EXTENDED PHASE 1 HABITAT SURVEY OF LAND OFF MARSH LANE, NEW MILLS, DERBYSHIRE
2012

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CONTENTS

1. INTRODUCTION 2

2. METHODOLOGY 3

3. RESULTS OF THE HABITAT SURVEY 4

4. PROTECTED SPECIES RESULTS 8

5. DATA SEARCH RESULTS 10

6. ASSESSMENT 11

7. RECOMMENDATIONS 13

APPENDIX 1 – TARGET NOTES
APPENDIX 2 – DATA SEARCH RESULTS

PHASE 1 HABITAT MAP

1.0 INTRODUCTION

1.1 Rachel Hacking Ecology Limited was commissioned by JR Consulting in 2012 to undertake an Extended Phase 1 Habitat Survey of land off Marsh Lane, New Mills, Derbyshire. The site is subject to a planning application (HPK/2012/0143) for 29 dwellings with improved access and parking provision.

1.2 The land off Marsh Lane, New Mills (OS grid reference: SK007854) mainly comprises an old quarry which has become heavily vegetated. The quarry has been unused for over 100 years. Parts of the site are steep quarry faces. A small part of the site is a private garden and the proposed access route closely follows an existing access drive and disused yard. The site is 1 ha in size.

1.3 The aims of the survey were to:

- Describe and map the habitats present on the site
- Assess the potential for protected species to be present on the site or just outside the immediate site boundary
- Identify where further survey may be necessary.

2.0 METHODOLOGY

2.1 The Extended Phase 1 Habitat survey was undertaken to JNCC standards. The site was walked, along with the adjacent habitats, and each habitat was mapped. Target Notes (species lists) were taken at locations of botanical interest. All botanical nomenclature follows Stace, C. A., 2010. *New Flora of the British Isles,* 3rd Ed. Cambridge University Press. A Phase 1 habitat map was produced showing habitat boundaries.

2.2 During the Phase 1 survey, the habitats were assessed for their potential to support protected species. Any evidence found of potential or definite protected species activity was noted. This included, but was not limited to, searching for evidence of Badger activity such as setts, latrines or mammal runs; assessing any trees or buildings present for their potential to support bats and assessing any waterbodies present for Great crested Newt.

2.3 In addition to the field visit, a data search was carried out for the site and for 1km around the site. Derbyshire Wildlife Trust was approached to provide records of any protected species or Biodiversity Action Plan (BAP) species (Local and National) within the 1km radius.

2.4 Rachel Hacking, Principal Ecologist, undertook the survey on 2nd August 2012. The weather was warm and dry. Rachel has over ten years of experience of habitat and protected species surveys. August is an optimum time of year to conduct an Extended Phase 1 Habitat Survey.

3.0 RESULTS OF THE HABITAT SURVEY

3.1 Target Notes are presented in Appendix 1. The Phase 1 Habitat Map can be found at the back of the report. The habitats are described below. The most abundant Phase 1 habitats within the site boundary are tall, ruderal herb and dry heath/acid grassland mosaic. It must be noted that some of the site was difficult to access due to the slopes and the extremely dense vegetation.

Tall, Ruderal Herb

3.2 Tall, ruderal herb occurs across most of the old quarry site (see Photographs 1 and 2). This habitat is characterised by tall vegetation comprising rank species. The dominant species at this site is Rosebay Willowherb *Chamerion angustifolium* with dense patches of Stinging Nettle *Urtica dioica.* Other species which occur less frequently include Hogweed *Heracleum sphondylium*, False Oat-grass *Arrhenatherum elatius* and Greater Willowherb *Epilobium hirsutum.* Target Note 1 – Appendix 1 details this habitat.

3.3 The tall, ruderal herb habitat is homogenous across the flatter areas of the site and some of the eastern slopes. In places, shorter vegetation grows such as pockets of acid grassland but this is also becoming encroached with Rosebay Willowherb. Tall, ruderal herb also occurs within the private garden and on the route of the proposed new access.



