

# Birmingham & Black Country Local Sites Assessment Report

EcoRecord Reference	Site Name	Grid Reference	Current Status [1]	Survey Date(s)
N/A	Land to the east and west of Chester Road, Hardwick	SP075995	None	08/08/2019
Planning Authority	Site Ownership	Area/Length	Reason for Survey	Report Date
Walsall	Private	23.92ha	BC Call for Sites	19/02/2020

<b>Meets LS Criteria</b>	SLINC (Part)	<b>Type</b>	Wildlife	i.e. Wildlife/Geological
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<b>Amendment(s)</b>	New Site	i.e. None; New Site; Upgrade; Downgrade; Extension; Whole/Part Deletion
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<b>Description</b>	The western and northern boundary was noted to act as a green corridor linking the site with surrounding designated and potentially designated sites, while provide a diverse corridor containing hedgerows, a wide field margin, offering a buffer to the ancient woodland, and a wet ditch. In addition, field compartment F4 provides a moderately diverse sward, with floral species beneficial for foraging birds. Therefore it is deemed to meet the criteria for site of local importance to Nature conservation (SLINC) status as such should be designated as a new SLINC site 'Farmland at Chester Road'.
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## Citation (Summary of Value)

The survey area comprises 23.92ha of agricultural farmland comprising semi-improved grassland and large arable fields, bordered by native hedgerows and a single running stream running adjacent to the northern boundary. The majority of the field system has been present for over a century and lies in close proximity to a number of designated and potentially designated Local Wildlife Sites, offering an ecological corridor connecting these sites.

Overall the site holds good ecological value providing a range of farmland habitats; specifically, with native hedgerows, semi-improved grassland and 3m wide field margin, providing much of the species and structural diversity being of particular interest. The 3m wide field margin also provides a semi-natural buffer for the adjacent ancient woodland from the intensive agricultural farming practices within the site, while the flora species present offer additional foraging habitat for farmland and garden birds noted on site and in close proximity.

## Local Site Selection Criteria

Ecological		
<b>Habitat Diversity</b>	L-M	A significant amount of the site is arable land, however, the site does support a range of habitats; hedgerows, running ditch and semi-improved grassland which does provide some structural variation, however, this is reduced due to current management practices.
<b>Species Diversity</b>	M	The overall species diversity of the site is moderate, due to the wide range of farmland habitats found on site. The highest flora species diversity was found within the semi-improved neutral grassland where variations in management have allowed for successional growth.
<b>Habitat Rarity</b>	M	Many of the habitats present on site are common farmland habitats across the Birmingham and the Black Country. However, the intact hedgerows are listed as Habitats of Principal Importance.
<b>Species Rarity</b>	M	The majority of flora species recorded onsite, during the Phase 1 habitat survey, were identified as being <i>Frequent</i> to <i>Uncommon</i> within the Birmingham and the Black Country. However, two <i>Very Rare</i> (Barberry <i>Berberis vulgaris</i> ) and <i>Rare</i> (Common Cudweed <i>Filago vulgaris</i> ) species have been recorded. In addition, a number of bird species, listed within the Birds of Conservation Concern red and amber lists were noted on site.
<b>Size or Extent</b>	H	In the context of Walsall's local Wildlife sites 'Land to the east and west of Chester Road, Hardwick' is of large extent in terms of the total site area present within the site boundary.
<b>Naturalness</b>	L-M	The majority of the site is regularly managed and used for agricultural processes meaning the naturalness of the site is low, however, the hedgerows and semi-improved grassland do provide a semi-natural feature.
<b>Position &amp; Connectivity</b>	M	The site is directly adjacent to an area of Ancient Woodland, Towers Covert, and Bath Fields Hardwick Candidate SLINC and lies in proximity to Bourn Pool SLINC, Sutton Park SSSI, Barr Beacon LNR, Cuckoo's Nook and the Dingle LNR.
Geological – Not assessed		
Social		
<b>Historical &amp; Cultural</b>	L-M	The field system present has been established for over a century with minimal changes to field structure and land use over time.
<b>Access</b>	L	The site is under private ownership and is not open to public.
<b>Aesthetic</b>	M	The site is aesthetically pleasing, containing semi-natural features and reflects the wider agricultural landscape.

<b>Recorded History</b>	<b>M</b>	Historical information is recorded within mapping records dating back to 1840. The Black Country Historic Landscape Characterisation dataset describes the area as field systems dating back to pre-1880.
<b>Value for Learning</b>	<b>M</b>	At the current time value for learning would be assessed as low due to access restriction. However, there is potential for informal education focused on agricultural farming.

## Site Description

The survey site Land to the east and west of Chester Road is 23.92ha and is situated north of Hardwick on the western boundary of Sutton Coldfield. The site lies in proximity to Sutton Park Site of Special Scientific Interest (SSSI), Barr Beacon Local Nature Reserve (LNR), Cuckoo's Nook and the Dingle LNR. The survey site lies along the railway embankment which provides a wildlife corridor within the wider landscape as such this site does provide an ecological stepping stone.

The survey area comprises agricultural farmland consisting of four semi-improved grassland fields and six large arable fields, bordered native hawthorn dominated hedgerows, with varying species diversity and structure, and a single running stream running adjacent to the northern boundary. The arable field margins are short in width in majority and comprises of common species, however, along the western boundary of site boundary adjacent to the offsite ancient woodland lies a 3m wide field margin dominated by a mosaic of tall ruderal and scrub habitat. A large area of Himalayan balsam has encroached on the western boundary adjacent to the access road.

At the current time the semi-improved neutral grassland fields have been left unmanaged for at least year as such these areas are showing evidence of succession. Due to this, these areas show moderate levels of species and structural diversity.

Historical mapping shows that the field layout has changed little from the 1840s, with the site being retained within an agricultural field system. Although with the changes in agricultural farming the site did incorporate 10 fields which were all part of arable farming, except for one which was pasture until at least the 1999. The access road currently present within the western portion of the site was created in 2015 while the residential buildings now present with the southern portion of field F1 and F8 originated around 1955.

For the purposes of this survey, the site has been divided into 10 compartments and 13 hedgerow compartments.

## Habitats

Phase 1 Name	Bramble and Scrub – dense / continuous / scattered	Phase 1 Code	A2.1 / A2.2 / A2.1Rf / A2.2Rf
<p>Along the eastern boundary of the site, which lies adjacent to an offsite railway embankment, lies an area of offsite scattered scrub which overhangs in to the survey area. Species include Pedunculate Oak <i>Quercus robur</i>, Goat Willow <i>Salix caprea</i>, Rosebay Willowherb <i>Chamerion angustifolium</i>, Silver Birch <i>Betula pendula</i> and Bramble <i>Rubus fruticosus</i> agg. On the top end of the boundary, adjacent to field compartment F4 and F2, lies a dense patch of Bramble which has encroached on to site. In addition, there is an area on the western edge of field compartment F4 and along the access road running through the western portion of the site where dense bramble scrub is situated.</p> <p>Along the western boundary field margin of field compartment F7 lies a 3m meter strip of successional vegetation, dominated by Bracken, which has encroached from the adjacent offsite Ancient broadleaved woodland. However, a small patch of self-set Silver Birch lies within the field margin.</p>			
Phase 1 Name	Semi-improved Neutral Grassland	Phase 1 Code	B22
<p>Field compartment F3 is a small rectangular area segmented from the larger arable field F1, which has been retained as grassland. At the current time it has not been managed for some time as a result the grassland has gone rank. The grassland itself has become tussocky in nature and Pedunculate Oak saplings have encroached from the adjacent hedgerow with localised patches of Creeping Thistle <i>Cirsium arvense</i>, Mugwort <i>Artemisia vulgaris</i> and Common Nettle <i>Urtica dioica</i> present sporadically. The sward itself is dominated by False Oat-grass <i>Arrhenatherum elatius</i> with Barren Brome <i>Anisantha sterilis</i>, Cleavers <i>Galium aparine</i>, Yorkshire Fog <i>Holcus lanatus</i>, Rough Meadow-grass <i>Poa trivialis</i>, Broad-leaved Dock <i>Rumex obtusifolius</i>, American Willowherb <i>Epilobium ciliatum</i>, Prickly Sow-thistle <i>Sonchus asper</i>, Great Mullein <i>Verbascum thapsus</i> and Scentless Mayweed <i>Tripleurospermum inodorum</i>.</p> <p>Along the southern boundary lies a rubble pile containing wooden planks, other infrastructure and brash. This area is heavily disturbed by tall ruderal vegetation, denoting that it had been there for some time, however, there is evidence of recent use.</p> <p>Field compartment F4 is a large area of set side semi-improved grassland with a grassed trackway (approximate width of 6m) running along the northern, eastern and western edge. The area does not appear to have been managed this year or the previous as the grassland has become rank and abundant with Common Ragwort <i>Senecio jacobaea</i> along with other ruderal species which have spread evenly throughout the sward. The sward itself comprises Red Fescue <i>Festuca rubra</i>, Rough Meadow-grass, Spear Thistle <i>Cirsium vulgare</i> and Creeping Thistle, Common Hemp-nettle <i>Galeopsis tetrahit</i>, Lesser Soft-Brome <i>Bromus hordeaceus</i>, False Oat-grass, Rosebay Willowherb, Smooth Hawk's-beard <i>Crepis capillaris</i>, Foxglove <i>Digitalis purpurea</i>, American Willowherb, Red Campion <i>Silene dioica</i>, Scentless Mayweed, Red Clover <i>Trifolium pratense</i>, Mugwort and Lesser Burdock <i>Arctium minus</i>. Due to the species diversity in the area, potentially this could have been sown as part of the stewardship scheme for Wintering Birds.</p>			
Phase 1 Name	Poor Semi-improved Grassland	Phase 1 Code	B6
<p>A small patch of disturbed species poor semi-improved grassland lies adjacent to access road entrance. At the time of the survey, large tracks were present within this grassland suggesting that the lorries using the access track have used the area for manoeuvring or parking up. The species sward comprising Cock's Foot <i>Dactylis glomerata</i>, Creeping Thistle, Spear Thistle, Timothy <i>Phleum pratense</i>, False Oat-grass, Common Ragwort and Bramble. This area is regularly mown for access.</p> <p>Field Compartment F9 is similar to the above field compartment F3, as it has been unmanaged for at least two years. As such the grassland has become tussocky in nature and competitive species are prevalent throughout, however, overall the sward has a lower species diversity and a small number of species dominating much of the grassland sward. Species mix also includes Rosebay Willowherb, Great Willowherb, Broadleaved Dock, Perennial Rye-grass, Cock's Foot, False Oat-grass, Annual Meadow-grass, Italian Rye-grass <i>Lolium multiflorum</i> and Common Ragwort.</p>			
Phase 1 Name	Bracken	Phase 1 Code	C1
<p>Large stands of dense Bracken <i>Pteridium aquilinum</i> were found on site within field compartment F7 along western boundary edge interspersed with tall ruderal habitat and scattered scrub. However, a single small stand was also found along the southern boundary of hedgerow compartment H6.</p>			
Phase 1 Name	Other tall herb and fern – Tall Ruderal	Phase 1 Code	C3.1
<p>Small patches along the field margins of field compartment F2 and F5 are dominated by Creeping Thistle, Common Nettle and Mugwort, as denoted on Map 3. These are marking encroachment from the hedgerows into the field.</p>			

Adjacent to hedgerow H2 lies a linear patch dominated by Mugwort, Common Nettle, Red Campion, Scentless Mayweed, Bugloss *Anchusa arvensis* and Common Hogweed *Heracleum sphondylium*. This is most likely an old field entrance that has not been used for some time allowing from competitive species to encroach.

