

# UPPINGHAM, RUTLAND

**EXTENDED PHASE 1 SURVEYS** 

FOR

**RUTLAND COUNTY COUNCIL** 

**JULY 2009** 



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#### 0.0 Non-Technical Summary

Background to Phase 1 Habitat Survey

Landscape Science Consultancy Ltd (LSC Ltd) was commissioned by Rutland County Council (RCC) to conduct Extended Phase 1 Habitat Surveys of compartments of land bordering the town of Uppingham, Rutland. The purpose of the surveys was to provide RCC with evidence on habitats and protected species within the compartments, as part of the Local Development Framework. The habitat surveys were conducted by LSC Ltd ecologists between April and May 2009 and followed best practice methodology. The results of the surveys have been detailed within reports and habitat maps for each compartment of land.

Overview - Habitats

The dominant habitats within the compartments surrounding Uppingham are grassland pasture fields, often over a varied topography of sweeping ridges and shallow valleys with ridge and furrow. Occasional large arable fields are also present in the majority of compartments, and dominate towards the north-west. The majority of grassland fields have, to varying degrees, been agriculturally 'improved' through the re-seeding of swards and use of fertilizers to maximise agricultural grass cover for rearing livestock. The grasslands therefore, in general, support a low diversity of grassland plants.

The majority of grassland and arable fields are enclosed by species-poor hedgerows dominated by hawthorn with a low mix of other woody species; species-rich hedgerows are generally uncommon. The habitat structure of the hedgerows vary markedly dependent on frequency of management. Mature oak and ash standard trees are found occasionally within many of the hedgerows.

Several minor streams run from west to east with a shallow, often indistinct water channel, and are generally no more than 1m in width. Minor areas of marsh, wet grassland, scrub and scattered broadleaf trees are associated with these streams, as well as thin belts of broadleaf woodland. Field ponds are uncommon and small in extent, supporting a low diversity of aquatic plants.

There are no sites of nature conservation which receive national or European protection within any of the compartments. Occasional, isolated sites are however, protected through the local planning system, such as grassland fields, ponds and marsh and are generally noted as being of Parish, or local value. The majority of habitats surveyed within the compartments are also considered to be of local value. The minor streams are considered to be of particular local value as they provide important wildlife corridors for the movement of floral and faunal species within the local landscape. Recommendations for the protection and enhancement of these wildlife corridors have been outlined within the main report. Recommendations have also been made for the general protection and enhancement of hedgerows and trees within the wider landscape. **Overview - Protected Species** 

During the Phase 1 habitat surveys, the compartments were surveyed for the presence, or the potential presence, of protected species. The presence, or potential presence, of protected species is a material consideration for any land-use change within the compartments, and may significantly increase the value of habitats present.

The streams and associated areas of marsh, scrub and tall grasslands have been identified as having the potential to support reptile species, particularly grass snake. There is also the potential for reptile species to be present within areas of unmanaged grassland and scrub, where field ponds are present, and in an allotment site to the north of Uppingham.

The streams within the surveyed compartments were generally found to be of low value for water voles, generally due to a lack of water channel suitable for swimming and foraging and banks for nesting.

The occasional field ponds found within the compartment may have the potential to support great crested newts, although most are over shaded with scrub and do not provide substantial vegetation for newts to lay eggs.

Several of the trees found within the woodland belts, hedgerows and within fields have the potential to support bat roosts due to the presence of cracks, splits, rot holes and ivy cover in tree boles and boughs. The mosaics of habitats found within the majority of the surveyed compartments of Uppingham provide potential foraging and commuting habitat for bats species.

Such habitats would also provide suitable opportunities for a wide variety of foraging and nesting farmland birds. Recommendations have been given with regards to conducting further protected surveys where they are found to be present or potentially present.

#### 1.0 Introduction

#### 1.1 Background

Landscape Science Consultancy Ltd (LSC Ltd) was commissioned by Rutland County Council to conduct Extended Phase 1 Habitat Surveys for seven compartments of land bordering the town of Uppingham, Rutland. The compartments reflect possible directions for growth that may be identified to meet the housing and other requirements of the Draft East Midlands Regional Plan.

The purpose of the survey is to provide Rutland County Council with evidence on habitats and protected species within the compartments of land surrounding Uppingham.

#### 1.2 Survey Objectives

The objectives of the surveys are:

- To provide evidence to support the Council's Local Development Framework and associated Sustainability Process in determining the future directions for growth, allocation of land for development and policies to protect and enhance local biodiversity.
- To provide sufficient information to assist in the determination of planning applications and to enable consistent and sustainable decisions to be made in respect of protecting biodiversity, with specific regards to the Council's obligations under Planning Policy 9 Biological and Geological Conservation.
- To provide a baseline and monitoring framework for further surveying and/or monitoring of habitats and protected species within the Rutland area.

## 1.3 Survey Methodology

The survey methodology employed followed the Phase 1 Habitat Survey Guidelines JNCC (2003). This involved a walkover of each compartment of land to identify and target note all macro-habitats present and identify the presence of, or the potential presence for, protected species. Any statutory or non-statutory sites of nature conservation interest within or adjacent to compartments were assessed. Any sites suitable for protection, such as areas of ancient woodland and potential veteran trees were identified.

This method provided a comprehensive and robust assessment of the extent, nature and conditions of habitats and associated species within each compartment of land to inform potential implications for land use planning. The full methodology is given in Appendix 1 in order to facilitate repetition as required.

#### 1.4 Survey Reports

Individual reports have been produced for each compartment of land surrounding Oakham, together with accompanying target notes and Phase 1 Habitat maps.

Records of protected species, statutory and non-statutory nature conservation sites and Local Biodiversity Action Plan (LBAP) priority species within 2km of each compartment of land have been identified and mapped. All records were sourced from the Leicester Environmental Records Centre (LERC).

Habitats suitable for specific LBAP species which have the potential to provide 'wildlife corridors' in the wider landscape have also been identified and mapped, as well as unrecorded habitats of semi-natural value such as ancient woodland and veteran trees.

Recommendations are given as to any further surveys which may be required to inform future planning permissions and any mitigation recommended to ensure that habitats and species are satisfactorily protected and areas enhanced.

## 2.0 Legislation and Policy

The potentially relevant legislation is summarised below:

2.1 Legislation

The Conservation (Natural Habitats &c.) Regulations 1994 (as amended), or the 'Habitat Regulations', transposes European Directives into English and Welsh legislation. Under these regulations, wild animals of a European Protected Species (EPS) and their breeding sites or resting places are protected under Regulation 39. Such wild animals of an EPS include great crested newts and all species of bats. It is an offence to deliberately capture, injure or kill any such animal or deliberately take or destroy their eggs. It is also an offence to damage or destroy a breeding place or resting place of such an animal.

Amendments to the 'Habitat Regulations' in 2009 have now raised the threshold for deliberately disturbing a wild animal of an EPS. Under Regulation 39, it is now an offence if a person:

Deliberately disturbs wild animals of any such species which is likely:

- (a) To impair their ability -
  - to survive, to breed or reproduce, or to rear or nurture their young; or
  - in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- (b) To affect significantly, the local distribution or abundance of the species to which they belong.

The Wildlife and Countryside Act 1981 (as amended) adds further protection to wildlife in England and Wales under Part 1. It is unlawful to intentionally kill, injure or take any wild bird or take, damage or destroy the nest of any wild bird whilst the nest is in use or being built. If the bird is included on the Schedule 1 list, it is additionally an offence to intentionally disturb its nest during the breeding season.

Certain species of animal, such as the water vole, are offered 'full protection' under the Wildlife and Countryside Act 1981 (as amended) by being included in Schedule 5 in respect of certain offences under Section 9. Such offences include:

- 9(1) Intentional killing, injuring or taking of a Schedule 5 animal;
- 9(4a) Damage to, destruction of, obstruction of access to any structure or place used by a Schedule 5 animal for shelter or protection;
- 9(4b) Disturbance of a Schedule 5 animal occupying such a structure or place.

Widespread species of native reptiles occurring within England and Wales such as the adder or common lizard are protected against killing and injuring under the Wildlife and Countryside Act 1981 (as amended) only. Animals of an EPS are now only protected under offences 9(4a) and 9(4b) of Section 9, however the main legislative tool covering EPS's is under the 'Habitats Directive'.

Under the Hedgerow Regulations 1997 it is an offence to remove most hedgerows without permission from the Local Planning Authority. Permission for the removal of hedgerows may be refused if the Local Planning Authority determine any hedgerow to be 'Important' under criteria listed in Part II of Schedule 1 of the Regulations.

2.2 European Protected Sites

Under the 'Habitats Directive' and the EC Directive on the Conservation of Wild Birds (79/409/EEC) 'The Birds' Directive', all Member States were required to identify a network of protected sites which represent areas of habitats and species of high ecological value which are rare, endangered or vulnerable in the European Community. This network of protected sites is known as Natura 2000 and includes Special Protection Areas (SPA's) and Special Areas of Conservation (SAC's).

Originally implemented through the UK's requirements under the EC Directive on the Conservation of Wild Birds (79/409/EEC), SPA's were implemented to safeguard the habitats of species of regularly occurring migratory birds from significant impacts. Rutland Water SPA is the only Natura 2000 site in Rutland and lies approximately 5.5km to the north of Uppingham.

Article 6 of the 'Habitats Directive' sets out circumstances under which a development having a significant adverse impact on a SPA site would only become acceptable where an overriding national need for development can be demonstrated and where there is a lack of alternative acceptable options.

Additionally, mitigation of habitat loss and/or improved habitat management measures should be implemented to ensure that the overall coherence of SPA's are protected. This is carried out by undertaking an Appropriate Assessment, which is a detailed appraisal of the impacts on the integrity of a Natura 2000 site. The Appropriate Assessment requires that all impacts within 2km of the SPA boundary are considered. Rutland Water lies approximately 5.5km to the north of Uppingham.

## 2.3 Ramsar Sites

Ramsar sites are wetlands of international importance designated under the Ramsar Convention, which was ratified by the UK Government in Iran in 1971. As a matter of policy, all Ramsar sites are also protected under Natura 2000 (as set out in the 'Habitat Regulations') and the vast majority are also SPA's.

Rutland Water SPA is designated as a Ramsar site of international importance and lies approximately 5.5km to the north of Uppingham.

# 2.4 Planning Policy Statement 9

Planning Policy Statement 9 (PPS9) Biodiversity and Geological Conservation aims 'to conserve, enhance and restore the diversity of England's wildlife by sustaining and where possible improving the quality and extent of the natural habitat .... and the populations of naturally occurring species that they support.' (ODPM, 2005).

Under PPS9 local authorities are required to ensure that protected species and designated nature conservation sites are protected from the adverse affects of proposed developments through the use of control measures within the planning system.

Where impact would occur to biodiversity interest, the local planning authority must be satisfied that there is no reasonable alternative and that adequate mitigation measures would be in place to result in less or no harm.

## 2.5 East Midlands Spatial Strategy

The East Midlands Regional Spatial Strategy 2009 (RSS) provides a broad development strategy for the East Midlands up to 2026. The RSS also represents the spatial element of the East Midlands Integrated Regional Strategy (IRS).

The RSS planning policies are now used as the primary tool for development within Rutland; therefore policies under the Leicestershire, Leicester and Rutland Structure Plan are no longer applicable.

Policies listed under the RSS relevant to nature conservation are:

# Policy 26

# Protecting and Enhancing the Region's Natural and Cultural Heritage

Sustainable development should ensure the protection, appropriate management and enhancement of the Region's natural and cultural heritage. As a result the following principles should be applied:

- The Region's internationally and nationally designated natural and historic assets should receive the highest level of protection;
- Neither direct nor indirect damage to EU designated Natura 2000 sites will be permitted;
- Damage to natural and historic assets or their settings should be avoided wherever and as far as possible, recognising that such assets are usually irreplaceable;
- Unavoidable damage must be minimised and clearly justified by a need for development in that location which outweighs the damage that would result;
- Unavoidable damage which cannot be mitigated should be compensated for, preferably in a relevant local context, and where possible in ways which also contribute to social and economic objectives;
- There should be a net increase in the quality and active management of natural and historic assets across the Region in ways that promote adaptation to climate change, and an increase in the quantity of environmental assets generally; and
- The Region's best and most versatile agricultural land should be protected from permanent loss or damage.

## Policy 29

## Priorities for Enhancing the Region's Biodiversity

Local Authorities, statutory environmental bodies and developers should work with the voluntary sector, landowners and local communities to implement the Regional Biodiversity Strategy, and to deliver a major step change increase in the level of biodiversity across the East Midlands.

Measures should include the:

- Achievement of the East Midlands regional contribution towards the UK Biodiversity Action Plan targets;
- Establishment of large scale habitat creation projects in the biodiversity conservation and enhancement areas;

- Establishment of a regional project to promote the re-creation of key wildlife habitats in each Natural Area in the East Midlands;
- Creating, protecting and enhancing networks of semi-natural green spaces in urban areas;
- Creating, protecting and enhancing features of the landscape which act as corridors and 'stepping stones', essential for the migration and dispersal of wildlife;
- Development and implementation of mechanisms to ensure that development results in no net loss of BAP habitats and species, particularly for restricted habitats with special environmental requirements, and that net gain is achieved; and
- Development and maintenance of appropriate data to monitor and report on regional targets Biodiversity Action Plans.

# Policy 30

# Regional Priorities for Managing and Increasing Woodland Cover

Local Authorities, statutory environmental bodies and developers should work with the voluntary sector, landowners and local communities to deliver a significant increase in woodland cover in the East Midlands in ways that respect local landscape character and support the implementation of the Regional Plan.

New cover should make use of species resistant to climate change and complement national and regional woodland strategies, including, for example, the Forestry Commission's Woodfuel Strategy for England. Any impact on local landscape character should be carefully considered.

New woodland should optimise social, environmental and economic value whilst recognising the biodiversity and character of existing woodland and the sensitivity of existing nature conservation or archaeological interest. New woodland should also avoid negative effects on water resources, and contribute to flood alleviation and floodplain management.

Woodland unavoidably lost to development should be replaced with new woodland of equivalent value, preferably in the same landscape unit. Preference should be given to creating 'new native woodland' as defined in Forestry Commission Bulletin 112.

Opportunities should be taken to increase woodland cover as part of new development and by using other mechanisms, focusing on:

• Priority areas identified through Space4Trees including; the National Forest, Greenwood Community Forest, Sherwood Forest, Rockingham Forest, East Derbyshire, the Boston Woods Initiative and ancient woodland clusters in the Lincolnshire Limewoods and Leighfield Forest areas;

Landscape Science Consultancy Ltd L:\LSC\R29.08 Rutland County Council\Reports & Drafts\Uppingham\Reports without badger data\Without badger data - Uppingham Extended Phase 1 Survey FINAL July 2009.doc • The Northamptonshire Growth Areas, where woodland creation and linkage should feature as a significant component of new green infrastructure; and principal transport corridors and Strategic River Corridors delivering local Biodiversity Action Plan targets.

Ancient semi-natural woodlands, veteran trees and other woodlands of acknowledged national and regional importance should be strongly protected by Local Development Frameworks. There should be a general presumption against the conversion of any woodland to other land uses unless there are overriding public benefits.

Opportunities should be taken to secure sustainable management of all woodland, and to increase public access to high quality multi-functional woodland close to communities as part of the development of Green Infrastructure.

## 2.6 Rutland Local Plan

The Rutland Local Plan was adopted by Rutland County Council on 23rd July 2001 and provides land-use planning policies for the period 1991-2006. The Plan is currently in the process of being replaced by a portfolio of local development documents as part of the Local Development Framework (LDF).

The evidence given in this report will form part of the policies relating to nature conservation and the natural environment in the new LDF documents.

## 2.7 Natural Areas

Natural Areas are sub-divisions of England devised by Natural England, each with a characteristic association of wildlife and natural features. Each Natural Area has a unique identity resulting from the interaction of wildlife, landforms, geology, land use and human impact.

Natural Areas provide a wider context for nature conservation action and also provide the framework for Natural England in setting objectives for nature conservation, as well as forming the context of national and local Biodiversity Action Plan targets.

Uppingham lies within the Trent Valley and Rises Natural Area 33 and its accompanying profile (Clifton and Windrum, 1999), briefly describes and evaluates its wildlife and geological features, summarises the issues which affect the nature conservation resource and concludes with the long-term visionary objectives through which the nature conservation interest could be maintained and enriched.

Objectives set by Natural England for the Trent Valley and Rises Natural Area include:

• To maintain the extent and quality of the characteristic semi-natural habitats in the Natural Area, particularly the 'unimproved' grasslands, freshwater and woodland habitats.

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- To increase the semi-natural and characteristic habitats in the Natural Area particularly the grasslands, freshwater, woodland, and farmland habitats.
- To maintain and enhance important species and populations which are characteristic of the Natural Area.
- To survey and monitor species and habitats
- To increase awareness of, and encourage appropriate use of, the nature conservation resource to ensure that the biodiversity can be enjoyed by all, including future generations, without damaging the Trent Valley and Rises environment.
- 2.8 Biodiversity Action Plans

The UK Biodiversity Action Plans (BAPs) were drafted for 'Priority' species and habitats in which specific conservation targets were set and are regularly reviewed. BAP features do not receive any legal protection but have biodiversity value within a national context. The UK BAPs also serve as a framework for local biodiversity conservation efforts.

"Biodiversity Challenge: An Action Plan for Leicester, Leicestershire and Rutland" was produced in 1998. The plan identifies local and national priority habitats and species, and sets targets for their conservation, outlines mechanisms for achieving these.

The species and habitats for which LBAP have been developed are detailed in Table 1.

Local Species Plans	Local Habitat Plans
Bats	Broadleaved woodland
Black hairstreak butterfly	Calcareous grassland
Black poplar	Eutrophic standing water
Dingy skipper	Fast-flowing streams
Grizzled skipper	Field margins
Dormouse	Floodplain wetland
Nightingale	Heath-grassland
Purple small-reed	Lowland wood-pasture and parkland
Redstart	Mature trees
Sand martin	Mesotrophic lakes
Violet helleborine	Neutral grassland
Water vole	Reed beds
White-clawed crayfish	Roadside verges
Wood vetch	Sphagnum ponds

Table 1: 'Priority' habitats and species listed under the Leicester, Leicestershire and Rutland LBAP.

Local Species Plans	Local Habitat Plans
	Springs and flushes
	Wet woodland

#### 3.0 Methodology

#### 3.1 Background Data

Background data with respect to protected species, statutory and non-statutory nature conservation sites and LBAP species within 2km of Uppingham were obtained from the Leicestershire Environmental Records Centre (LERC). However, the data supplied does not identify the level of activity with regard to each record, for example, whether a bat roost was present. The records only highlight that a particular species has been recorded at a particular location.

The 'MAGIC' website was also accessed for locations of statutory nature conservation sites and ancient woodlands within 2km of Uppingham.

#### 3.2 Field Surveys

#### 3.2.1 *Phase 1 Habitat Survey*

The survey methodology employed followed the Phase 1 Habitat Survey Guidelines JNCC (2003). This involved a walkover of each compartment of land surrounding Uppingham to identify and target note all macro-habitats present and identify the presence of, or the potential presence for, protected species. Information with regards to badgers has not been included within this version of the report, due to the sensitive nature of badger sett locations.

This method provided a comprehensive and robust assessment of the extent, nature and conditions of habitats and associated species within each compartment of land to inform potential implications for land use planning.

The surveys were conducted by LSC Ltd ecologists from April through May 2009.

Various landowners were contacted to grant permission for access to land to conduct the surveys. Where access to land could not be attained, habitats were surveyed from adjacent accessed areas, public footpaths and byways using binoculars. Land which could not be accessed has been clearly identified within the target notes and survey reports.

Species lists for the main habitat areas were compiled. Plant nomenclature follows Stace (1997). The UK priority Species/Red Data book/locally important species lists were used to establish national, regional and local status of any rarer plants; animals or invertebrates recorded during the survey. Aerial photographs of the area were used to increase the accuracy of the survey.

Landscape Science Consultancy Ltd 13 L:\LSC\R29.08 Rutland County Council\Reports & Drafts\Uppingham\Reports without badger data\Without badger data - Uppingham Extended Phase 1 Survey FINAL July 2009.doc The ecological survey of the compartments considered all relevant aspects of ecology in order to provide sufficient detail to:

- Identify and assess the overall habitat pattern of the compartment and associated linkages relevant to the proposals, highlighting the terrestrial habitats present.
- Assess the current ecological status and sensitivity, particularly in relation to any statutory designations.
- Identify presence or possible presence of protected species.
- Identify constraints to potential land-use change.
- Identify any notifiable weeds.

# 3.2.2 Protected Species Survey

During the walkover of each compartment of land, habitats were assessed for the presence and potential presence of protected species. For example, rapid assessments were made of the potential for trees and buildings to support bat roosts, water bodies to support great crested newts and specific habitats to support reptile species.

Notes were also made of actual evidence of protected species which are more evident in the field such as the presence of water vole nests and field signs along watercourses and brief notes of vulnerable bird species.

## 4.0 Generic Area Description

## 4.1 Uppingham – Landscape and Habitats

The small town of Uppingham and surrounding compartments of land are situated in the Rutland uplands at approximately 135-150m AOD. Uppingham is set within gently undulating countryside with distinct sweeping ridges and small shallow valleys. The majority of the compartments of land surrounding Uppingham, particularly to the north and west, are characterized by a mosaic of meadows, pasture and arable fields generally regular in shape and large in size and are typical of intensive agricultural systems.

To the south and east of Uppingham, grassland pasture and meadows prevail and are often small in extent with a varied topography of sweeping ridges and shallow valleys. The grasslands are generally improved and occasionally semi-improved in nature and generally used as pasture for livestock. Unmanaged areas of taller grasslands and scattered scrub are common in field corners and margins. Evidence of ridge and furrow can be found throughout several of the pasture grasslands and is an indicative feature that these habitats were once cultivated.

The grassland pastures are often bounded by high, infrequently managed hedgerows with full woody canopies which are generally species-poor and dominated by hawthorn with a varied mix of other species such as occasional elm, rose, blackthorn

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and elder. Where arable farming is more prominent to the north and west, hedgerow loss becomes more prevalent and those that remain are more regularly managed with frequent gaps.

Hedgerow trees form notable features in the landscape to the south where they are found frequently along hedgerows, with mature stag-headed ash and oak forming the most common trees. There is relatively little woodland cover surrounding Uppingham. However, the density of hedgerows and standard trees in this area gives an impression of a wooded landscape.

A number of linear features pass through Uppingham such as a disused railway to the south and a number of small streams with thin woodland belts running west to east. Such linear features, in combination with the network of hedgerows and trees bordering the fields surrounding Uppingham, provide important wildlife corridors for the movement of floral and faunal species through the wider landscape. Occasional small field ponds are scattered around the fields surrounding Uppingham and have generally been encroached by surrounding scrub and support a low diversity of aquatic plants.

# 4.2 Wildlife Corridors

Existing linear wildlife corridors within Uppingham and around the urban fringe have been identified in order to provide specific measures for their protection and enhancement within the Local Development Framework. All wildlife corridors are illustrated in Appendix 5.

## Watercourses

# Streams/River Corridors

Four main stream/river corridors have been identified within Uppingham and run from west to east. One of the streams is present to the northern urban edge of Uppingham (W1, Appendix 5); with a further stream part-culverted through the centre of Uppingham, which eventually flows out near the eastern urban edge (W2). Another stream is also partly culverted along the southern urban edge of Uppingham (W3), which eventually meets the southernmost stream of Uppingham (W4) to the east.

The source all of the watercourses appears to be near to the western urban edge of Uppingham and they flow east past the main urban area of Uppingham and eventually to the River Welland approximately 5km to the east/south east.

All watercourses pass through several of the compartments surrounding Uppingham and have been identified as minor streams with a shallow, often indistinct water channel, and are generally no more than 1.5 - 2m in width with a sluggish flow. All watercourses pass through a number of habitats identified in the current Phase 1 survey which include linear belts of scrub and plantation and semi-natural woodlands, grasslands and arable fields.

Outside of the surveyed compartments, it is evident from aerial photographs that similar habitats are present along the wider stretch of each watercourse as well as urban habitats such as housing estates and gardens (W2). Within the background data search, a number of areas of grasslands, scrub, marsh and trees have been identified as being of Parish level importance along the length of all watercourses (Appendix 4-7).

Although the watercourses identified are only minor streams, the mosaic of habitats along their length form distinct wildlife corridors which provide foraging, commuting, breeding and shelter for a variety of faunal species, as well as a corridor for the dispersal of floral species into the wider countryside. The current Phase 1 surveys have identified that these watercourses have the potential to support a variety of protected species such as water vole, reptiles (particularly grass snake), amphibians, birds and bats.

It is therefore recommended that specific measures for the protection and enhancement of the identified watercourses (W1 - 4) are considered with the Local Development Framework.

## Generic Recommendations for the Protection of Watercourses

Consideration should be given to the protection of the identified watercourse 'wildlife corridors' through the prevention of sediment loading, point source pollution and diffuse pollution from domestic, business and agricultural sources.

The pollution of watercourses from chemicals, fertilisers and pesticides has the potential to have a significant adverse affect on the floral and faunal communities found within these wildlife corridors.

The most effective way Rutland County Council can protect watercourses is through the implementation of Planning Policy Statement 23: Planning and Pollution Control (Annex 1) and PPS 9 through the planning process.

Generic recommendations are given below:

- Environmental and ecological specialists should always be consulted for expert advice where developments may potentially affect watercourses.
- Consideration should be given to the wider implementation of Sustainable Drainage Urban Systems (SUDS) within any potential developments near watercourses through the planning process, in order prevent point source pollution from surface water drainage.
- The creation and retention of 'buffer zones', such as riparian grassland strips, should also be considered in order to prevent diffuse pollution from developments adjacent to watercourses.
- Trees, scrub, woodlands and grasslands adjacent to watercourses should be retained as part of any development proposals near to watercourses,

Landscape Science Consultancy Ltd L:\LSC\R29.08 Rutland County Council\Reports & Drafts\Uppingham\Reports without badger data\Without badger data - Uppingham Extended Phase 1 Survey FINAL July 2009.doc particularly where such habitats are mature and/or semi-natural and impossible to replace within the short to medium term.

- Where development proposals may have the potential to adversely affect watercourse habitats and associated protected species, detailed and appropriate mitigation and compensation should be of material consideration when determining planning applications and conditions.
- Advice given under the Environment Agencies' Pollution Prevention Guidelines 4 – Works and Maintenance near Watercourses should be carefully implemented during the construction phase of any development.

# Generic Recommendations for the Enhancement of Watercourses

Consideration should be given to the enhancement of watercourses through the planning process as part of any development proposals near to such habitats. As has been previously described, any adverse affects to watercourse habitats and associated protected species should be suitably mitigated and compensated for within the planning process.

Where developments may be planned within close proximity to a watercourse but will not directly affect it, consideration should still be given to the enhancement of the watercourse corridor within the planning conditions. This may be implemented as compensation for the loss of other habitats within the development boundary not associated with the watercourse corridor.

Proposals to enhance the watercourse corridor should be undertaken by environmental and ecological specialists, who should formulate habitat creation and management proposals through the appropriate consideration of the abundance and distribution of existing habitats and protected species present.

For example, it would not be prudent to recommend the dense planting of trees in an area of watercourse where populations of water voles are known to occur, as the eventual shading from tree canopies would trigger the reduction of bankside vegetation and potential food plants for this species.

Habitat creation along watercourses could, however, include the strengthening of existing woodlands, scrub and tree lines through the planting of native tree and shrub species of local provenance, or the creation of species-rich river meadows and bankside vegetation. Proposals for protected species, if they are found to be present, could include the provision of pools and lagoons for water voles or the creation of hibernacula for grass snakes.

A detailed management plan for the future conservation of the enhanced watercourse corridor is vital to ensure biodiversity is maintained and should be included as a planning condition for the development.

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## Railway Corridor

A disused railway corridor is present at the south eastern urban fringe of Uppingham, which connects to the live Leicester – Oakham – Melton railway approximately 4-5km to the east. The disused section of railway does not pass through the urban centre of Uppingham, nor does it fall directly within any of the compartments of land identified within the local development framework. The railway corridor is not noted within the background data search.

From the study of current aerial photographs of the railway corridor, it appears to be bounded by a thin band of linear trees and scrub, typical of such disused railways. As the corridor was not accessed during the current Phase 1 survey, the nature and extent of habitat structures present is currently unknown.

Disused railway corridors are, however, important 'wildlife corridors' for a variety of faunal species, such as reptiles and foraging and nesting birds. Consideration should be given to the protection of this corridor within the planning process, which should include the retention and strengthening of linear woodlands and scrub.

Where a potential development may directly affect (or even bound) the railway corridor, detailed Phase 1 habitat surveys of the corridor should be conducted in order to ascertain the nature and extent of habitats present and the potential for protected species. This will give a clearer indication of the ecological value of the corridor and the appropriate recommendations for its enhancement and protection.

## 5.0 Compartment Results

The locations of the compartments are shown on Figure 01 and the Phase 1 Habitat maps for all compartments are illustrated in Figures 02-07. Field target notes for all compartments are included in Appendix 2 and background data for all compartments is given in Appendix 4. A glossary of terms used within the compartments reports is provided in Appendix 6.

## 5.1 Compartment 2

## 5.1.1 *Compartment Description*

Compartment 2 covers an area of approximately 16.5ha on the eastern urban fringe of Uppingham. The compartment is, in the main, dominated by semi-improved grassland and bounded by tall, defunct and generally unmanaged hedgerows. To the south of Compartment 2, semi-improved grassland pasture is present over a minor shallow valley, with a small stream at its trough and a linear belt of rush marsh.

## 5.1.2 Background Data, Habitats and Species

The results given in this report are as supplied at the time of survey May 2009.

# European Protected Sites of Nature Conservation Interest

There are no European protected sites of nature conservation interest within 2km of Compartment 2.

# Statutory Sites of Nature Conservation Interest

There are no statutory sites of nature conservation interest within 2km of Compartment 2.

No part of the compartment falls within, or abuts the boundary of, any statutory site of nature conservation interest.

# Non-Statutory Sites of Nature Conservation Interest

There are a number of non-statutory sites of nature conservation interest within a 2km radius of the compartment.

Two non-statutory sites of nature conservation interest fall within the compartment boundary. These are to the south of the compartment and are an area of heavily sheep grazed grassland and an area of mown grassland. Both areas are noted as being of Parish level importance.

A further two areas of grassland of Parish level importance are located to the south east of Compartment 2 and are separated from the compartment by Glaston Road.

<u>Species</u>

No records exist for protected species within the compartment boundary.

However, records do exist for protected species within a 2km radius of the compartment.

