

AN ECOLOGICAL SURVEY
of
LAND AT BLUNT'S FARM,
FERNDOWN

for
Dorset Council

February 2023

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SUMMARY

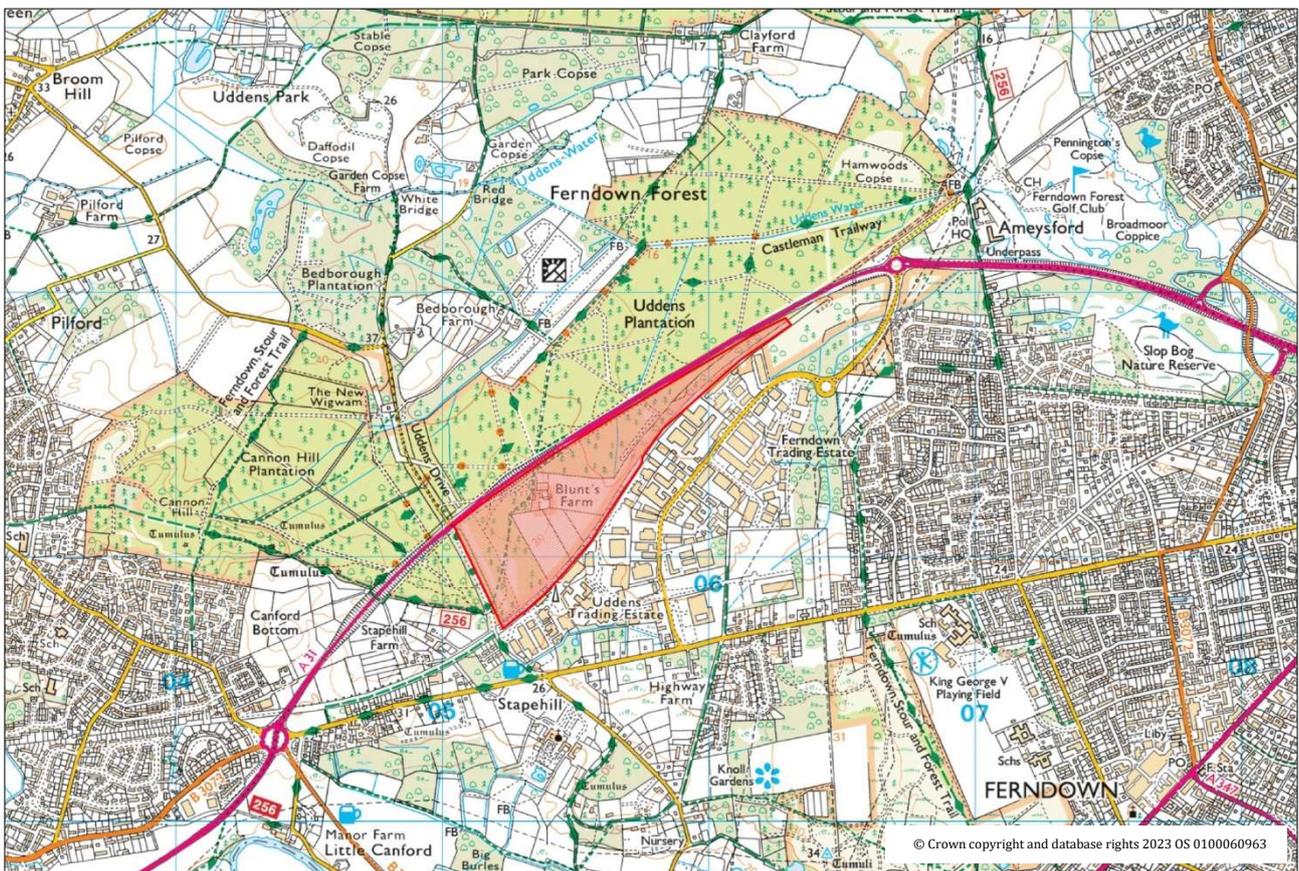
- This report forms part of a suite of ecological surveys commissioned by Dorset Council's Strategic Planning and Natural Environment Teams. Together the survey reports form part of the evidence base for the Local Plan, containing extended Phase 1 survey information for the potential allocated sites, highlighting important habitats and the likelihood of protected species being present.
- In addition to informing proposal WIMI/002, the survey will inform a review of the existing employment allocation at Blunt's Farm (FWP8 in the adopted Christchurch and East Dorset Local Plan Part 1 - Core Strategy which was carried forward into the Dorset Local Plan Options consultation in 2021 as FERN8) and the employment land supply from allocated sites.
- The site is varied with areas of High, Moderate and Low Ecological Interest on the site.
- There are small stands of **Lowland Heathland Priority Habitat**, one of 0.64-hectares within the current SNCI plus others that have developed within the two clearings, these are difficult to map as they occur in a mosaic with dense Purple Moor-grass.
- The woodland areas include a 0.93-hectare stand of **Wet Woodland Priority Habitat**.
- The fields support 8.5-hectares of semi-improved acid grassland that does not quite qualify as Lowland Dry Acid Grassland Priority Habitat but is close to it in places with four Dorset Notable plant species present and is judged to be of **Moderate Ecological Interest**.

1.0 INTRODUCTION

This report forms part of a suite of ecological surveys commissioned by Dorset Council's Strategic Planning and Natural Environment Teams. Together the survey reports form part of the evidence base for the Local Plan, containing extended Phase 1 survey information for the potential allocated sites, highlighting important habitats and the likelihood of protected species being present. The surveys have been carried out by Dorset Environmental Records Centre who are working with Dorset Council to ensure that ecological data for the Local Plan process is as up-to-date as possible.

In addition to informing proposal WIMI/002, the survey will inform a review of the existing employment allocation at Blunt's Farm (FWP8 in the adopted Christchurch and East Dorset Local Plan Part 1 - Core Strategy which was carried forward into the Dorset Local Plan Options consultation in 2021 as FERN8) and the employment land supply from allocated sites.