Within the southern portion of Field compartment F3 lies temporary buildings, including a mobile home and outbuildings, and piles of infrastructure and storage equipment. The area dominated by storage equipment, through disturbance and lack of management, has been encroached by competitive species such as False Oat-grass, Creeping Thistle, Common Nettle, Mugwort and Great Willowherb, which now dominate the area.

Western boundary of field compartment F7 is dominated by encroachment from the adjacent broadleaved woodland. This has resulted in a large stretch 3m wide area of interspersed Bracken and tall ruderal habitat dominated by Rosebay Willowherb and Common Nettle. The successional strip is managed to ensure it doesn't encroach into the arable crop, through regular cutting back of the Bracken.

Along the western boundary adjacent to the access road and field compartment F5 lies an area dominated by Himalayan Balsalm *Impatiens glandulifera*. Adjacent to this where a pylon is situated Himalayan Balsalm is abundant however, tall ruderal vegetation including Common Nettle, broadleaved Dock, Spear Thistle, Bramble, Rosebay Willowherb, Silver Birch and White Willow *Salix alba* saplings are present along the peripheries.

Phase 1 Name	Running Water	Phase 1 Code	G2
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Along the northern boundary along Field compartment F5 and F6 and hedgerow compartment H12 lies a running stream. The stream itself is moderately flowing with around 20cm of depth, at the time of the survey. The substrate was a combination of silt and pebbles. The stream was heavily shaded throughout its length by the adjacent hedgerow and scattered offsite trees. The bankside vegetation consists of Common Nettle and Bramble and semi-mature Pedunculate Oak and Holly, however, on the western edge lies an area abundant with Himalayan Balsalm. No aquatic associated species were noted along the stream, this is highly likely due to the dominance of competitive species.

Phase 1 Name	Arable	Phase 1 Code	J1.1
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The site encompasses six arable fields, specifically F1, F2, F5, F6, F7 and F8, which have been sown with wheat crop and sprayed as part of the management regime.

All the fields have limited field margins, on average are approximately 0.5m, while some field margins are all but gone, some can be up to 1m in width. The field margins sward is dominated by Common Nettle, Common Hogweed, Bramble with Common Poppy, Creeping Thistle, Italian Rye-grass, Spear Thistle, Field Pansy *Viola arvensis*, Lesser Burdock, Sterile Broome, Mugwort, Common Couch *Elytrigia repens*, Red Campion and Pricky Sow-thistle. Occasional Anthills were noted within the field margin.

Within F2 lies an area of bare earth centrally located within the arable field. This is likely resultant of inundation as the area sits within a depression. However, ruderal species such as Mugwort, Common Poppy *Papaver rhoeas* and Wild Radish *Raphanus raphanistrum* have encroached into this area.

The western field margin of field compartment F7 is dominated by encroachment from the adjacent broadleaved woodland. This has resulted in a large stretch 3m wide of interspersed Bracken and tall ruderal habitat dominated by Rosebay Willowherb and Common Nettle.

Due to the small width of the field margins and no evidence that the margins have been is managed for local bird species, the arable field margin present on site are not considered to fit the criteria of a Habitat of Principal Importance.

Phase 1 Name	Introduced Shrub	Phase 1 Code	J1.4
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Along the southern boundary of Field compartment F1 is small section of ornamental garden shrub.

Phase 1 Name	Hedgerow Intact / Defunct / with trees	Phase 1 Code	J2.1, J2.2, J2.3
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Hedgerow compartment H1 is an intact Hawthorn *Crataegus monogyna* hedgerow (approximately 2m high by 2m wide) with a field layer comprising Bramble, Hedge Bindweed *Calystegia sepium*, Mugwort, Common Nettle, Creeping Thistle, and Great Willowherb. The hedgerow is managed by flail cut regularly. The hedgerow borders Chester Road (A452) as such it is subject to highways management. In the southern end of the hedgerow, lies a large gap of approximately 50m, this has been infilled with dense bramble with Hedge bindweed and Mugwort.

Hedgerow compartment H2 is Intact hawthorn dominated hedgerow with occasional Elder *Sambucus nigra* and Sycamore *Acer pseudoplatanus*. The hedgerow itself is approximately 2m high by 1.5m wide and managed through regularly flail cutting. The field layer is a mixture of Bugloss *Anchusa arvensis*, False Oat-grass, White Bryony *Bryonia dioica*, Rosebay Willowherb, Fat-hen *Chenopodium album*, Common Hogweed, Herb-Robert *Geranium robertianum*, Broadleaved Dock and Rough Meadow-grass.

Hedgerow compartment H3 is an intact Hawthorn dominant hedgerow with individual semi-mature Sycamore, Barberry *Berberis vulgaris* and Elder. The hedgerow itself varies in height from 2m to 4m with a width of around 1m and is managed through side flailing. The field layer comprises Great Willowherb, Bramble, Common Nettle, Shepherd's Purse *Capsella bursa-pastoris*, Cow Parsley, Barren Brome, Garlic Mustard *Alliaria petiolata* and Black Bent *Agrostis gigantea* with numerous areas of localised bare earth.

Hedgerow compartment H4 lies along a portion of the eastern and northern boundary with varying levels of structure. The section that lies along the eastern boundary has become defunct with large gaps forming while the northern edge is intact with semi-mature Pedunculate Oak, Goat Willow *Salix caprea* and mature Ash *Fraxinus excelsior*. Both edges have been regularly flail cut. While the field layer is comprised of False Oat-grass, White Bryony, Common Hogweed, Dog-rose *Rosa canina* and Common Nettle.

Hedgerow compartments H5, H6, H7, H8, H10 and H13 are intact Hawthorn dominant hedgerows (approximately 2m high by 1m wide) with Pedunculate Oak, English Elm *Ulmus procera*, Holly *Ilex aquifolium* and Goat Willow, regularly managed by flail cut. The field layer comprises Creeping Thistle, Dandelion *Taraxacum officinale* agg., Common Nettle, Bramble, Cow Parsley, White Deadnettle and White Bryony with small areas of bare earth. The hedgerows have dense structure.

Hedgerow compartment H9 lies along the southern survey boundary. This length includes a short length of post and wire fence and also two large Pedunculate Oaks. The hedgerow is defunct, with standards. Species include Hawthorn, Holly and Pedunculate Oak. Field layer includes Mugwort, White Bryony, Cleavers and Foxglove.

Hedgerow compartment H11 is an intact hawthorn hedgerow, which is currently not subject to management practices. The species include semi-mature Goat Willow, Pedunculate Oak and Silver Birch. Due to the encroachment of Himalayan Balsalm adjacent which was prevalent throughout the area, no ground flora and shrub layer was noted. However, from a distance the hedgerow was well established and likely an historic hedgerow which has lead to much structural variation. This was evident through the presence of a wide range of ages and size with the semi-mature trees evident.

Hedgerow compartment H12 is an intact hedgerow with semi-mature and mature trees which includes Pedunculate Oak, Silver Birch and Hawthorn. The field layer comprises Bramble, Cock's Foot, Common Nettle, Broadleaved Dock and Male Fern *Dryopteris filix-mas*. Regularly managed by side flailing. The hedgerow lies along the southern boundary of a running stream noted within its relevant phase 1 habitat description. The hedgerow has good overall structure with evidence of encroachment of the field layer into the arable field in the west section.

Phase 1 Name	Built-up areas – Buildings	Phase 1 Code	J2.5
Within Field compartment F3 lies a number of mobile caravan and outbuildings all in use. In addition, a surface path lies onsite bordering field compartment F3 and lies between field compartment F5, F6, F7 and F8, used for vehicular access.			
<b>Notes</b>			

#### Habitats of Note [2]

Phase 1 Name	Phase 1 Code	EHD	NERC	LBAP	Rarity	Year
Hedgerows	J2.1, J2.2, J2.3		Y			2019
<b>Notes</b>						

#### Species of Note [2]

##### Flora

Species	Statutory	NERC	LBAP	RDL	Rarity	Axiophyte	Year
<i>Anchusa arvensis</i> - Bugloss					<b>U</b>		2019
<i>Berberis vulgaris</i> - Barberry					<b>VR</b>		2019
<i>Filago vulgaris</i> - Common Cudweed				<b>NT</b>	<b>R</b>	<b>Y</b>	2019
<i>Lolium multiflorum</i> - Italian Rye-grass					<b>U</b>		2019
<i>Melilotus altissimus</i> - Tall Melilot					<b>U</b>		2019
<i>Picris echioides</i> - Bristly Oxtongue					<b>U</b>		2019
<i>Trifolium arvense</i> - Hare's-foot Clover					<b>F</b>	<b>Y</b>	2019

