

Ecological Report Parish Neighbourhood Plan For

Alcester Town Council

**Habitat Biodiversity Audit Partnership
for Warwickshire, Coventry and Solihull
Warwickshire Wildlife Trust
Ecological Services Warwickshire
County Council**



August 2018

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1 River Arrow, Oversley Mill, Alcester. Source: C.Talbot 2018

Introduction

Wildlife and biodiversity are valuable as part of the natural environment, and in terms of contributing to people's quality of life and wellbeing. The Government has committed itself to halt and reverse the overall decline in biodiversity. Neighbourhood plans offer significant opportunities to understand the biodiversity assets you have and how they can be protected and enhanced.

Identifying biodiversity assets of your neighbourhood includes:

- Important habitats for example all woodlands, ponds, hedgerows and meadows;
- Designated nature areas, both statutory and non-statutory;
- Distribution of plants and animals
- Wildlife corridors between habitats to allow animals and plants to disperse

In addition to identifying biodiversity assets your local neighbourhood plan can be used to;

- Show where opportunities are for enhancing biodiversity by introducing different management of public spaces, planting trees or restoring hedgerows for example;
- Identifying where the threats to wildlife are, and how can they be avoided or mitigated;
- Plan to achieve a long-term biodiversity net gain for your parish

The Habitat Biodiversity Audit for Warwickshire Coventry and Solihull

Warwickshire, Coventry and Solihull are very well provided with wildlife information from Warwickshire Wildlife Trust's Habitat Biodiversity Audit and Warwickshire County Council Biological Records Centre.

The Habitat Biodiversity Audit (HBA) Partnership for Warwickshire, Coventry and Solihull has been surveying and maintaining a continuous record of the wildlife habitats for the Warwickshire sub-region since 1995. Today the HBA partnership is the longest running habitat survey programme of its kind in the country. Its success is due to the ongoing support and funding from all the local planning authorities across the sub-region, together with support and advice from the Environment Agency and Natural England.

In addition to the Phase 1 surveys the HBA incorporates the Local Wildlife Sites Project (LWSP) which designates Local Wildlife Sites (formerly Sites of Importance for Nature Conservation – SINCs) across the sub-region. Local Wildlife Sites are recognised within the planning system as of county importance for protecting wildlife and are incorporated

into all local district and county green infrastructure plans. Today there are more than 560 local wildlife sites in Warwickshire, Coventry and Solihull, covering more than 5,000 hectares.

The Warwickshire sub-region Phase 1 Habitat Survey

The phase 1 habitat survey is a standardised system for classifying and mapping wildlife habitats in all parts of Great Britain.

The Warwickshire Phase 1 habitat survey programme has been running unbroken for 21 years and is updated annually with the aim to update the Warwickshire sub-region within a five-year time span. The survey is managed by a GIS/Phase 1 officer with support from volunteers and ecological trainees.

Warwickshire was one of the first pilot areas for trailing the national biodiversity offsetting scheme which has now been formally adopted into the planning policy of all local authorities. Warwickshire was able to offer the offsetting scheme because of the consistent comprehensive coverage of the Phase 1 habitat dataset. The main addition from the offsetting scheme is the habitat distinctiveness score

In addition to the biodiversity offsetting scoring the Phase 1 habitat data has also been used for modelling habitat connectivity for woodlands and hedgerows, grasslands and wetlands and most recently for pond clusters.

For a detailed description of the Phase 1 habitat survey methodology please refer to the JNCC Handbook for Phase 1 habitat Survey (JNCC, 2010) and the HBA Phase 1 Survey Guidance Notes (Habitat Biodiversity Audit, 2012). The distinctiveness scoring methodology (Defra, 2012) is available on DEFRA's website at:

<http://www.defra.gov.uk/environment/biodiversity/uk/offsetting/>

The biodiversity offsetting definitions and criteria for Warwickshire amended 10/05/2013 are available from Ecological Services Warwickshire County Council.

Warwickshire Biological Records Centre Species Records

Species information is based on existing records within the Warwickshire Biological Record Centre (WBRC). For this report EU and UK protected species, UK Biodiversity Action Plan, local Biodiversity Action Plan species and rare and endangered species have been noted where records are held digitally. These records have been used with local knowledge to provide spatial interpretation for each site.

This interpretation is based on data and information available at the time of preparing this report. Please note that lack of records may well indicate that no survey work has yet been undertaken and does not indicate that species are necessarily absent. Protected species may be using the site and surrounding area and appropriate survey work may be required to establish their presence and to inform mitigation measures to ensure that they are not impacted by any proposed works.

Natural Environment Designations

Statutory Sites confer some form of statutory protection providing statutory protection for the best examples of the UK's flora, fauna, or geological or physiographical features.

Sites of Special Scientific Interest (SSSI)

A Site of Special Scientific Interest (SSSI) is a conservation designation denoting a protected area in the United Kingdom. SSSI's are legally protected under the Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way (CROW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006. This legislation gives Natural England powers to ensure better protection and management of SSSIs and safeguard their existence into the future.

Local Nature Reserves

A Local Nature Reserve (LNR) is a statutory designation made under section 21 of the National Parks and Access to the Countryside Act 1949 and amended by Schedule 11 of the Natural Environment and Rural Communities Act 2006. All district and county councils have powers to acquire, declare and manage LNRs. Parish and town councils can also declare LNRs but they must have the powers to do so delegated to them by the principal local authority. To qualify for LNR status, a site must be of importance for wildlife, geology, education or public enjoyment. Some are also nationally important Sites of Special Scientific Interest.

LNRs must be controlled by the local authority through ownership, lease or agreement with the owner. The main aim must be to care for the natural features which make the site special.

Ancient Woodlands

Ancient woodland is defined as woodland that has been in continuous existence since at least 1600 AD (Spencer and Kirby 1992). An inventory of ancient woodland was first initiated in 1981 by the Nature Conservancy Council (predecessor to Natural England), but only included woodlands greater than two hectares.

They include:

- Ancient semi-natural woodlands (ASNW) consisting mostly of native trees and shrubs, usually arising through natural regeneration
- Plantations on ancient woodland sites (PAWS) where the former tree cover has been felled and replaced by planted trees, usually with native species

- Ancient wood-pasture and historic parkland, many of which have not been included in the Ancient Woodland Inventory because their low tree density did not register on historical maps

Ancient Woodlands unless they are designated a SSSIs come under the National Planning Policy Framework (NPPF) (Communities and Local Government, 2012) guidance section 118 – state: “When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity” and to do this “planning permission should be refused for development resulting in loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees, unless the need for, and benefits of the development in that location clearly outweigh the loss (Woodland Trust, 2017)).

Due to historic significance under section 12 of the NPPF, LPAs may also consider veteran trees, and woodland pasture and parkland as heritage assets.

Hedgerows

The Hedgerow Regulations 1997 (Defra, 1997) protect important countryside hedges from removal, without the permission of the local planning authority. If a hedgerow is at least 30 years old and qualifies under any one of the criteria, then it is an important hedgerow as set out in the regulations. The criteria relate to a hedgerows importance with respect to its archaeology and history; wildlife and landscape.

The Hedgerows Regulations states that the hedgerow does not have to contain trees, but any trees in it form part of the hedgerow. Where a former hedgerow has not been actively managed and has grown into a line of trees it is not covered by the regulations. However, lines of trees may be protected under existing licensing procedures for felling or by Tree Preservation Orders (TPOs).

The Warwickshire Biodiversity Action Plan (BAP) for hedgerows is defined as having more than 80% native woody species, including at least five woody species that are either native somewhere in the UK or which are archaeophytes. If this is the case then the hedgerow is defined as being species-rich.

Designated non-statutory sites - Local Wildlife Sites

Non-statutory sites, covering local nature conservation importance, are more difficult to classify as they have no legislative basis or standardised definition.

LWS are defined in local and structure plans under the Town and Country Planning system and are a material consideration when planning applications are being determined.

Local Sites are a network of defined areas that are selected and designated locally for their wildlife or geological importance. Together they form a network of our most valuable urban and rural areas for the natural environment. Local Sites are complimentary to statutory sites such as Sites of Special Scientific Interest (SSSI), and

are afforded protection through the planning system, helping them to fulfil a crucial role in protecting our natural environment.

The few sites which have statutory designations because of their international or national interest represent the top of the hierarchy of protection. These sites are selected according to standardised criteria and procedures. Second tier, non-statutory sites, covering local nature conservation importance, are more difficult to classify as they have no legislative basis or standardised definition. The Warwickshire, Coventry and Solihull Local Wildlife Sites Project created in 2000 set out to formerly identify Sites of Importance for Nature Conservation (SINCs), now known as Local Wildlife Sites (LWS). The formal process for identifying, surveying and designating Local Wildlife Sites is set out in The Green Book: Guidance for the Selection of Local Wildlife Sites in Warwickshire, Coventry and Solihull (HBA, 2015 rev.)

