

# **South West Milton Keynes**

Updated Environmental Statement Volume 2 - Appendices

Carter Jonas LLP

MAY 2020

## **APPENDIX 7.1:**

### **DESKTOP STUDY INFORMATION**



## Methods

The Multi-Agency Geographic Information for the Countryside (MAGIC) online database was reviewed in March 2020 to identify the following ecological features (based on the Site's likely 'zone of influence' in respect of such features):

- Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites within 10km of the Site (including possible/proposed sites)
- Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Local Nature Reserves (LNR) within 3km of the Site
- Other relevant data e.g. Ancient Woodland Inventory within 1km of the Site

Buckinghamshire and Milton Keynes Environmental Record Centre (BMERC) was contacted for details of any non-statutory nature conservation designations and records of protected/notable habitats and species. This information was requested for an area encompassing the Site and adjacent land within c. 2km of the Site boundary. This search area was selected to include the likely zone of influence of effects upon non-statutory designations and protected or notable habitats and species. Other online sources were reviewed for relevant biological records, reports and background information.

The Woodland Trust's online Ancient Tree Inventory was reviewed for known ancient or veteran trees within the Site and adjacent land.

In accordance with Natural England's Great Crested Newt Mitigation Guidelines (2001), a desktop search was undertaken to identify ponds within 500m of the Site which may have potential to support breeding great crested newts *Triturus cristatus*, using Ordnance Survey (OS) mapping, the MAGIC database and aerial photography.

### Limitations

There were no limitations to the desktop study.

## Results

See Table 7.1 in Chapter 7 and relevant protected species appendices for the results of the desktop study. Maps highlighting the results of the above desktop studies are included below.

4/14/2020

Site Check Report Report generated on Tue Apr 14 2020  
**You selected the location:** Centroid Grid Ref: SP83263245  
The following features have been found in your search area:

**Local Nature Reserves (England)**

<b>Reference</b>	1008790
<b>Name</b>	BLUE LAGOON
<b>Hectares</b>	33.12
<b>Hyperlink</b>	<a href="https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1008790">https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1008790</a>

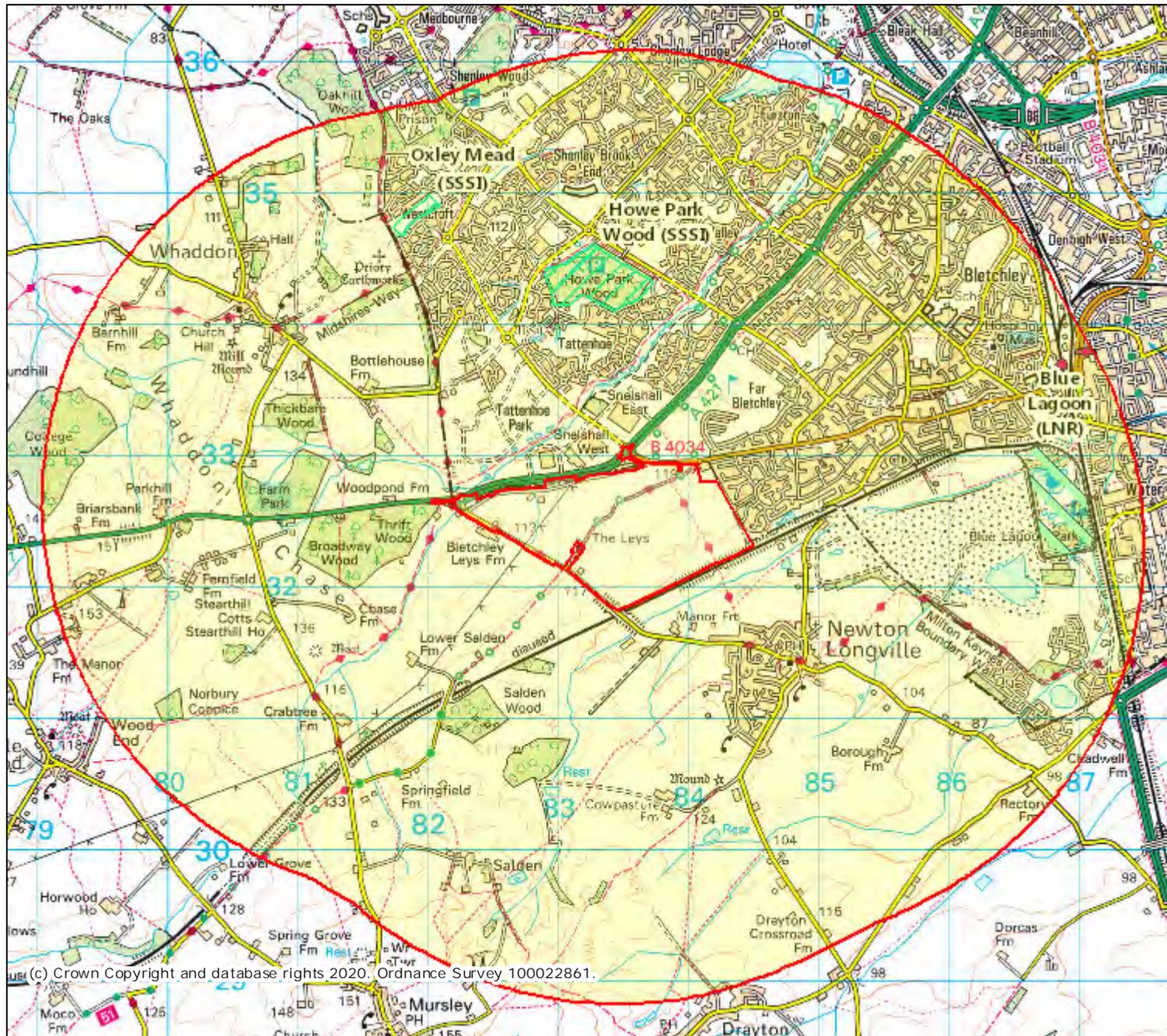
**Sites of Special Scientific Interest (England)**

<b>Name</b>	Howe Park Wood SSSI
<b>Reference</b>	1000856
<b>Natural England Contact</b>	SARAH DAVEY
<b>Natural England Phone Number</b>	0845 600 3078
<b>Hectares</b>	24.19
<b>Citation</b>	1006067
<b>Hyperlink</b>	<a href="http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1006067">http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1006067</a>

<b>Name</b>	Oxley Mead SSSI
<b>Reference</b>	1006202
<b>Natural England Contact</b>	SARAH DAVEY
<b>Natural England Phone Number</b>	0845 600 3078
<b>Hectares</b>	3.43
<b>Citation</b>	2000053
<b>Hyperlink</b>	<a href="http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s2000053">http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s2000053</a>

**National Nature Reserves (England)**

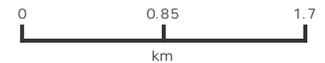
No Features found



### Legend

-  Local Nature Reserves (England)
-  National Nature Reserves (England)
-  Sites of Special Scientific Interest (England)

Projection = OSGB36  
 xmin = 471800  
 ymin = 226900  
 xmax = 494700  
 ymax = 238100



Map produced by MAGiC on 14 April, 2020.  
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4/14/2020

Site Check Report Report generated on Tue Apr 14 2020

**You selected the location:** Centroid Grid Ref: SP83253245

The following features have been found in your search area:

**Ramsar Sites (England)**

No Features found

**Proposed Ramsar Sites (England)**

No Features found

**Special Areas of Conservation (England)**

No Features found

**Possible Special Areas of Conservation (England)**

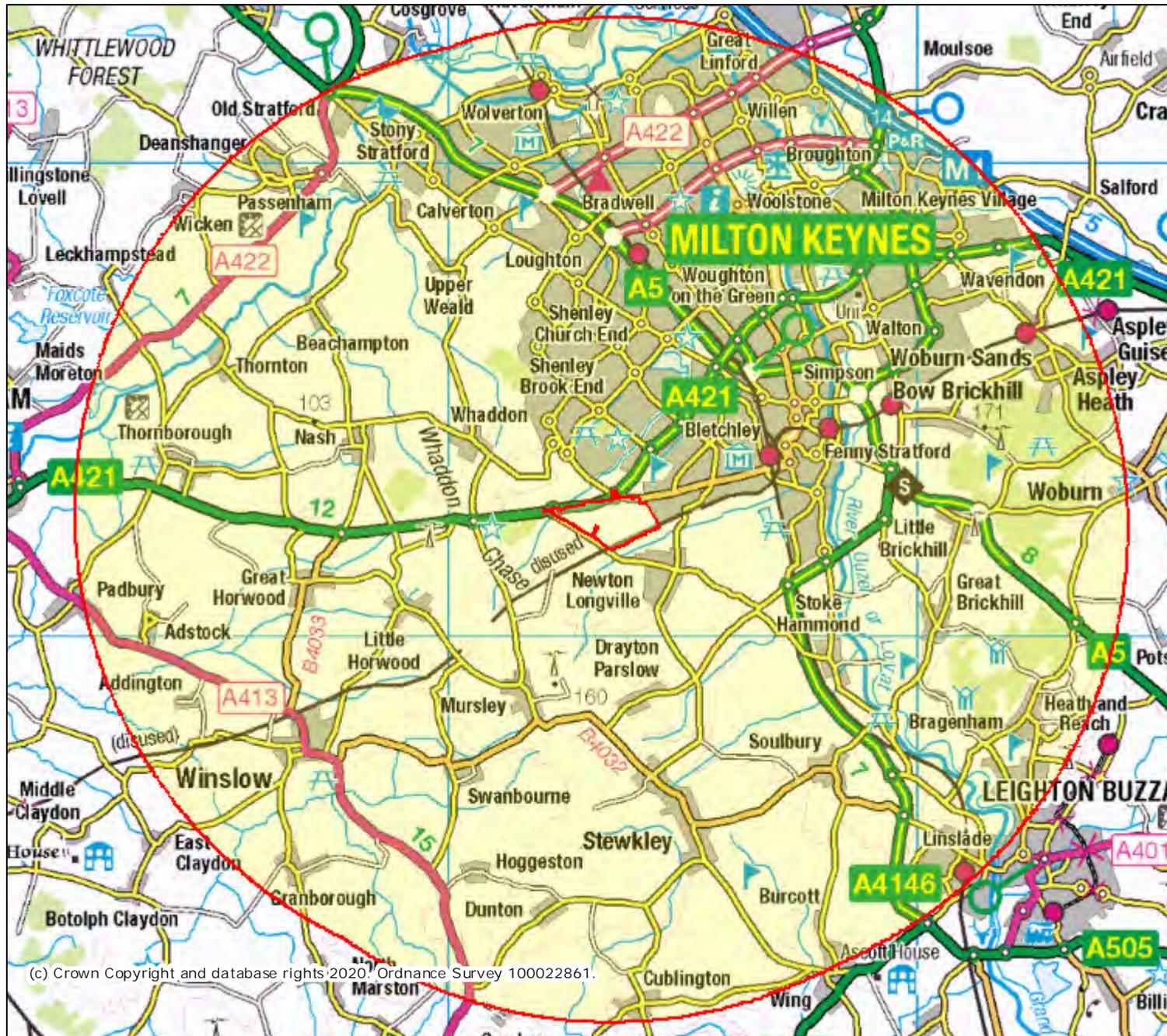
No Features found

**Special Protection Areas (England)**

No Features found

**Potential Special Protection Areas (England)**

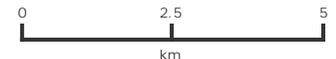
No Features found



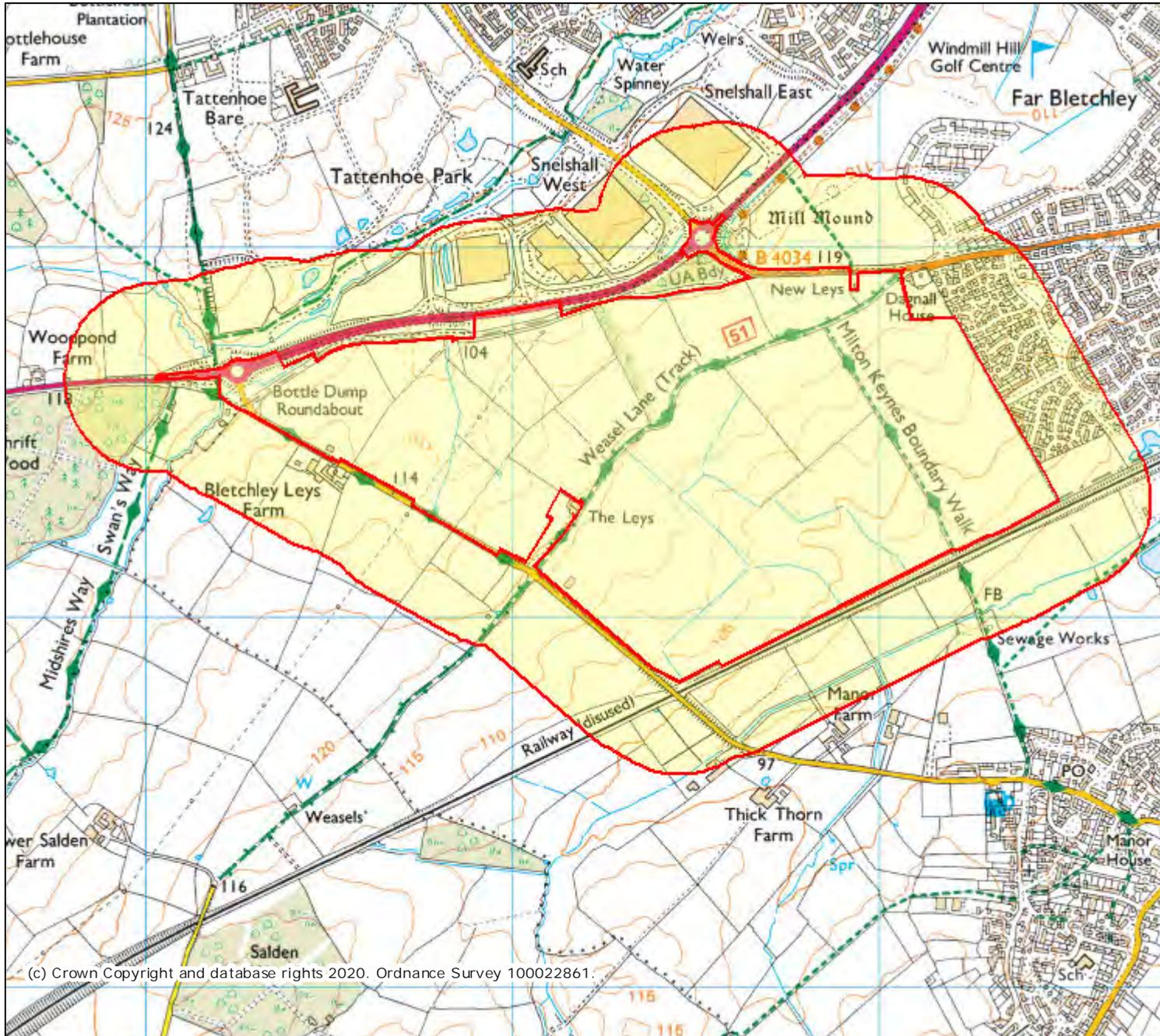
### Legend

-  Ramsar Sites (England)
-  Proposed Ramsar Sites (England)
-  Special Areas of Conservation (England)
-  Possible Special Areas of Conservation (England)
-  Special Protection Areas (England)
-  Potential Special Protection Areas (England)

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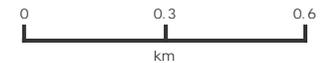
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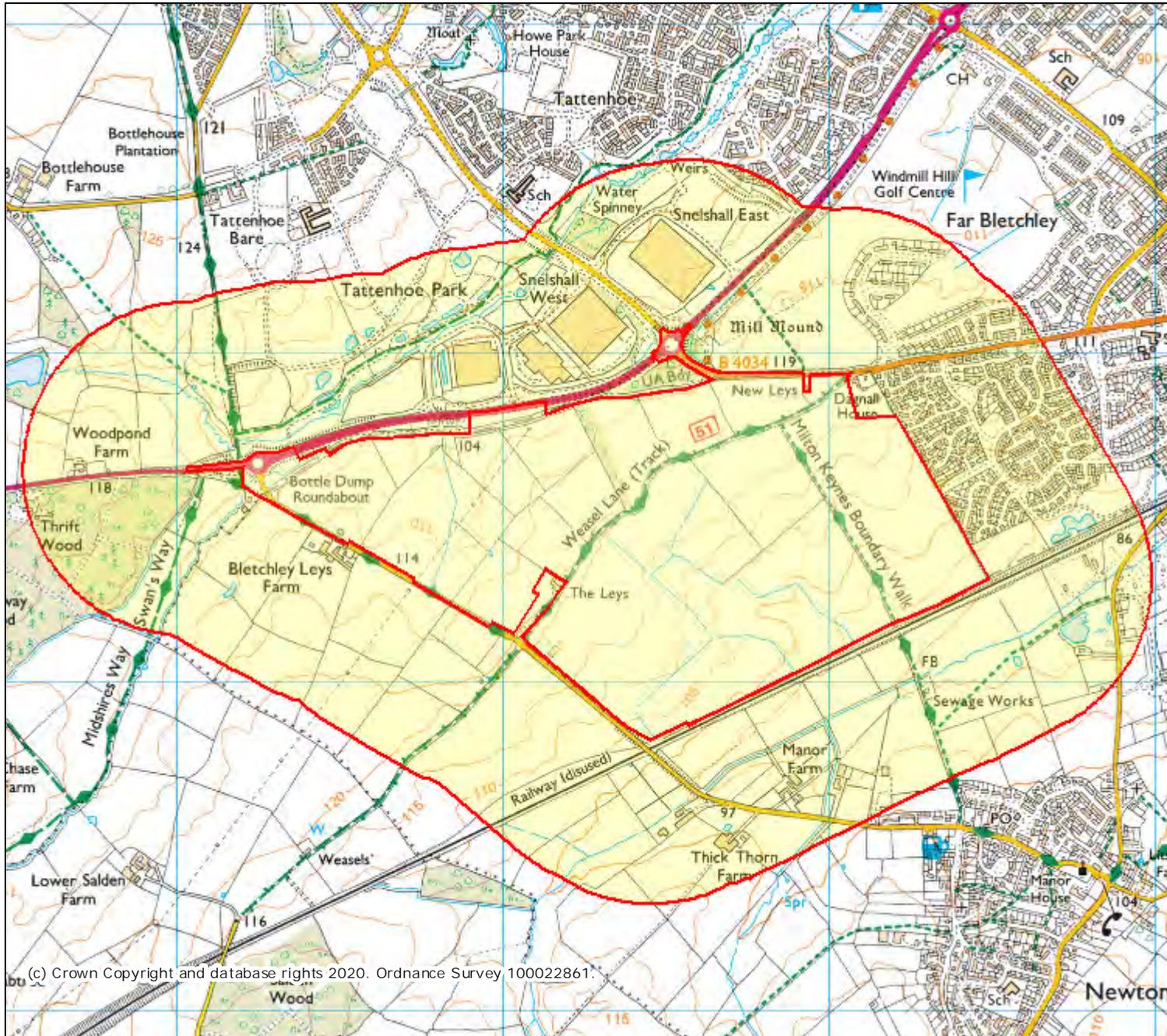
xmax = 487300