##### Notes

##### Fauna

Species	Statutory	NERC	LBAP	RDL	Concern	Rarity	Year
<i>Tyria jacobaeae</i> - Cinnabar		<b>Y</b>	<b>Y</b>			<b>C</b>	2019
<i>Columba oenas</i> - Stock Dove					<b>BAmb</b>	<b>F</b>	2019
<i>Delichon urbicum</i> - House Martin					<b>BAmb</b>	<b>F</b>	2019
<i>Emberiza citrinella</i> - Yellowhammer		<b>Y</b>			<b>BRed</b>	<b>C</b>	2019
<i>Linaria cannabina</i> - Linnet		<b>Y</b>			<b>BRed</b>	<b>C</b>	1987
<i>Passer domesticus</i> - House Sparrow		<b>Y</b>			<b>BRed</b>	<b>VC</b>	2019
<i>Prunella modularis</i> - Dunnock					<b>BAmb</b>	<b>VC</b>	1987
<i>Sturnus vulgaris</i> - Starling					<b>BRed</b>	<b>VC</b>	1987

#### The following Species of Note have been recorded within 500m of the assessment site boundary.

<i>Acanthis cabaret</i> - Lesser Redpoll		<b>Y</b>			<b>BRed</b>	<b>F</b>	2014
<i>Acanthis flammea</i> - Common (Mealy) Redpoll					<b>BAmb</b>	<b>U</b>	2014
<i>Acronicta psi</i> - Grey Dagger		<b>Y</b>				<b>U</b>	2001
<i>Alauda arvensis</i> - Skylark		<b>Y</b>	<b>Y</b>		<b>BRed</b>	<b>C</b>	2014
<i>Alcedo atthis</i> - Kingfisher	<b>WCA S1i</b>				<b>BAmb</b>	<b>F</b>	2014
<i>Allophyes oxyacanthae</i> - Green-brindled Crescent		<b>Y</b>				<b>U</b>	1998
<i>Aporophyla lutulenta</i> - Deep-brown Dart		<b>Y</b>				<b>R</b>	1998
<i>Anthus pratensis</i> - Meadow Pipit					<b>BAmb</b>	<b>C</b>	2013
<i>Apamea remissa</i> - Dusky Brocade		<b>Y</b>				<b>F</b>	2001
<i>Apus apus</i> - Swift					<b>BAmb</b>	<b>C</b>	1987
<i>Caradrina Morpheus</i> - Mottled Rustic		<b>Y</b>				<b>F</b>	1999
<i>Ceramica pisi</i> - Broom Moth		<b>Y</b>				<b>U</b>	2001
<i>Chiasmia clathrate</i> - Latticed Heath		<b>Y</b>				<b>C</b>	2001
<i>Chroicocephalus ridibundus</i> - Black-headed Gull					<b>BAmb</b>	<b>C</b>	2013
<i>Columba oenas</i> - Stock Dove					<b>BAmb</b>	<b>F</b>	2013
<i>Cuculus canorus</i> - Cuckoo		<b>Y</b>			<b>BRed</b>	<b>F</b>	2013
<i>Delichon urbicum</i> - House Martin					<b>BAmb</b>	<b>F</b>	1989
<i>Dendrocopos minor</i> - Lesser Spotted Woodpecker		<b>Y</b>			<b>BRed</b>	<b>F</b>	1989
<i>Emberiza schoeniclus</i> - Reed Bunting		<b>Y</b>			<b>BAmb</b>	<b>C</b>	2013
<i>Falco tinnunculus</i> - Kestrel			<b>Y</b>		<b>BAmb</b>	<b>C</b>	2013
<i>Hepialus humuli</i> - Ghost Moth		<b>Y</b>					2001

<i>Hoplodrina blanda</i> - Rustic		Y					1999
<i>Lasiommata megera</i> - Wall		Y	Y	RLGB .Lr(NT )			1989
<i>Leucania comma</i> - Shoulder-striped Wainscot		Y					2001
<i>Lissotriton vulgaris</i> - Smooth Newt	WCA S5/9.5a		Y			F	2016
<i>Motacilla cinerea</i> - Grey Wagtail					BRed	C	2013
<i>Passer montanus</i> - Tree Sparrow		Y	Y		BRed	F	1989
<i>Phylloscopus trochilus</i> - Willow Warbler					BAmb	C	1989
<i>Pyrrhula pyrrhula</i> - Bullfinch		Y			BAmb	C	2013
<i>Rana temporaria</i> - Common Frog	WCA S5/9.5a		Y			F	1987
<i>Saxicola rubetra</i> - Whinchat					BRed	U	1989
<i>Spilosoma lutea</i> - Buff Ermine		Y					2001
<i>Turdus iliacus</i> - Redwing	WCA S1i				BRed	C	2014
<i>Turdus philomelos</i> - Song Thrush		Y	Y		BRed	C	2014
<i>Turdus viscivorus</i> - Mistle Thrush					BRed	C	2013
<i>Vanellus vanellus</i> - Lapwing		Y			BRed	F	2013
<b>Notes</b>							

#### Site/Habitat Suitability for Other Species of Note (not recorded during the survey)

<b>Description/Notes</b>	The habitats on site provides suitable foraging habitat for European Hedgehog <i>Erinaceus europaeus</i> and Brown Hare <i>Lepus europaeus</i> The onsite grassland and hedgerows offer potential foraging and commuting habitat for local bat populations.
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#### Invasive Species [3]

Species	Location	Abundance (DAFOR)	Year Recorded
<i>Impatiens glandulifera</i> – Himalayan Balsam	SP071995	D	2019
<b>Notes</b>			

#### Geology

<b>Solid/Drift Formation</b>	Chester Formation - Sandstone And Conglomerate, Interbedded.
<b>Description</b>	Sedimentary Bedrock formed approximately 247 to 250 million years ago in the Triassic Period. Local environment previously dominated by rivers. Superficial river terrace deposits
<b>Features of Value</b>	
1	Not Known

#### Soils

No soil survey was carried out, however, as agricultural soils, they are likely to be improved. However, UKSO – Soils Map Viewer describes to soil type as freely draining slightly acid sandy soils.

#### Public Access & Site Usage

<b>Land Use</b>	Agricultural Farmland
<b>Access Level</b>	Restricted
<b>Access Type(s)</b>	By Permission only.

#### Comparison with Previous Survey(s) Results

No previous recorded survey.

#### Summary of Assessment

Land to the east and west of Chester Road, Hardwick holds a range of typical agricultural farmland habitat; including arable, semi-improved grassland, running stream with associated Hawthorn dominated hedgerows with moderate species diversity and structure. In addition, the site lies adjacent to a number to designated protected sites, offering established habitats along an ecological corridor. Overall the arable farmland fields, rank semi-improved grassland and the majority of Hawthorn dominated hedgerows holds some ecological importance for protected species when assessed against the Birmingham & Black Country Local Sites Criteria, however, limited species and structure composition has meant it fails to meet the criteria of Local Wildlife Site.

The main ecological features of the site lie along the western and northern site boundaries, which acts as a main ecological corridor for the sites. These include H11 and H12 which provide a good overall structure, due to the variation in age ranges of tree species and the associated running stream, and the western boundary's 3m field margin, which acts as a semi-natural buffer for the adjacent ancient woodland from the intensive agricultural farming practices within the site, while the flora species present offer additional foraging habitat for farmland and garden birds noted on site and in close proximity. In addition, field compartment F4 provides good species and structural diversity within semi-improved neutral grassland. Therefore, these areas mentioned above when assessed against the Local Sites selection criteria, meet the criteria of a SLINC.

#### Recommendations (including further survey & site management/enhancement)

1	The intact hedgerows should be placed under active management to maintain and enhance the hedgerow structure and density. This should involve annual trimming outside nesting bird season. It should also include the infilling of any sparse areas, with native species, to enhance species diversity.
2	Section of grassland now within active grazing rotation should be put under active meadow management to enhance species diversity. The management programme would involve: <ul style="list-style-type: none"> <li>• Successional growth (scrub and tall ruderal habitat) should be reduced to a specified level:</li> <li>• The grassland would be cut bi-annually, in early spring and late autumn; and</li> </ul> Arisings would be removed rather than left.
3	Semi-mature and mature broadleaved trees present should be placed under active management to ensure that the trees remain healthy and retained within the site.
4	Further fauna surveys including wintering and breeding bird surveys and bat activity surveys would be beneficial to ascertain importance of the site for local wildlife.
5	Undertake control of the invasive Himalayan Balsalm present on site.

#### Data Sources

	Source	Date
Species and Habitat Data Source(s)	The Wildlife Trust for Birmingham and the Black Country, Ecorecord data search, 2019.	08/082019
Geological Data Source(s)	British Geological Society 1:50,000 bedrock & superficial deposits GIS web map services from BGS website: <a href="https://www.bgs.ac.uk/data/services/mash-ups/desktopgis.html">https://www.bgs.ac.uk/data/services/mash-ups/desktopgis.html</a>	18/02/2020
Historic Data Sources(s)	Ordnance Survey Country Series Mapping 1884 – 1992. Quigley, P. 20210 Black Country Historic Landscape Characteration, electronic dataset, Wolverhampton City Council. Google earth pro historical Imagery January 2020	18/02/2020
Assessment Author and Organisation	The Wildlife Trust for Birmingham and the Black Country	18/02/2020

#### [1] Definitions of Local Sites in B&BC (SINCs & SLINCs) and Potential Sites of Importance (PSIs)

In Birmingham and the Black Country Local Wildlife and Geological Sites encompass what are termed Sites of Importance for Nature Conservation (SINCs) and Sites of Local Importance for Nature Conservation (SLINCs). This two-tier system aims to ensure that all sites of substantive local nature conservation and geological value are selected by assessing sites in both a sub-regional (i.e. Birmingham and the Black Country) and metropolitan borough or city context (either Birmingham, Dudley, Sandwell, Walsall or Wolverhampton). The two designations are defined as:

- Site of Importance for Nature Conservation (SINC) - Sites of substantive nature conservation value in the context of Birmingham and the Black Country.
- Site of Local Importance for Nature Conservation (SLINC) - Sites of substantive nature conservation value in the context of a metropolitan borough.

Potential Sites of Importance (PSIs) have not yet been assessed against the Local Wildlife and Geological Sites selection criteria but may potentially support species of note, areas of important semi-natural habitat or valuable geological features. PSIs are identified primarily through the use of aerial photography, but also through reference to old maps, existing records and local knowledge. Commonly these sites will not have been subject to the survey work necessary to undertake a Local Wildlife and Geological Sites assessment.