Identifying Local Wildlife Sites

Local Wildlife Sites help buffer and connect natural areas, providing ecological networks and increasing resilience of biodiversity to pressure of land use and climate change. They contribute to the quality of life and the health and well-being of communities and provide important open space in urban areas.

The Making Space for Nature report (*Lawton, 2010*) states that Local Wildlife Sites are highly vulnerable to damage and loss, and recommended improving their protection and management, underlining that Local Sites are “important to future ecological networks, because they not only provide wildlife refuges in their own right, but can act as stepping stones and corridors to link and protect nationally and internationally designated sites”.

The Government response to Making Space for Nature, published alongside the Natural Environment White Paper, (Defra, 2011), encouraged Local Site Partnerships to continue to implement Defra’s Local Sites guidance and play an increased role in identifying, protecting and managing Local Sites. The subsequent England Biodiversity Strategy 2020 (Defra, 2011) restated that Government will encourage local authorities to take a more active and positive role in the management of Local Sites, including through reporting data on such sites in the Government’s new Single Data List.

The HBAs Local Wildlife Sites Project identifies potential local wildlife sites and re-visits designated local wildlife sites wherever possible to ensure their continuation as viable wildlife areas, and makes recommendations and advice on the selection and management of these sites.

National Planning Policy (NPPF)

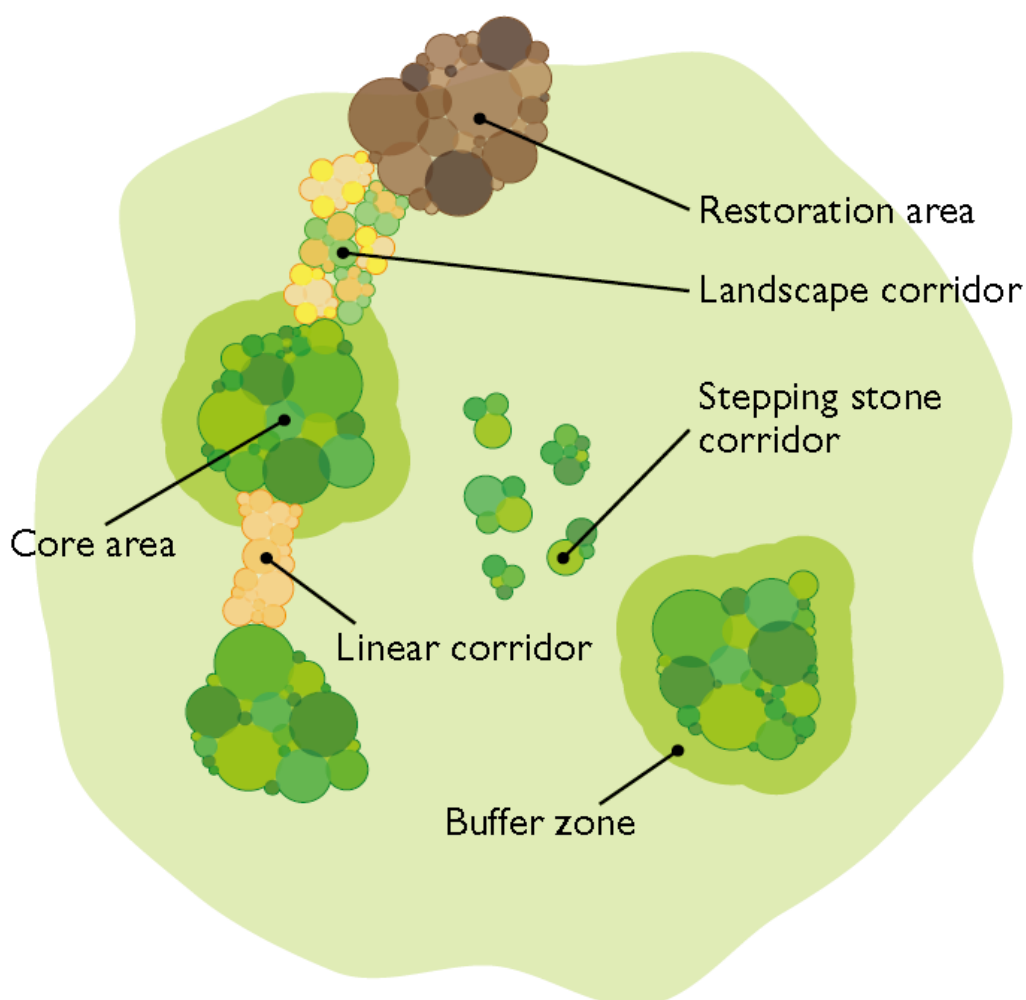
The Government’s National Planning Policy Framework (NPPF) (Communities and Local Government, 2012)) states that the distinction should continue to be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their

importance. It advocates the protection of local sites recognising their importance and the contribution that they make to wider ecological networks.

The NPPF says that to minimise impacts on biodiversity and geodiversity, planning policy should:

- “Plan for biodiversity at a landscape-scale across local planning policies;
- Identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them, and areas identified by local Partnerships for habitat restoration and creation;
- Promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan;
- Where Nature Improvement Areas (NIAs) are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas.”

Figure 2: Wildlife zones - bigger, better and connected - Lawton 2012



Constraints on Development

The constraints develop map is derived from the Phase 1 habitat mapping and shows where development should be avoided and ecological enhancement encouraged.

The important habitats are identified and buffered to create an overall green (terrestrial habitats) and blue (riparian and aquatic habitats) map which clearly demarcates the limits of development, they include:

- 30 metre buffer around all semi-natural woodland and broad-leaved plantation woodland
- 8 metre buffer either side of adjacent river courses
- 8 metre buffers around all wetland features including; emergent vegetation, lakes and ponds
- 5 metre buffer either side of intact hedgerows
- All areas of medium to high distinctiveness grassland with values 4, 5 and 6

These are the recommended minimum standard buffers as determined by Warwickshire County Council Ecological Services. Other LPAs have agreed 50 metre and 100 metre buffers for ancient woodlands For veteran trees the precautionary approach is set out in BS5837:2012 that there should be a minimum of 15 times the diameter of the tree trunk or 5 metres beyond the canopy, whichever is greater

Warwickshire, Coventry and Solihull Local Biodiversity Action Plan (LBAP)

The Warwickshire, Coventry and Solihull Local Biodiversity Action Plan (LBAP) provide a local response to the UK Government's National Action Plans for threatened habitats and species. The LBAP contributes to national targets wherever these are relevant to the Warwickshire sub-region but also sets local targets. The LBAP action plans for all local habitats can be found on the Warwickshire Wildlife Trust site:

<http://www.warwickshirewildlifetrust.org.uk/LBAP>

Alcester Civil Parish Area 12.26 square km

Alcester is situated at the southern end of the Warwickshire landscape character area known as the Arden; at the confluence of the River Alne and the River Arrow. These two rivers join at Alcester and flow down to the River Avon entering south of Salford Priors. The historic landscape area of the Arden is described as an historic region of former wood pasture and heath characterised by a dispersed settlement pattern, ancient woodlands and mature hedgerow oaks.

The natural vegetation of Arden consisted mainly of dense broadleaved woodland, dominated by oak. Woodland clearance, from an early period, resulted in the development of grasslands and wood pasture. Marshland occurred in low lying areas along rivers and streams. All of these habitats have been influenced by land-use history and no large areas have survived. The sites of greatest ecological interest today are those that retain remnants of these ancient vegetation types.

Wooded Estate lands and Ancient Woodland

The wooded estate lands are a well-established wooded agricultural landscape of large arable fields and prominent hilltop woodlands. Wooded estate lands occur in three main areas of the Arden, with the largest broad belt of countryside stretching from Alcester to Warwick along the northern fringe of the Avon Valley.

Large woodlands and mature hedgerow oaks remain a feature of the landscape along the Arrow Valley. Ancient deer parks are recorded at Ragley, Coughton and Oversley. True parkland only survives at Ragley, but these areas still retain an ancient wooded character.

River Wetlands

Historically river floodplains were managed as wet meadowland. These were floristically very rich and of great nature conservation value. The River Alne and the River Arrow remain relatively unspoilt retaining a good variety of marginal vegetation, wet grassland, riverside trees and scrub. Some areas of particular interest include the marsh reed-bed and flood-land on the Arrow at Alcester.

Unimproved Grasslands

Many of the unimproved grasslands that existed up to the Second World War have now been destroyed or damaged as a result of agricultural intensification. Areas of semi-improved grassland can still be found on disused railway cuttings such as the former Alcester-Broom railway line, or as remnant grassland meadows at Abbey Field and Priory Meadows.

Hedgerows

Ancient mixed hedgerows, often more than two metres wide, are a special feature of Arden, and some may represent remnants of the original wildwood as it was cleared into small hedged fields by assarting.

Local Wildlife Sites

The civil parish of Alcester has three designated local wildlife sites; Oversley Wood, Broom Disused Railway Line and both the rivers Arrow and Alne. To the north just outside the civil boundary is Coughton Park, which has been included in the report.