MAP 1. Location of site



2.0 METHODS

The survey was undertaken on the 22nd February 2023 in dry overcast to bright weather. The area was walked and a plant species list compiled with frequencies assigned to each species using the DAFOR scale¹. Particular attention was paid to the presence of any Section 41 or Red Listed species, and any that are on the Dorset Environmental Records Centre (DERC) lists of Dorset Notable species (DERC, 2012). Habitats present were assessed for their potential to support protected species (see Section 6.1), and visible signs for Badger such as setts, latrines and paths were looked for. Each habitat type present and any species or features of particular note were described using target notes (see Section 5.2.2).

A habitat map was produced in the field by drawing boundaries of the different vegetation types over a print out of the latest aerial photograph. This was then digitized using DERCs Integrated Habitat System (IHS) mapping process.

The sites are assessed for their ecological interest at the time of the survey (see Section 6.0). Those sites assessed as being of **Low Ecological Interest** have very little interest and are generally improved grasslands or arable fields. Those of **Moderate Ecological Interest** may support some interest such as one or more Dorset Notable plant species, but do not qualify as a Site of Nature Conservation Interest (SNCI). Those of **High Ecological Interest** are of SNCI quality and are therefore an important wildlife site within a county context.

Nomenclature for plants follows Stace (2019).

¹ The DAFOR scale records species according their abundance as follows:

D = Dominant; **A** = Abundant; **F** = Frequent; **O** = Occasional; **R** = Rare; **L** = Local (e.g. **LF** = Locally Frequent)

3.0 LEGISLATION & POLICY

3.1 LEGISLATION

The following legislation may be of relevance to the proposed works. Full details of statutory obligations with respect to biodiversity and the planning system can be found in DCLG Circular 06/2005.

- **The Conservation of Habitats and Species (Amendments) (EU Exit) Regulations 2019:**

This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into domestic law and ensures that the habitat and species protection and standards will continue to apply upon the UK's exit from the EU. The Regulations provide protection for a number of species including:

- All species of bat
- Dormouse (*Muscardinus avellanarius*)
- Great crested newt (*Triturus cristatus*).

This legislation makes it an offence to deliberately capture, kill or injure individuals of these species listed on Schedule 2 and damage or destroy their breeding site or place of shelter. It is also illegal to deliberately disturb these species in such a way as to be likely to significantly affect: (i) the ability of any significant group of the species to survive, breed or rear or nurture their young; or (ii) the local distribution or abundance of the species.

This legal protection means that where development has the potential to impact on bats, or other species of national interest, the results of a protected species survey must be submitted with a planning application.

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are also protected under this legislation. These are a network of sites designated for supporting habitats or species of high nature conservation importance in the European context. Any activity that has a detrimental effect on these European sites³ is made an offence under the Regulations. Where a development is likely to have a significant impact on a European site, the Regulations require a rigorous assessment of the impacts, known as an Appropriate Assessment.

- **The Wildlife and Countryside Act 1981 (and amendments):**

Protected fauna and flora are listed under Schedules 1, 5 & 8 of the Act. Species likely to be of relevance include:

- All species of **bat**. It is an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost
- All species of **British reptile** (in particular grass snake (*Natrix helvetica*), common lizard (*Zootoca vivipara*), adder (*Vipera berus*) and slow-worm (*Anguis fragilis*)). It is illegal to kill or injure these species
- **Great crested newt**. It is illegal to obstruct access to any structure or place which great crested newts use for shelter or protection or to disturb any great crested newt while it is using such a place.

This Act also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built). In addition, it is an offence to disturb any nesting bird listed on Schedule 1 or their young.

Schedule 9 of the Act lists those species for which it is an offence to plant or cause their spread. Species listed under Schedule 9 that are most likely to be encountered are Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*).

Sites of Special Scientific Interest (SSSIs) are also protected under the Wildlife and Countryside Act 1981. These are a network of sites identified as being of national nature conservation importance and hence afforded legal protection.

National Nature Reserves (NNRs) are also protected under the Act (section 35 (1)) and established under the National Parks and Access to the Countryside Act 1949. These are nature reserves which are considered to be of national importance by the relevant statutory bodies i.e. Natural England, Natural resource Wales.

- **Natural Environment and Rural Communities Act (NERC) 2006:**

This Act enforces a duty on the planning authority and local council to conserve biodiversity (section 40). Additionally, section 41 encourages the local councils to be aware of the species and habitats of ‘principal importance’ and to act accordingly to protect and manage these habitats and species.

- **The Countryside and Rights of Way Act 2000:**

This Act strengthens nature conservation and wildlife protection through a number of mechanisms. It places a duty on Government Ministers and Departments to conserve biological diversity, provides police with stronger powers relating to wildlife crimes, and improves protection and management of SSSIs.

- **The Protection of Badgers Act 1992:**

This Act makes it an offence to wilfully take, injure or kill a badger (*Meles meles*); cruelly mistreat a badger; interfere with badger setts, sell or possess a live badger; mark or ring a badger. A licence is required for work affecting badgers and their setts.

- **Wild Mammals (Protection) Act 1996:**

This Act provides protection for all wild animals from intentional acts of cruelty.

- **Hedgerow Regulations 1997:**

These Regulations establish a set of criteria for assessing the importance of hedgerows. Where a hedgerow is deemed to be ‘important’ its removal is prohibited without consent from the local Planning Authority.

3.2 POLICY

The following policy is of relevance to this report:

- **National Planning Policy Framework (NPPF):**

This sets out the Government’s vision for biodiversity in England with the broad aim that planning, construction, development and regeneration should maintain and enhance, restore or add to biodiversity and geological conservation interests. NPPF (2018) includes sections on legally protected species and sites (see Section 2.1).

- **Local Sites (including Sites of Nature Conservation Interest (SNCI), Local Nature Reserves (LNR), and Biological Notification Sites (BNSs)/County Wildlife Sites (CWSs)):**

These are a network of sites designated for their nature conservation importance in a local context. Although they are not afforded legal protection they contribute towards local and national biodiversity.