ymax = 234200



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Projection = OSGB36

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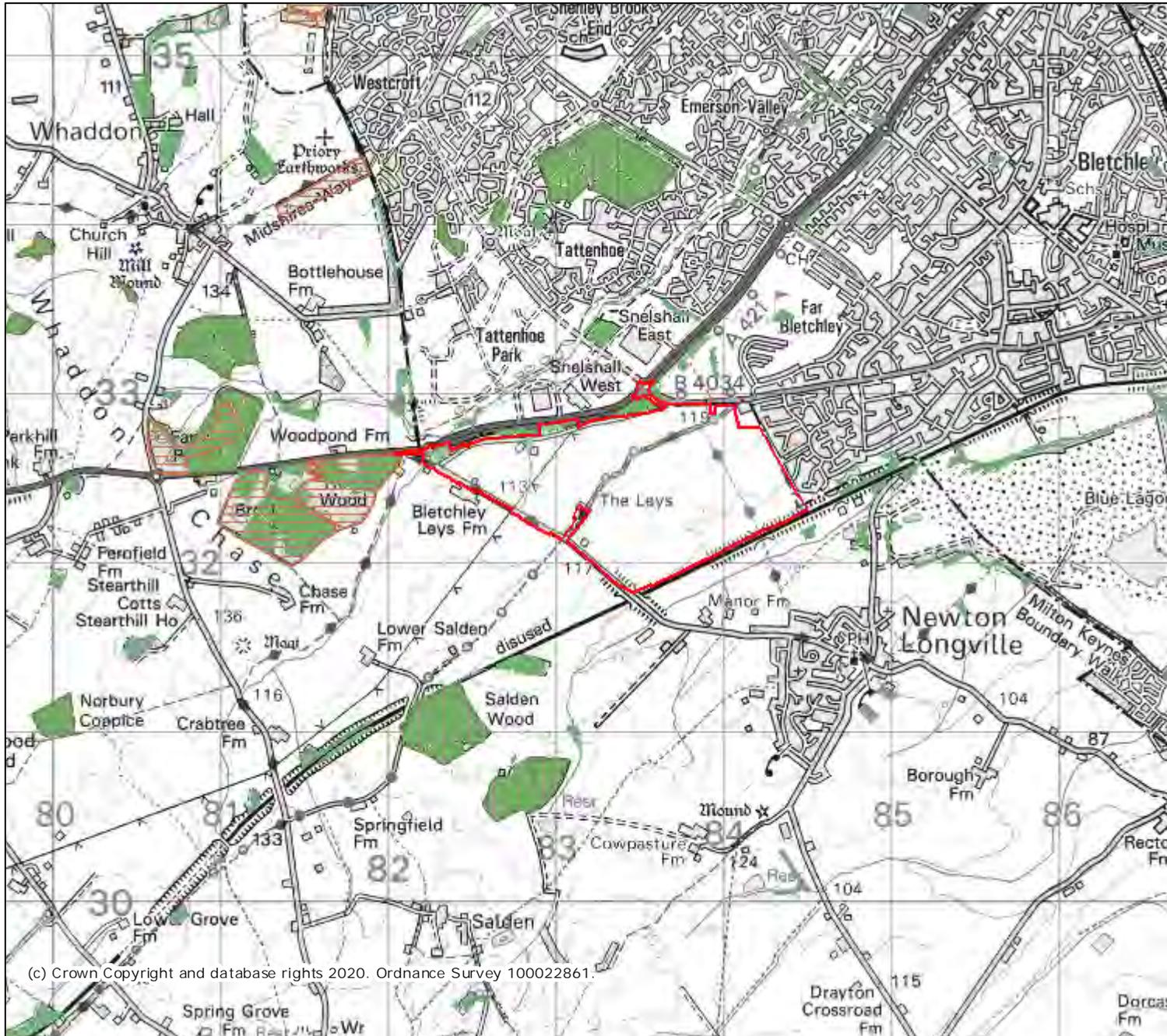
ymax = 234700



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# MAGiC 4857\_Ancient and Priority Habitat Woodland



## Legend

### Ancient Woodland (England)

 Ancient and Semi-Natural Woodland

 Ancient Replanted Woodland

 Priority Habitat Inventory - Deciduous Woodland (England)

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ymin = 227900

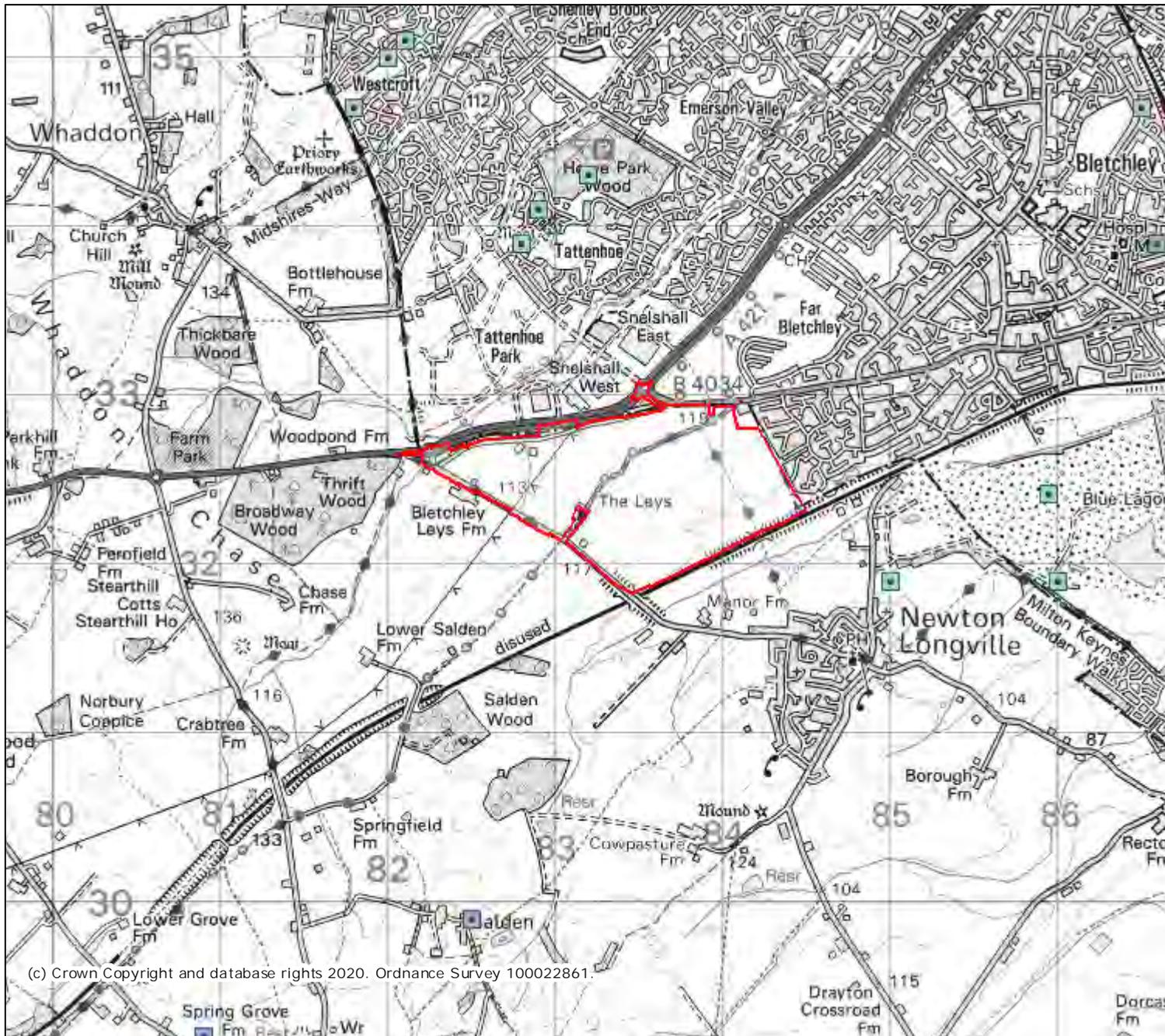
xmax = 492100

ymax = 236600



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### Legend

#### Granted European Protected Species Applications (England)

- Amphibian
- Bat
- Cetacean
- Invertebrate
- Other Mammal
- Plant
- Reptile

Projection = OSGB36  
 xmin = 474300  
 ymin = 227900  
 xmax = 492100  
 ymax = 236600



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Printed from eMapper for BMERC on 20/04/2020  
BM/E00285 | South-West Milton Keynes | 4857\_SWMK  
This map may be released into the public domain

**Key**

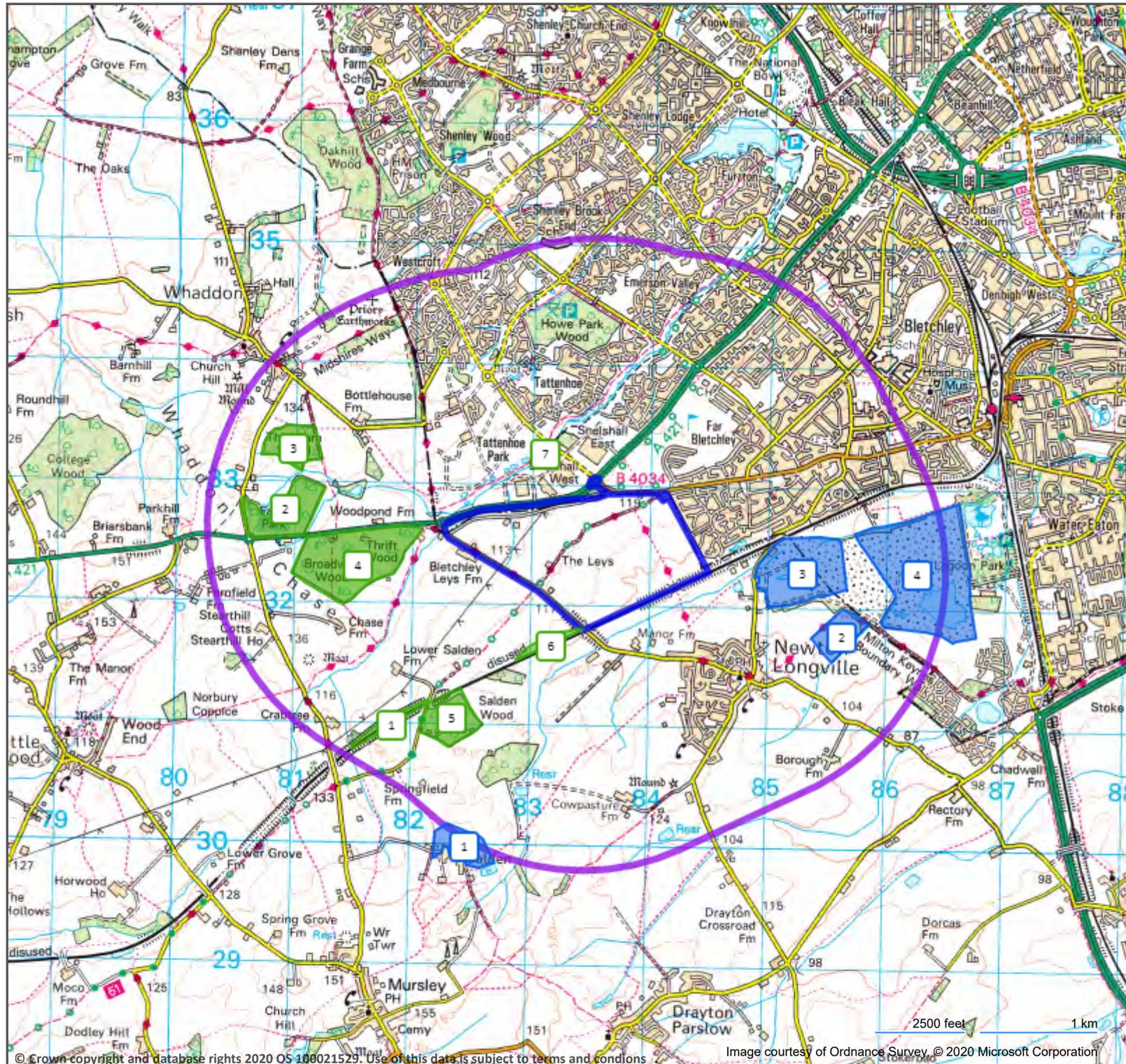
-  Search Location
-  LERC Boundary
-  Search Buffer (2000m)

