Rampion 2 WIND FARM

Rampion 2 Wind Farm

Category 6: Environmental Statement

Volume 4, Appendix 22.4: National Vegetation Classification survey report 2021-2022

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Contents

List of Tables

List of Figures

List of Annexes

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1. Introduction

1.1 Background

1.1.1 This Appendix should be read in conjunction with **Chapter 22: Terrestrial ecology and nature conservation, Volume 2** of the ES (Document Reference 6.2.22) which is provided in support of the delivery of an Environmental Impact Assessment (EIA) associated with the Rampion 2 Offshore Wind Farm, hereafter referred to as the 'Proposed Development' or 'Rampion 2'.

1.1.2 This Appendix describes the survey method and summarises the results of National Vegetation Classification (NVC) surveys undertaken in 2021 and 2022. Scientific species names are provided in **Annex C**.

Legislation

1.1.3 The two main legislations relating to the protection of habitats and plants within the UK are The Habitats Directive and Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) (WCA).

1.1.4 The Habitats Directive (Council Directive 92/43/EEC) aims to ensure the conservation of a wide range of rare, threatened or endemic animal and plant species, along with 213 rare and characteristic habitat types which are identified in Annex I as 'priority habitats'. The presence of Annex I habitats and Annex II species allow the establishment of Special Areas of Conservation (SAC) to maintain their favourable conservation status.

1.1.5 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*) is identified within Annex I. This priority habitat type was identified within the **Appendix 22.2: Terrestrial ecology desk study** of the ES (Document Reference 6.4.22.2) as being present at Sullington Hill Local Wildlife Site (LWS) and Warningcamp Hill and New Down LWS.

1.1.6 The WCA is the primary legislation which protects animals, plants and habitats in the UK. Schedule 8 of the WCA lists plant species that are protected from intentionally (or recklessly) picking, uprooting, or destroying any plant or spore / seed of any such plant, and the sale of plants or parts of plants listed in Schedule 8.

1.1.7 The desk study identified records of six plant species listed on Schedule 8 of the WCA: Alpine catchfly, bluebell, cut-grass, holly-leaved naiad, Jersey cudweed and monkey orchid.

Structure of this Appendix

1.1.8 This Appendix is structured as follows:

- **Section 2: Methods;**
- **Section 3: Results;**

- **Section 4: Summary;**
- **Section 5: Glossary and abbreviations;**
- **Section 6: References;**
- **Annex A: Figures and images;**
- **Annex B: Full survey details;**
- **Annex C: Scientific species names;**
- **Annex D: Floristic tables; and**
- **Annex E: MAVIS output.**

2. Methods

2.1 Defining scope of data collection

2.1.1 The data collected has included the following:

- desk study of records of statutory and non-statutory designated sites of botanical importance;
- desk study of protected or otherwise notable habitats and plants; and
- NVC field survey.

2.1.2 Due to the size and scale of the Proposed Development, it is not proportionate to undertake NVC survey across the entire proposed DCO Order Limits, instead a sampling approach has been undertaken based upon the broad habitat types recorded during the desk study (see **Section 2.2**), and through analysis of aerial mapping against the areas likely to be impacted by the Proposed Development. The NVC surveys were undertaken as the design of the Proposed Development has evolved. Therefore, some areas now fall outside of the draft proposed DCO Order Limits. The results of all surveys are reported below. All survey locations are shown in context to the proposed DCO Order Limits in **Figure 22.4.1**, **Annex A**.

2.2 Desk study

2.2.1 An environmental desk study was undertaken to identify statutory designated sites of international or national botanical importance within 10km of the proposed DCO Order Limits, and non-statutory designated sites of botanical importance and priority habitats within 5km of it. The search for statutory sites was carried out using the Multi-Agency Geographic Information for the Countryside (MAGIC) website (an internet-based GIS database provided by the Department for Environment, Foods and Rural Affairs (Defra)) and for non-statutory sites through a data request to Sussex Biodiversity Record Centre (SxBRC). Information on the statutory designated sites identified was gathered from the websites of Natural England and the Joint Nature Conservation Committee (JNCC).

2.2.2 In addition to the desk study for designated sites, information of protected or otherwise notable flora within 5km of the proposed DCO Order Limits was gathered from SxBRC.

2.2.3 A summary of the results of this desk study[1], with regards to statutory designated and non-statutory designated sites, priority habitats and protected or otherwise notable plants are shown in **Table 2-1**and **Table 2-2**, below.

2.2.4 Twelve statutory designated sites were identified within the search area as sites with features of botanical importance and these are outlined in **Table 2-1**.

[1] Data accords with **Appendix 22.2 Terrestrial ecology desk study, Volume 4** of the ES (Document Reference: 6.4.22.2).

2.2.5 Two of these statutory designated sites are of international importance, namely Arun Valley Ramsar site and Duncton to Bignor Escarpment SAC.

2.2.6 Ten nationally designated sites of botanical importance were identified within 5km of the proposed DCO Order Limits. One of these, Climping Beach Site of Special Scientific Interest (SSSI) is within the proposed DCO Order Limits, whilst Amberley Mount to Sullington Hill SSSI, is adjacent to the proposed DCO Order Limits.

Table 2-1 Details of statutory designated sites of botanical importance

Site name	Designated botanical and habitat features	Distance and direction from proposed DCO Order Limits
Internationally important sites		
Arun Valley Ramsar site **(overlaps with Arun Valley SAC, Arun Valley Special Protected Area (SPA), Amberley Wild Brooks SSSI, Waltham Brooks SSSI and Pulborough Brooks SSSI)**	Qualifies under Ramsar criterion 2 for four nationally rare and four nationally scarce plant species. Qualifies under Ramsar criterion 3 for a diverse and rich ditch flora including all 5 *Lemna* and *Rorippa*, and all 3 *Myriophyllum* species. All but one of the seven British pondwees and two-thirds of water dropworts can be found on site.	4.6km north-west
Duncton to Bignor Escarpment SAC	Asperulo-Fagetum beech forests	9.3km north-west
Nationally important sites		
Climping Beach SSSI **(overlaps with West Beach Local Nature Reserve (LNR))**	SD1 – *Rumex crispus – Glaucium flavum* shingle community, SD7 – *Ammophila Arenaria – Festuca rubra* semi-fixed dune community and SD8 – *Festuca rubra – Galium verum* fixed dune grassland	Within proposed DCO Order Limits
Amberley Mount to Sullington Hill SSSI	CG2 – *Festuca ovina – Avenula pratensis* lowland calcareous grassland , CG3 – *Bromus erectus* lowland calcareous grassland. Juniper *Juniperus communis* and Fly honeysuckle *Lonicera xylosteum*	Adjacent to proposed DCO Order Limits

Site name	Designated botanical and habitat features	Distance and direction from proposed DCO Order Limits
Chanctonbury Hill SSSI	CG2 – *Festuca ovina – Avenula pratensis* lowland calcareous grassland, CG3 – *Bromus erectus* lowland calcareous grassland, W12 – *Fagus sylvatica – Mercurialis perennis* woodland.	0.7km south-east
Sullington Warren SSSI	H2 – *Calluna vulgaris – Ulex minor* heath	0.8km north-west
Cissbury Ring SSSI	CG1 – *Festuca ovina – Carlina vulgaris* lowland calcareous grassland, CG2 – *Festuca ovina – Avenula pratensis* lowland calcareous grassland, CG3 – *Bromus erectus* lowland calcareous grassland and CG4 – *Brachypodium pinnatum* lowland calcareous grassland.	2.4km south
Arundel Park SSSI	CG2 *Festuca ovina – Avenula pratensis* lowland calcareous grassland, CG3 – *Bromus erectus* lowland calcareous grassland, Cut-grass *Leersia oryzoides*	2.8km north-west
Parham Park SSSI	Combinations of species – lichens. W10 – *Quercus robur – Pteridium aquilinum – Rubus fruticosus* woodland, W14 – *Fagus sylvatica – Rubus fruticosus* woodland, W15 – *Fagus sylvatica – Deschampsia flexuosa* woodland	2.8km north-west
Hurston Warren SSSI	H2 – *Calluna vulgaris – Ulex minor* heath, M1 – *Sphagnum auriculatum* bog pool community, M16 – *Erica tetralix – Sphagnum compactum* wet heath	4.0km north-west

Site name	Designated botanical and habitat features	Distance and direction from proposed DCO Order Limits
Arun Banks SSSI	*Schoenoplectus lacustris* sub-species *tabernaemontani x triqueter.* W5 – *Alnus glutinosa – Carex paniculate,* and W6 – *Alnus glutinosa – Urtica dioica* woodland.	4.2km west
Amberley Wild Brooks SSSI	Designated for its Vascular plant assemblage including true fox-sedge *Carex vulpine, and c*ut-grass *Leersia oryzoides.* Also S3 – *Carex paniculate* swamp, S5 – *Glyceria maxima* swamp and S7 *Carex acutiformis* swamp	4.7km north-west

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2.3 Non-statutory designated sites of nature conservation

2.3.1 Non-statutory designated sites of nature conservation were identified within data provided by SxBRC. **Table 2-2** provides the details of the LWS that are within the proposed DCO Order Limits and within 5km of it. There are four non-statutory designated sites located fully or partially within the proposed DCO Order Limits, with a further 46 within 5km of it (see **Appendix 22.2 Terrestrial ecology desk study** of the ES (Document Reference 6.4.22.2)).

Table 2-2 Details of non-statutory designated sites of botanical importance

Site name	Description[2]	Distance and direction from the proposed DCO Order Limits
Littlehampton Golf Course and Atherington Beach LWS	Littlehampton Golf Course is of outstanding importance botanically. Although much of its grassland has been improved there are patches of species-rich turf. The southern edge of the golf links includes an area of dry dune grassland, adjacent to the sand dune system of Climping Beach SSSI. The site also includes an area of vegetated shingle beach, a nationally uncommon habitat.	Within proposed DCO Order Limits
Elmer Rocks LWS	Elmer beach is a fine example of vegetated shingle, an internationally rare habitat. The intertidal area supports a diverse community including intertidal sand and eight 'rock islands' constructed in the early 1990s in the mid-tide zone to form a coastal defence against the eroding coastline. The rock islands have provided a habitat type that is very rare, if not unique, in West Sussex. The rock pools are probably the best in the county.	Within proposed DCO Order Limits (below mean low water springs (MLWS))
Sullington Hill LWS	This stretch of the South Downs escarpment supports moderately species-rich chalk grassland on north and east-facing slopes. Some areas are maintained by grazing while others are no longer grazed and have become heavily scrub-invaded. The site	Within proposed DCO Order Limits

[2] Description is copied from the summary provided on the designation information provided for each site by SxBRC

Site name	Description[2]	Distance and direction from the proposed DCO Order Limits
	includes small areas of semi-natural woodland.	
Bines Green LWS	Bines Green is an area of common land that straddles the B2135 road. It is damp, unimproved, neutral grassland of considerable botanical interest with a small, overgrown pond to the west of the road.	Within proposed DCO Order Limits (circa 10m^2 of an existing surfaced track only)
Warningcamp Hill and New Down LWS	The steep, north-west facing slope of New Down supports herb-rich chalk grassland with extensive patches of burnet rose *Rosa pimpinellifolia*, an uncommon plant in West Sussex. Warningcamp Hill supports a very large population of the rare small-flowered buttercup *Ranunculus parviflorus*. The site also includes an old chalk pit and a small area of ancient, semi-natural woodland.	Adjacent to proposed DCO Order Limits
Long Furlong and Church Hill LWS	Long Furlong is a steep north and west-facing slope between the A280 and Clapham Woods, supporting rich chalk grassland and scrub. Church Hill is a complex mosaic of chalk grassland, species-rich scrub and woodland. Long Furlong and Church Hill form a large piece of contiguous habitat, so have been included as one site.	Adjacent to proposed DCO Order Limits
Clapham Wood LWS	Clapham Wood is an extensive, ancient semi-natural woodland on the undulating dip slope of the South Downs. The ground flora is rich and includes a number of interesting species. The wood was moderately affected by the storm of October 1987 and unfortunately several large blocks of woodland were subsequently cleared for pasture. Much of the wood is not managed but some areas are still coppiced. Clapham Woods is an ancient woodland of County-wide importance.	0.4km south-east
Heath Common LWS	This site has moderately rich remnants of wet and dry heath, several ponds and some	0.5km north