#### [2] Habitats/Species of Note Tables – Attribute Definitions

**STATUTORY (PROTECTED)** - *EHD* = EU Habitats Directive (plus where relevant the Annex II or IV) | *WCA S1* = Wildlife & Countryside Act Schedule 1 (birds protected at all times) | *WCA S5* = Wildlife & Countryside Act Schedule 5 (animals with various levels of protection) | *WCA S8* = Wildlife & Countryside Act Schedule 8 (higher and lower plants with various levels of protection) | *PBA* = Protection of Badgers Act 1992 | *HabRegs2* = The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 2) | *HabRegs4* = The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 4).

**NERC** – *Y* = Habitats/Species included on the current list of Principal Importance in England under Section 41 of the NERC Act (2006 or amended).

**LBAP** – *Y* = Habitats/Species included on the latest B&BC LBAP list of Priority Habitats/Species.

**RDL** - Species included on Global IUCN & British Red Data Lists: *BRed* = Bird Population Status – red | *BAMB* = Bird Population Status - amber | *RLGB.EN* = IUCN (2001) – Endangered | *RLGB.VU* = IUCN (2001) – Vulnerable | *RDBGB.R* = IUCN (pre 1994) – Rare | *RLGB.Lr(NT)* = IUCN (2001) - Lower risk - near threatened | *RDBGB.IK* = RDB - Insufficient known | *RLGB.DD* = IUCN (2001) - Data Deficient

**RARITY (HABITATS) - BIRMINGHAM & BLACK COUNTRY** - *Y* = Habitats included on the B&BC list of locally rare habitats (administered by EcoRecord).

**RARITY (FLORA SPECIES) - BIRMINGHAM & BLACK COUNTRY** - (based on data held and managed by EcoRecord): *VR* = Very Rare - a species present in less than 1.0% of 1Km squares, tetrads, or 5Km squares in B&BC | *R* = Rare - a species present in 1.0% - 4.3% of 1Km squares, tetrads, or 5Km squares in B&BC | *U* = Uncommon - a species present in 4.3% - 12% of 1Km squares, tetrads or 5Km squares in B&BC | *NR* = no recent B&BC records.

**AXIOPHYTE - BBCF\_Ax** = included on the Birmingham & the Black Country list of axiophytes (administered by EcoRecord).

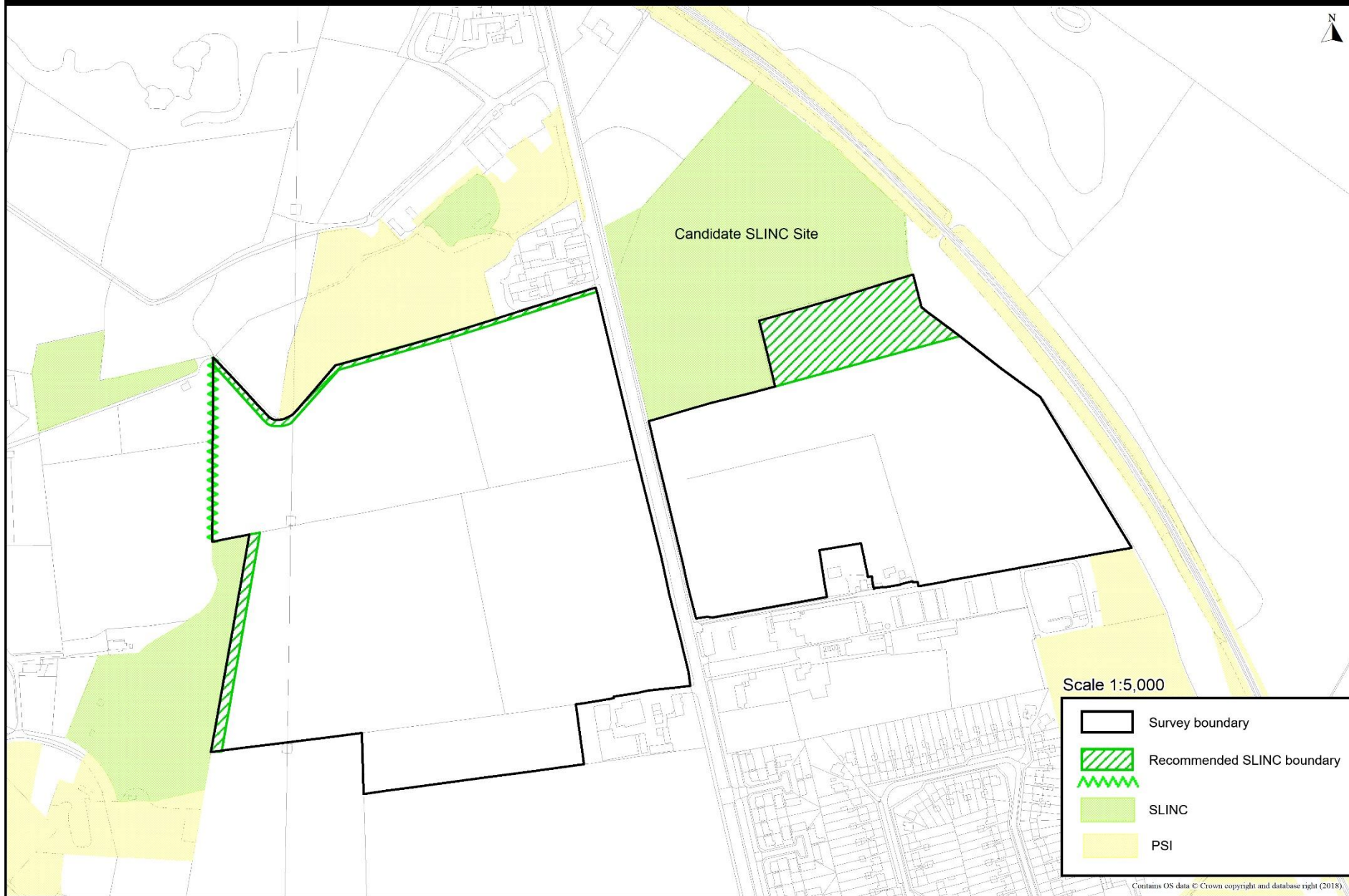
**YEAR** - The most recent year the species has been recorded.

**[3] Species listed on Schedule 9 part 1 (animals) and part 2 (plants) of the Wildlife and Countryside Act 1981 as amended** - this lists animals which may not be released or allowed to escape into the wild and plants which may not be planted or otherwise caused to grow in the wild.



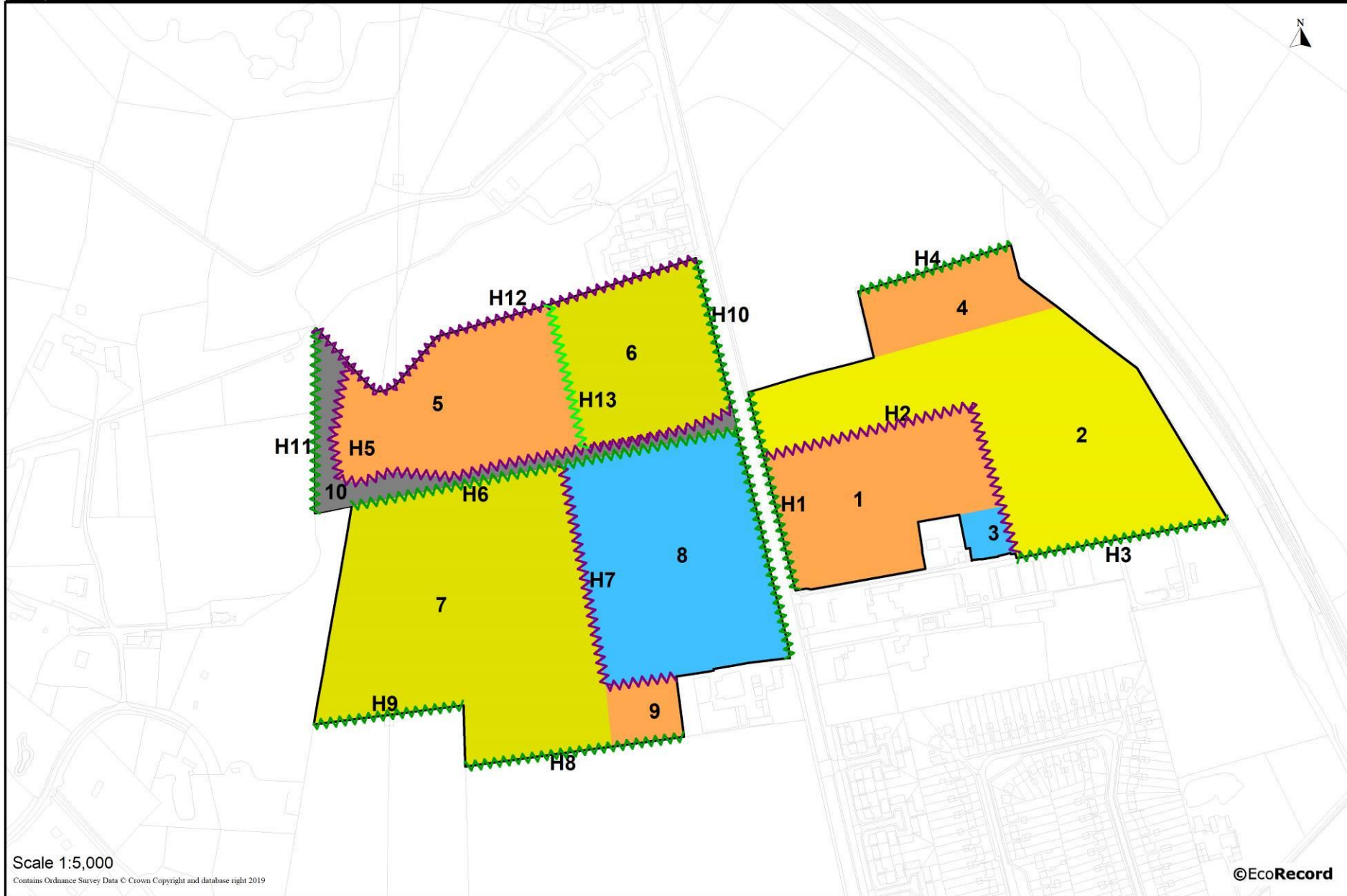


Map 1: Land to the East and West of Chester Road Current & Recommended Designation