In addition to the designated local wildlife sites there are a number of potential Local Wildlife sites including; the River Arrow Local Nature Reserve and Warwickshire Wildlife Trust reserve; the flood plain meadows as Oversley Mill; and the ancient woodlands and grasslands belonging to the Ragley Estate.

Oversley Wood

Oversley Wood is a very large (91/65 ha), but mainly replanted, ancient woodland situated about 1km to the south-east of Alcester. The present woodland is about 1.5 km long (from west to east) and from 0.7-0.9 km broad, and encloses a long ridge which reaches a maximum height of 112m ASL towards the western end.

The woodland originated as the southern half of an early medieval deer park, which formerly extended for about 0.7km north to Durlop ("Deer-Leap") Hill. It later became coppice woodland belonging to the Coughton Court Estate, and increased in size to include new coppice woodlands on the east side which extended the length by almost 1km. In the late nineteenth century most of these coppices gradually disappeared, to leave just the two immediately contiguous with Oversley, of which Shrove Hill Coppice is the largest. In 1944 much of the western half of the wood was clear felled, followed by the south-eastern section in 1946 and most of the central hill in 1950, leaving extensive areas of scrub. The Forestry Commission purchased the wood in 1951 and subsequently much of the woodland was converted to mixed plantation. The wood retained its ride system and small patches of deciduous semi-natural woodland, including an area of ancient Small-leaved Lime and Sessile Oak coppice stools on the hill.

Alcester-Broom Disused Railway

This linear LWS comprises a 4km stretch of the former Redditch-Evesham railway between Alcester and Broom, which was closed and dismantled in 1952. The site runs from north to south following the valley of the River Arrow and crosses the river in two places. At the southern end of the LWS and joining it from the east at the former Broom Junction there is also a 1km stretch of the former East-West Junction Railway, closed and dismantled in 1947, and this occupies a deep cutting for much of its length.

The countryside through which it passes is quite undulating and varied but is now dominated by mainly large arable fields separated by poorly timbered hedgerows, together with occasional new plantations. Most of the formerly wet river meadows along the Arrow are now also ploughed, while the whole valley is dominated by the busy A46 Evesham Bypass which crosses over the LWS a short distance north of Wixford Bridge.

A public footpath follows the main section of LWS for much of its length, but this is only well-used (by dog walkers) at the southern end between Wixford and Broom and around Broom Junction. The LWS forms a very important wildlife corridor connecting with adjoining habitats along the Arrow valley, although there are several short breaks in the corridor created by new road bridges.

The River Arrow

The River Arrow is a relatively natural lowland river of largely good ecological quality. The river meanders through south-west Warwickshire, providing a corridor for wildlife as well as supporting a diverse flora and fauna itself. The source of the river lies to the north-west of Redditch in Worcestershire and enters Warwickshire on the southern boundary of Redditch. The river has been modified in numerous places along its course, both historically and in more recent times as a result of the A46 bypass construction. The river is impounded in numerous places, many as a result of mill weirs. Despite the historic and more recent modification large sections of the river retains its natural riffle and pool sequences. The river is generally semi-continuously tree lined throughout, passing through a mixture of floodplain meadows, arable fields, ancient semi-natural woodland, as well as through several villages. The river was realigned as part of the A46 bypass construction, close to the confluence with the River Avon. The realignment (a mirror image of the original channel) has naturalised well and now contains gravel berms, islands, abundant woody debris, along with remnant backwaters (from the original channel) and wet woodland. There are several cut off meanders along the route of the Arrow, many of these form valuable wetland habitat in their own right (e.g. Ragley, Alcester, Coughton). The dominant tree species being alder (*Alnus glutinosa*), crack and white willow (*Salix fragilis* & *S. alba*), with occasional mature oak *Quercus robur* and ash *Fraxinus excelsior*. Hawthorn *Crataegus monogyna* and blackthorn *Prunus spinosa* form regular thickets, ideal for otter lying up sites. There are several hybrid black poplar plantations, some planted in or adjacent to the cut off meanders. Mature bankside oak and ash have developed extensive exposed routes, providing potential otter holts and the submerged roots form ideal refuges for white clawed crayfish and fish. The River Arrow provides an important wildlife corridor from the River Avon, through to the County Boundary and beyond and connecting to the River Alne. Native Black Poplar *Populus nigra* are to be found at several locations along the Arrow and its tributaries (including along the Hay Brook, Wixford).

The River Alne

The River Alne (from source to confluence with the River Arrow) is a relatively natural lowland river of largely good ecological quality. The river meanders through south Warwickshire, providing a corridor for wildlife as well as supporting a diverse flora and fauna itself. Whilst the river has been modified in places historically, largely to allow the construction of water mills, the majority of the river retains its natural riffle and pool sequences. The river is generally semi-continuously tree lined throughout, passing through a mixture of floodplain meadows, arable fields, ancient semi-natural woodland,

as well as through several villages. The dominant tree species being alder *Alnus glutinosa*, crack and white willow *Salix fragilis* & *S. alba*, with occasional mature oak (*Quercus robur*) and ash (*Fraxinus excelsior*.) Hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*) form regular thickets, ideal for otter lying up sites. Mature bankside oak and ash have developed extensive exposed routes, providing potential otter holts and the submerged roots form ideal refuges for white clawed crayfish and fish.

Coughton Park

A large (76 ha) mainly coniferous and formerly commercial forest set within the footprint of an ancient woodland, which is in the process of being replanted with native deciduous trees. This is one of the best acid woods in the county and is particularly important for its acid grassland and heathland flora in the rides, including at least 11 species of sedges, as well as for invertebrates.

Potential Local Wildlife Sites

- The Arrow Valley Nature Reserve, Abbey Field and Priory Meadows
- Oversley Mill Flood Meadows
- Land north of Arden Business Park
- Hangingwell, The Larches
- Park Farm Plantation
- Asplands Husk Coppice (Springs, Three Oakhill, The Belts Wood and Old Pack wood complex)
- Field at Alcester
- Cold Comfort Lane Orchard

A number of sites were first identified as possible local wildlife sites in 1996. Subsequent visits to some of the sites have recorded a decline in the potential of the sites to be designated as local wildlife sites. The larger and more important sites are along the River Arrow and include the Arrow Valley Nature Reserve, Abbey Field and Priory meadows which together form a continuous grassland section along the River Arrow that are managed by Warwickshire Wildlife Trust and Alcester Town Council. These grasslands are relatively species poor, being mainly dominated by tall coarser grasses and tall herb species with patches of marshy grassland containing stands of hard rush and common sedge. These grassland habitats will improve and become more species rich with continued sympathetic management.

There is a linear section of wet wood and semi-natural woodland along the River Arrow which are part of the Arrow Valley LNR. This narrow strip of woodland supports a number of mature native trees including Crack Willow, Alder, Field Maple, English Oak (including a veteran tree), Alder, Hornbeam, Ash, (Hybrid) Black Poplar, Hawthorn, Blackthorn, Elm and Sycamore. Along this section of the river is found the Small Teasel (*Dipsacus pilosus*) a Warwickshire notable plant. The non-native invasive Himalayan Balsam (*Impatiens glanulifera*) is persistent along the shaded river bank.

The Oversley Flood meadows are an extensive area of open grassland with a mix of grassland type ranging from species poor dry improved grassland to a wetter grassland with patches of rush pasture along the section of the Dismantler Railway Line LWS and the River Arrow.

Remnant patches of semi-improved grassland potential wildlife sites can be found along a section of the River Arrow north of the industrial estate along Beuchamp Court to King's Coughton and possibly along Kings Coughton Lane and a former orchard at Cold Comfort Lane.