Site name	Description[2]	Distance and direction from the proposed DCO Order Limits
	relics of ancient base-rich woodland rich in lichens and ferns. In recent years, the Sandgate Conservation Society has done excellent work in the management of this area as a nature reserve.	
Poling Copse LWS	Poling Copse is a large block of ancient, semi-natural woodland on the Coastal Plain south of the South Downs, just to the east of Arundel. It consists predominantly of Oak-Hazel woodland, a type typical of base-poor soils in the area. Sycamore woodland dominates on South Fields – a section which has probably regenerated on an old field.	0.5km north
Kithurst Hill LWS	This site lies on the steep, north-facing escarpment of the South Downs. Most of it is wooded. The lower slopes consist of ancient semi-natural woodland, mostly of ash and hazel. It is of interest for its epiphytic bryophytes. There are small areas of open grassland with species-rich swards.	0.6km north-west
Washington Chalk Quarry LWS	This area of open downland and scattered scrub lies at the western end of Chanctonbury Hill. It includes a collection of disused chalk pits which now support species-rich grassland. The flora and butterflies are both of great interest. Part of the site has recently been fenced and sheep grazing reinstated. The South Downs Way runs through the site.	0.7km south
Conyers Bank LWS	Conyers Bank is a small, isolated field of unimproved chalk grassland on a steep, north-facing hillside. Situated above the floodplain of the River Arun, it is surrounded by semi-natural woodland and improved water meadows. The site has a rich flora.	0.9km north-west
River Adur Water Meadows & Wyckham Wood LWS	Wyckham Wood, one of the few woodlands on the floodplain of the River Adur is of particular importance on account of its heronry. The water meadows have mostly	0.9km south-east

Site name	Description[2]	Distance and direction from the proposed DCO Order Limits
	been improved but some of the ditches are of great botanical interest. This wetland area is also of importance to birds and dragonflies.	
Arun Valley, Watersfield to Arundel Local Wildlife Site (LWS)	This section of the River Arun and its floodplain forms an extensive tract of wetland, a nationally declining habitat. There is a good network of ditches, some of which are very important botanically. The site is important for birds, dragonflies, water beetles, snails and plants, and supports many rare and declining species. The unimproved meadows of Watersfield Brooks are of great botanical interest.	1.1km west
Wiston Ponds LWS	This is a well-established pond within the grounds of Wiston Park. It is surrounded by trees and scrub and has well-developed marginal vegetation. Good populations of amphibians use this pond and also it supports a number of interesting bird species.	1.4km south-east
The Gallops & No Man's Land LWS	Contains a diversity of habitats including calcareous grassland, broadleaved woodland, rank grassland and dense scrub all in close proximity. Accessible to the public and adjacent to a local school.	2.0km south
Titnore & Goring Woods Complex LWS	Large area of lowland mixed deciduous woodland on edge of Worthing. Much is ancient and semi-natural. Includes wetland and grassland habitats.	2.2km south-east
America & Gratwicke's Wood LWS	An oak, ash, hazel woodland lying on the Weald Clay with wet areas supporting alder and aspen. The managed coppice provides a varied structure and together with paths and rides provides good habitats for birds and insects. The ground flora is rich and the trees and shrubs include wild service and Midland hawthorn.	2.2km north
Middleton Shingle LWS	The site consists of a strip of vegetated shingle along the seafront at Middleton-on-	2.2km west

Site name	Description[2]	Distance and direction from the proposed DCO Order Limits
	Sea with a large population of Sea Radish *Raphanus raphanistrum ssp. Maritimus*, a plant that occurs in only three other sites in Sussex. The strip of vegetated shingle is backed by regularly mown grass and then housing.	
Binsted Wood Complex LWS	Binsted Wood is a complex of woodland sites which includes Hundredhouse Copse in the west and Stewards Copse to the east. There is a mixture of ancient woodland, recent woodland, conifer plantation, species rich pasture and old tracks and shaws. The mix of habitats and geology gives rise to a very rich and diverse flora. The paths and rides are especially species rich and Scotland Lane supports an outstanding wet ride flora that includes at least 11 species of sedge including Long-stalked Yellow-sedge *Carex viridula* ssp.*brachyrhyncha*, a county rarity at its only recorded West Sussex location. This is the largest block of ancient semi-natural woodland south of the South Downs in Sussex.	2.3km north-west
Capite Wood LWS	This is a large area of very diverse woodland comprising both broadleaved ancient semi-natural woodland and re-planted areas of coniferous and deciduous trees. The woodland has two small streams, species rich rides, wet flushes, banks, ditches and a varied topography. It has suffered extensive storm damage and there is abundant deadwood. The woodland is rich in bryophytes.	2.3km north
The Sanctuary, High Salvington LWS	The site consists of a south-facing coombe and slope, located on the edge of High Salvington. The north and west part of the site is a mosaic of species-rich scrub, secondary woodland and chalk grassland, which is managed bird sanctuary. The rest is open, herb-rich grassland. The site represents a scarce habitat in the Borough.	2.3km south-east

Site name	Description[2]	Distance and direction from the proposed DCO Order Limits
	Meadow Clary *Salvia pratensis*, a Red Data Book species, occur here in one of only two sites in West Sussex.	
Walden Close Meadow LWS	This site consists of a large meadow alongside the A272 and a small meadow to the north. Both fields are cut for hay and have species-rich swards. The smaller meadow is notably rich in invertebrates.	2.4km north-west
Highdown Hill and the Miller's Tomb LWS	Species rich relatively unimproved chalk grassland and scrub with botanical and faunal interest.	2.5km south-east
West Wantley Farm Meadow LWS	Unimproved damp pasture meadow bounded by species rich hedgerow and ponds with notable populations of rare thistle. The site has a very large population of Meadow Thistle *Cirsium dissectum* which is very scarce in West Sussex.	2.5km north-west
Steyning Coombe & Steyning Round Hill LWS	Steyning Coombe and Steyning Round Hill are both important areas of unimproved downland on the escarpment above Steyning. Together these areas are extremely diverse, having steep slopes facing all directions, both short herb-rich sward and tall ungrazed sward, open grassland and grassland with scattered scrub. The rich flora and invertebrate fauna includes several rare plants, snails and butterflies.	2.6km south-east
Henfield Common LWS	The site is a registered common; one of three commons around Henfield. It is of great importance for wildlife as it encompasses a mosaic of species-rich grassland, woodland and a reedbed, together with small areas of marshy grassland and heath. The site is being actively managed to enhance its value for wildlife.	2.6km south-east
Peppering Down LWS	A species-rich strip of chalk grassland on a west-facing slope. There is a fair amount of	2.8km north

Site name	Description[2]	Distance and direction from the proposed DCO Order Limits
	scrub at the top of the slope in the south-east corner of the site.	
Old Deer Park LWS	This site which lies in an old deer park, south of Leonardslee Gardens, is one of the best surviving relics of the formerly vast St. Leonard's Forest. In addition to moderately species-rich dry and wet heath, there is a very interesting bog. The ancient parkland trees have a fine assemblage of woodland epiphytic lichens. Today the park is grazed by a herd of wallabies.	2.8km north
Rewell Wood Complex LWS	Rewell Wood is a large ancient woodland complex. It has a diversity of habitats including ancient semi-natural woodland, worked Sweet Chestnut coppice, conifer plantation, Beech plantation and species-rich chalk grassland. Wide rides and glades support a rich flora and butterfly fauna. The disused gravel pits are of entomological importance.	2.9km north-west
Broadmare Common LWS	The site is a registered common, located just south of Henfield. It is predominantly poor fen and scrub, with several ponds and an area of woodland. It represents a rather scarce habitat which, although somewhat degraded, is now managed for wildlife. The location of the site amongst intensively farmed countryside and close to a small town increases its value for nature conservation.	3.0km south-east
Worthing & Hill Barn golf courses LWS	These sites consist of unimproved chalk and neutral grassland with areas of scrub and woodland with high botanical interest and rare butterflies.	3.0km south-east
Peppering Farm Dew Pond LWS	Peppering Farm dewpond is a small dried-up dewpond, situated adjacent to a main track on the Downs and surrounded by arable. The area supports an exceptionally rich downland flora, including many uncommon plants. It is	3.2km north-west

Site name	Description[2]	Distance and direction from the proposed DCO Order Limits
	maintained by a small band of volunteers with permission from the estate and farmer. The major task is the removal of scrub, mainly Gorse and Hawthorn.	
Kneppmill Pond, the River Adur & Lancing Brook LWS	The site is a registered common, located close to Henfield. It consists of herb-rich damp grassland with areas of tall herbs and some scrub and woodland. It has a small pond in the western corner.	3.5km north-west
Ham Farm Wood LWS	This site is an ancient woodland in urban area with botanical, ornithological and recreational value.	3.5km south-east
Ferring Rife and Meadows LWS	Rife with rough grassland banks and notable population of nationally rare snail.	3.6km south
The Downs Link, Nutham Wood and Greatsteeds Farm Meadow LWS	The Downs Link, a dismantled railway line, has developed into an interesting moderately species-rich belt of shrubs. This supports a large colony of the rare Brown Hairstreak butterfly. A number of important wildlife sites lie adjacent to the old railway, notably a small, herb-rich meadow and small, stream-side, ancient semi-natural woodlands. Nutham Wood, in particular, has a very rich ground flora.	3.7km north-west
The Hanger LWS	Two main types of wood are present within this gill woodland site. Alder occurs along the streams and extends up the lower slopes in parts, with oak, hazel and ash on the upper slopes and the flat ground above. The wood supports a wide range of woodland plants, mosses and liverworts, a good bird community and a number of uncommon butterflies.	3.8km north-east
Hooklands Farm Meadow LWS	Hooklands Farm meadow is an excellent example of unimproved, damp grassland. It is very species-rich and supports plants typical of damp and slightly acidic soils. The site is surrounded by mature hedgerows and a stream runs through the meadow, creating	3.8km north-west

Site name	Description[2]	Distance and direction from the proposed DCO Order Limits
	a damp flush around an old pond in the south of the area.	
Hoe Wood LWS	This ancient woodland is dominated by Oak, with frequent ash and birch over hazel coppice. It has a good assemblage of woodland plants and supports a diverse community of birds. The site includes a lake which boasts significant numbers of dragonfly and damselfly species as well as providing for good populations of amphibians. Also include is an unimproved meadow.	3.8km south-east
Offington Cemetry	This site is an unimproved herb rich chalk grassland with areas of scrub in urban area, providing refuge for wildlife and botanical interest.	4.0km south-east
Boyds Wood & Furzefield Copse LWS	Boyds Wood and Furzefield Copse are two botanically rich woodlands just outside the village of Nuthurst. They encompass a range of woodland types, both ancient semi-natural and more recent broadleaved plantation. Boyds Wood includes a particularly interesting stream valley or gill woodland.	4.0km north-west
Tenants Hill and Reservoirs LWS	This site is a species rich unimproved chalk grassland, scrub and dewpond with exceptional botanical interest.	4.1km south-east
Tottington Wood LWS	This wood is situated just north of the South Downs. It consists typically of scattered Oak and Ash standards over mainly Hazel and some Ash coppice. It supports a very species-rich ground flora and a good number of bryophytes have been recorded. There are species-rich rides and several small streams.	4.2km south-east
Oreham Common LWS	The site is a registered common, located close to Henfield. It consists of herb-rich damp grassland with areas of tall herbs and some scrub and woodland. It has a small pond in the western corner.	4.2km south-east

Site name	Description[2]	Distance and direction from the proposed DCO Order Limits
Pond Lye LWS	This site includes a pond with extensive areas of sedge swamp around the margins and a species-rich neutral grassland. A number of locally uncommon plants are found in the meadow. The pond is of great ornithological importance, particularly for its breeding birds.	4.3km east
Amberley Chalkpits and Hacketts Copse LWS	Amberley Chalkpits and the adjoining woodland contain a huge variety of habitats spanning the succession from bare chalk and spoil heaps to deciduous woodland. The varied aspects of the chalk pits add to the range of microhabitats present. The site has an extremely rich flora and fauna including typical chalk downland species and many rarities. The site is also of geological importance.	4.4km north-west
Monkmead Woods LWS	This is an area of wet heath, dry heath and woodland on the south west edge of West Chiltington Common, between Storrington and Pulborough. The site has scarce plants, a rare fungus and nearby sites have a very rare dragonfly that could colonise this site if management was appropriate.	4.4km north-west
Goring and Ferring Gap LWS	Arable fields, broadleaved plantation woodland, semi-improved neutral, and amenity, grassland. Noted for gull and wader roost.	4.5km south-east
Part of Wiggonholt Common LWS	This site is a habitat mosaic of dry heathland, semi natural woodland and acid grassland with botanical interest and notable rarity.	4.6km north-west

2.3.2 Of the statutory and non-statutory sites identified in **Table 2-1** and **Table 2-2**, two non-statutory sites were identified as being potentially impacted by the onshore cable corridor, Littlehampton Golf Course and Atherington Beach LWS and Sullington Hill LWS.

