

Ecological Sub-area Statement of Biodiversity Priorities – Technical Appendix

Sub-area name	Moseley Hall & Northcote Farm	Sub-area ref.	CL02
Natural Character Area	Mid Severn Sandstone Plateau	NCA ref.	66
Local Authority Area	Wolverhampton	Area km²	1.8

Ecological Sub-area Description

Overview

Moseley Hall & Northcote Farm comprises an area of historic countryside on the northern edge of Wolverhampton in the historic parish of Bushbury. Immediately to the south and west are the urban settlements of Bushbury and Fallings Park, with rural South Staffordshire to the north and east with which the ecological sub-area forms a continuum of open countryside.

The northern part of the ecological sub-area is dominated by field systems, woodland (parts of which are designated as ancient) and parkland associated with the historic Moseley Hall, Moseley Court and Northcote Farm. The southern part of the ecological sub-area is dominated by a field system associated with Bushbury Hall.

The Waterhead Brook flows north along the southern part of the eastern boundary and follows a mostly unmodified channel to a lake (former millpond) in the grounds of Moseley Hall, from where the watercourse flows west through the ecological sub-area.

Land Use

The landuse of Moseley Hall & Northcote Farm remains predominantly agricultural, with many of the historic fields commercially productive arable or pasture. In the northern part of the ecological sub-area is Northcote Farm Country Park which comprises parts of the former country estate of the now demolished Moseley Court. This area of small fields and historic wood pasture and parkland is grazed under the management of City of Wolverhampton Council for the purposes of wildlife conservation, landscape preservation, education and amenity. To the north of the Country Park is Moseley Hall Farm, associated pasture and former millpond surrounded by woodland.

Along the course of the Waterhead Brook within both Northcote Farm and Moseley Hall there are a number of small ancient woodlands, as well as recent secondary and plantation woodlands.

To the south of Northcote Farm a number of former fields are now occupied by Bushbury Cemetery and Crematorium which comprises recent woodland and grassland. In the south of the ecological sub-area are two areas of informal park/open space, school grounds and playing fields, as well as St. Mary's churchyard.

In the far north-western corner of the ecological sub-area is an electricity sub-station.

Topography

Bushbury Hill in the south of Moseley Hall & Northcote Farm is the highest point in the ecological sub-area lying at an elevation of 180 m. From this point the land falls away in all directions to a low of 120 m in the north of the ecological sub-area along the valley of the Waterhead Brook.

Geology

The entire ecological sub-area is located on bedrock of sedimentary sandstone and conglomerate, interbedded, formed approximately 200 to 251 million years ago in the Triassic Period. This is partially overlain (in the north-western section) with superficial deposits of diamicton till formed up to 3 million years ago in the Quaternary Period.