 **Local Wildlife Sites**

- 1: 83A01 - Railway Bank By Salden Wood
- 2: 83B03 - Hogpound Wood
- 3: 83B04 - Thickbare Wood
- 4: 83B16 - Broadway and Thrift Wood
- 5: 83F01 - Salden Wood
- 6: 83F08 - Railway Siding East Of Salden Wood
- 7: 83G07 - Tattenhoe Park Meadow

 **Biological Notification Sites**

- 1: 82J08 - North Salden Farm
- 2: 83K02 - Ex-Brickfield Scrub
- 3: 83L01 - Newton Longville Brickworks
- 4: 83R06 - Newton Longville Brickpits

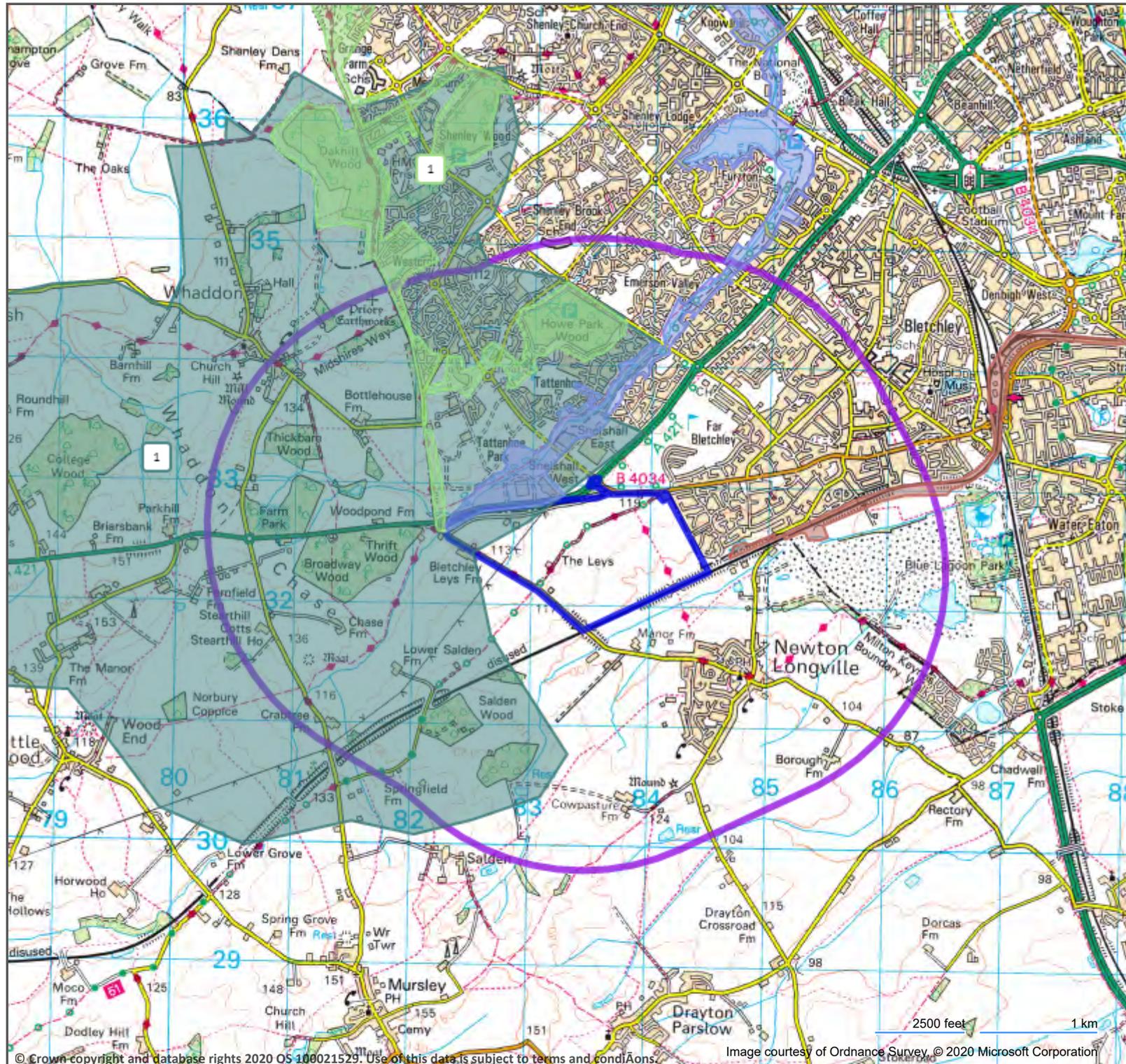




Printed from eMapper for BMERC on 20/04/2020  
BM/E00285 | South-West Milton Keynes | 4857\_SWMK  
This map may be released into the public domain

**Key**

-  Search Location
-  LERC Boundary
-  Search Buffer (2000m)
-  **Biodiversity Opportunity Areas**
- 1: Whaddon Chase**
-  **Milton Keynes Rail Wildlife Corridors**
- 1: Woburn - Bletchley**
-  **Milton Keynes Wet Wildlife Corridors**
- 1: Loughton Brook**
-  **Milton Keynes Wood Wildlife Corridors**
- 1: North Bucks Way**





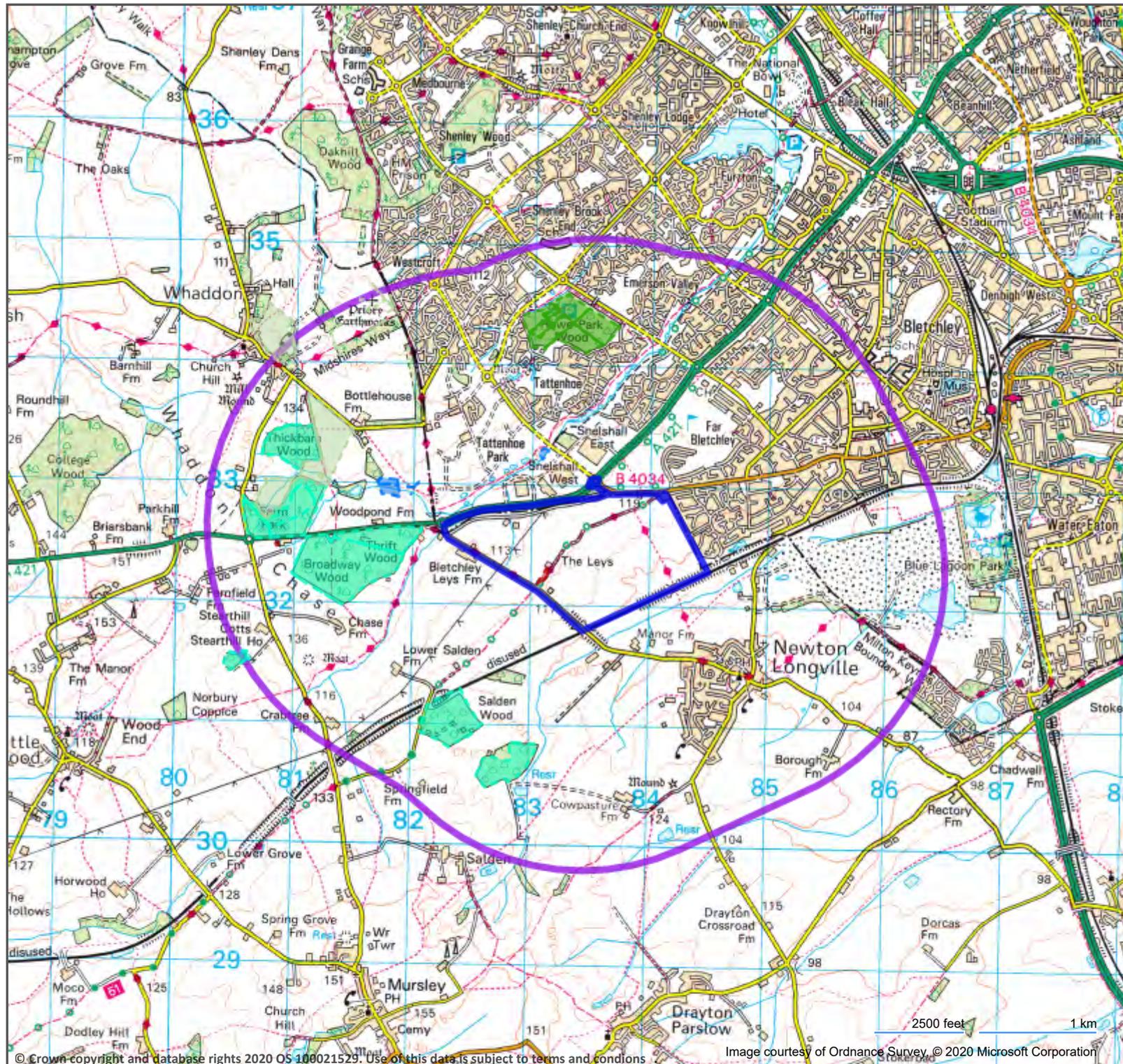
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BM/E00285 | South-West Milton Keynes | 4857\_SWMK  
This map may be released into the public domain