2.3.3 The desk study indicated that the onshore cable corridor passes through the following areas of ancient woodland: Michelgrove Park and Calcot Wood. These are both shown as Planted Ancient Woodland Sites (PAWS) on MAGIC.

2.3.4 A total of 1,360 records of vascular plants of 194 species that are legally protected or notable (some at a county level only) were identified within 5km of the proposed DCO Order Limits. Of these, 15 records of eight species were from within the proposed DCO Order Limits, comprising:

- One record of strawberry clover *Trifolium fragiferum* (GB Red List (2004); vulnerable, England Red List (2014); vulnerable, at Atherington, National Grid Reference (NGR) TQ00A;
- Two records of hound's-tongue *Cynoglossum officinale* (Red List GB (2004); Near Threatened). One record within Angmering Park at NGR TQ00T and one at TQ 0929 1199;
- One record of common valerian *Valeriana officinalis* (Red List England (2014): Near threatened) at NGR TQ 119131;
- Six records of yellow horned-poppy *Glaucium flavum* (Red List England (2014); near threatened). All records were from Climping Beach, with two records within Climping Beach SSSI;
- Two records of dune fescue *Vulpia fasciculata* (Nationally Scarce (Joint Nature Conservation Committee, 2018), Sussex Rare). Both records were from Climping Beach, one within the SSSI at TQ 01374 01008, one outside, at TQ 01293 00987;
- One record of stiff saltmarsh-grass *Puccinellia rupestris* (Nationally Scarce, Sussex Rare), recorded at grid reference TQ 0102 0094;
- One record of bulbous Meadow-grass *Poa bulbosa* (Nationally Scarce, Sussex Rare) recorded at NGR TQ 0119 0096; and
- One record of musk stork's-bill *Erodium moschatum*: (Sussex Rare) at NGR TQ 01440 01026.

2.4 National Vegetation Classification survey

2.4.1 NVC surveys were undertaken between April 2021 and June 2021, with follow up surveys between April 2022 and June 2022. The purpose of NVC surveys was to confirm the typical vegetation communities of more botanically rich habitats present within or close to the Proposed DCO Order Limits. The NVC surveys were undertaken as the design of the Proposed Development has evolved. Therefore, some areas now fall outside of the proposed DCO Order Limits. The results of all NVC surveys are reported below.

Data collection locations

2.4.2 The following survey areas have been defined for each of the survey locations, based upon the broad habitat types recorded in the desk study, and by analysis of aerial mapping. The NVC surveys were undertaken prior to finalisation of the design of the Proposed Development and therefore, four of the 12 survey locations are now outside of the proposed DCO Order Limits. Details of survey locations are provided in **Table 2-3** with survey locations shown on **Figure 2.1**, **Annex A**.

Table 2-3 Summary of NVC survey areas

Site name	Description	Within Proposed DCO Order Limits	Survey Year
Angmering Park	Directly west of Warningcamp Down (National Grid Reference - TQ 038074) this field contained approximately 1.8 hectares (ha) of tall rank grassland with very little variation and no signs of encroaching scrub or woodland (**Image 1, Annex A**). Likely used for silage or hay and waterlogged for part of the year. No evidence of disturbance or access from the general public recorded.	No	2022
Calcot Wood	Approximately 12ha of conifer plantation with sections separated by glades and open rides (National Grid Reference - TQ 174149). Direct connectivity to large area of semi-natural broadleaf woodland to the south. The wider landscape is dominated by agricultural fields with large areas of continuous broadleaf woodland. There are footpaths present within the main woodland however these are not open to the public; with no evidence of significant disturbance recorded.	Yes	2022
Crossbush	The woodland at Crossbush formed a discrete block of mature broadleaved woodland approximately 5ha in extent (National Grid Reference - TQ 035065). The wider landscape is predominantly used for agriculture with the exception of block of continuous woodland approximately 230m to the east. The woodland was generally homogeneous with the exception of the outcrop of scrub at the southwest which was being managed for game birds (**Image 4, Annex A**, National Grid Reference - TQ 035064). Footpaths dissect the woodland, however these are not open to the public; with no evidence of significant disturbance recorded.	No	2021
Grassland at Wineham Lane	Approximately 3ha of grassland, situated at National Grid Reference - TQ 242213. At the time of survey, the grassland had just	Yes	2022

Site name	Description	Within Proposed DCO Order Limits	Survey Year
	been subject to a close-cut making it difficult to confirm typical condition and habitat use (**Image 5, Annex A**). It lies adjacent to a small parcel of ancient woodland to the north, with the existing National Grid Bolney substation to the south, and agricultural fields in the wider landscape.		
Poling Copse	Approximately 1.4ha of mature broad-leaved woodland (**Image 6, Annex A**, National Grid Reference - TQ 037060). This area is the western edge of a much larger area of woodland which stretches approximately 4-5km east and northeast. The remaining wider landscape consists of agricultural fields and small clusters of urban development. Footpaths ran along the northern boundary of this woodland however no evidence of disturbance was recorded.	No	2022
Spofforth Higher Level Stewardship[3]	The survey area consisted of a northern (approximately 22ha, National Grid Reference - TQ 102108) and southern (~35ha, National Grid Reference - TQ 103103) field, separated by a single track road with public access. These fields contained little variation throughout (**Image 7, Annex A**). The surrounding landscape was dominated by agricultural use.	Yes	2022
Sullington Hill	Sullington Hill consists of a mosaic of short chalk grasslands, semi-natural deciduous woodland and scrub, with each habitat type generally distinct with little overlap (**Images 8-10, Annex A**, National Grid Reference - TQ 095119). The survey area covers approximately 7ha. This wider landscape consists primarily of pasture for sheep and cattle grazing, with little urban development. Although publicly accessible, disturbance appeared to be minimal, and was limited to within the chalk footpaths that follow the	Yes	2021

[3] This area is two adjacent fields referred to in this appendix as Spofforth north and Spofforth south.

Site name	Description	Within Proposed DCO Order Limits	Survey Year
	western extent of Sullington Hill, adjoining the South Downs Way to the south.		
Talbot & Baker I	A dense monoculture of Italian perennial rye grass with very little variation or other species present, surrounded by mature hedgerows and tree-lines (**Image 11, Annex A,** National Grid Reference - TQ 216206). The survey area was approximately 0.5ha. The surrounding landscape was dominated by agricultural use.	Yes	2022
Talbot & Baker II	Dense tussocky grassland field which appears disused (**Image 12, Annex A**, National Grid Reference - TQ 221211). The survey area was approximately 0.8ha with the surrounding landscape dominated by agricultural use.	Yes	2022
Warningcamp Hill	Survey effort focused on approximately 2ha of the north and south facing slopes at the eastern boundary of Warningcamp Hill and New Down Local Wildlife Site (LWS) (**Image 13, Annex A**, National Grid Reference – TQ 041075). The wider landscape consists of pasture for sheep and cattle grazing, with little urban development. The survey area contains short-grazed calcareous grassland on steep north and south facing slopes leading into a central valley. Within the central valley is a tree-line surrounded by taller vegetation. The northern boundary of the grassland was encroached by scattered scrub comprising thick gorse, bramble and hawthorn. The survey area is subject to regular disturbance from recreational users including dog walkers, cyclists and hikers.	No	2021
Woodland at Wineham Lane	Block of broad-leaved plantation woodland approximately 4.3ha in extent (National Grid Reference - TQ 237214). The woodland has good connectivity to the wider landscape through mature tree-lines and is surrounded in the wider landscape by agricultural fields, buildings, and National Grid's Bolney	Yes	2021

Site name	Description	Within Proposed DCO Order Limits	Survey Year
	substation approximately 120m to the southeast. Although access to the periphery of the survey area was possible from public rights of way, the internal areas of plantation were not accessible to the public nor were they served by permissive paths; the presence of thick bramble and blackthorn make it unlikely that disturbance from the public would be significant (**Image 14, Annex A**).		
Workhouse Copse	A small mixed woodland approximately 1.4ha between Water Lane and Buncton Chapel (National Grid Reference - TQ 144138). The wider landscape consists of agricultural fields and rural residential properties. The survey area consisted of approximately 0.11ha of mature mixed woodland dissected by the Wiston stream, which flows north to south through the woodland. This woodland showed signs of regular access with a well-worn path through the centre (**Image 15, Annex A**), the effects of trampling on ground flora appeared to be more pronounced at the south of the survey area, with more areas of bare ground.	Yes	2021

Data collection methods

NVC survey

2.4.3 The NVC surveys of the sites were undertaken following the NVC methodology as described by Rodwell (2006), hereafter referred to as Rodwell. Interpretation is supported by Rodwell (1998_a and 1998_b) for the relevant habitat type. For example:

- Rodwell (1998_b) *Vol. 3: Grassland and Montane Communities* is used for interpretation of grassland habitats;
- Rodwell (1998_a) *British Plant Communities. Vol. 1: Woodlands and scrub* is used for interpretation of woodland habitats; and

- Rodwell (2000) *British Plant Communities. Vol. 5: Maritime Communities and Vegetation of Open Habitats* is used for interpretation of open habitats. Rodwell (1998a, 1998b, 2000, 2006).

2.4.4 Rodwell (covering the references above) provides a detailed classification method and survey of a wide range of natural plant communities (and some man-made plant communities, e.g., pastureland) that occur within Great Britain. Within each of the NVC survey areas outlined within **Table 2-3**, the Rodwell method was undertaken by sampling set areas (quadrats) within the vegetation, recording species' frequency and abundance, and noting a description of distinctive areas.

Survey sampling

2.4.5 NVC communities and sub-communities were determined by recording the amount of cover of each plant species within a quadrat.

2.4.6 The size of each quadrat sampled was dependant on the habitat being surveyed, as per Rodwell, as follows:

- Grassland – Two Metres-squared ($2m^2$);
- Woodland (Field and Ground layer vegetation) – Four Metres-squared ($4m^2$); and
- Woodland (Canopy and understory layer vegetation) – Fifty Metres-squared ($50m^2$).

2.4.7 Surveys of each habitat were undertaken by sampling five quadrats during each survey visit. Survey locations were chosen in advance of the surveys, using aerial mapping to identify suitable sampling points deemed representative of the wider survey area.