- **Natural England Protected Species Standing Advice:**

The standing advice is used by local authorities as a fall-back position when in pre-application consultation or during the determination period to define habitat and species survey efforts and mitigation proposals.

4.0 EXISTING DATA

The following summary is based on the desk study carried out by DERC for Dorset Council covering the Local Plan Emerging Site Allocations (DERC 2020). The species records are based on post-2010 data.

4.1 PROTECTED SPECIES

Species	Status	Distance from site
Badger	WCA	Dead on A31 to north of site
Bats	EPS; WCA	Adjacent to the site, 2015 records of 5 species including Bechstein's.
Dormouse	S41; EPS; WCA	Within 1-km radius
Otter	EPS; WCA	Within 1-km radius
Water Vole	S41; WCA	3.6-km to north and west
Brown Hare	S41	4.2=km to the west
Hedgehog	S41	Recorded from the extreme east of the site in 2017
Great Crested Newt	EPS; S41	3.0-km to the southwest and northwest
Reptiles	S41; WCA	Within 1-km radius, Common Lizard, Slow Worm and Smooth Snake recorded from northern (south-facing) verge of A31 north of the site
Other Species		
Silver Studded Blue	WCA	Recorded from heathy clearing 2011

4.2 PROTECTED HABITATS

Lowland Heathland – Section 41; UK Priority Habitat	recorded on site within the SNCI
Wet Woodland – Section 41; UK Priority Habitat	recorded on site within the SNCI
Lowland Mixed Deciduous Woodland – Section 41; UK Priority Habitat	1.07-km metres to the north
Lowland Meadows – Section 41; UK Priority Habitat	715 metres to the northeast

4.3 PROTECTED SITES

Dorset Heaths Special Area of Conservation (SAC)	adjacent to the site in the east
Dorset Heathlands Special Protection Area (SPA)	adjacent to the site in the east
Dorset Heathlands RAMSAR	adjacent to the site in the east
Slop Bog & Uddens Heath Site of Special Scientific Interest (SSSI)	adjacent to the site in the east

Ferndown Bypass (SU00/060) Site of Nature Conservation Interest (SNCI) falls within the site extending over 3.85 hectares along the southeast boundary adjacent to the old railway line and includes the remnant of heathland plus secondary woodland including wet woodland. It was last monitored in 2017.

5.0 RESULTS

5.1 SITE DESCRIPTION

The site covers 33-hectares of land between Uddens and Ferndown Trading Estates and the A31 Ferndown Bypass, the disused railway forms the southern boundary. The land is mainly managed as plantation woodland with four fields between Blunt's Farm and the old railway line. The area overlies the Poole Formation with the Branksome Clay and Branksome Sand Members producing nutrient-poor, acid soils that are seasonally waterlogged in places.

5.2 HABITAT DESCRIPTION

Plantation woodland

Conifer plantations cover much of the site at present with Scot's Pine *Pinus sylvestris* and Corsican Pine *Pinus nigra* the dominant species, with very small amounts of Douglas Firs *Pseudotsuga menziesii*, Sitka Spruce *Picea sitchensis* and Western Hemlock *Tsuga heterophylla*. Along the western edge bordering the road there is a band of mixed planting with broadleaves including Beech *Fagus sylvatica*, Sweet Chestnut *Castanea sativa* and Pedunculate Oak *Quercus robur*.

Pine plantations

The current pine plantations are in a mature phase and some are quite open. Beneath the large trees Birch *Betula* species are frequent with Holly *Ilex aquifolium* scattered throughout and locally abundant plus patches of sometimes dense Rhododendron *Rhododendron ponticum*. The ground layer varies with Bracken *Pteridium aquifolium* abundant in drier areas with scattered Broad Buckler-fern *Dryopteris dilatata*, Bramble *Rubus fruticosus* and Honeysuckle *Lonicera periclymenum*. In damper areas Purple Moor-grass *Molinia caerulea* dominates with few other species present.

There are several areas where the canopy is open enough that heath vegetation survives with Ling *Calluna vulgaris**¹ and Bell Heather *Erica cinerea** plus smaller quantities of Western Gorse *Ulex gallii**, Cross-leaved Heath *Erica tetralix**, Bristle Bent *Agrostis curtisii** and Green-ribbed Sedge *Carex binervis*.

Birch woodland

There are extensive stands of Birch *Betula* species most of which are secondary in origin and have developed in the last 50 years. Both Silver Birch *Betula pendula* and Downy Birch *Betula pubescens* are present, with few other tree species apart from rare to occasional Grey Willow *Salix cinerea*, Aspen *Populus tremula* and

Pedunculate Oak *Quercus robur*; there is no understorey. The ground flora varies and is very sparse in places with patchy Bramble *Rubus fruticosus*, Bracken *Pteridium aquilinum* and Purple Moor-grass *Molinia caerulea* and the moss *Pseudoscleropodium purum*, plus scattered Broad Buckler-fern *Dryopteris dilatata*, Wood Sage *Teucrium scorodonia*, Honeysuckle *Lonicera periclymenum*, Wild Strawberry *Fragaria vesca*, Yorkshire Fog *Holcus lanatus* and Bristle Bent *Agrostis curtisii**

Wet woodland

In the east of the site there is an area of wet woodland which is secondary in origin but quite well developed. Downy Birch *Betula pubescens*, Grey Willow *Salix cinerea* and Alder *Alnus glutinosa* are all present, with the latter forming a dense, pure stand in one place. The ground flora is patchy with Remote Sedge *Carex remota* and Purple Moor-grass both locally abundant plus scattered Broad Buckler-fern *Dryopteris dilatata*, Lady Fern *Athyrium filix-femina* and Scaly Male-fern *Dryopteris affinis* agg. and Bramble, with several plants of Greater Tussock-sedge *Carex paniculata** under the Alder stand. Bog-moss is present locally with *Sphagnum auriculatum*, *S. fimbriatum* and *S. palustre* all present.

This area qualifies as Wet Woodland Priority Habitat.