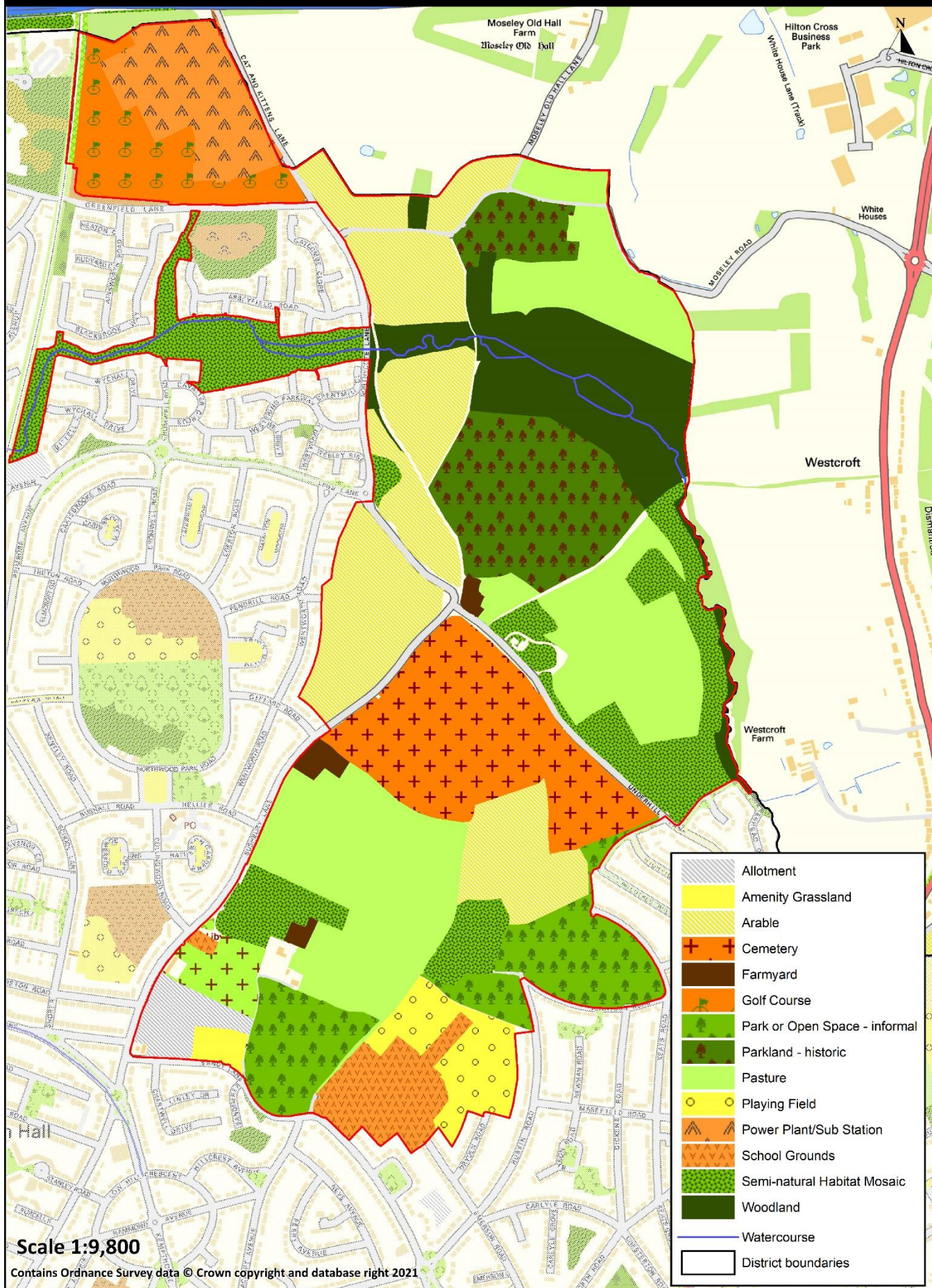
Geopark Sites

- Northcote Farm (GR SJ930031)

Soils

The ecological sub-area's soils are predominantly freely draining and slightly acid loamy, whilst in the north-west is an area of slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils, and in the south-east a small area of slightly acid loamy and clayey soils with impeded drainage.

CL02 - Moseley Hall & Northcote Farm - Land Use



Scale 1:9,800

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Historic Landscape Character Areas			
Reference	WV10	Name	Pendeford, Fordhouses & Moseley
<p>The entire ecological sub-area is within WV10 Pendeford, Fordhouses & Moseley. The modern landscape is characterised by late 20th century residential development, industrial sites, public services and recreational facilities (public parks and nature reserves), which also date to the period after 1938. Prior to the 19th century, this area was mainly agricultural with some fields being medieval in origin and with some early settlements located in the west of the Character Area at Pendeford Farm, Pendeford Hall and Barnhurst Farm. Pendeford Aerodrome was opened in 1938 and later became a 1980s housing estate. In the east of the Character Area, in the area occupied by Northcote Farm, there were two country houses and their associated parkland (Moseley Hall, and Moseley Court). Some parkland features, including old fishponds, survive in this area.</p>			