### Key

-  Search Location
-  LERC Boundary
-  Search Buffer (2000m)

### Priority Habitats

-  Lowland meadows
-  Lowland mixed deciduous woodland
-  Lowland wood-pasture and parkland
-  Traditional Orchard
-  Wet woodland





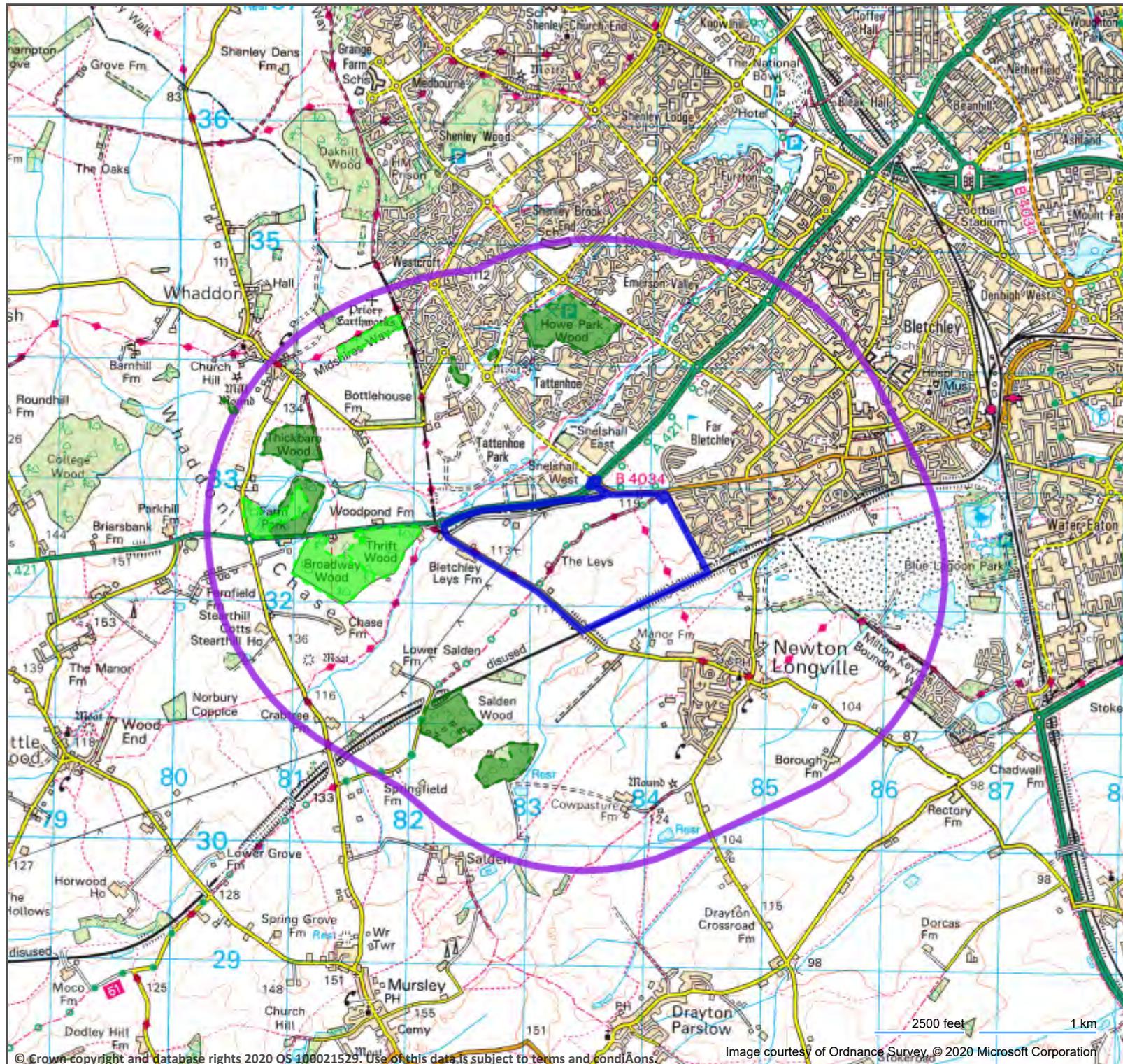
Printed from eMapper for BMERC on 20/04/2020  
BM/E00285 | South-West Milton Keynes | 4857\_SWMK  
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**Key**

-  Search Locaon
-  LERC Boundary
-  Search Buffer (2000m)

**Ancient Woodland**

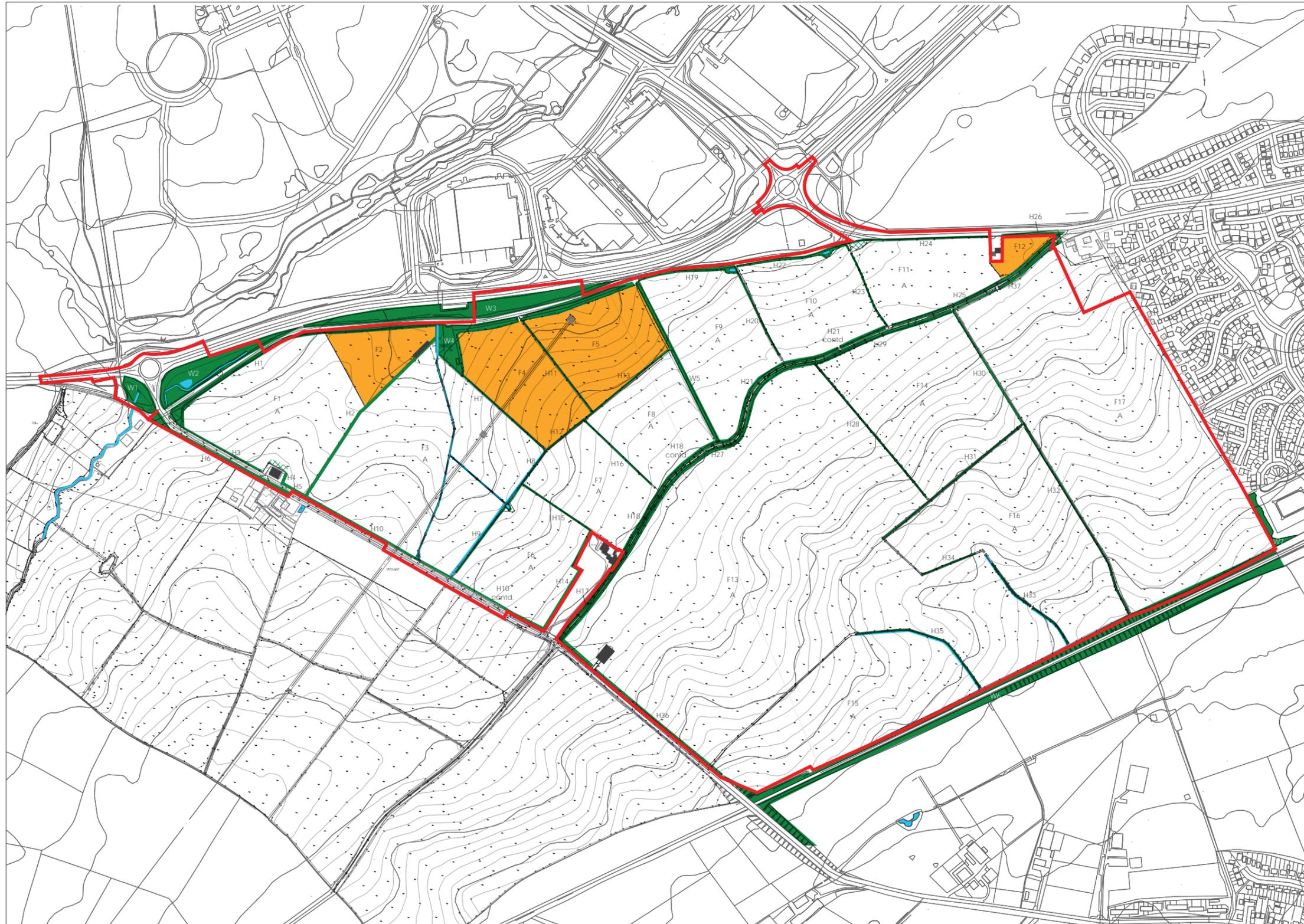
-  Ancient & Semi-Natural Woodland
-  Ancient Replanted Woodland



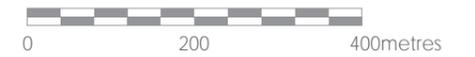
**APPENDIX 7.2:**

**EXTENDED PHASE 1 HABITAT SURVEY**





-  Site boundary
-  Arable
-  Semi-improved grassland
-  Woodland (with woodland no.)
-  Hedgerow (with hedgerow no.)
-  Pond
-  Watercourse/ ditch
-  Dense scrub
-  Building
-  Field number



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<b>Project</b>	South West Milton Keynes	<b>Date</b>	March 2020	<b>Drawing No.</b>	CSA/4857/115
<b>Drawing Title</b>	Figure 7a - Habitats Plan	<b>Scale</b>	Refer to scale	<b>Rev</b>	-
<b>Client</b>	Taylor Wimpey UK Ltd, William Davis Ltd, Hallam Land Management Ltd, Bellcross Homes and Connolly Homes	<b>Drawn</b>	CH	<b>Checked</b>	JW

## Methods

An extended Phase 1 Habitat survey was carried out in fine and dry weather conditions on 04 March 2020 by Jamie Woollam CEcol MCIEEM and Carly Howes ACIEEM, and again on 21 April 2020 encompassing the Site and immediately adjacent habitats that could be viewed. This updated survey work undertaken in October 2018 (CSA Environmental), previously by FPCR in 2014 and 2008 by Aspect Ecology.

