EXTENDED PHASE 1 HABITAT SURVEY OF WHITE HALL, CHINLEY, DERBYSHIRE 2013

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PHASE 1 HABITAT MAP

1.0 INTRODUCTION

1.1 Rachel Hacking Ecology Limited was commissioned by E. Astall in 2013 to undertake an Extended Phase 1 Habitat Survey of White Hall, Chinley, Derbyshire. The site will be the subject of two planning applications, one for the construction of a number of detached dwellings, link-detached and terraces to the north of the site and one for the conversion of the existing stable block to residential use.

1.2 White Hall, Chinley (OS grid reference: SK037823) is a private estate, comprising a large house, ancillary buildings (including garaging and a summerhouse) and equestrian facilities (including stabling, a ménage and a horse-walker). The land surrounding the buildings comprises mainly ornamental planting and lawns to the south and grazed pasture to the north and west. Black Brook flows through part of the site.

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 whole estate of White Hall was walked over 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 31st May 2013. The weather was warm and dry. The surveyor has over eleven years of experience of habitat and protected species surveys. May 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 semi-improved grassland and amenity grassland.

Semi-improved Grassland

3.2 Semi-improved grassland occurs throughout the site; within the enclosed fields, within a small area in the bend of Black Brook and in pockets of the site surrounding the equestrian facilities. The grassland is grazed by horses and supports a number of species including Meadow Buttercup *Ranunculus repens*, Crested Dog's-tail *Cynosurus cristatus*, Meadow Vetchling *Lathyrus pratensis*, Meadow Foxtail *Alopecurus pratensis* and Ribwort Plantain *Plantago lanceolata* (see Target Note 1 – Appendix 1). Photographs 1 and 2 show the semi-improved grassland.

3.3 In places, the grassland is damp and these areas support a different flora, which includes Marsh Foxtail *Alopecurus pratensis*, Cuckooflower *Cardamine pratensis* and Bird's-foot Trefoil *Lotus corniculatus*.



Photograph 1 showing semi-improved grassland within the north-eastern field



Photograph 2 showing semi-improved grassland within the south-western field

Amenity Grassland

3.4 Large grass lawns occur within the southern half of the site (see Photograph 3). These are mown and have been classified as amenity grassland. This habitat is species-poor and supports Daisy *Bellis perennis*, Field Wood-rush *Luzula campestris* and Thyme-leaved Speedwell *Veronica serpyllifolia* (see Target Note 2 – Appendix 1).



Photograph 3 showing amenity grassland

Broad-leaved Plantation Woodland

3.5 Broad-leaved plantation woodland occurs along the eastern boundary of the site. Mature broad-leaved trees exist along the eastern bank of the stream and within an area of land bordering the formal gardens (see left-hand side of Photograph 1 and the right-hand side of Photograph 8). The species include Sycamore *Acer pseudoplatanus*, Horse-chestnut *Aesculus hippocastanum*, Beech *Fagus sylvatica* and Lime *Tilia x europaea.* The under-storey includes Hawthorn *Crataegus monogyna*, Holly *Ilex aquifolium* and Goat Willow *Salix caprea.*

Introduced Shrub

3.6 Introduced shrub occurs throughout the formal gardens. The habitat comprises planted ornamental shrubs (see Photograph 4). These include Snowberry *Symphoricarpos albus*, Rhododendron varieties and Snow-in-summer *Cerastium tomentosum*.



Photograph 4 showing introduced shrub beds by Black Brook

Open Water

3.7 A large pond occurs on site (see Photograph 5). The pond supports little aquatic vegetation and the water is turbid. A stream flows into the pond at the north and water flows out of the pond through a channel towards the southern end. Clumps of Brooklime *Veronica beccabunga* and Soft Rush *Juncus effusus* occur in places at the edge of the water. The pond is shaded at its edges by mature broad-leaved trees.



Photograph 5 showing the pond

Flowing Water

3.8 A small stream flows north to south along the eastern edge of the site (see Photograph 6). The substrate is stony and the water level was extremely shallow at the time of the survey. The banks are also shallow and the entire stream is heavily shaded.



Photograph 6 showing the stream

3.9 Black Brook flows through the site in the south-eastern corner (see Photograph 7). This is a wide, slow-flowing waterbody where it enters the site. The Banks are stone walls and saplings have self-seeded within the walls.