Grassland

There are four small fields which are now split into two units, the three smaller ones are currently grazed by four horses, the larger eastern one had been topped. The grassland is on the acid side of neutral and is best described as semi-improved. The sward is dominated by Common Bent *Agrostis capillaris*, with Yorkshire Fog *Holcus lanatus*, Cock's-foot *Dactylis glomerata*, Red Fescue *Festuca rubra*, Crested Dog's-tail *Cynosurus cristatus* and Sweet Vernal Grass *Anthoxanthum odoratum* all locally prominent. Perennial Ryegrass *Lolium perenne* is only occasional. In several areas Heath-grass *Danthonia decumbens** and Field Wood-rush *Luzula campestris* were noted.

Herbs are not particularly diverse with Creeping Buttercup *Ranunculus repens*, Meadow Buttercup *Ranunculus acris*, *Potentilla* species, Common Sorrel *Rumex acetosa* and Ribwort Plantain *Plantago lanceolata* the most prominent herbs, smaller quantities of Selfheal *Prunella vulgaris*, Germander Speedwell *Veronica chamaedrys*, Common Cat's-ear *Hypochaeris radicata* and Yarrow *Achillea millefolium* and with Bird's-foot-trefoil *Lotus corniculatus** noted in one area. There are occasional patches of Ragwort *Jacobaea vulgaris* and Creeping Thistle *Cirsium arvense*. In the southeast corner there is a very small area which appears to be unimproved with Heath-grass more frequent in the sward and Spring Sedge *Carex caryophylla* also present. Herbs here include Tormentil *Potentilla erecta* and Mouse-ear Hawkweed *Pilosella officinarum**, to the east this grades into dry heath.

Heathland

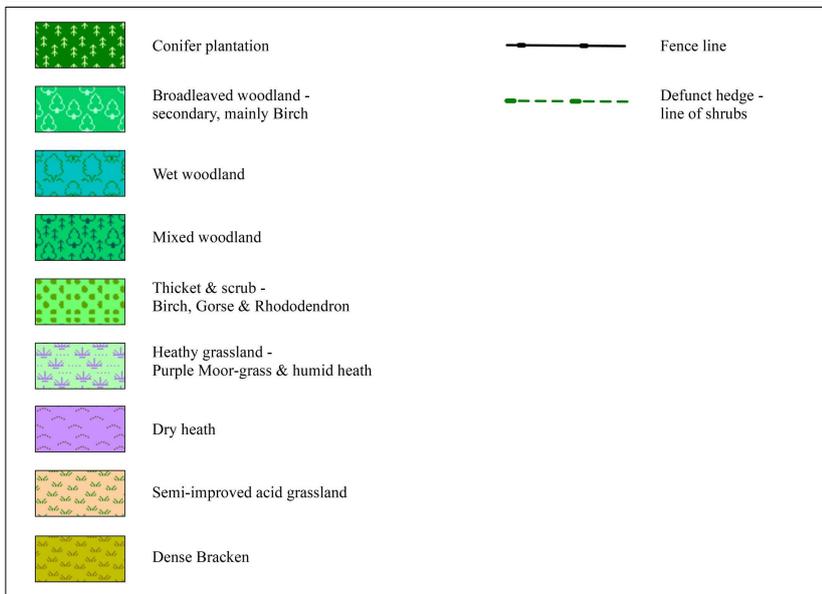
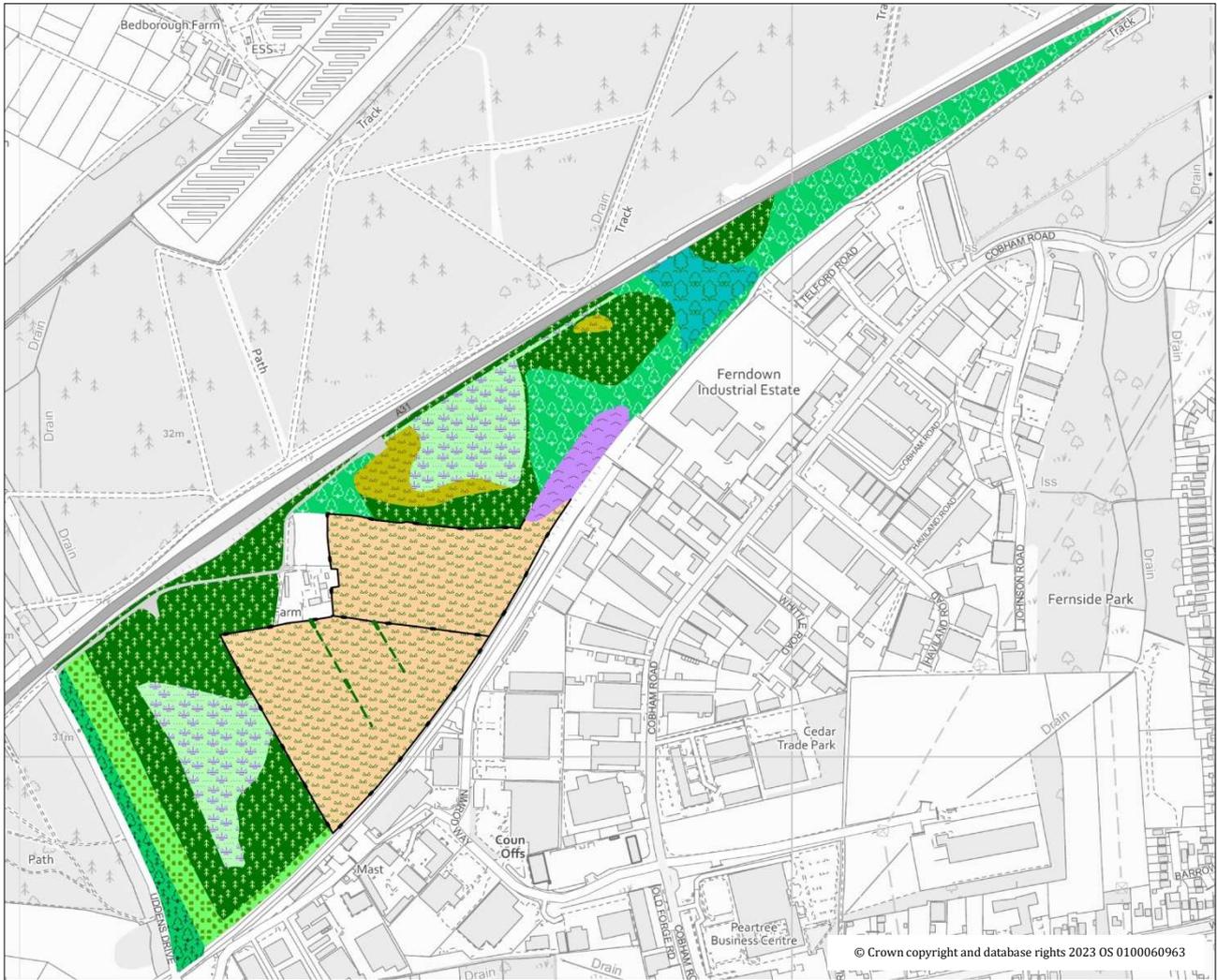
There are several small areas of heath present. The main one is in the south of the site adjacent to the old railway line and is included within the SNCI. Ling *Calluna vulgaris* and Bell Heather *Erica cinerea* are both abundant with scattered Bristle Bent *Agrostis curtisii*¹*. There is scattered Gorse *Ulex europaeus* and Bramble *Rubus fruticosus* scrub here with young Birch are invading in places.