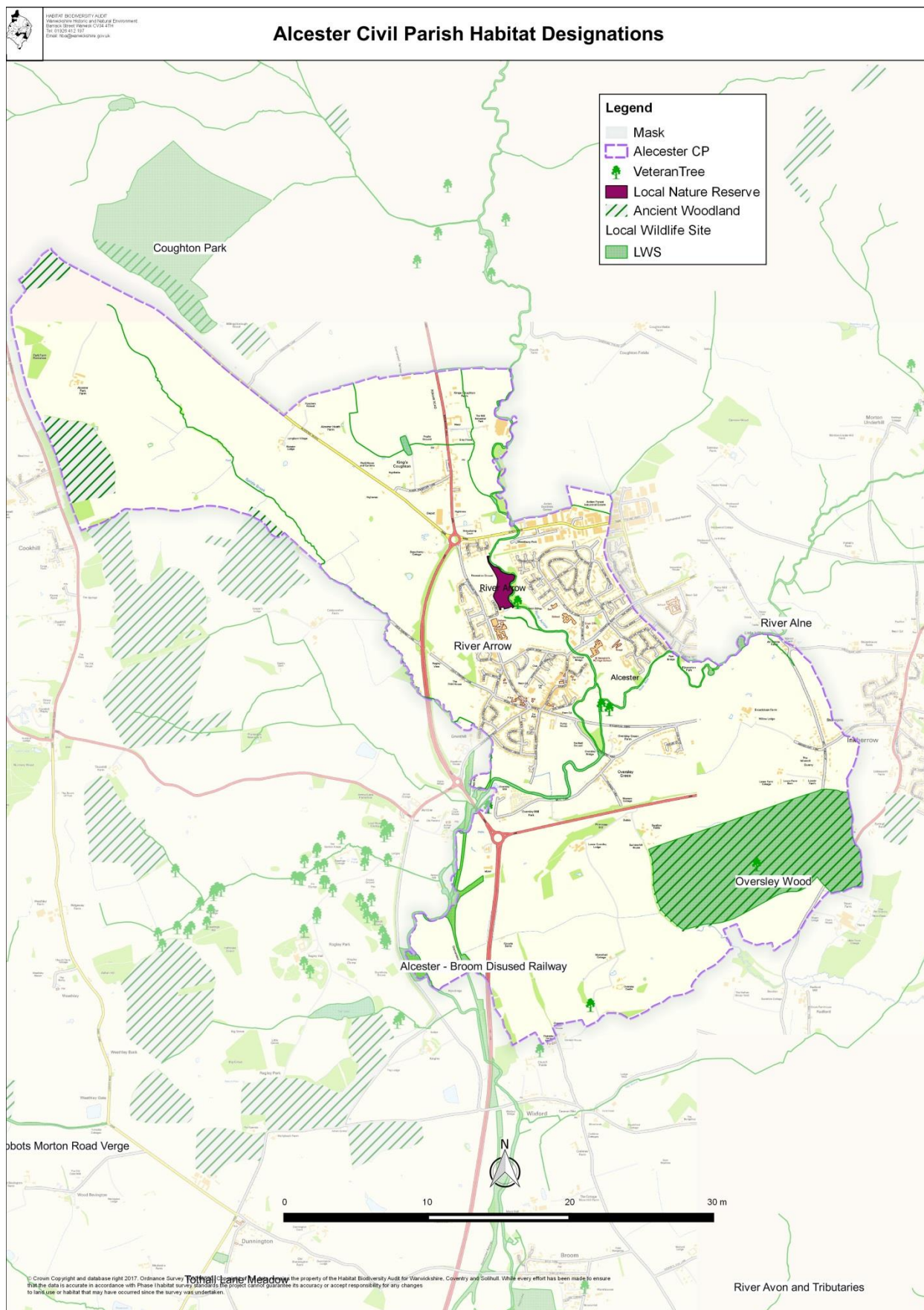
To the north of the parish are areas of woodland potential Local Wildlife Sites, which are a mix of broad-leaved plantation and semi-natural woodlands that form a complex of woods from Coughton Park LWS in the north, south to the Ragley Park estate.

3: Small Teasel, River Arrow LNR

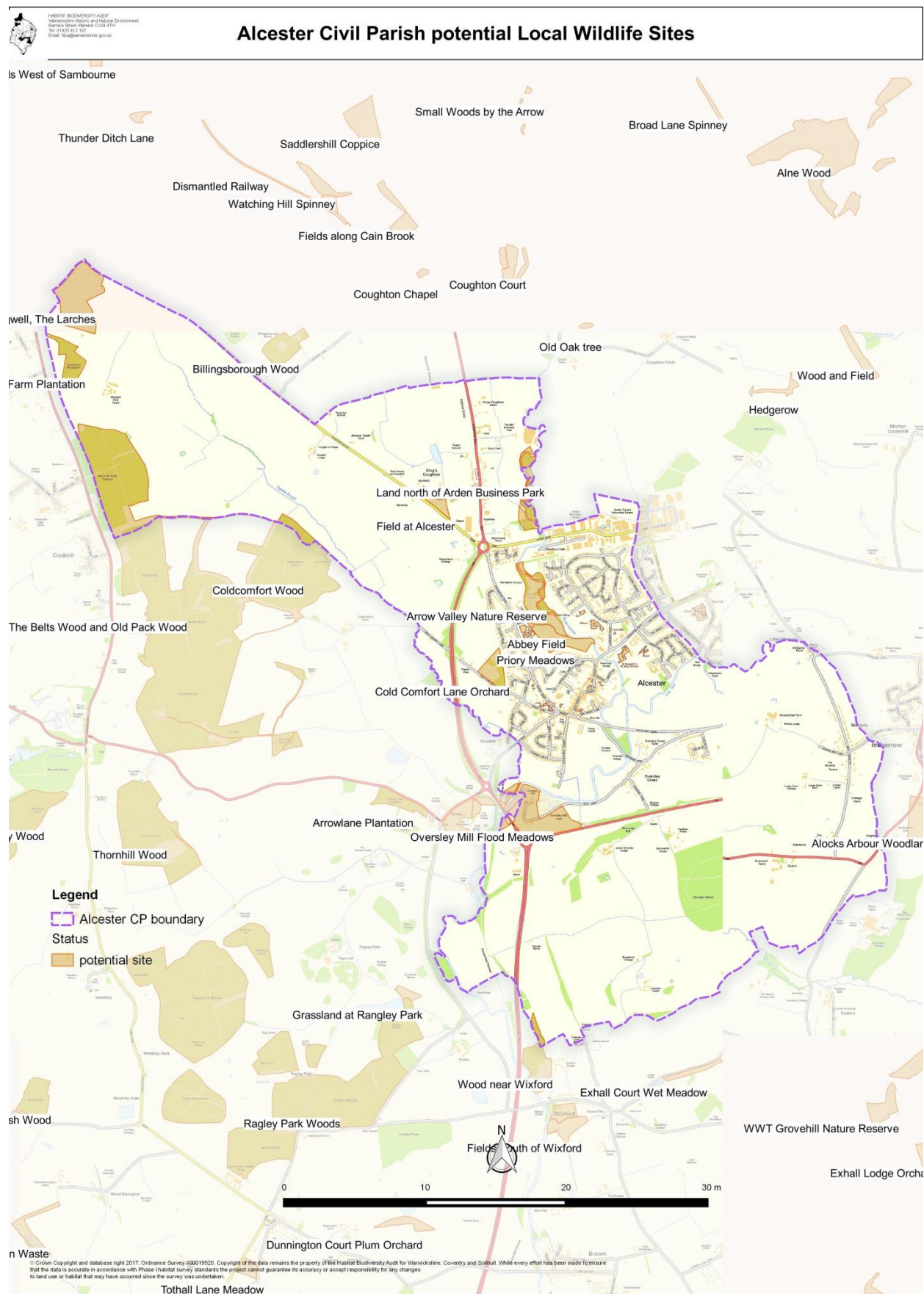


Source: C. Talbot, 2018

4: Habitat Designations



5: Potential Local Wildlife Sites



Identifying important habitats – Phase 1 survey

The Phase 1 habitat survey for the Alcester area was first recorded in 1996 and then partially updated in 2009-10 for the Stratford on Avon District Ecological and Geological Assessment (Alcester section 3.5). The most recent Phase 1 habitat survey was partly re-surveyed in 2016.