2.4.8 Quadrats were then set out on the ground within homogeneous areas, using visual assessment, with locations noted by 12-figure grid references using a Global Positioning System (GPS) unit to ensure surveys were repeatable. Following initial vegetative assessments, notably species-rich or species-poor stands of vegetation, which were atypical of the wider plant communities, were avoided.

Floristic tables: species' frequency and abundance

2.4.9 Plant communities in this appendix are described in terms of frequency and abundance, recorded within floristic tables. Frequency is determined by the number of quadrats each species was recorded in, as follows: scarce (1/5 – represented by the Roman numeral I), occasional (2/5 - represented by the Roman numeral II), frequent (3/5 represented by the Roman numeral III),) or constant (4/5-5/5 represented by the Roman numerals IV and V respectively), in line with Rodwell.

2.4.10 The abundance of each species relates to the percentage of ground it covers in each quadrat as described in the Domin scale (Shimwell, 1972):

- 91-100 percent cover – 10;
- 76-90 percent cover – 9;

- 51-75 percent cover – 8;
- 34-50 percent cover – 7;
- 26-33 percent cover – 6;
- 11-25 percent cover – 5;
- 4-10 percent cover – 4;
- <4 percent (Many plants) – 3;
- <4 percent (Several plants) – 2; and
- <4 percent (Few plants) – 1.

Vegetation descriptions

2.4.11 Each survey area was described including key species, vegetation structure, management techniques, and relationship with neighbouring vegetation in order to match it with the closest community type as described by Rodwell.

2.4.12 Where relevant, notes were made on the height of vegetation, soil drainage, slope, aspect, grazing-levels, land management, and any other data considered useful in determining the vegetation communities present.

2.4.13 The nomenclature for the vascular plants in this appendix follows Stace (2019) for both scientific and common names, see **Annex C**. Identification guides by Poland & Clement (2009), Rose (2006) and Wallace (2021) were used to confirm the identification of species. This appendix uses common species names, only using scientific names for species groups where common names are unavailable (such as bryophytes).

2.4.14 Initial survey visits within the woodland areas in April 2021, and April 2022 focused on the field and ground layer only. Initial surveys aimed to detect the presence and abundance of vernal species which complete their annual growth phase early in the year before the tree canopy has fully developed. Information on canopy and understory of woodland areas was collected during follow up surveys in May 2021 and June 2022, once the canopy had developed and identification of trees becomes easier, along with additional information on ground and field layers.

2.4.15 Grassland surveys were completed in May 2021 and June 2021 to detect both early and later flowering species. As there was little difference between the results of May and June surveys in 2021, this approach was not repeated in 2022[4]. Instead, a single survey of the fields was carried out during June 2022 which is the optimum period for surveying grassland.

Data analysis methods

2.4.16 Each survey area was assigned to a community type based on the species present, their relative frequency between quadrats, and how closely they match descriptions of communities described in Rodwell.

[4] See **Table 2-3** for the year in which each survey location was surveyed.

2.4.17 Where there was a change in abundance or cover of a species between survey visits at each quadrat the highest value of the two was used. For example, if there was 90 percent cover of bluebells at quadrat 1 in April and 40 percent in May, 90 percent bluebell cover was used in helping to determine the community present. This ensures species are not omitted from interpretation due to seasonal changes and allows accurate comparison of species recorded to floristic tables provided by Rodwell.

2.4.18 To assist with assigning communities, a statistical analysis programme - MAVIS software (Ver 1.03) (Centre for Ecology and Hydrology, 2016) was used to analyse the floristic table sample size data. Data from groups of quadrats was entered into MAVIS as constancy (or frequency) tables, matching coefficients are computed between the published synoptic tables and the new field data with the top 10 coefficients displayed. As MAVIS can be prone to misidentifying communities, interpretation of Rodwell was used as the primary method of classification; the MAVIS outputs are referred to where relevant.

2.4.19 Floristic tables for all NVC sites are provided in **Annex D**, with full output from all MAVIS calculations provided in **Annex E**. Full survey details, including visit dates are available in **Table B1, Annex B**.

Constraints and limitations

2.4.20 The timing of grassland surveys in May 2021 and June 2021 (in-line with best guidance) aimed to detect both early and later flowering species, particularly grasses. However, these surveys were completed within six days of each other due to land access restrictions. It is therefore unlikely that the data collected during these two close visits is a true representation of mid to late flowering species and their relative seasonal abundance. Similarly, a single visit for grassland surveys in June 2022, whilst capturing the optimal survey period for species diversity, does not capture flowering periods for both early and late flowering species.

2.4.21 Although three survey dates are provided for the woodland at Wineham Lane, survey visits on 15 April 2021 and 16 April 2021 were part of the same survey. This is due to time constraints meaning the whole area could not be effectively surveyed in the remaining time on 15 April 2021.

2.4.22 Due to the prevailing weather conditions, unusually high rainfall levels and cool temperatures throughout May 2021, many grass species were late to flower in 2021. As a result, identification was largely only possible using vegetative characteristics (i.e. non-flowering growth). Whilst this method is reliable for species identification, it increases the chance of finer plant specimens (if present amongst stands of similar vegetation) being under-recorded in number, which accurately reflect their abundance and frequency.

2.4.23 GPS point accuracy can only confirm location to within 4-5m (dependent upon signal triangulation). This means although repeat surveys attempted to re-survey the exact locations as earlier quadrats, there may be slight variation, particularly in grassland survey areas where the size of each quadrat ($2m^2$) is below the resolution of the GPS capability. Due to the public nature of these sites, quadrats could not be marked out in-situ between repeat surveys.

2.4.24 It should be noted the survey area at Workhouse Copse was 0.12ha in extent – which is too small to take more than one sample for the canopy and understory layers. The survey method recommends a minimum of 5 quadrats per survey area is taken; therefore, a workaround (Dring, 2000) was used within MAVIS calculations. Without this workaround, there is an increased likelihood that the recording of individual trees would result in large variations in the predicted community. This is due to all species recorded in the canopy and understory layer being automatically classed as 'constant' if only one quadrat is taken, irrespective of percentage cover within the quadrat.

2.4.25 A single quadrat covering the entire survey area at Workhouse Copse does mean that all species in the survey area were identified, whereas data collected at the other sites is a representative sample of the wider survey area.

2.4.26 A single quadrat was also used to establish the community present for the grassland and Wineham Lane. All other quadrats were in areas which had recently been cut to between one and two centimetres (cm) above ground, making identification of most species impossible. As such, these quadrats were unsuitable for assigning NVC community. As only one suitable quadrat was available for interpretation, Dring (2000) was used for MAVIS calculations at this location. The only area it was possible to effectively survey was the northern boundary of the survey area, adjacent to ancient woodland. This quadrat is unlikely to be representative of the wider field prior to cutting and prone to a higher abundance of woodland species from the adjacent ancient woodland.

2.4.27 None of the constraints or limitations identified above (**paragraphs 2.4.20 -2.4.26**) are considered likely to be significant or restrictive enough to result in the misidentification of communities when using Rodwell.

2.4.28 Recording plant cover using the Domin scale is subjective, being affected by recorder bias as different surveyors may estimate different percentage cover for identical samples. As these surveys were completed by the same surveyor there is unlikely to be Domin scale deviation between survey locations or dates.

2.4.29 There is potential that notable or rare species were present at the survey locations but were not recorded during surveys as they were not clearly visible at the time of survey and/or were outside of the randomly selected survey quadrats.

2.4.30 Survey effort was considered to be appropriate for the size and complexities of the habitats surveyed. It is likely that any additional species, if present, occur at low frequencies, or emerge later in the survey season if they were not detected during the NVC surveys.

2.4.31 MAVIS software was used to analyse the floristic table sample size data. As MAVIS can be prone to misidentifying communities, interpretation of Rodwell was used as the primary method of classification; the MAVIS outputs are referred to where relevant.

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3. Results

3.1 Field Survey Results

3.1.1 The NVC surveys were undertaken over two consecutive years, with the survey areas evolving in-keeping with the proposed DCO Order Limits. The surveys were undertaken between 15 April and 03 June 2021, and 12 April 2022 and 15 June 2022.

3.1.2 Eleven NVC Communities were identified during the surveys. NVC communities identified during this sampling approach are considered typical of habitats within the wider area.

3.1.3 Results for each of the areas surveyed are presented below in **Sections 3.2** to **3.16**.

3.2 Angmering Park

General site description

3.2.1 Directly west of Warningcamp Down (NGR - TQ 038074) this field contained approximately 1.8ha of tall rank grassland with very little variation and no signs of encroaching scrub or woodland. This grassland is identified as 'good semi-improved grassland' on the MAGIC maps Priority Habitat Inventory although it should be noted the confidence of this classification is low. This grassland was flanked by blocks of mature broadleaf woodland to the north and south.

Damp Grassland description

- Sample size: Five 2m^2 quadrats (Q1-Q5).
- Survey date: 15 June 2022.
- Average species count: 9.

3.2.2 This grassland consisted of dense tussocky grass with Yorkshire fog dominant. Other species include those typical of seasonally flooded or waterlogged grassland such as hairy sedge, common sedge, water mint and marsh foxtail. A high abundance of perennial rye suggests this field is improved which may be due to the depositing of nutrients from seasonal flooding, or from management for hay or silage. Although not recorded inside quadrats small areas of dominant soft rush were noted to the west of the field, suggestive of frequent wetting.

Community matches

3.2.3 The closest match for this community was MG10a (*Holcuo-Juncetum effuse* rush pasture – Typical sub-community) due to the high abundance of Yorkshire fog and species typical of permanently moist sites. This was supported by MAVIS. Creeping buttercup was present at the expected frequency for this community,

hairy sedge was present but at a greater abundance than would be expected. Soft rush was not as commonly found as would be expected in this community however in some small areas it was totally dominant. This may be due to control methods if this land is being used for silage or hay production.

3.2.4 **Final community** – MG10a (*Holco-Juncetum effuse* rush pasture, typical sub-community)

3.3 Calcot Wood

General site description

3.3.1 12ha of mature conifer plantation located at NGR - TQ 174149. This conifer woodland was dominated by Scots pine, with woodland parcels separated by glades and forest tracks. The woodland canopy was relatively sparse with 30-40 percent of the canopy cover open. During the summer months, much of the field layer was overgrown with bramble however significant areas of bare ground remain (**Image 16, Appendix A**). This is likely due to needle litter and grazing by deer supressing the growth of plant species.

Pine plantation woodland description

- Sample size: Five 50m^2 quadrats (Q1-Q5).
- Survey date: 12 April 2022, 14 June 2022.
- Average species count: 12.

3.3.2 This woodland was dominated by mature Scots pine, other tree species commonly recorded include sessile oak and silver birch, with holly recorded in the understory. Non-native sitka spruce was recorded at the northwest corner of the survey area. The understory was largely absent with some younger silver birch present at low density. Typical woodland species were commonly recorded such as foxglove, wood sage, bluebell and honeysuckle. Bryophyte cover was generally sparse apart from at Q2 where it accounted for 51-75 percent of ground cover.

Community matches

3.3.3 This woodland proved difficult to classify as it is not a semi-natural habitat. W18 (*Pinus sylvestric-Hylocomium splendes* woodland) is a fairly-close match for the canopy due to the dominance of Scots pine but strictly speaking these woodlands comprise native pinewoods or pine plantations within the native range of Scots pine. The field and ground layers do not correlate with W18.

3.3.4 W25 (*Pteridium aquilinum-Rubus fruticosus* underscrub) is a closer match based on the field and ground layers, this community consist of vegetation dominated by bramble and bracken. The presence of foxglove, creeping bent, creeping softgrass, sweet vernal, bluebell and the high abundance of wood sage support this. In this community it would be expected that trees would make a negligible contribution to cover, which was not found to be the case. This is supported by MAVIS which found this community to most closely resemble W25b (47.15 percent match).