Photograph 1 showing dense head-high tall, ruderal herb



Photograph 2 looking across the site at the dense tall, ruderal herb

Dry Heath/Acid Grassland Mosaic

3.4 Dry heath/acid grassland mosaic occurs on the eastern slopes of the old quarry (see Photograph 3). This habitat is a mixture of low-growing shrubs and acid grassland. There are large patches of Heather *Calluna vulgaris* and Bilberry *Vaccinium myrtillus.* The grassland comprises species such as Wavy Hair-grass *Deschampsia flexuosa*, Mat-grass *Nardus stricta*, Heath Bedstraw *Galium saxatile* and Sheep's Sorrel *Rumex acetosella.* There are small areas of rock outcrops which appears to quarry spoil. Target Note 2 – Appendix 1 details the plant species from this habitat.



Photograph 3 showing dry heath/acid grassland mosaic on rock outcrop

Amenity Grassland

3.5 Amenity grassland occurs within the private garden at the western edge of the site (see Photograph 4) and in front of the line of cottages to the north. Amenity grassland is typical of lawns which are managed by mowing. The amenity grassland on site is species-poor and comprises Yorkshire Fog *Holcus lanatus*, Perennial Rye-grass *Lolium perenne*, Annual Meadow-grass *Poa annua*, Common Daisy *Bellis perennis* and Common Ragwort *Senecio jacobaea.*



Photograph 4 showing amenity grassland within private garden

Semi-natural Broad-leaved Woodland

3.6 Within parts of the site, natural regeneration of broad-leaved trees has occurred. The trees are mature and grouped together and have been classified as semi-natural broad-leaved woodland. The species are mixed and include predominantly Sycamore *Acer pseudoplatanus* with Ash *Fraxinus excelsior*, Downy Birch *Betula pubescens*, Silver Birch *Betula pendula* and Rowan *Sorbus aucuparia* (see Photograph 5). Dense Buddleja *Buddleja davidii* occurs beneath some of the canopy.



Photograph 5 showing dense broad-leaved trees to the right

Introduced Shrub

3.7 A small strip of introduced shrub occurs within the private garden. It forms a border to the amenity grassland and has planted shrubs within it such as *Cotoneaster* var.

Other habitats

3.8 Hardstanding occurs along the route of the proposed access. This is a mixture of gravel and tarmac driveways. Part of the front gardens to the cottages have been mapped as they lie within the site boundary. These gardens are a mixture of hard landscaping and garden shrubs. Stone walls occur within the western half of the site, surrounding private properties.

Tree and Scattered Scrub

3.9 Throughout the site, particularly within the tall, ruderal herb habitat, are a number of young trees which have regenerated naturally. The species include Rowan *Sorbus aucuparia*, Silver Birch *Betula pendula* and Ash *Fraxinus excelsior.* Shrubs have also regenerated naturally an these are mapped as scattered scrub. Species include Hawthorn *Crataegus monogyna* and Goat Willow *Salix caprea.*

4.0 PROTECTED SPECIES RESULTS

4.1 No evidence of protected species could be located during the site survey.

Badger

4.2 Badgers *Meles meles* are protected under the Protection of Badgers Act 1992. This Act, for example, makes it illegal to disturb a Badger whilst it is in a sett, to kill, injure or take a badger and to obstruct the entrance to a Badger sett.

4.3 No Badger sett could be located during the survey. It should be noted that certain parts of the site could not be accessed but these were scanned using binoculars for signs of dug earth. No mammal runs were evident on the site or leading away from the site. No other evidence of Badger activity could be located.

Bat

4.4 All bat species are European Protected Species under the Conservation of Habitats and Species Regulations 2010 and are also fully protected under the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000, the Natural Environment and Rural Communities Act (NERC, 2006). It is illegal to disturb or damage a bat roost.

4.5 No buildings are present on the site other than a steel container. Most of the trees present on the site did not appear to be suitable to support a bat roost. The majority were not mature enough to support cavities and none of these trees supported Ivy *Hedera helix.* The quarry did not support any caves or adits. A mature Horse-chestnut *Aesculus hippocastanum* occurs close to the proposed access route. This tree had the most potential to support bats but no cavities could be seen.