Historic Environment Area Designations [1]			
Reference	AHHTV 2	Name	Moseley Historic Rural Settlement
<p>The AHHTV contains four Grade II listed buildings and one Grade II * listed building (Moseley Hall) associated with Moseley Hall. The buildings date to the early 18th and 19th century and are considered to be of regional and national significance. The remains of a dilapidated non-designated 19th century farm lie to the north of the listed buildings. These listed and non-designated buildings are considered to have historic environment value and make a positive contribution to the character of the area.</p> <p>The presence of possible medieval fish ponds located to the south-east of the AHHTV suggests that this settlement may have medieval origins but there are no extant buildings dating to this period and it is possible the medieval settlement was located to the north around Moseley Hall.</p> <p>An area of ridge and furrow lies to the east and south-east of the settlement, this has been included in the AHHTV as it is a relic of an earlier land use that may have been associated with the village. These remains can shed light on past land management and use.</p>			
Reference	AHHLV 20	Name	Moseley Mill and Fish Ponds
<p>The AHHLV contains the remains of Moseley Corn Mill, which is located on the west side of Moseley Lake behind the dam. Three sides of the Mill survive as earthworks. The millpond was shown on a map of 1727, which suggests that there has been a mill at this location from at least the 18th century. The land to the west of the mill, adjacent to the stream, contains a number of earthwork banks and ditches which are shown on the Environment Agency LIDAR survey within a woodland area. These are described as an osier bed on the Tithe map, and it is likely that the earthworks relate to the planting and farming of willow trees in this area. The area to the north-east of Moseley Lake contains earthworks remains of a substantial water feeding system and two dry ponds.</p>			
Reference	DLHHV 3	Name	Moseley Court, Bushbury
<p>The DLHHV contains the parkland associated with Moseley Court. The park was laid out in the early 19th century and some of its original layout has been lost. Visible clumps of trees, irregular undulations associated with the original park, the icehouse and the gatehouse survive. The area is now part of Northcote Farm Country Park. The DLHHV contains surviving areas of woodland associated with the original park. The original house associated with the parkland no longer survives but there may be present below-ground archaeological remains associated with the structure.</p>			
Reference	AHHLV 23	Name	Historic Field System, Northcote Farm County Park
<p>The AHHLV contains a well-preserved pre-enclosure field system to the south of the former Moseley Park (DLHHV 3). Several boundary banks are preserved within the existing hedgerows and one of the hedgerows is believed to be ancient (WoHER 14005). The northern boundary of the AHHLV contains a possible park pale marking the division between the designed parkland of Moseley Park and its associated estate. The Black Country HLC dates the enclosure of this landscape to the late medieval or early post-medieval period. The projected line of a Roman road running between Pennocrucium Penkridge/ Water Eaton and Metchley Roman Fort may pass through the AHHLV. A segment of the Roman road has been recorded in South Staffordshire and the alignment has been projected running through the AHHLV. The AHHLV is considered to have some potential to contain below-ground archaeological remains associated with the Roman road and possible Roman roadside activity, although it is noted that no archaeological evidence for the Roman road has been recorded within Wolverhampton and the line of the road is lost in the urban area to the south. Should archaeological evidence of the Roman road be found within the AHHLV it would provide valuable information regarding the historic alignment of the road.</p>			

Historic Environment Area Designations [1]

The field boundaries in this area are well-preserved and date back to at least the early post-medieval period, possibly earlier. Prior to this, the land was probably part of the open field system associated with Bushbury to the south. During the 19th century the area was strongly associated with Moseley Park to the north. This association is maintained in the present day landscape.

Reference	APA 29	Name	Bushbury deserted medieval settlement
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The APA contains the earthwork remains of a possible deserted medieval settlement. The earthworks are situated to the north of the churchyard at Bushbury, but their function is not clear. The area contains some dumping, some mounds and some possible building platforms. The remains pre-date the re-routing of the road to Bushbury Hall in the 19th century. A 1790 description of the property of Bushbury Hall refers to two tenements and gardens near the Hall, which may correspond with these mounds. LiDAR shows the remains of a large mound in the area but does not show evidence of mounds or platforms.

To the south of the deserted medieval village is the Grade II* listed Church of St Mary and several listed funerary monuments. The APA also includes the scheduled Cross in St Marys churchyard. The church yard has the potential to contain medieval and post-medieval remains.

To the east of the churchyard is the Grade II listed Bushbury Hall which was potentially the site of a medieval moated site. The APA thus has the potential to contain below ground archaeological remains associated with the medieval manor and moated site.

Waterbody Catchments

River Basin District	Humber	Management Catchment	Trent Valley Staffordshire
Waterbody Catchment	Overall Classification	Ecological	Chemical
Penk from Source to Saredon Brook	Poor (2019)	Poor (2019)	Fail (2019)

Key Habitats [2]

Broad Habitat Type	Boundary & Linear Features	Priority Habitat	Hedgerows
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Historic field boundary hedgerows exist throughout the ecological sub-area. These are typically Hawthorn-dominated with varying diversity of woody component and field-layer, with some containing mature standards of species including Pedunculate Oak. Restoration and reinstatement of historic hedgerows has been undertaken within Northcote Farm Country Park.