3.3.5 W25b shows a close association with W10 (*Quercus robur-Pteridium aquilinum-Rubus Fruticose* woodland) and when W25b is found close to or within woodland it is nearly always of this type. It is therefore likely that this area was W10 woodland before being felled for conifer plantation, with some of the ground and field layer flora persisting.

3.3.6 **Final community** – W25b (*Pteridium aquilinum-Rubus fruticosus* underscrub, Teucrium scorodonia sub-community) with Scots pine canopy resembling W18 (*Pinus sylvestric-Hylocomium splendes* woodland).

3.3.7 Bluebell was recorded in this woodland. This is a Schedule 8 species of the Wildlife & Countryside Act 1981 (as amended) and as such is protected from picking and sale. No other notable plant species were recorded.

3.4 Crossbush

General site description

3.4.1 Survey effort focused on approximately 5ha of homogeneous broad-leaved woodland which made up most of the survey area, this area is also designated as ancient woodland on MAGIC maps ancient woodland inventory (Defra, 2021), however a description of the scrub habitat is also provided. The woodland is situated on a gentle (approximately 10°) east-facing slope (NGR - TQ 035065). Standing deadwood was frequently found along with a mixture of different aged trees. Bark stripping by squirrels was noted on some trees, however this was not extensive.

Broadleaved woodland

- Sample size: Five 50m^2 woodland quadrats; with one field and ground layer quadrat contained in each (Q1-Q5).
- Survey dates: 15 April 2021, 24 May 2021.
- Other woodland descriptor: Priority habitat: Lowland Mixed Deciduous Woodland.
- Average species count: 17.

3.4.2 Quadrats Q1-Q3 were placed in the north-western part of the survey area, with Q4 and Q5 in the central areas; the south-western limit was atypical and was therefore not sampled.

3.4.3 The woodland was mature, with a near continuous canopy dominated by beech, ash and pedunculate oak. Non-native tree species, European larch and Norway maple were recorded occasionally in the canopy. The understory was generally sparse and consisted of constant beech and holly, frequent Norway maple, occasional field maple, and scarce elder, hazel, hawthorn and blackthorn; particularly near the woodland edges. A single wild service tree was recorded in the understory, in Q4.

3.4.4 Bramble was constant throughout the field layer but generally was less than 40cm in height and accounted for <30 percent of ground cover. Other species found in

the field layer included occasional gooseberry and male fern. The ground layer was generally dominated by bluebell with occasional rough meadow-grass and dog's mercury, constant cleavers, dog's mercury, and scarce common sorrel and primrose.

Community matches

3.4.5 The key provided in Rodwell suggest the community to be a good match for W15 (*Fagus sylvatica – Deschampsia flexuosa* woodland) due to beech being constant and dominant in the tree canopy along with pedunculate oak and holly. However, the ground layer of this community does not appear to be a close match due to the dominance of bluebells which would be expected to be scarce and should not comprise more than 25 percent of ground cover. Bluebell accounted for >50 percent of ground cover in all quadrats and in some cases >91 percent (Q1).

3.4.6 Communities suggested by MAVIS (W21b, 43.04 percent & W25 42.73 percent) are not a good match for this community as these are representative of scrub habitats as opposed to mature woodland.

3.4.7 From descriptions of community and constancy tables W8 (*Fraxinus excelsior-Acer campestre-Mercurialis perennis* woodland) appears to be the closest match. W8 is a very diverse community with canopy and field layers often varying independently of each other. On base-rich soils beech can become important competitors of the major trees of this community and can give it the appearance of a community in transition to high forest dominated by beech, as recorded in the quadrats sampled at this site. This woodland therefore appears to represent an intermediate stand in which the canopy is transitioning to beech woodland more typical of W15 however the ground and field layers were still more reminiscent of W8.

3.4.8 **Final community** – W8 (*Fraxinus excelsior-Acer campestre-Mercurialis* perennis woodland)

3.4.9 Bluebell was recorded in this woodland. This is a Schedule 8 species of the Wildlife & Countryside Act 1981 (as amended) and as such is protected from picking and sale. No other notable plant species were recorded.

3.5 Grassland at Wineham Lane

General site description

3.5.1 Approximately 3ha of grassland found at TQ 242213. At the time of survey (June 2022), the grassland had just been cut making it difficult to confirm typical condition and use, or identify species present. This survey area lies adjacent to a small parcel of remnant ancient woodland to the north, with the existing National Grid Bolney substation directly to the south. Surrounding fields include agricultural pasture, used for hay / silage.

Neutral grassland

- Sample size: One 2m^2 quadrat taken near the field margin which had not been cut, four other potential quadrat locations were found to be unsuitable for survey as it was not possible to effectively identify species following recent cut.
- Survey date: 14 June 2022.
- Species count: 13.

3.5.2 This grassland contained a variety of commonly found grass species typical of lowland neutral habitats. Of these Yorkshire fog and Crested dog's-tail were the most frequently occurring. Other species such as cock's-foot, sterile brome, false oat-grass and timothy formed a lesser component. False brome was also identified which is more commonly associated with woodland however as this quadrat was in a field margin adjacent to a block of broadleaf woodland this is not unexpected. The remainder of the field has been cut to approximately 2cm with grass cuttings left in place. This management is not sympathetic management of lowland meadows[5]. It is therefore unlikely that there are any notable management practices taking place at this field to improve wildflower diversity.

3.5.3 Herbs recorded were common plants typical of field margins and grassland these included red clover and creeping buttercup. Wood speedwell was recorded which is more commonly associated with woodland, this is due to the proximity of woodland to the north.

3.5.4 It was attempted to identify species present in the wider field at an additional four locations however this was largely unsuccessful, where species could be identified they were in keeping with Q1 with creeping buttercup and Yorkshire fog commonly identified.

Community matches

3.5.5 It was not possible to determine the community type of most of the survey area however Q1 was largely typical of dairy pastures, most closely resembling MG6 (*Lolium perenne-Cynosurus cristatus*). This was due to the combination of a high prevalence of Crested dog's-tail and low species diversity. This is despite perennial rye grass being absent instead of constant as would be expected in this community. Rodwell states that Yorkshire fog and cock's-foot can obtain higher abundance when this grassland is under-grazed, this was found to be the case at Q1. As Q1 was not cut during typical management it is likely that this lack of management will encourage a greater abundance of coarse tussocky grass species at this location compared to Q2-Q5. High abundance of fast-growing tussocky grass species with few forbs generally indicates a high nutrient load, which would not be expected if this grassland was unimproved meadow.

3.5.6 **Final community** – MG6 (*Lolium perenne-Cynosurus cristatus*).

[5] It is not recommended to cut until mid-July to allow wildflowers time to set seed for species rich lowland meadows

3.6 Poling Copse

General site description

3.6.1 Broadleaf woodland with a complete canopy cover and very sparse understory and field layer found at NGR - TQ 037060. Q3 and Q4 appeared to be more typical of plantation woodland with a sparse ground layer and dense coppiced hazel. Q1, Q2 and Q5 were more typical of mature broadleaf woodland with a more developed ground layer typical of semi-natural woodland, and Ancient Woodland Indicator (AWI) species present. AWI species are as collated by Rose (2006) and change depending on to geographic locations, all survey areas in this appendix were classed as southeast. Signs of management were evident with coppiced hazel throughout. The survey area consisted of a 1.4ha section of a much larger area of woodland which stretches approximately 4-5km east and northeast.

Broadleaved woodland

- Sample size: Five 50m^2 quadrats (Q1-Q5).
- Survey date: 15 June 2022.
- Average species count: 11.

3.6.2 This woodland was dominated by semi-mature coppiced hazel (at least 51 percent of cover throughout), with mature sessile oak accounting for at least Percent% of cover in all quadrats. Sycamore and field maple were also found to be constant throughout although they formed a lesser component of the canopy. Holly and silver birch were also recorded. The field and ground layer were found to be very sparse during the June 2022 visit at all quadrats except for Q5.

Community matches

3.6.3 The key provided in Rodwell suggest the community to be a good match for W8d (*Fraxinum excelsior – Acer campestre – Mercurialis perennis* woodland, *Hedera helix* sub-community). This is due to the constant species hazel, field maple and bramble and the dominance of ivy in places. A high abundance of oak would be expected in this sub-community compared to other W8 woodlands, as was found to be the case. At the ground layer bluebell was dominant in places during April surveys although much of this vegetation had died back by June 2022. Other ground species were largely absent although some common woodland species such as honeysuckle, false brome, wood sedge and holly (saplings) were recorded. A greater abundance of species was recorded at the ground layer at Q5 which was towards the edge of the woodland including ground ivy, wood dock, cleavers, common nettle and primrose.

3.6.4 A reasonably close match was W10 (*Quercus robur – Pteridium aquilinum – Rubus fruticosus* woodland), particularly the *Holcus lanatus* sub-community, however this community lacks a high abundance of field maple, with eagle fern expected to be constant, instead of absent. Communities suggested by MAVIS (W8d, 43.44 percent, W10c, 39.34 percent) are largely in line with this.

3.6.5 **Final community** – W8d (*Fraxinus excelsior-Acer campestre-Mercurialis* perennis woodland, hedera helix sub-community).

3.6.6 Bluebell was recorded in this woodland. This is a Schedule 8 species of the Wildlife & Countryside Act 1981 (as amended) and as such is protected from picking and sale. No other notable plant species were recorded.

3.7 Spofforth North

General site description

3.7.1 This survey area consisted of two field compartments split into a northern (approximately 22ha) section and southern (approximately 35ha) section. As the communities in each field appeared to be slightly different and these fields covered a large area, they were analysed separately with the results of the northern field presented below.

Spofforth North

3.7.2 Homogenous grassland with little variation throughout. Red fescue, soft brome and cock's foot were all abundant along with a diverse mixture of common herbs such as daisy, creeping buttercup, common chickweed, white clover and dandelion *sp*. Less frequently recorded species within this field include crosswort, bird's foot trefoil, red clover and lesser hop-trefoil.

- Sample size: 5 quadrats (Q6-Q10).
- Survey date: 15 June 2022.
- Sward Height: 10cm.
- Average species count: 21.

Community matches – Northern field

3.7.3 Following the key in Rodwell suggests this community is MG11 (*Festuca rubra - Agrostis stolonifera-Potentilla anesira* grassland). In this community no grass species except red fescue and creeping bent are expected to be abundant, however soft brome, smaller cat's-tail and cock's-foot were constant. In addition to this no forbs would be expected to be constant with only white clover being frequent. This was not found to be the case with 12 forb species being at least frequent.

3.7.4 MG6c is suggested as a community type by MAVIS, likely because red fescue and creeping bent are abundant in this community, and Yorkshire fog is frequent as would be expected. Scarlet pimpernel was also found to be rare which is in line with this community. However, perennial rye grass, yellow oat grass and crested dogs' tail would all be expected to be constant, instead of absent.

3.7.5 MG6a (*Lolium perenne-Cynosurus cristatus* grassland) is a closer match due the absence of timothy grass or yellow oat grass. Forbs present are more in line with MG6a grassland than MG11 or MG6c with white clover, common mouse-ear,

creeping buttercup, germander speedwell, yarrow and spear thistle all present, if at different frequencies than would be expected.

3.7.6 **Final community** – MG6a (*Lolium perenne-Cynosurus cristatus* grassland).

3.8 Spofforth South

General site description

3.8.1 This survey area consisted of two field compartments split into a northern (approximately 22ha) section and southern (approximately 35ha) section. As the communities in each field appeared to be slightly different and these fields covered a large area, they were analysed separately with the results of the southern land parcel presented below. This field contained a high abundance of grass species such as cock's foot, red fescue, smaller cat's tail and soft brome. Forbs frequently recorded include smooth hawk's-beard, rough hawk's-beard, white clover, lesser stitchwort, field madder and red bartsia. Fairy flax and red bartsia were both recorded which are generally associated with less fertile soils suggesting there is not large levels of nutrient enrichment.