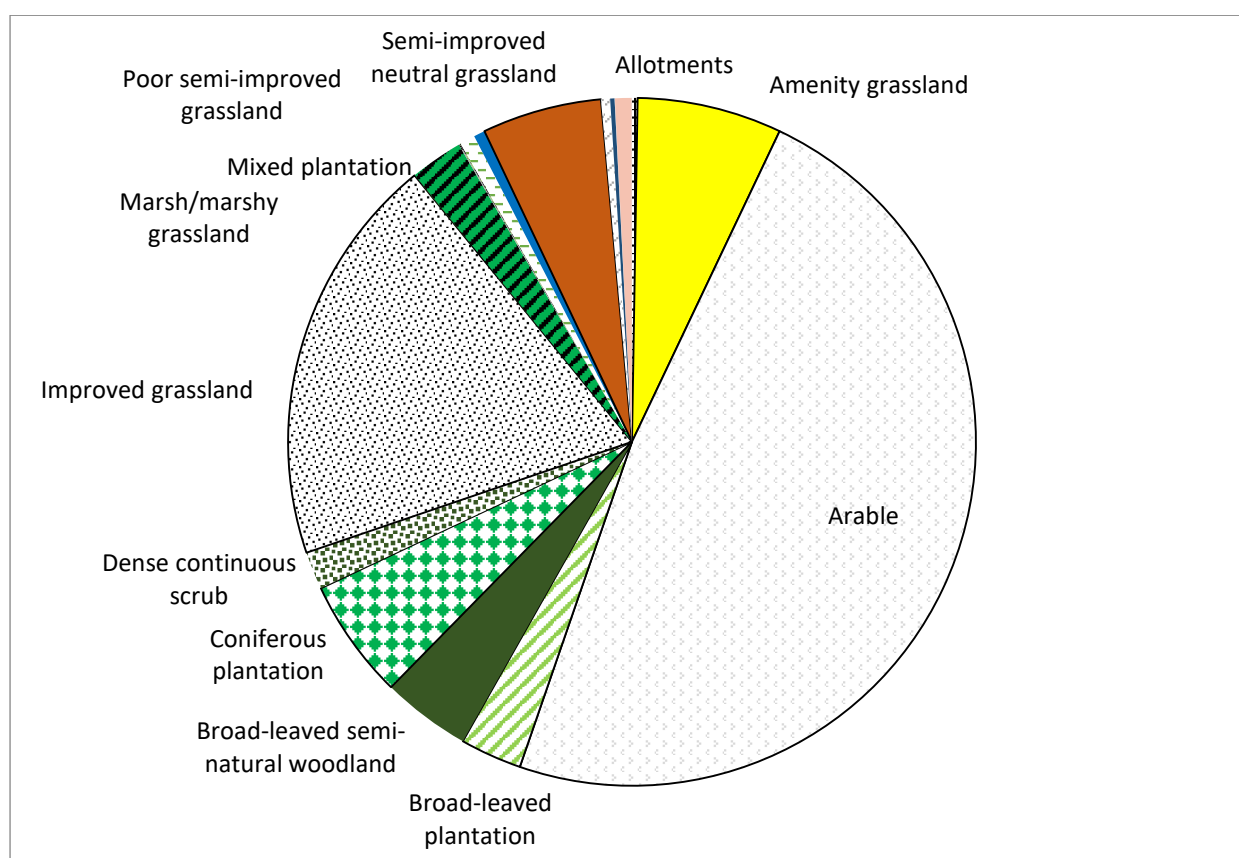
Habitat Description

The Phase 1 habitats for the Alcester Civil Parish are summarised in the table below. The largest area land use in the parish is arable and agriculturally improved grassland, together they account for 67.5% of the total land use. Woodland accounts for some 14% of land use, but is mixed with plantation woodland, both broad-leaved and coniferous and remnant broad-leaved semi-natural woodland. Less agriculturally improved grasslands range from species poor semi-natural grassland, which is grassland associated with rough grazing and/or poor grassland management. Species poor grasslands provide the opportunity for wildlife improvement through proper management. The better wildlife grasslands include semi-improved neutral, marsh and marshy grasslands. These can be found on the River Arrow LNR and to a varying degree along the Oversley Mill Flood plain meadows. Other small pockets of semi-improved grassland occur along the river corridors and along the roadside verges, for example along the M46 where the verges have been re-seeded with wildflower seed mixes.

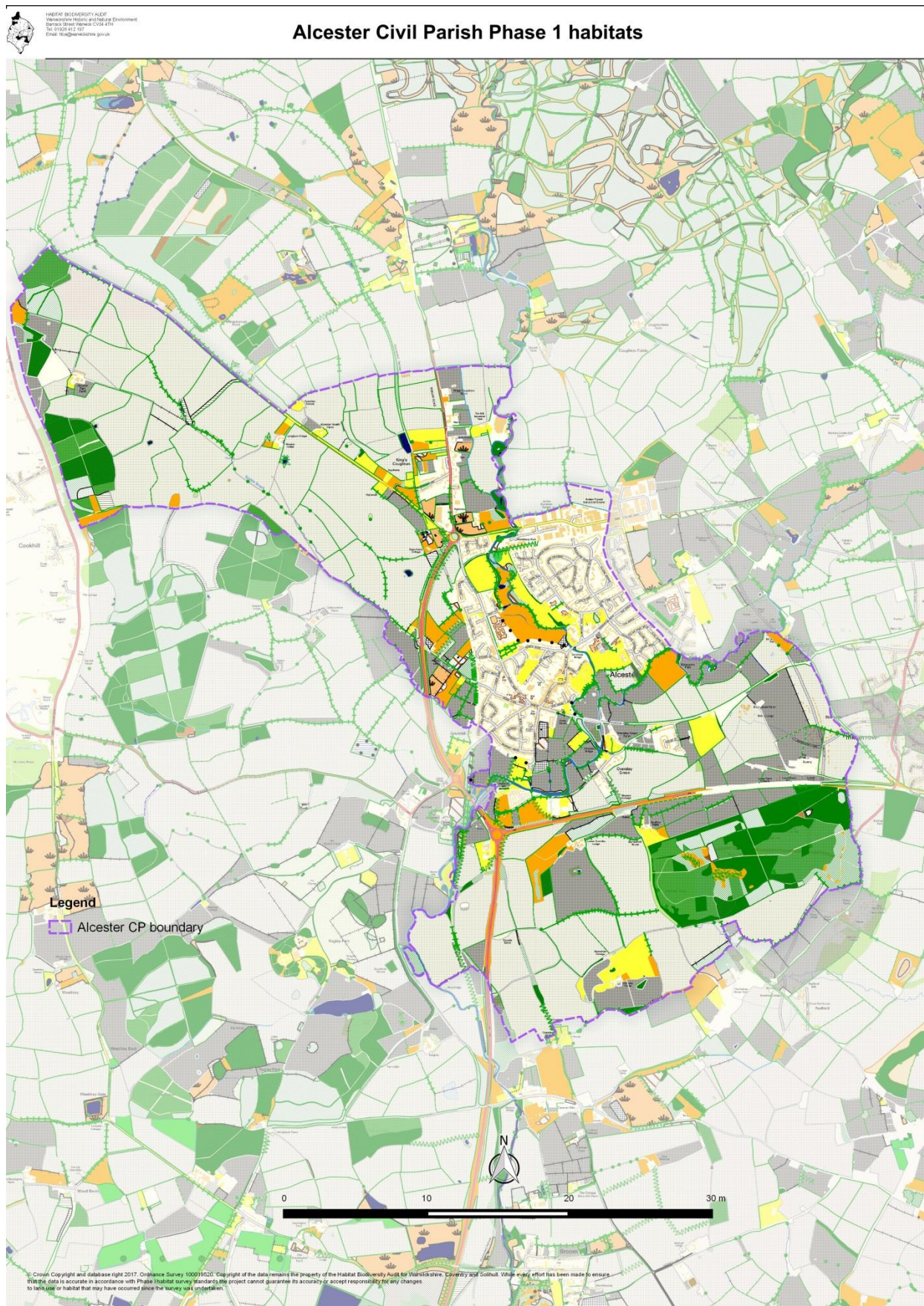
The River Arrow and the River Alne and their tributaries are important riparian habitats as well as important wildlife corridors allowing species to move across the farmed and built environment. The habitats along the river corridors provide important wildlife areas and include; wet woodland; marsh and marshy grasslands; and inundation vegetation including for example reed-beds. Where ever possible the recommended guideline is to provide a habitat buffer between the river and intensively farmed or developed land.

1: Phase 1 habitat categories

Description	AREA (ha)	%
Allotments	2.0	0.3%
Amenity grassland	52.8	6.8%
Arable	374.4	48.2%
Broad-leaved plantation	22.5	2.9%
Broad-leaved semi-natural woodland	32.4	4.2%
Coniferous plantation	43.8	5.6%
Continuous bracken	0.1	0.0%
Dense continuous scrub	13.7	1.8%
Improved grassland	150.1	19.3%
Marsh/marshy grassland	0.2	0.0%
Mixed plantation	19.2	2.5%
Mixed semi-natural woodland	0.4	0.1%
Orchard	0.3	0.0%
Poor semi-improved grassland	5.6	0.7%
Running water	4.1	0.5%
Semi-improved neutral grassland	43.6	5.6%
Set-aside (field margins)	3.3	0.4%
Standing water	1.6	0.2%
Swamp	0.1	0.0%
Tall ruderal	6.1	0.8%
Wet woodland	0.1	0.0%
Grand Total	776.4	100.0%