5.1.3 Survey Results

Figure 02A

<u>Habitats</u>

## <u>Arable Land</u>

A single, extensive, arable field is present within the centre of Compartment 2 and was sown with winter oil seed rape at the time of survey. No distinct grassland field margins were present.

## Semi-Improved Grassland

The dominant habitat within Compartment 2 is semi-improved grassland pasture. To the south of the compartment, the grassland is present within a minor shallow valley rising to approximately 25-30m at its crest, separated into three fields by boundary

hedgerows (U2 – 10, 14 & 17). A small stream surrounded by a linear belt of rush marsh is present at the valley trough (U2 – 20) (Photograph 1). The grasslands are noted as being of Parish level importance within the background data search.

The grassland fields support Yorkshire fog, fescue, sweet vernal grass, meadow grass, field woodrush and meadow foxtail with an increasing abundance of tufted hair grass and soft rush towards the valley trough. The grasslands are grazed by livestock to an average sward height of 10-15cm. A number of herbaceous species are present throughout the grassland sward and include white clover, meadow buttercup, lesser celandine, common mouse-ear, bulbous buttercup and thyme-leaved speedwell. Species more associated with unimproved grassland communities are present occasionally within the sward and include wild carrot, yarrow and meadow vetchling.



**Photograph 1.** Semi-improved grassland and rush marsh within a shallow valley to the south of Compartment 2.

A number of springs run down the southern edge of the valley side, through the grasslands and are typically dominated by either soft rush or floating sweet grass, with occasional to frequent wavy bittercress, cuckoo flower, great willowherb and brooklime. The springs support no distinct water channel and comprise of damp ground.

It is likely that the grasslands within the shallow valley are remnants of old speciesrich pasture, which have been partly agriculturally improved for livestock grazing.

A further grassland field is present upon the southern crest of the valley (U2 - 21) and supports grass species typical of those found within the valley swards. However, grasses are more dominant with only occasionally occurring herbaceous species.

A semi-improved grassland meadow is present to the north of Compartment 2 and is evidently managed as a hay crop, due to the presence of dead thatch throughout the sward. Grass species present within the sward include frequent to abundant meadow foxtail, Yorkshire fog and meadow grass with locally frequent sweet vernal grass and red fescue. Herbaceous species occur frequently throughout the sward and

include dandelion, ribwort plantain, common chickweed, meadow buttercup, sorrel and common vetch.

## Species-Poor Hedgerows

Hedgerows bound the majority of fields within Compartment 2 and are generally species-poor, supporting an abundance of hawthorn with a low number of other woody species such as occasional blackthorn, elder and rose. Ruderal herbaceous species dominate the understorey of the hedgerows and include typical species such as common nettle, white dead nettle, cleavers, hogweed and cow parsley.

The hedgerows to the north of Compartment 2 are generally managed to varying heights of between 2-3m (i.e. U2 - 1, 6, 5 & 9). Conversely, the hedgerows to the south, surrounding the semi-improved grassland valley fields, are tall (>4m), unmanaged and overgrown with bramble and ivy, with frequent gaps and occasional semi-mature to mature ash trees (i.e. U2 - 7, 11, 13 & 16) (Photograph 2).



**Photograph 2.** The tall defunct hedgerows surrounding the grassland fields to the south of Compartment 2.

# **Running Water and Marsh**

A narrow stream (U2 - 20) running west to east is present along the trough of the shallow valley running through grasslands U2 - 10, 14 & 17, to the south of Compartment 2. The stream is culverted under a new housing estate to the west.

The stream channel is, on average, 1m wide and up to 30cm in depth with a sluggish to slow flow. The stream often forms only damp ground with no visible channel present. An area of marsh surrounds the stream in a narrow linear belt varying from 10-25m in width. The marsh supports abundant soft rush with frequent to occasional tufted-hair grass, floating sweet grass, cuckooflower, Yorkshire fog and wavy bittercress (Photograph 3).



Photograph 3. Stream with rush marsh within the shallow valley to the south of Compartment 2.

# Scattered Broadleaf Trees

Several scattered mature balsam poplar trees (U2 - 15) are present to the southern corner of grassland field U2 - 14. Tall ruderal vegetation is present below the trees and includes cock's foot, common chickweed, common nettle and false-oat grass with frequent lesser celandine.

# <u>Buildings</u>

A complex of breeze block and metal built farm buildings are present to the south and north of Compartment 2 (U2 – 4 & 19) and are used as stables and storage for the rearing of livestock. No direct access to these buildings was possible.

# **Species**

# <u>Bats</u>

Several of the hedgerow trees to the south of Compartment 2 have the potential to support roosting bats (U2 – 11 & 20), due to the presence of cracks, splits and rot holes within the tree boles and crowns. The two complexes of farm buildings are likely to be of low bat roosting potential, as they were modern metal and breeze block buildings (U2 – 4 & 19). No direct access to these buildings was possible at the time of survey and the interiors were therefore not surveyed.

The hedgerows, trees and grassland fields found throughout Compartment 2 have the potential to provide foraging and commuting habitat for bat species.

## Great Crested Newts

The marsh area to the south of Compartment 2 has the potential to support juvenile great crested newts.

#### Water Voles

The stream to the south of Compartment 2 is unsuitable for water voles, due to a lack of burrowing substrate for this species.

## **Reptiles**

There is the potential for reptiles to be present, particularly grass snake, within the stream and associated marsh to the south of Compartment 2.

#### **Birds**

The hedgerows and trees found throughout Compartment 2 have the potential to provide nesting and foraging habitat for a variety of farmland birds. The linear stretch of marsh running through the shallow valley to the south of Compartment 2 (U2 - 20) has the potential to support ground nesting species such as woodcock and lapwing.

#### 5.1.4 Recommendations

#### Hedgerows

Where appropriate, the hedges should be protected and managed to improve the structure, diversity and function of the hedge line. Dead wood should be cleared out and gaps should be infilled with native indigenous shrubs such as dogwood, blackthorn, guelder rose, buckthorn, spindle, field maple and wild privet.

Consideration should be given to the planting of new hedgerows where appropriate, so that links to the wider landscape are enhanced and maintained. Tree planting should be done using native indigenous species.

## Trees

Consideration should be given to the protection of trees and their root structures within the compartment, following British Standard (BS) 5837 guidelines.

It is recommended that the planting of native trees and shrubs to enhance and strengthen existing tree lines, scrub and woodlands should also be considered.

#### Water

Consideration should also be given to the protection of watercourses in accordance with Environment Agency best practice, with respect to controlling runoff, diffuse and point source pollution and contamination of the water course.

#### **Protected Species Surveys**

In order to ascertain the distribution and abundance of protected species within the compartment, it is recommended that the following protected species surveys may potentially need to be carried out.

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Several of the hedgerow trees to the south of Compartment 2 have the potential to support roosting bats (U2 - 11 & 20), due to the presence of cracks, splits and rot holes within the tree boles and crowns. All trees with bat roosting potential within the compartment should be surveyed.

Whilst the farm buildings within the compartment were considered to have low potential to support roosting bats due to their construction (U2 - 4 & 19), no access was gained during the current Phase 1 survey. It would therefore be recommended that a building inspection for roosting bats be carried out on the farm buildings.

The stream and associated marsh area have the potential to support reptiles, particularly grass snake, and great crested newts. Therefore surveys to ascertain presence/absence of these species should be undertaken.

Consideration would always need to be given to the protection of breeding birds which may be potentially present within the mosaic of habitats found throughout the compartment.

The surveys should be undertaken according to Best Practice at the time of commission.

## 5.2 Compartment 3

#### 5.2.1 *Compartment Description*

Compartment 3 covers an area of approximately 5ha on the eastern edge of Uppingham. The western half of Compartment 3 is dominated by amenity grassland bounded by managed species-poor hedgerows. To the east, much of the compartment has been recently developed into housing.

The area of amenity grassland within Compartment 3 is a well used cricket pitch owned by Uppingham School. Access to the majority of the compartment, together with the taking of photographs and use of binoculars, was therefore not possible.

## 5.2.2 Background Data, Habitats and Species

The results given in this report are as supplied at the time of survey May 2009.

#### European Protected Sites of Nature Conservation Interest

There are no European protected sites of nature conservation interest within 2km of Compartment 3.

#### Statutory Sites of Nature Conservation Interest

There are no statutory sites of nature conservation interest within 2km of Compartment 3.

No part of the compartment falls within, or abuts the boundary of, any statutory site of nature conservation interest.

## Non-Statutory Sites of Nature Conservation Interest

There are a number of non-statutory sites of nature conservation interest within a 2km radius of the compartment.

Two areas of grassland that have Parish level importance abut Compartment 3 to the north. The first is an area of mown grassland which is contained within Compartment 2. The second is a grassland embankment to the north-west of Compartment 3.

No non-statutory sites of nature conservation interest fall within the compartment boundary.

#### <u>Species</u>

No records exist for protected species within the compartment boundary.

However, records do exist for protected species within a 2km radius of the compartment.

## 5.2.3 Survey Results

Figure 03

Habitats

# Amenity Grassland

The majority of Compartment 3 is amenity grassland and is a regularly used cricket pitch owned by Uppingham School (U3 - 3). The pitch is well-managed and short mown to an exceptionally short sward height of below 1cm. Access to the cricket pitch was restricted but the sward appeared to be grass dominated with virtually no herbaceous species.

A number of well-managed, semi-mature trees have been planted around the margins of the cricket pitch and include whitebeam, sycamore and lime.

# Plantation Broadleaf Woodland

A small linear copse of plantation woodland (U3 - 5) is present on the southern edge of the new housing estate and has been partly reduced by the development (Photograph 4). The woodland could not be directly accessed at the time of survey.

The woodland appears to comprise mature ash and lime trees with a scattered hawthorn shrub layer. The field layer appears to be dominated by ivy, as are many of the tree boles and crowns. Open areas of the woodland support locally abundant common nettle, cow parsley and garlic mustard.



**Photograph 4.** Linear belt of plantation woodland U3 - 5.

# Species-Poor Hedgerows

The hedgerow surrounding the cricket pitch is species-poor and regularly managed to a height of 1.5m with frequent small gaps (U3 - 2) (Photograph 5). The hedgerow supports an abundance of hawthorn with a low number of other woody species such

as occasional elder with an understorey of ruderal herbaceous species such as white dead nettle, cow parsley and cleavers.

Several semi-mature lime trees have been planted in front of the hedgeline, within the margins of the cricket pitch.



**Photograph 5.** Species-poor hedgerow at U3 - 2.

A short section of species-poor hedgerow (U3 - 6) is present along the south-eastern edge of the cricket pitch, near the plantation woodland U3 - 5. The hedgerow is approximately 4m in height and is evidently a remnant of the adjacent woodland, as a mature ash tree and coppiced ash stools are present within the hedgeline.

A further species-poor hedgerow which supports frequent semi-mature wild cherry and ash trees (U3 - 4) is present along the northern boundary of the new housing estate and is occasionally managed to a height of 3 - 3.5m.



Photograph 6. Species-poor hedgerow U3 – 4.

## <u>Buildings</u>

A previously arable field has been developed to the east of the cricket pitch with a complex of houses and apartments with associated areas of hard standing and amenity planting.

Two buildings are present within the cricket pitch; a thatched but well maintained cricket pavilion (U3 - 1) and a temporary pre-fabricated building, probably used as changing rooms (U3 - 7). No direct access was possible to either building and the interiors were not surveyed.

## **Species**

# <u>Bats</u>

There is the potential for bats to be roosting within mature trees in the linear belt of plantation woodland and along the adjacent hedgerow due to the presence of cracks, splits and rot holes with the tree boles and crowns (U3 - 5 & 6).

The buildings within the cricket pitch could not be effectively surveyed during the survey period but are likely to be of low bat roosting potential (U3 - 1 & 7).

The hedgerows, trees and grassland fields found throughout Compartment 3 have the potential to provide foraging and commuting habitat for bat species.

<u>Birds</u>

The hedgerows and trees within Compartment 3 have the potential to provide nesting and foraging habitat for a variety of bird species.

# 5.2.4 Recommendations

## <u>Hedgerows</u>

Where appropriate, the hedges should be protected and managed to improve the structure, diversity and function of the hedge line. Dead wood should be cleared out and gaps should be infilled with native indigenous shrubs such as dogwood, blackthorn, guelder rose, buckthorn, spindle, field maple and wild privet.

Consideration should be given to the planting of new hedgerows where appropriate, so that links to the wider landscape are enhanced and maintained. Tree planting should be done using native indigenous species.

## <u>Trees</u>

Consideration should be given to the protection of trees and their root structures within the compartment, following British Standard (BS) 5837 guidelines.

It is recommended that the planting of native trees and shrubs to enhance and strengthen existing tree lines, scrub and woodlands should also be considered.

#### Protected Species Surveys

In order to ascertain the distribution and abundance of protected species within the compartment, it is recommended that the following protected species surveys may potentially need to be carried out.

The trees within the linear belt of plantation woodland and along the adjacent hedgerow should be surveyed for the presence of bat roosts, due to the presence of cracks, splits and rot holes within the tree boles and crowns. In addition, the buildings within the compartment should be surveyed for the presence of roosting bats.

Consideration would always need to be given to the protection of breeding birds which may be potentially present within the mosaic of habitats found throughout the compartment.

The surveys should be undertaken according to Best Practice at the time of commission.

## 5.3 Compartment 4

#### 5.3.1 *Compartment Description*

Compartment 4 covers an area of approximately 19ha on the south eastern urban fringe of Uppingham. The compartment is dominated by improved and semiimproved grassland fields, although there is an arable field present towards the centre of the compartment. The fields within the compartment are bounded by species-poor hedgerows which are often defunct and support occasional semi-mature and mature standard trees.

Two small streams run from west to east along the northern and southern boundary of the compartment and are bounded by a thin belt of dense scrub with scattered broadleaf trees. Areas of tall ruderal and marshy vegetation are also found close to these streams.

## 5.3.2 Background Data, Habitats and Species

The results given in this report are as supplied at the time of survey May 2009.

## European Protected Sites of Nature Conservation Interest

There are no European protected sites of nature conservation interest within 2km of Compartment 4.

#### Statutory Sites of Nature Conservation Interest

There are no statutory sites of nature conservation interest within 2km of Compartment 4.

No part of the compartment falls within, or abuts the boundary of, any statutory site of nature conservation interest.

## Non-Statutory Sites of Nature Conservation Interest

There are a number of non-statutory sites of nature conservation interest within a 2km radius of the compartment.

Four grassland fields within the south western corner of the compartment are noted as being of Parish level importance (U4 - 21, 23, 27, & 32).

Several non-statutory sites of nature conservation abut the southern boundary of Compartment 4. These are:

- The Gos (Gorse scrub and rough grass) Parish level importance.
- Rough grassland Parish level importance.
- Grassland and marsh Parish level importance.
- Rough grassland District level importance.

In addition the north western corner of Compartment 4 abuts the cemetery. The granite wall on the western and northern boundary of the cemetery is of District level importance.

## <u>Species</u>

No records exist for protected species within the boundary of Compartment 4.

However, records do exist for protected species within a 2km radius of the compartment.

5.3.3 Survey Results

Figure 04

Habitats

## Semi-Improved Grassland

There is a semi-improved grassland field (U4 - 3) at the north of the compartment which slopes sharply uphill away from a small stream (U4 - 1) from north to south (Photograph 7). The grassland appears to be unmanaged and ungrazed and has developed into a rank sward, which is dominated by ruderal species towards the top of the bank and to the east. The grassland is tussocky and has a dense thatch in places.

Grasses within this field include false-oat grass, creeping bent and red fescue, as well as tufted hair grass closer to the water. A range of herbaceous species are also present and include lesser celandine, creeping buttercup, cuckooflower, wild carrot, greater stitchwort and yarrow. Ruderal species such as broadleaf dock, nettle and cleavers are present throughout the grassland and especially to the top of the bank and to the east. Close to the stream at the eastern end, the grassland is marshy where a wet flush is present; here rushes, meadowsweet and common sedge dominate. Two mature ash trees and one mature sycamore are present within this field and occasional scrub species such as elder and hawthorn were recorded below.

Two further semi-improved grassland fields (U4 - 27 & 32) are present at the southern boundary of the compartment. Both grasslands support a similar range of grass species including meadow foxtail, cock's foot, Yorkshire fog, red fescue, false-oat grass and bent grass. A range of herbaceous species are also present including common chickweed, sorrel, meadow vetchling, cuckooflower, wild carrot, field speedwell and thyme-leaved speedwell. The fields slope uphill from a stream from north to south at an approximate angle of  $20^{\circ}$  with damper grassland at the base.

The semi-improved grasslands within this compartment support botanical communities which are typical of former species-rich unimproved grasslands, and are likely to have been partly agriculturally improved. It is evident that much of this species-richness has been lost; however, species more typical of unimproved swards occur occasionally within these grasslands such as wild carrot and meadow vetchling.

Grasslands U4 - 32 & 27 are noted as being of Parish level importance. Grassland U4 - 3 should also be given the same designation.



**Photograph 7.** Semi-improved grassland field U4 – 3 within Compartment 4.

# Improved Grassland

Three improved grassland fields are present to the east of the compartment. The largest of these (U4 - 14), slopes uphill from the stream U4 - 1 along the northern compartment boundary towards the centre of the field, before sloping back downhill to a further stream (U4 - 17) along the southern compartment boundary (Photograph 8). The grassland field was sheep-grazed at the time of survey with a sward height of approximately 5cm. Several semi-mature to mature trees and scrub are present throughout the field including ash, horse chestnut and hawthorn.



Photograph 8. Improved grassland field U4 – 14 within Compartment 4.

Typical of improved grassland swards, the dominant grass species within the sward is perennial rye grass with occasional false-oat grass, cock's foot and Yorkshire fog also present. Herbaceous species typical of improved swards are present and include

white clover and creeping buttercup, as well as occasional ruderals such as common nettle and spear thistle where grazing livestock has caused nutrient enrichment. Patches of rush occur occasionally, where the ground is damper. There are infrequently occurring small anthills within the grassland field.

The improved grassland field (U4 - 21) is used as a grazing pasture for horses and, although not fully accessed due to the livestock, appeared to be of a similar character to the larger improved field to the east (U4 - 14). The adjacent improved field to the west appeared to be used for amenity purposes (U4 - 23). These grasslands are noted as being of Parish level importance within the background data search.

# Arable Land

There is a single arable field along the western boundary of Compartment 4 which was not under active cultivation at the time of survey (Photograph 9).



Photograph 9. Arable field within Compartment 4.

# Species-Poor Hedgerows

Species-poor hedgerows, many of them defunct, separate many of the grassland fields within Compartment 4 (i.e. U4 - 6, 8, 10, 12, 22, 26 & 33) (Photograph 10). The hedgerows are generally unmanaged with frequent gaps throughout. Semimature to mature standard ash trees are present in many of the hedgelines. Typical of species-poor hedgerows, a low number of woody species are present within the compartment hedgerows, which are hawthorn dominated with elder, elm and blackthorn forming components of some. The ground layer below the hedgerows is largely ruderal with common nettle, dock and cleavers most frequently recorded.



Photograph 10. Species-poor hedgerow U4 – 8 within Compartment 4.

Running through the centre of the compartment from east to west (U4 - 13), there is a double hedgerow which follows the line of an old track, which is now overgrown with scrub and ruderal vegetation. Ash is the main component within this hedgerow on the northern side with mature, previously laid specimens present. Hawthorn dominates to the south. Further to the west, just outside the compartment boundary, the track is still in existence and a line of mature ash are present on a steep bank which supports a number of woodland species such as lords and ladies, red campion, herb Robert and foxglove.

## **Running Water**

There are two streams within Compartment 4. The first (U4 - 1) flows from west to east along the northern compartment boundary and has medium flowing, clear water to a depth of approximately 10cm. The banks of the stream vary in aspect and are steep in places (to approximately 50°) but flatter in others, and rise to 1m above the surface of the water. The substrate of the stream channel is fine gravel and clay, with a stream channel approximately 0.5m wide. Occasional emergent species including fool's watercress and brooklime are present within the stream channel along with marginal species such as yellow flag iris and pendulous sedge (Photograph 11).



Photograph 11. Stream U4 – 1.

A strip of dense mature hawthorn and elder scrub with scattered semi-mature to mature willow trees is present along the margins of this stream (U4 - 2). Dense areas of bramble are locally dominant throughout this habitat as well as a field layer of occasional woodland species such as ransoms, lords and ladies and lesser celandine. Where the ground is damper, stands of meadowsweet and rush tend to dominate.

Occasional ruderal species are also present, possibly due to nutrient enrichment from the surrounding habitats and include common nettle and dock. The botanical communities along this stream are, however, indicative of habitats which have not been extensively affected by agricultural improvement.

A further stream runs through the southern area of the compartment (U4 - 17) (Photograph 12). The water channel is approximately 0.5m wide with a slow to medium flow, with banks varying in height up to 0.5m. Emergent species dominate the watercourse in parts and include sweet grass, brooklime and fool's watercress, whilst the water is unobstructed in others. Occasional marginal species including hard rush and soft rush are present along the stream edges.

Semi-mature to mature willow are present along the margins of this stream in association with scattered hawthorn, elder and bramble scrub with ruderal vegetation (U4 20, 25 & 31).



Photograph 12. Stream U4 – 17 within Compartment 4.

# **Species**

# <u>Bats</u>

A number of ash trees within hedgerows and woodland scattered throughout Compartment 4 have the potential to provide suitable roosting habitat for bat species, due to the presence of rot holes, splits, cracks and ivy cover in tree boles and boughs.

The hedgerows, trees, grasslands, woodlands and scrub within Compartment 4 have the potential to provide foraging and commuting habitat for a variety of bat species.

# <u>Birds</u>

The hedgerows, trees, woodlands and scrub within Compartment 4 have the potential to provide nesting and foraging habitat for a variety of farmland bird species.

# <u>Reptiles</u>

The streams running through Compartment 4 and adjacent marsh and grassland habitats, especially the semi-improved grasslands, have the potential to support foraging reptile species, particularly grass snake.

## Water Vole

The streams running through Compartment 4 are considered unsuitable for water voles due to heavy shading in parts and lack of a distinctive water channel suitable for swimming and foraging. The stream banks are also unlikely to provide suitable burrowing habitat.

#### 5.3.4 Recommendations

#### <u>Hedgerows</u>

Where appropriate, the hedges should be protected and managed to improve the structure, diversity and function of the hedge line. Dead wood should be cleared out and gaps should be infilled with native indigenous shrubs such as dogwood, blackthorn, guelder rose, buckthorn, spindle, field maple and wild privet.

Consideration should be given to the planting of new hedgerows where appropriate, so that links to the wider landscape are enhanced and maintained. Tree planting should be done using native indigenous species.

#### <u>Trees</u>

Consideration should be given to the protection of trees and their root structures within the compartment, following British Standard (BS) 5837 guidelines.

It is recommended that the planting of native trees and shrubs to enhance and strengthen existing tree lines, scrub and woodlands should also be considered.

#### Water

Consideration should also be given to the protection of watercourses in accordance with Environment Agency best practice, with respect to controlling runoff, diffuse and point source pollution and contamination of the water course.

## Protected Species Surveys

In order to ascertain the distribution and abundance of protected species within the compartment, it is recommended that the following protected species surveys may potentially need to be carried out.

A number of ash trees within Compartment 4, particularly within the hedgerows and woodland, have the potential to provide suitable roosting habitat for bat species, due to the presence of rot holes, splits, cracks and ivy cover in tree boles and boughs. Therefore each tree should be individually assessed as to its potential to support roosting bats and activity surveys should be undertaken.

The streams running through Compartment 4 and adjacent marsh and grassland habitats, especially the semi-improved grasslands, have the potential to support foraging reptile species, particularly grass snake. A dedicated reptile survey should therefore be undertaken.

Consideration would always need to be given to the protection of breeding birds which may be potentially present within the mosaic of habitats found throughout the compartment.

The surveys should be undertaken according to Best Practice at the time of commission.

## **Compartments 5a and 5b**

## 5.4 Compartment 5a

#### 5.4.1 *Compartment Description*

Compartment 5a covers an area of approximately 15ha on the south western urban fringe of Uppingham. The compartment is dominated by an extensive arable field to the east and improved grassland pasture to the west. The fields within the compartment are bounded by species-poor hedgerows which are generally intact and support occasional semi-mature and mature standard trees.

A small stream runs from west to east through the centre of the compartment and is bounded by a thin belt of scrub.

#### 5.4.2 Background Data, Habitats and Species

The results given in this report are as supplied at the time of survey May 2009.

#### European Protected Sites of Nature Conservation Interest

There are no European protected sites of nature conservation interest within 2km of Compartment 5a.

#### Statutory Sites of Nature Conservation Interest

There are no statutory sites of nature conservation interest within 2km of Compartment 5a. However, Eyebrook Reservoir SSSI lies approximately 2.1km south of Compartment 5a. The citation for Eyebrook Reservoir is included in Appendix 3.

No part of the compartment falls within or abuts the boundary of any statutory site of nature conservation interest.

## Non-Statutory Sites of Nature Conservation Interest

There are a number of non-statutory sites of nature conservation interest within a 2km radius of the compartment.

One non-statutory site of nature conservation interest falls within the boundary of Compartment 5a. This is a pond on the edge of an area of improved grassland and is noted as being of Parish level importance

In addition the north western boundary of Compartment 5a abuts a hedgerow that is a Wildlife Site (U5a - 1).

## <u>Species</u>

No records exist for protected species within the boundary of Compartment 5a. However, records do exist for protected species within a 2km radius of the compartment.

5.4.3 Survey Results

Figure 05

**Habitats** 

## <u>Arable Land</u>

The east of Compartment 5a is dominated by an extensive arable field which was planted with a winter crop at the time of survey.

## Improved Grassland

The west of Compartment 5a is dominated by improved grassland pasture (U5a – 5 & 6), which was grazed by sheep and cattle at the time of survey to an average sward height of 10-15cm (Photograph 13). This grassland supports a typical abundance of perennial-rye grass with occasional Yorkshire fog, cock's foot, false oat grass and sweet vernal grass. Herbaceous species typical of improved swards occur occasionally to frequently and include creeping buttercup, dandelion, dock and meadow buttercup. A mature ash is present within the grassland field U5a – 6.



**Photograph 13.** Improved grassland field U5a – 6 within Compartment 5a.

## Species-Poor Hedgerows

Hedgerows bound the majority of field within Compartment 5a and are generally species-poor and support an abundance of hawthorn with a low number of other woody species such as occasional to locally frequent blackthorn, elder and ash. The hedgerows are managed to an average height of 2-3m and are generally intact with no gaps. Hedgerow understoreys support abundant ruderal species such as common

Landscape Science Consultancy Ltd 39 L:\LSC\R29.08 Rutland County Council\Reports & Drafts\Uppingham\Reports without badger data\Without badger data - Uppingham Extended Phase 1 Survey FINAL July 2009.doc nettle, cleavers, ground ivy, cow parsley and hogweed with occasional woodland species such as lesser celandine, herb Robert, wood avens and lords and ladies.

The majority of hedgerows support occasional to frequent ash standard trees which are semi-mature to mature in age and often covered with ivy (i.e. U5a - 2, 3, 10, 11 & 12) (Photograph 14).



**Photograph 14.** A typical species-poor hedgerow with ash trees in Compartment 5a (U5a – 10).

# Species-Rich Hedgerows

A species-rich hedgerow is present along the western boundary of Compartment 5a parallel to Stockerston Road and is managed to a height of 2-3m with no gaps present (U5a - 1). The hedgerow supports abundant hawthorn but with a variety of other woody species such as locally frequent elder, field maple, ash, elm, dog rose and blackthorn with a semi-mature standard ash tree present to the south.

The hedgerow understorey is dominated by ruderal species including ground ivy, white dead nettle, common nettle and cow parsley.

This hedgerow is noted as being a non-statutory Wildlife Site within the background data search.

# Running Water

A slow flowing stream is present through the centre of Compartment 5a travelling from west to east (U5a - 7, Photograph 15). The stream is dry to the west and culverted under a track to the eastern boundary of the compartment. With an average depth of 5cm, the water channel cuts through a substrate of silt and mud with banks rising to 3m to the north and 1m to the east. The banks are dominated with ruderal herbaceous species such as common nettle and greater willowherb, with species more typical of wet habitats such wavy bittercress, brooklime and soft rush occurring occasionally to locally frequently nearer the waters' surface.

A belt of dense scrub is present along the northern half of the stream (U5a - 8).

The background data search indicates that a pond of Parish level importance is present in this area, however the pond could not been found during the current Phase 1 survey.



**Photograph 15.** Shallow stream running through the centre of Compartment 5a (U5a – 7).

## Dense Scrub with Tall Ruderal Vegetation

A thin belt of dense scrub is present along the northern banks of the stream running through the centre of Compartment 5a (5a - 8, Photograph 16). The scrub is likely to be an old hedgerow which has not been managed for some time. The scrub belt supports tall, mature and outgrown hawthorn shrubs to 4-4.5m in height and 4-6m in width, with occasional semi-mature ash and willow trees.

Bramble is present throughout the understorey of the scrub and forms locally abundant patches of tangled scrub. Ruderal species are also present in the scrub understorey and include common nettle, cow parsley and cleavers with occasional woodland species such as dog's mercury, lesser celandine and lords and ladies. Further to the west, the scrub is managed and resembles more of a typical hedge structure to 2m in height and width.



**Photograph 16.** Dense scrub lining the northern banks of stream U5a - 7.

## **Species**

## <u>Bats</u>

Several of the trees within hedgerows in Compartment 5a have the potential to support bat roosts due to the presence of cracks, splits, rot holes and ivy cover in tree boles and boughs.

The hedgerows, trees and grasslands within Compartment 5a have the potential to provide suitable foraging and commuting habitat for bat species.

# <u>Birds</u>

The hedgerows, trees and grasslands within Compartment 5a have the potential to provide suitable nesting and foraging habitat for a variety of farmland bird species.

## 5.4.4 Recommendations

## <u>Hedgerows</u>

Where appropriate, the hedges should be protected and managed to improve the structure, diversity and function of the hedge line. Dead wood should be cleared out and gaps should be infilled with native indigenous shrubs such as dogwood, blackthorn, guelder rose, buckthorn, spindle, field maple and wild privet.

Consideration should be given to the planting of new hedgerows where appropriate, so that links to the wider landscape are enhanced and maintained. Tree planting should be done using native indigenous species.

## <u>Trees</u>

Consideration should be given to the protection of trees and their root structures within the compartment, following British Standard (BS) 5837 guidelines.

It is recommended that the planting of native trees and shrubs to enhance and strengthen existing tree lines, scrub and woodlands should also be considered.

## Water

Consideration should also be given to the protection of watercourses in accordance with Environment Agency best practice, with respect to controlling runoff, diffuse and point source pollution and contamination of the water course.