Phase 1 Habitat survey is a method of classification and mapping wildlife habitats in Great Britain. It was originally intended to provide "...relatively rapidly, a record of the semi-natural vegetation and wildlife habitat over large areas of countryside." The Phase 1 Habitat Survey method has been widely 'extended' beyond its original purpose to allow the capture of information at an intermediate level between Phase 1 and Phase 2 Habitat surveys, and here includes the following:

- More detailed floral species lists for each identified habitat
- Descriptions of habitat structure, the evidence of management and a broad assessment of habitat condition
- Mapping of additional habitat types (e.g. hardstanding)
- Identification of Priority Habitats under Section 41 of the NERC Act
- Identification of Habitats Directive Annex I habitat types
- Evidence of, or potential for, European Protected Species (EPS) (including bats, great crested newt, dormouse and otter)
- Evidence of, or potential for, other protected species (including birds, reptiles, water vole, badger and certain invertebrates)
- Evidence of, or potential for, other notable species (including S41 Species of Principal Importance as well as notable, rare, protected or controlled plants and invertebrates)

### Limitations

The recent phase 1 surveys were undertaken outside of the optimal period for botanical surveying, when some plant species may not be visible above ground. However, survey work across the previous years were drawn upon and further observations of species present were recorded throughout the survey period up to May 2020.

## Results

### Survey Results

The extended Phase 1 Habitat survey findings are presented on the Habitats Plan (CSA/4857/115). Table 1 below provides a list of all floral species recorded in each broad habitat type.

**Table 7.2.A** Habitats and Flora Species List

Habitat	Flora	
	Common name	Latin name
Arable	Petty spurge	<i>Euphorbia peplus</i>
	Cornsalad	<i>Valerianella</i> sp.

	Cleavers	<i>Galium aparine</i>
	Cut leaved cranesbill	<i>Geranium dissectum</i>
	Dove's foot cranesbill	<i>Geranium molle</i>
	Common field speedwell	<i>Veronica persica</i>
	Red dead nettle	<i>Lamium purpureum</i>
	Groundsel	<i>Senecio vulgaris</i>
	Hogweed	<i>Heracleum sphondylium</i>
	Black grass	<i>Alopecurus myosuroides</i>
	Daisy	<i>Bellis perennis</i>
	Creeping cinqfoil	<i>Potentilla reptans</i>
	Hoary cress	<i>Lepidium draba</i>
	Common chickweed	<i>Stellaria media</i>
	Common mouse ear	<i>Cerastium fontanum</i>
	Creeping thistle	<i>Cirsium arvense</i>
	Curled dock	<i>Rumex crispus</i>
	Hemlock	<i>Conium maculatum</i>
	Procumbent pearlwort	<i>Sagina procumbens</i>
	Shepherd's purse	<i>Capsella bursa-pastoris</i>
	Common mallow	<i>Malva sylvestris</i>
	Nipplewort	<i>Lapsana communis</i>
	Scentless mayweed	<i>Tripleurospermum inodorum</i>
	Prickly sow thistle	<i>Sonchus asper</i>
	Knotgrass	<i>Polygonum aviculare</i>
	Scarlet pimpernel	<i>Anagallis arvensis</i>
Semi-improved grassland	False oat grass	<i>Arrhenatherum elatius elatius</i>
	Meadow foxtail	<i>Alopecurus pratensis</i>
	Yorkshire fog	<i>Holcus lanatus</i>
	Tufted hair grass	<i>Deschampsia cespitosa</i>
	Crested dog's tail	<i>Cynosaurus cristatus</i>
	Hard rush	<i>Juncus inflexus</i>
	Common bent	<i>Agrostis stolonifera</i>
	Cock's foot	<i>Dactylus glomerata</i>
	Perennial rye grass	<i>Lolium perenne</i>
	Red fescue	<i>Festuca rubra</i>
	Sweet vernal grass	<i>Anthoxanthum odoratum</i>
	Common sorrel	<i>Rumex acetosa</i>
	Primrose	<i>Primula vulgaris</i>
	Ribwort plantain	<i>Plantago lanceolata</i>
	Black knapweed	<i>Centaurea nigra</i>
	Cow parsley	<i>Anthriscus sylvestris</i>
	Hogweed	<i>Heracleum sphondylium</i>
	Meadow vetchling	<i>Lathyrus pratensis</i>
	Common vetch	<i>Vicia cracca</i>
	Meadow cranesbill	<i>Geranium pratense</i>
Musk mallow	<i>Malva moschata</i>	

	Ladies' bedstraw	<i>Galium verum</i>
	Common bird's foot trefoil	<i>Lotus corniculatus</i>
	Black medic	<i>Medicago lupulina</i>
	Creeping cinqfoil	<i>Potentilla reptans</i>
	Germander speedwell	<i>Veronica chamaedrys</i>
	Common field speedwell	<i>Veronica persica</i>
	Thyme-leaved speedwell	<i>Veronica serpyllifolia</i>
	Sow thistle	<i>Sonchus</i> sp.
	White clover	<i>Trifolium repens</i>
	Red clover	<i>Trifolium pratense</i>
	Weld	<i>Reseda luteola</i>
	Curled dock	<i>Rumex</i>
	Dandelion	<i>Taraxacum officinale</i> agg.
	Creeping buttercup	<i>Ranunculus repens</i>
	Charlock	<i>Sinapis arvensis</i>
	Fat hen	<i>Chenopodium album</i>
Ponds & Ditches	Osier	<i>Salix viminalis</i>
	Goat willow	<i>Salix caprea</i>
	Grey willow	<i>Salix cinerea</i>
	Black poplar	<i>Populus nigra</i>
	Guelder rose	<i>Viburnum opulus</i>
	Bittersweet	<i>Solanum dulcamara</i>
	Floating sweetgrass	<i>Glyceria fuitans</i>
	Reed canary grass	<i>Phalaris</i>
	Greater reedmace	<i>Typha</i>
	Remote sedge	<i>Carex remota</i>
	Pendulous sedge	<i>Carex pendula</i>
	Starwort	<i>Callitriche</i> sp.
	Watercress	<i>Nasturtium officinale</i>
	Water mint	<i>Mentha aquatica</i>
	Lesser celandine	<i>Ficaria verna</i>
	Soft rush	<i>Juncus effuses</i>
	Brooklime	<i>Veronica beccabunga</i>
	Yellow iris	<i>Iris pseudoacorus</i>
Common reed	<i>Phragmites australis</i>	
Woodland & Scrub	Pedunculate oak	<i>Quercus robur</i>
	Common ash	<i>Frazinus excelsior</i>
	Field maple	<i>Acer campestre</i>
	Hornbeam	<i>Carpinus betulus</i>
	Goat willow	<i>Salix caprea</i>
	Horse-chestnut	<i>Aesculus hippocastanum</i>
	Scots pine	<i>Pinus sylvestris</i>
	Hybrid poplar	<i>Populus nigra x</i>
	Grey poplar	<i>Populus alba x tremula</i>
	Blackthorn	<i>Prunus spinosa</i>

	Elder	<i>Sambucus nigra</i>
	Wild privet	<i>Ligustrum vulgare</i>
	Common hawthorn	<i>Crataegus monogyna</i>
	Elm	<i>Ulmus</i> sp.
	Whitebeam	<i>Sorbus aria</i>
	Honeysuckle	<i>Lonicera periclymenum</i>
	Bramble	<i>Rubus fruticosus</i> agg.
	Dog rose	<i>Rosa canina</i> agg.
	Bluebell	<i>Hyacinthoides non-scripta</i>
	Goldilocks buttercup	<i>Ranunculus auricomus</i>
	Lords and ladies	<i>Arum maculatum</i>
	Dog's mercury	<i>Mercurialis perennis</i>
	Herb Robert	<i>Geranium robertianum</i>
	Dog violet	<i>Viola canina</i>
	Wood avens	<i>Geum urbanum</i>
	Garlic mustard	<i>Alliaria petiolata</i>
	Primrose	<i>Primula vulgaris</i>
	Cowslip	<i>Primula veris</i>
	Hedge woundwort	<i>Stachys sylvatica</i>
	Wood false brome	<i>Brachypodium sylvestris</i>
	Ground ivy	<i>Glechoma hederacea</i>
	Ivy	<i>Hedera helix</i>
	Algerian ivy	<i>Hedera canariensis</i>
	Lesser celandine	<i>Ficaria verna</i>
	White dead nettle	<i>Lamium album</i>
	Stinging nettle	<i>Urtic dioica</i>
	Cleavers	<i>Galium aparine</i>
	Creeping cinqfoil	<i>Potentilla reptans</i>
	Variegated yellow archangel	<i>Lamium galeobdolon</i> ssp. <i>argentatum</i>
	Green alkanet	<i>Pentaglottis sempervirens</i>
	Red campion	<i>Silene dioica</i>
	Wood dock	<i>Rumex sanguineus</i>
	Periwinkle	<i>Vinca</i> sp.
	Betony	<i>Stachys officinalis</i>
Hedgerows & Individual Trees	Common ash	<i>Fraxinus excelsior</i>
	Blackthorn	<i>Prunus spinosa</i>
	Bramble	<i>Rubus fruticosus</i>
	Cherry plum	<i>Prunus cerasifera</i>
	Crack-willow	<i>Salix fragilis</i>
	Dogwood	<i>Cornus sanguinea</i>
	Elder	<i>Sambucus nigra</i>
	Elm	<i>Ulmus</i> sp.
	Field maple	<i>Acer campestre</i>
	Field-rose	<i>Rosa arvensis</i>
	Goat willow	<i>Salix caprea</i>