Spofforth South

- Sample size: 5 quadrats (Q1-Q5).
- Survey dates: 15 June 2022.
- Sward Height: 12cm.
- Average species count: 17.

Community matches – Southern field

3.8.2 Following the key in Rodwell suggests this community is MG11 (*Festuca rubra - Agrostis stolonifera-Potentilla anesira* grassland). In this community no grass species except red fescue and creeping bent are expected to be abundant, however both soft brome and cock's-foot were constant. In addition to this no forbs would be expected to be constant with only white clover being frequent. This was not found to be the case with 19 forb species being at least frequent.

3.8.3 MG6a (*Lolium perenne-Cynosurus cristatus* grassland) is suggested as a community type by MAVIS, likely because red fescue and creeping bent are abundant in this community, and smaller cat's tail and cock's-foot are constant. However, perennial rye grass and crested dogs' tail would be expected to be constant, instead of rare and absent, respectively. Despite this the forbs present are more in line with MG6c grassland than MG11 with white clover, common mouse-ear, creeping buttercup and black medic, yarrow and spear thistle all present, if at different frequencies than would be expected.

3.8.4 Anther community suggested by MAVIS is OV23 (*Lolium perenne – Dactylis glomerata* community) which is characteristic of resown recreational areas subjected to regular disturbance with irregular mowing. In this community, perennial rye grass would be expected to be constant however it was found to be

very rare. In addition to this, herbs such as bulbous buttercup, cut-leaved geranium, and daisy; and grass species such as red fescue, soft brome and creeping bent were found at much higher frequency than would be expected. As such this community is not deemed to be a close match.

3.8.5 **Final community** – MG6a (*Lolium perenne-Cynosurus cristatus* grassland, typical sub-community).

3.9 Sullington Hill LWS

General site description

3.9.1 NVC survey effort focused on the area of calcareous grassland identified to the west of the site**,** a brief description of the other habitats present is also provided below.

Calcareous grassland description

- Sample size: Five 2m^2 quadrats.
- Survey dates: 26 May 2021, 03 June 2021.
- Sward Height: 8cm during both site visits.
- Average species count: 27.

3.9.2 Calcareous grassland areas surveyed were predominantly located on the east facing slope which has a gradient between 20-30°.

3.9.3 Quadrats Q1 and Q3 were sampled within the northern area of this slope and quadrats Q2, Q4 and Q5 were sampled within the southern area.

3.9.4 A sward height of ~8cm was typical in all samples, the sward did not exceed 15cm.

3.9.5 In total 48 species were identified within quadrats. On average approximately 20 species were identified per quadrat in May 2021 and increasing to approximately 27 in June 2021. Seventeen species were recorded exclusively in June 2021, with three species were recorded exclusively in May 2021.

3.9.6 The grassland was dominated by sheep's fescue, with tussocky species such as cock's-foot and upright brome also frequent. Herbs and sedges were frequent throughout, particularly bulbous buttercup and salad burnet, however in most cases individual species did not account for >10 percent of cover. There appeared to be slightly increased grazing pressure at the south of the survey area within Q5, however species recorded were similar to the less-grazed areas.

3.9.7 Some scattered hawthorn, elder, gorse and bramble were present, although this did not appear to be encroaching into the grassland. Ant hills were common throughout indicating that the survey area had not been ploughed for at least 10 years (King, 1981). As shown on **Image 10, Annex A**, very few species were in flower during survey visits.

3.9.8 Signs of heavy grazing with cow dung were regularly observed throughout the survey area, with some areas showing signs of poaching, although no cattle were observed on either survey date.

3.9.9 Small-flowered buttercup is considered nationally scarce and was recorded in low numbers at Sullington Hill, within Q2 and Q3.

Community matches

3.9.10 Although MAVIS suggests CG2c (*Fesctuca ovina-Avenula pratensis* grassland, *Dicranum scoparium* sub-community) as the most likely community match for this grassland, upright brome would be expected to be typically infrequent and never abundant as such this seems unlikely.

3.9.11 Another less likely suggestion by MAVIS is CG4 (*Brachypodium pinnatum* grassland) and associated sub-communities, however in these communities tor-grass would be expected to exceed 10 percent cover; it was not recorded during these surveys.

3.9.12 CG3 (*Bromus erectus* grassland) is described as containing all swards in which upright brome makes up more than 10 percent of the cover and where other similar grasses such as tor-grass or downy oat-grass make up a negligible contribution. In the quadrats sampled, tor-grass and downy oat-grass were completely absent suggesting that CG3 is a close fit for this community.

3.9.13 All of the species which would be expected to be constant in CG3 (upright brome, glaucous sedge, sheep's fescue, bird's-foot trefoil, ribwort plantain and salad burnet) were found to be constant in the quadrats sampled, the exception being that upright brome was frequent. When present upright brome made up 35-50 percent of the plant cover in each quadrat which is in keeping with this community. Other flowering species present which are typical of CG3 include: bulbous buttercup, rough hawkbit, common knapweed, common ragwort, hedge bedstraw, yarrow, hairy violet, self-heal and red clover. Grass species present that match this community include cock's-foot, common bent, Yorkshire fog, smaller cat's tail, smooth meadow grass and quaking grass. As would be expected these grass species formed a lesser component of the sward and in some cases were scarce.

3.9.14 **Final community** – CG3 (*Bromus erectus* grassland).

3.9.15 Additional information was collected on other habitat types present within the survey area. Although these habitats were not subject to a full NVC survey, details are provided below to provide greater context of the wider site.

Semi-natural woodland

3.9.16 The semi-natural woodland located within the eastern half of the survey area contained a diverse mixture of semi-mature trees ranging from 8 to 12m in height.

3.9.17 Hazel and hawthorn were present in dense stands and shared co-dominance while blackthorn, holly, elder, dogwood and pedunculate oak were recorded occasionally. Canopy cover was dense at around 95 percent. Bramble, dog-rose, and clematis formed a shrub layer, with a number of common woodland species

found at the ground layer including yellow archangel, lords-and-ladies, common nettle, red campion and dog's mercury.

Scrub

3.9.18 There is an area of scrub along the eastern edge of Sullington Hill, surrounded by the semi-natural woodland described above. The scrub was relatively homogeneous and low lying (no taller than approximately 1m, typically approximately 50cm tall); bramble was constant (accounting for >80 percent of ground cover) interspersed with constant dogwood. Yorkshire fog was constant within the ground layer; with false brome and sweet vernal grass scarce. A wide variety of herbs were identified with annual mercury and smooth bedstraw being the most regularly recorded. Other herbs which were regularly recorded but did not provide a large amount of coverage include: barren strawberry, common valerian, ground-ivy, herb-robert, nettle-leaved bellflower, field forget-me-not, slender thistle and spear thistle. Greater burdock and common ragwort were scarce.

3.10 Talbot & Baker I

General site description

3.10.1 A dense monoculture of Italian rye grass with very little variation or other species present, surrounded by mature hedgerows and tree lines. The field was flanked by drains to the north and south with connectivity to the Cowfold stream to the east. To understand if this resulted in damp conditions and the associated flora typical of floodplain grazing marsh, an NVC survey was carried out. The survey area was approximately 0.5ha. The surrounding landscape was dominated by agricultural use.

Grassland description

- Sample size: Five 2m^2 quadrats.
- Survey date: 14 June 2022.
- Sward Height: 100cm.
- Average species count: 2.

Community matches

3.10.2 This species poor grassland is typical of highly productive grassland which has been subject to nutrient enrichment. Forbs were almost absent with a few occurrences of Broad-leaved dock and creeping buttercup which are typical of nutrient rich habitats. Italian rye is a commonly used species for hay leys in Britain and was found to be completely dominant at this location.

3.10.3 MG7 (*Lolio-plantaginion* leys and related grasslands) is the only community that somewhat matches this location. It is not a perfect match as typically perennial rye grass instead of Italian rye grass is the dominant grass species however this is due to a different seed mixture being used. Unlike MG7 which often contains small

amounts of other forbs, forbs were almost absent in this field. Nonetheless this community represents intensively managed grasslands leys which were found at this location.

3.10.4 **Final community** – MG7 (*Lolio-plantaginion* leys and related grasslands).

3.11 Talbot & Baker II

General site description

3.11.1 A generally species poor sward of thick tussocky grass which at the time of survey, does not appear to be undergoing management and appears disused. The survey area was approximately 0.8ha with the surrounding landscape dominated by a mixture of horse and cattle grazing pasture and cereal crops.

Grassland description

- Sample size: Five 2m^2 quadrats.
- Survey date: 14 June 2022.
- Sward Height: 80cm.
- Average species count: 7.

Community matches

3.11.2 This community is a good match for MG9b (*Holcus lanatus-Deschampsia cespitosa* grassland, *Arrhenatherum elatius* sub-community) due to the high abundance of Yorkshire fog and the occasional presence of tufted hairgrass. Other tussocky grass species such as false oat-grass and cock's foot accounted for >50 percent of ground cover in places forming a significant component of the sward, as would be expected in this community, this is supported by MAVIS.

3.11.3 Meadow foxtail occurs at a higher abundance than would be expected for MG9 grassland (constant instead of occasional). Meadow barley would be expected to be scarce and account for no more than 4 percent of cover, however it was found to be constant within this field and accounted for 34-50 percent of cover within Q1 and Q5, this does not match any of the vegetation communities identified by Rodwell.

3.11.4 In addition to MG9b MAVIS also suggests MG1b (*Arrhenatherum elatius* grassland, *utrica dioca* sub-community) as a likely community. MG1b is a fairly-close match however false oat-grass, common nettle and hogweed would all be expected to occur at a much higher frequency.

3.11.5 **Final community** – MG9b (*Holcus lanatus-Deschampsia cespitosa* grassland, *Arrhenatherum elatius* sub-community).

3.12 Woodland at Wineham Lane

General site description

3.12.1 The survey area was a block of broadleaved plantation woodland approximately 4.3ha in extent. The woodland had good connectivity to the wider landscape through mature treelines and was surrounded in the wider landscape by agricultural fields, buildings and existing National Grid Bolney substation approximately 120m to the southeast. Although access to the periphery of the site was possible from public rights of way, the internal areas of plantation were not accessible to the public, nor were there permissive paths; the presence of thick bramble and blackthorn make it unlikely that disturbance from the public would be significant.

Broadleaved plantation woodland

- Sample size: Five 50m^2 woodland quadrats; with one 4m^2 field and ground layer quadrat contained in each (Q1-Q5).
- Survey dates: 15 April 2021, 16 April 2021, 24 May 2021.
- Average species count: 20.

3.12.2 This plantation woodland contained a variety of native semi-mature broadleaved tree species. The most frequently recorded canopy species were sessile oak, ash, bird cherry and field maple which were all constant; small-leaved lime was also frequent. Signs of a plantation woodland include tree tubes, many trees being of a similar age and a clearly planting pattern, with many in rows with equal spacing (**Image 10, Annex A**). Canopy cover was up to 80 percent with some more open glades also present particularly along the northern boundary of the survey area. Standing deadwood from ash trees was more frequent in the western half of the survey area, likely due to ash die back. However, in no cases did the cover of standing deadwood exceed 5 percent. In many places, it was difficult to distinguish between the understory and the canopy with scrubby species such as blackthorn and hawthorn forming the canopy, while also being constant and frequent in the understory respectively. Constant bramble and occasional dogrose made the scrub dense and impenetrable in places.