## **Protected Species Surveys**

In order to ascertain the distribution and abundance of protected species within the compartment, it is recommended that the following protected species surveys may potentially need to be carried out.

Several of the trees within hedgerows in Compartment 5a have the potential to support bat roosts due to the presence of cracks, splits, rot holes and ivy cover in tree boles and boughs. These trees should be assessed individually to assess their suitability to support roosting bats.

Consideration would always need to be given to the protection of breeding birds which may be potentially present within the mosaic of habitats found throughout the compartment.

The surveys should be undertaken according to Best Practice at the time of commission.

# 5.5 Compartment 5b

## 5.5.1 *Compartment Description*

Compartment 5b covers an area of approximately 12ha on the southern urban fringe of Uppingham. The majority of the compartment is dominated by long, rectangular, semi-improved grassland pasture fields bounded by managed hedgerows with occasional to frequent semi-mature and mature trees. A thin stream travels from west to east along the northern boundary of the compartment in a shallow but distinct valley. The stream is bounded by linear belts of marsh, scrub and woodland along its length.

## 5.5.2 Background Data, Habitats and Species

The results given in this report are as supplied at the time of survey May 2009.

## European Protected Sites of Nature Conservation Interest

There are no European protected sites of nature conservation interest within 2km of Compartment 5b.

# Statutory Sites of Nature Conservation Interest

There are no statutory sites of Nature Conservation interest within 2km of Compartment 5b. However, Eyebrook Reservoir SSSI lies approximately 2.3km south of Compartment 5b. The citation for Eyebrook Reservoir is included in Appendix 3.

No part of the compartment falls within or abuts the boundary of any statutory site of nature conservation interest.

## Non-Statutory Sites of Nature Conservation Interest

There are a number of non-statutory sites of nature conservation interest within a 2km radius of the compartment.

Two non-statutory sites of nature conservation interest fall within the boundary of Compartment 5b. These are an area of marsh on the sloping edge of an improved grassland sward and an area of cattle grazed grassland. Both sites sit within the northern half of Compartment 5b and are of Parish level importance.

## <u>Species</u>

Records exist for protected species within the compartment boundary. Brown longeared and common pipistrelle bats were recorded in the north western corner of the compartment in 1989.

Records also exist for other protected species within a 2km radius of the compartment.

5.5.3 Survey Results

Figure 05

Habitats

# Semi-Improved Grassland

Semi-improved grassland pasture fields are the dominant habitat within Compartment 5b. The pasture is separated into long rectangular fields by boundary hedgerows within the compartment. The western pasture field (U5b - 2) was grazed by sheep at the time of survey with a sward height of 15-20cm. A small stream runs through the centre of the grassland (U5b - 4) and has created a shallow but distinct valley with steep banks rising to at least 10m in height (Photograph 17).

Grasses within the semi-improved sward include meadow foxtail, red fescue Yorkshire fog, meadow grass, false-oat grass, cock's foot, bent grass, perennial-rye grass and sweet vernal grass with frequent herbaceous species including white and red clover, daisy, dandelion, common mouse-ear, creeping thistle, lesser celandine, wild carrot and meadow vetchling. To the north of the pasture field ridge and furrow is present with an increasing abundance of tufted hair grass in the furrows, indicating damper conditions. A number of ant hills were present within the field.



**Photograph 17.** Semi-improved grassland pasture U5b - 2. The minor valley with running water at its trough is visible in the background.

To the east, a further two semi-improved grassland fields are present (U5b - 8 & 15) and support a similar botanical community to U5b - 2. The northern most section of grassland U5b - 8 dips sharply past hedgerow U5b - 12 to the stream at the northern boundary of Compartment 5b. An abundance of anthills is present to the eastern boundary of the field (Photograph 18). Further to the south of hedgerow U5b - 12 to grassland becomes more level to a level peak at U5b - 15.

The grasslands are indicative of former unimproved meadows which have been partly agriculturally improved for livestock grazing. Occasional species typical of unimproved meadows are present within these grasslands such as wild carrot and meadow vetchling.



**Photograph 18.** Anthills at the eastern boundary of the semi-improved grassland field U5b - 8.

## Improved Grassland

An improved grassland field is present at the south western corner of Compartment 5b and was sheep grazed at the time of survey to average sward height of up to 5cm (U5b - 20, Photograph 19). Grass species dominate the sward with an abundance of perennial-rye grass with occasional creeping bent and Yorkshire fog. The sward is typically species-poor with occasional to frequent white clover, creeping buttercup, spear thistle and creeping thistle.



Photograph 19. Improved pasture field U5b - 20.

## Species-Poor Hedgerows

Species-poor hedgerows bound the majority of grassland fields in Compartment 5b and support an abundance of hawthorn with varying mixes of elder, ash and blackthorn. The hedgerows within the compartment vary in structure and often support occasional to frequent semi-mature to mature standard trees mainly comprising of ash but also with holly, sycamore and horse chestnut. The majority of the hedgerows are relatively intact with no gaps and are managed to an average height of 2-3m (i.e. U5b - 1, 6, 14, 16, 17 & 13) (Photograph 20).



**Photograph 20.** Typical species-poor hedgerow with trees in Compartment 5b (U5a - 6).

Several of the hedgerows to the east of Compartment 5b are thin, leggy and over managed to 1.5m in height with frequent gaps (i.e. U5b - 7 & 12). A tall, infrequently managed hedgerow to 10m in height is present on the south western boundary (U5b - 19), and a high ash tree line with unmanaged hawthorn shrubs is present along the north eastern boundary (U5b - 11).

## <u>Running Water</u>

A narrow stream runs through a shallow but distinct valley through grassland U5b - 2 from the western boundary of Compartment 5b and then along its northern boundary to the east (U5b - 4, Photograph 21). The stream has carved a shallow but often steep valley through the grasslands in the compartment with banks rising to 10m at a variable aspect of between 40-80°, becoming more open and wider to the east.

The water channel varies from a shallow 20cm depth along its length to almost damp ground, with a variable channel width of between 4-8m. Locally abundant floating sweet grass, brooklime and fool's water cress is present within the water channel with occasional to frequent soft rush, hard rush, tufted-hair grass, great willowherb and lesser spearwort on the channel margins.

Linear belts of marsh, scrub and woodland and are along the length of the stream.



**Photograph 21.** The shallow stream running through Compartment 5b (U5b – 4).

## Scattered Scrub and Broadleaf Trees

Scattered mature willow scrub is present along the margins of the stream running through the shallow valley to the west of Compartment 5b (U5b - 5, Photograph 22). Several mature ash trees are also present in this area. The field layer is dominated by ruderal grass and herbaceous species including dense stands of common nettle.



**Photograph 22.** Scattered willow scrub and ash trees along the stream valley in Compartment 5b (U5b - 5).

Another area of dense scrub is also present along the eastern stretch of the stream (U5b - 9), forming a dense canopy of mature willow, sycamore and ash with a shrub frequent hawthorn, bramble and rose scrub over the water channel (Photograph 23). The field layer in this stretch supports abundant ruderal herbs such as common nettle, broadleaf dock and white dead nettle with occasional to frequent woodland species such as lords and ladies and lesser celandine. Fallen trees and deadwood are present throughout this habitat.



**Photograph 23.** Dense shrub and tree canopy along the eastern section of the stream (U5b - 9).

# <u>Marsh</u>

A small area of marsh (U5b - 3) is present within a shallow hollow on the northern bank of the stream running through Compartment 5b within grassland field U5b - 2 (Photograph 24). The marsh was dominated by hard and soft rush with occasional to frequent Yorkshire fog, tufted hair grass, creeping buttercup, lesser celandine and cuckooflower. The marsh was damp underfoot and appeared to be fed by a wet flush in the local vicinity.

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**Photograph 24.** Area of marsh on the northern banks of the stream (U5b - 3).

# Semi-Natural Broadleaf Woodland

A thin belt of semi-natural broadleaf woodland, likely to have developed as secondary woodland is present along the stream running through Compartment 5b at the north eastern boundary (U5b - 10). The woodland supports mature ash and horse chestnut trees which form a dense canopy over the stream channel, with a scattered shrub layer of mature hawthorn and blackthorn. Lesser celandine dominates the field layer of the woodland with occasional bluebell, lords and ladies and herb Robert.

# Species

# <u>Bats</u>

A number of ash trees within hedgerows and woodland or scattered throughout Compartment 5b have the potential to provide suitable roosting habitat for bat species, due to the presence of rot holes, splits, cracks and ivy cover in tree boles and boughs.

The hedgerows, trees, grasslands, woodlands and scrub within Compartment 5b have the potential to provide foraging and commuting habitat for a variety of bat species.

# <u>Birds</u>

The hedgerows, trees, woodlands and scrub within Compartment 5b have the potential to provide nesting and foraging habitat for a variety of farmland bird species.

# **Reptiles and Amphibians**

The stream running through Compartment 5b and adjacent marsh and grassland habitats has the potential to support foraging reptile species, particularly grass snake as well as amphibian species such as great crested newts.

#### Water Vole

The stream running through Compartment 5b is considered unsuitable for water voles due to heavy shading in parts and lack of a distinctive water channel suitable for swimming and foraging. The stream banks are also unlikely to provide nesting habitat close enough to the water channel.

#### 5.5.4 Recommendations

#### **Hedgerows**

Where appropriate, the hedges should be protected and managed to improve the structure, diversity and function of the hedge line. Dead wood should be cleared out and gaps should be infilled with native indigenous shrubs such as dogwood, blackthorn, guelder rose, buckthorn, spindle, field maple and wild privet.

Consideration should be given to the planting of new hedgerows where appropriate, so that links to the wider landscape are enhanced and maintained. Tree planting should be done using native indigenous species.

#### **Trees**

Consideration should be given to the protection of trees and their root structures within the compartment, following British Standard (BS) 5837 guidelines.

It is recommended that the planting of native trees and shrubs to enhance and strengthen existing tree lines, scrub and woodlands should also be considered.

## Water

Consideration should also be given to the protection of watercourses in accordance with Environment Agency best practice, with respect to controlling runoff, diffuse and point source pollution and contamination of the water course.

## **Protected Species Surveys**

In order to ascertain the distribution and abundance of protected species within the compartment, it is recommended that the following protected species surveys may potentially need to be carried out.

Several of the trees within the hedgerows and broadleaf woodland in Compartment 5b have the potential to support bat roosts due to the presence of cracks, splits, rot holes and ivy cover in tree boles and boughs. These trees should be assessed individually to assess their suitability to support roosting bats.

The stream and adjacent marsh area, together with the grassland habitats, have the potential to support reptile species such as grass snake and amphibian species such as great crested newts. Therefore it is recommended that dedicated surveys are undertaken to ascertain presence/absence of these species.

Consideration would always need to be given to the protection of breeding birds which may be potentially present within the mosaic of habitats found throughout the compartment.

The surveys should be undertaken according to Best Practice at the time of commission.

## 5.6 Compartment 6

## 5.6.1 *Compartment Description*

Compartment 6 covers an area of approximately 16.5ha on the western urban fringe of Uppingham. The compartment is dominated by grassland pasture, with semiimproved grassland to the north and improved grassland to the south. Species-poor hedgerows, often with trees, bound the majority of the grassland fields and are infrequently managed with gaps. Two small field ponds are present on the western boundary of Compartment 6.

## 5.6.2 Background Data, Habitats and Species

The results given in this report are as supplied at the time of survey May 2009.

## European Protected Sites of Nature Conservation Interest

There are no European protected sites of nature conservation interest within 2km of Compartment 6.

## Statutory Sites of Nature Conservation Interest

There are no statutory sites of Nature Conservation interest within 2km of Compartment 6. However, Eyebrook Reservoir SSSI lies approximately 2.5km south of Compartment 6. The citation for Eyebrook Reservoir is included in Appendix 3.

No part of the compartment falls within or abuts the boundary of any statutory site of nature conservation interest.

## Non-Statutory Sites of Nature Conservation Interest

There are a number of non-statutory sites of nature conservation interest within a 2km radius of the compartment.

Two non-statutory sites of nature conservation interest fall on the western boundary of Compartment 6. These are two ponds within an area of improved grassland and are noted as being of Parish level importance.

## <u>Species</u>

There are no records for protected species within the boundary of Compartment 6, although common pipistrelle bats were recorded just outside the eastern boundary in 2005.

Records also exist for other protected species within a 2km radius of the compartment.

5.6.3 Survey Results

Figure 06

Habitats

# Improved Grassland

To the south of Compartment 6, two large improved grassland pasture fields are present and were, at the time of survey, grazed by sheep to a sward height of up to 10-15cm (U6 – 2 & 7). Due to access restrictions field U6 – 7 could not be directly surveyed during the survey period.

The sward within improved field U6 - 2 was typically dominated by perennial-rye grass with occasional to locally frequent red fescue and Yorkshire fog (Photograph 25). Herbaceous species typical of improved swards were also present, such as white clover occasional, dandelion, daisy, common chickweed and bulbous buttercup were present.

Ridge and furrow was evident within both grasslands U6 - 2 & 7.



**Photograph 25.** Improved grassland field U6 - 2 to the south of Compartment 6.

# Semi-Improved Grassland

An extensive area of unmanaged semi-improved grassland, likely to be an abandoned improved pasture field, is present to the north of Compartment 6 (U6 – 11, Photograph 26). To the north of the grassland field, ruderal species dominate with tall grasses such as Yorkshire fog, false-oat grass, cock's foot and occasional perennial-rye grass. Ruderal herb species are abundant throughout the sward and include broadleaved dock, common nettle, white dead nettle, spear thistle, creeping thistle and hogweed.

The southern half of the grassland field supports species typical of wet grassland such as abundant tufted hair grass and soft rush with occasional creeping buttercup and cuckooflower. Locally frequent scattered goat willow scrub is present

throughout the southern half of the field with occasional hawthorn and bramble. The landowner has indicated that the field drains at the southern edge of the field are damaged, which would account for the wet grassland present.

As the field appears to have been abandoned, natural succession to woodland is present throughout. Ash saplings are scattered occasionally throughout the field with an abundance of young ash and goat willow in the south western corner, forming a small copse of young woodland. A line of young ash and hawthorn is also present along the north western field boundary with locally abundant patches of bramble and raspberry scrub present throughout the northern half of the field.



**Photograph 26.** Semi-improved grassland U6 – 11 to the north of Compartment 6.

An area of semi-improved grassland pasture is also present to the east of the compartment and at the time of survey, was grazed by cattle to an average sward height of 20-30cm (U6 – 15). Ridge and furrow is just evident to the south of the grassland field.

Grass species are abundant throughout the sward and include Yorkshire fog, meadow foxtail, meadow grass, fescue, crested dog's tail and sweet vernal grass with occasional perennial-rye grass. Field woodrush is present in locally abundant patches throughout the sward. Frequent to abundant herb species are also present and include common chickweed, common mouse ear, bulbous buttercup, germander speedwell, sorrel and rarely recorded cuckooflower.

# Species-Poor Hedgerows

The majority of hedgerows within Compartment 6 are species-poor supporting an abundance of hawthorn with a low number of other woody species such as occasional to locally abundant blackthorn. Ruderal species dominate the hedgerow understoreys and include common nettle, cleavers, cow parsley and great willowherb.

The hedgerows to the south of Compartment 6 are generally frequently managed to an average height of 1.5-2m often with frequent gaps (U6 - 3 & 6) (Photograph 27).

Several mature ash trees are present in two of the hedgerows in this area (U6 – 5 & 8).

Hedgerows to the north of Compartment 6 are generally under-managed to an average height of 3-4m, often with frequent gaps and wide bushy canopies to ground level (i.e. U6 - 9, 12, 13 & 20) (Photograph 28). Occasional dead elm trees to 4-5m in height are present in hedgerows in this area.



**Photograph 27.** Over managed hedgerow with frequent gaps (U6 - 3) running along the south western boundary of improved grassland field U6 - 2.



**Photograph 28.** Under managed hedgerow U6 - 20 running along the western boundary of semiimproved grassland field U6 - 11.

# Species-Rich Hedgerows

A species-rich hedgerow is present along the northern boundary of Compartment 6 and supports a varied mix of woody species with abundant hawthorn and occasional elm, blackthorn, rose, crab apple, goat willow and domestic apple. To the east the hedgerow is frequently managed to a height of 1.5m (U6 - 18), whilst to the west, the hedgerow is overgrown with frequent gaps to a height of 4-5m (U6 - 19).

A dry ditch is present on the northern side of the hedgerow and is overgrown with common nettle, cleavers and great willowherb.

## **Open Water**

A field pond (U6 - 4) is situated just off-site on the north western boundary of improved grassland field U6 - 2 (Photograph 29). The pond is more akin to a wet depression covering an area of approximately  $20m^2$  with a shallow water depth of up to 20cm. The water's surface is dominated by duckweed with creeping bent forming a thin band around the waters' edge, with occasional creeping buttercup, broadleaved dock and rarely recorded cuckooflower. There are no distinctive banks surrounding the pond and merge gently into the surrounding improved grassland field.



Photograph 29. Field pond U6 – 4.

A further field pond (U6 - 10) is present to the north near to the south western corner of semi-improved grassland field U6 - 11 (Photograph 30). The pond covers and area of approximately  $30m^2$ . There is no aquatic vegetation present and the water appears to be stagnant and is at least 1m deep. The pond is heavily shaded by overhanging hawthorn shrubs and ash trees.

Uniform clay banks surround the pond rising to a height of 1m at an aspect of 40°. Ruderal vegetation such as common nettle, broadleaved dock and Yorkshire fog dominate the banks with frequent areas of bare ground.

Both ponds are noted as being of Parish level importance within the background data search.



**Photograph 30.** Field pond U6 – 10, which is heavily shaded by surrounding shrubs and trees.

#### **Species**

## <u>Bats</u>

The hedgerows, trees and grassland fields found throughout Compartment 6 have the potential to provide foraging and commuting habitat for bat species.

## <u>Birds</u>

The hedgerows and trees within Compartment 6 have the potential to provide nesting and foraging habitat for a wide variety of farmland bird species.

## **Reptiles and Amphibians**

There is the potential for great crested newts to be present within the field ponds U6 -4 & 10 on the eastern boundary of Compartment 6. There is also the potential for reptiles to be present within the field ponds, particularly grass snakes. The unmanaged semi-improved grassland field U6 -11 also has the potential to provide foraging habitat for reptile species.

## 5.6.4 *Recommendations*

## **Hedgerows**

Where appropriate, the hedges should be protected and managed to improve the structure, diversity and function of the hedge line. Dead wood should be cleared out and gaps should be infilled with native indigenous shrubs such as dogwood, blackthorn, guelder rose, buckthorn, spindle, field maple and wild privet.

Consideration should be given to the planting of new hedgerows where appropriate, so that links to the wider landscape are enhanced and maintained. Tree planting should be done using native indigenous species.

Landscape Science Consultancy Ltd 57 L:\LSC\R29.08 Rutland County Council\Reports & Drafts\Uppingham\Reports without badger data\Without badger data - Uppingham Extended Phase 1 Survey FINAL July 2009.doc All species-rich hedgerows within Compartment 6 would need to be fully surveyed to assess whether they are likely to meet the criteria of an 'important' hedgerow under the Hedgerow Regulations 1997.

## <u>Trees</u>

Consideration should be given to the protection of trees and their root structures within the compartment, following British Standard (BS) 5837 guidelines.

It is recommended that the planting of native trees and shrubs to enhance and strengthen existing tree lines, scrub and woodlands should also be considered.

## Water

Consideration should also be given to the protection of watercourses in accordance with Environment Agency best practice, with respect to controlling runoff, diffuse and point source pollution and contamination of the water course.

## Protected Species Surveys

In order to ascertain the distribution and abundance of protected species within the compartment, it is recommended that the following protected species surveys may potentially need to be carried out.

Whilst no direct roosting opportunities for bats were noted on site during the Phase 1 survey, it should be noted that the hedgerows, trees and grasslands can offer foraging and commuting habitats for bats.

The field ponds within Compartment 6 have the potential to support great crested newts and it is therefore a recommendation that a dedicated survey should be undertaken on these waterbodies. In addition, the ponds and surrounding grassland habitats should also be surveyed with respect to their suitability to support a reptile population.

Consideration would always need to be given to the protection of breeding birds which may be potentially present within the mosaic of habitats found throughout the compartment.

The surveys should be undertaken according to Best Practice at the time of commission.

## 5.7 Compartment 7

## 5.7.1 *Compartment Description*

Compartment 7 covers an area of approximately 25ha on the northern fringes of Uppingham. The compartment is dominated by arable fields of varying sizes which are generally bounded by species-poor hedgerows often with mature trees. Two fields of semi-mature grassland are present to the north-west, with a small stream and associated semi-natural broadleaf woodland running west to east through the centre of the compartment.

## 5.7.2 Background Data, Habitats and Species

The results given in this report are as supplied at the time of survey May 2009.

## European Protected Sites of Nature Conservation Interest

There are no European protected sites of nature conservation interest within 2km of Compartment 7.

## Statutory Sites of Nature Conservation Interest

There are no statutory sites of nature conservation interest within 2km of Compartment 7.

No part of the compartment falls within or abuts the boundary of any statutory site of nature conservation interest.

## Non-Statutory Sites of Nature Conservation Interest

There are a number of non-statutory sites of nature conservation interest within a 2km radius of the compartment.

No non-statutory sites of nature conservation interest fall within or abut the boundary of Compartment 7.

## <u>Species</u>

Records exist for protected species within a 2km radius of Compartment 7, although there are no records within the boundary of the compartment.

## 5.7.3 Survey Results

Figure 07

<u>Habitats</u>

## Arable Land

Compartment 7 is dominated by arable fields of varying sizes which are generally bounded by species-poor hedgerows. An extensive allotment site is present near the southern boundary of the compartment (U7 - 7) which is fully cultivated and regularly managed by plot holders (Photograph 31). Various crops and ornamental plants are present.



**Photograph 31.** The allotment site in Compartment 7 (U7 - 7).

# Semi-Improved Grassland

A semi-improved grassland field is present to the north-west of Compartment 7, which, at the time of survey, was cattle grazed to an average sward height of up to 20 cm (U7 - 21, Photograph 32). The field followed a gentle slope from north to south. Grasses within the sward include frequent to abundant cock's foot, meadow grass, Yorkshire fog, meadow foxtail and red fescue with locally abundant crested dog's tail, sweet vernal grass, field woodrush and bent grass.

Herbs are abundant throughout the sward and include creeping buttercup, bulbous buttercup and sorrel with locally frequent ribwort plantain, ground ivy, thyme leaved speedwell, yarrow and rarely recorded cuckooflower. The botanical communities within the grassland are evident of swards which have not been extensively agriculturally improved, such as those within improved pastures.



Photograph 32. Semi-improved grassland field U7 – 21.

A further area of semi-improved grassland (U7 - 9) is also present just to the south, above the allotment site U7 - 7. The grassland appears to be regularly mechanically mown to an average sward height of 30-40cm, due to the presence of dead thatch. Grass species in the sward include Yorkshire fog, meadow foxtail, false-oat grass, cock's foot and perennial-rye grass with frequent herbaceous species such as ribwort plantain, dandelion, sorrel, bulbous buttercup, white clover, common mouse ear and common vetch.

Frequent, young, scattered trees are present to the northern edge of the grassland with species including ash, pedunculate oak and wild cherry.

## Species-Poor Hedgerows

Hedgerows bound the majority of fields in Compartment 7 and are generally speciespoor supporting an abundance of hawthorn and a low mix of other woody species such occasional blackthorn, elder and rose. The majority of the hedgerows within the compartment are frequently managed with few or no gaps to average heights of between 1.5-2.5m (i.e. U7 - 1, 2, 4, 8, 11, 13, 16 & 17) (Photograph 33). Occasional semi-mature trees are present in these hedgerows with a predominance of ash and infrequent oak and field maple. Ruderal species dominate the majority of hedgerow understoreys with species including common nettle, cow parsley, ground ivy, white dead nettle and cleavers.



**Photograph 33.** A typical managed hedgerow within Compartment 7 (U7 - 1).

A defunct species-poor hedgerow with frequent gaps runs through the centre of Compartment 7 which, at the western most edge (U7 - 3), has been over managed to a height of 1.5m and supports an abundance of hawthorn and elder with locally frequent holly and elm. Several mature beech trees are present within the hedgerow including one standing mature dead tree with frequent woodpecker holes, cracks splits and tears.

Further to the east, the hedgerow becomes overgrown and unmanaged to a height of 3-4m. The hedgerow set on a raised bank adjacent to the arable field and there is an area of tall ruderal vegetation to the south (U7 - 10) (Photograph 34). Hawthorn is abundant in the hedgerow with occasional to frequent blackthorn, elm, elder and goat willow. Frequent mature ash trees are present within the hedgerow and are covered in dense ivy.



**Photograph 34.** Defunct hedgerow with mature ash trees U7 - 10.

# Species-Rich Hedgerows

Two species-rich hedgerows bound the grassland field to the north western edge of Compartment 7, with a varied mix of woody species including hawthorn, blackthorn,

Landscape Science Consultancy Ltd 62 L:\LSC\R29.08 Rutland County Council\Reports & Drafts\Uppingham\Reports without badger data\Without badger data - Uppingham Extended Phase 1 Survey FINAL July 2009.doc dogwood, hazel, elm, elder, ash, holly and rose (U7 - 19 & 20) (Photograph 35). Both hedgerows are managed to an average height of 1.5-3m. Frequent mature ash is present within hedgerow U7 – 19 with occasional semi-mature ash to the north of hedgerow U7 – 20.

The understoreys of both hedgerows are dominated by ruderal species including common nettle, white dead nettle, cow parsley and cleavers with frequent bracken in hedgerow U7 - 20.



**Photograph 35.** Species-rich hedgerow U7 – 19 with frequent mature ash trees.

## <u>Running Water</u>

A shallow stream up to 10cm in depth and 0.5m in width runs from west to east through the centre of Compartment 7 at the trough of a wide and shallow valley (U7 -15). The stream channel is almost non-existent in parts, particularly to the west, where the channel forms damp ground with an abundance of meadowsweet and occasional common nettle, hogweed and rarely recorded cuckooflower.

As the stream follows the line of the shallow, wide valley to the east, the water channel cuts through the clay banks which rise to a height of 1m-1.5m and a shallow aspect of 30-35°. No aquatic plants are present within the stream and the banks are generally overgrown with common nettle, bramble, Yorkshire fog and broadleaved dock.

A thin linear belt of semi-natural woodland surrounds the banks of the stream.

# Semi-Natural Broadleaf Woodland

A thin linear belt of semi-natural woodland is present along the shallow stream running through the centre of Compartment 7. To the west of the stream, the woodland is at its widest (>20-30m) forming an enclosed canopy with frequent mature ash, pedunculate oak, goat willow and crack willow. A dense scrub layer is present below with species including goat willow, hawthorn, blackthorn and holly. Lesser celandine is locally abundant within the field layer with common nettle,

hogweed and frequent areas of bare ground. It is likely that the woodland belt has developed as secondary woodland.

The woodland begins to form a thin belt (>10m) as it follows the line of the stream down the shallow valley to the east. This section of woodland supports mature ash, pedunculate oak, white willow and crack willow trees with an occasional shrub layer of blackthorn, hawthorn, dog rose and goat willow. Many of the ash and oak trees throughout the woodland are stag headed with frequent rot holes, cracks and splits in boles and boughs.

# Tall Ruderal Herb and Fern

A wide strip of tall ruderal vegetation (U7 - 14) is present in a shallow trough to the north of hedgerow U7- 10. Tall herbs typical of nutrient rich conditions dominate the habitat and include spear thistle, common nettle, hogweed, cow parsley, broadleaved dock, bramble and false-oat grass (Photograph 36). It is likely that this is an area of uncultivated land which may have previously been cleared of woodland or scrub.



**Photograph 36.** Strip of tall ruderal vegetation in a shallow trough (U7 - 14).

# **Species**

# <u>Bats</u>

There are several trees present within hedgerows (i.e. U7 - 3, 10, 13 & 19) and along the linear broadleaf woodland (U7 - 15) which have the potential to support roosting bats, due to the presence of cracks, splits and rot holes in tree boughs and boles.

The hedgerows, trees, woodland and areas of grassland found throughout Compartment 7 have the potential to provide foraging and commuting habitat for a variety of bat species.

## **Birds**

The hedgerows, trees, woodland and areas of grassland found throughout Compartment 7 have the potential to provide nesting and foraging habitat for a variety of bird species.

## *Reptiles*

There is a high potential for reptiles to be present within the allotment site near the southern boundary of Compartment 7. Compost heaps and organic rubbish piles are present throughout this area which provides suitable nesting and foraging habitat for grass snake, common lizard and slow worm. Allotments holders, at the time of survey, indicated that common lizard and grass snake were present on-site.

There is also the potential for reptiles, particularly grass snakes, to be present along the stream running through the centre of Compartment 7 and adjacent habitats such as the tall ruderal vegetation, woodland and semi-improved grassland which would be utilised by these species for foraging.

#### Water Vole

The stream running through the centre of Compartment 7 (U7 - 15) is considered unsuitable for water voles due to heavy shading, a general lack of suitable food plants and poor banks for nesting.

#### 5.7.4 **Recommendations**

## *Hedgerows*

Where appropriate the hedges should be protected and managed to improve the structure, diversity and function of the hedge line. Dead wood should be cleared out and gaps should be infilled with native indigenous shrubs such as dogwood, blackthorn, guelder rose, buckthorn, spindle, field maple and wild privet.

Consideration should be given to the planting of new hedgerows where appropriate, so that links to the wider landscape are enhanced and maintained. Tree planting should be done using native indigenous species.

All species-rich hedgerows within Compartment 7 would need to be fully surveyed to assess whether they are likely to meet the criteria of an 'important' hedgerow under the Hedgerow Regulations 1997.

## Trees

Consideration should be given to the protection of trees and their root structures within the compartment, following British Standard (BS) 5837 guidelines.

It is recommended that the planting of native trees and shrubs to enhance and strengthen existing tree lines, scrub and woodlands should also be considered.

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## Water

Consideration should also be given to the protection of watercourses in accordance with Environment Agency best practice, with respect to controlling runoff, diffuse and point source pollution and contamination of the water course.

## Protected Species Surveys

In order to ascertain the distribution and abundance of protected species within the compartment, it is recommended that the following protected species surveys may potentially need to be carried out.

There are several trees present within hedgerows and along the linear broadleaf woodland which have the potential to support roosting bats, due to the presence of cracks, splits and rot holes in tree boughs and boles. Therefore these trees should be individually surveyed to ascertain their suitability to support roosting bats.

The compost heaps and organic rubbish piles within the allotments on site have the potential to provide suitable nesting and foraging opportunities for reptiles. It is therefore a recommendation that a dedicated reptile survey be undertaken to ascertain presence/absence. Similarly the grasslands and habitats along the stream course should also be surveyed for the presence of reptiles.