Barn Owl

4.6 All bird species are protected at their nest under the Wildlife and Countryside Act 1981 but Barn Owls *Tyto alba* are afforded extra protected through inclusion of Schedule 1 of the Act which makes it an offence to ‘recklessly disturb a Barn Owl whilst it is building a nest….or recklessly disturb a Barn Owl whilst near a nest….or recklessly disturb dependent young of a Barn Owl’.

4.7 No evidence of Barn Owl activity could be located. There are no habitats on site suitable to provide a Barn Owl nest. The dense, tall vegetation is not optimum foraging habitat for Barn Owl.

Great Crested Newt

4.8 Great Crested Newt *Triturus cristatus* is a European Protected Species (EPS). It is listed under Annex IV of the EC Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. This is implemented in the UK through The Conservation of Habitats and

Species Regulations 2010 and the species is fully protected under the Wildlife and Countryside Act 1981 (as amended).

4.9 No ponds are present on the site. The nearest pond that could be located is approximately 200 metres to the north. A main road, housing and a stream lie between the site and the pond. No other ponds lie within 250 metres of the site.

4.10 Terrestrial GCN habitat is represented on the site by the tall vegetation. Newts will use habitats such as tall, ruderal herb and grassland to forage within and for cover. Tree roots can be used for hibernation habitat. The rock outcrops also provide terrestrial newt habitat.

Water Vole

4.11 Water Vole is afforded full protection under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence, for example, to:

- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
- intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose;
- intentionally kill, injure or take water voles.

4.12 There are no habitats on site which are suitable for Water Vole.

Nesting Birds

4.13 All bird species are protected at their nest under the Wildlife and Countryside Act 1981.

4.14 Within the site are plenty of habitats which birds could utilise to build nests in such as mature trees and scrub.

Other species – Common Reptiles

4.15 The dry heath/acid grassland area with its rock outcrops is suitable for reptiles such as Common Lizard *Zootoca vivipara* or Adder *Vipera berus.*

Other species - Invertebrates

4.16 The dry heath/acid grassland area supported a number of invertebrates including butterflies, hoverflies, bumblebees and beetles.

5.0 DATA SEARCH RESULTS

5.1 The list of the protected species and BAP species from the data search, provided by Derbyshire Wildlife Trust, can be found in Appendix 2.

Protected species

5.2 The data search shows that there are records for Water Vole from the River Sett. These records are from the 1980s. The River Sett lies over 700 metres to the west of the site.

5.3 Four records of bat roosts were provided. The nearest is a Brown Long-eared bat roost at St. Georges Church, approximately 200 metres to the north-west. All of the bat roost records are from buildings within New Mills.

5.4 Records were provided for three Badger setts within the 1km search radius. The nearest Badger sett is approximately 800 metres away.

5.5 No other protected species records were provided.

Biodiversity Action Plan species

5.6 A number of UK BAP bird species have been recorded from around the site, mainly from Mew Mills town centre. Brown Hare has also been recorded from approximately 200 metres from the site. UK BAP Moth and butterfly records exist from the Local Wildlife Site ‘Mill Fields’,

Other species

5.7 A number of plant species, which are uncommon in Derbyshire, have been recorded from the search area. None of these species were recorded from the site during the survey.

Protected sites

5.8 A Local Nature Reserve (LNR) Goytside Meadows occurs over a kilometre to the south-west. A number of Local Wildlife Sites (LWS) occur within the search area. The nearest are River Goyt at Goytside LWS and Mill Fields LWS, both of which lie approximately 600 metres to the south-west of the site.

6.0 ASSESSMENT

HABITATS

6.1 The Phase 1 Habitats present on the site are common throughout the UK. No nationally rare or locally rare plant species were located during the Extended Phase 1 Habitat Survey.

6.2 The dry heath/acid grassland mosaic habitat is the most species-rich habitat on the site. This habitat provides a good pollen and nectar source for invertebrates and is also suitable habitat for common reptiles.

