

***Preliminary Ecological Report
Parish Neighbourhood Plan
For***

Berkswell Parish Council

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



JANUARY 2018

Contents

<i>Contents</i>	2
<i>Introduction</i>	3
<i>Natural Environment Designations</i>	5
<i>Designated and Statutory and Non-Statutory sites</i>	11
<i>Identifying important habitats – Phase 1 habitats</i>	18
<i>Protected species</i>	26
<i>Proposed Housing Allocations</i>	30
<i>Bibliography</i>	33

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 design and layout of major housing allocations

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, borough 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. 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.

Local Wildlife Sites

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 (Habitat Biodiversity Audit , 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 D.H., 2010*) asserted 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.”

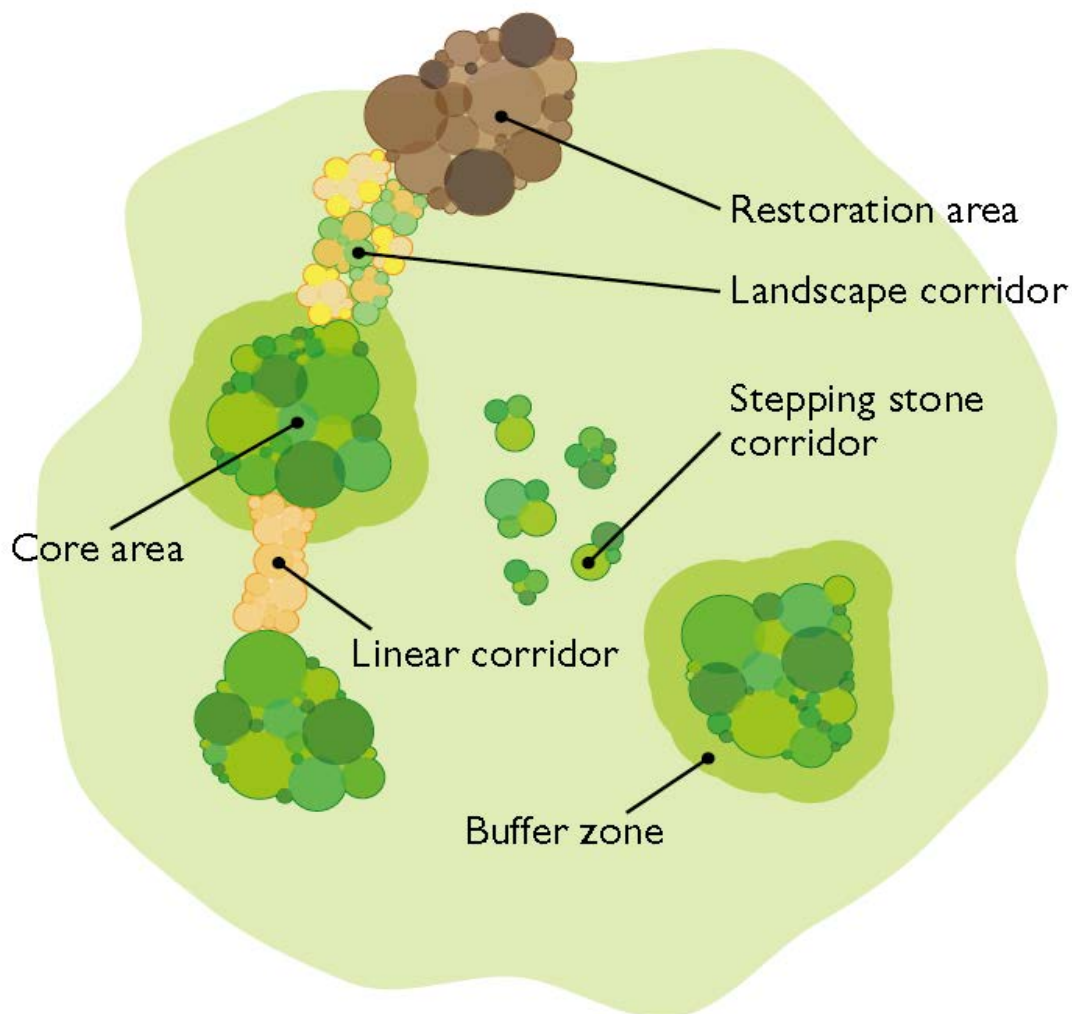


Figure 1 Wildlife Zones - bigger, better and connected Lawton 2010

Berkswell Parish

The rural parish of Berkswell is a relative large parish of some 2,343 hectares within the metropolitan borough of Solihull. The parish is located within the Meriden Gap an important area of greenbelt between the City of Coventry to the east and the metropolitan area of Solihull to the west. To the south is Balsall Common where further developments are planned". As matter of history Balsall Common started on its eastern side hence Berkswell Station about 1850, the Railway Inn (about 1890), Berkswell Stores (17th Century) and the Brickmakers Arms (17th century)

Historically the parish is within the Arden Landscape area (Rendell, 1990) a region of former wood pasture and heath characterised by a dispersed settlement pattern, ancient woodlands and matures hedgerow oaks.

The River Blythe SSSI runs along the western edge of the parish and the Berkswell Marsh SSSI, which is part of the Berkswell Estate together, create important core habitat areas for wildlife which are compliment by the adjacent local wildlife sites, Berkswell Marsh Meadow and Merciotte Mill Pool. In addition are the nearby potential local wildlife sites, including Marsh Lane Nature Reserve.

To the south and west are some smaller local wildlife sites including the Kenilworth Green Way, Big Pools and Little Pools Wood, Berkswell Moss Little Beanit Farm Meadow and Beanit Farm Hedge.

The Constraints Map

The constraints map for the parish is derived from the Phase 1 habitat mapping and shows where development should be avoided and ecological enhancement encouraged. The more detailed constraints maps for the proposed housing allocations at Barratt's Farm and Windmill Lane/Kenilworth Road are shown under the section headed Proposed Housing Developments.

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.

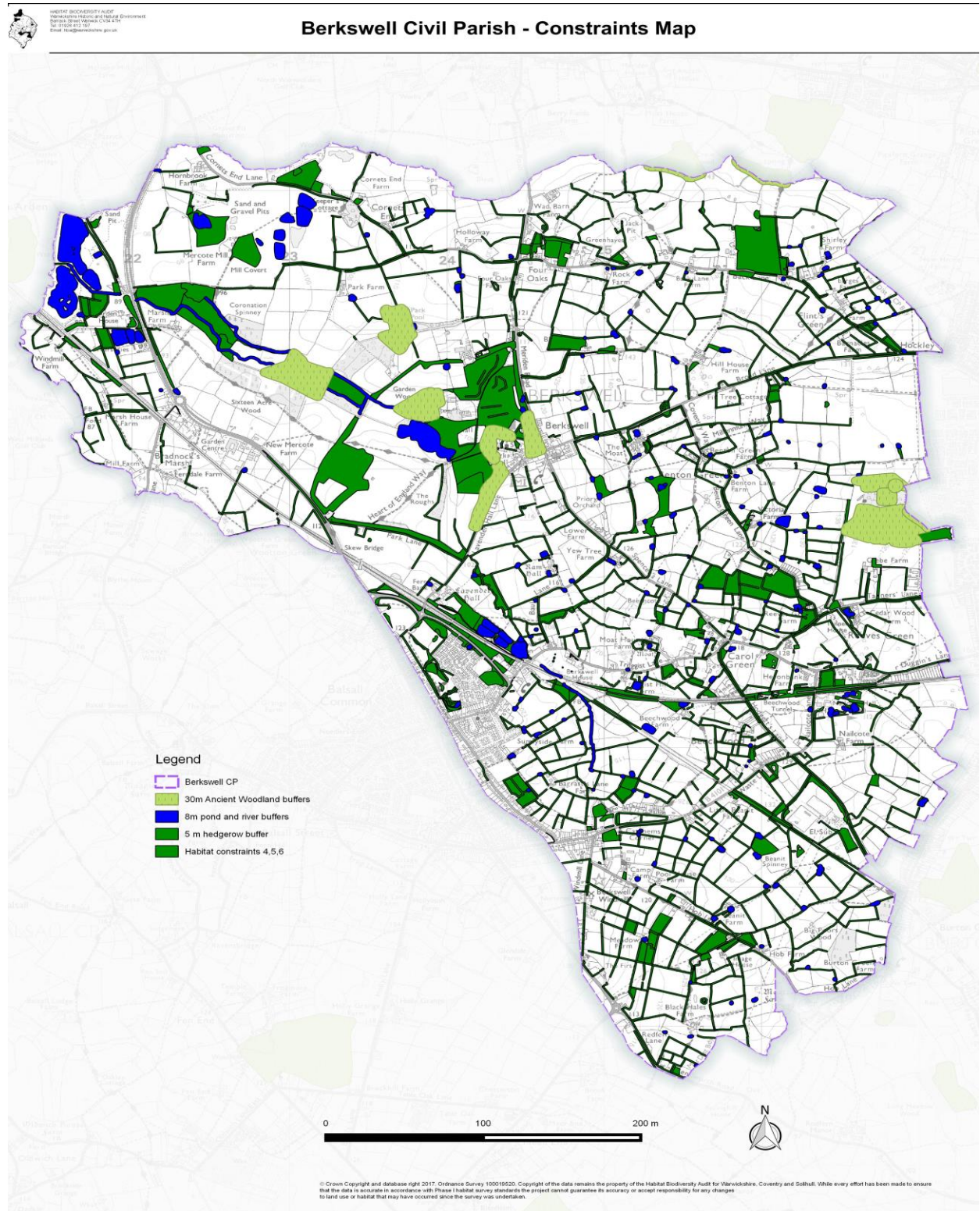


Figure 2: Berkswell Parish habitat constraints map

Designated and Statutory and Non-Statutory sites

Berkswell Marsh SSSI

Berkswell Marsh is located in the Meriden gap between Birmingham and Coventry. It lies on alluvial deposits over Keuper Marl. The site is made up of an area of fen meadow bisected by a tributary of the River Blythe and two blocks of wet woodland. The marsh forms the largest-known example of fen meadow in the West Midlands County. (*Natural England, 1991*)