Consideration would always need to be given to the protection of breeding birds which may be potentially present within the mosaic of habitats found throughout the compartment.

The surveys should be undertaken according to Best Practice at the time of commission.

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East Midlands Regional Spatial Strategy 2009 - 2021

Policy 26 - Protecting and Enhancing the Region's Natural and Cultural Heritage Policy 28 - Priorities for Enhancing the Region's Biodiversity Policy 29 - A Regional Target for Increasing Woodland Cover

Leicestershire Environmental Resources Centre.

Websites:

MAGIC www.magic.gov.uk

# **APPENDIX 1**

# PHASE 1 SURVEY FORMS

#### Phase 1 Habitat Survey – LSC Standard Recording Methodology

Rutland County Council 2009

#### WOODLAND – ALL TYPES

Broadleaved - <10%	Coniferous - <10%	Mixed - 10-90% broadleaved or
Conifers	Broadleaved	conifer
Scrub - woody species <5m tall	Carr - willows or alder with a marshy understorey	Open - scattered trees with pasture below (trees <30%)

#### Woodland layers: CANOPY, SHRUB/UNDERSTOREY, FIELD, GROUND

**Recording attributes:** Woodland layers present and % cover, species in each layer, approximate age of trees/shrubs, indicator plant species of ancient woodland, rare plant species, deadwood, leaf litter, bare ground, previous/current woodland management, rides and glades (see grasslands), potential for protected species.

#### **GRASSLAND** – ALL TYPES

Recording attributes: Species, average sward height, previous/current management, bare ground, dead thatch, grazing livestock, indicator species of unimproved grassland and/or impeded drainage (wet grassland), rare plant species, indictor species of soil types (acid/neutral/calcareous), agricultural improvement, ridge and furrow, ant hills, potential for protected species.

#### **RUNNING WATER** – STREAMS AND RIVERS

River/stream zones: WATER CHANNEL, MARGINS, BANKS

Recording attributes: Species in each zone (floating, submerged, emergent, marginal, bankside), flow rate and direction, substrate type, approximate height/width/depth/aspect of each zone, pollution/water quality, previous/current management, potential for protected species.

#### STANDING WATER – PONDS, LAKES, CANALS, DITCHES

Recording attributes: Species (floating, submerged, emergent, marginal, bankside), approximate area and depth of water, approximate height/width/aspect of banks, adjacent terrestrial habitat, presence of pollution/water quality, previous/current management, potential for protected species.

#### TALL HERB AND FERN - BRACKEN, RUDERAL, NON-RUDERAL

Recording attributes: Species, height of vegetation, evidence of nutrient enrichment and/or disturbance, potential for protected species.

#### SWAMP, MARGINAL AND INUNDATION

Recording attributes: Species, height of vegetation, depth of water, substrate, area of habitat type, seasonal variation in water level, evidence of nutrient enrichment, potential for protected species.

#### FEN – ALL TYPES

Recording attributes: Species, height of vegetation, depth of water, substrate., area of habitat type, evidence of nutrient enrichment, obvious water flow (soligenous), impeded drainage (topogenous), previous/current management, potential for protected species.

## SHORT EPHEMERAL/PERENNIAL VEGETATION

Recording attributes: Species, substrate, area of bare ground, area of habitat type, evidence of disturbance, height of vegetation, potential for protected species.

TN (& compartment Nº):	Component ID:	Photograph:	Access (Y/	′N?):
Broad Habitat Classifie	cation(s):			
Habitat Description / P	rotected Species Potential:			
Species List:				
TN (& compartment N°):	Component ID:	Photograph:	Access (Y/	/N?):

Broad Habitat Classi	fication	(c)·			
Dioad Habitat Classi	incation	(5).			
Habitat Description /	Protecte	ed Species Potentia	1:		
Species List:					

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SPECIES-RICH HEDGEROW RECORDING SHEET						
Hedgerow N <sup>o</sup> (s) and Compa	rtment N°:	Photograph:		Access (Y/N?):		
Height (m)		Width (m)		Recently laid or coppiced?		
Hedgerow runs al	ong bridleway, footpath, roa	nd used as a public	path or a	a bridleway open to all traffic?		
Woody species present:					r	
Alder, common (Alnus glutinosa)	Gorse (Ulex europaeus)			Privet, wild (Ligustrum vulgare)		
Apple, crab (Malus sylvestris)	Gorse, western (Ulex ga			Rose, dog- (Rosa canina)		
Ash (Fraxinus excelsior)	Guelder rose (Viburnum	-		Rose, field- (Rosa arvensis)		
Aspen (Populus tremula)	Hawthorn, Common (Cr			Rose (Rosa sp.)		
Beech (Fagus sylvatica)	Hawthorn, Midland (Cra			Rowan (Sorbus aucuparia)		
Birch, downy (Betula pubescens)	Hazel (Corylus avellana	)		Spindle (Euonymus europaeus)		
Birch, silver (Betula pendula)	Holly (Ilex aquifolium)			Sycamore (Acer pseudoplatanus)		
Blackthorn (Prunus spinosa)	Hornbeam (Carpinus be			Wayfaring-tree (Viburnum lantana)		
Broom (Cytisus scoparius)	Lime, large-leaved (Tilia			Willow, grey (Salix cinerea)		
Buckthorn (Rhamnus cathartica)	Maple, field (Acer camp			Willow, goat (Salix caprea)		
Cherry, wild (Prunus avium)	Oak, pedunculate (Quero			Willow (Salix sp.)		
Dogwood (Cornus sanguinea)	Oak, sessile (Quercus pe	traea)				
Elder (Sambucus nigra)	Pear, (Pyrus communis)					
Elm, English (Ulmus procera)	Pine, Scots (Pinus sylves					
Elm, wych (Ulmus glabra)	Plum, wild (Prunus dom	estica)				
Elm, (Ulmus sp.)	Poplar, black (Populus n	igra betulifolia)				
-						
N <sup>o</sup> of woody species:		Is the he	edgerow	recently planted (<30 years)?		
Other climbers present:						
Bramble (Rubus fruticosus agg.)	Honeysuckle (Lonicera	•		Ivy (Hedera helix)		
Traveller's-joy (Clematis vitalba)	White bryony (Bryonia a	lioica)				
Standard trees (Species, fre	quency/number and avera	ige height):				
On average, at least one standard tree per 50m in the hedgerow length?						
	On average, at least	one standard tree	per 50m	in the hedgerow length?		
Ground flora (Dominants a	nd ancient woodland indi	ator cracios).				
Ground nora (Dominants a	nu ancient woouland mui	ator species):				
	More than three wo	odland species in h	nedgerow	(from list of 57 plants)?		
		serund species in i	reageron	(from fist of 57 prairie).		
Other associated features:						
Bank/wall supporting hedger	ow at least one half length?					
Less than 10% gaps in hedgerow length?						
A ditch along at least one half length of the hedgerow?						
A parallel hedge within 15m of the hedgerow?						
		woodlands?				
Number of connections with other hedgerows, ponds and woodlands?						
Other comments (i.e. condition, shape or management of hedgerow):						

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# **APPENDIX 2**

# CITATIONS

**Eyebrook Reservoir SSSI** 

# **APPENDIX 3**

## PHASE 1 HABITAT SURVEY TARGET NOTES

	COMPARTMENT 2		
TN No. /Access	Description	Species	
U2 – 1 FULL ACCESS	Intact Species-Poor HedgerowHawthorn (Crataegus monogyna) dominated hedgerow managed to a height and widthof 2.5m with an under story of ruderal species including common nettle (Urticadioica) and cow parsley (Anthriscus sylvestris).	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), ash (Fraxinus excelsior), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), bramble (Rubus fruticosus agg.), white clover (Trifolium repens), red clover (Trifolium pratense).	
U2 – 2 FULL ACCESS	Semi-Improved GrasslandGrassland appears to be mechanically cut for hay as dead thatch remains with an even sward height throughout (20cm). Grass species include frequent to abundant meadow foxtail (Alopecurus pratensis), Yorkshire fog (Holcus lanatus) and meadow grass spp. (Poa spp.) with locally frequent sweet vernal grass (Anthoxanthum odoratum) and red fescue (Festuca rubra).Herbs occur frequently through the sward and include dandelion (Taraxacum officinale), ribwort plantain (Plantago lanceolata), common chickweed (Stellaria media), meadow buttercup (Ranunculus acris), sorrel (Rumex acetosa) and common vetch (Vicia sativa).	Yorkshire fog (Holcus lanatus), meadow grass spp. (Poa spp.), sweet vernal grass (Anthoxanthum odoratum), dandelion (Taraxacum officinale), greater plantain (Plantago major), ribwort plantain (Plantago lanceolata), common chickweed (Stellaria media), false oat grass (Arrhenatherum elatius), cock's foot (Dactylis glomerata), meadow buttercup (Ranunculus acris), broadleaved dock (Rumex obtusifolius), sorrel (Rumex acetosa), creeping buttercup (Ranunculus repens), fescue spp. (Festuca spp.), bulbous buttercup (Ranunculus bulbosa), daisy (Bellis perennis), perennial rye grass (Lolium perenne), common vetch (Vicia sativa), crested dog's tail (Cynosurus cristatus), meadow foxtail (Alopecurus pratensis), hogweed (Heracleum sphondylium), dove's foot cranesbill (Geranium molle) .	
U2 – 3 FULL ACCESS	Defunct Species-Poor Hedgerow With TreesUnmanaged hawthorn (Crataegus monogyna) dominated hedgerow with frequent gaps to a height and width of 2m. The hedgerow is higher and wider to the west (>3.5m) with a mature ash (Fraxinus excelsior) tree.Ruderal species dominate the hedgerow under story and include cleavers (Galium aparine) and common nettle (Urtica dioica).	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), ivy (Hedera helix), cleavers (Galium aparine), common nettle (Urtica dioica) bramble (Rubus fruticosus agg.).	
U2 – 4 CLOSE DISTANCE	Buildings         A number of redundant farm buildings constructed from brick and wood in poor condition. Many buildings without roofs. No internal access was gained into the buildings.         Low bat potential.		

	COMPARTMENT 2		
TN No. /Access	Description	Species	
U2 – 5 FULL ACCESS	Intact Species-Poor Hedgerow         Tall hawthorn (Crataegus monogyna) dominated hedgerow managed to a height of 4.5m and width of 4m.	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), common nettle (Urtica dioica), cleavers (Galium aparine).	
	Ruderal species dominate the under story and include common nettle (Urtica dioica) and cleavers (Galium aparine).		
U2 – 6 FULL ACCESS	Intact Species-Poor Hedgerow         Hawthorn (Crataegus monogyna) dominated hedgerow with occasional blackthorn (Prunus spinosa) and rose spp. (Rosa spp.). Managed to a height and width of 2m.         Ruderal species dominate the under story and include common nettle (Urtica dioica) and cleavers (Galium aparine).	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), rose spp. (Rosa spp.), blackthorn (Prunus spinosa), common nettle (Urtica dioica), bramble (Rubus fruticosus agg.), cow parsley (Anthriscus sylvestris), white dead nettle (Lamium album).	
U2 – 7 FULL ACCESS	Defunct Species-Poor Hedgerow         Unmanaged hedgerow with mature hawthorn (Crataegus monogyna), elder (Sambucus nigra) shrubs and occasional Elm spp. (Ulmus spp.), 4-5m in height.         Ruderal species dominate the under story and include common nettle (Urtica dioica), garlic mustard (Alliaria petiolata) and cleavers (Galium aparine).	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), holly (Ilex aquifolium), elm spp. (Ulmus spp.), common nettle (Urtica dioica), cleavers (Galium aparine), ivy (Hedera helix), garlic mustard (Alliaria petiolata).	
U2 – 8 FULL ACCESS	Intact Species-Poor Hedgerow         Recently planted hedgerow (>5 years) with hawthorn (Crataegus monogyna), dogwood (Cornus sanguinea) and dog rose (Rosa canina) alongside a new housing estate.         Dandelion (Taraxacum officinale) and false oat grass (Arrhenatherum elatius) dominated the under story.	Hawthorn (Crataegus monogyna), dogwood (Cornus sanguinea), dog rose (Rosa canina), dandelion (Taraxacum officinale) and false oat grass (Arrhenatherum elatius.	

	COMPARTMENT 2		
TN No. /Access	Description	Species	
U2 – 9 FULL ACCESS	Intact Species-Poor Hedgerow         Hawthorn (Crataegus monogyna) dominated hedgerow with occasional elder (Sambucus nigra) and blackthorn (Prunus spinosa) managed to a height of 3m and width of 2.5m.         Ruderal species dominate the under story and include common nettle (Urtica dioica) and cleavers (Galium aparine).	Common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), cleavers (Galium aparine).	
U2 – 10 FULL ACCESS	Semi-Improved GrasslandAn area of semi-improved grassland growing in a minor V-shaped valley at a height of approximately 30-40m at its crest. A small stream runs through the trough of the valley (U2 – 20). The grassland supports Yorkshire fog (Holcus lanatus), fescue spp. (Festuca spp.), sweet vernal grass (Anthoxanthum odoratum), meadow grass spp. (Poa spp.), field woodrush (Luzula campestris) and meadow foxtail (Alopecurus pratensis) with an increasing abundance of tufted hair grass (Deschampsia cespitosa) and soft rush (Juncus effusus) towards the valley trough. Average sward height of 15-20cm.At least four springs run down the edges of the southern valley face dominated by soft rush with occasional cuckooflower (Cardamine pratensis) and great willowherb (Epilobium hirsutum).A number of herbaceous species are present within the grassland sward and include white clover (Trifolium repens), meadow buttercup (Ranunculus acris), lesser celandine (Ranunculus ficaria), common mouse ear (Cerastium fontanum), bulbous buttercup (Ranunculus bulbosa) and thyme leaved speedwell (Veronica serpyllifolia).Species more associated with unimproved grassland communities are present occasionally within the sward and include wild carrot (Daucus carota), yarrow (Achillea millefolium) and meadow vetchling (Lathyris pratensis).	Yorkshire fog (Holcus lanatus), sweet vernal grass (Anthoxanthum odoratum), white clover (Trifolium repens), creeping buttercup (Ranunculus repens), meadow buttercup (Ranunculus acris), lesser celandine (Ranunculus ficaria), cuckooflower (Cardamine pratensis), fescue spp. (Festuca spp.), soft rush (Juncus effusus), tufted hair grass (Deschampsia cespitosa), cock's foot (Dactylis glomerata), meadow foxtail (Alopecurus pratensis), common mouse ear (Cerastium fontanum), sorrel (Rumex acetosa), dandelion (Taraxacum officinale), field woodrush (Luzula campestris), wild carrot (Daucus carota), yarrow (Achillea millefolium), meadow vetchling (Lathyris pratensis), bulbous buttercup (Ranunculus bulbosa), perennial rye grass (Lolium perenne), thyme leaved speedwell (Veronica serpyllifolia), meadow grass spp. (Poa spp.).	
U2 – 11 FULL ACCESS	Defunct Species-Poor Hedgerow With Trees Hawthorn (Crataegus monogyna) dominated hedgerow unmanaged and overgrown to	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), common nettle (Urtica dioica), white dead nettle (Lamium album), cleavers (Galium aparine), garlic mustard (Alliaria petiolata).	

	COMPARTMENT 2		
TN No. /Access	Description	Species	
	a height of 3-4m with frequent gaps. A mature ash (Fraxinus excelsior) is present with potential for supporting roosting bats.		
	Ruderal species dominate the under story and include common nettle (Urtica dioica), garlic mustard (Alliaria petiolata) and cleavers (Galium aparine).		
U2 – 12 FULL ACCESS	Defunct Species-Poor Hedgerow With Trees           Hawthorn (Crataegus monogyna) dominated hedgerow unmanaged and overgrown to a height of 3-4m with gaps throughout. The hedgerow is overgrown with bramble (Rubus fruticosus agg.) in parts. Occasional semi-mature trees are present within the hedgerow.	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), ash (Fraxinus excelsior), common nettle (Urtica dioica), white dead nettle (Lamium album), cleavers (Galium aparine), ivy (Hedera helix).	
	Ruderal species dominate the under story and include common nettle (Urtica dioica) and cleavers (Galium aparine).		
U2 – 13 FULL ACCESS	Defunct Species-Poor Hedgerow With TreesHawthorn (Crataegus monogyna) dominated hedgerow unmanaged and overgrown to a height of 3-4m with gaps throughout. The hedgerow is overgrown with bramble (Rubus fruticosus agg.) in parts. Occasional semi-mature trees are present within the hedgerow.Ruderal species dominate the under story and include common nettle (Urtica dioica) and cleavers (Galium aparine).	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), ash (Fraxinus excelsior), common nettle (Urtica dioica), white dead nettle (Lamium album), cleavers (Galium aparine), ivy (Hedera helix).	
U2 – 14 FULL ACCESS	Semi-Improved GrasslandAn area of semi-improved grassland growing in a minor V-shaped valley at a height of approximately 30-40m at its crest. A small stream runs through the trough of the valley (U2 – 20). The grassland supports Yorkshire fog (Holcus lanatus), fescue spp. (Festuca spp.), sweet vernal grass (Anthoxanthum odoratum), meadow grass spp. (Poa spp.), field woodrush (Luzula campestris) and meadow foxtail (Alopecurus pratensis) with an increasing abundance of tufted hair grass (Deschampsia cespitosa) and soft rush (Juncus effusus) towards the valley trough. Average sward height of 15-20cm.	Yorkshire fog (Holcus lanatus), sweet vernal grass (Anthoxanthum odoratum), white clover (Trifolium repens), creeping buttercup (Ranunculus repens), meadow buttercup (Ranunculus acris), lesser celandine (Ranunculus ficaria), cuckooflower (Cardamine pratensis), fescue spp. (Festuca spp.), soft rush (Juncus effusus), tufted hair grass (Deschampsia cespitosa), cock's foot (Dactylis glomerata), meadow foxtail (Alopecurus pratensis), common mouse ear (Cerastium fontanum), sorrel (Rumex acetosa), dandelion (Taraxacum officinale), field woodrush (Luzula campestre), wild carrot (Daucus carota),	

	COMPARTMENT 2		
TN No. /Access	Description	Species	
	A wide wet flush runs down the southern valley face and supports an abundance of floating sweet grass (Glyceria fluitans) with occasional cuckooflower (Cardamine pratensis), great willowherb (Epilobium hirsutum), brooklime (Veronica beccabunga) and wavy bittercress (Cardamine flexuosa). A number of herbaceous species are present within the grassland sward and include white clover (Trifolium repens), meadow buttercup (Ranunculus acris), lesser celandine (Ranunculus ficaria), common mouse ear (Cerastium fontanum), bulbous buttercup (Ranunculus bulbosa) and thyme leaved speedwell (Veronica serpyllifolia). Species more associated with unimproved grassland communities are present rarely within the sward and include wild carrot (Daucus carota), yarrow (Achillea millefolium) and meadow vetchling (Lathyris pratensis).	yarrow (Achillea millefolium), meadow vetchling (Lathyris pratensis), bulbous buttercup (Ranunculus bulbosa), perennial rye grass (Lolium perenne), thyme leaved speedwell (Veronica serpyllifolia), meadow grass spp. (Poa spp.), brooklime (Veronica beccabunga), wavy bittercress (Cardamine flexuosa), floating sweet grass (Glyceria fluitans), great willowherb (Epilobium hirsutum).	
U2 – 15 FULL ACCESS	Scattered Broadleaf WoodlandMature balsam poplar spp. trees in a field corner with tall ruderal vegetation belowincluding cock's foot (Dactylis glomerata), common chickweed (Stellaria media),common nettle (Urtica dioica), false oat grass (Arrhenatherum elatius), with frequentlesser celandine (Ranunculus ficaria).		
U2 – 16 FULL ACCESS	Defunct Species-Poor Hedgerow With TreesHawthorn (Crataegus monogyna) dominated hedgerow unmanaged and overgrown to a height of 3-4m with gaps throughout. The hedgerow is overgrown with bramble (Rubus fruticosus agg.) in parts. Several semi-mature to mature ash (Fraxinus excelsior) trees are present within the hedgerow with potential for supporting roosting bats.Ruderal species dominate the under story and include common nettle (Urtica dioica) and cleavers (Galium aparine).	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), ash (Fraxinus excelsior), common nettle (Urtica dioica), white dead nettle (Lamium album), cleavers (Galium aparine), ivy (Hedera helix).	

	COMPARTMENT 2	
TN No. /Access	Description	Species
U2 – 17 FAR DISTANCE	Semi-Improved Grassland         No direct access to field. Likely to be similar to U2 – 10/14.	
U2 – 18 FAR DISTANCE	Defunct Species-Poor Hedgerow With TreesHedgerow viewed from 30-40m distance with binoculars. Much of the original hedgeline has been removed with only occasional hawthorn (Crataegus monogyna) shrubsremaining. A mature ash (Fraxinus excelsior) and sycamore (Acer pseudoplatanus) ispresent in the hedgerow.	Hawthorn (Crataegus monogyna), a mature ash (Fraxinus excelsior) and sycamore (Acer pseudoplatanus).
U2 – 19 FAR DISTANCE	Buildings           Buildings viewed from 30-40m distance with binoculars. Several small breeze block stables with corrugated metal roof. Appear to be in good condition. Likely to be of poor bat potential.	
U2 – 20 FULL ACCESS	Running Water With MarshNarrow stream running along the trough of a minor V-shaped valley running through grasslands U2 – 10, 14 & 17. The stream is culverted under a housing estate to the west.The stream channel is on average 1m wide and up to 30cm in depth with a sluggish to slow flow. The stream often forms only damp ground with no visible channel.An area of marsh surrounds the stream in a narrow linear belt varying from 10-25m in width. The marsh supports abundant soft rush (Juncus effusus) with frequent to occasional tufted hair grass (Deschampsia cespitosa), floating sweet grass (Glyceria fluitans), cuckooflower (Cardamine pratensis), Yorkshire fog (Holcus lanatus) and wavy bittercress (Cardamine flexuosa).	Soft rush (Juncus effusus), tufted hair grass (Deschampsia cespitosa), cuckooflower (Cardamine pratensis), Yorkshire fog (Holcus lanatus), floating sweet grass (Glyceria fluitans), wavy bittercress (Cardamine flexuosa), broadleaved dock (Rumex obtusifolius), lesser celandine (Ranunculus ficaria), dandelion (Taraxacum officinale), creeping bent (Agrostis stolonifera).

	COMPARTMENT 2		
TN No. /Access	Description	Species	
U2 – 21 FULL ACCESS	Semi-Improved GrasslandArea of grassland on the southern crest and plateau of a minor V-shaped valley, above grassland U2 – 10. Sward height of 30-40cm.Grasses are abundant throughout the sward and supports an abundance of meadow foxtail (Alopecurus pratensis) and Yorkshire fog (Holcus lanatus) with occasional meadow grass spp. (Poa spp.), sweet vernal grass (Anthoxanthum odoratum), red fescue (Festuca rubra) and cock's foot (Dactylis glomerata).Occasional herbs are present in the sward and include meadow buttercup (Ranunculus acris), lesser celandine (Ranunculus ficaria), sorrel (Rumex acetosa), broadleaved dock (Rumex obtusifolius), bulbous buttercup (Ranunculus bulbosa) and field speedwell (Veronica persica).Several wet flushes run down the southern edge of the grassland and are dominated by floating sweet grass (Glyceria fluitans).	Meadow foxtail (Alopecurus pratensis), Yorkshire fog (Holcus lanatus), cock's foot (Dactylis glomerata), meadow grass spp. (Poa spp.), sweet vernal grass (Anthoxanthum odoratum), bramble (Rubus fruticosus agg.), fescue spp. (Festuca spp.), cock's foot (Dactylis glomerata), sorrel (Rumex acetosa), lesser celandine (Ranunculus ficaria), meadow buttercup (Ranunculus acris), bulbous buttercup (Ranunculus bulbosa), broadleaved dock (Rumex obtusifolius), field speedwell (Veronica persica).	
U2 – 22 FULL ACCESS	Defunct Species-Poor Hedgerow           Hawthorn (Crataegus monogyna) dominated hedgerow with extensive gaps along the edge of residential houses, closely managed to a height and width of 1.5-2m.	Hawthorn (Crataegus monogyna).	
U2 – 23 FULL ACCESS	Defunct Species-Poor HedgerowUnmanaged and overgrown hawthorn (Crataegus monogyna) hedgerow 3-5m in height with occasional semi-mature re-growth of ash (Fraxinus excelsior) from coppiced stools.The hedgerow is on a sloping road bank to the east with an abundance of ruderal vegetation including cow parsley (Anthriscus sylvestris), cleavers (Galium aparine), ivy (Hedera helix) and barren brome (Bromus sterilis).	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), cow parsley (Anthriscus sylvestris), cleavers (Galium aparine), common nettle (Urtica dioica), ivy (Hedera helix), barren brome (Bromus sterilis), white dead nettle (Lamium album), bramble (Rubus fruticosus agg.).	

	COMPARTMENT 3		
TN No. /Access	Description	Species	
U3 – 1 CLOSE DISTANCE	Building         Thatched cricket pavilion on the edge of a cricket ground. Potential for bat roosting.         No access was gained into the interior of the building.		
U3 – 2 FULL ACCESS	Defunct Species-Poor Hedgerow         Hawthorn (Crataegus monogyna) dominated hedgerow closely managed to a height and width of 1.5m alongside a cricket pitch. Ruderal species dominate the under story and include white dead nettle (Lamium album) and cow parsley (Anthriscus sylvestris).         A line of semi-mature lime spp. (Tilia spp.) and horse chestnut (Aesculus hippocastanum) offset from the hedge line on the margins of the cricket pitch.	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), lime spp. (Tilia spp.), horse chestnut (Aesculus hippocastanum), white dead nettle (Lamium album), cow parsley (Anthriscus sylvestris), common nettle (Urtica dioica), cleavers (Galium aparine).	
U3 – 3 PARTAL ACCESS	Amenity Grassland         Only part of the grassland could be accessed. A well maintained cricket pitch with an exceptionally short sward (>1cm) likely to support grass species typical of an amenity mix.         A number of semi-mature trees have been planted around the margins of the cricket pitch and include whitebeam (Sorbus aria), sycamore (Acer pseudoplatanus) and lime spp. (Tilia spp.).	Whitebeam (Sorbus aria), sycamore (Acer pseudoplatanus), lime spp. (Tilia spp.).	
U3 – 4 FULL ACCESS	Defunct Species-Poor HedgerowHawthorn (Crataegus monogyna) dominated hedgerow on the edge of a new housing estate with several wide gaps. Managed to a height of 3m and width of 3.5m. Occasional semi-mature wild cherry (Prunus avium) and ash (Fraxinus excelsior) trees are present in the hedgerow.The hedgerow under story is dominated by ruderal species such as common nettle (Urtica dioica) and cow parsley (Anthriscus sylvestris).	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), wild cherry (Prunus avium), ash (Fraxinus excelsior).	

	COMPARTMENT 3		
TN No. /Access	Description	Species	
U3 – 5 CLOSE DISTANCE	Plantation Broadleaf Woodland         Small copse of woodland on the edge of a new housing estate. Could not be directly accessed.         The woodland appears to comprise of mature ash (Fraxinus excelsior) and lime spp. (Tilia spp.) trees with a scattered but locally dominant hawthorn (Crataegus monogyna) shrub layer. The field layer appears to be dominated by ivy (Hedera helix), as are many of the tree boles and crowns. More open areas of the woodland support locally abundant common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris) and garlic mustard (Alliaria petiolata).	Lime spp. (Tilia spp.), ash (Fraxinus excelsior), hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), cow parsley (Anthriscus sylvestris), ivy (Hedera helix), garlic mustard (Alliaria petiolata), common nettle (Urtica dioica).	
U3 – 6 CLOSE DISTANCE	Defunct Species-Poor HedgerowHawthorn (Crataegus monogyna) hedgerow which appears to be generally unmanaged with several wide gaps. The hedgerow is approximately 3-4m in height. Frequent young ash (Fraxinus excelsior) trees are locally abundant within the hedgerow which is re-growth from semi-mature coppiced stools. One mature ash tree is present within the hedgerow which provides potential for roosting bats.The hedgerow under story is dominated by ruderal species such as common nettle (Urtica dioica) and cow parsley (Anthriscus sylvestris).	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), cleavers (Galium aparine), white dead nettle (Lamium album).	
U3 – 7 FAR DISTANCE	Building         Could only be viewed from a 30m distance. Small pre-fabricated building within the cricket ground.         Negligible potential for roosting bats.		