6.3 The tall, ruderal herb habitat is species-poor but provides cover for small mammals and birds and a pollen and nectar source for invertebrates. The semi-natural broad-leaved woodland is species-poor. Sycamore *Acer pseudoplatanus* dominates this habitat. However, the woodland does provide nesting opportunities for birds. Similarly, the trees and scrub on the site also provide habitat for birds.

6.4 The remaining habitats offer little ecological value. The amenity grassland is species-poor and hostile to wildlife due to the lack of cover.

PROTECTED SPECIES

Badger

6.5 No Badger setts or signs of Badger activity could be located during the survey. The nearest record of a Badger sett is approximately 800 metres away from the site. Badger is not thought to be a constraint on development at this time.

Bats

6.6 There is little opportunity for bats to roost within the site. Most of the trees are too young to support cavities. No buildings are present on site. The nearest bat roosts are within used buildings within New Mills town centre. Bats are not thought to be a constraint on development at this time.

Barn Owl

6.7 No records were provided for Barn Owl from the search area and the site does not support any suitable habitat for a Barn Owl nest. Barn Owl is not thought to be a constraint on development at this time.

Water Vole

6.8 There are no suitable habitats for Water Vole on site. Water Vole records exist from the River Sett, to the west of the site. Water Vole is not considered to be a constraint on development at this time.

Great Crested Newt

6.9 No ponds exist on site. The nearest pond which could be located is 200 metres to the north. No records were provided for Great Crested Newt in the search area. It is unlikely that Great Crested Newts are using the site. However, the recommendations for reptiles (Section 7) will also safeguard any existing newt population.

Nesting Birds

6.10 The site did support many suitable nesting habitats for birds, e.g. within the mature trees and the scrub. A nesting bird survey may be required depending on the future of the site (see Section 7 - Recommendations) although nesting birds can be mitigated for by allowing no tree works (or works on other potential nest sites) to be carried out within the bird nesting season (March – August).

Reptiles

6.11 No records of any reptiles were provided by the data search and no reptiles were seen during the site survey. However, the dry heath/acid grassland mosaic does have the potential to be used by reptiles. It is recommended (see Section 7) that an ecological watching brief is implemented during the vegetation clearance of the heathland habitat. This would safeguard any reptiles that may occur within this habitat.

BAP Habitats and Species

6.12 Brownfield land is a priority habitat in the UK Biodiversity Action Plan. Brownfield sites have the potential to support many species of plant and animal due to the habitat diversity and structure. Open areas of brownfield sites tend to be the most ecologically valuable. The site at Marsh Lane supports mainly homogenous vegetation which is species-poor. The vegetation has been allowed to develop and is reverting to woodland. Therefore, the site is not considered to be a good example of a species-rich brownfield site.

6.13 Derbyshire Biodiversity Action Plan (BAP) lists ‘Moorland and Heathland’ within its Habitat Action Plans (HAP). Typically this concerns large swathes of moor and heath. Reptiles are also listed in the Derbyshire BAP. Objectives within the BAP aim to safeguard the habitats ad species.

7.0 RECOMMENDATIONS

7.1 Due to the lack of records of protected species for the site and the lack of evidence during the habitat survey, no further protected species work is required. However, there are habitats on site which could support UK BAP reptiles such as Common Lizard or Adder. It is therefore recommended that the following measures be implemented:

- Before clearance begins of the heathland areas (the mound to the east), an ecologist conducts a walkover survey to check for any reptiles/amphibians/other wildlife.

- An ecologist should be present on site during the vegetation clearance of this area in case any species are found during the clearance.

- If any tree works or works to the scrub need to be conducted within the bird nesting season (March to August) then a nesting bird check will be carried out immediately prior to the works commencing.

7.2 The loss of the pollen and nectar source from the site (e.g. the acid grassland) could be compensated for by designing a planting scheme that uses a mixture of native flowering species.

7.3 The loss of the trees on site will mean the loss of bird nesting habitat. It is recommended that bird boxes and/or bat boxes be installed on the new buildings.

APPENDIX 1 – TARGET NOTES

The DAFOR scale proceeds the species name. This indicates the abundance of the plant within the habitat. D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare. The pre-fix "L" indicates Locally, where the plant can be, for example, dominant within only one locality of the habitat.