Crack willow	<i>Salix fragilis</i>
Hawthorn	<i>Crataegus monogyna</i>
Horse-chestnut	<i>Aesculus hippocastanum</i>
Leylandii cypress	<i>Cupressus x leylandii</i>
Common lime	<i>Tilia x cordata</i>
Pedunculate oak	<i>Quercus robur</i>
Poplar spp. (including <i>Populus nigra</i> , <i>Populus alba</i> )	<i>Populus sp.</i>
Dog rose	<i>Rosa canina</i> agg.
Field rose	<i>Rosa arvensis</i>
Snowberry	<i>Symphoricarpos albus</i>
Hornbeam	<i>Carpinus betula</i>
Wild privet	<i>Ligustrum vulgare</i>
Common bent	<i>Agrostis stolonifera</i>
Cleavers	<i>Gallium aparine</i>
Cock's-foot	<i>Dactylis glomerata</i>
Common nettle	<i>Urtica dioica</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Creeping thistle	<i>Cirsium arvense</i>
Daffodil	<i>Narcissus sp.</i>
Dandelion	<i>Taraxacum officinale</i> agg.
Dock	<i>Rumex sp.</i>
White bryony	<i>Bryony dioica</i>
Dove's-foot crane's-bill	<i>Geranium molle</i>
False oat-grass	<i>Arrhenatherum elatius</i>
Red fescue	<i>Festuca rubra</i> ssp
Field-speedwell	<i>Veronica persica</i>
Forget-me-not	<i>Myosotis arvensis</i>
Garlic mustard	<i>Alliaria petiolata</i>
Ground ivy	<i>Glechoma hederacea</i>
Groundsel	<i>Senecio vulgaris</i>
Hedge woundwort	<i>Stachys sylvatica</i>
Hemlock	<i>Conium maculatum</i>
Herb Robert	<i>Geranium robertianum</i>
Hogweed	<i>Heracleum sphondylium</i>
Lords-and-ladies	<i>Arum maculatum</i>
Common mallow	<i>Malva sp.</i>
Meadow foxtail	<i>Alopecurus pratensis</i>
Meadow-grass	<i>Poa sp.</i>
Common mouse-ear	<i>Cerastium fontanum</i>
Perennial rye grass	<i>Lolium perenne</i>
Read dead-nettle	<i>Lamium purpureum</i>
Smooth meadow-grass	<i>Poa pratensis</i>
Spear thistle	<i>Cirsium vulgare</i>
Sweet violet	<i>Viola odorata</i>

	White dead-nettle	<i>Lamium album</i>
	Great willowherb	<i>Epilobium</i> sp.
	Wood avens	<i>Geum urbanum</i>
	Yorkshire fog	<i>Holcus lanatus</i>



**APPENDIX 7.3:**  
**HEDGEROW SURVEY**

## Appendix 7.3

### Hedgerows

## Legislation

Hedgerows are assessed under the Hedgerows Regulations 1997.

The term 'hedgerow' is not defined in the Hedgerow Regulations, but is defined in the Hedgerow Survey Handbook (Defra, 2007) as:

*"...any boundary line of trees or shrubs over 20m long and less than 5m wide at the base, provided that at one time the trees or shrubs were more or less continuous. It includes an earth bank or wall only where such a feature occurs in association with a line of trees or shrubs. This includes 'classic' shrubby hedgerows, lines of trees, shrubby hedgerows with trees and very gappy hedgerows (where each shrubby section may be less than 20m long, but the gaps are less than 20m)."*

The Hedgerow Regulations are aimed primarily at countryside hedgerows and apply to:

*"...any hedgerow growing in, or adjacent to, any common land, protected land, or land used for agriculture, forestry or the breeding or keeping of horses, ponies or donkeys, if:*

- *it has a continuous length of, or exceeding, 20m; or*
- *it has a continuous length of less than 20m AND, at each end, meets (whether by intersection or junction) another hedgerow."*

In terms of length of hedgerows and their measurement:

- Each hedgerow is to be regarded as starting and/or ending at the point where it forms a junction or intersection with another hedgerow.
- Gaps are also treated as part of a hedgerow if there are 20m or less or have been made in contravention of the Regulations. A gap is defined as an opening, whether or not it is filled (i.e. by a gate).

The Hedgerow Regulations do not apply to garden hedges i.e. those which lie within the curtilage of, or mark the boundary of the curtilage of, a dwelling house.

## Methods

The hedgerow assessment survey was undertaken on 17, 18 and 24 March 2020 by Carly Howes ACIEEM and Alexandra Cole ACIEEM. The information collected via desktop and on-site survey and the methods of assessment are based on the Criteria for Determining "Important" Hedgerows as outlined within the Hedgerow Regulations and the Hedgerow Survey Handbook (Defra, 2007). Species-richness is determined using criteria from the Hedgerow Survey Handbook. In addition to this a Condition Assessment of each hedgerow was undertaken in-line with the Biodiversity Metric 2.0 (Natural England, 2019).

Each hedgerow was assigned a reference number H1 to H37, the location of each hedgerow is shown on the Habitats Plan (CSA/4857/115).

### Criteria for Determining "Important" Hedgerows

#### *Archaeological and Historical*

- Marks a pre-1850 parish or township boundary
- Incorporates an archaeological feature
- Is part of, or associated with an archaeological site
- Mark the boundary of, or is associated with, a pre-1600 estate or manor
- Forms an integral part of a pre-Parliamentary enclosure field system

#### *Wildlife and Landscape*

- Includes certain categories of species of birds, animals or plants listed in the Wildlife and Countryside Act of Joint Nature Conservation Committee (JNCC) publications.
- Includes at least seven woody species, on average, in a 30m length, OR
- Includes at least six woody species, on average, in a 30m length and is associated with at least three of the Associated Features listed below.
- Includes at least six woody species including one of the following
  - Native black-poplar *Populus nigra ssp betulifolia*
  - Large-leaved lime *Tilia platyphyllos*
  - Small-leaved lime *Tilia cordata*
  - Wild service-tree *Sorbus torminalis*
- Includes at least five woody species, on average, in a 30m length and be associated with at least four of the Associated Features listed below.

The number of woody species is reduced by one in northern counties. The list of 56 woody species comprises mainly of shrubs and trees. It generally excludes climbers and bramble, but includes wild roses.

Hedgerows that are located adjacent to a footpath, bridleway, or Road Used as a Public Path (RUPP), or byway open to all traffic AND include at least four specified woody species, on average, in a 30m length AND has at least two of the Associated Features listed below.

#### *Associated Features*

- A bank or wall that supports the hedgerow along at least one half of its length
- Gaps which in aggregate do not exceed 10% of the length of the hedgerow
- On average, at least one tree per 50m

- At least three woodland species (as listed on Schedule 2 of the Regulations) within 1m, in any direction, of the outermost edges of the hedgerow
- A ditch along at least one half of the length of the hedgerow
- Connections scoring four points or more. A connection with another hedgerow score one point; a connection with a pond or a woodland scores two points
- A parallel hedgerow within 15m of the hedgerow

#### Criteria for Determining "Species-rich" Hedgerows

To determine species-richness, a 30m section of hedgerow is selected. Where the structural species making up the 30m section of hedgerow include at least five (or at least four in northern and eastern England, upland Wales and Scotland) woody species that are either native somewhere in the UK, or which are archaeophytes, the hedgerow is defined as species-rich. Climbers and bramble do not count towards the total except for roses *Rosa* sp.

#### Biodiversity Metric 2.0 Condition Assessment

Condition assessment determines whether a habitat scores as high, medium or low quality habitat. The assessment criteria describe what components need to be present for the habitat to be judged to be of good quality.

#### *Criteria*

- A1. Height
- A2. Width
- B1. Gap – hedge base
- B2. Gap – hedge canopy continuity
- C1. Undisturbed ground and perennial vegetation
- C2. Undesirable perennial vegetation
- D1. Invasive and neophyte species
- D2. Current damage

#### **Results**

None of the hedgerows within the Site boundary were assessed as being of "importance" under the Hedgerow Regulations. However, all hedgerows were determined to be of 'moderate' or 'good' condition based on the Biodiversity Metric 2.0 condition assessment. Ten of the 37 hedgerows assessed (H3, H6, H9, H18, H19, H22, H26, H29, H31 and H36) were determined to be species-rich, each containing at least five woody species within a 30m section.

Full survey results are shown in Tables 1-10 below. Species floral lists for hedgerows can be found in Appendix 7.2.

**Table 1** Hedgerow Survey Results Overview

Number	Length (m)	Important Hedgerow? (As defined by 'Hedgerow Regs')	Species Rich? (5 or more woody species along selected 30m section?)	Condition: 'Good', 'Moderate' or 'Poor'? (As defined by the Biodiversity Metric 2.0 condition assessment)
H1	550	No	No	Good
H2	390	No	No	Moderate
H3	180	No	Yes	Moderate
H4	30	No	No	Moderate
H5	50	No	No	Moderate
H6	240	No	Yes	Moderate
H7	220	No	No	Good
H8	90	No	No	Good
H9	220	No	Yes	Moderate
H10	550	No	No	Moderate
H11	230	No	No	Good
H12	120	No	No	Good
H13	200	No	No	Good
H14	230	No	No	Good
H15	200	No	No	Moderate
H16	190	No	No	Moderate
H17	220	No	No	Good
H18	300	No	Yes	Good
H19	200	No	Yes	Good
H20	210	No	No	Good
H21	440	No	No	Good
H22	230	No	Yes	Moderate
H23	180	No	No	Good
H24	250	No	No	Good
H25	390	No	No	Moderate
H26	110	No	Yes	Good
H27	790	No	No	Moderate
H28	360	No	No	Good
H29	290	No	Yes	Moderate
H30	270	No	No	Good
H31	360	No	Yes	Good
H32	440	No	No	Good
H33	210	No	No	Good
H34	110	No	No	Moderate
H35	300	No	No	Good
H36	410	No	Yes	Moderate
H37	240	No	No	Good







Table 8 Hedgerow Survey Results (31 - H37)

Date of Survey	17th/18th/24th March 2020
Surveyor	Alexandra Cole & Carly Howes
Project Number	4857
Project Name	South West Milton Keynes