Broad Habitat Type	Standing Open Water and Canals	Priority Habitat	Ponds
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In the north of the ecological sub-area within the grounds of Moseley Hall there is a large former millpond. There are small former field ponds within the grounds of the hall, Northcote Farm Country Park and Bushbury Cemetery and Crematorium.

Broad Habitat Type	Rivers and Streams	Priority Habitat	Rivers
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The Waterhead Brook emerges from a culvert approximately 350m south of Northcote Farm in Greenacres Avenue. This flows north and follows a mostly unmodified channel along the back of the housing of Waterhead Drive, through Waterhead Brook Wood and into Moseley Hall - where it feeds a former mill pool, from where the watercourse flows west through the ecological sub-area.

Broad Habitat Type	Neutral Grassland	Priority Habitat	
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A number of the historic fields are permeant pasture grazed by cattle, sheep and horses.

Several of the small fields within Northcote Farm Country Park are managed as meadow and have been enhanced/created through the strewing of species-rich green hay.

There are numerous areas of regularly mown amenity grassland throughout, including areas of public open space, golf courses, school grounds, sports fields, within Bushbury Cemetery and Crematorium, and within the electricity sub-station.

Broad Habitat Type	Broadleaved, Mixed and Yew Woodland	Priority Habitat	
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There are several blocks of planted trees at Bushbury Hill, Bushbury Cemetery and Crematorium and at Northcote Farm Country Park. These are predominantly comprised of native broadleaved species and date to the latter part of the 20th century. Most of the blocks are typically structurally poor and support a field-layer flora comprised of ubiquitous species, however, a number of projects have been undertaken to enhance these areas at Bushbury Hill and Northcote Farm and both the structural and species diversity is increasing.

There are a number of mature plantation woodlands associated with Moseley Hall and Northcote Farm that contain specimen trees of species including Beech and Pedunculate Oak.

Broad Habitat Type	Broadleaved, Mixed and Yew Woodland	Priority Habitat	Lowland Mixed Deciduous Woodland
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There are a number of small wet woodlands occupying the shallow valley of the Waterhead Brook which are of some age and likely to be ancient (woodland since at least AD 1600). The woodlands support a diverse woody and field-layer flora associated with ancient woodlands.

Broad Habitat Type	Broadleaved, Mixed and Yew Woodland	Priority Habitat	Wood-Pasture & Parkland
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Within Northcote Farm Country Park there is area of Wood-Pasture & Parkland associated with Moseley Court which was laid out in the early 19th century. This contains numerous mature standard trees which were presumably layed out at the time Moseley Court was built. Recent LIDAR imagery shows that at an earlier time this area had been cultivated for crops, as clear ridge and furrow (plough marks) can be seen. The western area of parkland was until recent years grazed but this was discontinued when Northcote Farm's cattle herd was removed from the site. The eastern area has been subdivided into small enclosures and an area accessible to the public in which is a natural play area.

Key Species [3]

Bird indicators

Farmland	Common Reed Bunting, Eurasian Skylark, Goldfinch, Greenfinch, Jackdaw, Kestrel, Lapwing, Linnet, Rook, Starling, Stock Dove, Western Yellow Wagtail, Whitethroat, Woodpigeon, Yellowhammer.
Woodland	Blackbird, Chiffchaff, Coal Tit, Common Chaffinch, Dunnock, Eurasian Blackcap, Eurasian Blue Tit, Eurasian Bullfinch, Eurasian Nuthatch, Eurasian Wren, European Green Woodpecker, Garden Warbler, Goldcrest, Great Spotted Woodpecker, Great Tit, Jay, Lesser Spotted Woodpecker, Lesser Whitethroat, Long-tailed Tit, Marsh Tit, Red Crossbill, Redstart, Robin, Siskin, Song Thrush, Sparrowhawk, Spotted Flycatcher, Tawny Owl, Tree Pipit, Treecreeper, Willow Tit, Willow Warbler.
Water & Wetland	Common Merganser, Common Reed Bunting, Common Sandpiper, Curlew, Eurasian Coot, Grey Heron, Grey Wagtail, Kingfisher, Lapwing, Mallard, Moorhen, Mute Swan, Oystercatcher, Sand Martin, Sedge Warbler, Snipe, Tufted Duck, Western Yellow Wagtail.
Other	Black-headed Gull, Buzzard, Carrion Crow, Collared Dove, Common House Martin, Eurasian Magpie, Gadwall, Golden Plover, Greylag Goose, Hobby, House Sparrow, Meadow Pipit, Mistle Thrush, Northern Raven, Peregrine, Pied Wagtail, Red Kite, Stonechat, Swallow, Swift.