River Blythe SSSI

The 39 kilometre stretch of the River Blythe, from the point at which Spring Brook exits from under the Stratford-upon-Avon to Birmingham railway line to its confluence with the River Tame, is a particularly fine example of a lowland river on clay.

The diverse physical features of the Blythe are mirrored by its diverse plant communities. The mean number of plant species found in any 1 km stretch is above average for a lowland river, as is the number of species recorded for the whole length of the river. Botanically, the Blythe is one of the richest rivers in lowland England with the most species-rich sections containing as many species as the very richest chalk streams.

The river supports a diverse invertebrate community with a wide range of molluscs, oligochaetes and caddisflies. The most notable species is the pea-shell cockle *Pisidium moitessierianum* which is at the western edge of its range here. The dragonflies are also well represented with the beautiful demoiselle *Calopteryx virgo* being the least common of the species found (*Natural England, 1989*).

Berkswell Marsh Meadow SINC

Berkswell Marsh Meadow SINC (Waddell & Cole, 2001) is a rather large, approximately 8ha, field situated on the Berkswell Estate. The field is bisected by a small tributary of the River Blythe SSSI and contains a series of habitats including various wet and dry grassland types, swamp, scrub and tall herb. Most of the adjacent land use is improved grassland and arable, although there are areas of conifer plantations to the east and large areas of quarries to the north and west.

The ecological position of the site is an important consideration as the SINC is contiguous with the Berkswell Marsh SSSI and a tributary of the River Blythe SSSI which runs through both of these sites. Other marshy grassland sites are present nearby along the River Blythe floodplain. Community value is less important. A Public Right of Way runs through the middle of the SINC which appears to be little used. An area of improved grassland has been included in the SINC because it is part of the same management unit.

Beanit Farm Hedge LWS

Beanit Farm Hedge LWS (*Bowley, 2014*) is one of the few hedgerows to be designated to date and represents an example of the species rich hedges found across the area which remain under surveyed and recorded.

The hedge is 750 metres in length and stands on a substantial medieval wood bank and ditch. It was previously the western boundary of extensive woodland known as The Bearnet, which was listed as a wood in the 14th and 15th centuries and subsequently enclosed in the 18th century and divided into pasture fields. The hedge supports a good variety of trees and shrubs, many of which are characteristic of ancient woodland, survivors from the original woodland. Pedunculate Oak is the dominant tree species, with Ash and Small Leaved-Lime as well as a Sessile-Oak and Wild Pear, a Warwickshire rarity (*Falk, 2009*). Other notable plants found were Nettle-Leaved Bellflower, Wood Melick and Greater Chickweed.

Little Beanit Farm Meadow SINC

Little Beanit Farm Meadow (*Waddell, 2001*) is a small field of unimproved, though neglected, neutral grassland. Several species associated with unimproved or species rich semi-improved grassland are present including Sneezewort, Lesser Knapweed, Greater Bird's-foot-trefoil, Tormentil, Betony and Devil's-bit Scabious.

Berkswell Moss SINC

Berkswell Moss is a small example of a basin mire, i.e. a fen on deep peat with a limited through flow of water. The site contains a large population of the locally rare plant Marsh Cinquefoil as well as a locally rare Bulrush Swamp vegetation type. There are no similar features in the area although the Berkswell Marsh SSSI (a valley mire) occurs approximately 2km to the west. Marshland vegetation is otherwise absent in this area of Solihull (*Waddell, Berkswell Moss SINC, 2001*)

Big Pools and Little Pools Wood SINC

Big Pools and Little Pools SINC (*Easton, 2004*) is located at Burton Green, in a rural area of Solihull to the south east of Balsall Common. It comprises two small blocks of W10 Oak-Bracken-Bramble Woodland (*Quercus robur*-*Pteridium aquilinum*- *Rubus fruticosus*). However, both woodlands have been modified to some extent by planting with species such as Larch. The surrounding landscape is largely arable and improved grassland. The eastern boundary of the Little Pools Wood is bordered by residential gardens and the northern boundary by a disused railway with cutting. Both woodlands are shown on the first edition Ordnance Survey Map.

Mericot Mill Pool SINC

A former mill pond, now seasonal, surrounded by a mosaic of marsh, reed bed, alder and willow carr and broad-leaved woodland. Records suggest that the pool, once more extensive, has been affected by falling water table levels and by the breaching of the clay lining in the mid 1980's. Part of the pool area has been colonised by alder and

willow woodland but this currently does not appear to be spreading into the remaining marsh and pool area.

Mericate Mill Pool supports wetland habitats which are now scarce in Solihull and Warwickshire, especially when found in an intimate mosaic such as that present on this site. Due to the habitat mosaic, the site supports a diversity of botanical species, including local rarities, and has potential for invertebrates. An invertebrate survey should be carried out. Historical associations add to the site's ecological importance. (*Glaisher, 1998*)

Beanit Green Lane LWS

Beanit Green Lane is the second site in the parish to be designated for its species-rich hedgerows. The hedgerows border a 400m long slightly sunken green lane, with the status of a public footpath. The lane runs between tall neglected hedges and crosses some pasture fields, in a typical area of Arden countryside. A large electricity substation is present to the east and a belt of new woodland, planted as a screen to this station, now forms a woodland corridor extending from the north end of the site, south-eastwards along Hodgett's Lane for 750 metres.

The site forms a valuable wooded corridor which links up with the Kenilworth Greenway LWS and is also close to Beanit Farm Hedge LWS; the latter being the relict western medieval wood bank of Beanit Wood. The northern end of this hedge lies about 200m to the west of the south end of the site, and there are several other woodland or hedgerow pLWSs close by, including Beanit Spinney (a replanted fox covert within the site of the original wood) 200m to the south-west. (*Bowley, Beanit Green lane, 2016*)

Kenilworth Greenway LWS

The Kenilworth Greenway is a 6.5km long linear country park owned by Warwickshire County Council occupying the route of a former railway running from Common Lane on the perimeter of Kenilworth Common LWS, north-westwards to a point 100m east of Berkswell Station on the Coventry to Birmingham main line railway. It occupies a series of low embankments and cuttings as it crosses a mainly rural landscape of farmland and scattered woodlands; although it starts within the small suburb of Crackley on the northern edge of Kenilworth. It also passes by way of a deep cutting the linear settlement of Burton Green, part of the ribbon development extending out from Coventry along Cromwell Lane.

The Greenway is a popular open green space for the general public, who use it for walking, cycling and horse riding, with direct access from the town of Kenilworth at the south-east end and the populous dormitory settlement of Balsall Common at the north-west end. It also links up with a new cycle path running from Kenilworth to the University of Warwick, 2km to the north. The Greenway is a major wildlife corridor due to the unbroken chain of habitats, including secondary woodland, scrub, tall herb and

grassland along the route. It is also important for connectivity as it links up several woodland LWSs along the route which would otherwise be now rather isolated, and these include Black Waste Wood, Broadwells Wood, Crackley Wood NR and Kenilworth Common NR. At the north-western end, it also links up directly with Beanit Green Lane LWS and is within a few metres of Beanit Farm Hedge LWS, both near Waste Lane (*Bowley, Kenilworth Greenway, 2015*)

Rough Close LWS (Ancient Woodland)

Rough Close is a medium-sized ancient woodland with a great diversity of species situated just beyond the western outskirts of the city of Coventry. Since 1946 the wood has been used as a camp site by the Coventry Scout Group. The wood is situated off Tanner's Lane in the parish of Berkswell, 2km east-south-east of the village and on the border with the Coventry suburb of Tile Hill. The wood was formerly surrounded by a network of small pasture fields and hay meadows, but most of these have now been ploughed up and enlarged for arable farming.