Photograph 7 showing Black Brook

Arable (Flowerbed)

3.10 Within the formal gardens lie flowerbeds, mainly planted with Roses *Rosa var.* (see Photograph 8). These are classified as arable in a Phase 1 Habitat survey.



Photograph 8 showing the flowerbeds

Scattered Trees

3.11 Mature trees exist throughout the site. These are a mixture of broad-leaved and coniferous. The broad-leaved species include Horse-chestnut *Aesculus hippocastanum*, Beech *Fagus sylvatica*, Lime *Tilia x europaea* and ornamental Cherries *Prunus var.* The coniferous species include White Cedar *Thuja occidentalis* and Yew *Taxus baccata.*

Other habitats

3.12 Stone walls occur throughout the site and also border most of the site. Any hardstanding or gravel has been mapped as bare ground. The equestrian facilities, including the ménage, have also been mapped as bare ground.

4.0 PROTECTED SPECIES RESULTS

Badger

4.1 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.

4.2 No Badger sett could be located during the survey. No evidence of Badger activity was seen.

Bat

4.3 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.

4.4 Many buildings are present on the site and the majority of buildings are stone-built with pitched roofs. These include the main house and the stables. These buildings have the potential to support bats.

4.5 A number of mature trees on site support cavities which bats could utilise as roost sites. Cavities were noted in trees bordering the stream (see Photograph 9) and within the trees on the northern edge of the site.



Photograph 9 showing a cavity within one of the trees bordering the stream

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 protection 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 The buildings on site may offer potential habitat for a Barn Owl roost, particularly where there are openings in the brickwork, such as within the stables. None of the mature trees offer suitable habitat for a Barn Owl roost and no evidence of Barn Owl activity could be located during the survey.

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 A large pond is present on the site. This pond did not appear to offer optimum breeding habitat for Great Crested Newt (GCN) due to the lack of egg-laying material (aquatic vegetation). The pond may have been stocked with fish in the past. The pond is connected to a stream and so could support small fish such as Sticklebacks.

4.10 Terrestrial GCN habitat is represented on the site by the woodland, shrub beds and grassland. Newts will use habitats such as these to forage within and for cover and hibernation.

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 The small stream which flows north to south is not considered suitable for Water Vole. The water level was extremely low during the survey and the stream banks were extremely shallow. Water Voles prefer deep water for cover. No evidence of Water Vole activity, such as burrows or feeding remains, could be located. Black Brook may support Water Vole within its length but the part of Black Brook which flows through the site had stone wall and concrete banks. This type of bank does not offer suitable Water Vole habitat.

White-clawed Crayfish

4.13 White-clawed Crayfish *Austropotamobius pallipes* is protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to intentionally or recklessly kill or injure the species. It is a species of Principal Importance under the NERC Act 2006 and is listed on the IUCN Red List for Endangered and Threatened species.

4.14 White-clawed Crayfish are known to occur in Derbyshire. The section of Black Brook which flows through the site has limited potential to support White-clawed Crayfish within the stone walls where mortar has eroded away. The base of the walls is concrete which does not provide suitable habitat for this species.

Nesting Birds

4.15 All bird species are protected at their nest under the Wildlife and Countryside Act 1981 (as amended).

4.16 Within the site are plenty of habitats which birds could utilise to build nests in such as mature trees, woodland and shrubs. An active bird nest was located within one of the mature trees within the southern half of the site.

5.0 DATA SEARCH RESULTS

5.1 The full list of the protected species and BAP species from the data search, provided by Derbyshire Wildlife Trust, can be found in Appendix 2. No protected species records were returned from within the site.

Protected species

5.2 Three Water Vole records were returned from the data search. These records are all over ten years old and the exact locations not given. They are likely to have been taken from Black Brook or one of its tributaries.

5.3 Three records of bat roosts were provided. A bat roosts existed in 2007 within a dwelling on Stubbins Lane, to the north of the site, but the species of bat is unidentified. A Pipistrelle bat roost record from 1998 was provided from the hamlet of Whitehough, to the south of the site.

5.4 Confidential records were provided for four Badger setts within the 1km search radius. The nearest Badger sett is approximately 400 metres away.

5.5 No other protected species records were provided.

Biodiversity Action Plan species

5.6 A UK BAP bird species; Thrush *Turdus philomelos* record exists from 2007 from the village of Chinley. Four BAP butterfly records exist from the search area. These are likely to have been taken from public accessible areas.