Target Note 1: **Tall, Ruderal Herb**

Scientific name	**Vernacular name**	**DAFOR rating**
Chamerion angustifolium	Rosebay Willowherb	D
Urtica dioica	Stinging Nettle	LD
Arrhenatherum elatius	False Oat-grass	LF
Heracleum sphondylium	Hogweed	LF
Epilobium hirsutum	Greater Willowherb	LF
Galium aparine	Cleavers	O
Rumex obtusifolius	Broad-leaved Dock	R

Target Note 2: Dry Heath/Acid Grassland Mosaic

Scientific name	**Vernacular name**	**DAFOR rating**
Deschampsia flexuosa	Wavy Hair-grass	LA
Calluna vulgaris	Heather	LF
Vaccinium myrtillus	Bilberry	LF
Galium saxatile	Heath Bedstraw	LF
Holcus lanatus	Yorkshire Fog	LF
Agrostis capillaris	Common Bent	LF
Digitalis purpurea	Foxglove	LF
Festuca rubra	Red Fescue	LF
Rumex acetosella	Sheep's Sorrel	O
Hieraceum sp.	Hawkweed	O
Nardus stricta	Mat-grass	O
Deschampsia cespitosa	Tufted Hair-grass	R

APPENDIX 2 – DATA SEARCH RESULTS

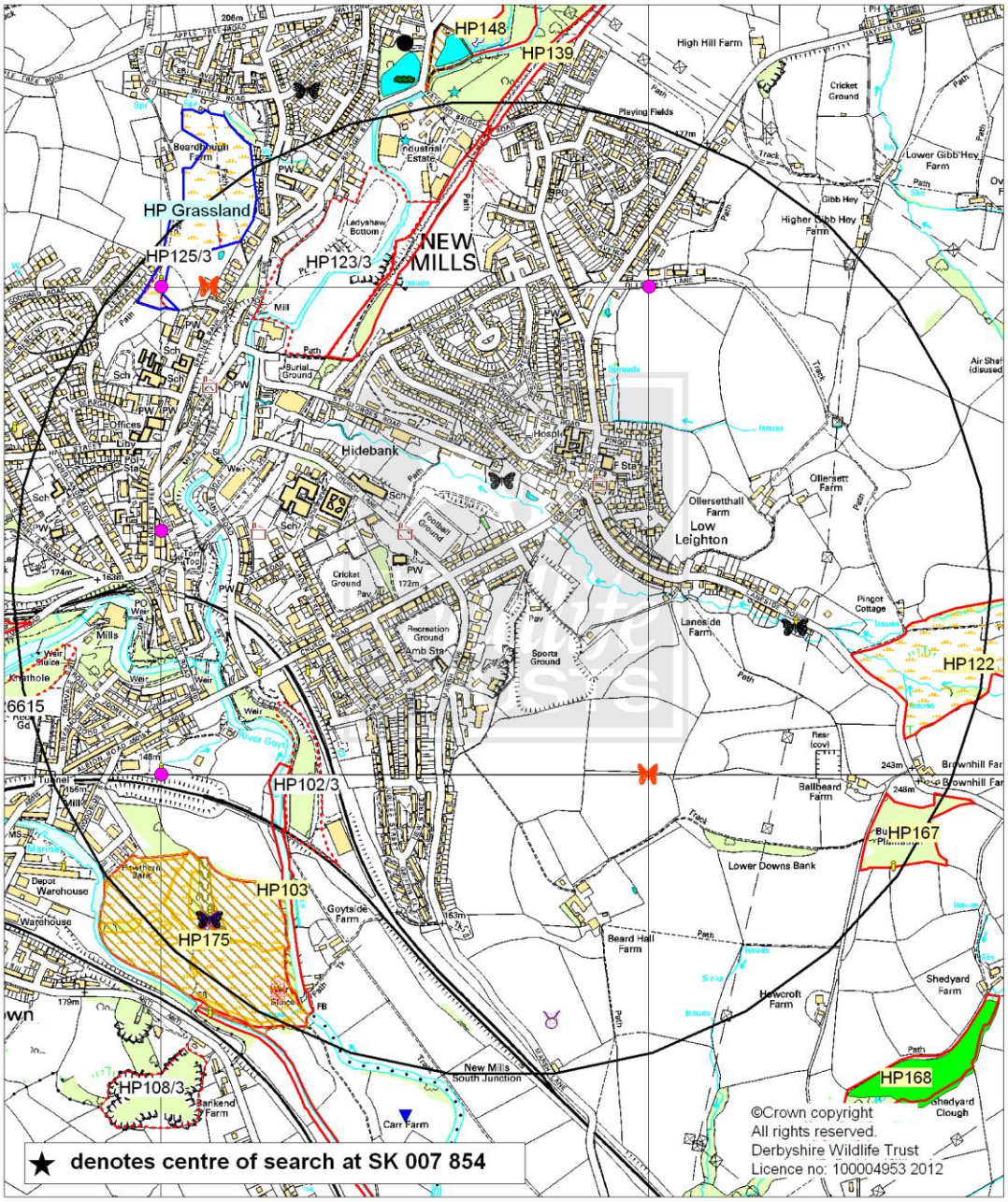
Water vole records				
OS Grid Ref	**Location**		**Date**	
SK 000 8960	New Mills		1970	
SK 010 860	Thornsett		1972	
SK 000 850	River Sett, The Torrs, New Mills		1980	
SK 000 860	River Sett, nr High Hills Road		1980	
SK 000 855	unspecified		1985	
SK 000 850	River Sett, Watford Bridge		1986	
SK 000 850	River Sett, Watford Bridge		1986	
Bat roost records				
Species	**OS Grid Ref**	**Location**	**Date**	
Brown Long-eared bat	SK005855	St George's Church	2010	
Common pipistrelle	SK001858	New Mills Adult Education Centre	2006	
Common pipistrelle	SK002855	Hyde Bank Road	2006	
Common pipistrelle	SK009856	Falcon Close	2006	
Brown Long-eared bat	SK005855	St George's Church	2009	