Patchy heath vegetation is also developing in two areas that have been cleared of pine trees. While Purple Moor-grass dominates over large areas of these clearings there are small stands of Ling, Bell Heather and Western Gorse *Ulex gallii*¹* with smaller quantities of Cross-leaved Heath *Erica tetralix* and Bristle Bent *Agrostis curtisii*.

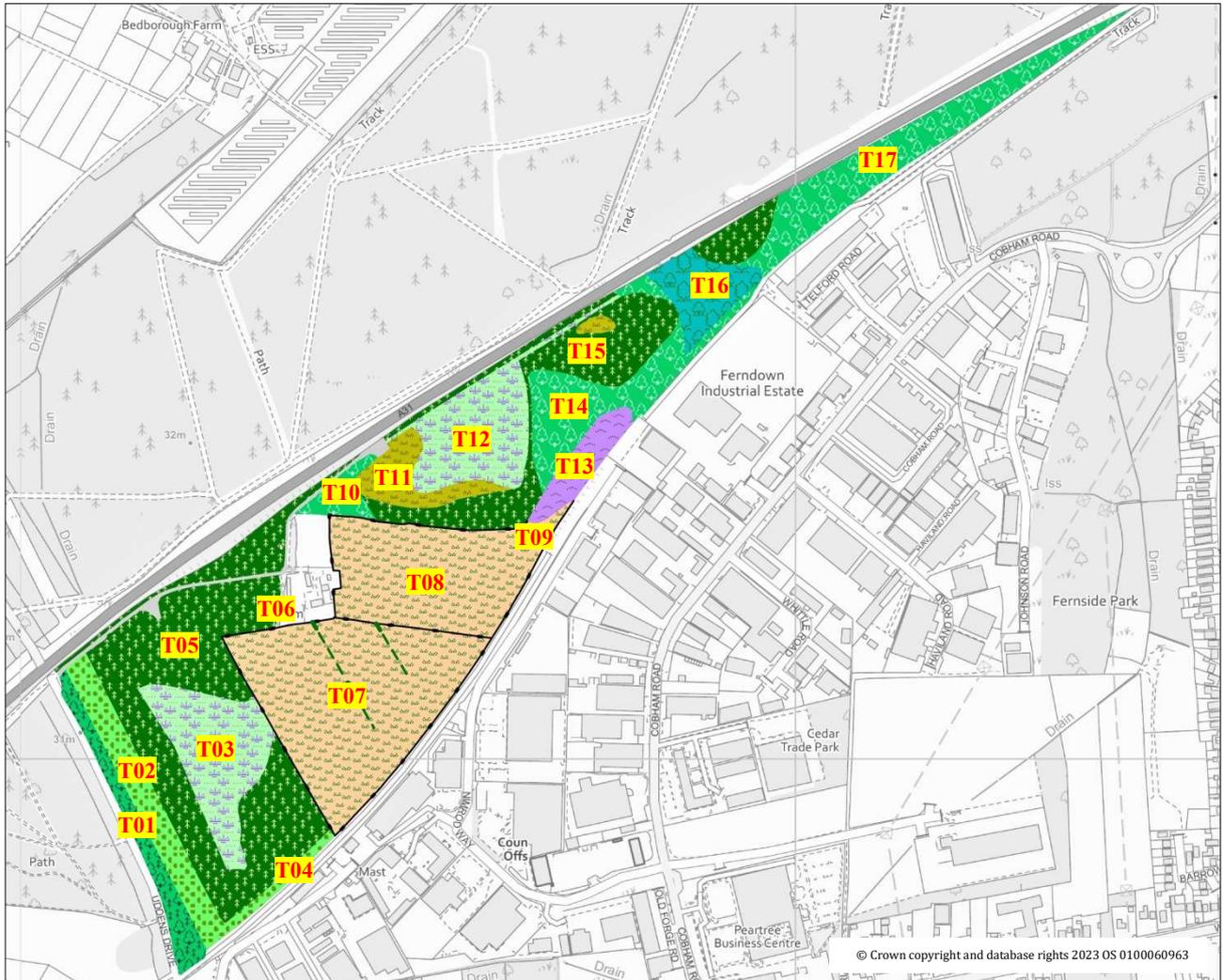
Both areas qualify as Lowland Heathland Priority Habitat.