The woodland habitat consists of mature and locally damp ancient woodland, characteristic of W10 *Pedunculate Oak-Bracken-Bramble* NVC community, the typical climax woodland of the more acid soils across northern, central and western Warwickshire. (*Bowley, Rough Close Local Wildlife Site, 2017*)

Banner Lane Meadows LWS (part)

Banner Lane Meadows area a group of five moderately diverse semi-improved grass fields situated on the western edge of the city between the suburb of Tile Hill and Rough Close LWS in Berkswell Parish, Solihull MBC. Three of these at Conway Farm are close-grazed by horses, one is unmanaged and the largest is now managed as a private conservation area (CA). There are also associated areas of scrub, secondary woodland and two water bodies. The meadows were formerly combined with Rough Close as the Rough Close Wood and Meadows SINC, a Coventry CC LWS designated in 1998. (*Bowley, Banner Lane Meadows Local Wildlife Site, 2017*)

The south-western meadow

Despite not having been managed for many years, this old damp semi-improved former pasture is still relatively species-diverse and would appear to have derived originally from a MG4 (Meadow Foxtail-Great Burnet) hay meadow community⁴, now one of the rarest and most threatened habitats in the country. The sward is now rank and largely dominated by False Oat-grass, but with Tufted Hair-grass locally abundant at the eastern end. This canopy of tussock grasses overhangs a sub-canopy comprising a mix of Sweet Vernal-grass, Common Bent, Red Fescue and Yorkshire Fog, with more occasional Meadow Foxtail, Crested Dogstail and other grasses. Cocksfoot is frequent. Forbs are much more numerous than in the adjoining CA field and includes locally

abundant Hogweed, Meadow Vetchling, Common Birdsfoot-trefoil, Greater Burnet-saxifrage, Creeping Cinquefoil, Common Sorrel and Tufted Vetch, with frequent Yarrow, Common Knapweed, Great Burnet and Lesser Stitchwort, locally frequent Field Bindweed, Field Horsetail, hybrid cinquefoil (with Tormentil) and occasional Pignut. The meadow is becoming extensively invaded by tall ruderal (such as Creeping Thistle and Common Nettle), Bramble, Blackthorn and young trees which are spreading out from the boundary hedges.



Berkswell Civil Parish - Site Designations

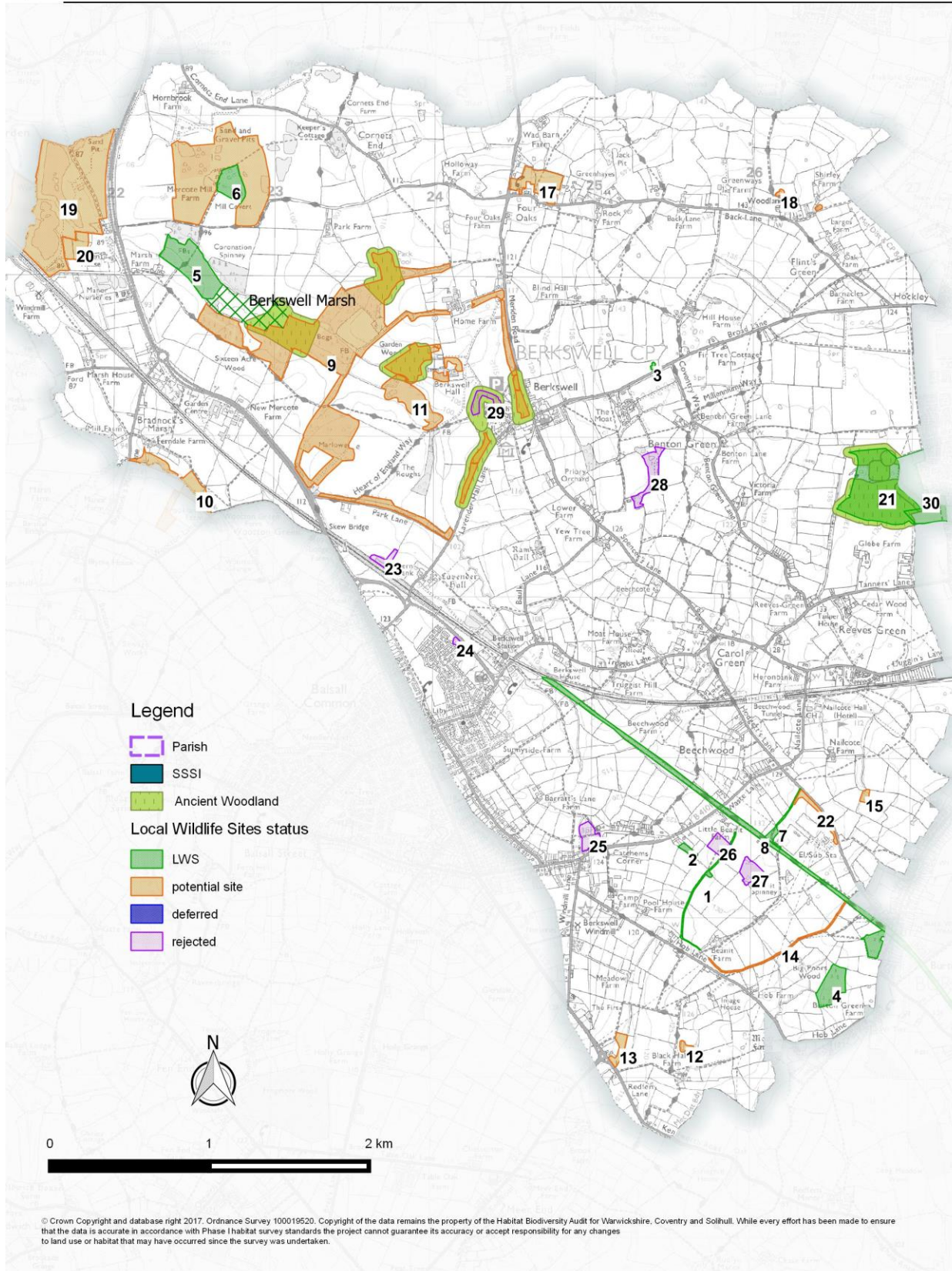


Figure 3: Berkswell Parish site designations map

Local Wildlife Sites by Status

No.	Sitename	Siteid	status	Area (ha)	GridRef
1	Beanit Farm Hedge	SP27N3	LWS	0.88	SP256761
2	Little Beanit Farm Meadow	SP27N5	LWS	0.43	SP256764
3	Berkswell Moss	SP27P2	LWS	0.09	SP253794
4	Big Pools and Little Pools Wood	SP27S3	LWS	4.74	SP265755
5	Berkswell Marsh Meadow	SP28F4	LWS	7.04	SP224800
6	Mercote Mill Pool	SP28F6	LWS	2.8	SP227805
7	Beanit Green Lane	SP27T1	LWS	0.69	SP262766
8	Kenilworth Greenway	SP27Li9n	LWS	38.04	SP296727
9	Berkswell Hall Wood	SP27J1	potential site	60.03	SP230794
10	Brooklands Spinneys	SP27J2	potential site	5.64	SP225786
11	Berkswell Pool	SP27J6	potential site	5.05	SP238792
12	Blackholes Farm Pond	SP27M2	potential site	0.4	SP256751
13	Blackholes Farm Meadow	SP27M3	potential site	1.03	SP251751
14	Beanit Farm Hedge East	SP27S7	potential site	1.05	SP263758
15	Small Copse on Arnold Farm	SP27T2	potential site	0.38	SP267767
	Mill Farm Quarry Pools and Mill				
16	Covert	SP28F2	potential site	24.76	SP226806
17	Grassland at Four Oaks	SP28K2	potential site	3.95	SP246805
18	Two Ponds	SP28Q4	potential site	0.28	SP261805
19	Marsh Lane Nature Reserve	SP28A2	potential site	38.02	SP215804
20	Fields South of Grove Quarry	SP28A3	potential site	2.3	SP217801
21	Rough Close Wood	SP27U3	LWS	14.71	SP267786
22	Hodgett's Lane Plantation	SP27T5	potential site	0.99	SP264766
23	Fern Bank Marsh	SP27J4	rejected	0.78	SP236782
24	Pond	SP27N1	rejected	0.16	SP241777
25	Two Fields	SP27N2	rejected	1.69	SP249765
26	Meadow at Catchems Corner	SP27N4	rejected	1.15	SP258764
27	Beanit Spinney	SP27N6	rejected	1.64	SP260762
28	Wood at Benton Green	SP27P1	rejected	2.51	SP253787
29	Berkswell Churchyard	SP27P3	rejected	1.47	SP242792
30	Banner Lane Meadow (part)	SP27U1	LWS	11.02	SP270786

Table 1: Berkswell Parish Local Wildlife Sites Status

Identifying important habitats – Phase 1 survey

The Phase 1 habitat survey for Berkswell Parish has been updated within the past 5 years, including a large section of the southern part of parish immediately to the north of Balsall Common for the proposed HS2 development and more recently for the Solihull Additional Housing Allocation Ecological report (*HBA and WBRC, 2016*).