6: Phase 1 habitat map

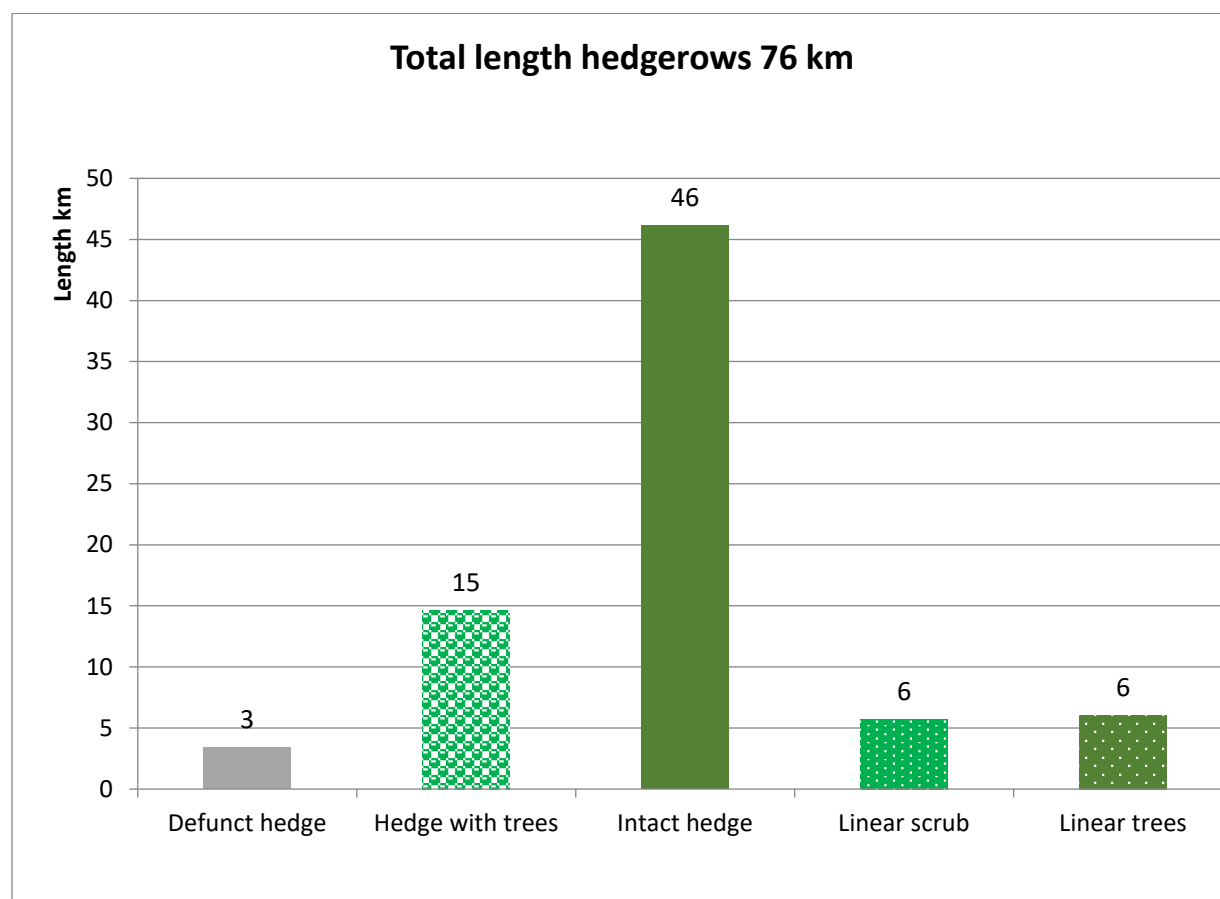


Hedgerows

Hedgerows are important habitats, as well as wildlife corridors and distinctive features of the historic landscape. The Phase 1 survey records wherever possible the kinds of hedgerows as well as lost or defunct hedgerows.

The hedgerow categories and their lengths are shown in the graph below. The total estimated length of all hedgerows is 76 km with the majority being intact hedgerows and relatively low percentage of defunct hedgerows.

7: Hedgerow categories



Phase 1 Habitat Distinctiveness

The habitat distinctiveness categories and their associated scores have been taken from the Biodiversity Offsetting Pilot in the UK National Ecosystem Assessment (UK NEA, 2011). The Phase 1 habitat classification does not determine between those land uses that are best for biodiversity and those that are not. The distinctiveness is designed to assign scores to those land-uses that are the most bio-diverse and those that are not.

The habitat distinctiveness categories can also be interpreted as areas of habitat importance or sensitivity to development, and are a useful way of simplifying the 57 Phase 1 map categories. Each Phase 1 habitat type has been given a distinctiveness score as below:

- 6 – High distinctiveness
- 5 – Medium / High distinctiveness
- 4 – Medium distinctiveness
- 3 – Low / Medium distinctiveness
- 2 – Low distinctiveness.
- 1 - None

High distinctiveness scores equate to areas of highest biodiversity, including all unimproved habitats. High distinctiveness will incorporate statutory sites, Local Wildlife Sites and the Biodiversity Action Plan (BAP) habitats and species. The high distinctiveness category for linear habitats includes species-rich hedgerows.

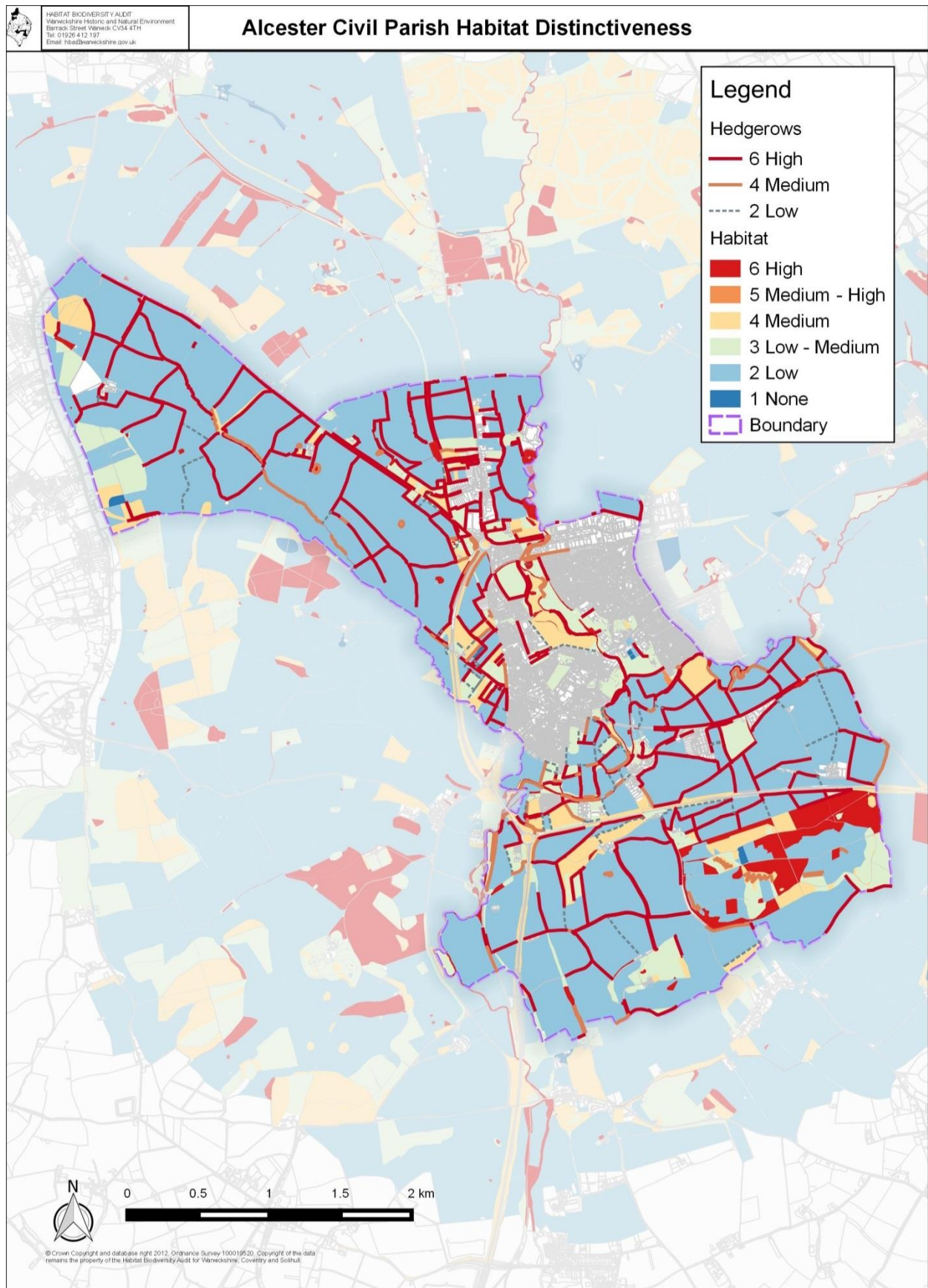
Moderate distinctiveness scores are a mid-way assessment for areas that are either a transition from high to low or vice versa; or are of indeterminate biodiversity. Examples include semi-improved neutral grassland, scrub and tall ruderal¹ which are transitional and temporary habitats. Linear sites with moderate scores include intact hedgerows.

Low distinctiveness scores are areas of low biodiversity interest. These areas cover the majority of the sub-region, including for example agricultural farmland, amenity grassland and coniferous plantation woodland. Low linear scores are associated with defunct hedgerows, fences and dry ditches.

Ancient Woodland and SSSIs are considered as irreplaceable habitats and although are given a score of 6 for the purpose of mapping they are to be avoided. By definition, they are not replaceable. Local Wildlife Sites are also scored highly for their habitats but afford less protection under planning law.

¹ Ruderal from the latin for rubble or rubbish refers to cleared areas that have become colonised by pioneer plant species, typical tall perennial or biennial plant species e.g. Rosebay Willowherb, Common nettle, Japanese Knotweed

8: Habitat Distinctiveness



Phase 1 Habitat Connectivity

The NPPF recognises the need for, and the implementation of landscape habitat connectivity. However, the NPPF does not specify how this should be done. The HBA has developed its own habitat connectivity modelling.