Protected sites

5.7 A Local Nature Reserve (LNR) Stubbin Park occurs to the north of the site, on the northern side of the railway line. Four Local Wildlife Sites (LWS) occur within the search area. The nearest is Alders Lane Meadows, approximately 800 metres away to the north-east of site. This has been designated for its species-rich grassland.

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 semi-improved grassland on site provides a nectar and pollen source for invertebrates and offers limited cover for small mammals. The amenity grassland is species-poor and hostile to wildlife due to the lack of cover.

6.3 The mature plantation woodland and individual mature trees offer nesting habitat for birds and potential roosting habitat for bats.

6.4 The pond and watercourses on site, despite supporting little aquatic vegetation, offer habitat for amphibians and invertebrates.

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 400 metres away from the site. Badger is not thought to be a constraint on development at this time.

Bats

6.6 The buildings on site have the potential to be used by bats. The stable block will be the subject of a planning application for conversion to residential use and as such, a bat survey will be required of the building (see Section 7 – Recommendations). None of the other buildings on site will be affected by the proposed developments. No bat roost records were returned from within the site.

6.7 The mature trees on site have the potential to be used by bats as roosting sites where they support cavities. A few trees were noted to support cavities, particularly the trees bordering the stream but others have the potential to support cavities. None of the trees will be directly affected by the two proposed developments but if any development works take place in close proximity to a tree that has the potential to support bats, a bat survey of the tree will be required (see Section 7 – Recommendations).

Barn Owl

6.8 No Barn Owl records were provided from within the search area. None of the trees on site had the potential to support a Barn Owl roost. The stable block offers limited potential for Barn Owls and as such, a Barn Owl survey should be carried out prior to conversion.

Great Crested Newt

6.9 One pond exists on site. This is considered to be sub-optimal Great Crested Newt habitat. No other ponds could be located within 250 metres of the site. No records were provided for Great Crested Newt (GCN) in the search area. It is unlikely that Great Crested Newts exist on site. The proposed northern development of new build housing will take place on semi-improved grassland approximately 150m away from the pond. The conversion of the stable block will not affect any potential GCN habitat. GCN may need to be considered during the planning process and therefore, Reasonable Avoidance Measures seem the most pragmatic action (see Section 7 – Recommendations).

Water Vole

6.10 Water Vole records were returned from the data search but all were over ten years old and no definitive location given. Black Brook is known to support Water Vole but the section of Black Brook which flows through the site does not support optimal Water Vole habitat, having stone walls as banks. The stream on site is too shallow to support Water Vole. The two proposed developments will not affect the banks of the watercourses or the pond. Water Vole is not considered to be a constraint on development at this time.

White-clawed Crayfish

6.11 No records for White-clawed Crayfish were returned from the data search. Black Brook has the potential to support White-clawed Crayfish. However, the proposed developments will take place at least 100 metres from the banks of the brook and therefore, there will be no impact on the brook. White-clawed Crayfish is not considered to be a constraint on development at this time.

Nesting Birds

6.12 The site did support many suitable nesting habitats for birds, e.g. within the mature trees and the shrubs. 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).

7.0 RECOMMENDATIONS

Further Surveys

7.1 The presence of protected species is a material consideration when a planning authority is considering a planning application. The presence of protected species and the affect of the proposed development must be established before planning permission can be granted. Prior to a full planning application being made on the site, further surveys are required to determine whether mitigation and/or compensation will be required for any protected species. Following the findings from the extended Phase 1 survey, the following surveys or work may need to be undertaken:

- **Bat and Barn Owl survey** – A bat and Barn Owl survey will be required of the stable block due to the proposals to convert this building for residential use.

7.2 If any trees are to be affected by the development proposals, a bat survey may need to be carried out of the trees, if they support cavities.

7.3 Nesting bird surveys may be required if tree works are to be carried out within the bird breeding season (generally March to August). Trees works should be carried out outside of the bird breeding season, where practical.

Site Enhancement

7.4 Where possible, mature trees and woodland should be retained. The loss of part of the semi-improved grassland to the proposed development could be somewhat mitigated for by seeding an area on site with wildflower seed, to increase the species diversity on site.

7.5 Where practical, bird and bat boxes could be erected on trees or buildings to increase the opportunity on site for nesting/roosting.