	Compartment 4		
TN No. /Access	Description	Species	
U4 – 1 FULL ACCESS	Running WaterStream with medium-fast flowing, clear water to a depth of ~10cm. Banks are steep in places (to ~50°) but flatter in others, the top of the bank is ~1m above the surface of the water. The substrate is fine gravel and clay. Some aquatics including fool's watercress (Apium nodiflorum) and brooklime (Veronica beccabunga) were present along with marginals yellow flag iris (Iris pseudacorus) and pendulous sedge (Carex pendula). There are some semi-mature/mature willow (Salix spp.) associated with the stream. The strip of dense scrub with scattered broadleaf trees (U4 – 2) grows around this stream. Some artificial debris was present, especially close to the footpath.	Fool's watercress (Apium nodiflorum), creeping buttercup (Ranunculus repens), sweet grass (Glyceria spp.), brooklime (Veronica beccabunga), yellow flag iris (Iris pseudacorus), pendulous sedge (Carex pendula).	
U4 – 2 FULL ACCESS	Dense Scrub With Scattered Broadleaf Trees Strip of dense scrub running along the stream (U4 – 1) with abundant semi-mature and mature willow (Salix spp.) with hawthorn (Crataegus monogyna) and elder (Sambucus nigra) occasional. There are areas of dense bramble (Rubus fruticosus agg.) and raspberry (Rubus idaeus) scrub. The ground layer contains species typical of shady places including ramsons (Allium ursinum), Lords and Ladies (Arum maculatum) and lesser celandine (Ranunculus ficaria) as well as ruderals such as dock (Rumex spp.), ivy (Hedera helix) and common nettle (Urtica dioica) as well as some bracken (Pteridium aquilinum). Meadowsweet (Filipendula ulmaria) and rush (Juncus spp.) are present where the ground is damper.	Ground elder (Aegopodium podagraria), hawthorn (Crataegus monogyna), willow (Salix spp.), snowberry (Symphoricarpos albus), ivy (Hedera helix), cleavers (Galium aparine), bramble (Rubus fruticosus agg.), cow parsley (Anthriscus sylvestris), wavy bittercress (Cardamine flexuosa), lesser celandine (Ranunculus ficaria), bracken (Pteridium aquilinum), rosebay willowherb (Epilobium angustifolium), dog's mercury (Mercurialis perennis), Lords and Ladies (Arum maculatum), hogweed (Heracleum sphondylium), Cock's foot (Dactylis glomerata), false oat grass (Arrhenatherum elatius), Yorkshire fog (Holcus lanatus), meadowsweet (Filipendula ulmaria), broadleaf dock (Rumex obtusifolius), bindweed (Convolvulus spp.), horsetail (Equisetum spp.), dock (Rumex spp.), soft rush (Juncus effusus), white dead-nettle (Lamium album), elder (Sambucus nigra), ramsons (Allium ursinum), ash (Fraxinus excelsior), ground ivy (Glechoma hederacea), cuckooflower (Cardamine pratensis), field speedwell (Veronica arvense).	
U4 – 3 FULL ACCESS	Semi-Improved Grassland           Tussocky semi-improved grassland on a slope which runs uphill north-south with dense thatch in places. Grasses such as false oat grass (Arrhenatherum elatius), creeping bent (Agrostis stolonifera) and red fescue (Festuca rubra) dominate for much of the field but there are frequent ruderals which become locally dominant towards the top of the bank	Yorkshire fog (Holcus lanatus), tufted hair-grass (Deschampsia cespitosa), false oat grass (Arrhenatherum elatius), crested dog's-tail (Cynosurus cristatus), lesser celandine (Ranunculus ficaria), bramble (Rubus fruticosus agg.), creeping thistle (Cirsium arvense), common nettle (Urtica dioica), sorrel (Rumex acetosa), bramble (Rubus fruticosus agg.), cleavers (Galium aparine), dandelion (Taraxacum	

	Compartment 4		
TN No. /Access	Description	Species	
	including common nettle (Urtica dioica), cleavers (Galium aparine) and cow parsley (Anthriscus sylvestris). There is abundant sorrel (Rumex acetosa) in places with other herbaceous species including greater stitchwort (Stellaria holostea), cuckooflower (Cardamine pratensis), wild carrot (Daucus carota) and ground ivy (Glechoma hederacea). There are patches of soft rush (Juncus effusus) in the field where there are wet flushes, here tufted hair-grass (Deschampsia cespitosa) and meadowsweet (Filipendula ulmaria) are also found as well as close to the stream (U4 – 1). The field was un-grazed at the time of survey and appears to have been left unmanaged in the recent past. There are two mature ash (Fraxinus excelsior) and 1 mature horse chestnut (Aesculus hippocastanum) present as field trees.	officinale agg.), tufted hair-grass (Deschampsia cespitosa), cow parsley (Anthriscus sylvestris), broadleaf dock (Rumex obtusifolius), soft rush (Juncus effusus), cuckooflower (Cardamine pratensis), creeping buttercup (Ranunculus repens), perennial rye grass (Lolium perenne), meadow foxtail (Alopecurus pratensis), ribwort plantain (Plantago lanceolata), common mouse-ear (Cerastium fontanum), yarrow (Achillea millefolium), bulbous buttercup (Ranunculus bulbosa), wild carrot (Daucus carota), greater stitchwort (Stellaria holostea), ground ivy (Glechoma hederacea), broad leaved plantain (Plantago major), Lords and Ladies (Arum maculatum), horsetail (Equisetum spp.), bird's foot trefoil (Lotus corniculatus), meadowsweet (Filipendula ulmaria), white dead-nettle (Lamium album), bent grass (Agrostis spp.), field speedwell (Veronica persica), marestail (Hippuris spp.).	
U4 – 4 FULL ACCESS	Tall Ruderal Herb And Fern With Scattered Scrub.Semi-improved grassland as $(U4 - 3)$ but with dense ruderal cover, found towards the top of the hill described in $(U4 - 3)$ . Common nettle (Urtica dioica) dominates over large areas where bramble (Rubus fruticosus agg.) scrub is also present. Some elder (Sambucus nigra) and ash (Fraxinus excelsior) saplings are present with further scrub encroaching from the hedgerow $(U4 - 7)$ along its length. There is a mature ash in the south—eastern corner. There are some areas of woodland species beneath the shade of scrub and trees including bluebell (Hyacinthoides non-scripta), Lords and Ladies (Arum maculatum) and wood avens (Geum urbanum). There is a wet flush within this area, close to the stream $(U4 - 1)$ where hard rush (Juncus inflexus), soft rush (Juncus effusus), common sedge (Carex nigra) and tufted hair-grass (Deschampsia cespitosa) were recorded.	False oat grass (Arrhenatherum elatius), broad-leaved willowherb (Epilobium montanum), broadleaf dock (Rumex obtusifolius), lesser celandine (Ranunculus ficaria), spear thistle (Cirsium vulgare), creeping thistle (Cirsium arvense), soft rush (Juncus effusus), hard rush (Juncus inflexus), creeping buttercup (Ranunculus repens), cleavers (Galium aparine), sorrel (Rumex acetosa), Yorkshire fog (Holcus lanatus), ash (Fraxinus excelsior), red fescue (Festuca rubra), white clover (Trifolium repens), common chickweed (Stellaria media), dandelion (Taraxacum officinale agg.), crested dog's-tail (Cynosurus cristatus), cuckooflower (Cardamine pratensis), creeping buttercup (Ranunculus repens), nipplewort (Lapsana communis), raspberry (Rubus idaeus), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), ivy leaved speedwell (Veronica hederifolia), white dead-nettle (Lamium album), elder (Sambucus nigra), false oat grass (Arrhenatherum elatius), Cock's foot (Dactylis glomerata), bramble (Rubus fruticosus agg.), Lords and Ladies (Arum maculatum), ground ivy (Glechoma hederacea), bluebell (Hyacinthoides non- scripta), wood avens (Geum urbanum), common sedge (Carex nigra), tufted hair-grass (Deschampsia cespitosa).	

	Compartment 4		
TN No. /Access	Description	Species	
U4 – 5 FULL ACCESS	Defunct Species-Poor Hedgerow With Trees Hawthorn (Crataegus monogyna) dominated line of shrubs with some ash (Fraxinus excelsior) and cherry (Prunus spp.) as standards. This hedgerow is not maintained, large gaps are present and the components have grown to 8m tall. Ruderal species were recorded beneath including common nettle (Urtica dioica), cleavers (Galium aparine) and broad-leaved willowherb (Epilobium montanum) as well as lesser celandine (Ranunculus ficaria).	Hawthorn (Crataegus monogyna), cherry (Prunus spp.), common nettle (Urtica dioica), cleavers (Galium aparine), ground ivy (Glechoma hederacea), lesser celandine (Ranunculus ficaria), broad-leaved willowherb (Epilobium montanum), blackthorn (Prunus spinosa), ash (Fraxinus excelsior), bramble (Rubus fruticosus agg.), elm (Ulmus spp.), elder (Sambucus nigra).	
U4 – 6 CLOSE DISTANCE	Defunct Species-Poor Hedgerow With Trees Gappy, hawthorn (Crataegus monogyna) and elder (Sambucus nigra) co-dominated hedgerow with one semi-mature ash (Fraxinus excelsior) standard. The hedge is cut to 3m high and 2m wide but appears not to have been maintained recently. The ground layer is largely ruderal including common nettle (Urtica dioica), cleavers (Galium aparine) and white dead-nettle (Lamium album).	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), ivy (Hedera helix), bramble (Rubus fruticosus agg.), common nettle (Urtica dioica), white dead-nettle (Lamium album), ground ivy (Glechoma hederacea), cleavers (Galium aparine), broadleaf dock (Rumex obtusifolius), cow parsley (Anthriscus sylvestris).	
U4 – 7 FULL ACCESS	Defunct Species-Poor Hedgerow With Trees Hawthorn (Crataegus monogyna) and elm (Ulmus spp.) dominated hedgerow with frequent elder (Sambucus nigra) which is tall and unmanaged to the west (where is is ~8m tall), but cut to ~5m high and 3m wide to the east. Three mature ash (Fraxinus excelsior) standards are present, one of which is ivy (Hedera helix) clad; younger ash also present. The ground layer is largely ruderal and grass including common nettle (Urtica dioica), white dead-nettle (Lamium album), hogweed (Heracleum sphondylium), false oat grass (Arrhenatherum elatius) and Cock's foot (Dactylis glomerata). The mature ash standards have the potential to provide roosting habitat for bats.	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), common nettle (Urtica dioica), white dead-nettle (Lamium album), ground ivy (Glechoma hederacea), hogweed (Heracleum sphondylium), false oat grass (Arrhenatherum elatius), Yorkshire fog (Holcus lanatus), Cock's foot (Dactylis glomerata), wavy bittercress (Cardamine flexuosa), garlic mustard (Alliaria petiolata), elm (Ulmus spp.), red dead-nettle (Lamium purpureum), bramble (Rubus fruticosus agg.), ivy (Hedera helix), cleavers (Galium aparine), ash (Fraxinus excelsior), burdock (Arctium lappa).	
U4 – 8 FULL ACCESS	<u>Defunct Species-Poor Hedgerow</u> Defunct hedgeline with large gaps, the components now growing as shrubs rather than forming a cohesive entity. Hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) dominate with bramble (Rubus fruticosus agg.) scrub extending into the field (U4 - 3). The shrubs are 10-12m high. The ground layer is largely common nettle	Hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), elder (Sambucus nigra), bramble (Rubus fruticosus agg.), common nettle (Urtica dioica), cleavers (Galium aparine).	

	Compartment 4		
TN No. /Access	Description	Species	
	(Urtica dioica) with some cleavers (Galium aparine).		
U4 – 9 FULL ACCESS	Defunct Species-Poor Hedgerow With TreesVery leggy, hawthorn (Crataegus monogyna) and elder (Sambucus nigra) line of shrubs/trees, unmanaged for a long time, now to 10m tall. Ground layer is largely ivy (Hedera helix) with bramble (Rubus fruticosus agg.) and common nettle (Urtica dioica) also. This scrub extends into the field (U4 – 4). Several mature ash (Fraxinus excelsior) standards are present as well as a single mature pedunculate oak (Quercus robur) standard.	Elder (Sambucus nigra), hawthorn (Crataegus monogyna), ivy (Hedera helix), lesser celandine (Ranunculus ficaria), bramble (Rubus fruticosus agg.), common nettle (Urtica dioica), ash (Fraxinus excelsior), pedunculate oak (Quercus robur).	
U4 – 10 FULL ACCESS	Defunct Species-Poor Hedgerow With TreesMostly elm (Ulmus spp.) hedgerow which is possibly cut on the off-site side which is residential but unmaintained on site side. Dense bramble (Rubus fruticosus agg.) scrub extends into the largely ruderal verge with common nettle (Urtica dioica), hogweed (Heracleum sphondylium) and cow parsley (Anthriscus sylvestris). There are two mature ash (Fraxinus excelsior), two dead standing trees and one ornamental laburnum (Laburnum spp.).	Cherry (Prunus spp.), bramble (Rubus fruticosus agg.), common nettle (Urtica dioica), ramsons (Allium ursinum), hogweed (Heracleum sphondylium), cow parsley (Anthriscus sylvestris), dandelion (Taraxacum officinale agg.), elm (Ulmus spp.), ash (Fraxinus excelsior), ivy (Hedera helix), ground ivy (Glechoma hederacea), laburnum (Laburnum spp.), rose (Rosa spp.).	
U4 – 11 FULL ACCESS	Tall Ruderal Herb And Fern With Dense Scrub         Edge of an area of dense scrub/semi-natural broadleaf woodland which is offsite. Along the eastern boundary of this area is dense scrub and trees including elder (Sambucus nigra), ash (Fraxinus excelsior) and sycamore (Acer pseudoplatanus) whilst bramble (Rubus fruticosus agg.) and common nettle (Urtica dioica) dominate along the northern boundary.	Bramble (Rubus fruticosus agg.), common nettle (Urtica dioica), rosebay willowherb (Epilobium angustifolium), elder (Sambucus nigra), creeping thistle (Cirsium arvense), broadleaf dock (Rumex obtusifolius), ash (Fraxinus excelsior), cleavers (Galium aparine), hawthorn (Crataegus monogyna), rose (Rosa spp.), sycamore (Acer pseudoplatanus), ivy (Hedera helix).	
U4 – 12 FULL ACCESS	Defunct Species-Poor Hedgerow With Trees With Tall Ruderal Herb And Fern Verge.           There is a hawthorn (Crataegus monogyna) hedgerow running along the field with ivy (Hedera helix). Large mature ash (Fraxinus excelsior) set back on the verge which is a steep bank, 3m across with a 3m drop to the track. It is open in places with shade loving species dominating including red campion (Silene dioica), Lords and Ladies (Arum	Ash (Fraxinus excelsior), common nettle (Urtica dioica), ivy (Hedera helix), cleavers (Galium aparine), dock (Rumex spp.), ramsons (Allium ursinum), elder (Sambucus nigra), dock (Rumex spp.), red campion (Silene dioica), green alkanet (Pentaglottis sempervirens), foxglove (Digitalis purpurea), blackthorn (Prunus spinosa), lesser celandine (Ranunculus ficaria), Lords and Ladies (Arum maculatum), burdock	

Compartment 4		
TN No. /Access	Description	Species
	maculatum), lesser celandine (Ranunculus ficaria) and foxglove (Digitalis purpurea). Some ruderals including cleavers (Galium aparine), common nettle (Urtica dioica) and cow parsley (Anthriscus sylvestris) are also present. The hedge is gappy and is trimmed to 1.5m high and 1.5m wide.	(Arctium lappa), white dead-nettle (Lamium album), hawthorn (Crataegus monogyna), cow parsley (Anthriscus sylvestris), common ragwort (Senecio jacobaea), field forget-me-not (Myosotis arvensis), rose (Rosa spp.), sycamore (Acer pseudoplatanus).
U4 – 13 FULL ACCESS	Defunct Species-Poor Hedgerow With Dense Scrub.         A double hedgerow around a defunct old trackway which is now dense scrub. The hedge on the north is ash (Fraxinus excelsior) with old laid trees and some elder (Sambucus nigra) present, maintained as a hedgerow to the west but left as unmanaged trees to the east. On the south is an unmanaged hawthorn (Crataegus monogyna) hedgerow. The dense scrub in the middle is largely elder (Sambucus nigra), hawthorn, rose (Rosa spp.) and common nettle (Urtica dioica).	Ash (Fraxinus excelsior), elder (Sambucus nigra), common nettle (Urtica dioica), hogweed (Heracleum sphondylium), ivy (Hedera helix), white dead-nettle (Lamium album), false oat grass (Arrhenatherum elatius), hawthorn (Crataegus monogyna), rose (Rosa spp.), cow parsley (Anthriscus sylvestris), bramble (Rubus fruticosus agg.), Lords and Ladies (Arum maculatum), lesser celandine (Ranunculus ficaria).
U4 – 14 FULL ACCESS	Improved Grassland With Scattered Broadleaf TreesThis is an improved grassland which was sheep grazed at the time of survey. From the stream (U4 – 1), the field slopes uphill from north-south to a peak along the line of the hedgerow (U4 – 7), here is begins to slope gently down to the stream (U4 – 17) at the southern boundary. The slope immediately to the north of the ridge is steep, ~75° but is much more shallow closer to the base. Perennial rye grass (Lolium perenne) dominated but other grasses including false oat grass (Arrhenatherum elatius), Cock's foot (Dactylis glomerata) and Yorkshire fog (Holcus lanatus) were also recorded. The sward was ~5cm in height with herbaceous species present including white clover (Trifolium repens) and creeping buttercup (Ranunculus repens) as well as ruderals such as common nettle (Urtica dioica) and spear thistle (Cirsium vulgare), the latter of which is found sparsely throughout the sward. There are infrequently occurring small anthills. Patches of rush are present occasionally where the ground is damper. Several mature trees are present throughout the grassland including ash (Fraxinus excelsior), horse chestnut (Aesculus hippocastanum) and hawthorn (Crataegus monogyna).One of the ash trees appears to have been struck by lightning in the past and provides good potential habitat for breeding bats, as to a lesser extent do the other mature trees	Perennial rye grass (Lolium perenne), bent grass (Agrostis spp.), meadow grass (Poa spp.), white clover (Trifolium repens), creeping buttercup (Ranunculus repens), bulbous buttercup (Ranunculus bulbosa), lesser celandine (Ranunculus ficaria), Yorkshire fog (Holcus lanatus), Cock's foot (Dactylis glomerata), false oat grass (Arrhenatherum elatius), red fescue (Festuca rubra), common nettle (Urtica dioica), creeping thistle (Cirsium arvense), spear thistle (Cirsium vulgare), sweet vernal grass (Anthoxanthum odoratum), tufted hair-grass (Deschampsia cespitosa), soft rush (Juncus effusus), horse chestnut (Aesculus hippocastanum), ash (Fraxinus excelsior), common chickweed (Stellaria media), hard rush (Juncus inflexus), meadow foxtail (Alopecurus pratensis), cherry (Prunus spp.), common mouse-ear (Cerastium fontanum), ivy (Hedera helix), daisy (Bellis perennis), thyme leaved speedwell (Veronica serpyllifolia).

	Compartment 4		
TN No. /Access	Description	Species	
U4 – 15 FULL ACCESS	Marsh         Damp area of the improved grassland field (U4 – 14) where soft rush (Juncus effusus) and hard rush (Juncus inflexus) dominate on a slope leading down to the stream (U4 – 1). Cuckooflower (Cardamine pratensis) and creeping buttercup (Ranunculus repens) were frequently occurring herbaceous species along with meadow buttercup (Ranunculus acris) and dandelion (Taraxacum officinale agg.). The grasses tufted hairgrass (Deschampsia cespitosa), Yorkshire fog (Holcus lanatus) and sweet vernal grass (Anthoxanthum odoratum) were also present.	Tufted hair-grass (Deschampsia cespitosa), soft rush (Juncus effusus), hard rush (Juncus inflexus), creeping buttercup (Ranunculus repens), lesser celandine (Ranunculus ficaria), meadow buttercup (Ranunculus acris), cuckooflower (Cardamine pratensis), sweet vernal grass (Anthoxanthum odoratum), dandelion (Taraxacum officinale agg.), Yorkshire fog (Holcus lanatus), meadow foxtail (Alopecurus pratensis), common nettle (Urtica dioica), honeysuckle (Lonicera spp.).	
U4 – 16 FULL ACCESS	Dense Scrub With Scattered Broadleaf TreesDense scrub running along the fence between the field (U4 – 14) and the industrial estate to the north. Ash (Fraxinus excelsior) trees were frequent with hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) as the most abundant shrub species. Some ornamentals including snowberry (Symphoricarpos albus) and portuguese laurel (Prunus lusitanica) are also present. This is not a hedge and is unmanaged, growing to between 5-12m. There is a mature ash which has bat potential. The ground layer is largely bare ground and ruderals including white dead-nettle (Lamium album) and ivy (Hedera helix) with some ground ivy (Glechoma hederacea) and Lords and Ladies (Arum maculatum).	Snowberry (Symphoricarpos albus), white dead-nettle (Lamium album), bramble (Rubus fruticosus agg.), hawthorn (Crataegus monogyna), ground ivy (Glechoma hederacea), red fescue (Festuca rubra), dandelion (Taraxacum officinale agg.), common vetch (Vicia sativa), blackthorn (Prunus spinosa), ivy (Hedera helix), holly (Ilex aquifolium), cherry (Prunus spp.), Lords and Ladies (Arum maculatum), dog's mercury (Mercurialis perennis), common nettle (Urtica dioica), rose (Rosa spp.), ash (Fraxinus excelsior), portuguese laurel (Prunus lusitanica), field speedwell (Veronica persica).	
U4 – 17 FULL ACCESS	Running WaterShallow stream with clear water flowing at a medium rate. Vegetation covers the surface of the water in places, with aquatics including sweet grass (Glyceria spp.), brooklime (Veronica beccabunga) and fool's watercress (Apium nodiflorum), whilst the water is unobstructed in others. Some marginals including hard rush (Juncus inflexus) and soft rush (Juncus effusus) are present. To the east, the water follows a channel ~0.5m high and wide whilst the banks are flatter, wider and more open. Mature willow (Salix spp.) are growing associated with the stream with scrub and ruderals in places as described in (U4a - 20, U4a - 25 and U4a - 31).	Hard rush (Juncus inflexus), soft rush (Juncus effusus), fool's watercress (Apium nodiflorum), creeping buttercup (Ranunculus repens), bulbous buttercup (Ranunculus bulbosa), sweet grass (Glyceria spp.), brooklime (Veronica beccabunga), willow (Salix spp.), iris (Iris spp.), water dock (Rumex hydrolapathum), glaucous sedge (Carex flacca).	

	Compartment 4		
TN No. /Access	Description	Species	
U4 – 18 FULL ACCESS	Defunct Species-Poor Hedgerow With TreesDefunct hedgerow which is more of a hawthorn (Crataegus monogyna) shrub line, gappy and merged with the woodland habitat offsite to the south. The ground flora contains a number of woodland species including greater stitchwort (Stellaria holostea), yellow archangel (Lamiastrum galeobdolon), lesser celandine (Ranunculus ficaria) and herb robert (Geranium robertianum). Mature ash (Fraxinus excelsior) and willow (Salix spp.) are present.The mature trees could provide potential roosting habitat for bats.	Hawthorn (Crataegus monogyna), common nettle (Urtica dioica), ivy (Hedera helix), ash (Fraxinus excelsior), creeping buttercup (Ranunculus repens), elder (Sambucus nigra), bramble (Rubus fruticosus agg.), rose (Rosa spp.), honeysuckle (Lonicera spp.), willow (Salix spp.), broadleaf dock (Rumex obtusifolius), white dead-nettle (Lamium album), lesser celandine (Ranunculus ficaria), greater stitchwort (Stellaria holostea), ground ivy (Glechoma hederacea), yellow archangel (Lamiastrum galeobdolon), herb robert (Geranium robertianum), wavy bittercress (Cardamine flexuosa).	
U4 – 19 FULL ACCESS	Defunct Species-Poor Hedgerow With Trees Tall, leggy hawthorn (Crataegus monogyna) hedge to 6/7mtall. The understorey is ruderal including common nettle (Urtica dioica), ivy (Hedera helix) and cleavers (Galium aparine) with some herb robert (Geranium robertianum) and ground ivy (Glechoma hederacea). There is a mature, ivy (Hedera helix) clad ash (Fraxinus excelsior) at the southern end. The mature ash has the potential to provide roosting habitat for bats.	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), ivy (Hedera helix), common nettle (Urtica dioica), rose (Rosa spp.), bramble (Rubus fruticosus agg.), herb robert (Geranium robertianum), ground ivy (Glechoma hederacea), cleavers (Galium aparine), elder (Sambucus nigra).	
U4 – 20 FULL ACCESS	Dense Scrub With Scattered Broadleaf TreesDense hawthorn (Crataegus monogyna) and bramble (Rubus fruticosus agg.) scrub with rose (Rosa spp.) and a largely ruderal ground layer including common nettle (Urtica dioica) and cleavers (Galium aparine). There are large, mature willow (Salix spp.) associated with the stream (U4 – 17).The mature willow have the potential to provide roosting habitat for bats.	Willow (Salix spp.), common nettle (Urtica dioica), blackthorn (Prunus spinosa), cleavers (Galium aparine), creeping buttercup (Ranunculus repens), bramble (Rubus fruticosus agg.), hawthorn (Crataegus monogyna), rose (Rosa spp.)	
U4 – 21 PARTIAL DISTANCE	<u>Improved Grassland</u> This is an improved grassland field which was grazed by horses at the time of survey – access was limited. The field slopes down from north-south towards the stream (U4 –	Perennial rye grass (Lolium perenne), white clover (Trifolium repens), dandelion (Taraxacum officinale agg.), daisy (Bellis perennis), Cock's foot (Dactylis glomerata), soft rush (Juncus effusus), hard rush (Juncus inflexus), common nettle (Urtica dioica), dock (Rumex spp.), red	

	Compartment 4		
TN No. /Access	Description	Species	
	17) at an angle of ~15/20°. The sward appeared improved, to ~5/10cm height and perennial rye grass (Lolium perenne) dominated with some Cock's foot (Dactylis glomerata) and other grasses. The field was marshy closer to the stream where hard rush (Juncus inflexus) and soft rush (Juncus effusus) were present. Ruderals including dock (Rumex spp.) and common nettle (Urtica dioica) were scattered but sparse.	fescue (Festuca rubra), creeping buttercup (Ranunculus repens), bulbous buttercup (Ranunculus bulbosa).	
U4 – 22 PARTIAL DISTANCE	Defunct Species-Poor Hedgerow With Trees Hawthorn (Crataegus monogyna) dominated hedgerow with some blackthorn (Prunus spinosa) present. Willow (Salix spp.) and ash (Fraxinus excelsior) standards were present including a mature ash. The ground later is largely ruderal including common nettle (Urtica dioica), bramble (Rubus fruticosus agg.) and white dead-nettle (Lamium album). There is no evidence of recent maintenance and the hedge is to a height of ~6m. The mature ash (Fraxinus excelsior) especially has the potential to provide roosting habitat for bats.	Hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), elder (Sambucus nigra), ash (Fraxinus excelsior), willow (Salix spp.), common nettle (Urtica dioica), bramble (Rubus fruticosus agg.), white dead-nettle (Lamium album), cleavers (Galium aparine), broadleaf dock (Rumex obtusifolius).	
U4 – 23 PARTIAL DISTANCE	Improved Grassland This is an improved grassland field. The centre of this was fenced off and had a trampoline, indicating recreational use. The northern end of the field could not be accessed. The southern bank has abundant broadleaf dock (Rumex obtusifolius) where it slopes downhill towards the stream (U4 – 17) along with other ruderals including common nettle (Urtica dioica) and creeping thistle (Cirsium arvense). Grasses include perennial rye grass (Lolium perenne), Yorkshire fog (Holcus lanatus) and Cock's foot (Dactylis glomerata) with herbaceous species including creeping buttercup (Ranunculus repens), heath speedwell (Veronica officinalis), common vetch (Vicia sativa) and daisy (Bellis perennis). Close to the stream, the ground is marshy with hard rush (Juncus inflexus) and soft rush (Juncus effusus) as well as glaucous sedge (Carex flacca) and water dock (Rumex hydrolapathum).	Perennial rye grass (Lolium perenne), bent grass (Agrostis spp.), Yorkshire fog (Holcus lanatus), Cock's foot (Dactylis glomerata), spear thistle (Cirsium vulgare), creeping thistle (Cirsium arvense), common nettle (Urtica dioica), green alkanet (Pentaglottis sempervirens), broadleaf dock (Rumex obtusifolius), white dead-nettle (Lamium album), red fescue (Festuca rubra), meadow grass (Poa spp.), dandelion (Taraxacum officinale agg.), creeping buttercup (Ranunculus repens), heath speedwell (Veronica officinalis), white clover (Trifolium repens), common chickweed (Stellaria media), meadow foxtail (Alopecurus pratensis), thyme-leaved speedwell (Veronica serpyllifolia), common vetch (Vicia sativa), daisy (Bellis perennis), meadow buttercup (Ranunculus acris), glaucous sedge (Carex flacca), water dock (Rumex hydrolapathum).	
U4 – 24 PARTIAL DISTANCE	Defunct Species-Poor Hedgerow With Trees Hawthorn (Crataegus monogyna) dominated hedge to 6m tall, unmanaged (with no evidence of previous management) with blackthorn (Prunus spinosa) also present.	Hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), elder (Sambucus nigra), ash (Fraxinus excelsior), common nettle (Urtica dioica), cleavers (Galium aparine), broadleaf dock (Rumex obtusifolius), bramble (Rubus fruticosus agg.), rose (Rosa spp.),	

	Compartment 4	
TN No. /Access	Description	Species
	Bramble (Rubus fruticosus agg.) and rose (Rosa spp.) were recorded throughout. The ground layer is largely ruderal with species including common nettle (Urtica dioica), cleavers (Galium aparine) and broadleaf dock (Rumex obtusifolius) as well as green alkanet (Pentaglottis sempervirens) and ground ivy (Glechoma hederacea).	ground ivy (Glechoma hederacea), green alkanet (Pentaglottis sempervirens).
U4 – 25 FULL ACCESS	Scattered Scrub         Scattered scrub associated with the stream (U4 – 17). Willow (Salix spp.) grows close to the water with bramble (Rubus fruticosus agg.) and hawthorn (Crataegus monogyna) scrub and ruderal beneath including common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris) and broadleaf dock (Rumex obtusifolius). One ash (Fraxinus excelsior) tree recorded.	Willow (Salix spp.), bramble (Rubus fruticosus agg.), hawthorn (Crataegus monogyna), ivy (Hedera helix), broadleaf dock (Rumex obtusifolius), ground ivy (Glechoma hederacea), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), ash (Fraxinus excelsior), cuckooflower (Cardamine pratensis), herb robert (Geranium robertianum).
U4 – 26 FULL ACCESS	Defunct Species-Poor Hedgerow         Gappy, tall (~10m), unmanaged hawthorn (Crataegus monogyna) hedgerow with semi- mature/mature ash (Fraxinus excelsior) standards. The ground layer is largely ruderal including common nettle (Urtica dioica) and rose (Rosa spp.).         The mature trees could provide potential roosting habitat for bats.	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), bramble (Rubus fruticosus agg.), common nettle (Urtica dioica), rose (Rosa spp.), tufted hair-grass (Deschampsia cespitosa), blackthorn (Prunus spinosa).
U4 – 27 FULL ACCESS	Semi-Improved GrasslandPig grazed semi-improved grassland with a lot of consequent disturbance on a slope uphill from north-south with the stream (U4 – 17) at the base. Grass dominated with species including tufted hair-grass (Deschampsia cespitosa), Yorkshire fog (Holcus lanatus), perennial rye grass (Lolium perenne) and sweet vernal grass (Anthoxanthum odoratum) with lots of herbaceous/ruderal vegetation including lesser celandine (Ranunculus ficaria), thyme-leaved speedwell (Veronica serpyllifolia), common mouse- ear (Cerastium fontanum), black knapweed (Centaurea nigra), field speedwell (Veronica persica), and violet (Viola spp.). There are some small patches of hawthorn (Crataegus monogyna) and ash (Fraxinus excelsior) scrub with associated bramble (Rubus fruticosus agg.), dock (Rumex spp.) and common nettle (Urtica dioica) as well as herb robert (Geranium robertianum) and lesser celandine present beneath. This field could have been ridge and furrow in the past. There is one mature hawthorn (Crataegus	Common chickweed (Stellaria media), creeping buttercup (Ranunculus repens), bulbous buttercup (Ranunculus bulbosa), white clover (Trifolium repens), perennial rye grass (Lolium perenne), Yorkshire fog (Holcus lanatus), broadleaf dock (Rumex obtusifolius), sweet vernal grass (Anthoxanthum odoratum), false oat grass (Arrhenatherum elatius), Cock's foot (Dactylis glomerata), lesser celandine (Ranunculus ficaria), thyme-leaved speedwell (Veronica serpyllifolia), common mouse-ear (Cerastium fontanum), black knapweed (Centaurea nigra), field speedwell (Veronica persica), violet (Viola spp.), elder (Sambucus nigra), herb robert (Geranium robertianum).