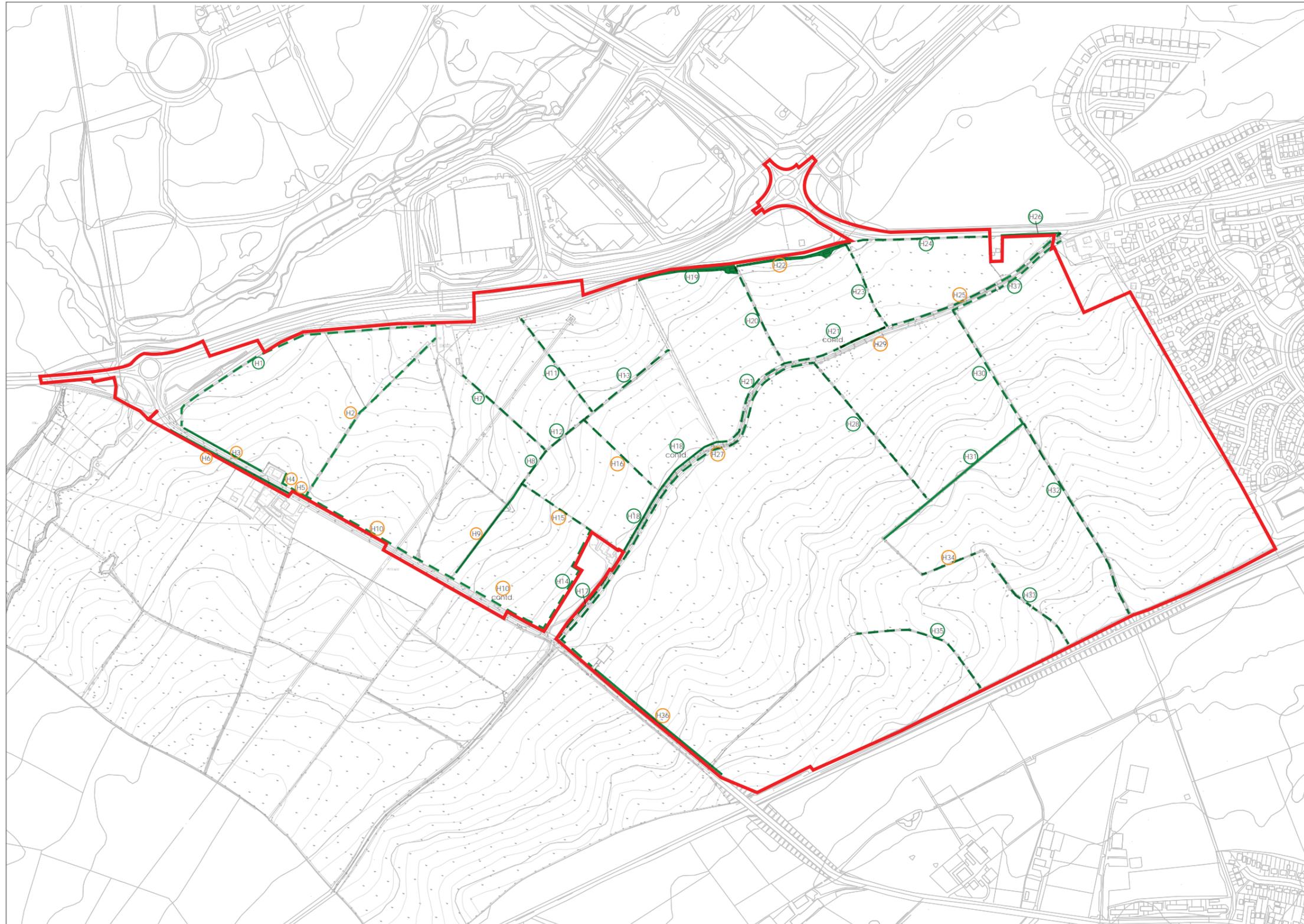
General Hedgerow Information	H31	H32	H33	H34	H35	H36	H37
Does the hedgerow lie within, or mark the boundary to, a private garden?	No						
Hedgerow length (m)	360	440	210	110	300	410	240
Number of 30m sections for specified sampling technique	3	3	3	2	3	3	3
Average number of native woody species (following specified sampling technique)	2	1.3	0.7	0.5	1.7	2.3	2.3
Number of native woody species (along total length)	6	6	5	2	6	8	9
Species-rich hedgerow? (5 or more native woody species in 30m section)	Yes	No	No	No	No	Yes	No

Table 9 Assessment of Important Hedgerows (H31 - H37)

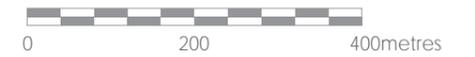
Regulation 4: Criteria for determining "Important Hedgerows"							
Has the hedgerow existed for 30 years or more? (Consider age of trees/coppice and review aerial photography or historic mapping.)	Yes						
If so, does it meet one or more of the criteria listed in Part II of Schedule 1, listed below?	No						
As such, is it an Important hedgerow? (Identify Important hedgerows in <b>bold</b> )	No						
Schedule 1: Additional Criteria for Determining "Important Hedgerows"- Part II, Criteria							
Archaeology and history							
Has a desk-based assessment of historic/archaeological significance been undertaken?	No						
If so, has the hedgerow been considered 'Important' under these criteria?	-	-	-	-	-	-	-
Wildlife and Landscape							
Does the hedgerow 'contain' any of the following species, or are there records of these species (within the last five or ten years for animals or plants, respectively) with no subsequent <i>negative</i> records?:	No						
Those listed in Part 1 of Schedule 1 (birds protected by special penalties e.g. barn owl), Schedule 5 (animals which are protected e.g. hazel dormouse) and schedule 8 (plants which are protected e.g. bluebell) of the Wildlife and Countryside Act 1981.	No						
Those categorised as a declining breeder (category 3) in 'Red Data Birds in Britain'	No						
Those categorised as 'endangered', 'extinct', 'rare' or 'vulnerable' in Red data books for Vascular Plants, Insect, Invertebrates other than insects (see primarily legislation for more details)	No						
Does the hedgerow include at least 7 woody species? (Subject to specified sampling technique)	No						
Does the hedgerow include 6 woody species and support at least 3 additional features, or 5 woody species and at least 4 of the following additional features, as set out below?:	No						
Bank or wall which supports the hedge along half its length?	No						
Gaps <10% aggregate length of hedgerows?	Yes	Yes	No	Yes	Yes	Yes	Yes
One standard tree per 50m?	No	No	No	No	No	No	Yes
At least three woodland (ground flora) species within 3m of the hedgerow? (Refer to list.)	No						
Ditch along at least half hedgerow length?	Yes						
At least 4 points based on the following: 1 point for 'connection' with another hedgerow and 2 points for connection with a pond or broadleaved woodland? (N.B. A hedgerow is considered connected when it meets or ends within 10m of another feature, where it would meet it if continued.)	No	Yes	No	No	No	No	No
Parallel hedgerow within 15m?	No	No	No	No	No	No	Yes
Does the hedgerow include at least 6 woody species including one of the following: black-poplar tree, large-leaved lime, small-leaved lime or wild service-tree?	No						
Is the hedgerow adjacent to a bridleway or footpath and include at least four woody species and two additional features?	No						

**Table 10** Biodiversity Metric 2.0 Condition Assessment Criteria

Number	A1	A2	B1	B2	C1	C2	D1	D2
H1	✓	✓	✓	✓	✓	X	✓	X
H2	✓	✓	✓	✓	X	X	✓	X
H3	✓	✓	✓	✓	X	X	✓	X
H4	✓	✓	✓	✓	X	X	✓	X
H5	✓	✓	✓	✓	X	X	✓	X
H6	✓	✓	✓	✓	X	X	✓	X
H7	✓	✓	✓	✓	X	✓	✓	✓
H8	✓	✓	✓	✓	X	✓	✓	✓
H9	✓	✓	✓	✓	X	X	✓	✓
H10	✓	✓	✓	✓	X	X	✓	X
H11	✓	✓	✓	✓	X	✓	✓	✓
H12	✓	✓	✓	✓	X	✓	✓	✓
H13	✓	✓	✓	✓	X	✓	✓	✓
H14	✓	✓	✓	✓	✓	X	✓	✓
H15	✓	✓	✓	✓	X	✓	✓	X
H16	✓	✓	✓	✓	X	X	✓	✓
H17	✓	✓	✓	✓	X	X	✓	✓
H18	✓	✓	✓	✓	X	✓	✓	✓
H19	✓	✓	✓	✓	X	✓	✓	X
H20	✓	✓	✓	✓	X	✓	✓	X
H21	✓	✓	✓	✓	X	✓	✓	✓
H22	✓	✓	✓	✓	X	✓	✓	✓
H23	✓	✓	✓	✓	X	X	✓	X
H24	✓	✓	✓	✓	X	✓	✓	✓
H25	✓	✓	✓	✓	X	✓	X	✓
H26	✓	✓	✓	✓	X	X	✓	✓
H27	✓	✓	✓	✓	X	✓	✓	✓
H28	✓	✓	✓	✓	X	X	✓	X
H29	✓	✓	✓	✓	X	✓	✓	✓
H30	✓	✓	✓	✓	X	X	✓	✓
H31	✓	✓	✓	✓	X	✓	✓	✓
H32	✓	✓	✓	✓	X	✓	✓	✓
H33	✓	✓	✓	✓	X	✓	✓	✓
H34	✓	✓	✓	X	X	✓	✓	✓
H35	✓	✓	✓	✓	X	X	✓	✓
H36	✓	✓	✓	✓	X	✓	✓	✓
H37	✓	✓	✓	✓	X	X	✓	X



-  Site boundary
-  Species-rich hedgerow
-  Species-poor hedgerow
-  Hedgerow in 'good' condition
-  Hedgerow in 'moderate' condition



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<b>Project</b>	South West Milton Keynes	<b>Date</b>	March 2020	<b>Drawing No.</b>	CSA/4857/115
<b>Drawing Title</b>	Figure 7b - Hedgerow Survey Plan	<b>Scale</b>	Refer to scale	<b>Rev</b>	-
<b>Client</b>	Taylor Wimpey UK Ltd, William Davis Ltd, Hallam Land Management Ltd, Bellcross Homes and Connolly Homes	<b>Drawn</b>	AC	<b>Checked</b>	JW