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: **Semi-improved Grassland**

Scientific name	Vernacular name	DAFOR rating
Lolium perenne	Perennial Rye-grass	LA
Ranunculus repens	Creeping Buttercup	LA
Alopecurus pratensis	Meadow Foxtail	LF
Ranunculus acris	Meadow Buttercup	LF
Plantago lanceolata	Ribwort Plantain	LF
Cynosurus cristatus	Crested Dog's-tail	LF
Anthoxanthum odoratum	Sweet Vernal-grass	LF
Rumex obtusifolius	Broad-leaved Dock	O
Bellis perennis	Daisy	O
Taraxacum officinale agg.	Dandelion	O
Cerastium fontanum	Common Mouse-ear	O
Veronica serpyllifolia	Thyme-leaved Speedwell	O
Rumex acetosa	Sorrel	O
Luzula campestris	Field Wood-rush	O
Lotus corniculatus	Bird's-foot Trefoil	R
Lathyrus pratensis	Meadow Vetchling	R
Alopecurus geniculatus	Marsh Foxtail	R
Cardamine pratensis	Cuckooflower	R
Plantago major	Greater Plantain	R
Agrostis stolonifera	Creeping Bent	R

Target Note 2: Amenity Grassland

Scientific name	Vernacular name	DAFOR rating
Bellis perennis	Daisy	F
Lolium perenne	Perennial Rye-grass	F
Holcus lanatus	Yorkshire Fog	O
Rhytidiadelphus squarrosus	Moss	O
Ranunculus repens	Creeping Buttercup	O
Luzula campestris	Field Wood-rush	R
Veronica arvensis	Field Speedwell	R
Veronica serpyllifolia	Thyme-leaved Speedwell	R

APPENDIX 2 – DATA SEARCH RESULTS

Water vole records			
	OS Grid Ref	**Location**	**Date**
	SK0382	Buxworth	1973
	SK0482	unspecified	1997
	SK0482	unspecified	1997
Bat roost records			
Species	**OS Grid Ref**	**Location**	**Date**
Unidentified	SK035826	Meadow Side Cottage, Stubbins Lane, Chinley	2007
Pipistrelle bat	SK039820	Wilshaw, Whitehough, Chapel en le Frith	1998
Unidentified	SK0382	2 Hawthorne Close, Chinley	1985
UK BAP Bird species			
Species	**OS Grid Ref**	**Location**	**Date**
Turdus philomelos	SK043828	Chinley	2007
Turdus philomelos	SK043828	Chinley	2007
Turdus philomelos	SK043828	Chinley	2007
LNR			
Stubbin Park LNR			

Local Wildlife Sites			
Ref No	**Name**	**Ecological feature**	**Area (ha)**
HP042	Alders Lane Meadows	Unimproved neutral grassland	7.37
HP080	Crist Quarry	Wet grassland	2.68
HP081	Eccles Pike	Unimproved acid grassland	39.16
HP195	Chinley Community Meadow	Unimproved neutral grassland	1.79