UK BAP Bird species				
Species		**OS Grid Ref**	**Date**	
Song Thrush	*Turdus philomelos*	SK008845	2001	
Skylark	*Alauda arvensis*	SK001847	1992	
Dunnock	*Prunella modularis*	SK001847	1992	
Dunnock	*Prunella modularis*	SK001847	2001	
Bullfinch	*Pyrrhula pyrrhula*	SK001847	2001	
UK BAP Mammal species				
Species		**OS Grid Ref**	**Date**	
Lepus capensis	Brown Hare	SK008845	2001	
UK BAP moth species (DWT records)				
Species		**OS Grid Ref**	**Date**	
Cinnabar	*Tyria jacobaeae*	SK001847	1992	
UK BAP butterfly species (DWT records)				
Species		**OS Grid Ref**	**Date**	
Wall	*Lasiommata megera*	SK001860	1999	
Wall	*Lasiommata megera*	SK001847	1992	
Small Heath	*Coenonympha pamphilus*	SK001847	1992	

Nationally Threatened (DRDB) plant species				
Latin	**Common**	**Location**	**OS Grid Ref**	**Date**
Euphorbia exigua	Dwarf Spurge	New Mills	SK013853	1980
Euphorbia exigua	Dwarf Spurge	New Mills	SK013853	1980
Stellaria palustris	Marsh Stitchwort	Butterbank Plantation	SK015848	1991
Locally Scarce or Declining (DRDB) plant species				
Latin	**Common**	**Location**	**OS Grid Ref**	**Date**
Agrimonia procera	Fragrant Agrimony	The Torrs, footpath nr.	SK003852	1997
Callitriche hamulata sens.str.	Intermediate Water-Starwort	Watford Lodge, nr	SK0086	1978
Dryopteris carthusiana	Narrow Buckler-fern	The Torrs, New Mills	SK0085	1984
Epilobium roseum	Pale Willowherb	unspecified	SK0085	1997
Epilobium roseum	Pale Willowherb	The Torrs, New Mills	SK002852	1984
Scirpus sylvaticus	Wood Club-rush	Watford Bridge	SK0086	1995
Triglochin palustre	Marsh Arrowgrass	Mill Fields	SK001847	1992
Valeriana dioica	Marsh Valerian	Mill Fields	SK001847	1992