	Compartment 4		
TN No. /Access	Description	Species	
	monogyna) present between 8-10m high.		
U4 – 28 FULL ACCESS	Defunct Species-Poor Hedgerow With TreesTall, unmanaged hawthorn (Crataegus monogyna) hedgerow to ~12m height with semi- mature ash (Fraxinus excelsior) standards. The ground layer is largely ruderal with broadleaf dock (Rumex obtusifolius), cleavers (Galium aparine) and common nettle (Urtica dioica) as well as Lords and Ladies (Arum maculatum), wood avens (Geum urbanum) and ground ivy (Glechoma hederacea).	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), Lords and Ladies (Arum maculatum), common nettle (Urtica dioica), broadleaf dock (Rumex obtusifolius), cleavers (Galium aparine), ramsons (Allium ursinum), ground ivy (Glechoma hederacea), wood avens (Geum urbanum).	
U4 – 29 FULL ACCESS	Semi-Improved Grassland         This is a grass track which is a footpath, between the field (U4 – 27) and the hedgeline (U4 – 30). Grass species include perennial rye grass (Lolium perenne), Cock's foot (Dactylis glomerata), Yorkshire fog (Holcus lanatus) and poa with ruderals including hogweed (Heracleum sphondylium), cow parsley (Anthriscus sylvestris) and common nettle (Urtica dioica) and woodland species including lesser celandine (Ranunculus ficaria), Lords and Ladies (Arum maculatum) and ground ivy (Glechoma hederacea).	Cow parsley (Anthriscus sylvestris), hogweed (Heracleum sphondylium), Lords and Ladies (Arum maculatum), dock (Rumex spp.), perennial rye grass (Lolium perenne), creeping thistle (Cirsium arvense), spear thistle (Cirsium vulgare), common chickweed (Stellaria media), ground ivy (Glechoma hederacea), ramsons (Allium ursinum), common nettle (Urtica dioica), Cock's foot (Dactylis glomerata), Yorkshire fog (Holcus lanatus), lesser celandine (Ranunculus ficaria), meadow grass (Poa spp.), field speedwell (Veronica persica), cuckooflower (Cardamine pratensis), dandelion (Taraxacum officinale agg.), black knapweed (Centaurea nigra), white dead-nettle (Lamium album).	
U4 – 30 FULL ACCESS	Defunct Species-Poor Hedgerow With TreesTall, leggy, unmanaged hawthorn (Crataegus monogyna) hedge to ~10m with ash (Fraxinus excelsior) standards, some of which are mature. The ground layer is similar to the track (U4 – 29) with ruderals including burdock (Arctium lappa), ivy (Hedera helix) and cow parsley (Anthriscus sylvestris) as well as Lords and Ladies (Arum maculatum). There is a mature willow (Salix spp.) at the northern base of the hedgeline associated with the stream (U4 – 17).	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), ivy (Hedera helix), common nettle (Urtica dioica), ramsons (Allium ursinum), Lords and Ladies (Arum maculatum), cow parsley (Anthriscus sylvestris), bramble (Rubus fruticosus agg.), dandelion (Taraxacum officinale agg.), white dead-nettle (Lamium album), willow (Salix spp.).	
U4 – 31 FULL ACCESS	Scattered Scrub         Dense scrub by the stream (U4 – 17) with a large mature willow (Salix spp.) at the base.         There is some hawthorn (Crataegus monogyna) and associated scrub eg. bramble (Rubus	Willow (Salix spp.), sycamore (Acer pseudoplatanus), Lords and Ladies (Arum maculatum), common nettle (Urtica dioica), creeping buttercup (Ranunculus repens), dock (Rumex spp.), lesser celandine (Ranunculus ficaria), ground ivy (Glechoma hederacea), field	

	Compartment 4		
TN No. /Access	Description	Species	
	fruticosus agg.). The ground layer beneath is marshy grassland with species including lesser celandine (Ranunculus ficaria), soft rush (Juncus effusus), hard rush (Juncus inflexus), creeping buttercup (Ranunculus repens), Lords and Ladies (Arum maculatum) and cuckooflower (Cardamine pratensis) with some ruderals including dock (Rumex spp.), common nettle (Urtica dioica) and spear thistle (Cirsium vulgare).	speedwell (Myosotis arvensis), hawthorn (Crataegus monogyna), cow parsley (Anthriscus sylvestris), spear thistle (Cirsium vulgare), creeping thistle (Cirsium arvense), horsetail (Equisetum spp.), cuckooflower (Cardamine pratensis), soft rush (Juncus effusus), black knapweed (Centaurea nigra), green alkanet (Pentaglottis sempervirens), Yorkshire fog (Holcus lanatus), Cock's foot (Dactylis glomerata), tufted hair-grass (Deschampsia cespitosa), perennial rye grass (Lolium perenne).	
U4 – 32 FULL ACCESS	Semi-Improved Grassland/Un-Improved Grassland Tussocky grassland with dense thatch in places, ungrazed at the time of survey. Numerous herbaceous species including common chickweed (Stellaria media), sorrel (Rumex acetosa), meadow vetchling (Lathyrus pratensis), cuckooflower (Cardamine pratensis), wild carrot (Daucus carota), field speedwell (Veronica persica) and thyme- leaved speedwell (Veronica serpyllifolia). Grass species include meadow foxtail (Alopecurus pratensis), Cock's foot (Dactylis glomerata), Yorkshire fog (Holcus lanatus), red fescue (Festuca rubra), false oat grass (Arrhenatherum elatius) and bent grass (Agrostis spp.). In places, the ratio of grass:herb species is 50:50. The field slopes uphill from north-south at an angle of ~20° with damper grassland at the base, associated with the stream (U4 – 17). There are few ruderals present.	Meadow foxtail (Alopecurus pratensis), cleavers (Galium aparine), common nettle (Urtica dioica), Cock's foot (Dactylis glomerata), common chickweed (Stellaria media), sorrel (Rumex acetosa), hogweed (Heracleum sphondylium), creeping buttercup (Ranunculus repens), meadow buttercup (Ranunculus acris), Yorkshire fog (Holcus lanatus), red fescue (Festuca rubra), wild carrot (Daucus carota), lesser celandine (Ranunculus ficaria), tufted hair-grass (Deschampsia cespitosa), greater stitchwort (Stellaria holostea), black knapweed (Centaurea nigra), timothy (Phleum pratense), creeping thistle (Cirsium arvense), spear thistle (Cirsium vulgare), false oat grass (Arrhenatherum elatius), cuckooflower (Cardamine pratensis), wavy bittercress (Cardamine flexuosa), wild carrot (Daucus carota), meadow vetchling (Lathyrus pratensis), field speedwell (Veronica persica), thyme-leaved speedwell (Veronica serpyllifolia), bent grass (Agrostis spp.).	
U4 – 33 FULL ACCESS	Semi-Natural Broadleaf WoodlandBoundary with an offsite broadleaf woodland to the west. There is mature ash (Fraxinus excelsior) present which overhang the field (U4 – 32) along with some hawthorn (Crataegus monogyna) and sycamore (Acer pseudoplatanus). The ground layer is largely ruderal including common nettle (Urtica dioica), cleavers (Galium aparine) and broadleaf dock (Rumex obtusifolius) with ivy (Hedera helix).The mature trees have the potential to provide roosting habitat for bats.	Ash (Fraxinus excelsior), ivy (Hedera helix), sycamore (Acer pseudoplatanus), ground ivy (Glechoma hederacea), common nettle (Urtica dioica), cleavers (Galium aparine), broadleaf dock (Rumex obtusifolius), hawthorn (Crataegus monogyna).	

	Compartment 4		
TN No. /Access	Description	Species	
U4 – 34 FULL ACCESS	Defunct Species-Poor Hedgerow With Trees This is an unmanaged hedgerow which is hawthorn (Crataegus monogyna) dominated with some elder (Sambucus nigra), to ~10m height. There are three mature ash (Fraxinus excelsior). The ground layer is largely ruderal including cow parsley (Anthriscus sylvestris), common nettle (Urtica dioica) and white dead-nettle (Lamium album) with some burdock (Arctium lappa) and lesser celandine (Ranunculus ficaria). The mature trees have the potential to provide roosting habitat for bats.	Ash (Fraxinus excelsior), hawthorn (Crataegus monogyna), elder (Sambucus nigra), bramble (Rubus fruticosus agg.), cow parsley (Anthriscus sylvestris), common nettle (Urtica dioica), white dead- nettle (Lamium album), dock (Rumex spp.), burdock (Arctium lappa), hogweed (Heracleum sphondylium), Cock's foot (Dactylis glomerata), lesser celandine (Ranunculus ficaria).	

	COMPARTMENT 5A		
TN No. /Access	Description	Species	
U5a – 1 FULL ACCESS	Intact Species-Rich Hedgerow With Trees Hawthorn (Crataegus monogyna) dominated hedgerow with occasional elder (Sambucus nigra), ash (Fraxinus excelsior), field maple (Acer campestre), blackthorn (Prunus spinosa), rose (Rosa spp.) and elm (Ulmus spp.) around a post and rail fence. The hedge is maintained to ~2m tall but is lower in places and up to 3m wide. There is a ditch on the road side which was dry at the time of survey. There is a wide, grassy verge on the road side with common bistort (Persicaria bistorta) present. One semi- mature ash (Fraxinus excelsior) standard was present. The woody components other than hawthorn were well mixed in places but patchy in others. This could be an 'important' hedgerow.	Hawthorn (Crataegus monogyna), bramble (Rubus fruticosus agg.), elder (Sambucus nigra), cow parsley (Anthriscus sylvestris), white dead-nettle (Lamium album), Cock's foot (Dactylis glomerata), tufted hair-grass (Deschampsia cespitosa), common nettle (Urtica dioica), cleavers (Galium aparine), ground ivy (Glechoma hederacea), red dead- nettle (Lamium purpureum), daisy (Bellis perennis), smooth sow thistle (Sonchus oleraceus), broadleaf dock (Rumex obtusifolius), ivy (Hedera helix), hogweed (Heracleum sphondylium), elm (Ulmus spp.), ash (Fraxinus excelsior), rose (Rosa spp.), field maple (Acer campestre), Lords and Ladies (Arum maculatum), creeping thistle (Cirsium arvense), blackthorn (Prunus spinosa), common bistort (Persicaria bistorta), bush vetch (Vicia sepium).	
U5a – 2 CLOSE DISTANCE	Intact Species-Poor Hedgerow With Trees This is a hawthorn (Crataegus monogyna) dominated hedgerow with gaps in places and occasional ornamental species as this hedge runs along the end of residential gardens. Ivy (Hedera helix) growing below and through with bare ground and a ruderal under storey beneath. There is a strip of grass and ruderal on the site side which is ~1m wide. The maintenance varies with the residential property but is generally well cut. There is one semi-mature ash (Fraxinus excelsior) standard.	Hawthorn (Crataegus monogyna), ivy (Hedera helix), broad-leaved willowherb (Epilobium montanum), cleavers (Galium aparine), speedwell (Veronica spp.), Cock's foot (Dactylis glomerata), common nettle (Urtica dioica), groundsel (Senecio vulgaris), daisy (Bellis perennis), ash (Fraxinus excelsior), red dead-nettle (Lamium purpureum).	
U5a – 3 CLOSE DISTANCE	Intact Species-Poor Hedgerow With Trees Hawthorn (Crataegus monogyna) dominated hedgerow with ash (Fraxinus excelsior) standards which are mature to the west and semi-mature in places. The hedgerow is well maintained by cutting to ~1.5m height and 1m wide. There is a strip of blackthorn (Prunus spinosa) on the northern side. The ground layer is largely ruderal with species including cleavers (Galium aparine), common nettle (Urtica dioica) and cow parsley (Anthriscus sylvestris) as well as dog's mercury (Mercurialis perennis), Lords and Ladies (Arum maculatum) and wood avens (Geum urbanum). There is a ditch which was wet in places at the time of survey with occasional lesser celandine (Ranunculus ficaria) and brooklime (Veronica beccabunga) present. Ash (Fraxinus excelsior)	Hawthorn (Crataegus monogyna), bramble (Rubus fruticosus agg.), blackthorn (Prunus spinosa), ivy (Hedera helix), ash (Fraxinus excelsior), cleavers (Galium aparine), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), dog's mercury (Mercurialis perennis), broad-leaved willowherb (Epilobium montanum), Cock's foot (Dactylis glomerata), Yorkshire fog (Holcus lanatus), dock (Rumex spp.), rose (Rosa spp.), white dead-nettle (Lamium album), elder (Sambucus nigra), lesser celandine (Ranunculus ficaria), Lords and Ladies (Arum maculatum), shining cranesbill (Geranium lucidum), creeping buttercup (Ranunculus repens), wood avens (Geum urbanum).	

	COMPARTMENT 5A		
TN No. /Access	Description	Species	
	<ul><li>saplings are present in the scrub along with occasional semi-mature hawthorn (Crataegus monogyna) shrubs.</li><li>Some of the ash standards are ivy (Hedera helix) clad and may provide potential roosting habitat for bats.</li></ul>		
U5a – 4 FULL ACCESS	Intact Species-Poor Hedgerow With Trees This is a well maintained hedge cut to ~3m height and ~3m wide at the northern end but closer to 2m x 2m at the southern end. Ash (Fraxinus excelsior) is a frequent woody component within the hedgerow along with elder (Sambucus nigra). The ground layer is largely ruderal including cow parsley (Anthriscus sylvestris), hogweed (Heracleum sphondylium) and ivy (Hedera helix) along with lesser celandine (Ranunculus ficaria), herb robert (Geranium robertianum) and wood avens (Geum urbanum). More blackthorn (Prunus spinosa) is recorded to the west where willow (Salix spp.) is also present. There is a dry ditch with heavy broad-leaved willowherb (Epilobium montanum) cover by the road. There is a verge between the ditch and the road which is largely grass including Cock's foot (Dactylis glomerata) and false oat grass (Arrhenatherum elatius) and has been recently planted with hawthorn (Crataegus monogyna) saplings and occasional snowberry (Symphoricarpos albus) and pedunculate oak (Quercus robur). There are large mature ash standards, some of which are ivy (Hedera helix) covered and some provide potential roosting habitat for bats.	Ash (Fraxinus excelsior), hawthorn (Crataegus monogyna), bramble (Rubus fruticosus agg.), ivy (Hedera helix), cleavers (Galium aparine), hogweed (Heracleum sphondylium), rose (Rosa spp.), cow parsley (Anthriscus sylvestris), broad-leaved willowherb (Epilobium montanum), white dead-nettle (Lamium album), black horehound (Ballota nigra), broadleaf dock (Rumex obtusifolius), lesser celandine (Ranunculus ficaria), elder (Sambucus nigra), herb robert (Geranium robertianum), midland hawthorn (Crataegus laevigata), variegated red dead-nettle (Lamium purpureum), garlic mustard (Alliaria petiolata), cherry (Prunus spp.), field forget-me-not (Myosotis arvensis), creeping buttercup (Ranunculus repens), dense scrub, wood avens (Geum urbanum), willow (Salix spp.), pedunculate oak (Quercus robur).	
U5a – 5 CLOSE DISTANCE	Improved Grassland This is a sheep grazed improved grassland where perennial rye grass (Lolium perenne) dominates. Herbaceous species include daisy (Bellis perennis) and dandelion (Taraxacum officinale agg.). There is a dead standing stump and occasional deadwood present in the field. An abandoned shed was noted in the south-west corner which could not be accessed but could potentially provide a roosting habitat for bats.	Perennial rye grass (Lolium perenne), Yorkshire fog (Holcus lanatus), meadow grass (Poa spp.), daisy (Bellis perennis), dandelion (Taraxacum officinale agg.), white clover (Trifolium repens).	
U5a – 6 FULL ACCESS	Improved Grassland This is a cattle-grazed grassland at the time of survey with species including perennial	Perennial rye grass (Lolium perenne), daisy (Bellis perennis), dandelion (Taraxacum officinale agg.), dock (Rumex spp.), creeping buttercup (Ranunculus repens), meadow foxtail (Alopecurus pratensis), ribwort	

	COMPARTMENT 5A		
TN No. /Access	Description	Species	
	rye grass (Lolium perenne), Yorkshire fog (Holcus lanatus), Cock's foot (Dactylis glomerata), false oat grass (Arrhenatherum elatius) and sweet vernal grass (Anthoxanthum odoratum). Herbaceous species include creeping buttercup (Ranunculus repens), dandelion (Taraxacum officinale agg.), dock (Rumex spp.) and meadow buttercup (Ranunculus acris). A mature ash (Fraxinus excelsior) was present within the grassland.	plantain (Plantago lanceolata), hogweed (Heracleum sphondylium), Yorkshire fog (Holcus lanatus), Cock's foot (Dactylis glomerata), false oat grass (Arrhenatherum elatius), white clover (Trifolium repens), meadow buttercup (Ranunculus acris), sorrel (Rumex acetosa), common mouse-ear (Cerastium fontanum), geranium (Geranium spp.), red fescue (Festuca rubra), ash (Fraxinus excelsior), wavy bittercress (Cardamine flexuosa), creeping thistle (Cirsium arvense), bulbous buttercup (Ranunculus bulbosa).	
U5a – 7 FULL ACCESS	Running WaterThis is a slow flowing, clear stream with water to ~5cm depth. The substrate is silt and mud with banks sloping at ~60° to the west but gentler ~10° to the east. The banks rise to ~3m above the water on the west and ~1m to the east. The ditch is dry to the north and then vanishes at the top of the field.	Brooklime (Veronica beccabunga), broad-leaved willowherb (Epilobium montanum), soft rush (Juncus effusus), wavy bittercress (Cardamine flexuosa).	
U5a – 8 FULL ACCESS	Dense Scrub With Tall Ruderal Herb And Fern There is a hawthorn (Crataegus monogyna) hedge running along the northern side of the stream (U5a – 7) with trees such as willow (Salix spp.) and ash (Fraxinus excelsior) present. This hedge does not appear to be maintained and there is abundant bramble (Rubus fruticosus agg.) scrub present. The southern side is largely ruderal with species including common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris) and cleavers (Galium aparine) with dog's mercury (Mercurialis perennis), lesser celandine (Ranunculus ficaria) and garlic mustard (Alliaria petiolata) also present. To the north, the hedge is more compact and managed where the stream dissipates; here it is 2m high and 2m wide.	Rose (Rosa spp.), hawthorn (Crataegus monogyna), willow (Salix spp.), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), dog's mercury (Mercurialis perennis), common chickweed (Stellaria media), garlic mustard (Alliaria petiolata), dandelion (Taraxacum officinale agg.), broadleaf dock (Rumex obtusifolius), ground ivy (Glechoma hederacea), Cock's foot (Dactylis glomerata), Yorkshire fog (Holcus lanatus), hogweed (Heracleum sphondylium), wavy bittercress (Cardamine flexuosa), cleavers (Galium aparine), perennial rye grass (Lolium perenne), lesser celandine (Ranunculus ficaria), elder (Sambucus nigra), ash (Fraxinus excelsior), red campion (Silene dioica), rosebay willowherb (Epilobium angustifolium), garlic mustard (Alliaria petiolata), white dead-nettle (Lamium album).	
U5a – 9 CLOSE DISTANCE	<u>Defunct Species-Poor Hedgerow</u> This is a line of hawthorn (Crataegus monogyna) and ash (Fraxinus excelsior) trees in the field; it appears to have been a hedgerow in the past.	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior).	

	COMPARTMENT 5A		
TN No. /Access	Description	Species	
U5a – 10 FULL ACCESS	Intact Species-Poor Hedgerow With Trees         This is a hawthorn (Crataegus monogyna) dominated hedgerow to 2.5m high and 3m wide, maintained by trimming. There are four standard ash (Fraxinus excelsior) which are semi-mature/mature, one of which is ivy (Hedera helix) covered. The ground layer is largely bare ground with ruderals.         The trees have the potential to provide roosting habitat for bats.	Ivy (Hedera helix), hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), cow parsley (Anthriscus sylvestris), broadleaf dock (Rumex obtusifolius), black horehound (Ballota nigra), common nettle (Urtica dioica), cleavers (Galium aparine), rose (Rosa spp.), bramble (Rubus fruticosus agg.), ground ivy (Glechoma hederacea).	
U5a – 11 FULL ACCESS	Intact Species-Poor Hedgerow With TreesThis is a hawthorn (Crataegus monogyna) dominated hedgerow which appears unmanaged with one semi-mature ash (Fraxinus excelsior) standard in the east-west section and two mature ash along the north-south section. Ash is also a woody component along with occasional blackthorn (Prunus spinosa). The ground layer is largely ruderal with cow parsley (Anthriscus sylvestris) and common nettle (Urtica dioica) with ivy (Hedera helix). There appears to be a dry ditch on the off-site side. The hedge is cut to 2m height and 2m across along the north-south section.The trees have the potential to provide roosting habitat for bats.	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), ivy (Hedera helix), cow parsley (Anthriscus sylvestris), dock (Rumex spp.), common nettle (Urtica dioica), ground ivy (Glechoma hederacea), elder (Sambucus nigra), bramble (Rubus fruticosus agg.), Lords and Ladies (Arum maculatum), blackthorn (Prunus spinosa).	
U5a – 12 FULL ACCESS	Intact Species-Poor Hedgerow With TreesThis is a hawthorn (Crataegus monogyna) dominated hedgerow with mature and semi- mature ash (Fraxinus excelsior) standards. Blackthorn (Prunus spinosa) is frequently present, especially towards the south and ash is present as a component also. The hedge appears rarely managed to 6m height and 3m wide. There is a grass track and a parallel hedgerow on the off-site side. The ground layer is largely ruderal with bramble (Rubus fruticosus agg.) and rose (Rosa spp.) present throughout the hedge. There is occasional willow (Salix spp.) present at the southern end.The trees have the potential to provide roosting habitat for bats, especially the ash.	Hawthorn (Crataegus monogyna), bramble (Rubus fruticosus agg.), common nettle (Urtica dioica), rose (Rosa spp.), ivy (Hedera helix), cleavers (Galium aparine), ground ivy (Glechoma hederacea), broadleaf dock (Rumex obtusifolius), ash (Fraxinus excelsior), blackthorn (Prunus spinosa).	

	COMPARTMENT 5B		
TN No. /Access	Description	Species	
U5b – 1 FULL ACCESS	Intact species-poor hedgerow with trees This is a well maintained hedge cut to ~3m height and ~3m wide at the northern end but closer to 2m x 2m at the southern end. Ash (Fraxinus excelsior) is a frequent woody component within the hedgerow along with elder (Sambucus nigra). The ground layer is largely ruderal including cow parsley (Anthriscus sylvestris), hogweed (Heracleum sphondylium) and ivy (Hedera helix) along with lesser celandine (Ranunculus ficaria), herb robert (Geranium robertianum) and wood avens (Geum urbanum). More blackthorn (Prunus spinosa) is recorded to the west where willow (Salix spp.) is also present. There is a dry ditch with heavy broad-leaved willowherb (Epilobium montanum) cover by the road. There is a verge between the ditch and the road which is largely grass including Cock's foot (Dactylis glomerata) and false oat grass (Arrhenatherum elatius) and has been recently planted with hawthorn (Crataegus monogyna) saplings and occasional snowberry (Symphoricarpos albus) and pedunculate oak (Quercus robur). There are large mature ash standards, some of which are ivy (Hedera helix) covered and some provide potential roosting habitat for bats.	Ash (Fraxinus excelsior), hawthorn (Crataegus monogyna), bramble (Rubus fruticosus agg.), ivy (Hedera helix), cleavers (Galium aparine), hogweed (Heracleum sphondylium), rose (Rosa spp.), cow parsley (Anthriscus sylvestris), broad-leaved willowherb (Epilobium montanum), white dead-nettle (Lamium album), black horehound (Ballota nigra), broadleaf dock (Rumex obtusifolius), lesser celandine (Ranunculus ficaria), elder (Sambucus nigra), herb robert (Geranium robertianum), midland hawthorn (Crataegus laevigata), variegated red dead-nettle (Lamium purpureum), garlic mustard (Alliaria petiolata), cherry (Prunus spp.), field forget-me-not (Myosotis arvensis), creeping buttercup (Ranunculus repens), dense scrub, wood avens (Geum urbanum), willow (Salix spp.), pedunculate oak (Quercus robur).	
U5b – 2 FULL ACCESS	Semi-Improved Grassland Grassland, sheep grazed (at time of survey) with banks present and a stream (U5b – 4) running through the centre. The hollow created by the stream is deepest towards the east, the banks are steeper on the southern side (~80°) and shallower on the northern side (~40°). The northern side of the field is old ridge and furrow with damper grassland in the furrows, species inc. lesser celandine (Ranunculus ficaria) and tufted hair-grass (Deschampsia cespitosa). Anthills are present in places. The grassland appears semi-improved but is more improved with more ruderal species on the southern side of the stream.	Perennial rye grass (Lolium perenne), meadow grass (Poa spp.), dandelion (Taraxacum officinale agg.), meadow foxtail (Alopecurus pratensis), tufted hair-grass (Deschampsia cespitosa), white clover (Trifolium repens), lesser celandine (Ranunculus ficaria), Yorkshire fog (Holcus lanatus), creeping thistle (Cirsium arvense), red fescue (Festuca rubra), crested dog's-tail (Cynosurus cristatus), daisy (Bellis perennis), red clover (Trifolium pratense), common nettle (Urtica dioica), false oat grass (Arrhenatherum elatius), Cock's foot (Dactylis glomerata), common mouse-ear (Cerastium fontanum), spear thistle (Cirsium vulgare), bent grass (Agrostis spp.), wall speedwell (Veronica arvensis), meadow vetchling (Lathyrus pratensis) sweet vernal grass (Anthoxanthum odoratum).	

	COMPARTMENT 5B		
TN No. /Access	Description	Species	
U5b – 3 FULL ACCESS	MarshRush dominated area close to the stream (U5b – 4) with species including soft rush (Juncus effusus) and hard rush (Juncus inflexus). The area was damp underfoot and appeared to be a result of a wet flush in places. Grasses were occasional including Yorkshire fog (Holcus lanatus) and tufted hair-grass (Deschampsia cespitosa) but there were abundant herbaceous species including creeping buttercup (Ranunculus repens), lesser celandine (Ranunculus ficaria), cuckooflower (Cardamine pratensis) and sphagnum moss on the ground. A frog was seen along with a large number of green- veined whites (Pieris napi). The area appears unmanaged and little grazed by the sheep in the surrounding field (U5b – 1).	Hard rush (Juncus inflexus), lesser celandine (Ranunculus ficaria), creeping buttercup (Ranunculus repens), wavy bittercress (Cardamine flexuosa), Yorkshire fog (Holcus lanatus), sorrel (Rumex acetosa), sphagnum moss (Sphagnum spp.), cleavers (Galium aparine), common nettle (Urtica dioica), dandelion (Taraxacum officinale agg.), broadleaf dock (Rumex obtusifolius), cuckooflower (Cardamine pratensis), ground ivy (Glechoma hederacea), meadow buttercup (Ranunculus acris), brooklime (Veronica beccabunga), black horehound (Ballota nigra), tufted hair-grass (Deschampsia cespitosa), soft rush (Juncus effusus).	
U5b – 4 FULL ACCESS	Running Water         Stream which is more open to the east but abundant vegetation including sweet grass (Glyceria spp.), brooklime (Veronica beccabunga) and fool's watercress (Apium nodiflorum). This stream flows through the field (U5b – 2), the rising slopes of which form the banks except in a single location towards the west where the stream has carved a gully with steep banks through a bank. The stream runs ~10/15m from the top of the field.	Brooklime (Veronica beccabunga), sweet grass (Glyceria spp.), hard rush (Juncus inflexus), soft rush (Juncus effusus), broad-leaved willowherb (Epilobium montanum), creeping buttercup (Ranunculus repens), willow (Salix spp.), colt's foot (Tussilago farfara), bramble (Rubus fruticosus agg.), fool's watercress (Apium nodiflorum), lesser spearwort (Ranunculus flammula).	
	The water is to ~20cm in places and much shallower in others, especially where there is an abundance of aquatics. Soft rush (Juncus effusus) and hard rush (Juncus inflexus) are present as marginals with broad-leaved willowherb (Epilobium montanum) and some lesser spearwort (Ranunculus flammula). The land is marshy to the sides in many places, as described in $(U5b - 3)$ . Some willow (Salix spp.) is growing associated with the water, as described in $(U5b - 5)$ . The stream is culverted in one location.		
U5b – 5 FULL ACCESS	Scattered Scrub And Scattered Broadleaf TreesMature willow (Salix spp.) associated with the stream (U5b – 4) with mature ash(Fraxinus excelsior) also present. The grassland beneath is as described for the field(U5b – 2) and the marshy area (U5b – 3). Ruderals are present such as common nettle(Urtica dioica).	Willow (Salix spp.), ash (Fraxinus excelsior), common nettle (Urtica dioica).	