# Map 2: Land to the East and West of Chester Road Compartment Map - 26.02.2020







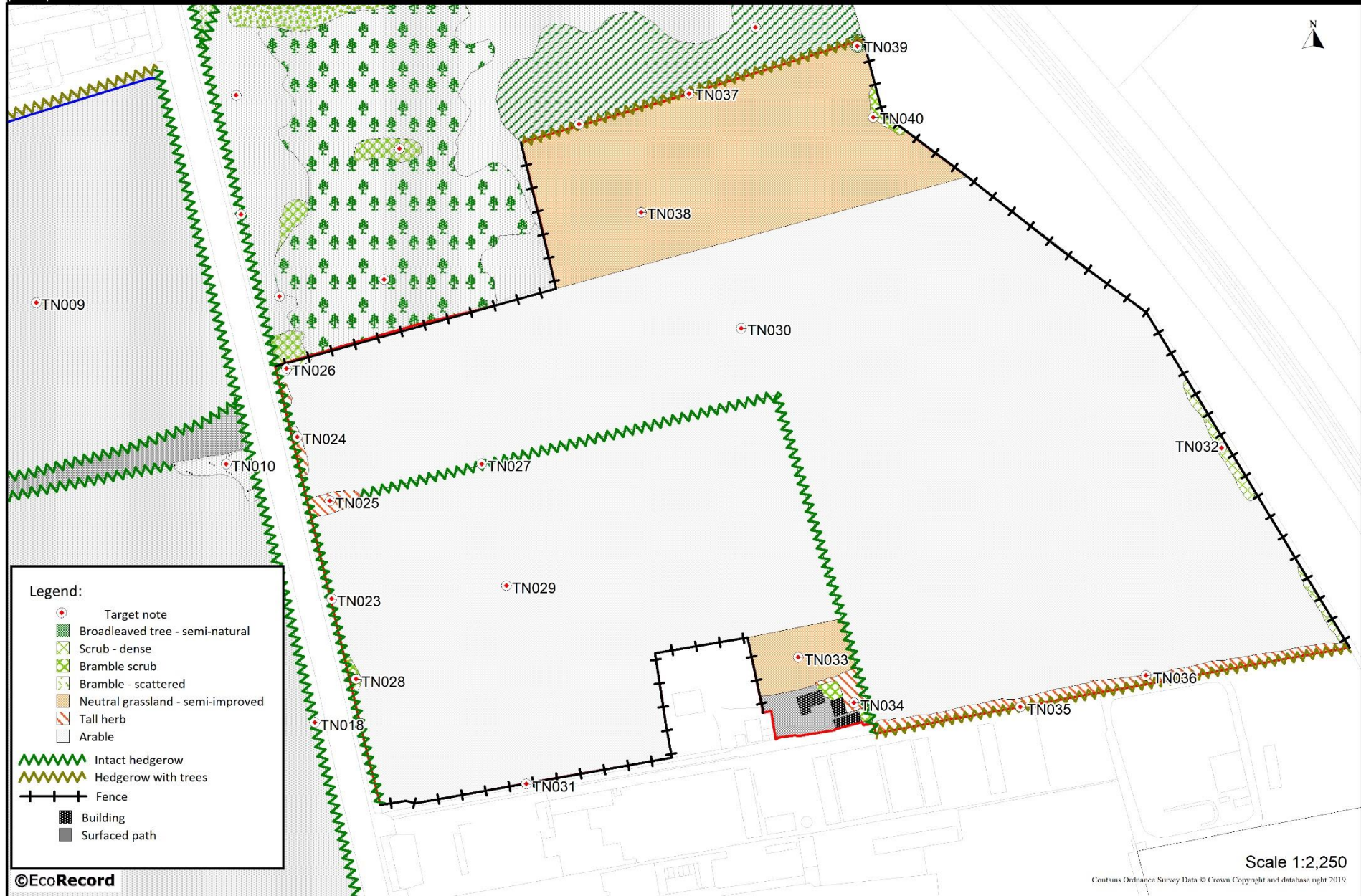
### Map 3: Land to the East and West of Chester Road Phase 1 Habitat Map Overview - 26.02.2020







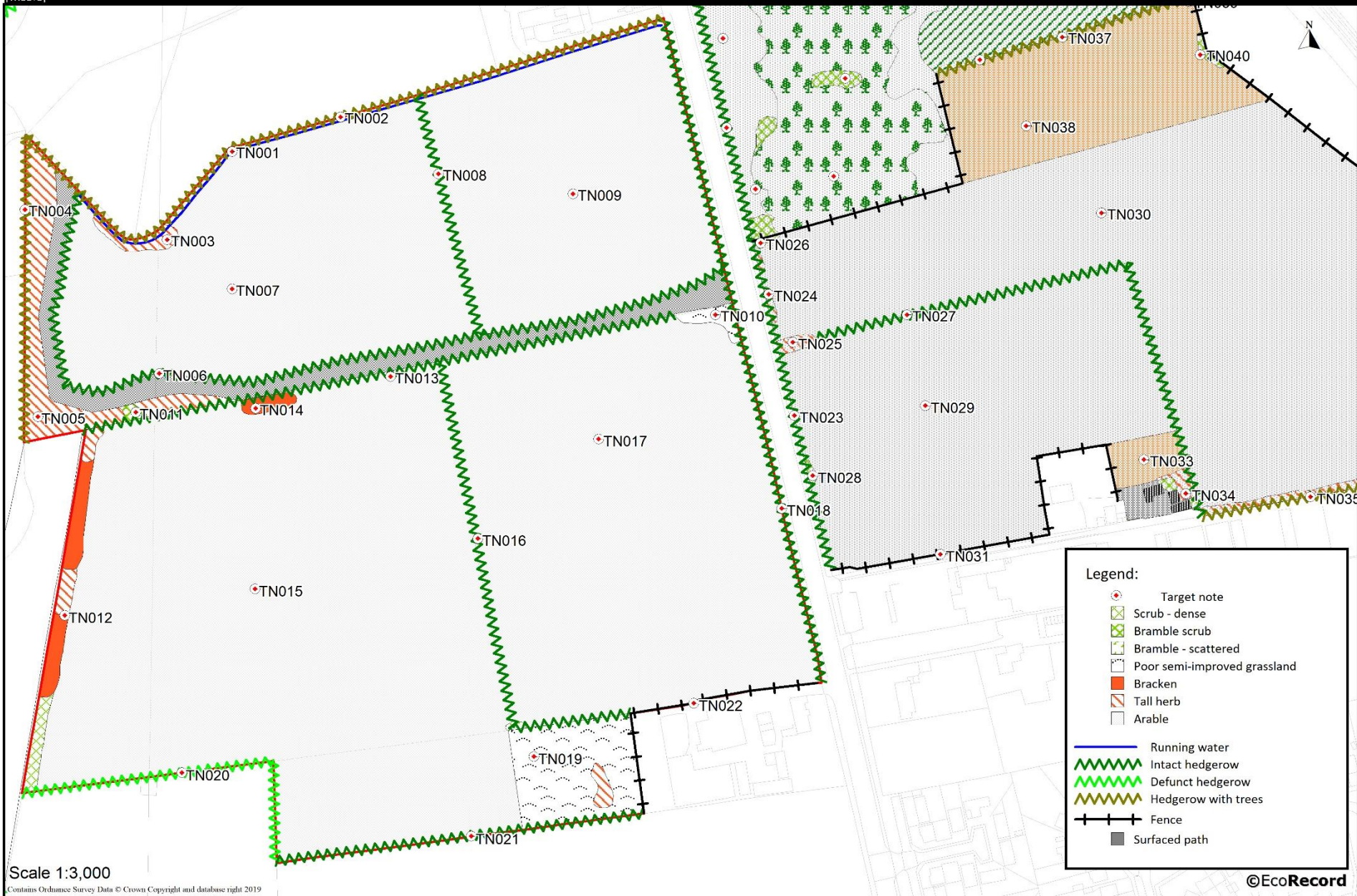
# Map 4: Land to the East and West of Chester Road Compartments 1,2,3 & 4 - 26.02.2020







# Map 5: Land to the East and West of Chester Road Compartments 5,6,7,8 & 9 - 26.02.2020



## Target Notes

Target Note Ref.	Target Note Description
TN001	Running stream present along the northern boundary. Bankside vegetation consists of Common Nettle, Bramble, Pedunculate Oak and Holly.
TN002	Intact hedgerow bordering running stream comprised of Pedunculate Oak, Silver Birch and Hawthorn.
TN003	Area of Common Nettle, Creeping Thistle and Bramble encroaching from adjacent hedgerow.
TN004	Intact hedgerow with trees.
TN005	Area dominated by Himalayan Balsam.
TN006	Intact Hawthorn dominated hedgerow with Goat Willow.
TN007	Arable field bordered by Hawthorn hedgerow and running stream. Narrow field margin is approximately 0.5m in width.
TN008	Hawthorn hedgerow with frequent White Bryony and Bramble.
TN009	Arable field with narrow margins consisting of Italian Rye-grass, Field Pansy, Lesser Burdock, Sterile Brome, Common Couch and Red Campion.
TN010	Area of disturbed species poor grassland comprising Cock's-foot, Creeping Thistle, Timothy and Common Ragwort.
TN011	A mosaic patch of successional vegetation caused by a lack of management. Species include Bramble, Himalayan Balsam, Spear Thistle, Rosebay Willowherb, Pedunculate Oak and Holly.
TN012	Successional encroachment from adjacent ancient woodland. Species mix is dominated by Bracken with patches of Silver Birch, Rosebay Willowherb and Common Nettle.
TN013	Intact Hawthorn hedgerow with occasional Alder, Elder, Hazel and Pedunculate Oak.
TN014	Small stand of Bracken.
TN015	Large arable field with narrow field margins except on the western boundary, where due to encroachment reaches 3m.
TN016	Hawthorn hedge abundant with Bramble.
TN017	Arable field with narrow field margins. Species include Mugwort, Common Poppy and Wild Radish.
TN018	Intact Hawthorn dominated hedgerow with semi-mature Pedunculate Oak, Sycamore and Ash.
TN019	Area of unmanaged grassland left to go rank. Species sward includes Rosebay Willowherb, Broadleaved Dock, Perennial Rye-grass, Italian Rye-grass and Great Willowherb.
TN020	Defunct hedgerow comprised of Hawthorn, Holly and Pedunculate Oak.
TN021	Intact Hawthorn hedge with Holly.
TN022	Post and rail fencing.
TN023	Intact Hawthorn hedgerow with Bramble, Hedge Bindweed, Mugwort and Great Willowherb.
TN024	Area of Common Nettle, Creeping Thistle and Mugwort encroaching from adjacent hedgerow.
TN025	Linear area of Mugwort, Common Nettle, Red Campion, Scentless Mayweed and Bugloss. This was likely a former field entrance.
TN026	Scattered Bramble.
TN027	Intact Hawthorn dominated hedgerow with occasional Elder and Sycamore.
TN028	Large gap within hedgerow infilled by dense Bramble, Hedge Bindweed and Mugwort.
TN029	Moderately sized arable field with narrow field margins, except on the eastern boundary which reaches up to 1m in width.
TN030	Large arable field with narrow margins sown with Wheat crop.
TN031	Post and wire fencing.
TN032	Overhanging Pedunculate Oak, Goat Willow, Silver Birch and Rosebay Willowherb scrub.
TN033	Small area of rank grassland comprising False Oat-grass, Rough Meadow-grass, Prickly Sow Thistle, American Willowherb and self-set Pedunculate Oak scattered throughout.
TN034	Disturbed area used for storage and maintenance, dominated by tall ruderal habitat. Species include False Oat-grass, Great Willowherb and Creeping Thistle.
TN035	Intact Hawthorn hedgerow with Sycamore and Elder. An old dry ditch is present.