3.12.3 The field and ground layers were notably sparse with fallen leaves and bare ground accounting for 50-75 percent of cover across much of the woodland. Wood meadow-grass was constant but in no cases made up >10 percent of ground cover. Common bent and rough meadow-grass were occasional and sweet vernal was found to be rare. Q2 was found to contain significant areas of grass cover with 35-50 percent cover of common bent. Forbs were rarely recorded and in no cases accounted for >10 percent of ground cover, forbs recorded were scarce spear thistle, rosebay willowherb, wood speedwell, bugle, broad buckler-fern, wood avens and creeping buttercup. Bryophytes were scarce throughout though springy turf-moss, *Plagiothecium sp*. and common feather moss were all recorded.

Community matches

3.12.4 This woodland was difficult to classify as it had been planted within the last 20 years and therefore did not comprise a typical semi-natural woodland community. The ground layer has not had time to sufficiently establish a woodland ground flora since planting, as such it does not match any woodland communities as described by Rodwell, and showed signs of relic grassland that had existed at the site prior to planting. Based on the high abundance of ash and field maple in the canopy the closest community to this would be W8 (*Fraxinus excelsior-Acer campestre-Mercurialis perennis* woodland), however this is not a very close match. This is supported by MAVIS which suggested W8d and W8a as the most closely matching community.

3.12.5 **Final community** – No match for woodland, canopy has some similarities to W8 (*Fraxinus excelsior-Acer campestre-Mercurialis* perennis woodland).

3.13 Warningcamp Hill

General site description

3.13.1 Survey effort focused on approximately 2ha of the north and south facing slopes at the eastern boundary of Warningcamp Hill and New Down Local Wildlife Site (LWS). These were two areas of calcareous grassland on steep slopes, up to 45° in places, directly facing each other. The wider landscape consists of pasture for sheep and cattle grazing, with little urban development. The survey area contains short-grazed calcareous grassland on steep north and south facing slopes leading into a central valley. Within the central valley is a tree-line surrounded by taller vegetation. The northern boundary of the grassland was encroached by scattered scrub comprising thick gorse, bramble and hawthorn. The survey area is subject to regular disturbance from recreational users including dog walkers, cyclists and hikers.

Calcareous grassland description

- Sample size: Five 2m^2 quadrats.
- Survey dates: 25 May 2021, 02 June 2021.
- Average Sward Height: 20cm.
- Average species count: 24.

3.13.2 Quadrats Q1 and Q2 were sampled within the north facing slope in the southern half of the site; quadrats Q3 to Q5 were sampled within the south facing, northern half of the site.

3.13.3 A sward height of approximately 20cm was typical in all quadrats; and did not exceed 35cm. Ant hills were common indicating that the area had not been ploughed for at least 10 years (King, 1981). During both survey visits, few species were in flower (**Image 16, Annex A**), particularly the grasses which were predominantly identified using vegetative characteristics.

3.13.4 In total 44 species were recorded within the five quadrats. On average approximately 19 species were identified per quadrat in May 2021, increasing to approximately 24 species in June 2021. Nine species were recorded exclusively in June 2021, and one species recorded exclusively in May 2021.

3.13.5 The grassland was dominated by the sheep's fescue, recorded as constant particularly within quadrats Q1 and Q2 on the north facing slope. Common bent was constant, accounting for 35-50 percent of ground cover in places on the south facing slopes but was not recorded in Q1 or Q2 on the north facing slopes. The tussocky grasses, Yorkshire fog, meadow fescue and cock's-foot were constant throughout the survey area but rarely accounted for >10 percent of ground cover each. Other grass species recorded in lower numbers include false oat-grass, crested hair-grass, Crested dog's-tail and soft-brome.

3.13.6 Forbs generally accounted for at least 20 percent of ground cover with this split amongst multiple species. The most frequent herb species identified were bulbous buttercup, lady's bedstraw, ribwort plantain, bird's-foot trefoil, germander speedwell, common ragwort and creeping cinquefoil. Sedges were scarcely recorded with only a single species – glaucous sedge – recorded in one quadrat.

3.13.7 Small-flowered buttercup was not recorded within the survey area despite being identified as present at Warningcamp Hill during the desk study. It may be that small-flowered buttercup populations are located outside of the survey area, or this could be due to under-recording from this species emerging late as explained in constraints.

3.13.8 At the bottom of the slope a line of semi-mature elder, hawthorn and hazel is surrounded by thick vegetation (**Image 17, Annex A**) typical of nutrient rich environments. This area showed signs of improvement, with additional nutrients potentially derived from agricultural runoff; common nettle was found to be dominant at the field layer. Other species present within the field layer included white dead-nettle, lords-and-ladies, ground-ivy, common hogweed, cleavers, false brome and marsh marigold.

3.13.9 This tree-line was flanked by approximately 30m wide area of flattened improved grassland, with species recorded reflective of higher nutrient environments including: frequent creeping buttercup, cock's-foot, Yorkshire fog, annual meadow grass, broad-leaved plantain, dandelion *sp.*, silverweed and white clover. There was a lower species diversity within the valley-bottom than was recorded within the surrounding sloped grasslands.

3.13.10 Signs of cattle grazing were observed within the grassland areas with cow dung observed throughout; disturbance from cattle was significant in flatter areas at the bottom of the valley with frequent poached areas and bare ground. No cattle were present on either of the survey days. A cattle drinking trough was also noted in the valley basin which was surrounded by bare ground from disturbance by cattle.

Community matches

3.13.11 Two potential matches for this community are MG5b (*Cynosurus cristatus-Centaurea nigra grassland, Galium serum* sub-community) and CG2c (*Festuca ovina-Avenula pratensis, Holcus lanatus-Trifolium repens* sub-community), which is supported by MAVIS (50.83 percent and 48.6 percent respectively). Rodwell

does state that in some cases, the vegetation of MG5b can closely resemble CG2 grassland in its floristics and structure.

3.13.12 MG5b is a close match for this community based on the following species being constant: Yorkshire fog, cock's-foot, bird's foot trefoil and ribwort plantain. Although lady's bedstraw was not constant as would be expected in this sub-community, it was frequent. The presence of creeping cinquefoil and lesser trefoil is notable as these species are usually absent from CG2 grasslands. However, red fescue would be expected to be constant in the place of sheep's fescue and crested dog's-tail was rare, rather than constant. In addition to this, yarrow, common knapweed and yellow oat-grass would all be expected to be constant but they were absent within the quadrats sampled.

3.13.13 CG2c appears to be a closer match, as in this community sheep's fescue was constant with other more bulky and coarse-leaved grass species being present such as constant Yorkshire fog and frequent cock's-foot, common bent and false oat-grass.

3.13.14 Other herbs present appeared to be representative of CG2c with red and white clover both constant. Hedge bedstraw and hairy violet were both recorded - matching this community, note that both species would be expected to be absent in MG5b. Other herbs recorded which are typical of this community include black medic, salad burnet, bird's-foot trefoil, bulbous buttercup, ribwort plantain and self-heal.

3.13.15 **Final community** – CG2c (*Festuca ovina-Avenula pratensis*, *Holcus lanatus-Trifolium repens* sub-community) with elements of MG5b (*Cynosurus cristatus-Centaurea nigra* grassland, *Galium serum* sub-community)

3.14 Workhouse Copse

General site description

3.14.1 A small mixed woodland approximately 1.4ha between Water Lane and Buncton Chapel. The wider landscape consists of agricultural fields and rural residential properties. The survey area consisted of approximately 0.11ha of mature mixed woodland dissected by the Wiston stream, which flows north to south through the woodland. This woodland showed signs of regular access with a well-worn path through the centre, the effects of trampling on ground flora appeared to be more pronounced at the south of the survey area, with more areas of bare ground. The survey area was too small to take more than one sample for the canopy and understory layer as explained in the survey constraints.

Mixed woodland

- Sample size: one 50m^2 woodland quadrat; five 4m^2 field and ground layer quadrats (Q1-Q5).
- Survey dates: 16 April 2021, 24 May 2021.
- Average species count: 17.

3.14.2 Quadrats Q1-Q5 were spread evenly throughout the woodland quadrat with Q1 to the north adjacent to a larger block of woodland and Q5 in the south.

3.14.3 This woodland strip contained a mixture of mature coniferous and broadleaved trees up to approximately 40m tall with a canopy cover of >90 percent. In the canopy Scots pine and sweet chestnut shared co-dominance with a single mature pedunculate oak at the south of the woodland quadrat. A single mature Scots pine was also recorded along with a fallen mature Scots pine. The presence of Scots pine is likely due to planting, with no indicators typical of semi-natural Scots pine woodland such as wavy-hair grass, heather or bulkier mosses such as sphagnum moss or rough goose neck moss were recorded.

3.14.4 The understory was diverse and contained a variety of broadleaved trees such as beech, sycamore and cherry (scarce at <4 percent cover), occasional holly, elder, English elm and field maple (4-10 percent cover). Coppiced hazel was frequent (26-33 percent cover). The field layer was dominated by the low lying vernals including: bluebell and wood anemone (both constant) with lesser celandine frequent. Other plants which were recorded occasionally included dog's mercury, lords-and-ladies, hard shield-fern, primrose, white dead-nettle and red campion. Mosses were constant in some areas where vascular plant cover was sparse with Swan's neck, Thyme moss, common feather moss and *Fissidens sp*. all recorded.

Community matches

3.14.5 This woodland proved difficult to classify. Following the key provided in Rodwell W10b (*Quercus robur-Peridium aquilinum-Rubus fruticosus woodland, Anemone nemorosa* sub-community) appeared to match the community recorded within the quadrats sampled. This is primarily because wood anemone largely replaced bluebell as a vernal dominant in places (although both are constant), coppiced hazel was the most frequent shrub and sweet chestnut was constant in the canopy. Scots pine would be expected to be scarce this community instead of dominant however its prevalence is likely a result of planting, so the presence of Scots pine is disregarded.

3.14.6 Although the canopy layer appears to be a good match for W10b the field and ground layers recorded within the quadrats sampled, were not a particularly close match with this community despite bluebell being constant, with lesser celandine found to be constant instead of scarce and bramble found to be absent instead of constant. Annual dog's mercury, lords-and-ladies and primrose were all recorded as being either scarce or occasional, however they would be expected to be absent from this community.

3.14.7 MAVIS suggests W8b (*Fraxinus excelsior-Acer campestre-Mercurialis perennis* woodland, *anemone nemorosa* sub-community) likely due to the percentage cover of hazel, wood anemone and lesser celandine. However, the canopy for this community is not a close match with ash completely absent, instead of constant, and sweet chestnut constant instead of scarce. Many of the ground layer species that would be expected to be frequent such as enchanter's-nightshade, wood avens, dog violet and yellow archangel were absent. Despite this, this is still a closer match at the ground level than W10b with bluebell and lesser celandine both constant, primrose, annual dog's mercury, *Fissidens sp.*, red campion and common nettles all being present but in no cases being more than occasional.

3.14.8 **Final community** – W10b (*Quercus robur-Peridium aquilinum-Rubus fruticosus* woodland, *Anemone nemorosa* sub-community) with similarities to W8b (*Fraxinus excelsior-Acer campestre-Mercurialis perennis* woodland, *anemone nemorosa* sub-community).

3.15 Notable plant species recorded

3.15.1 One WCA Schedule 8 listed species, Bluebell, was recorded during NVC surveys, with records at Calcot Wood, Crossbush, Poling Copse and Workhouse Copse. Small-flowered buttercup is considered nationally scarce (though increasing in Sussex, (Sussex Wildlife Trust, 2001)) and was recorded at Sullington Hill LWS. No other notable plant species were recorded during the NVC surveys undertaken in 2021 and 2022.

3.16 Legally controlled plant species

3.16.1 No legally controlled species were found to be present within or immediately adjacent to the survey area.

4. Summary

4.1.1 National Vegetation Classification (NVC) Surveys were successfully completed across all survey locations, with the constraints listed in **Section 2.4** not deemed to be significant enough to impact the results at survey locations, except for Grassland at Wineham Lane. **Table 4-1** below summarises the results of NVC surveys and provides information on priority habitats associated with these communities.