¹ * = Dorset Notable Plant species

5.2.1 Habitat map



5.2.2 Target notes



No.	Grid Ref	Target Note
T01	SU0514 0092	Mixed plantation strip along road cleared of Rhododendron understorey. Mature Beech, Sweet Chestnut, Pedunculate Oak and Scot's Pine with scattered Birch. Little ground flora due to former cover of Rhododendron. Several Bat boxes noted on the trees.
T02	SU0156 0096	Area periodically cut under pylon line at present developing into thickets of Birch and Gorse with patches of Rhododendron and dense Bracken in places.
T03	SU0524 0102	Clearing dominated by Purple Moor-grass with frequent young Birch and some Gorse scrub. In places there is developing humid heath with Ling, Bell Heather, Cross-leaved Heath, Western Gorse* ¹ and Bristle Bent*.
T04	SU0354 0082	Strip along old railway line which is used as a path. Developing woodland with Birch Scot's Pine, Pedunculate Oak and Grey Willow, with scattered shrubs of Hawthorn and Elder.

No.	Grid Ref	Target Note
T05	SU0524 0119	Mature plantation of Scot's and Corsican Pine with an understorey of Birch and Holly, the latter starting to form small thickets in places; there small patches of Rhododendron. The ground flora varies with abundant Bracken in dry areas and Purple Moor-grass in damper sections. Few other species are present apart from scattered Broad Buckler-fern, Honeysuckle and Bramble.
T06	SU0534 0123	Line of older Oak trees on boundary bank west of farm.
T07	SU054010	Three small fields now fenced and managed as one and grazed by four horses. The former field boundaries are marked by a line of mature Hawthorn bushes and Bramble. The sward is dominated by Common Bent with occasional to locally abundant Yorkshire Fog, Cock's-foot, Red Fescue, Crested Dog's-tail and Sweet Vernal Grass. Perennial Rye-grass is only occasional and mainly around the gateway. Herbs including Creeping Buttercup, Meadow Buttercup, <i>Potentilla</i> species, Common Sorrel and Ribwort Plantain are the most prominent with smaller quantities of Selfheal and Yarrow. There are patches of Ragwort and Creeping Thistle in places. Some scrub, Bramble and Bracken are invading the fields from the south along the old railway line.
T08	SU055012	An acid grassland field which at the time of the survey was un-grazed but looks to have been topped. The general flora is very similar to the other fields as described above but there are small areas of slightly richer grassland with Bird's-foot-trefoil*, Common Cat's-ear, Field Wood-rush and Spring Sedge in places.
T09	SU0565 0127	Small area of unimproved acid grassland in southeast corner with Common Bent and Red Fescue dominating the short sward with scattered Heath-grass* and Field Wood-rush. Herbs include frequent Tormentil plus Mouse-ear Hawkweed* and Bird's-foot-trefoil*. Nests (mounds) of Yellow Meadow Ant are present in places.
T10	SU0540 0134	Secondary Birch woodland with rare Oak and Rowan, the sparse ground flora including Broad Buckler Fern, Honeysuckle, Bramble and the mosses <i>Mnium hornum</i> , <i>Polytrichastum formosum</i> and <i>Pseudoscleropodium purum</i> . Some older Oak trees and Holly bushes are present on the boundary along the field margin.
T11	SU0547 0137	West and southern part of clearing dominated by very dense Bracken with few other species present except for scattered Birch and Gorse.
T12	SU0555 0140	Main part of clearing dominated by tussocky Purple Moor-grass with scattered to locally abundant young Birch which is beginning to form thickets in places, patches of Gorse are also present. In several places stands of humid heath have developed with abundant Ling plus scattered Bell Heather, Cross-leaved Heath, Western Gorse* and Bristle Bent*.
T13	SU0573 0138	Small area of heathland adjacent to old railway line with scattered Bramble and Gorse scrub is being invaded by Birch on the northern side. Ling is abundant and Bell Heather frequent with Common Bent, Tormentil, Heath Bedstraw*, <i>Cladonia rangiformis</i> and <i>Pseudopodium purum</i> in more open areas between the heather.
T14	SU0569 0146	Secondary dense damp birch woodland dominated by Downy Birch and the ground layer dominated by Purple Moor-grass. Few other species are present apart from scattered Broad Buckler-fern, Hard Fern and Honeysuckle with <i>Sphagnum auriculatum</i> in a few wet hollows.

No.	Grid Ref	Target Note
T15	SU0574 0154	Mature Pine plantation with frequent Birch and Holly forming a patchy understorey, Bracken and Purple Moor-grass are locally abundant. The more open areas have patchy heath with Bell Heather, Ling, Western Gorse* and Bristle Bent*.
T16	SU0587 0161	Area of wet woodland quite varied with Downy Birch, Grey Willow and Alder all present, the last of these forming a dense pure stand nearer the road. The ground flora includes a local abundance of Purple Moor-grass and Remote Sedge, with Lady Fern, Broad Buckler Fern, Scaly Male-fern, Soft Rush and the bog-mosses <i>Sphagnum auriculatum</i> , <i>S. fimbriatum</i> and <i>S. palustre</i> . Scattered plants of Greater Tussock-sedge* are present under the Alder.
T16	SU0620 0183	Narrow eastern end of site is mostly secondary Birch woodland with some scattered Scot's Pine, plus Pedunculate Oak and Grey Willow along the old railway line. The woodland varies between dry and damp with the former having locally abundant Bracken and the latter patchy Purple Moor-grass. The ground flora is otherwise sparse with scattered Broad Buckler-fern, Honeysuckle, Bramble, Ground Ivy, Wild Strawberry and patches of the moss <i>Pseudoscleropodium purum</i> .

¹ * = Dorset Notable Plant species

6.0 ASSESSMENT

There are two small area of Priority Habitat with 0.64 hectares of **Lowland Heathland** within the SNCI adjacent to the old railway line. Patches of **Lowland Heathland** PHT are also present within the two clearings but is very difficult to map. The clearings cover 3.70 ha but the area of heathland is probably around 25% of this. There is also a 0.93-ha stand of **Wet Woodland** PHT found within the wider area of secondary broadleaved woodland.