Amphibians & Reptiles

Amphibians	Common Frog, Common Toad, Smooth Newt.
Reptiles	none

Mammals

Bats	Common Pipistrelle, Noctule Bat, Soprano Pipistrelle.
Other	Brown Hare, Eurasian Badger.

Fish

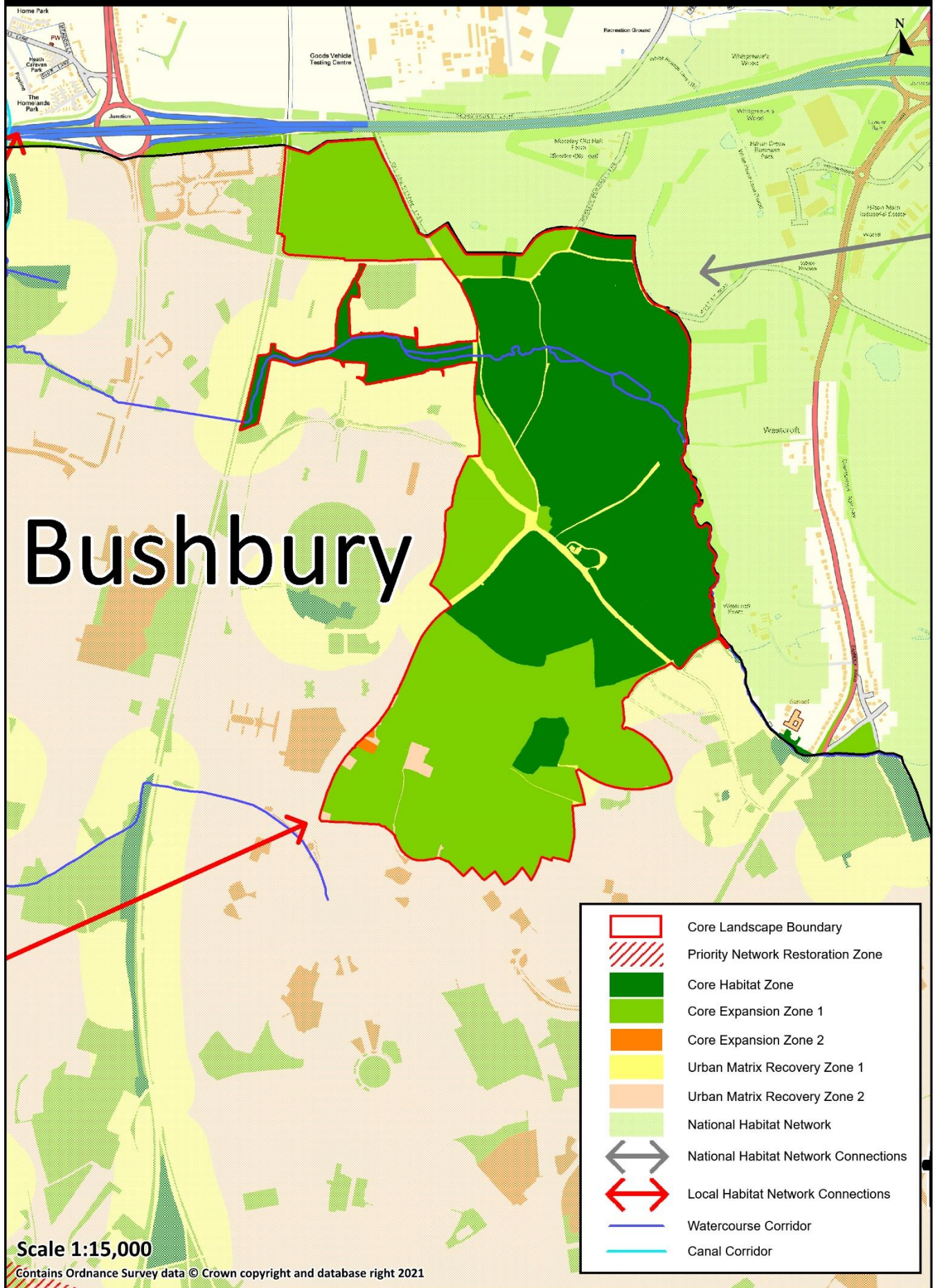
Bony Fish	none
Jawless Fish	none

Invertebrates

Assemblage type	
Flora (axiophytes)	
Woodland	<i>Adoxa moschatellina, Ajuga reptans, Allium ursinum, Anemone nemorosa, Angelica sylvestris, Athyrium filix-femina, Brachypodium sylvaticum, Bromopsis ramosa, Caltha palustris, Cardamine amara, Carex remota, Carex sylvatica, Chrysosplenium oppositifolium, Dioscorea communis, Dryopteris affinis, Epipactis helleborine, Festuca gigantea, Filipendula ulmaria, Frangula alnus, Malus sylvestris, Melica uniflora, Mercurialis perennis, Miliium effusum, Moehringia trinervia, Oxalis acetosella, Poa nemoralis, Quercus petraea, Stellaria holostea, Teucrium scorodonia, Torilis japonica, Valeriana officinalis, Veronica montana.</i>
Grassland	<i>Ajuga reptans, Anacamptis pyramidalis, Brachypodium sylvaticum, Briza media, Caltha palustris, Campanula rotundifolia, Cirsium palustre, Daucus carota subsp. carota, Euphrasia officinalis agg., Filipendula ulmaria, Galium saxatile, Leontodon hispidus, Rhinanthus minor, Stellaria holostea, Veronica officinalis.</i>
Heathland	<i>Campanula rotundifolia, Galium saxatile, Teucrium scorodonia, Veronica officinalis.</i>
Mires	<i>Angelica sylvestris, Athyrium filix-femina, Briza media, Caltha palustris, Cardamine amara, Carex acutiformis, Cirsium palustre, Equisetum palustre, Filipendula ulmaria, Glyceria notata, Valeriana officinalis, Veronica beccabunga.</i>
Open Water	<i>Carex acutiformis, Glyceria notata.</i>
Post-industrial (water-stressed)	<i>Anacamptis pyramidalis, Catapodium rigidum, Daucus carota subsp. carota, Erophila verna, Ophrys apifera.</i>
Cultivation	None

Ecological Connectivity	
Local Habitat Network	
There are no direct links to other ecological sub-areas.	
National Habitat Network	
Moseley Hall & Northcote Farm links directly to the national habitat network in rural South Staffordshire their shared northern and eastern boundary which comprises a continuum of open countryside.	