Veteran Trees (DWT records only)				
OS Grid Ref	**Location**	**Species**	**Date**	
SK 002 845	Gotside Meadows LNR, New Mills	Alder	2007	
SK 002 845	Gotside Meadows LNR, New Mills	Alder	2007	
SK 002 845	Gotside Meadows LNR, New Mills	Alder	2007	
SK 002 845	Gotside Meadows LNR, New Mills	Alder	2007	
SK 006 862	Sett Valley Trail	Elm	2008	
LNR	**OS Grid Ref**			
Goytside Meadows LNR	SK 000 846			
Local Wildlife Sites				
Ref No	**Name**		**Area (ha)**	**Ecological feature**
HP175	Mill Fields		0.4	Lowland fen
HP 122	Hollinhurst Head Complex		7.55	Unimproved acid grassland, unimproved neutral grassland and wet grassland

HP 167	Butterbank Plantation		1.92	Ancient woodland, plantation broad-leaved woodland
HP 103	River Goyt at Goytside		1.18	Flowing water
HP 139	Sett Valley Trail		10	Habitat mosaic
HP 196	Mousley Bottom		17.27	Habitat mosaic
Semi natural grassland sites (regarded as Potential LWSs unless already designated as a LWS; not necessarily UK BAP habitat - may require survey)				
Ref No	**Name**	**Area (ha)**	**UK/LBAP**	**Ecological feature**
HP125/3	Beardhough Grassland	4.2		Unimproved acid grassland
	Goytside Hay Meadow	1.76		Semi-improved neutral grassland
Other recorded sites of interest				
Name		**Ref No**		
Scrub beside River Goyt		HP102/3		
River Sett Grassland		HP123/3		
Grove Street, New Mills		HPR6615		
Beardhough Grassland		HP125/3		



Produced for Rachel Hacking Ecology Ltd

by Derbyshire Wildlife Trust
August 2012

50 YEARS

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GENERAL KEY TO GIS MAPS

NB Not all these symbols may appear on the map supplied

- otter (BAP) record
- badger record (confidential)
- fresh water crayfish
- BAP great crested newt with 500m buffer zone
- bat roost
- water vole (BAP) record
- BAP bird record
- kilarney fern
- Derbyshire Red Data Book Plant Species
- veteran trees
- Pond (not necessarily BAP habitat)
- Local Wildlife Site (HP111)
- other recorded site of interest (DE030/3)
- native black poplar record
- BAP mammal record
- BAP reptiles
- BAP bumblebee
- BAP beetle
- BAP butterfly record
- BAP moth record
- BAP fish record
- BAP vascular plant record
- toad record or toad crossing
- swift
- species rich hedgerow
- land in Countryside/Environment Stewardship
- potential Local Wildlife Site (HP CWS)
- DWT nature reserve (Cliee Dale)
- SSSI
- SAC
- SPA
- National Nature Reserve
- LNR
- RIGS (Regionally Important Geological Sites)
- Semi Natural Grassland

Ancient Woodland from Ancient Woodland Inventory

- Ancient semi-natural broad-leaved woodland
- Plantation on ancient woodland site

UK BAP Priority Habitats

- Lakes in Lowland Derbyshire
- Reedbed
- Purple moor grass and rush pasture
- Lowland heathland
- Lowland swamp and tall herb swamp
- Traditional orchard (not ground truthed)
- Mire
- Parkland