<b>TN036</b>	Linear strip of Creeping Thistle, Common Nettle and Mugwort.
<b>TN037</b>	Hawthorn hedge with semi-mature Pedunculate Oak, Goat Willow and mature Ash.
<b>TN038</b>	Set-aside semi-improved neutral grassland comprising Common Ragwort, Red Fescue, Rough Meadow-grass, Spear Thistle, Common Hemp-nettle and Lesser Soft Brome.
<b>TN039</b>	Mature Ash.
<b>TN040</b>	Dense Bramble.

## Site Photographs



Photo 1: Looking east over a large gap present in Hedgerow H1, infilled by Common Nettle, Bramble, Creeping Thistle and Hedge Bindweed, to arable field F2.



Photo2. Arable field compartment F2.



Photo3. Semi-improved grassland field F3





Photo4. Field compartment F1 looking towards the eastern site boundary



Photo5. Access Road bordered by Hedgerows H5 and H6





Photo6. 3m wide ruderal and Bracken strip along the eastern boundary of field compartment F7

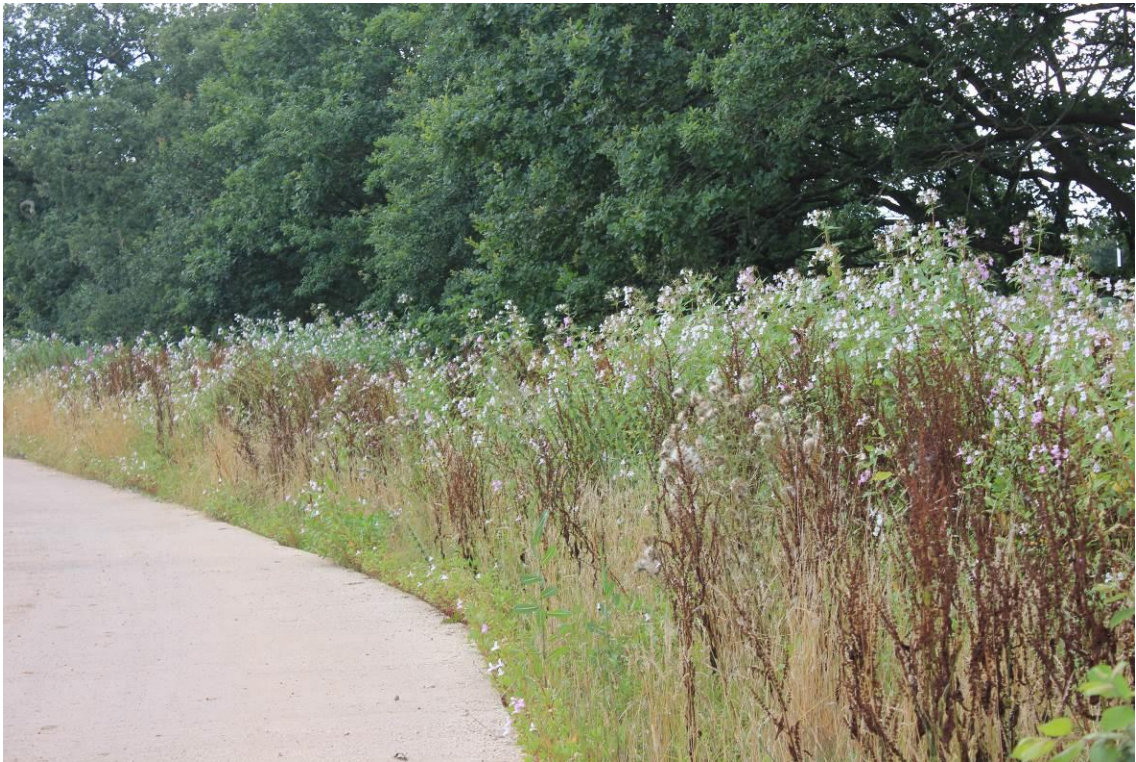


Photo 7. Himalayan Balsam expanse adjacent to Hedgerow H11





Photo 8. Western section of stream adjacent to hedgerow H12, with abundant Himalayan Balsam.

## Species Records

### FLORA

Field 1 (Hardwick Field)

Scientific Name	Common Name
<i>Agrostis gigantea</i>	Black Bent
<i>Anchusa arvensis</i>	Bugloss
<i>Aphanes arvensis</i>	Parsley-piert
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Artemisia vulgaris</i>	Mugwort
<i>Bromus hordeaceus</i>	Lesser Soft-Brome
<i>Chenopodium album</i>	Fat-hen
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Dactylis glomerata</i>	Cock's-foot
<i>Elytrigia repens</i>	Common Couch
<i>Epilobium ciliatum</i>	American Willowherb
<i>Fallopia convolvulus</i>	Black-bindweed
<i>Galium aparine</i>	Cleavers
<i>Geranium molle</i>	Dove's-foot Crane's-bill
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Myosotis arvensis</i>	Field Forget-me-not
<i>Papaver rhoeas</i>	Common Poppy
<i>Plantago major</i>	Greater Plantain
<i>Raphanus raphanistrum</i>	Wild Radish
<i>Rubus fruticosus agg.</i>	Bramble
<i>Silene dioica</i>	Red Campion

<i>Silene latifolia</i>	White Champion
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Urtica dioica</i>	Common Nettle
<i>Viola arvensis</i>	Field Pansy

Field 2 (Far Hardwick Field)

Scientific Name	Common Name
<i>Agrostis gigantea</i>	Black Bent
<i>Alliaria petiolata</i>	Garlic Mustard
<i>Anchusa arvensis</i>	Bugloss
<i>Anisantha sterilis</i>	Barren Brome
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Aphanes arvensis</i>	Parsley-piert
<i>Arctium minus</i>	Lesser Burdock
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Artemisia vulgaris</i>	Mugwort
<i>Betula pendula</i>	Silver Birch
<i>Bromus hordeaceus</i>	Lesser Soft-Brome
<i>Bryonia dioica</i>	White Bryony
<i>Capsella bursa-pastoris</i>	Shepherd's-purse
<i>Chamerion angustifolium</i>	Rosebay Willowherb
<i>Chenopodium album</i>	Fat-hen
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Crepis capillaris</i>	Smooth Hawk's-beard
<i>Dactylis glomerata</i>	Cock's-foot
<i>Digitalis purpurea</i>	Foxglove
<i>Elytrigia repens</i>	Common Couch
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Galeopsis tetrahit</i>	Common Hemp-nettle
<i>Galium aparine</i>	Cleavers
<i>Geranium molle</i>	Dove's-foot Crane's-bill
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Holcus mollis</i>	Creeping Soft-grass
<i>Juncus conglomeratus</i>	Compact Rush
<i>Lolium multiflorum</i>	Italian Rye-grass
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Papaver rhoeas</i>	Common Poppy
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Poa annua</i>	Annual Meadow-grass
<i>Quercus robur</i>	Pedunculate Oak
<i>Raphanus raphanistrum</i>	Wild Radish
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Scorzoneroideis autumnalis</i>	Autumn Hawkbit
<i>Senecio jacobaea</i>	Common Ragwort

<i>Senecio vulgaris</i>	Groundsel
<i>Silene latifolia</i>	White Champion
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Taraxacum officinale agg.</i>	Dandelion
<i>Tragopogon pratensis</i>	Goat's-beard
<i>Trifolium repens</i>	White Clover
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Urtica dioica</i>	Common Nettle
<i>Veronica arvensis</i>	Wall Speedwell
<i>Vicia cracca</i>	Tufted Vetch
<i>Vicia hirsuta</i>	Hairy Tare
<i>Viola arvensis</i>	Field Pansy

Field 3 (Hardwick Field SE Corner)

Scientific Name	Common Name
<i>Agrostis gigantea</i>	Black Bent
<i>Anisantha sterilis</i>	Barren Brome
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Artemisia vulgaris</i>	Mugwort
<i>Avena sativa</i>	Oat
<i>Chamerion angustifolium</i>	Rosebay Willowherb
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Conyza</i>	flowering plant
<i>Elytrigia repens</i>	Common Couch
<i>Epilobium ciliatum</i>	American Willowherb
<i>Galium aparine</i>	Cleavers
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Papaver rhoeas</i>	Common Poppy
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Quercus robur</i>	Pedunculate Oak
<i>Rosa sp.</i>	Rose
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Taraxacum officinale agg.</i>	Dandelion
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Urtica dioica</i>	Common Nettle
<i>Verbascum thapsus</i>	Great Mullein

Field 4 (Far Hardwick Field North)

Scientific Name	Common Name
<i>Agrostis gigantea</i>	Black Bent
<i>Anisantha sterilis</i>	Barren Brome
<i>Arctium minus</i>	Lesser Burdock
<i>Arrhenatherum elatius</i>	False Oat-grass