CL02 - Moseley Hall & Northcote Farm - Components & Connectivity



Ecological Sub-area Opportunities

Focus Habitats		
Habitat	Action	Measure
Hedgerows	Improve management of existing	Habitat in good condition
	Restore through gapping up	Habitat in good condition
	Establish hedgerow trees	Habitat structure improved
Ponds	Restore existing	Habitat in good condition
	Create new	New habitat at existing and new sites
Rivers	Restore hydromorphology (naturalise modified channels)	Improved ecological status
	Reduce artificial inputs	Improved chemical status
Grassland	Enhance existing neutral grasslands	Increased floral diversity
	Create new species-rich neutral grasslands	Increased floral diversity and habitat structure improved
Lowland mixed deciduous woodland	Coppice	Habitat structure improved
	Create woodland edge	Habitat structure improved
	Diversify woody component	Habitat structure improved
	Diversify field-layer component of plantations	Increased floral diversity
Wood-Pasture & Parkland	Improve management of existing - grazing	Habitat in good condition
	Maintain existing – standard tree succession planting	Improve management of existing

Target Species	
Species/Species Group	Measure
Bats	Increased abundance of confirmed species
Breeding farmland birds (specialists)	Increased species and abundance
Breeding water & wetland birds (specialists)	Increased species and abundance
Breeding woodland birds (specialists)	Increased species and abundance
Hedgehog	Confirmed recent records

Connectivity Opportunities	
Local Habitat Network	
Connection	Action
Within Core Landscape CL02	Restoration of modified channel of the Waterhead Brook.
	Species-rich neutral grassland enhancement and creation at sites including areas of public open space, golf courses, school grounds and sports fields.
	Plantation woodland enhancement.
	Creation of new ponds.
	Field boundary hedgerow restoration and creation.
	Planting of standard trees in parks, green spaces and school grounds.