Produced for
Rachel Hacking Ecology
by Derbyshire Wildlife Trust
20 June 2013

Derbyshire
Wildlife Trust

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

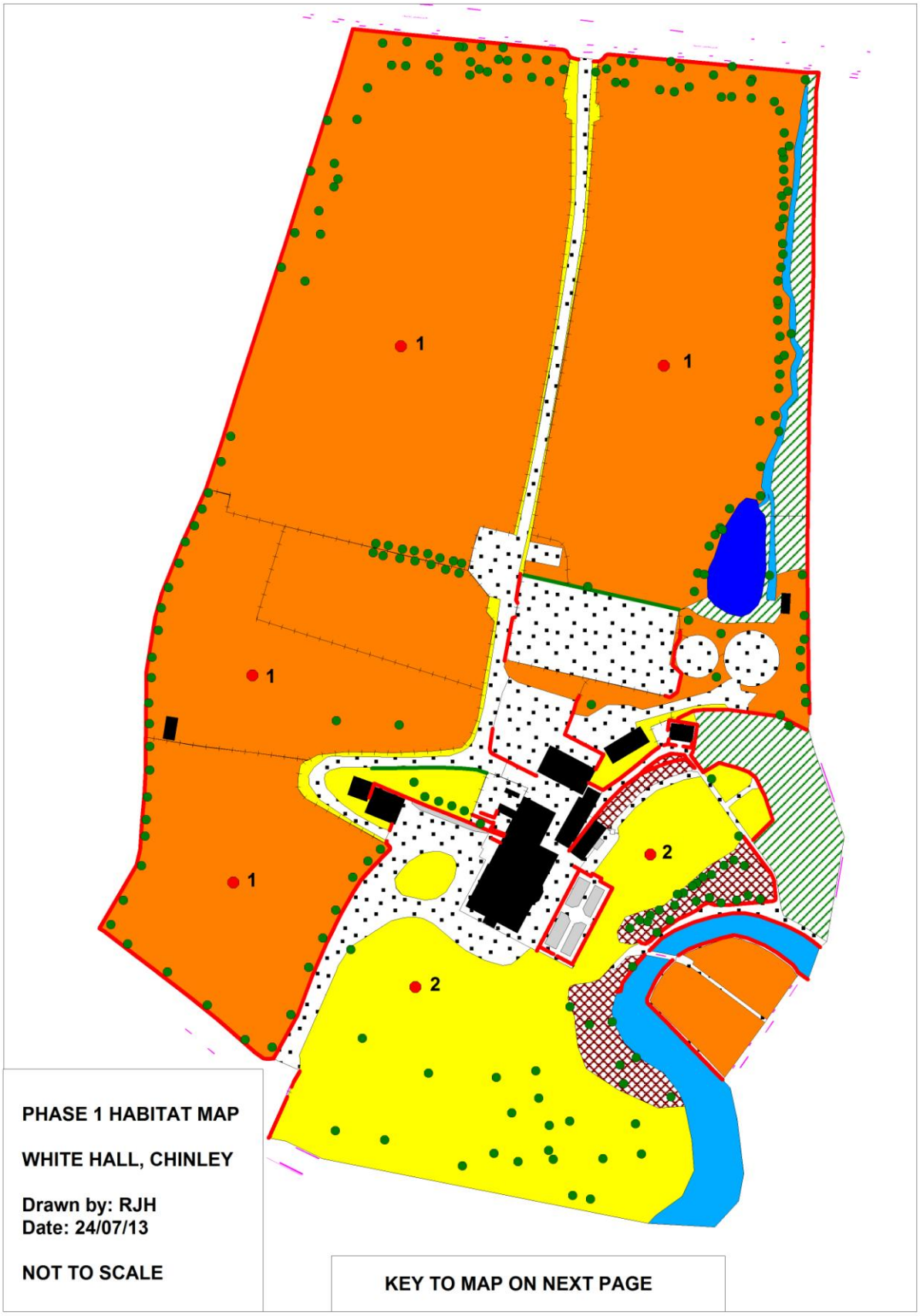
- Ancient semi-natural broad-leaved woodland
- Plantation on ancient woodland site

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



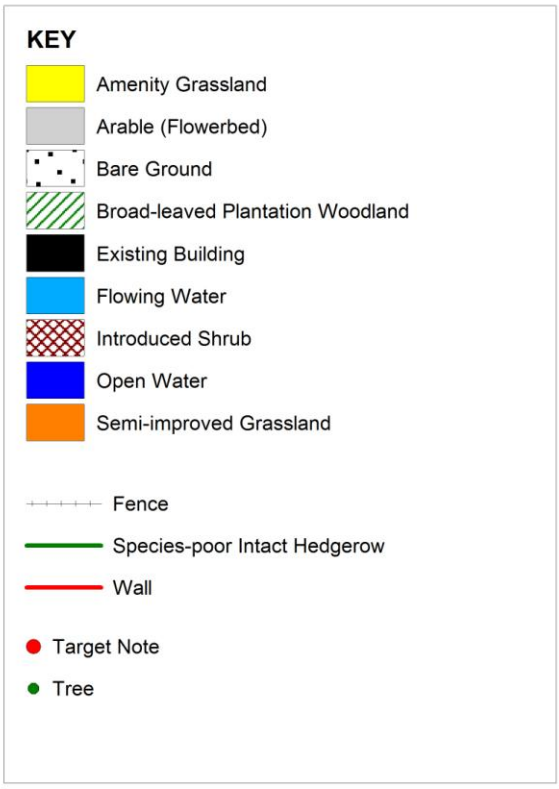
PHASE 1 HABITAT MAP

WHITE HALL, CHINLEY

Drawn by: RJH
Date: 24/07/13

NOT TO SCALE

KEY TO MAP ON NEXT PAGE


KEY
Amenity Grassland
Arable (Flowerbed)
Bare Ground
Broad-leaved Plantation Woodland
Existing Building
Flowing Water
Introduced Shrub
Open Water
Semi-improved Grassland
Fence
Species-poor Intact Hedgerow
Wall
Target Note
Tree