	COMPARTMENT 5B		
TN No. /Access	Description	Species	
	Some of the trees could provide roosting habitat for bats.		
U5b – 6 FULL ACCESS	Intact Species-Poor Hedgerow With Trees This hedgerow has been laid in the past, hawthorn (Crataegus monogyna) is dominant, 2m high and 1.5m wide. Semi-mature and mature ash (Fraxinus excelsior) standards are present in places and there are ash (Fraxinus excelsior) and apple (Malus spp.) present on the south side along with a semi-mature horse chestnut (Aesculus hippocastanum). Ruderal vegetation with some bare ground beneath. The hedge is wider towards the eastern end and is trimmed on the northern side.	Ash (Fraxinus excelsior), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), speedwell (Veronica spp.), lesser celandine (Ranunculus ficaria), spear thistle (Cirsium vulgare), ivy (Hedera helix), green alkanet (Pentaglottis sempervirens), garlic mustard (Alliaria petiolata), hawthorn (Crataegus monogyna), elder (Sambucus nigra), sycamore (Acer pseudoplatanus), Lords and Ladies (Arum maculatum), cleavers (Galium aparine), common nettle (Urtica dioica), wood avens (Geum urbanum), hedge woundwort (Stachys sylvatica), common mouse-ear (Cerastium fontanum), apple (Malus spp.), horse chestnut (Aesculus hippocastanum), rose (Rosa spp.), bramble (Rubus fruticosus agg.), white dead-nettle (Lamium album), cuckooflower (Cardamine pratensis).	
U5b – 7 FULL ACCESS	<u>Defunct Species-Poor Hedgerow</u> This is a hawthorn (Crataegus monogyna) dominated hedgerow with an under storey as in the field surrounding (U5b – 2) with common nettle (Urtica dioica). Some elder (Sambucus nigra) also present. The hedge is gappy and taller to the north where the mature shrubs grow to $\sim 8/10$ m on the slope towards the stream (U5b – 4).	Hawthorn (Crataegus monogyna), common nettle (Urtica dioica), elder (Sambucus nigra), bramble (Rubus fruticosus agg.).	
U5b – 8 CLOSE DISTANCE	<u>Semi-Improved Grassland</u> This is an improved grassland/semi-improved grassland for which full access was not gained. It appears to be similar to the field $(U5b - 2)$ and is more improved towards the south where more ruderals are present. Earth banks and undulating ground are present but this field does not appear to be ridge and furrow. There are a large number of anthills to the east and green woodpecker (Picus viridis) was seen. Frequent lesser celandine (Ranunculus ficaria) is present lower down the banks towards the stream.	Perennial rye grass (Lolium perenne), meadow grass (Poa spp.), dandelion (Taraxacum officinale agg.), meadow foxtail (Alopecurus pratensis), tufted hair-grass (Deschampsia cespitosa), white clover (Trifolium repens), lesser celandine (Ranunculus ficaria), Yorkshire fog (Holcus lanatus), creeping thistle (Cirsium arvense), red fescue (Festuca rubra), crested dog's-tail (Cynosurus cristatus), daisy (Bellis perennis), red clover (Trifolium pratense), common nettle (Urtica dioica), false oat grass (Arrhenatherum elatius), cock's foot (Dactylis glomerata), common mouse-ear (Cerastium fontanum), spear thistle (Cirsium vulgare), bent grass (Agrostis spp.), wall speedwell (Veronica arvensis), meadow vetchling (Lathyrus pratensis), red campion (Silene dioica).	

	COMPARTMENT 5B		
TN No. /Access	Description	Species	
U5b – 9 CLOSE DISTANCE	Dense Scrub And Scattered Broadleaf TreesDense scrub present around the stream (U5b – 4). Willow (Salix spp.) is growing associated with the stream along with sycamore (Acer pseudoplatanus) and ash (Fraxinus excelsior). Hawthorn (Crataegus monogyna) forms the under canopy with bramble (Rubus fruticosus agg.) and rose (Rosa spp.) growing through. The ground layer is largely ruderal including common nettle (Urtica dioica) and broadleaf dock (Rumex obtusifolius) with lesser celandine (Ranunculus ficaria) and Lords and Ladies (Arum maculatum) also present. There are fallen trees and deadwood in places. A green woodpecker (Picus viridis) was seen.The mature trees could provide potential roosting habitat for bats, especially the ash.	Willow (Salix spp.), sycamore (Acer pseudoplatanus), ash (Fraxinus excelsior), hawthorn (Crataegus monogyna), bramble (Rubus fruticosus agg.), cuckooflower (Cardamine pratensis), common nettle (Urtica dioica), white dead-nettle (Lamium album), broadleaf dock (Rumex obtusifolius), rose (Rosa spp.), ivy (Hedera helix), lesser celandine (Ranunculus ficaria), Lords and Ladies (Arum maculatum).	
U5b – 10 FULL ACCESS	Semi-Natural Broadleaf WoodlandMature horse chestnut (Aesculus hippocastanum) trees with ash (Fraxinus excelsior), hawthorn (Crataegus monogyna), elder (Sambucus nigra) and willow (Salix spp.) also present. The ground layer contained bluebell (Hyacinthoides non-scripta), lesser celandine (Ranunculus ficaria), Lords and Ladies (Arum maculatum), and herb robert (Geranium robertianum). Lesser celandine dominates the ground layer of the field (U5b – 9) beneath the horse chestnut tree canopy. The stream (U5b – 4) runs through and some fern species are present.The mature trees could provide potential roosting habitat for bats, especially the ash.	Horse chestnut (Aesculus hippocastanum), hawthorn (Crataegus monogyna), elder (Sambucus nigra), willow (Salix spp.), ivy (Hedera helix), bluebell (Hyacinthoides non-scripta), lesser celandine (Ranunculus ficaria), Lords and Ladies (Arum maculatum), cow parsley (Anthriscus sylvestris), common nettle (Urtica dioica), ground ivy (Glechoma hederacea), ash (Fraxinus excelsior), blackthorn (Prunus spinosa).	
U5b – 11 FULL ACCESS	<u>Tree Line</u> Tree line with a hedge beneath, no evidence of maintenance past or present. The tree line is neither dense nor cohesive growing to 6-8m in places with some taller, mature ash (Fraxinus excelsior) in places. There is a steep bank to the road on the off-site side which is mostly ivy (Hedera helix) covered with ruderals, woodland species and bare ground beneath.	Hawthorn (Crataegus monogyna), sycamore (Acer pseudoplatanus), white dead-nettle (Lamium album), common nettle (Urtica dioica), ivy (Hedera helix), elder (Sambucus nigra), ground ivy (Glechoma hederacea), hogweed (Heracleum sphondylium), Lords and Ladies (Arum maculatum), dandelion (Taraxacum officinale agg.), bramble (Rubus fruticosus agg.), rose (Rosa spp.), crabapple (Malus spp.), willow (Salix spp.), holly (Ilex aquifolium), ash (Fraxinus excelsior), cleavers (Galium aparine), blackthorn (Prunus spinosa).	

	COMPARTMENT 5B		
TN No. /Access	Description	Species	
	The mature trees could provide potential roosting habitat for bats, especially the ash.		
U5b – 12 FULL ACCESS	Defunct Species-Poor Hedgerow With Trees         This is a well-maintained trimmed hedge approximately 2m high and 2m wide. The hedge is gappy and there are gaps beneath and the sheep pass beneath and between. There is one semi-mature ash (Fraxinus excelsior) to the east and one holly (Ilex aquifolium) tree around the telegraph pole towards the centre.	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), common nettle (Urtica dioica), ground ivy (Glechoma hederacea), midland hawthorn (Crataegus laevigata), creeping buttercup (Ranunculus repens), red campion (Silene dioica), elder (Sambucus nigra), Lords and Ladies (Arum maculatum), dandelion (Taraxacum officinale agg.), hedge woundwort (Stachys sylvatica), rose (Rosa spp.), holly (Ilex aquifolium).	
U5b – 13 FULL ACCESS	Intact Species-Poor Hedgerow With TreesHawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) co-dominated hedgerow with semi-mature ash (Fraxinus excelsior) and sycamore (Acer pseudoplatanus) trees. The bank to the road is less thick here than the adjacent (U5b – 12). The under storey is ruderal with common nettle (Urtica dioica), cleavers (Galium aparine) and hogweed (Heracleum sphondylium). Hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) form scrub on the bank on the road side.	Blackthorn (Prunus spinosa), hawthorn (Crataegus monogyna), common nettle (Urtica dioica), ivy (Hedera helix), daisy (Bellis perennis), hogweed (Heracleum sphondylium), cleavers (Galium aparine), ground ivy (Glechoma hederacea), elder (Sambucus nigra), Lords and Ladies (Arum maculatum), ash (Fraxinus excelsior), sycamore (Acer pseudoplatanus), dandelion (Taraxacum officinale agg.), white dead-nettle (Lamium album), cow parsley (Anthriscus sylvestris).	
U5b – 14 FULL ACCESS	Intact Species-Poor Hedgerow With Trees         This is a hawthorn (Crataegus monogyna) dominated hedgerow to 2.5m tall and 2m wide. There is one semi-mature ash (Fraxinus excelsior) standard with two holly (Ilex aquifolium) standards. The under storey is ruderal with species including common nettle (Urtica dioica), cleavers (Galium aparine) and ivy (Hedera helix) as well as Lords and Ladies (Arum maculatum) and garlic mustard (Alliaria petiolata).	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), holly (Ilex aquifolium), common nettle (Urtica dioica), cleavers (Galium aparine), bramble (Rubus fruticosus agg.), ash (Fraxinus excelsior), cow parsley (Anthriscus sylvestris), rose (Rosa spp.), tufted hair-grass (Deschampsia cespitosa), Lords and Ladies (Arum maculatum), burdock (Arctium lappa), garlic mustard (Alliaria petiolata), ivy (Hedera helix), blackthorn (Prunus spinosa), black horehound (Ballota nigra), mint (Mentha spp.), ground ivy (Glechoma hederacea).	
U5b – 15 FULL ACCESS	Semi-Improved Grassland           This is an ungrazed, semi-improved, grassland with perennial rye grass (Lolium perenne) present but other grasses including red fescue (Festuca rubra), creeping bent (Agrostis stolonifera) and false oat grass (Arrhenatherum elatius) dominant. There are ruderal spp. present especially close to the hedgerows but occurring occasionally	Perennial rye grass (Lolium perenne). sweet vernal grass (Anthoxanthum odoratum), dock (Rumex spp.), Cock's foot (Dactylis glomerata), dandelion (Taraxacum officinale agg.), hogweed (Heracleum sphondylium), creeping bent (Agrostis stolonifera), red fescue (Festuca rubra), creeping thistle (Cirsium arvense), white clover (Trifolium repens), creeping buttercup (Ranunculus repens), Yorkshire	

	COMPARTMENT 5B		
TN No. /Access	Description	Species	
	throughout. The grassland sward is ~20/30cm in places. Herbaceous species are present including ground elder (Aegopodium podagraria), meadow vetchling (Lathyrus pratensis), daisy (Bellis perennis) and common vetch (Vicia sativa).	fog (Holcus lanatus), false oat grass (Arrhenatherum elatius), daisy (Bellis perennis), ground elder (Aegopodium podagraria), cow parsley (Anthriscus sylvestris), spear thistle (Cirsium vulgare), common mouse- ear (Cerastium fontanum), meadow foxtail (Alopecurus pratensis), field speedwell (Veronica persica), meadow vetchling (Lathyrus pratensis).	
U5b – 16 FULL ACCESS	Intact Species-Poor Hedgerow This is a hawthorn (Crataegus monogyna) hedgerow which appears recently planted (within the previous 10-20 years) and has never been laid. The under storey is grass and ruderal, trimmed to 2m high and 2m wide.	Hawthorn (Crataegus monogyna), cow parsley (Anthriscus sylvestris), dock (Rumex spp.), common nettle (Urtica dioica), hogweed (Heracleum sphondylium), cleavers (Galium aparine).	
U5b – 17 FULL ACCESS	Intact Species-Poor Hedgerow With Trees This is a hawthorn (Crataegus monogyna) dominated hedgerow with other components, including ash (Fraxinus excelsior), elder (Sambucus nigra) and blackthorn (Prunus spinosa), present only occasionally/rarely. The hedge is trimmed to ~2.5m high and 3m wide. There are two semi-mature ash (Fraxinus excelsior) standards and two holly (Ilex aquifolium) standards. The ground is largely bare ground with ruderal species including hogweed (Heracleum sphondylium), common nettle (Urtica dioica) and cow parsley (Anthriscus sylvestris) with Lords and Ladies (Arum maculatum), ground elder (Aegopodium podagraria) and burdock (Arctium lappa) also present.	Hawthorn (Crataegus monogyna), cleavers (Galium aparine), cow parsley (Anthriscus sylvestris), common nettle (Urtica dioica), dock (Rumex spp.), ash (Fraxinus excelsior), garlic mustard (Alliaria petiolata), hogweed (Heracleum sphondylium), Lords and Ladies (Arum maculatum), elder (Sambucus nigra), rose (Rosa spp.), creeping thistle (Cirsium arvense), ground elder (Aegopodium podagraria), ground ivy (Glechoma hederacea), burdock (Arctium lappa), holly (Ilex aquifolium), ivy (Hedera helix), creeping buttercup (Ranunculus repens), blackthorn (Prunus spinosa), daffodil (Narcissus spp.).	
U5b – 18 FULL ACCESS	Intact Species-Poor Hedgerow With Trees This is a 6-7m wide hedgerow from the edge of the field to the footpath beyond. The hedgerow is blackthorn (Prunus spinosa) dominated with hawthorn (Crataegus monogyna) and cut on the field side to ~2.5/3m high but 7/8m high by the road. The ground layer is largely ruderal including common nettle (Urtica dioica) and cleavers (Galium aparine) as well as dog's mercury (Mercurialis perennis), and ground ivy (Glechoma hederacea). There is one semi-mature standard ash (Fraxinus excelsior) and one sycamore (Acer pseudoplatanus), both of which are ivy (Hedera helix) covered.	Blackthorn (Prunus spinosa), hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), sycamore (Acer pseudoplatanus), ivy (Hedera helix), hogweed (Heracleum sphondylium), cleavers (Galium aparine), cow parsley (Anthriscus sylvestris), common nettle (Urtica dioica), white dead-nettle (Lamium album), crabapple (Malus spp.), burdock (Arctium lappa), ground ivy (Glechoma hederacea), dog's mercury (Mercurialis perennis), rose (Rosa spp.), holly (Ilex aquifolium).	

	COMPARTMENT 5B		
TN No. /Access	Description	Species	
U5b – 19 FULL ACCESS	Defunct Species-Poor Hedgerow With Trees           This is a tall, leggy hawthorn (Crataegus monogyna) dominated hedgerow to ~10m height with ruderal species beneath including common nettle (Urtica dioica) and cow parsley (Anthriscus sylvestris) as well as Lords and Ladies (Arum maculatum). There are semi-mature ash (Fraxinus excelsior) every 5/10m along the hedge. The hedgerow appears unmanaged.	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), common nettle (Urtica dioica), ground ivy (Glechoma hederacea), Lords and Ladies (Arum maculatum), bramble (Rubus fruticosus agg.), cow parsley (Anthriscus sylvestris), black horehound (Ballota nigra).	
U5b – 20 FULL ACCESS	Improved Grassland         This grassland was sheep-grazed at the time of survey. It is a short-sward to ~5cm.         Perennial rye grass (Lolium perenne) dominates with few herbaceous species except frequent white clover (Trifolium repens). There is abundant thistle throughout the grassland.	Perennial rye grass (Lolium perenne), Yorkshire fog (Holcus lanatus), Cock's foot (Dactylis glomerata), white clover (Trifolium repens), creeping buttercup (Ranunculus repens), creeping thistle (Cirsium arvense), creeping bent (Agrostis stolonifera), spear thistle (Cirsium vulgare), common mouse-ear (Cerastium fontanum).	

	COMPARTMENT 6		
TN No. /Access	Description	Species	
U6 – 1 FULL ACCESS	Intact Species-Poor HedgerowHawthorn (Crataegus monogyna) dominated hedgerow managed to a height of 1.8mand width of 1.5-2m. Occasional blackthorn (Prunus spinosa) and rose spp. (Rosa spp.)are also present within the hedgerow.Common nettle (Urtica dioica) dominated the hedgerow understorey.	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), rose spp. (Rosa spp.), blackthorn (Prunus spinosa), common nettle (Urtica dioica), Lord's and Ladies' (Arum maculatum).	
U6 – 2 FULL ACCESS	Improved Grassland         Perennial rye grass (Lolium perenne) dominated grassland with a sward height of         >20cm currently grazed by sheep. An abundance of red clover (Trifolium pratense)         and white clover (Trifolium repens) is also present within the sward with frequent to         occasional dandelion (Taraxacum officinale), common chickweed (Stellaria media) and         meadow buttercup (Ranunculus acris).         There is evidence of a ridge and furrow structure within the field.	Dandelion (Taraxacum officinale), perennial rye grass (Lolium perenne), meadow buttercup (Ranunculus acris), creeping buttercup (Ranunculus repens), red clover (Trifolium pratense), white clover (Trifolium repens), common chickweed (Stellaria media), creeping thistle (Cirsium arvense), Yorkshire fog (Holcus lanatus), fescue spp. (Festuca spp.), sorrel (Rumex acetosa).	
U6 – 3 FULL ACCESS	Defunct Species-Poor Hedgerow Hawthorn (Crataegus monogyna) dominated hedgerow with frequent gaps, managed to a height and width of 1.5m.	Hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), common nettle (Urtica dioica).	
U6 – 4 FULL ACCESS	Open WaterA shallow (>20cm) wet depression in a field corner just off-site covering an area of 15-20sqm. The water surface is dominated by duckweed (Lemna spp.) with creeping bent (Agrostis stolonifera) forming a thin band around the waters' edge with occasional creeping buttercup (Ranunculus repens), broadleaved dock (Rumex obtusifolius) and rarely recorded cuckooflower (Cardamine pratensis).May provide potential habitat for great crested newts (Triturus cristatus).	Duckweed (Lemna spp.), creeping bent (Agrostis stolonifera), creeping buttercup (Ranunculus repens), broadleaved dock (Rumex obtusifolius), recorded cuckooflower (Cardamine pratensis).	

	COMPARTMENT 6	
TN No. /Access	Description	Species
U6 – 5 FULL ACCESS	Intact Species-Poor Hedgerow With Trees Hawthorn (Crataegus monogyna) dominated hedgerow with occasional blackthorn (Prunus spinosa), managed to a height of 3m and width of 2m. A mature ash (Fraxinus excelsior) tree is present in the hedgerow. The understorey is dominated by ruderal species including common nettle (Urtica dioica) and cow parsley (Anthriscus sylvestris).	Blackthorn (Prunus spinosa), hawthorn (Crataegus monogyna), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris).
U6 – 6 FAR DISTANCE	Defunct Species-Poor Hedgerow Hedgerow was viewed from a distance of 40m with binoculars as no access was gained.	Hawthorn (Crataegus monogyna).
	Appeared to be a hawthorn (Crataegus monogyna) dominated hedgerow 2-3m in height, with frequent gaps throughout.	
U6 – 7 FAR DISTANCE	<u>Improved Grassland</u> No access was gained to field but appeared to be improved with ridge and furrow. The north eastern edge of the field has been fenced off with high spoil mounds and bare ground present. This area appears to be part of a development taking place in the adjacent school grounds.	
U6 – 8 FAR DISTANCE	Intact Species-Poor Hedgerow With Trees Hedgerow was viewed from a distance of 40m with binoculars as no access was gained. Hedgerow appeared to be species poor hawthorn (Crataegus monogyna) dominated managed to varying heights as it bounds residential gardens. Several mature trees are present including ash (Fraxinus excelsior).	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior).
U6 – 9 FULL ACCESS	Defunct Species-Poor Hedgerow Unmanaged hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) hedgerow 2-3m in height and 4-5m in width with frequent gaps. Dense stands of bramble (Rubus fruticosus agg.) dominate the hedgerow canopy in parts.	Hawthorn (Crataegus monogyna), rose spp. (Rosa spp.), blackthorn (Prunus spinosa), bramble (Rubus fruticosus agg.), ash (Fraxinus excelsior), common nettle (Urtica dioica), cleavers (Galium aparine), broadleaved dock (Rumex obtusifolius), willowherb spp. (Epilobium spp.), creeping buttercup (Ranunculus repens), Yorkshire fog (Holcus

COMPARTMENT 6		
TN No. /Access	Description	Species
	A dry ditch is present along the southern edge of the hedgerow and is 1m in height and 1.5m in width and overgrown with common nettle (Urtica dioica), willowherb spp. (Epilobium spp.), broadleaved dock (Rumex obtusifolius) and bramble.	lanatus).
U6 – 10 FULL ACCESS	Open WaterSmall pond in a field corner covering and area of approximately 30m². There is no aquatic vegetation present and the water appears to be stagnant and is at least 1m deep. The pond is heavily shaded by overhanging hawthorn (Crataegus monogyna) shrubs and ash (Fraxinus excelsior) trees.Uniform clay banks surround the pond rising to a height of 1m at an aspect of 40°. Ruderal vegetation such as common nettle (Urtica dioica), broadleaved dock (Rumex obtusifolius) and Yorkshire fog (Holcus lanatus) dominate the banks with frequent areas of bare ground.Low potential for great crested newts (Triturus cristatus).	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior). Common nettle (Urtica dioica), broadleaved dock (Rumex obtusifolius), Yorkshire fog (Holcus lanatus).
U6 – 11 FULL ACCESS	Semi-Improved GrasslandExtensive area of unmanaged grassland likely to be abandoned pasture field. To the north ruderal species dominate with tall grasses such as Yorkshire fog (Holcus lanatus), false oat grass (Arrhenatherum elatius), cock's foot (Dactylis glomerata) and occasional perennial rye grass (Lolium perenne). Ruderal herb species are abundant throughout the sward and include broadleaved dock (Rumex obtusifolius), common nettle (Urtica dioica), white dead nettle (Lamium album), spear thistle (Cirsium arvense), creeping thistle (Cirsium arvense) and hogweed (Heracleum sphondylium).The southern half of the field supports species typical of wet grassland such as abundant tufted hair grass (Deschampsia cespitosa) and soft rush (Juncus effusus) with occasional creeping buttercup (Ranunculus repens) and cuckooflower (Cardamine pratensis). Locally frequent scattered goat willow (Salix caprea) scrub is present throughout the southern half of the field with occasional hawthorn (Crataegus monogyna) and bramble (Rubus fruicosus agg.).	Tufted hair grass (Deschampsia cespitosa), false oat grass (Arrhenatherum elatius), cuckooflower (Cardamine pratensis), broadleaved dock (Rumex obtusifolius), creeping buttercup (Ranunculus repens), meadow buttercup (Ranunculus acris), common nettle (Urtica dioica), hogweed (Heracleum sphondylium), dandelion (Taraxacum officinale), goat willow (Salix caprea), bramble (Rubus fruticosus agg.), hawthorn (Crataegus monogyna), common ragwort (Senecio jacobaea), Yorkshire fog (Holcus lanatus), perennial rye grass (Lolium perenne) , bent spp. (Agrostis spp.), fescue spp. (Festuca spp.), cock's foot (Dactylis glomerata), cow parsley (Anthriscus sylvestris), greater plantain (Plantago major), ash (Fraxinus excelsior), creeping thistle (Cirsium arvense), spear thistle (Cirsium arvense), soft rush (Juncus effusus), white clover (Trifolium repens), red clover (Trifolium pratense), white dead nettle (Lamium album).

	COMPARTMENT 6		
TN No. /Access	Description	Species	
	As the field appears to have been abandoned natural succession to woodland is present throughout. Ash (Fraxinus excelsior) saplings are scattered occasionally throughout the field with an abundance of young ash and goat willow in the south western corner, forming a small copse of woodland. A line of young ash and hawthorn is also present along the north western field boundary with locally abundant patches of bramble scrub present throughout the northern half of the field. Due to diverse grassland and scrub habitat structures within the field, a number of warblers and other bird species were observed, including willow warbler (Phylloscopus trochilus), blackcap (Sylvia atricapilla), garden warbler (Sylvia borin), chiffchaff (Phylloscopus collybita) and whitethroat (Sylvia communis). The field would be suitable for supporting reptile species.		
U6 – 12 FULL ACCESS	Intact Species-Poor HedgerowTall, generally unmanaged, hedgerow with hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) to a height of 3-4m and a width of 4m. Occasional dead elm spp. (Ulmus spp.) trees are present. A dry ditch is present along the western edge of the hedgerow and is 1.5m in height and 2m in width. The ditch is completely over shaded by the hedgerow and is therefore devoid of vegetation.Ruderal species dominate the hedgerow understorey and include common nettle (Urtica dioica) and cow parsley (Anthriscus sylvestris).	Hawthorn (Crataegus monogyna), elm spp. (Ulmus spp.), blackthorn (Prunus spinosa), elder (Sambucus nigra), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), cleavers (Galium aparine).	
U6 – 13 FULL ACCESS	Intact Species-Poor Hedgerow         Generally unmanaged hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) hedgerow 3-4m in height and 5-6m in width. A dry ditch is present along the northern edge of the hedgerow and is 1.5m in height and 2.5m in width. The ditch is completely over shaded by the hedgerow and is therefore devoid of vegetation.         Ruderal species dominate the hedgerow understorey and include common nettle (Urtica dioica) and cow parsley (Anthriscus sylvestris).	Hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), white dead nettle (Lamium album), cock's foot (Dactylis glomerata), false oat grass (Arrhenatherum elatius).	

	COMPARTMENT 6		
TN No. /Access	Description	Species	
U6-14 FULL ACCESS	Defunct Species-Poor Hedgerow         Small section of hawthorn (Crataegus monogyna) dominated hedgerow with dead elm spp. (Ulmus spp.) trees.         Ruderal species dominate the hedgerow understorey and include common nettle (Urtica dioica) and cow parsley (Anthriscus sylvestris).	Hawthorn (Crataegus monogyna), common nettle (Urtica dioica), rose spp. (Rosa spp.), blackthorn (Prunus spinosa), bramble (Rubus fruticosus agg.), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris).	
U6-15 FULL ACCESS	Semi-Improved GrasslandCattle grazed semi-improved grassland with a sward height of 20-30cm. Ridge and furrow is just evident to the south of the field.Grass species are abundant throughout the sward and include Yorkshire fog (Holcus lanatus), meadow foxtail (Alopecurus pratensis), meadow grass spp. (Poa spp.), fescue spp. (Festuca spp.), crested dog's tail (Cynosurus cristatus) and sweet vernal grass (Anthoxanthum odoratum) with occasional perennial rye grass (Lolium perenne). Field woodrush (Luzula campestris) was present in locally abundant patches throughout the field.Frequent to abundant herb species are also found within the sward and include common chickweed (Stellaria media), common mouse ear (Cerastium fontanum), bulbous buttercup (Ranunculus bulbosa), germander speedwell (Veronica chamaedrys), sorrel (Rumex acetosa) and rarely recorded cuckooflower (Cardamine pratensis). <td>Perennial rye grass (Lolium perenne), cock's foot (Dactylis glomerata), crested dog's tail (Cynosurus cristatus), sweet vernal grass (Anthoxanthum odoratum), meadow foxtail (Alopecurus pratensis), meadow grass spp. (Poa spp.), Yorkshire fog (Holcus lanatus), meadow buttercup (Ranunculus acris), bulbous buttercup (Ranunculus bulbosa), creeping buttercup (Ranunculus repens), spear thistle (Cirsium arvense), greater plantain (Plantago major), common nettle (Urtica dioica), field woodrush (Luzula campestris), broadleaved dock (Rumex obtusifolius), common chickweed (Stellaria media), common mouse ear (Cerastium fontanum), germander speedwell (Veronica chamaedrys), sorrel (Rumex acetosa), fescue spp. (Festuca spp.), cuckooflower (Cardamine pratensis).</td>	Perennial rye grass (Lolium perenne), cock's foot (Dactylis glomerata), crested dog's tail (Cynosurus cristatus), sweet vernal grass (Anthoxanthum odoratum), meadow foxtail (Alopecurus pratensis), meadow grass spp. (Poa spp.), Yorkshire fog (Holcus lanatus), meadow buttercup (Ranunculus acris), bulbous buttercup (Ranunculus bulbosa), creeping buttercup (Ranunculus repens), spear thistle (Cirsium arvense), greater plantain (Plantago major), common nettle (Urtica dioica), field woodrush (Luzula campestris), broadleaved dock (Rumex obtusifolius), common chickweed (Stellaria media), common mouse ear (Cerastium fontanum), germander speedwell (Veronica chamaedrys), sorrel (Rumex acetosa), fescue spp. (Festuca spp.), cuckooflower (Cardamine pratensis).	
U6 – 16 FULL ACCESS	Intact Species-Poor HedgerowHawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) hedgerow managed to a height of 1.7m and width of 2m.Ruderal species dominate the understorey and include bramble (Rubus fruticosus agg.) and common nettle (Urtica dioica).	Blackthorn (Prunus spinosa), rose spp. (Rosa spp.), hawthorn (Crataegus monogyna), ivy (Hedera helix), bramble (Rubus fruticosus agg.), cuckooflower (Cardamine pratensis), common nettle (Urtica dioica), germander speedwell (Veronica chamaedrys).	

	COMPARTMENT 6		
TN No. /Access	Description	Species	
U6 – 17 FULL ACCESS	Intact Species-Poor Hedgerow With TreesHawthorn (Crataegus monogyna) dominated hedgerow managed to a height of 1.7mand width of 2m. One semi-mature ash (Fraxinus excelsior) tree is present to the eastof the hedgerow.Ruderal species dominate the hedgerow understorey and include common nettle (Urticadioica), cleavers (Galium aparine) and cow parsley (Anthriscus sylvestris).	Hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), holly (Ilex aquifolium), elder (Sambucus nigra), ash (Fraxinus excelsior), bramble (Rubus fruticosus agg.), common nettle (Urtica dioica), cleavers (Galium aparine), cow parsley (Anthriscus sylvestris).	
U6 – 18 FULL ACCESS	Intact Species-Rich HedgerowManaged hedgerow to a height and width of 1.5m. Hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) are abundant within the hedgerow with occasional elm spp. (Ulmus spp.), blackthorn (Prunus spinosa), elder (Sambucus nigra), rose spp. (Rosa spp.) and crab apple (Malus sylvestris).A dry ditch is present on the northern side of the hedgerow and is overgrown with common nettle (Urtica dioica), cleavers (Galium aparine) and great willowherb (Epilobium hirsutum).	Hawthorn (Crataegus monogyna), elm spp. (Ulmus spp.), crab apple (Malus sylvestris), elder (Sambucus nigra), rose spp. (Rosa spp.), blackthorn (Prunus spinosa), cleavers (Galium aparine), common nettle (Urtica dioica), hogweed (Heracleum sphondylium), cow parsley (Anthriscus sylvestris), bramble (Rubus fruticosus agg.), ivy (Hedera helix), great willowherb (Epilobium hirsutum).	
U6 – 19 FULL ACCESS	Defunct Species-Rich Hedgerow With TreesUnmanaged hedgerow to a height of 3-4m. Hawthorn (Crataegus monogyna) is abundant throughout the hedgerow with occasional to frequent ash (Fraxinus excelsior), rose spp. (Rosa spp.), elder (Sambucus nigra), goat willow (Salix caprea), blackthorn (Prunus spinosa), elm spp. (Ulmus spp.) and apple spp. (Malus spp.).A dry ditch is present on the northern side of the hedgerow and is overgrown with common nettle (Urtica dioica), cleavers (Galium aparine) and great willowherb (Epilobium hirsutum).	Hawthorn (Crataegus monogyna), elm spp. (Ulmus spp.), apple spp. (Malus spp.), elder (Sambucus nigra), rose spp. (Rosa spp.), blackthorn (Prunus spinosa), cleavers (Galium aparine), common nettle (Urtica dioica), hogweed (Heracleum sphondylium), cow parsley (Anthriscus sylvestris), bramble (Rubus fruticosus agg.), ivy (Hedera helix), great willowherb (Epilobium hirsutum), common chickweed (Stellaria media), cock's foot (Dactylis glomerata), dandelion (Taraxacum officinale).	
U6 – 20 FULL ACCESS	Defunct Species-Poor Hedgerow With Trees Unmanaged hawthorn (Crataegus monogyna) hedgerow to a height and width of 3m. Occasional mature ash (Fraxinus excelsior) trees are present within the hedgerow.	Hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), elder (Sambucus nigra), blackthorn (Prunus spinosa), cleavers (Galium aparine), common nettle (Urtica dioica), broadleaved dock (Rumex obtusifolius), bramble (Rubus fruticosus agg.).	