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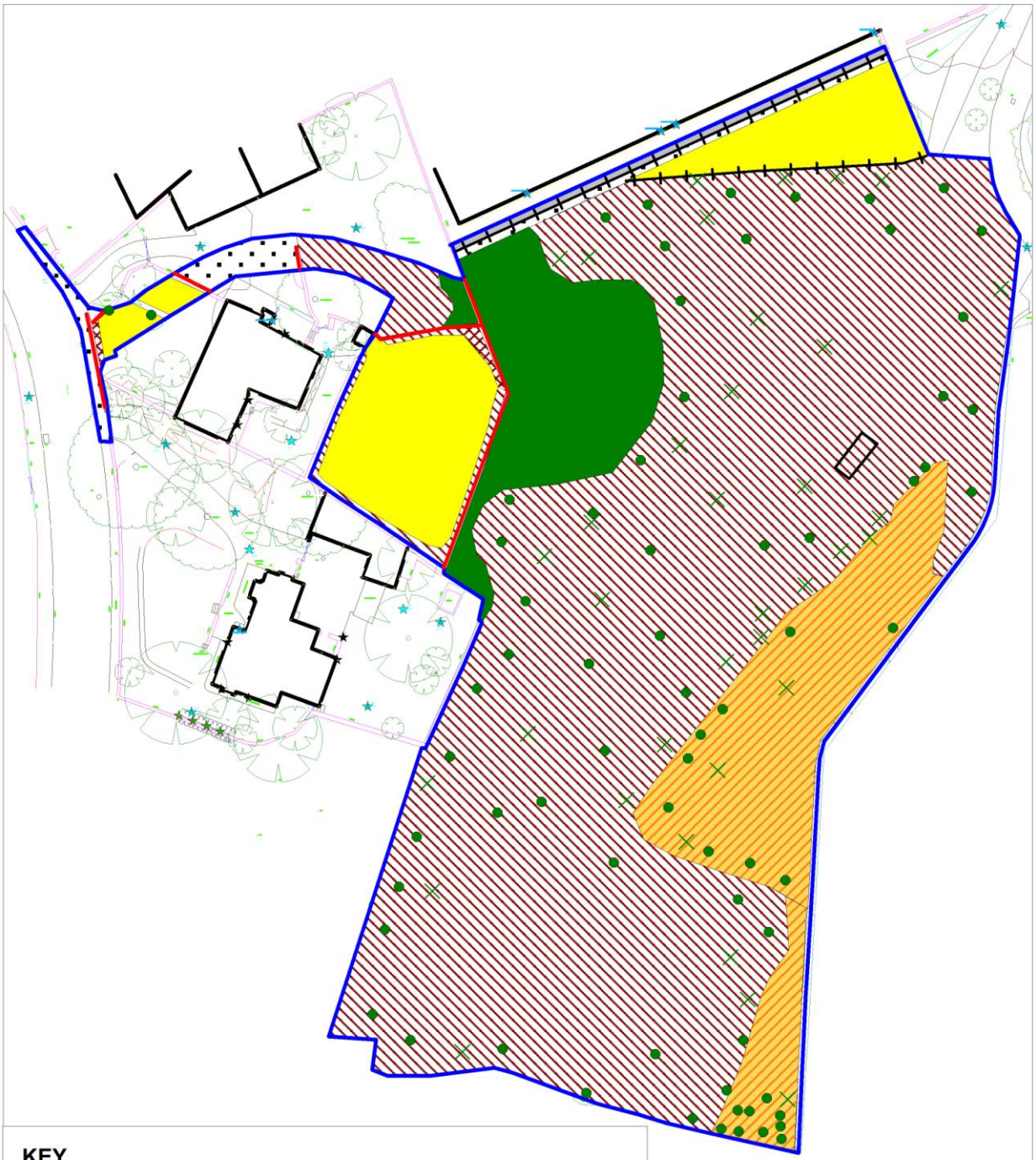
PHASE 1 HABITAT MAP



KEY

- Amenity Grassland
- Dry Heath/Acid Grassland Mosaic
- Gardens
- Hardstanding
- Introduced Shrub
- Semi-natural Broad-leaved Woodland
- Tall, Ruderal Herb
- Site Boundary
- Fence
- Wall
- Scattered Scrub
- Tree

Land off Marsh Lane
Phase 1 Habitat Map
Drawn by: RH
Date: 13/08/2012

Rachel Hacking Ecology Limited