The Phase 1 habitat map for Berkswell Parish is shown in Figure 6. A breakdown of the main habitats are shown in Figure 4 woodland and scrub and Figure 5 non-agricultural/improved grassland. All woodland accounts for 208 hectares, or 10% of the total survey area (2,000 hectares) of which 19% is semi-natural woodland; 16% is broad-leaved plantation; 13% mixed plantation of both coniferous and broad-leaved trees; and dense scrub with 38%. The remaining area is a mix of open scrub and parkland.

All together grasslands cover 926 hectares of the parish (46% total survey area), with most of the grassland given over to improved grassland, 677 hectares or 47% of all grasslands. The priority semi-improved grasslands including acidic, neutral, and marshy grasslands, together account for 12% of the area (70 hectares). The other grasslands are amenity grasslands, 27% and species poor grasslands, 16%.

Wetland habitats comprise rivers and streams; ponds and lakes; swamp vegetation, marsh and marshy grassland. All together these cover just over 2% of the total survey area.

Ancient woodland

Scattered blocks of ancient semi-natural woodland occur throughout the Arden and Berkswell has 6 areas of ancient woodland all of which are also potential local wildlife sites. Many woods on the ancient woodlands register have been substantially replanted. However their rich ground flora and fauna built up over centuries is often still present, particularly along rides and around the edge of the woodland. This makes them superior wildlife sites to more recent woodland plantations.

The two areas of ancient woodland in the parish are Berkswell Hall Wood plws and Rough Close Wood plws.

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 and converted into small hedged fields by assarting. A wide variety of woody species are typically present, often dominated by hazel, with dogwood, field maple, blackthorn and holly.

Hedgerows also provide important wildlife corridors and provide the connection for plants and animals to move between woodlands and grasslands.

There are two designated hedgerow local wildlife sites and approximately 5km of species rich hedgerows recorded by the Phase 1 habitat survey. Further hedgerow surveying would identify more species rich hedgerows across the parish.

Semi-natural grasslands

Areas of semi-improved permanent grassland are still a feature of the more pastoral Arden landscape. Many sites existed up to the Second World War are now largely destroyed or damaged as a result of agricultural intensification and development, but many areas do remain, particularly on marginal land including roadside embankments and verges; steep hillsides; disused railway cuttings; or as isolated groups of hedged fields.

Examples include Litte Beanit Farm LWS and Marsh Lane Nature Reserve plws as well as other potential sites. A number of potential semi-natural grassland sites have been rejected for LWS status including a meadow at Catchems Corner and Berkswell Church yard. Although these sites have been rejected they remain sites of opportunity for restoration.

Field ponds

Field ponds, often fringed by scrub and trees, are found throughout Arden and are associated with a history of stock-rearing. Where they are managed to avoid silting up and over shading by surrounding scrub vegetation they can be valuable wildlife habitats. Although many ponds have been lost as a result of agricultural intensification and neglect they are still an important feature of the parish.

More than 200 ponds have been recorded across the parish including one designated LWS site – Mercot Mill Pools and four potential sites with ponds. These field ponds are important for the great crested newt population as they provide important breeding habitats. Many ponds across the area remain unsurveyed both as habitats and for the presence of great crested newts.

River wetlands

Historically river floodplains were managed as wet meadowland. These were floristically rich and of great nature conservation value. Some areas of particular wildlife interest include marsh and marshy grassland. Examples of these rare sites are found in the parish including; Berkswell Marsh SSSI, Berkswell Marsh Meadow LWS and Berkswell Moss LWS. Potential wetland sites are associated with former or close by gravel working areas including for example Marsh Lane Nature Reserve plws alongside the River Blythe SSSI.

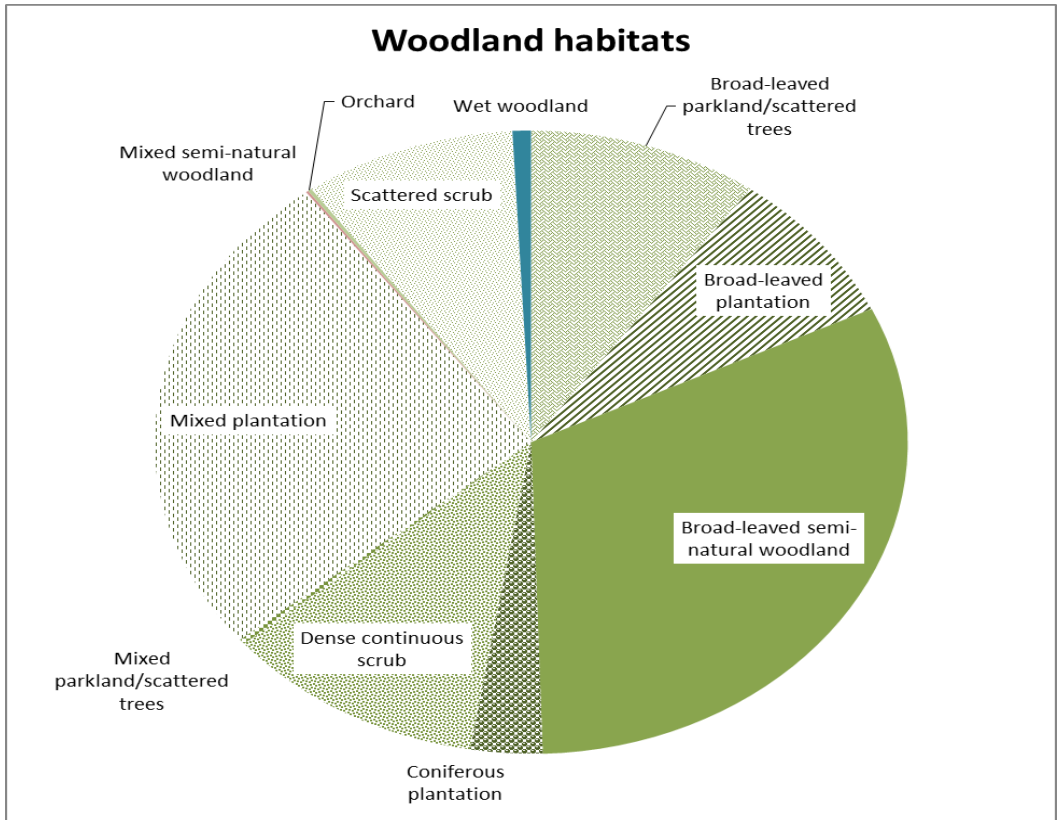


Figure 4 Phase 1 woodland habitat types

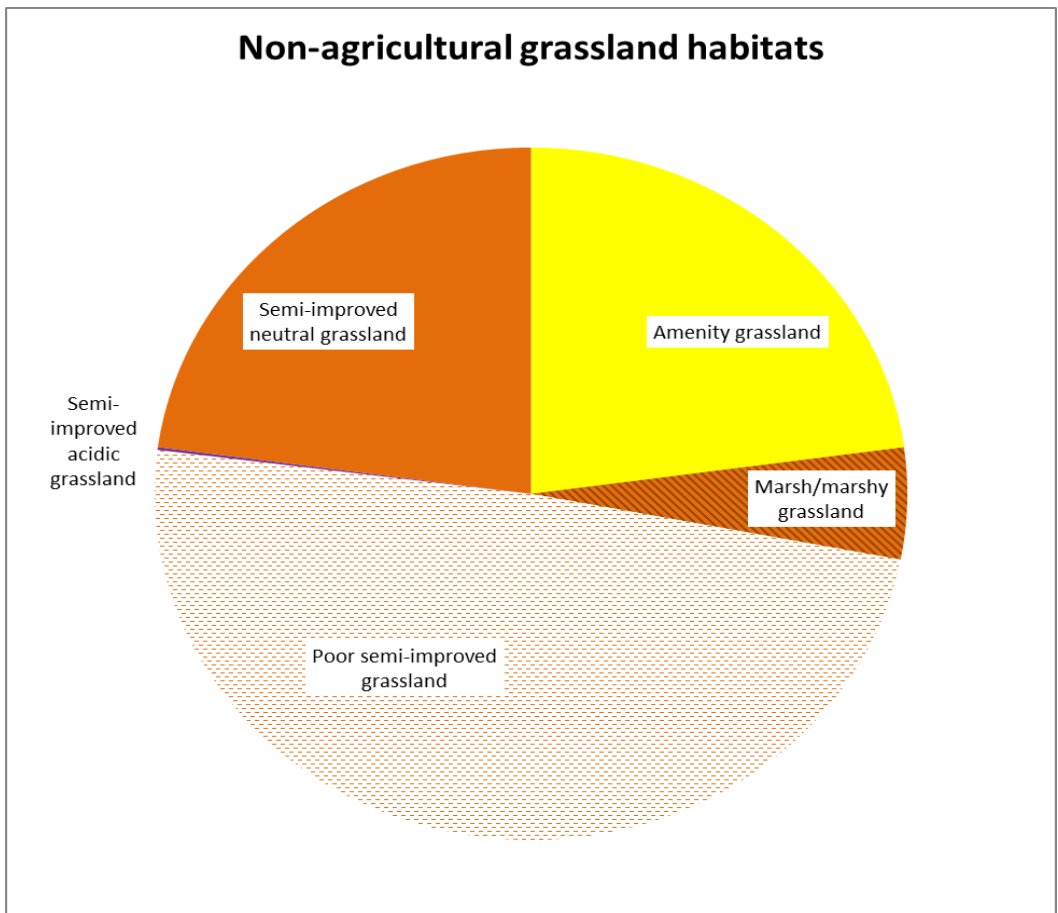


Figure 5 Phase 1 grassland types

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 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.