Information and Data Sources		
	Source	Date
Landuse	Ecological Evaluation of Birmingham and Black Country GIS data set, EcoRecord.	2021
Topography	OS Terrain 50 GIS data set, Ordnance Survey.	2017
Geology	British Geological Society 1:625,000 bedrock & superficial GIS web map services from BGS website: http://mapapps.bgs.ac.uk/geologyofbritain/home.html	2021
	Black Country UNESCO Global Geopark sites names and location information https://blackcountrygeopark.dudley.gov.uk/bcg/	2021
Soils	Soilscapes, Cranfield Soil & Agricultural Institute website: http://www.landis.org.uk/soilscapes/	2021
Species and Habitats	EcoRecord species and habitat databases.	2021
Ecological Connectivity	EcoRecord, The Wildlife Trust for Birmingham and the Black Country (2021) <i>Draft Black Country Local Nature Recovery Opportunity Map</i>	2021
	EcoRecord et al. (2021) <i>Midlands Heathland Heartland Lowland Heathland Nature Recovery Opportunity Mapping</i> .	2021
Historic Landscape Character Areas	Wolverhampton City Council (2010) <i>Black Country Historic Landscape Characterisation</i> [data-set]. York: Archaeology Data Service [distributor] https://doi.org/10.5284/1000030	2010
Historic Environment Area Designations	Black Country Historic Landscape Characterisation Study, Oxford Archaeology.	2019

[1] HISTORIC ENVIRONMENT AREA DESIGNATIONS

The Black Country Historic Landscape Characterisation Study has divided the Historic Environment Area Designations into four categories:

Archaeological Priority Areas (APA): sites with a high potential for archaeological remains of regional or national significance that have not been considered for designation as scheduled monuments, or where there is insufficient data available about the state or preservation of any remains to justify a designation. APAs are likely to have high archaeological and historic interest.

Areas of High Historic Townscape Value (AHHTV): areas where built heritage makes a significant contribution to local character and distinctiveness. The significance of AHHTVs is likely to be derived primarily from their architectural and historic interests. However, these areas may also have artistic and archaeological interests. Areas of High Historic Townscape Value are not limited to towns or cities, they also include villages, hamlets and areas of industry where the built heritage is considered to make a positive contribution to the historic environment of an area.

Designed Landscapes of High Historic Value (DLHHV): landscape areas that make an important contribution to local historic character but do not meet the criteria for inclusion on the national Register for Parks and Gardens. The significance of these areas is likely to arise from their historic, artistic and architectural interests, although such areas may also contain remains of archaeological interest.

Areas of High Historic Landscape Value (AHLV): these recognise the quality of the wider landscape and their relative values. The significance of these areas arises from the natural and historic features contained within them (e.g. woodland, watercourses, hedgerows, and archaeological features). The significance of these areas is likely to be derived from their archaeological and historic interests.

[2] KEY HABITATS follows the UK Biodiversity Action Plan (BAP) Broad & Priority Habitat definitions

This is a UK-habitat classification prepared by the UK Biodiversity Group that classifies all terrestrial and freshwater habitats in the UK into 37 broad habitat types. UK BAP Priority Habitats are a range of semi-natural habitat types that were identified as being the most threatened and requiring conservation action. The original Priority Habitat list was created between 1995 and 1999 and revised in 2007. The list of Priority Habitats has been used to help draw up statutory lists of habitats of principal importance for the conservation of biodiversity in England, Scotland, Wales and Northern Ireland. The suite of habitats of principal importance for the conservation of biodiversity (formerly Priority Habitats) nest into the defined Broad Habitat Types.

[3] KEY SPECIES

Bird Indicators: Species listed under UK Biodiversity Indicator C5, Birds of the wider countryside and at sea (JNCC). The indicator shows changes in the breeding population sizes of common native birds of farmland and woodland and of freshwater and marine habitats in the UK.

Amphibians & Reptiles: All amphibian and reptile species native to the UK are included.

Mammals: Those protected by UK or EU law, included on the current list of Principal Importance in England under Section 41 of the NERC Act (2006 or amended), and those included on the latest B&BC LBAP list of Priority Habitats/Species.

Fish: Those protected by UK or EU law, included on the current list of Principal Importance in England under Section 41 of the NERC Act (2006 or amended), and those included on the latest B&BC LBAP list of Priority Habitats/Species.

Invertebrates: Pantheon Assemblage Types Analysis.

Flora (axiophytes): Those included on the Birmingham & the Black Country list of axiophytes (administered by EcoRecord) by four locally defined habitat types.