The acid grassland fields covering 8.5-ha are semi-improved but have probably had few artificial inputs, Rye-grass is only occasional and generally found more around gateways and the sward is probably reverting towards a semi-natural type. There are Dorset Notable species present, Bird's-foot-trefoil, Mouse-ear Hawkweed and Heath-grass, but these are generally restricted to small areas particularly the southeast corner where ant-hills (nest of Yellow Meadow Ant) are present. The grassland does not quite fall within the definition of Lowland Dry Acid Grassland PHT but is quite close in places.

Five species, Bell Heather, Cross-leaved Heath, Ling, Tormentil and Wild Strawberry are listed as Near Threatened on the England Red List (Stroh, 2014). These are best described as widespread decliners and the first four are heathland species that have become rare in some parts of England but remain frequent on the Dorset heaths.

6.1 PROTECTED SPECIES ASSESSMENT

Species	Status	Habitat Potential	Future surveys
Badger	WCA	No setts or holes were noted during the survey.	
Bats	EPS; WCA	There are suitable flight lines and foraging habitat along the edges of the woodland and over the acid grassland.	Required
Dormouse	S41; EPS; WCA	Habitat is sub-optimal for this species.	
Otter	EPS; WCA	No suitable habitat on site.	
Water Vole	S41; WCA	No suitable habitat on site.	
Brown Hare	S41	No suitable habitat on site.	
Hedgehog	S41	Suitable especially along the old railway line	
Great Crested Newt	EPS; S41	No suitable habitat on site.	
Reptiles	S41; WCA	There is suitable habitat in the heathy areas and along the more open tracks with sunny south-facing aspects.	Required

REFERENCES

DERC 2012 *Dorset Notable Species Lists*. Dorset Environmental Records Centre, Dorchester

DERC 2020 *Local Plan Greenbelt Sites: Ecological Data*. [Unpublished report for Dorset Council]

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Stroh, P.A., Leach, S.J., August, T.A., Walker, K.J., Pearman, D.A., Rumsey, F.J., Harrower, C.A., Fay, M.F., Martin, J.P., Pankhurst, T., Preston, C.D. & Taylor, I. 2014 *A Vascular Plant Red List for England*. Botanical Society of Britain and Ireland, Bristol.

APPENDIX I: Plant species recorded

Species	Common Name	Habitat	Frequency
<i>Achillea millefolium</i>	Yarrow	Acid grassland	R-O
<i>Agrostis canina</i>	Velvet Bent	Heathy grassland	O-LF
<i>Agrostis capillaris</i>	Common Bent	Acid grassland	A
<i>Agrostis curtisii</i>	Bristle Bent	Heathland; broadleaved woodland	O
<i>Alnus glutinosa</i>	Alder	Wet woodland	O-LA
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	Acid grassland	LF
<i>Athyrium filix-femina</i>	Lady Fern	Wet woodland	R
<i>Bellis perennis</i>	Daisy	Trackways	R-O
<i>Betula pendula</i>	Silver Birch	Broadleaved woodland	LA
<i>Betula pubescens</i>	Downy Birch	Wet & broadleaved woodland	LA
<i>Blechnum spicant</i>	Hard Fern	Broadleaved woodland	O
<i>Brachypodium sylvaticum</i>	False-brome	Broadleaved woodland	R
<i>Calluna vulgaris</i>	Ling	Heathland	LA
<i>Carex binervis</i>	Green-ribbed Sedge	Broadleaved woodland	O
<i>Carex demissa</i>	Common Yellow-sedge	Heathy grassland	R
<i>Carex flacca</i>	Glaucous Sedge	Trackways	R
<i>Carex paniculata</i>	Greater Tussock-sedge	Wet woodland	R
<i>Carex pendula</i>	Pendulous Sedge	Broadleaved woodland	O
<i>Carex remota</i>	Remote Sedge	Wet woodland	R-LA
<i>Carex sylvatica</i>	Wood Sedge	Broadleaved woodland	R
<i>Castanea sativa</i>	Sweet Chestnut	Broadleaved woodland	O
<i>Cirsium arvense</i>	Creeping Thistle	Acid grassland	O-LF
<i>Cirsium palustre</i>	Marsh Thistle	Trackways	R
<i>Crataegus monogyna</i>	Hawthorn	Old hedgerows	O
<i>Cynosurus cristatus</i>	Crested Dog's-tail	Acid grassland	O-LF
<i>Dactylis glomerata</i>	Cock's-foot	Acid grassland	LF
<i>Danthonia decumbens</i>	Heath-grass	Acid grassland	O-LF
<i>Digitalis purpurea</i>	Foxglove	Broadleaved woodland	R
<i>Dryopteris affinis</i>	Scaly Male-fern	Wet & broadleaved woodland	R-O
<i>Dryopteris dilatata</i>	Broad Buckler-fern	Wet & broadleaved woodland	O-LF
<i>Dryopteris filix-mas</i>	Male Fern	Broadleaved woodland	O
<i>Erica cinerea</i>	Bell Heather	Heathland	O-LF
<i>Erica tetralix</i>	Cross-leaved Heath	Heathland	O
<i>Festuca rubra</i>	Red Fescue	Acid grassland	F
<i>Fragaria vesca</i>	Wild Strawberry	Broadleaved woodland	R-O
<i>Geum urbanum</i>	Wood Avens	Broadleaved woodland	O
<i>Glechoma hederacea</i>	Ground Ivy	Broadleaved woodland	O
<i>Glyceria fluitans</i>	Floating Sweet-grass	Wet woodland	R
<i>Hedera helix</i>	Ivy	Broadleaved woodland	O
<i>Holcus lanatus</i>	Yorkshire Fog	Acid grassland	F-LA
<i>Hypericum perforatum</i>	Perforate St John's-wort	Trackways	R