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

Ancient Woodland and SSSIs and 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.

Figure 5 shows the distinctiveness maps highlighting the important woodlands; semi-natural grasslands; and intact and species rich hedgerows.

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 together with WCC Ecological Services and York University developed a set of Phase 1 habitat connectivity maps in 2012 which continued until recently. The Solihull Metropolitan Borough Council *Additional Site Options Ecological Assessment 2016* included the connectivity assessment maps as part of the report findings. The quality and level of detail afforded by the Phase I cover data allow the results to be used as measures of structural connectivity, where the physical connectedness of the landscape elements of habitat patches and linear features can be assessed.

In 2017 HBA began working with open source connectivity modelling software called Conefor 2.6 (*Saura, 2006*). Some of the mapped results are shown below in Figure 6.

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 HBA/WCC habitat connectivity mapping has been applied to the proposed HS2 rail link through Warwickshire, a section of which is planned pass through the southern part of the parish of Berkswell. A detailed assessment of the HS2 impact is available from Warwickshire County Council Ecological Services.

Berkswell Civil Parish - Phase 1 habitat map

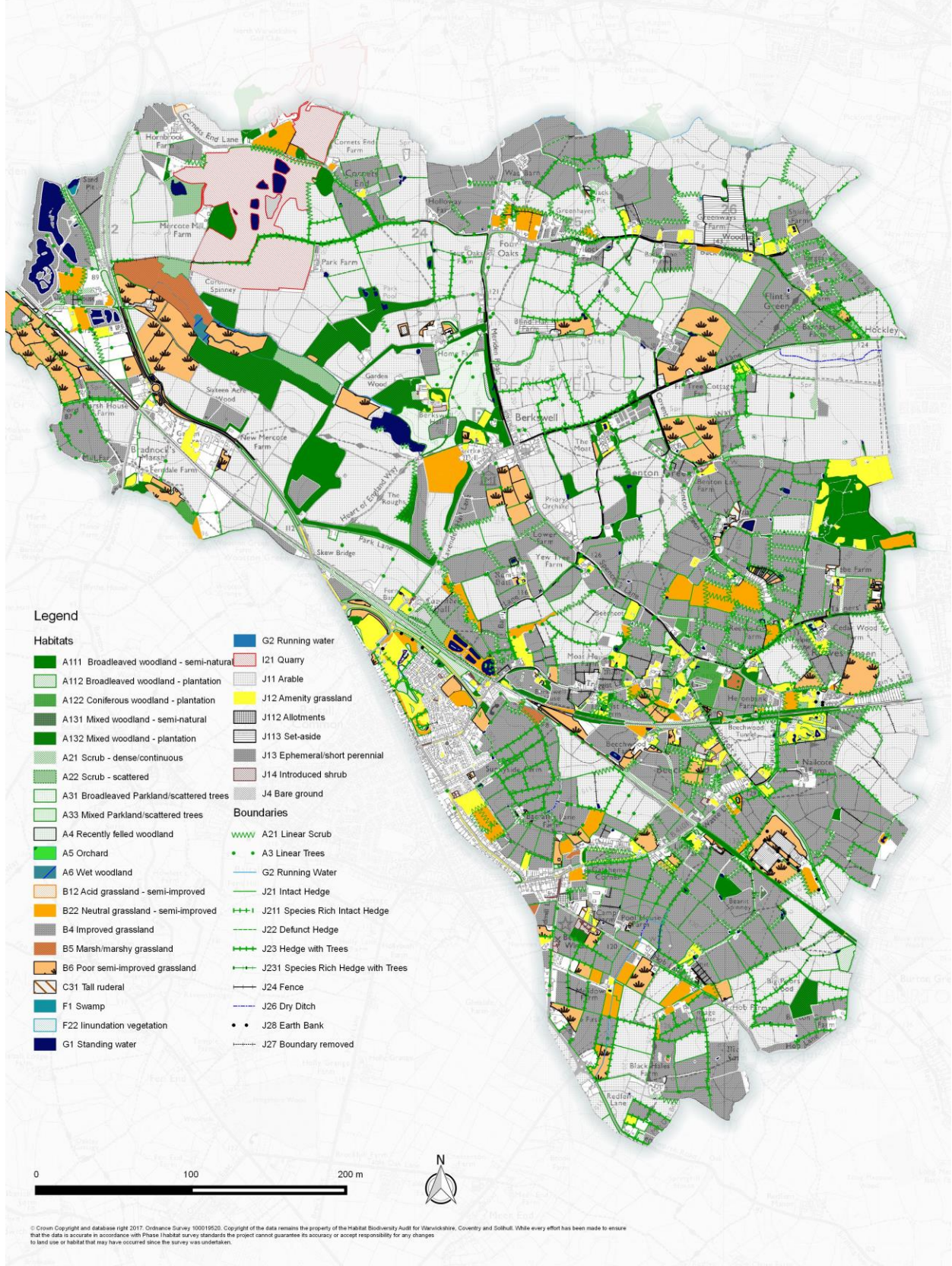


Figure 6: Berkswell Parish Phase 1 habitats map

Berkswell Civil Parish - Phase 1 habitat distinctiveness

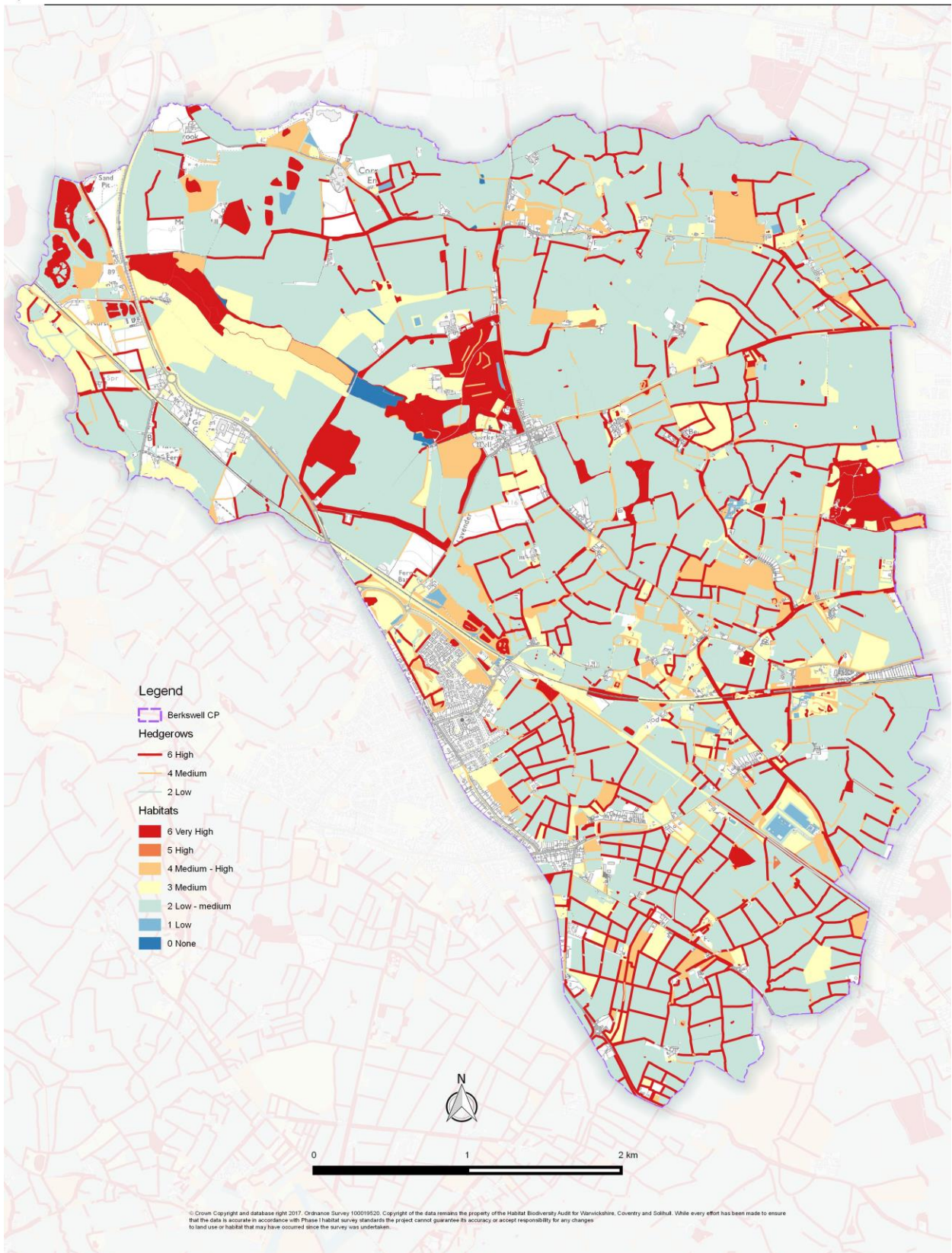


Figure 7: Berkswell Parish habitat distinctiveness map

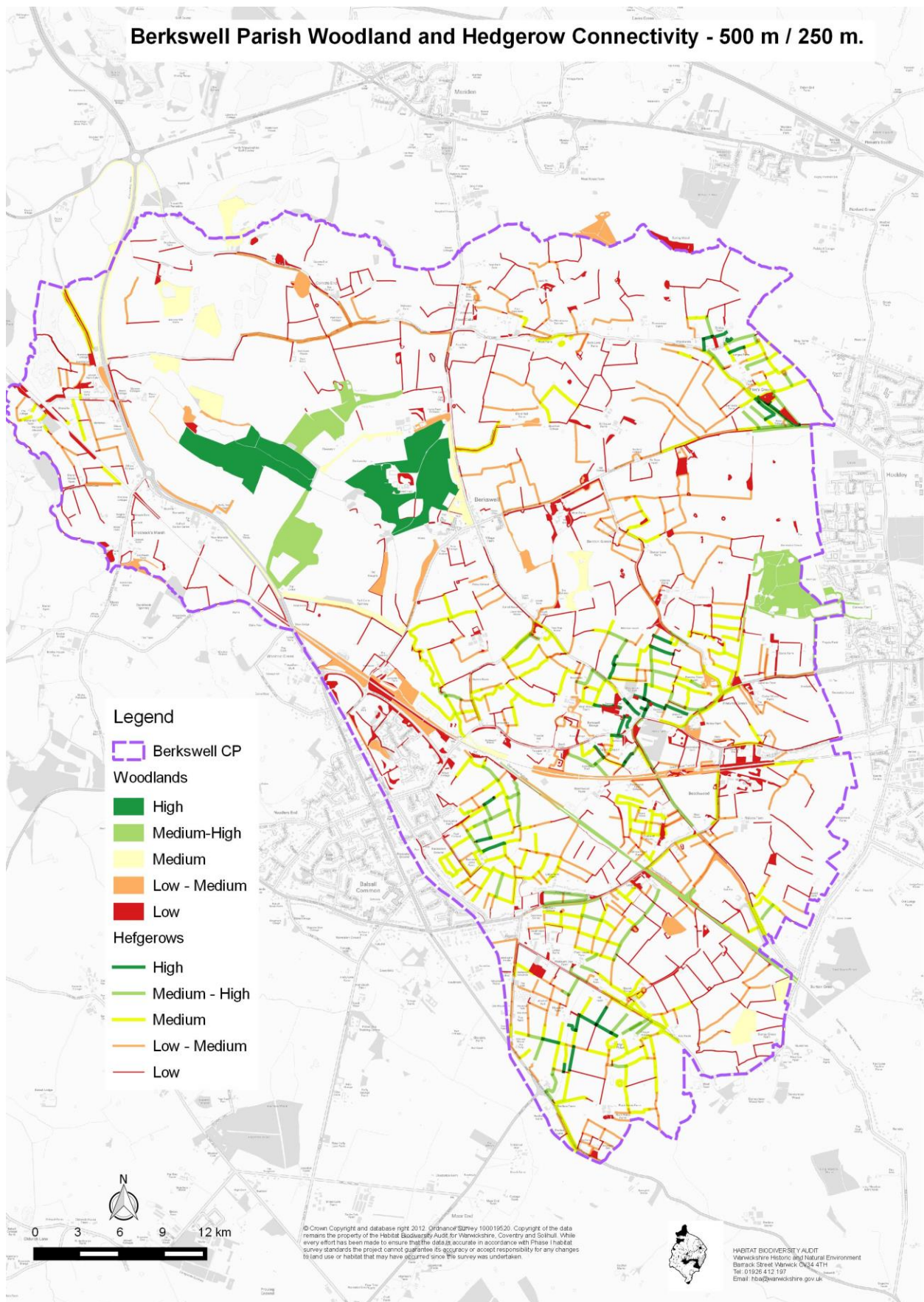


Figure 8 Berkswell Parish Woodland and Hedgerow Connectivity

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 (*Warwickshire Wildlife Trust, 2012*)

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, 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>