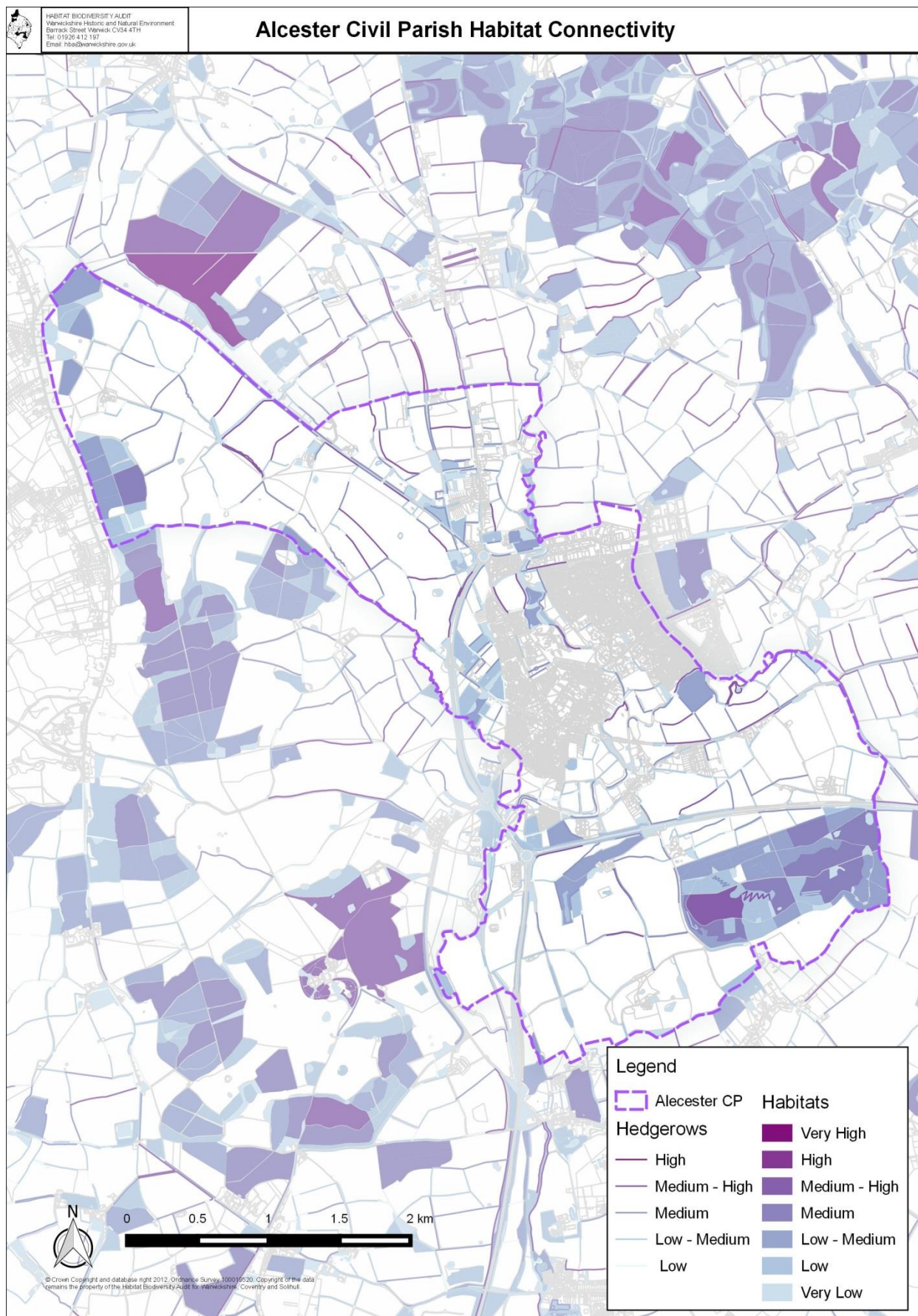
The main habitat groups identified for the connectivity mapping include:

- Woodlands; including semi-natural, broad-leaved plantation and scrub land
- Priority grasslands; namely all grasslands that have not been agriculturally improved
- Standing water and habitats associated with marshy conditions; ponds and marsh
- Intact hedgerows and trees

The connectivity mapping shows where there are opportunities for improving connections between similar types of habitats. Conversely the mapping can be used to assess the possible impact of development on existing habitats and where these can be offset or avoided altogether.

The habitat connectivity mapping (Figure 8) below illustrates the woodland connections across the extensive area of the Heart of England Forest broad-leaved plantations to the north, and along the western edge of the county south to Coughton Park and down to the woodlands at Ragley Hall. The grasslands and hedgerows show a more fragmented picture, with connected sections of grassland habitats along the River Arrow and main roads such as the A46.

9: Habitat connectivity



Protected species

Protected species information is based on existing records within the Warwickshire Biological Record Centre (WBRC). For this report EU and UK protected species, UK Biodiversity Action Plan, Local Biodiversity Action Plan species and rare and endangered species have been noted where records are held digitally. These records have been used with local knowledge to provide spatial interpretation for each site.

This interpretation is based on data and information available at the time of preparing this report. Please note that lack of records may well indicate that no survey work has yet been undertaken, and does not indicate that species are necessarily absent. Protected species may be using the site and surrounding area and appropriate survey work may be required to establish their presence and to inform mitigation measures to ensure that they are not impacted by any proposed works.