Species	Common Name	Habitat	Frequency
<i>Hypericum pulchrum</i>	Slender St John's-wort	Heathy grassland	R
<i>Hypochaeris radicata</i>	Common Cat's-ear	Acid grassland	O
<i>Ilex aquifolium</i>	Holly	Broadleaved woodland & conifer plantation	F-LA
<i>Jacobaea vulgaris</i>	Ragwort	Acid grassland	O-LF
<i>Juncus acutiflorus</i>	Sharp-flowered Rush	Heathy grassland	R
<i>Juncus conglomeratus</i>	Compact Rush	Heathy grassland	R
<i>Juncus effusus</i>	Soft Rush	Wet woodland	O
<i>Juncus inflexus</i>	Hard Rush	Trackways	R
<i>Lonicera periclymenum</i>	Honeysuckle	Broadleaved woodland & conifer plantation	O-LF
<i>Lotus corniculatus</i>	Bird's-foot-trefoil	Acid grassland	R-O
<i>Luzula campestris</i>	Field Wood-rush	Acid grassland	O
<i>Lysimachia nemorum</i>	Yellow Pimpernel	Broadleaved woodland	R
<i>Molinia caerulea</i>	Purple Moor-grass	Heathy grassland & wet woodland	F-LD
<i>Picea sitchensis</i>	Sitka Spruce	Conifer plantation	R
<i>Pilosella officinarum</i>	Mouse-ear-hawkweed	Acid grassland	R-O
<i>Pinus nigra</i>	Corsican Pine	Conifer plantation	LA
<i>Pinus sylvestris</i>	Scot's Pine	Conifer plantation	LA
<i>Plantago lanceolata</i>	Ribwort Plantain	Acid grassland	O-LA
<i>Polystichum setiferum</i>	Soft Shield-fern	Broadleaved woodland	R
<i>Populus tremula</i>	Aspen	Broadleaved woodland	R-O
<i>Potentilla erecta</i>	Tormentil	Acid & heathy grassland	O-LF
<i>Prunella vulgaris</i>	Selfheal	Acid grassland	O
<i>Prunus spinosa</i>	Blackthorn	Scrub	R
<i>Pseudotsuga menziesii</i>	Douglas Fir	Conifer plantation	R
<i>Pteridium aquilinum</i>	Bracken	Broadleaved woodland, conifer plantation & heathy grassland	F-LD
<i>Pulicaria dysenterica</i>	Common Fleabane	Trackways	O
<i>Quercus robur</i>	Pedunculate Oak	Broadleaved woodland	O
<i>Ranunculus acris</i>	Meadow Buttercup	Acid grassland	O
<i>Ranunculus repens</i>	Creeping Buttercup	Acid grassland	O-LF
<i>Rosa canina</i>	Dog Rose	Heathland	R
<i>Rubus fruticosus</i>	Bramble	Broadleaved woodland & conifer plantation	O-LA
<i>Rumex acetosa</i>	Common Sorrel	Acid grassland	F
<i>Rumex sanguineus</i>	Wood Dock	Broadleaved woodland	O
<i>Salix cinerea</i>	Grey Willow	Wet & broadleaved woodland	O
<i>Sambucus nigra</i>	Elder	Scrub	R
<i>Sorbus aria</i>	Rowan	Broadleaved woodland	R
<i>Taraxacum officinale agg.</i>	Dandelion	Trackways	O
<i>Teucrium scorodonia</i>	Wood Sage	Broadleaved woodland	O
<i>Trifolium pratense</i>	Red Clover	Acid grassland	O
<i>Trifolium repens</i>	White Clover	Acid grassland	R

Species	Common Name	Habitat	Frequency
<i>Tsuga heterophylla</i>	Western Hemlock	Conifer woodland	O
<i>Ulex europaeus</i>	Common Gorse	Heathy grassland	O
<i>Ulex gallii</i>	Western Gorse	Heathy grassland & heathland	O
<i>Ulex minor</i>	Dwarf Gorse	Heathland	R
<i>Urtica dioica</i>	Stinging Nettle	Broadleaved woodland	O
<i>Veronica chamaedrys</i>	Germander Speedwell	Acid grassland	R
<i>Viola riviniana</i>	Common Dog-violet	Broadleaved woodland	O

¹ **D** = Dominant; **A** = Abundant; **F** = Frequent; **O** = Occasional; **R** = Rare; **L** = Local (e.g. **LF** = Locally Frequent)

APPENDIX II: Bryophyte species recorded

Species	Common Name	Habitat	Frequency
<i>Calliergonella cuspidata</i>		Acid grassland	O
<i>Kindbergia praelonga</i>		Broadleaved woodland	O
<i>Mnium hornum</i>		Broadleaved woodland	O
<i>Polytrichastrum formosum</i>		Broadleaved woodland	O
<i>Pseudoscleropodium purum</i>		Acid grassland, heathland and broadleaved woodland	O-LA
<i>Rhytidiadelphus squarrosus</i>		Acid grassland	O
<i>Sphagnum auriculatum</i>		Wet woodland	O-LA
<i>Sphagnum fimbriatum</i>		Wet woodland	O
<i>Sphagnum palustre</i>		Wet woodland	O

APPENDIX III: Photographs



FIG 1. Dry heath area along southern margin within SNCI, SU0571 0136.



FIG 2. Humid heath area developing in the eastern clearing (SU0551 0140) in a mosaic with dense Purple Moor-grass.



FIG 3. Looking north across central acid grassland field with Blunts Farm in the left hand edge of the image, SU0550 0104.



FIG 4. Small area of unimproved acid grassland in southeast corner of the eastern field, SU0556 0128 (Target note T09). The small hummocks are developing nests of Yellow Meadow Ant,



FIG 5. Stand of wet Birch-dominated woodland with large patches of *Sphagnum auriculatum* in wet hollows, SU0594 0164.



FIG 6. Stand of wet Alder-dominated woodland with abundant Remote Sedge and scattered Greater Tussock-sedge, SU0586 0162.



FIG 7. Mature Pine plantation SU0570 0153 with an open canopy and some heath vegetation surviving in the ground layer.



FIG 8. Secondary Birch woodland in the east of the site SU0607 0176 with sparse ground flora.