Berkswell Civil Parish Protected Species

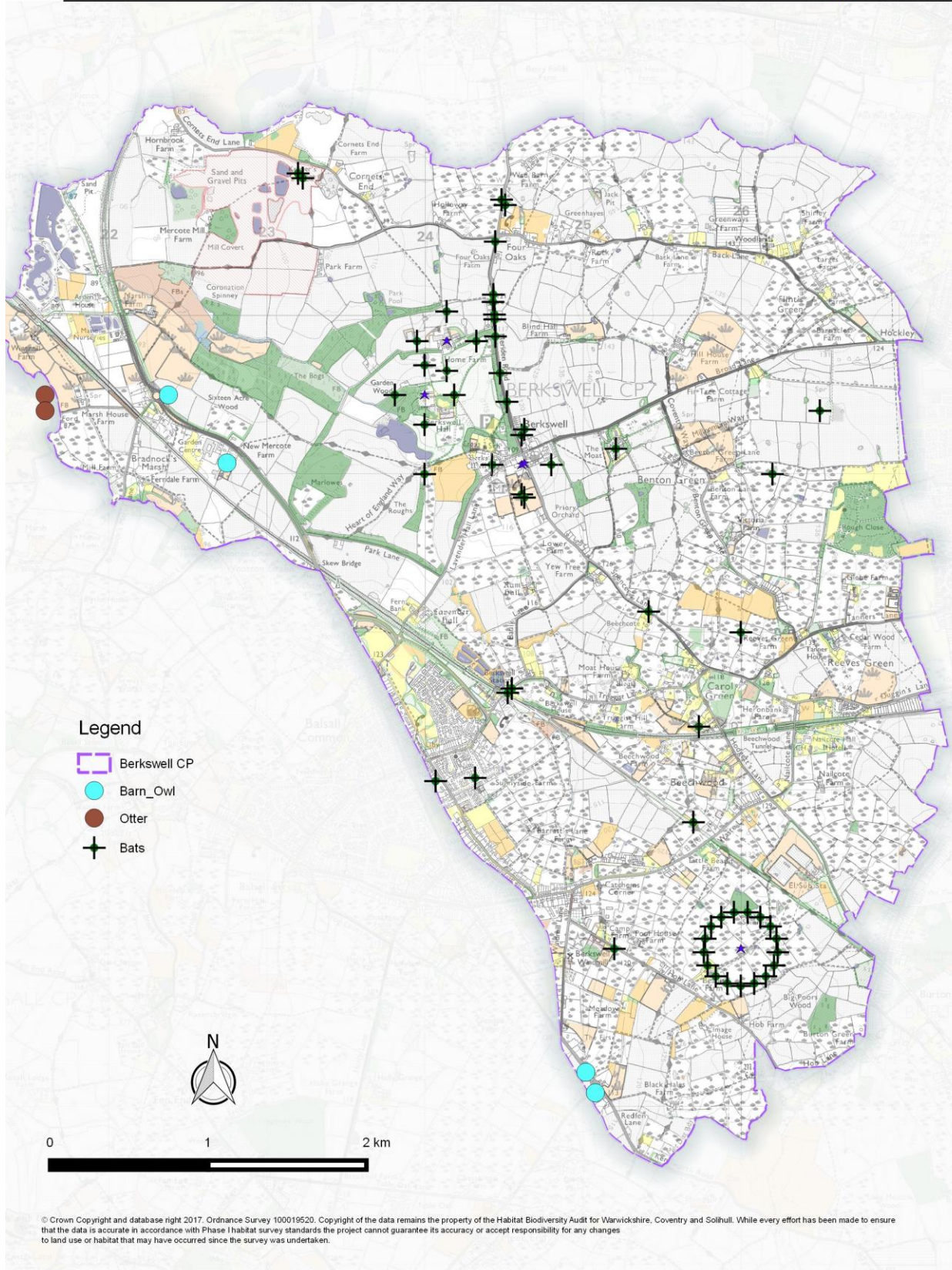


Figure 9: Berkswell Parish protected species map

Berkswell Civil Parish Species: Reptiles and Amphibians

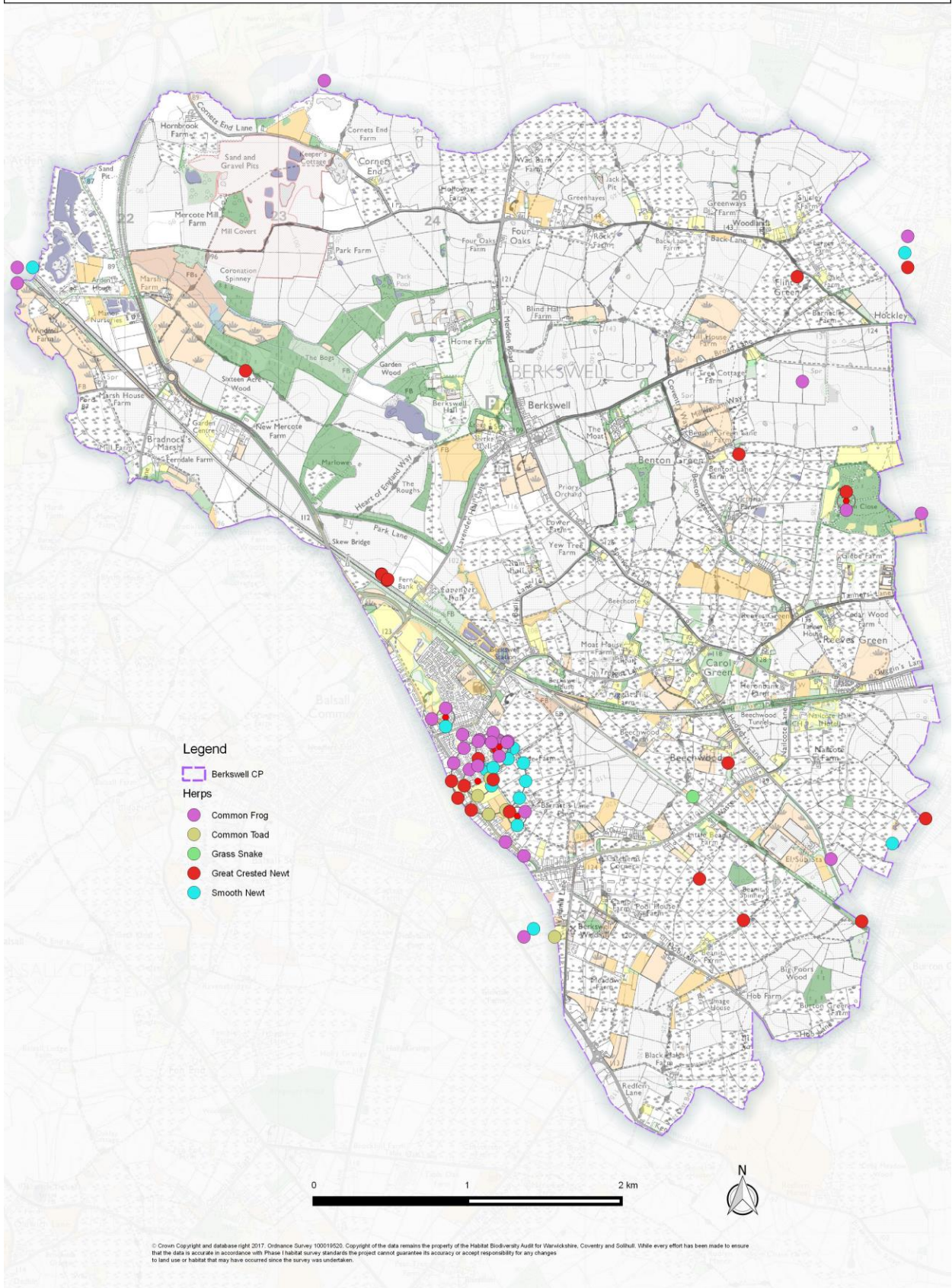


Figure 10: Berkswell Parish Protected Species map 2

Proposed Housing Allocations

In 2016 Solihull Metropolitan Council commissioned the HBA to carry out an ecological assessment with recommendations to protect wildlife for a number of proposed housing development sites across Solihull (HBA & Ecological Services, 2016). These assessments included two sites within the parish of Berkswell; Barratt's Farm, Balsall Common and Windmill Lane/Kenilworth Lane, Balsall Common.

The site assessments and recommendations are reproduced below as part of the parish plan review.

Barratt's Farm

Many of the small fields of semi-improved grassland with their associated ridge and furrow have been degraded through intensive grazing, general neglect or through expansion of housing development. The few remaining viable semi-improved grasslands have continued to be neglected and are declining in habitat value. Consideration should be given to restoring the semi-improved grasslands along the southern boundary of the site incorporating the rejected local wildlife site.

There should be a strong commitment to a long term management regime of the species-rich grassland present with the development parcel. A site-specific long-term management plan is required to prevent domination of the sward by scrub and aggressive species. Long term-management should include a monitoring and evaluation programme that will enable the management regime to be adapted as necessary with the aim to determine the extent of the grassland establishment (% ground cover, bald patches and presence of leaf litter) and sward composition (grass to herb ratio, positive indicator species, negative indicator species, species with local distinctiveness). A regime of cutting and light grazing is essential for maintaining species richness.

The small fields are characteristic of the Arden landscape and retention of the species-rich hedgerows should be a priority to maintain the connection with the open countryside south of Balsall Common.

Any potentially species-rich hedgerows should be subject to a full hedgerow survey detailed in the Hedgerow Survey Handbook (2nd edition) under The Hedgerows Regulations (made under Section 97 of the Environment Act 1995). The regulations were introduced in England and Wales in 1997 to protect this characteristic element of the countryside. The Regulations prohibit the removal of most countryside hedgerows without first submitting a hedgerow removal notice to the local planning authority. Local planning authorities are able to order the retention of 'important' hedgerows but not others.

The presence of recent valid amphibian records for great crested newts, smooth newt, common frog and common toad necessitates the requirement for amphibian surveys to

determine the status of populations within the development parcel. The supporting pond network should be surveyed to LWS survey standard as a pond cluster.

Given the position of the proposed development in relation to metapopulations of great crested newts, the development scheme should be designed to incorporate additional aquatic features and green corridors to improve linkage between sites in addition to the retention of suitable terrestrial habitat. Sustainable urban drainage schemes should be used to achieve conservation gains for great crested newts.

Building and development work can harm great crested newts and their habitats, for example if it:

- Removes habitat or makes it unsuitable
- Disconnects or isolates habitats, for example by splitting it up
- Changes habitats of other species, reducing the newts' food sources
- Increases shade and silt in ponds or other water bodies used by the newts
- Changes the water table
- Introduces fish, which will eat newt eggs or young
- Increases the numbers of people, traffic and pollutants in the area or the amount of chemicals that run off into ponds

You should be able to avoid harming the newts, damaging or blocking access to their habitats by adjusting proposed development plans.

Mitigation measures must demonstrate that the assessed great crested newt population has suffered no net loss on its conservation status.