<i>Artemisia vulgaris</i>	Mugwort
<i>Avena sativa</i>	Oat
<i>Betula pendula</i>	Silver Birch
<i>Bromus hordeaceus</i>	Lesser Soft-Brome
<i>Centaurea nigra</i>	Common Knapweed
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Conyza</i>	flowering plant
<i>Crepis capillaris</i>	Smooth Hawk's-beard
<i>Dactylis glomerata</i>	Cock's-foot
<i>Digitalis purpurea</i>	Foxglove
<i>Elytrigia repens</i>	Common Couch
<i>Epilobium ciliatum</i>	American Willowherb
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Fallopia convolvulus</i>	Black-bindweed
<i>Festuca rubra</i>	Red Fescue
<i>Fraxinus excelsior</i>	Ash
<i>Galeopsis tetrahit</i>	Common Hemp-nettle
<i>Geranium molle</i>	Dove's-foot Crane's-bill
<i>Geum urbanum</i>	Wood Avens
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Holcus mollis</i>	Creeping Soft-grass
<i>Hypochaeris radicata</i>	Cat's-ear
<i>Juncus effusus</i>	Soft-rush
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Papaver rhoeas</i>	Common Poppy
<i>Picris echioides</i>	Bristly Oxtongue
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Quercus robur</i>	Pedunculate Oak
<i>Rosa sp.</i>	Rose
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Senecio jacobaea</i>	Common Ragwort
<i>Silene dioica</i>	Red Campion
<i>Silene latifolia</i>	White Campion
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Stellaria graminea</i>	Lesser Stitchwort
<i>Trifolium pratense</i>	Red Clover
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Triticum</i>	Wheat
<i>Urtica dioica</i>	Common Nettle

Field 5 (Loaches Bank)

Scientific Name	Common Name
<i>Agrostis gigantea</i>	Black Bent
<i>Anchusa arvensis</i>	Bugloss

<i>Anisantha sterilis</i>	Barren Brome
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Bromus hordeaceus</i>	Lesser Soft-Brome
<i>Capsella bursa-pastoris</i>	Shepherd's-purse
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Chenopodium album</i>	Fat-hen
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Digitalis purpurea</i>	Foxglove
<i>Elytrigia repens</i>	Common Couch
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Euphorbia helioscopia</i>	Sun Spurge
<i>Fallopia convolvulus</i>	Black-bindweed
<i>Galium aparine</i>	Cleavers
<i>Geranium molle</i>	Dove's-foot Crane's-bill
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Impatiens glandulifera</i>	Indian Balsam
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Matricaria discoidea</i>	Pineappleweed
<i>Papaver rhoeas</i>	Common Poppy
<i>Persicaria maculosa</i>	Redshank
<i>Plantago major</i>	Greater Plantain
<i>Poa annua</i>	Annual Meadow-grass
<i>Polygonum aviculare</i>	Knotgrass
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Silene latifolia</i>	White Champion
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Taraxacum officinale agg.</i>	Dandelion
<i>Trifolium pratense</i>	Red Clover
<i>Trifolium repens</i>	White Clover
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Urtica dioica</i>	Common Nettle
<i>Vicia sativa</i>	Common Vetch
<i>Viola arvensis</i>	Field Pansy

Field 6 (Road Piece)

Scientific Name	Common Name
<i>Agrostis gigantea</i>	Black Bent
<i>Anisantha sterilis</i>	Barren Brome
<i>Arctium minus</i>	Lesser Burdock
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Bryonia dioica</i>	White Bryony
<i>Capsella bursa-pastoris</i>	Shepherd's-purse
<i>Chenopodium album</i>	Fat-hen
<i>Cirsium arvense</i>	Creeping Thistle
<i>Dactylis glomerata</i>	Cock's-foot
<i>Elytrigia repens</i>	Common Couch

<i>Euphorbia helioscopia</i>	Sun Spurge
<i>Fallopia convolvulus</i>	Black-bindweed
<i>Galium aparine</i>	Cleavers
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Matricaria discoidea</i>	Pineappleweed
<i>Poa annua</i>	Annual Meadow-grass
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Silene dioica</i>	Red Campion
<i>Silene latifolia</i>	White Campion
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Solanum tuberosum</i>	Potato
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Stellaria media</i>	Common Chickweed
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Urtica dioica</i>	Common Nettle
<i>Veronica arvensis</i>	Wall Speedwell
<i>Viola arvensis</i>	Field Pansy

Field 7 (Far and Middle  
Hardwick)

Scientific Name	Common Name
<i>Agrostis gigantea</i>	Black Bent
<i>Aphanes arvensis</i>	Parsley-piert
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Artemisia vulgaris</i>	Mugwort
<i>Bryonia dioica</i>	White Bryony
<i>Chamerion angustifolium</i>	Rosebay Willowherb
<i>Chenopodium album</i>	Fat-hen
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Crepis capillaris</i>	Smooth Hawk's-beard
<i>Dactylis glomerata</i>	Cock's-foot
<i>Digitalis purpurea</i>	Foxglove
<i>Elytrigia repens</i>	Common Couch
<i>Epilobium ciliatum</i>	American Willowherb
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Euphorbia helioscopia</i>	Sun Spurge
<i>Fallopia convolvulus</i>	Black-bindweed
<i>Filago vulgaris</i>	Common Cudweed
<i>Galeopsis tetrahit</i>	Common Hemp-nettle
<i>Galium aparine</i>	Cleavers
<i>Geranium molle</i>	Dove's-foot Crane's-bill
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Holcus mollis</i>	Creeping Soft-grass
<i>Impatiens glandulifera</i>	Indian Balsam
<i>Juncus conglomeratus</i>	Compact Rush



<i>Lactuca serriola</i>	Prickly Lettuce
<i>Lamium album</i>	White Dead-nettle
<i>Lapsana communis</i>	Nipplewort
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Papaver rhoeas</i>	Common Poppy
<i>Persicaria maculosa</i>	Redshank
<i>Poa annua</i>	Annual Meadow-grass
<i>Polygonum aviculare</i>	Knotgrass
<i>Pteridium aquilinum</i>	Bracken
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Sambucus nigra</i>	Elder
<i>Silene latifolia</i>	White Champion
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Stellaria media</i>	Common Chickweed
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Triticum</i>	Wheat
<i>Urtica dioica</i>	Common Nettle
<i>Viola arvensis</i>	Field Pansy

Field 8 (Near Hardwick)

Scientific Name	Common Name
<i>Agrostis gigantea</i>	Black Bent
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Avena sativa</i>	Oat
<i>Capsella bursa-pastoris</i>	Shepherd's-purse
<i>Chenopodium album</i>	Fat-hen
<i>Cirsium vulgare</i>	Spear Thistle
<i>Dactylis glomerata</i>	Cock's-foot
<i>Elytrigia repens</i>	Common Couch
<i>Galium aparine</i>	Cleavers
<i>Geranium molle</i>	Dove's-foot Crane's-bill
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Papaver rhoeas</i>	Common Poppy
<i>Poa annua</i>	Annual Meadow-grass
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Polygonum aviculare</i>	Knotgrass
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Senecio jacobaea</i>	Common Ragwort
<i>Silene latifolia</i>	White Champion
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Triticum</i>	Wheat
<i>Urtica dioica</i>	Common Nettle
<i>Viola arvensis</i>	Field Pansy

## Field 9 (Far Piece E)

Scientific Name	Common Name
<i>Agrostis gigantea</i>	Black Bent
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Avena sativa</i>	Oat
<i>Chamerion angustifolium</i>	Rosebay Willowherb
<i>Chenopodium album</i>	Fat-hen
<i>Cirsium vulgare</i>	Spear Thistle
<i>Dactylis glomerata</i>	Cock's-foot
<i>Elytrigia repens</i>	Common Couch
<i>Epilobium ciliatum</i>	American Willowherb
<i>Erodium cicutarium</i>	Common Stork's-bill
<i>Euphorbia helioscopia</i>	Sun Spurge
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Papaver rhoeas</i>	Common Poppy
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Senecio jacobaea</i>	Common Ragwort
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Urtica dioica</i>	Common Nettle

## Entrance and access road

Scientific Name	Common Name
<i>Achillea millefolium</i>	Yarrow
<i>Agrostis capillaris</i>	Common Bent
<i>Agrostis gigantea</i>	Black Bent
<i>Anisantha sterilis</i>	Barren Brome
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Artemisia vulgaris</i>	Mugwort
<i>Bromus hordeaceus</i>	Lesser Soft-Brome
<i>Capsella bursa-pastoris</i>	Shepherd's-purse
<i>Chamerion angustifolium</i>	Rosebay Willowherb
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Conyza</i>	flowering plant
<i>Crepis capillaris</i>	Smooth Hawk's-beard
<i>Dactylis glomerata</i>	Cock's-foot
<i>Digitalis purpurea</i>	Foxglove
<i>Elytrigia repens</i>	Common Couch
<i>Epilobium ciliatum</i>	American Willowherb
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Geranium molle</i>	Dove's-foot Crane's-bill
<i>Heracleum sphondylium</i>	Hogweed

<i>Holcus lanatus</i>	Yorkshire-fog
<i>Hypochaeris radicata</i>	Cat's-ear
<i>Impatiens glandulifera</i>	Indian Balsam
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Lapsana communis</i>	Nipplewort
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Medicago lupulina</i>	Black Medick
<i>Melilotus</i>	flowering plant
<i>Melilotus altissimus</i>	Tall Melilot
<i>Phleum pratense</i>	Timothy
<i>Picris echioides</i>	Bristly Oxtongue
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Plantago major</i>	Greater Plantain
<i>Polygonum aviculare</i>	Knotgrass
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Reseda luteola</i>	Weld
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Salix alba</i>	White Willow
<i>Salix aurita</i>	Eared Willow
<i>Scorzoneroideis autumnalis</i>	Autumn Hawkbit
<i>Senecio jacobaea</i>	Common Ragwort
<i>Silene latifolia</i>	White Champion
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Taraxacum officinale agg.</i>	Dandelion
<i>Trifolium arvense</i>	Hare's-foot Clover
<i>Trifolium pratense</i>	Red Clover
<i>Trifolium repens</i>	White Clover
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Tussilago farfara</i>	Colt's-foot
<i>Urtica dioica</i>	Common Nettle
<i>Viola arvensis</i>	Field Pansy

Hedge 1 (Chester Road Hedge - east (S))