Protected Species in Warwickshire

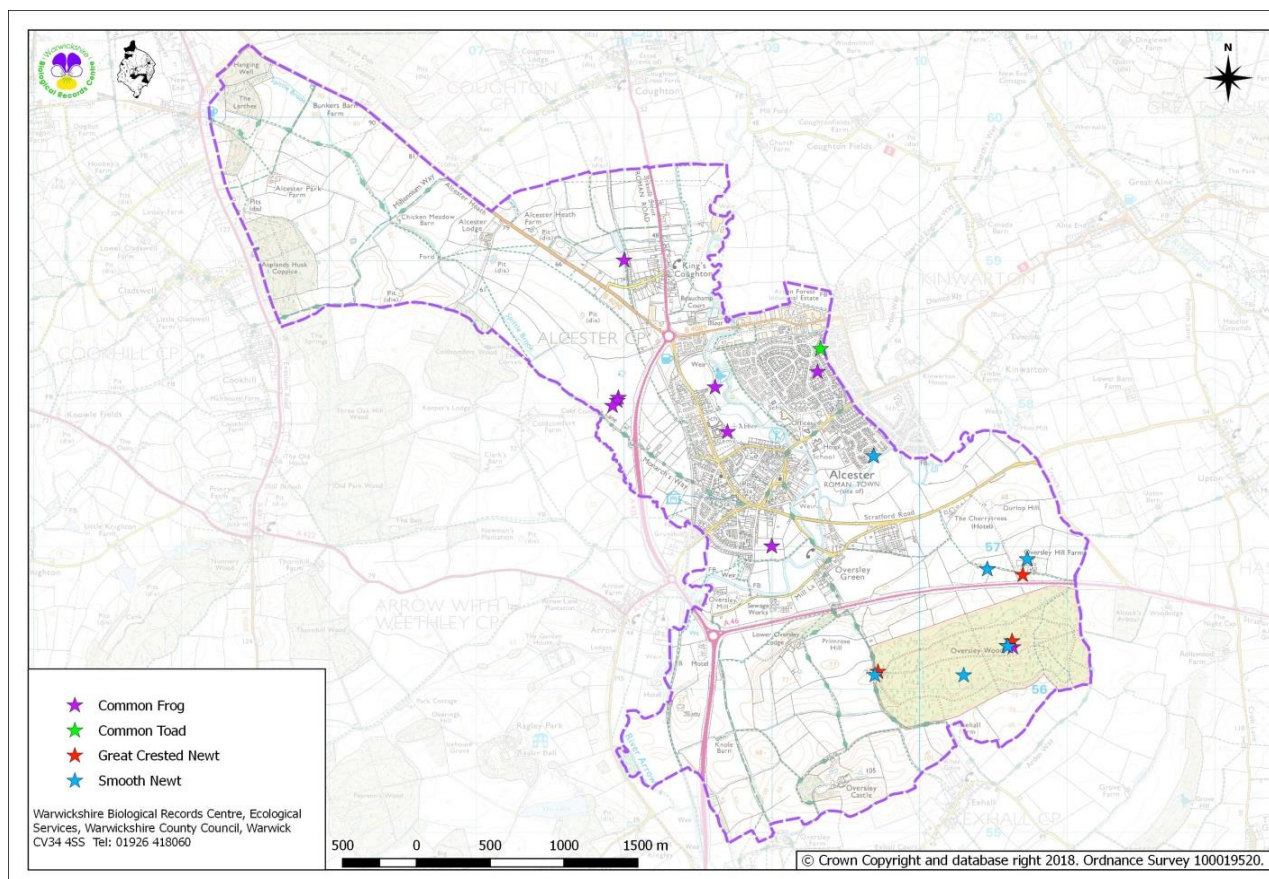
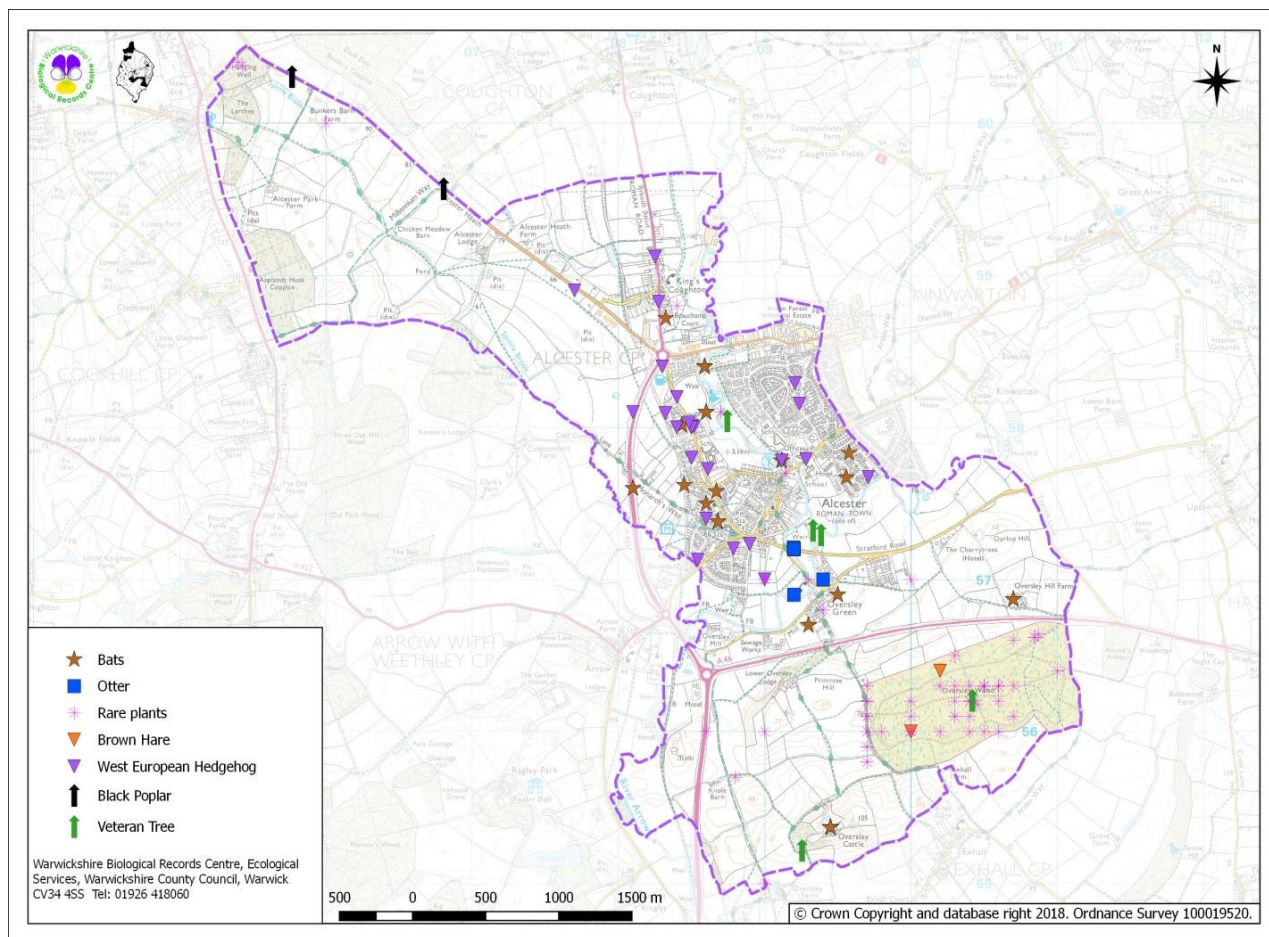
European Protected Species (EPS) are protected under the Conservation (Natural Habitats &c.) Regulations 1994 found in Warwickshire include:

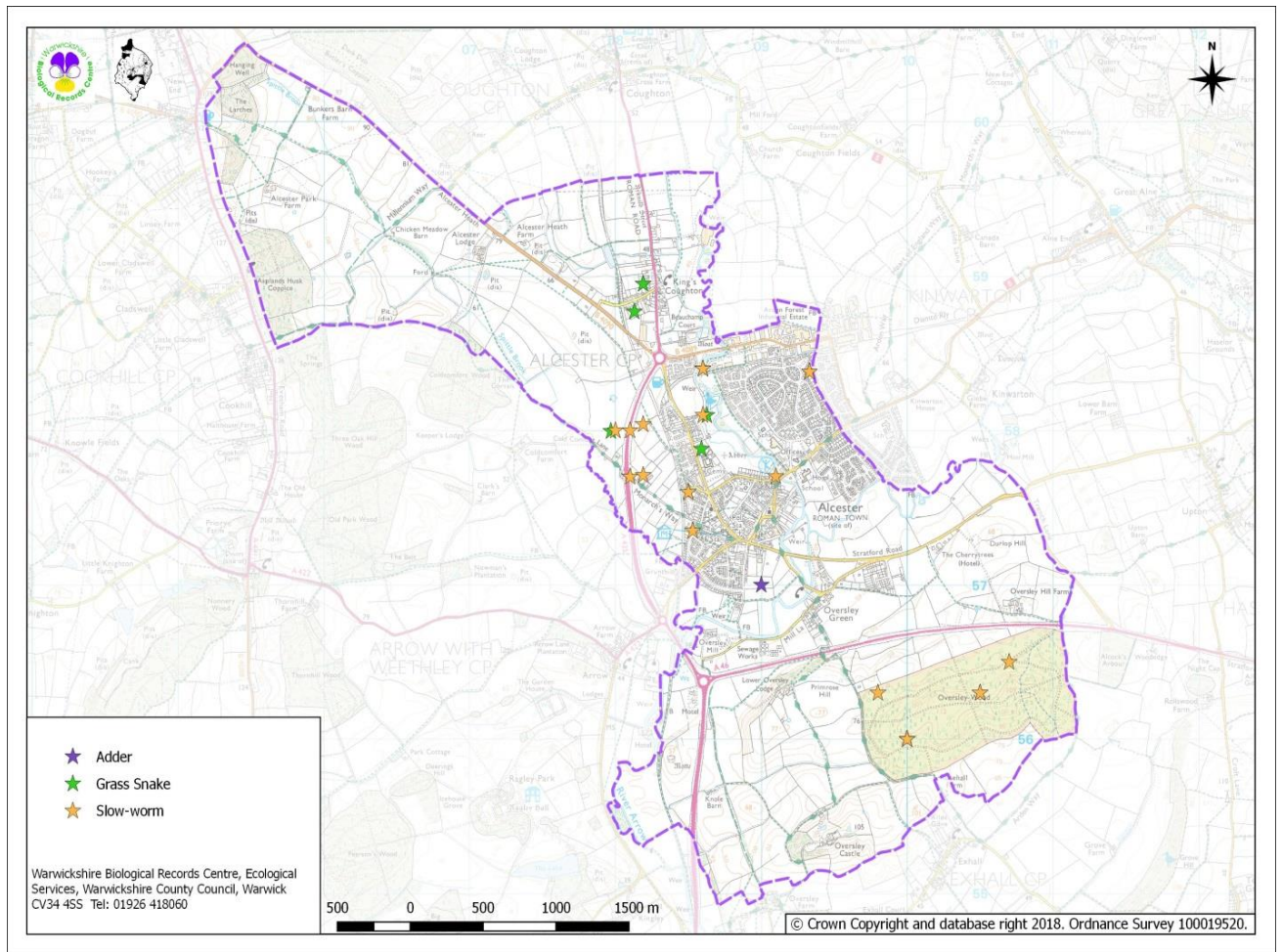
- All species of bat
- Great crested newt
- Otter
- Dormouse
- White-clawed crayfish
- Other species that are protected under the Wildlife and Countryside Act 1981 (as amended) and the Protection of Badgers Act 1982 relevant to Warwickshire include:
 - Water Vole
 - Barn owl
 - Grass snake
 - Slow worm
 - Common lizard
 - Badger

Warwickshire Local Biodiversity Action Plan Species (not included above):

- Hedgehogs

Figure: 10 Species maps:





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- Woodland Trust. (2017). *Planning for Ancient Woodland: Planners' Manual for Ancient Woodland and Veteran Trees*. Lincoln: Woodland Trust.

Appendices

Phase 1 habitat categories





11 Abbey Field pLWS - River Arrow LNR. Source: C. Talbot, 2018



12 River Arrow LWS, - LNR shingle banks and Himalayan Balsam. Source C. Talbot, 2018



13: Priory Meadow pLWS. Source C. Talbot, 2018



14 Oversley Meadows pLWS. Source C. Talbot 2018