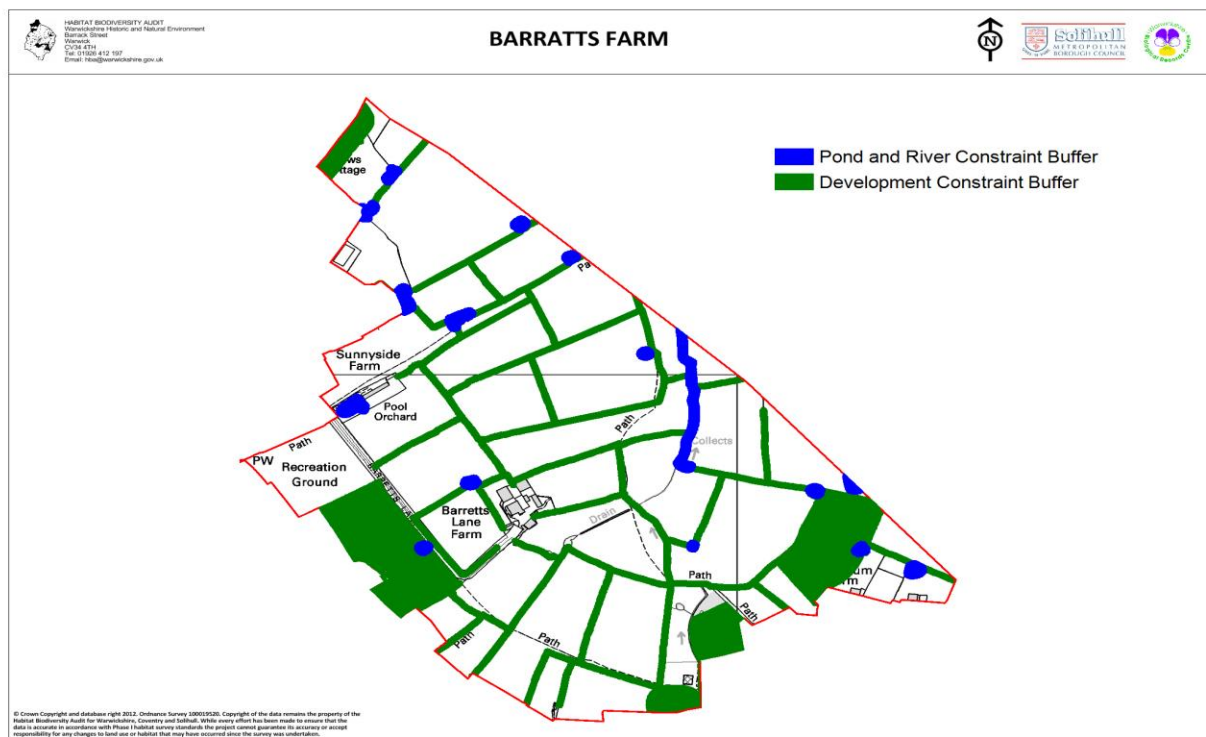


Figure 11: Barratts Farm constraints map

Windmill Lane/Kenilworth Road

The existing stand of semi-natural woodland should be retained and hedgerows where possible should be retained and restored. Consideration should be given to the wet marshy grasslands as areas for habitat creation as wetland retention areas incorporating ponds and patches of inundated vegetation

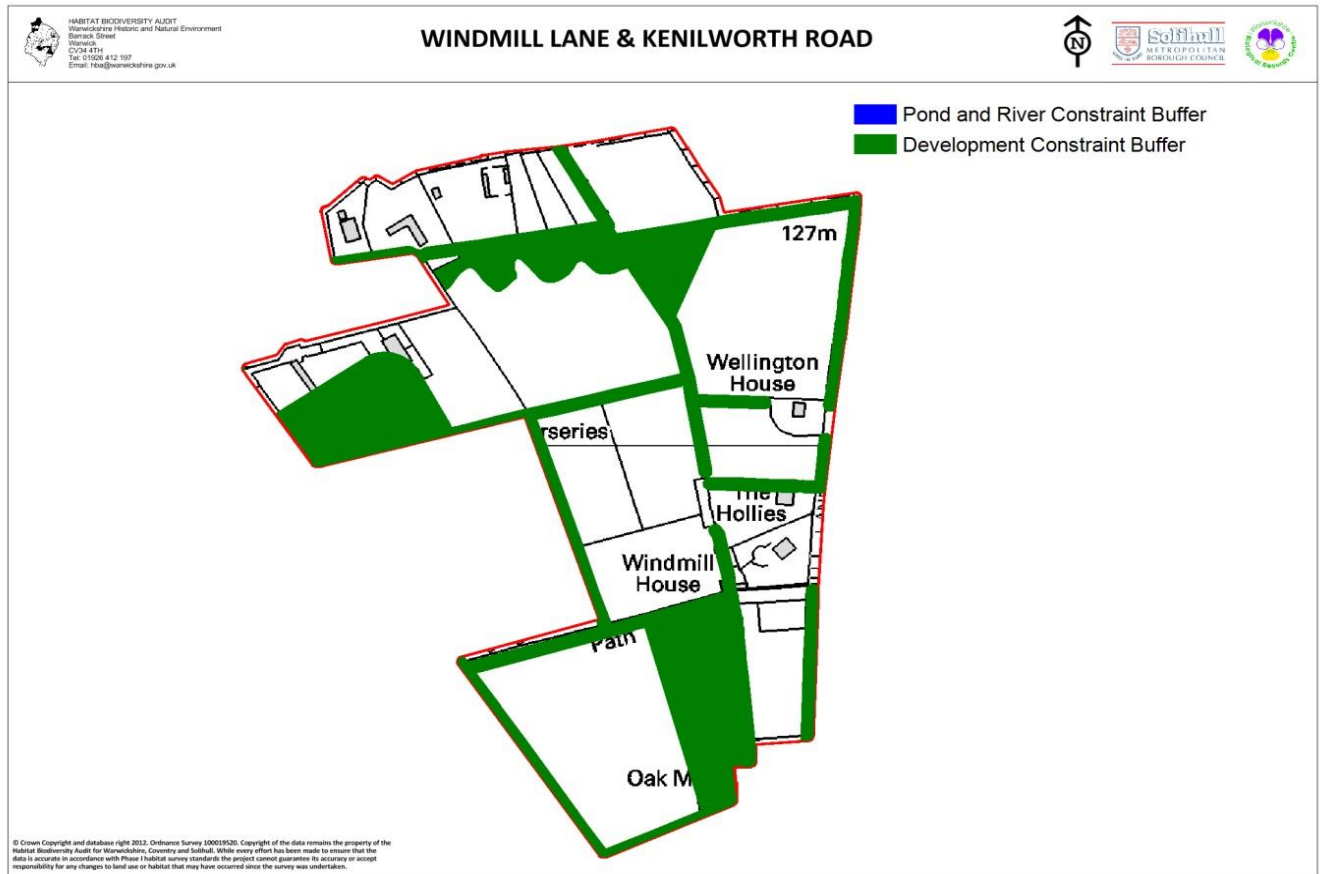


Figure 12: Windmill Lane constraints map

Bibliography

- Bowley, J. (2014). Beanit Farm Hedge Local Wildlife Site. Warwick: HBA.*
- Bowley, J. (2015). Kenilworth Greenway. Warwick: HBA.*
- Bowley, J. (2016). Beanit Green lane. Warwick: HBA.*
- Bowley, J. (2017). Banner Lane Meadows Local Wildlife Site. Warwick: HBA.*
- Bowley, J. (2017). Rough Close Local Wildlife Site. Warwick: HBA.*
- Bowley, J. (n.d.). Berkswell Marsh Meadow SINC .*
- Cole, J. W. (2001). Berkswell marsh Meadow SINC. Warwick: HBA.*
- Communities and Local Government. (2012). National Planning Policy Framework. London: Department for Communities and Local Government.*
- Defra. (1997). The Hedgerow Regulations: A guide to the law and good practice. London: HMSO.*
- Defra. (2012). Biodiversity Offsetting Technical Paper. London: HM Government.*
- Easton, J. (2004). Big Pools and Little Pools Wood SINC. Warwick: HBA.*
- Falk, S. J. (2009). Warwickshire's Wildflowers. Warwick: Warwickshire County Council.*
- Glaisher, A. (1998). Mercote Mill Pool. Warwick: HBA.*
- Habitat Biodiversity Audit. (2012). HBA Habitats Guide. Warwick: HBA Warwickshire Coventry & Solihull.*
- HBA & Ecological Services. (2016). Solihull Metropolitan Borough Council Additional Site Options Ecological Assessment. Warwick: HBA/WCC.*
- HBA. (2015 rev.). The Green Book: Guidance for the Selection of Local Wildlife Sites in Warwickshire, COventry and Solihull. Warwick: HBA.*
- HBA and WBRC. (2016). Additional Housing Allocation Ecological Report for Solihull Metropolitan Borough. Warwick: HBA/WBRC.*
- JNCC. (2010). Handbook for Phase 1 habitat survey: a technique for environmental audit. Peterborough: JNCC.*
- Lawton, J. H. (2010). Making Space for Nature: a review of England's wildlife sites and ecological networks. London: HMSO.*

- Natural England. (1989). River Blythe. Natural England.*
- Natural England. (1991). Berkswell marsh. Natural England.*
- Rendell, L. (1990). Arden: Warwickshire Lansdscapes Guidleines. Warwick: Warwickshire County Council.*
- Saura, L. P.-H. (2006). Comparison and developemnt of new graph-based lanscape connectivity indices: towards the prioritization of habitat patches and corridors for conervation. Landscape Ecology, 21:959-967.*
- Waddell, J. (2001). Berkswell Moss SINC. Warwick: HBA.*
- Waddell, J. (2001). Little Beanit Farm Meadow SINC. Warwick: HBA.*
- Warwickshire Wildlife Trust. (2012). Wildlife and Planning Guidance: Wildlfe and the Law. Brandon: Warwickshire Wildlife Trust.*
- WCC Ecological Services & Hbaitat Biodiversity Audit and WCC Landscape Architects. (November 2013). Warwick District Council Landscape Sensitivity and Ecological & Geological Study. Warwick: Warwickshire County Council.*
- Woodland Trust. (2017). Planners' Manual for Ancient Woodland and Veteran Trees. Grantham: Woodland Trust.*