	COMPARTMENT 6	
TN No. /Access	Description	Species
	Ruderal species dominate the hedgerow understorey and include cleavers (Galium aparine) and common nettle (Urtica dioica).	

	COMPARTMENT 7		
TN No. /Access	Description	Species	
U7 - 1 FULL ACCESS	Intact Species-Poor Hedgerow With TreesHawthorn (Crataegus monogyna) dominated hedgerow with locally abundant elder (Sambucus nigra) and occasional ash (Fraxinus excelsior) and blackthorn (Prunus spinosa). The hedgerow is managed to a height and width of 2m and several semi- mature ash trees are present within the hedgeline.The hedgerow understorey is dominated by ruderal species such as cleavers (Galium aparine), cow parsley (Anthriscus sylvestris) and common nettle (Urtica dioica).	Hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), elder (Sambucus nigra), ash (Fraxinus excelsior), ash (Fraxinus excelsior), Norway maple (Acer platanoides), Yorkshire fog (Holcus lanatus), cleavers (Galium aparine), cow parsley (Anthriscus sylvestris), common nettle (Urtica dioica), hogweed (Heracleum sphondylium), dandelion (Taraxacum officinale).	
U7 – 2 FULL ACCESS	Intact Species-Poor Hedgerow With TreesHawthorn (Crataegus monogyna) and elder (Sambucus nigra) dominated hedgerow with occasional maturing ash (Fraxinus excelsior) trees. To the south, the hedgerow is managed to a height of 1.8m and width of 2m alongside residential houses. To the north, the hedgerow is higher and is managed by 'siding' to a height and width of 3-4m.The hedgerow understorey is dominated by ruderal species such as cleavers (Galium aparine), green alkanet (Pentaglottis sempervirens), cow parsley (Anthriscus sylvestris) and common nettle (Urtica dioica).Rabbit (Oryctolagus cuniculus) holes are present throughout the hedgerow bottom.	Elder (Sambucus nigra), hawthorn (Crataegus monogyna), holly (Ilex aquifolium), ash (Fraxinus excelsior), cleavers (Galium aparine) common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), Lord's and Ladies' (Arum maculatum), green alkanet (Pentaglottis sempervirens).	
U7 – 3 FULL ACCESS	Defunct Species-Poor Hedgerow With TreesHawthorn (Crataegus monogyna) hedgerow with locally abundant holly (Ilex aquifolium), apple spp. (Malus spp.) and elm spp. (Ulmus spp.). The hedgerow is managed to a height of 1.5m and width of 2m although frequent gaps are present.Several mature beech (Fagus sylvatica) trees are present within the hedgeline including a standing deadwood tree with potential to support roosting bats. Ruderal species dominate the hedgerow understorey and include common nettle (Urtica dioica), white dead nettle (Lamium album) and ground ivy (Glechoma hederacea).	Elder (Sambucus nigra), hawthorn (Crataegus monogyna), holly (Ilex aquifolium), apple spp. (Malus spp.), elm spp. (Ulmus spp.), beech (Fagus sylvatica), common nettle (Urtica dioica), white dead nettle (Lamium album), Yorkshire fog (Holcus lanatus), ground ivy (Glechoma hederacea), cow parsley (Anthriscus sylvestris), cleavers (Galium aparine).	

	COMPARTMENT 7		
TN No. /Access	Description	Species	
	Rabbit (Oryctolagus cuniculus) holes are present throughout the hedgerow bottom.		
U7 – 4 FULL ACCESS	Intact Species-Poor Hedgerow         Hawthorn (Crataegus monogyna) and elm spp. (Ulmus spp.) hedgerow managed to a height and width of 2m.	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), elm spp. (Ulmus spp.), blackthorn (Prunus spinosa), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris).	
	Common nettle (Urtica dioica) and cow parsley (Anthriscus sylvestris) dominates the hedgerow understorey.		
U7 – 5 FULL ACCESS	Defunct Species-Poor Hedgerow With TreesAn overgrown and unmanaged hedgerow with hawthorn (Crataegus monogyna), elder (Sambucus nigra) and elm spp. (Ulmus spp.). A line of mature ash (Fraxinus excelsior) and sycamore (Acer pseudoplatanus) trees are present further to the east, along the boundary of an allotment site (U 7 – 7)Ruderal species dominate the hedgerow understorey and include common nettle (Urtica	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), elm spp. (Ulmus spp.), ash (Fraxinus excelsior), sycamore (Acer pseudoplatanus), common nettle (Urtica dioica), hogweed (Heracleum sphondylium), dandelion (Taraxacum officinale), cock's foot (Dactylis glomerata), false oat grass (Arrhenatherum elatius), cleavers (Galium aparine), cow parsley (Anthriscus sylvestris), garlic mustard (Alliaria petiolata).	
U7 – 6 CLOSE DISTANCE	dioica) hogweed (Heracleum sphondylium) and dandelion (Taraxacum officinale).         Improved Grassland         Short sward (<1cm) grassland grazed by Shetland ponies and goats. The site could not be directly accessed although species typical of a improved sward appear to persist and include perennial rye grass (Lolium perenne), fescue spp. (Fescuta spp.), white clover (Trifolium repens), broadleaved dock (Rumex obtusifolius), dandelion (Taraxacum officinale) and meadow buttercup (Ranunculus acris).	Perennial rye grass (Lolium perenne), dandelion (Taraxacum officinale), spear thistle (Cirsium arvense), creeping thistle (Cirsium arvense), meadow buttercup (Ranunculus acris), creeping buttercup (Ranunculus repens), common nettle (Urtica dioica), meadow grass spp. (Poa spp.), fescue spp. (Festuca spp.), broadleaved dock (Rumex obtusifolius).	
U7 – 7 FULL ACCESS	Allotments         Extensive allotment site which is fully cultivated and regularly managed. Many garden plants and vegetable crops are present.         Allotment holders have reported regular sightings of common lizard (Lacerta vivipara) and grass snake (Natrix natrix). Frequent compost heaps and areas of artificial refugia		

	COMPARTMENT 7		
TN No. /Access	Description	Species	
	suitable for these species are present throughout the allotment site. Also potential for slow worm (Anguis fragilis).		
U7 – 8 FULL ACCESS	Intact Species-Poor Hedgerow With TreesManaged hedgerow to a height and width of 2m on the edge of an allotment site with dominant hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) and locally abundant ash (Fraxinus excelsior) and elm spp. (Ulmus spp.). Occasional semi-mature ash trees are present in the hedge line.Ruderal species dominate the hedgerow understorey and include dandelion (Taraxacum officinale), false oat grass (Arrhenatherum elatius) and cleavers (Galium aparine).	Elder (Sambucus nigra), blackthorn (Prunus spinosa), hawthorn (Crataegus monogyna), ash (Fraxinus excelsior), elm spp. (Ulmus spp.), dandelion (Taraxacum officinale), false oat grass (Arrhenatherum elatius), cleavers (Galium aparine), white dead nettle (Lamium album), garlic mustard (Alliaria petiolata), bramble (Rubus fruticosus agg.).	
U7 – 9 FULL ACCESS	Semi-Improved GrasslandArea of semi-improved grassland to the south of an allotment site which appears have been mechanically cut at a sward height of 30-40cm. Grass species in the sward include Yorkshire fog (Holcus lanatus), meadow foxtail (Alopecurus pratensis), false oat grass (Arrhenatherum elatius), cock's foot (Dactylis glomerata) and perennial rye grass (Lolium perenne) with frequent herb species such as ribwort plantain (Plantago lanceolata), dandelion (Taraxacum officinale), sorrel (Rumex acetosa), bulbous buttercup (Ranunculus bulbosa), white clover (Trifolium repens), common mouse ear (Cerastium fontanum) and common vetch (Vicia sativa).Frequent scattered trees are present to the northern edge of the grassland with species including ash (Fraxinus excelsior), pedunculate oak (Quercus robur) and wild cherry (Prunus avium).	Cow parsley (Anthriscus sylvestris), dandelion (Taraxacum officinale), hogweed (Heracleum sphondylium), ribwort plantain (Plantago lanceolata), sorrel (Rumex acetosa), Yorkshire fog (Holcus lanatus), false oat grass (Arrhenatherum elatius), cock's foot (Dactylis glomerata), common mouse ear (Cerastium fontanum), bulbous buttercup (Ranunculus bulbosa), perennial rye grass (Lolium perenne), common vetch (Vicia sativa), white clover (Trifolium repens), red clover (Trifolium pratense), common ragwort (Senecio jacobaea), dandelion (Taraxacum officinale), meadow grass spp. (Poa spp.), ash (Fraxinus excelsior), pedunculate oak (Quercus robur), wild cherry (Prunus avium), hawthorn (Crataegus monogyna).	
U7 – 10 FULL ACCESS	Defunct Species-Poor Hedgerow With Trees           Overgrown and unmanaged hedgerow on a high bank to a height of 3-4m and width of 5-6m. Frequent gaps are present throughout the hedgerow. Woody species within the hedgerow include hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), elm spp. (Ulmus spp.) and elder (Sambucus nigra) with occasional goat willow (Salix	Hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), elm spp. (Ulmus spp.), elder (Sambucus nigra), white willow (Salix alba), ash (Fraxinus excelsior), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), cleavers (Galium aparine), false oat grass (Arrhenatherum elatius), garlic mustard (Alliaria petiolata), white dead nettle (Lamium album), dandelion (Taraxacum officinale), ground ivy	

	COMPARTMENT 7		
TN No. /Access	Description	Species	
	<ul> <li>caprea).</li> <li>The hedgerow understorey is dominated by ruderal species including ground ivy (Glechoma hederacea), common nettle (Urtica dioica), cow parsley (Anthriscus sylvestris), cleavers (Galium aparine) and garlic mustard (Alliaria petiolata).</li> <li>Several mature ash (Fraxinus excelsior) trees are present within the hedgeline and are covered in dense ivy (Hedera helix). The trees have the potential to support roosting bats.</li> </ul>	(Glechoma hederacea), hogweed (Heracleum sphondylium).	
U7 – 11 FULL ACCESS	Intact Species-Poor Hedgerow With Trees         Hawthorn (Crataegus monogyna) and elder (Sambucus nigra) dominated hedgerow         managed to a height and width of 1.5m. The understorey is dominated by ruderal         species including bramble (Rubus fruticosus agg.), cow parsley (Anthriscus sylvestris)         and hogweed (Heracleum sphondylium).         One young pedunculate oak (Quercus robur) and ash (Fraxinus excelsior) tree is present         along the hedgeline.	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), pedunculate oak (Quercus robur), ash (Fraxinus excelsior), bramble (Rubus fruticosus agg.), cow parsley (Anthriscus sylvestris), hogweed (Heracleum sphondylium), cock's foot (Dactylis glomerata), false oat grass (Arrhenatherum elatius), white clover (Trifolium repens).	
U7 – 12 FULL ACCESS	Intact Species-Poor Hedgerow With Trees         Line of young and unmanaged goat willow (Salix caprea) to 3m in height alongside the boundary of a new housing estate. Common nettle (Urtica dioica) and dandelion (Taraxacum officinale) dominates the understorey.	Goat willow (Salix caprea), common nettle (Urtica dioica), dandelion (Taraxacum officinale), false oat grass (Arrhenatherum elatius), cock's foot (Dactylis glomerata), cleavers (Galium aparine).	
U7 – 13 FULL ACCESS	Intact Species-Poor Hedgerow With TreesOccasionally managed hedgerow to a height of 3-4m and width of 5-6m. Locally abundant hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) are present within the hedgeline and are gradually encroaching into the adjacent fields. Locally abundant ash (Fraxinus excelsior), wild cherry (Prunus avium), elder (Sambucus nigra) and the non-native snowberry (Symphoricarpos albus) are also present.	Snowberry (Symphoricarpos albus), ash (Fraxinus excelsior), elder (Sambucus nigra), hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), wild cherry (Prunus avium), broadleaved dock (Rumex obtusifolius), dandelion (Taraxacum officinale), false oat grass (Arrhenatherum elatius), cow parsley (Anthriscus sylvestris), common nettle (Urtica dioica).	

COMPARTMENT 7	
Description	Species
A mature ash tree is present at the southern edge of the hedgerow and has the potential to support roosting bats. Ruderal species dominate the hedgerow understorey and include broadleaved dock (Rumex obtusifolius), dandelion (Taraxacum officinale) and cow parsley (Anthriscus sylvestris).	
Tall Ruderal Vegetation         Area of tall ruderal vegetation in a long hollow opposite to a high defunct hedgerow with trees (U7 – 10). Tall herbs typical of nutrient rich conditions dominate the habitat and include spear thistle (Cirsium arvense), common nettle (Urtica dioica), hogweed (Heracleum sphondylium), cow parsley (Anthriscus sylvestris), broadleaved dock (Rumex obtusifolius), bramble (Rubus fruticosus agg.) and false oat grass (Arrhenatherum elatius).	Yorkshire fog (Holcus lanatus), cock's foot (Dactylis glomerata), false oat grass (Arrhenatherum elatius), willowherb spp. (Epilobium spp.), dandelion (Taraxacum officinale), lesser celandine (Ranunculus ficaria), spear thistle (Cirsium arvense), common nettle (Urtica dioica), hogweed (Heracleum sphondylium), cow parsley (Anthriscus sylvestris), broadleaved dock (Rumex obtusifolius), bramble (Rubus fruticosus agg.).
Semi-Natural Broadleaf Woodland With Running WaterA thin belt of woodland in a natural shallow valley at the trough of adjacent fields on the banks of a minor stream that in parts almost resembles a wet flush.To the west the woodland is at its widest (>20-30m) forming and enclosed canopy with frequent mature ash (Fraxinus excelsior), pedunculate oak (Quercus robur), goat willow (Salix caprea) and crack willow (Salix fragilis). A dense scrub layer is present below with species including goat willow (Salix caprea), hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa) and holly (Ilex aquifolium). Lesser celandine (Ranunculus ficaria) is locally abundant within the field layer with common nettle (Urtica dioica), hogweed (Heracleum sphondylium) and frequent areas of bare ground. It is likely that the woodland had developed as secondary woodland.The stream is almost non-existent in this area although the surrounding ground is damp and supports an abundance of meadowsweet (Filipendula ulmaria) with common nettle, hogweed and rarely recorded cuckooflower (Cardamine pratensis).The woodland begins to form a thin belt (>10m) as it follows the line of the stream down	Ash (Fraxinus excelsior), blackthorn (Prunus spinosa), ia, goat willow (Salix caprea), hawthorn (Crataegus monogyna), elder (Sambucus nigra), white willow (Salix alba), elm spp. (Ulmus spp.), pedunculate oak (Quercus robur), rose spp. (Rosa spp.), sycamore (Acer pseudoplatanus), lesser celandine (Ranunculus ficaria), common nettle (Urtica dioica), hogweed (Heracleum sphondylium), cuckooflower (Cardamine pratensis), creeping buttercup (Ranunculus repens), Yorkshire fog (Holcus lanatus), ground ivy (Glechoma hederacea), bramble (Rubus fruticosus agg.), meadowsweet (Filipendula ulmaria).
	A mature ash tree is present at the southern edge of the hedgerow and has the potential to support roosting bats. Ruderal species dominate the hedgerow understorey and include broadleaved dock (Rumex obtusifolius), dandelion (Taraxacum officinale) and cow parsley (Anthriscus sylvestris).           Tall Ruderal Vegetation           Area of tall ruderal vegetation in a long hollow opposite to a high defunct hedgerow with trees (U7 – 10). Tall herbs typical of nutrient rich conditions dominate the habitat and include spear thistle (Cirsium arvense), common nettle (Urtica dioica), hogweed (Heracleum sphondylium), cow parsley (Anthriscus sylvestris), broadleaved dock (Rumex obtusifolius), bramble (Rubus fruticosus agg.) and false oat grass (Arrhenatherum elatius).           Semi-Natural Broadleaf Woodland With Running Water           A thin belt of woodland is a tits widest (>20-30m) forming and enclosed canopy with frequent mature ash (Fraxinus excelsior), pedunculate oak (Quercus robur), goat willow (Salix caprea) and crack willow (Salix caprea), hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa) and holly (Ilex aquifolium). Lesser celandine (Ranunculus ficaria) is locally abundant within the field layer with common nettle (Urtica dioica), hogweed (Heracleum sphondylium) and frequent areas of bare ground. It is likely that the woodland had developed as secondary woodland.

	COMPARTMENT 7		
TN No. /Access	Description	Species	
	<ul> <li>cutting through the clay banks which rise to a height of 1m-1.5m and a shallow aspect of 30-35°. No aquatic plants are present within the stream and the banks are generally overgrown with common nettle, bramble (Rubus fruticosus agg.), Yorkshire fog (Holcus lanatus) and broadleaved dock (Rumex obtusifolius).</li> <li>This section of woodland supports mature ash, pedunculate oak, white willow (Salix</li> </ul>		
	alba) and crack willow (Salix fragilis) trees with an occasional shrub layer of blackthorn (Prunus spinosa), hawthorn (Crataegus monogyna), dog rose (Rosa canina) and goat willow (Salix caprea). Many of the trees throughout the woodland have the potential to support roosting bats.		
U7 – 16 FULL ACCESS	Intact Species-Poor Hedgerow With Trees         Extensive roadside hedgerow dominated by hawthorn (Crataegus monogyna) with occasional semi-mature elm spp. (Ulmus spp.), field maple (Acer campestre) and ash (Fraxinus excelsior) trees to the west.         The hedgerow is frequently managed to a height and width of 2.5m. A dry ditch is present further to the west of the hedgerow and is overgrown with hogweed (Heracleum sphondylium), common nettle (Urtica dioica) and great willowherb (Epilobium hirsutum).	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), ash (Fraxinus excelsior), elm spp. (Ulmus spp.), field maple (Acer campestre), cow parsley (Anthriscus sylvestris), hogweed (Heracleum sphondylium), white dead nettle (Lamium album), dandelion (Taraxacum officinale), false oat grass (Arrhenatherum elatius), broadleaved dock (Rumex obtusifolius), common nettle (Urtica dioica).	
U7 – 17 FULL ACCESS	Intact Species-Poor HedgerowHawthorn (Crataegus monogyna) dominated hedgerow with occasional elder (Sambucus nigra) managed to a height of 1m and width of 1.5m. Scattered whitebeam (Sorbus aria) are present to the east of the hedgerow on a high roadside bank with a field layer of tall ruderal vegetation including cow parsley (Anthriscus sylvestris), common nettle (Urtica dioica) and garlic mustard (Alliaria petiolata).	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), whitebeam (Sorbus aria), cow parsley (Anthriscus sylvestris), common nettle (Urtica dioica), white dead nettle (Lamium album), cock's foot (Dactylis glomerata), false oat grass (Arrhenatherum elatius), Yorkshire fog (Holcus lanatus).	
U7 – 18 FULL ACCESS	Defunct Species-Poor Hedgerow           Hawthorn (Crataegus monogyna) dominated hedgerow with occasional elm spp. (Ulmus spp.), elder (Sambucus nigra) and holly (Ilex aquifolium) along the edge of residential houses. The hedgerow is closely managed to a height of 1.5m and width of 2m.	Elm spp. (Ulmus spp.), hawthorn (Crataegus monogyna), elder (Sambucus nigra), holly (Ilex aquifolium), hogweed (Heracleum sphondylium), cow parsley (Anthriscus sylvestris), cleavers (Galium aparine), dandelion (Taraxacum officinale), white dead nettle (Lamium album), garlic mustard (Alliaria petiolata).	

	COMPARTMENT 7		
TN No. /Access	Description	Species	
	Ruderal species dominate the understorey and include cow parsley (Anthriscus sylvestris) and white dead nettle (Lamium album).		
U7 – 19 FULL ACCESS	Intact Species-Rich Hedgerow With TreesHedgerow managed to a height of 1.5m and width if 2.5m with abundant hawthorn (Crataegus monogyna) and locally frequent holly (Ilex aquifolium), rose spp. (Rosa spp.), blackthorn (Prunus spinosa) and elder (Sambucus nigra), as well as occasional hazel (Corylus avellana) and ash (Fraxinus excelsior). The understorey is dominated by ruderal species and include cleavers (Galium aparine), common nettle (Urtica dioica) and white dead nettle (Lamium album).Occasional mature ash trees are present in the hedgeline.	Hawthorn (Crataegus monogyna), elder (Sambucus nigra), holly (Ilex aquifolium), hazel (Corylus avellana), rose spp. (Rosa spp.), ash (Fraxinus excelsior), blackthorn (Prunus spinosa), cleavers (Galium aparine), common nettle (Urtica dioica) ivy (Hedera helix), white dead nettle (Lamium album), bramble (Rubus fruticosus agg.).	
U7 – 20 FULL ACCESS	Intact Species-Rich Hedgerow With TreesManaged hedgerow part of which is on a bank to a height of 2-3m and width of 3-4m. Abundant hawthorn (Crataegus monogyna) is present within the hedgerow with locally frequent blackthorn (Prunus spinosa), elder (Sambucus nigra) and hazel (Corylus avellana) with occasional rose spp. (Rosa spp.), elm spp. (Ulmus spp.), holly (Ilex aquifolium) and dogwood (Cornus sanguinea).Bracken (Pteridium aquilinum) is abundant in the hedgerow understorey with common nettle (Urtica dioica) and cleavers (Galium aparine).	Blackthorn (Prunus spinosa), hawthorn (Crataegus monogyna), elder (Sambucus nigra), elm spp. (Ulmus spp.), holly (Ilex aquifolium), rose spp. (Rosa spp.), dogwood (Cornus sanguinea), hazel (Corylus avellana), bracken (Pteridium aquilinum), common nettle (Urtica dioica), cleavers (Galium aparine), white dead nettle (Lamium album), cow parsley (Anthriscus sylvestris), garlic mustard (Alliaria petiolata), Lord's and Ladies' (Arum maculatum).	
U7 – 21 FULL ACCESS	Semi-Improved Grassland         Cattle grazed grassland to an average sward height of >20cm following a gentle slope from north to south. Grasses within the sward include frequent to abundant cock's foot (Dactylis glomerata), meadow grass spp. (Poa spp.), Yorkshire fog (Holcus lanatus), meadow foxtail (Alopecurus pratensis) and red fescue (Festuca rubra) with locally abundant crested dog's tail (Cynosurus cristatus), sweet vernal grass (Anthoxanthum odoratum) and bent spp. (Agrostis spp.).	Cock's foot (Dactylis glomerata), Yorkshire fog (Holcus lanatus), field speedwell (Veronica persica), common nettle (Urtica dioica), crested dog's tail (Cynosurus cristatus), ribwort plantain (Plantago lanceolata), common mouse ear (Cerastium fontanum), cleavers (Galium aparine), perennial rye grass (Lolium perenne), greater plantain (Plantago major), ground ivy (Glechoma hederacea), meadow foxtail (Alopecurus pratensis), white clover (Trifolium repens), yarrow (Achillea millefolium), sorrel (Rumex acetosa), bulbous buttercup (Ranunculus bulbosa), false oat grass (Arrhenatherum elatius), cuckooflower	

	COMPARTMENT 7		
TN No. /Access	Description	Species	
	Herbs are abundant throughout the sward and include frequent to abundant creeping buttercup (Ranunculus repens), bulbous buttercup (Ranunculus bulbosa), sorrel (Rumex acetosa) with locally frequent ribwort plantain (Plantago lanceolata), ground ivy (Glechoma hederacea), thyme leaved speedwell (Veronica serpyllifolia), yarrow (Achillea millefolium), field woodrush (Luzula campestris) and rarely recorded cuckooflower (Cardamine pratensis).	(Cardamine pratensis), red fescue (Festuca rubra), field woodrush (Luzula campestris), hogweed (Heracleum sphondylium), thyme leaved speedwell (Veronica serpyllifolia), creeping buttercup (Ranunculus repens), dandelion (Taraxacum officinale), creeping thistle (Cirsium arvense), sweet vernal grass (Anthoxanthum odoratum), daisy (Bellis perennis), white dead nettle (Lamium album), meadow grass spp. (Poa spp.), dock spp. (Rumex spp.), creeping bent (Agrostis stolonifera).	

# **APPENDIX 4**

# **BACKGROUND DATA MAPS**

## **APPENDIX 5**

## WILDLIFE CORRIDORS

## **APPENDIX 6**

## **GLOSSARY OF TERMS**

Landscape Science Consultancy Ltd 123 L:\LSC\R29.08 Rutland County Council\Reports & Drafts\Uppingham\Reports without badger data\Without badger data - Uppingham Extended Phase 1 Survey FINAL July 2009.doc The glossary of terms has been taken from the JNCC Phase 1 Habitat Survey Classification. All habitats have been categorized in line with the recommendations contained within the guidelines.

### Woodland

Woodland is defined as vegetation dominated by trees more than 5m high when mature, forming a distinct, although sometimes open canopy. Dominant species have been noted with the understorey and ground layer species also identified. Distinct blocks of woodland, whether broadleaved or coniferous, have been mapped separately wherever possible.

The definitions of the main categories are:-

- Broadleaved woodland: 10% or less conifer in the canopy;
- Coniferous woodland: 10% or less broadleaved in the canopy;
- Mixed woodland: 10-90% of either broadleaved or conifer in the canopy.

If the cover of trees is less than 30%, the area is shown as scattered trees.

### Semi-Natural Woodland

Semi-natural woodland comprises all stands which do not obviously originate from planting. The distribution of species will generally reflect natural variations in the site and its soil. Both ancient and more recent stands are included. Woodland with both semi-natural and planted trees are classified as semi-natural if the planted trees account for less than 30% of the canopy composition, but as plantation if more than 30% is planted.

The following would, amongst others, be included in the semi-natural woodland category:-

- woods with planted standards in semi-natural coppice;
- mature plantations (more than about 120 years old) of native species growing on sites where those species are native and where there are semi-natural woodland ground flora and shrub communities;
- self-sown secondary stands of exotic species
- alder carr and willow carr where the willows are more than 5m tall
- well-established sweet-chestnut coppice (that is, over 25 years old);
- woods which have been completely underplanted, but where the planted trees do not yet contribute to the canopy;

### **Plantation Woodland**

All obviously planted woodland of any age are included in this category, with the exception of those types mentioned previously.

#### Scrub

Scrub is seral or climax vegetation dominated by locally native shrubs, usually less than 5m tall, occasionally with a few scattered trees. The following species are, amongst others, be included in this category:-

- Gorse, common broom and common juniper scrub;
- Stands of bramble and dog rose scrub
- Stands of mature hawthorn, blackthorn or grey willow, even if more than 5 m tall;
- All willow carr less than 5 m tall; all grey willow carr;

The following would not be included in this category:-

- Hedges
- Stands of young trees or stump regrowth less than 5 m high, where these represent more than 50% of the immature canopy cover;
- stands of introduced shrub species

### **Species-Poor Hedgerows**

Hedges with a low diversity of native woody species and ground flora.

### **Species-Rich Hedges**

Hedges with a high diversity of native woody species and ground flora.

### Intact Hedge

Intact hedges are entire and more-or-less stock proof.

### **Defunct Hedge**

Hedges in which there are gaps and which are no longer stock-proof.

### **Unimproved Grassland**

Unimproved grasslands are likely to be rank and neglected, mown or grazed. They may have been treated with low levels of farmyard manure, but should not have had sufficient applications of fertiliser or herbicide, or have been so intensively grazed or drained, as to alter the sward composition significantly. Species diversity is often high, with species characteristic of the area and the soils and with a very low percentage of agricultural species. Unimproved grasslands may often be of high conservation value.

### Semi-Improved Grassland

Semi-improved grassland is made up of grasslands which have been modified by artificial fertilisers, slurry, intensive grazing, herbicides or drainage, and consequently have a range of species which is less diverse and natural than

unimproved grasslands. Such grasslands are still of some conservation value. Semiimproved grassland may originate from partial improvement of acid, neutral or calcareous grassland. Species diversity will generally be lower than in unimproved grassland in the same area.

Semi-improved grassland are also common where former improved grasslands have become neglected, abandoned or only occasionally grazed and thus a more varied floral community often develops.

### **Improved Grassland**

Improved grasslands are those meadows and pastures which have been so affected by heavy grazing, drainage, or the application of herbicides, inorganic fertilisers, slurry or high doses or manure that they have lost many of the species which one could expect to find in an unimproved sward. They have only a very limited range of grasses and a few common forbs, mainly those demanding of nutrients and resistant to grazing. Rye grass, crested dog's tail, white clover, broad leaved dock, Dandelion, daisy, meadow buttercup and bulbous buttercup are typical of improved grassland, while stands of dock species, common nettle and thistles species indicate local enrichment of the soil by grazing animals.

The following signs usually indicate substantial improvement:-

- Bright green, lush and even sward, dominated by grasses (though poaching causes unevenness);
- Low diversity of herb species;
- More than 50% rye grass, white clover and other agricultural species.

### Marsh/Marshy Grassland

This includes grasslands with a high proportion of rush species, sedge species or meadowsweet, and wet meadows and pastures supporting communities of species such as marsh marigold or valerian species, where broadleaved herbs rather than grasses predominate.

### Amenity Grassland

This comprises intensively managed and regularly mown grasslands, typical of lawns, playing fields, golf course fairways and many urban 'savannah' parks.

## **Tall Ruderal Vegetation**

This category comprises stands of tall perennial or biennial herbaceous species, usually more than 25cm high, of species such as rosebay willowherb, common nettle and Japanese knotweed. Tall ruderal vegetation is indicative of areas of disturbed ground and/or nutrient enrichment.

### **Standing Water**

Standing water includes lakes, reservoirs, pools, flooded gravel pits, ponds, waterfilled ditches, canals and brackish lagoons.

#### **Running Water**

Running water comprises rivers and streams.

### Arable

This includes arable cropland, horticultural land (for example nurseries, vegetable plots, flower beds), freshly-ploughed land and recently reseeded grassland, such as rye grass and rye-clover leys, often managed for silage.

### **Ephemeral/Short Perennial Vegetation**

Short, patchy plant associations typical of derelict urban sites, quarries and railway ballast. The land is usually freely draining, and usually has shallow stony soil. The vegetation typically lacks a clear dominant species, but consists of a mixture of low growing plants, often less than 25 cm high.