Scientific Name	Common Name
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Artemisia vulgaris</i>	Mugwort
<i>Calystegia sepium</i>	Hedge Bindweed
<i>Cirsium arvense</i>	Creeping Thistle
<i>Crataegus monogyna</i>	Hawthorn
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Fraxinus excelsior</i>	Ash
<i>Rubus fruticosus agg.</i>	Bramble
<i>Silene latifolia</i>	White Champion
<i>Urtica dioica</i>	Common Nettle
<i>Vicia cracca</i>	Tufted Vetch

Hedge 2 (Hardwick Field Hedge - north)

Scientific Name	Common Name
<i>Acer pseudoplatanus</i>	Sycamore
<i>Agrostis gigantea</i>	Black Bent
<i>Anchusa arvensis</i>	Bugloss
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Artemisia vulgaris</i>	Mugwort
<i>Bryonia dioica</i>	White Bryony
<i>Chamerion angustifolium</i>	Rosebay Willowherb
<i>Chenopodium album</i>	Fat-hen
<i>Crataegus monogyna</i>	Hawthorn
<i>Dactylis glomerata</i>	Cock's-foot
<i>Galium aparine</i>	Cleavers
<i>Geranium robertianum</i>	Herb-Robert
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Myosotis arvensis</i>	Field Forget-me-not
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Sambucus nigra</i>	Elder
<i>Senecio jacobaea</i>	Common Ragwort
<i>Silene dioica</i>	Red Champion
<i>Silene latifolia</i>	White Champion
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Spiraea douglasii</i>	Steeple-bush
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Urtica dioica</i>	Common Nettle

Hedge 3 (Hardwick Field Hedge - south)

Scientific Name	Common Name
<i>Acer pseudoplatanus</i>	Sycamore
<i>Agrostis gigantea</i>	Black Bent
<i>Alliaria petiolata</i>	Garlic Mustard
<i>Anisantha sterilis</i>	Barren Brome
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Artemisia vulgaris</i>	Mugwort
<i>Berberis vulgaris</i>	Barberry
<i>Bryonia dioica</i>	White Bryony
<i>Capsella bursa-pastoris</i>	Shepherd's-purse
<i>Chenopodium album</i>	Fat-hen
<i>Crataegus monogyna</i>	Hawthorn
<i>Dactylis glomerata</i>	Cock's-foot
<i>Elytrigia repens</i>	Common Couch
<i>Epilobium ciliatum</i>	American Willowherb
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Fallopia convolvulus</i>	Black-bindweed

<i>Galium aparine</i>	Cleavers
<i>Geranium molle</i>	Dove's-foot Crane's-bill
<i>Geranium robertianum</i>	Herb-Robert
<i>Heracleum sphondylium</i>	Hogweed
<i>Papaver rhoeas</i>	Common Poppy
<i>Polygonum aviculare</i>	Knotgrass
<i>Raphanus raphanistrum</i>	Radish
<i>Rubus fruticosus agg.</i>	Bramble
<i>Sambucus nigra</i>	Elder
<i>Scorzoneroideis autumnalis</i>	Autumn Hawkbit
<i>Silene dioica</i>	Red Campion
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Urtica dioica</i>	Common Nettle
<i>Viola arvensis</i>	Field Pansy

Hedge 4 (Bath Field Hedge - south)

Scientific Name	Common Name
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Bryonia dioica</i>	White Bryony
<i>Crataegus monogyna</i>	Hawthorn
<i>Fraxinus excelsior</i>	Ash
<i>Heracleum sphondylium</i>	Hogweed
<i>Quercus robur</i>	Pedunculate Oak
<i>Rosa canina</i>	Dog-rose
<i>Rubus fruticosus agg.</i>	Bramble
<i>Salix caprea</i>	Goat Willow
<i>Urtica dioica</i>	Common Nettle

Hedge 5 (Chester Road Hedge - west (N) & Branton Hill Quarry Trackway Hedge)

Scientific Name	Common Name
<i>Acer pseudoplatanus</i>	Sycamore
<i>Bryonia dioica</i>	White Bryony
<i>Crataegus monogyna</i>	Hawthorn
<i>Fraxinus excelsior</i>	Ash
<i>Galium aparine</i>	Cleavers
<i>Quercus robur</i>	Pedunculate Oak
<i>Rubus fruticosus agg.</i>	Bramble
<i>Salix aurita</i>	Eared Willow
<i>Sambucus nigra</i>	Elder
<i>Urtica dioica</i>	Common Nettle

Hedge 6 (Chester Road Hedge - west (N) & Near-Far Hardwick Hedge)

Scientific Name	Common Name
<i>Alnus glutinosa</i>	Alder
<i>Betula pendula</i>	Silver Birch
<i>Bryonia dioica</i>	White Bryony
<i>Crataegus monogyna</i>	Hawthorn

<i>Galium aparine</i>	Cleavers
<i>Ilex aquifolium</i>	Holly
<i>Pteridium aquilinum</i>	Bracken
<i>Quercus robur</i>	Pedunculate Oak
<i>Rosa canina</i>	Dog-rose
<i>Rubus fruticosus agg.</i>	Bramble
<i>Sambucus nigra</i>	Elder
<i>Urtica dioica</i>	Common Nettle

Hedge 7 (Near Hardwick Hedge - west)

Scientific Name	Common Name
<i>Bryonia dioica</i>	White Bryony
<i>Crataegus monogyna</i>	Hawthorn
<i>Cupressus macrocarpa</i> x <i>Xanthocyparis nootkatensis</i> = <i>X Cuprocyparis leylandi</i>	Leyland Cypress
<i>Rosa canina</i>	Dog-rose
<i>Rubus fruticosus agg.</i>	Bramble
<i>Urtica dioica</i>	Common Nettle

Hedge 8 (Moor Piece Hedge - north)

Scientific Name	Common Name
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Bryonia dioica</i>	White Bryony
<i>Crataegus monogyna</i>	Hawthorn
<i>Galium aparine</i>	Cleavers
<i>Ilex aquifolium</i>	Holly
<i>Rosa canina</i>	Dog-rose
<i>Rubus fruticosus agg.</i>	Bramble
<i>Ulmus procera</i>	English Elm
<i>Urtica dioica</i>	Common Nettle

Hedge 9 (Upper Piece Hedge - north)

Scientific Name	Common Name
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Betula pendula</i>	Silver Birch
<i>Chamerion angustifolium</i>	Rosebay Willowherb
<i>Crataegus monogyna</i>	Hawthorn
<i>Digitalis purpurea</i>	Foxglove
<i>Galium aparine</i>	Cleavers
<i>Ilex aquifolium</i>	Holly
<i>Quercus robur</i>	Pedunculate Oak
<i>Rubus fruticosus agg.</i>	Bramble
<i>Urtica dioica</i>	Common Nettle

Hedge 11 (Loaches Bank Hedge - west)

Scientific Name	Common Name
<i>Betula pendula</i>	Silver Birch
<i>Quercus robur</i>	Pedunculate Oak
<i>Salix caprea</i>	Goat Willow

Hedge 12 (Southern Hedgerow, Bourne Farm)

Scientific Name	Common Name
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Betula pendula</i>	Silver Birch
<i>Crataegus monogyna</i>	Hawthorn
<i>Galeopsis tetrahit s.l.</i>	Common Hemp-nettle
<i>Galium aparine</i>	Cleavers
<i>Ilex aquifolium</i>	Holly
<i>Quercus robur</i>	Pedunculate Oak
<i>Urtica dioica</i>	Common Nettle

Hedge 13 (Loaches Bank Hedge - east)

Scientific Name	Common Name
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Bryonia dioica</i>	White Bryony
<i>Crataegus monogyna</i>	Hawthorn
<i>Digitalis purpurea</i>	Foxglove
<i>Fraxinus excelsior</i>	Ash
<i>Galium aparine</i>	Cleavers
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Quercus robur</i>	Pedunculate Oak
<i>Rubus fruticosus agg.</i>	Bramble
<i>Urtica dioica</i>	Common Nettle

**FAUNA**

Whole Site

Scientific Name	Common Name
<i>Cantharidae</i>	a soldier beetle
<i>Coccinella septempunctata</i>	7-spot Ladybird
<i>Aglais io</i>	Peacock
<i>Gonepteryx rhamni rhamni</i>	Brimstone
<i>Ochlodes sylvanus</i>	Large Skipper
<i>Pieris brassicae</i>	Large White
<i>Pieris rapae</i>	Small White
<i>Pyronia tithonus britanniae</i>	Hedge Brown
<i>Vanessa atalanta</i>	Red Admiral
<i>Aeshna grandis</i>	Brown Hawker
<i>Andricus fecundator</i>	Artichoke Gall
<i>Apis mellifera</i>	Western Honey Bee
<i>Bombus</i>	Bumble Bee
<i>Bombus (Melanobombus) lapidarius</i>	Large Red Tailed Bumble Bee
<i>Bombus (Thoracombus) pascuorum</i>	Common Carder Bee
<i>Lasius</i>	insect - hymenopteran
<i>Vespula (Paravespula) vulgaris</i>	Common Wasp
<i>Tyria jacobaeae</i>	Cinnabar
<i>Orthoptera</i>	a grasshopper or cricket
<i>Syrphidae</i>	a hoverfly

<i>Volucella</i>	a hoverfly
<i>Oryctolagus cuniculus</i>	European Rabbit
<i>Sciurus carolinensis</i>	Eastern Grey Squirrel
<i>Sorex araneus</i>	Eurasian Common Shrew
<i>Aegithalos caudatus</i>	Long-tailed Tit
<i>Buteo buteo</i>	Buzzard
<i>Carduelis carduelis</i>	Goldfinch
<i>Columba oenas</i>	Stock Dove
<i>Columba palumbus</i>	Woodpigeon
<i>Corvus corone</i>	Carrion Crow
<i>Corvus monedula</i>	Jackdaw
<i>Cyanistes caeruleus</i>	Blue Tit
<i>Delichon urbicum</i>	House Martin
<i>Dendrocopos major</i>	Great Spotted Woodpecker
<i>Emberiza citrinella</i>	Yellowhammer
<i>Passer domesticus</i>	House Sparrow
<i>Pica pica</i>	Magpie
<i>Picus viridis</i>	Green Woodpecker
<i>Sitta europaea</i>	Nuthatch
<i>Sylvia atricapilla</i>	Blackcap
<i>Troglodytes troglodytes</i>	Wren
<i>Turdus merula</i>	Blackbird