Table 4-1 Results of NVC surveys

Survey area	NVC community	Status
Angmering Park	MG10a (*Holco-Juncetum effuse* rush pasture, typical sub-community)	Priority habitat: Coastal and Floodplain Grazing Marsh. MG10 grassland is often associated with wet meadows and pasture. They are often communities degraded through agricultural improvement, drainage failure or conversely recolonising vegetation following abandonment of pasture / arable farming activities on poorly drained soils[6]. This habitat does not have the species rich composition that would be associated with semi-natural Coastal and Floodplain Grazing Marsh Priority Habitat (CFGM). However, the presence of ditches which are likely to contain standing water throughout much of the year at the western end of this field are in line with CFGM, which is largely defined by features rather than vegetation type. Other features typical include periodic inundation, grazing by livestock and location on floodplains. The eastern end of the survey area lacks surrounding ditches and as such would be unlikely to qualify as CFGMPH.
Calcot Wood	W25b (*Pteridium aquilinum-Rubus fruticosus* underscrub, *Teucrium scorodonia*	Priority habitat: No Despite the presence of some Ancient Woodland Indicator (AWI) species this woodland is not semi-natural and is

[6] A Review of the National Vegetation Classification for the Calthion group of plant communities in England and Wales (2017) Natural England.

Survey area	NVC community	Status
	sub-community) with Scots pine canopy resembling W18 (*Pinus sylvestric-Hylocomium splendes* woodland)	dominated by planted conifer trees of a similar age. Priority habitat: Ancient replanted woodland. The presence of AWI species and the inclusion of this woodland on the ancient woodland inventory (Defra, 2021) suggests this site is Ancient replanted woodland. Ancient woodland indicator (AWI) species recorded include: bluebell, slender St. John's-wort, honeysuckle, dog's mercury, sessile oak.
Grassland an Wineham Lane	MG6 (*Lolium perenne-Cynosurus cristatus*)	Priority habitat: No None of the indicator species typical of priority grassland habitat were recorded. It should be noted that recent cutting made it difficult to identify species. This is unlikely to be managed as good condition lowland meadow given the cutting regime in place will not allow many species of wildflowers to set seed. It is likely that this grassland is being managed as grass ley based on management practices observed and species recorded.
Poling Copse	W8d (*Fraxinus excelsior-Acer campestre-Mercurialis perennis* woodland, *hedera helix* sub-community)	Priority habitat: Lowland Mixed Deciduous Woodland Priority Habitat[7]. Some areas of this woodland are reminiscent of plantation woodland and do not appear to be natural, with a sparse ground layer and many hazel trees of a similar age. Despite this, the woodland is considered to meet lowland mixed deciduous woodland priority habitat criteria, particularly at the periphery of the woodland where it has characteristics of semi-natural woodland. Priority habitat: Ancient replanted woodland-included on ancient woodland inventory (Defra, 2021). Absence of veteran trees suggests that this woodland is not true ancient woodland but has been planted on a site previously containing ancient woodland as suggested by MAGIC which classified it as Ancient Replanted Woodland. Ancient woodland indicator (AWI) species recorded include: bluebell, dog's mercury,

[7] Lowland Mixed Deciduous Woodland habitat of principal importance.

Survey area	NVC community	Status
		primrose, scaly male fern, wood sedge, lesser celandine, holly, field maple, sessile oak.
Spofforth North	MG6a (*Lolium perenne-Cynosurus cristatus* grassland, typical sub-community)	Priority habitat: No No indication from desk study data, species assemblages recorded on site or management techniques associated with priority habitats that this is priority habitat.
Spofforth South	MG6a (*Lolium perenne-Cynosurus cristatus* grassland, typical sub-community)	Priority habitat: No No indication from desk study data, species assemblages recorded on site or management techniques associated with priority habitats that this is priority habitat.
Talbot & Baker I	MG7 (*Lolio-plantaginion* leys and related grasslands)	Priority habitat: No No indication from desk study data, species assemblages recorded on site or management techniques associated with priority habitats that this is priority habitat.
Talbot & Baker II	MG9 (*Holcus lanatus-Deschampsia cespitosa* grassland, *Arrhenatherum elatius* sub-community)	Priority habitat: No No indication from desk study data, species assemblages recorded on site or management techniques associated with priority habitats that this is priority habitat.
Warningcamp Hill	CG2c (*Festuca ovina-Avenula pratensis, Holcus lanatus-Trifolium repens* sub-community) with elements of MG5b (*Cynosurus cristatus-Centaurea nigra grassland, Galium serum* sub-community)	Priority habitat: Lowland Calcareous grassland[8]. The species assemblages recorded and most closely matching community are consistent with lowland calcareous grassland priority habitat. CG2 is one of three short-sward communities associated with heavy grazing and is regarded as “typical” chalk grassland.
Sullington Hill LWS	CG3 (*Bromus erectus* grassland)	Priority habitat: Lowland Calcareous grassland[9]. The species assemblages recorded, and the most closely matching community are consistent with lowland calcareous grassland priority habitat. CG3 is one of four communities associated with low levels of grazing with the calcicolous grassland group.

[8] Calcareous grassland habitat of principal importance.

Survey area	NVC community	Status
Crossbush	W8 (*Fraxinus excelsior-Acer campestre-Mercurialis perennis* woodland)	Priority habitat: Lowland Mixed Deciduous Woodland Priority Habitat Priority habitat: Ancient woodland- included on ancient woodland inventory (Defra, 2021). Ancient woodland indicator (AWI) species recorded include: bluebell, dog's mercury, primrose, wood anemone, wild garlic and wild service tree.
Workhouse Copse	W10b (*Quercus robur-Peridium aquilinum-Rubus fruticosus* woodland, *Anemone nemorosa* sub-community) with similarities to W8b (*Fraxinus excelsior-Acer campestre-Mercurialis perennis* woodland, *anemone nemorosa* sub-community)	Priority habitat: Lowland Mixed Deciduous Woodland Priority Habitat Priority habitat: Ancient woodland – This area of woodland does not qualify as ancient (Lowland Mixed Deciduous Woodland Priority Habitat), but it does have some characteristics due to good connectivity to ancient woodland approximately 60m north. It is not included on the ancient woodland inventory (Defra, 2021) and lacked any veteran trees. Mature Scots pine were recorded; however, this species can reach 'mature' status at around 125-200 years old which would not confirm that this area of woodland has remained permanently wooded for over 400 years. Some AWI species were recorded as present including: bluebell, dog's mercury, primrose, red campion and wood anemone.
Woodland at Wineham Lane	*No match for woodland, canopy has some similarities to W8 (Fraxinus excelsior-Acer campestre-Mercurialis perennis woodland)*	Priority habitat: No Nothing to indicate this is ancient woodland or plantation on ancient woodland sites based on very sparse ground flora. No clear example of good quality priority habitat as many trees of a similar age structure and character. There is little regrowth or clearings, no recognisable woodland NVC community, generally a single storey across all survey plots, no veteran trees present and a very sparse ground and field layer.

4.1.2 Additional information on priority habitats recorded are provided in **Table 4-2** below. **Section 1.1** provides further details on legislation relating to legally protected habitats and species identified in this appendix.

Table 4-2 Priority habitat descriptions

Priority habitat type	Description
Lowland Calcareous grassland	Lowland calcareous grasslands are developed on shallow lime-rich soils generally overlying limestone rocks, including chalk. They are typically managed as components of pastoral or mixed farming systems, supporting sheep, cattle and sometimes horse grazing. A large number of rare plants are associated with this habitat, there is at least a moderate representation of species typical of calcareous grassland. Lowland calcareous grassland is included within the broad habitat type of semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia)* and is identified in Annex 1 of the EC Habitats Directive as of Community interest.
Lowland Mixed Deciduous Woodland Priority Habitat	Lowland mixed deciduous woodland includes woodland growing on the full range of soil conditions, from very acidic (<4 pH) to base-rich, and includes most semi-natural woodland in southern and eastern England. Lowland Mixed Deciduous Woodland also occurs in parts of lowland Wales and Scotland. It usually occurs on sites with well-defined boundaries, at relatively low altitudes, although altitude is not a defining feature. Many are classed as ancient woodland.
Ancient woodland	Areas of woodland which have remained woodland for over 400 years, often listed on the Ancient Woodland Inventory (Defra, 2021). Ancient woodland requires special consideration before planning consent can be granted: '*planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss.*' (Ministry of Housing, Communities & Local Government, 2012).

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5. Glossary of terms and abbreviations

Term (Acronym)	Definition
DCO	Development Consent Order
EIA	Environmental Impact Assessment
EEC	European Economic Community
CFGM	Coastal and floodplain grazing marsh
ES	Environmental Statement
GPS	Global Positioning System
HLS	Higher Level Stewardship
JNCC	Joint Nature Conservation Committee
km	Kilometre
LWS	Local Wildlife Site
m	Metre
NVC	National Vegetation Classification
OS	Ordinance Survey
SAC	Special Area of Conservation
SxBRC	Sussex Biodiversity Record Centre
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

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6. References

CEH, (2016). *Modular Analysis of Vegetation Information System (MAVIS) Version 1.03. CEH.* [Online] Available at: https://www.ceh.ac.uk/services/modular-analysis-vegetation-information-system-mavis [Accessed 20 July 2022].

Council Directive 92/43/EEC., 1992 (as Amended). *The Habitats Directive 92/43/EEC*. [Online]. Available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043 [Accessed 20 July 2023.]

Department for Environment, Food and Rural Affairs (Defra),(2021). *MAGIC webpage*. [Online]. Available at https://magic.defra.gov.uk/. [Accessed 20 July 2023].

Dring, J.S., (2000). *SIMIL: A suite of programs for calculating the similarity between new quadrat data and the units of the National Vegetation Classification*. Unit of Vegetation Science. Lancaster University.

JNCC, (2021). *JNCC Resource Hub*. [Online]. Available at https://jncc.gov.uk/. [Accessed May 2023].

King, T. J. (1981). *Ant-Hills and Grassland History.Journal of Biogeography*, vol. 8, no. 4, 1981, pp. 329–334. *JSTOR*, www.jstor.org/stable/2844766. [Accessed 20 July 2021].

Legislation.gov.uk. n.d. *Wildlife and Countryside Act 1981*. [online] Available at: http://www.legislation.gov.uk/ukpga/1981/69/section/28P . [Accessed 20 July 2023].

Maddock, A. (2008). *Lowland Calcareous Grassland.* Available at: https://data.jncc.gov.uk/data/c212f9ed-9df8-408a-83cf-668ef9802b2f/UKBAP-BAPHabitats-25-LowlandCalcGrass.pdf [Accessed 20 July 2023]

Ministry of Housing, Communities & Local Government (2012). *National Planning Policy Framework*. [online]. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf [Accessed 20 July 2023]

Natural England (2017). *A review of the National Vegetation Classification for the Calthion group of plant communities in England and Wales.* [Online]. Available at http://publications.naturalengland.org.uk/file/4890571146002432 [Accessed 20 July 2022]

Natural England and the Forestry Commission. (2014). *Ancient woodland, ancient trees and veteran trees: protecting them from development*. London; Forestry Commission

Natural England, (2021). *Designated Sites View*. Available at https://designatedsites.naturalengland.org.uk/. [Accessed 20 July 2023].

Peterken, G.F. (1981) *Woodland conservation and management.* Available at: https://data.jncc.gov.uk/data/2829ce47-1ca5-41e7-bc1a-871c1cc0b3ae/UKBAP-BAPHabitats-30-LowlandMixedDecWood.pdf [Accessed 20 July 2023]

Poland, J. & Clement E.J. (2009) *The Vegetative Key to the British Flora*. Botanical Society of the British Isles, Durham.

Rodwell, J.S. (Ed.), Pigott, C.D., Ratcliffe, D.A., Malloch, A.J.C., Birks, H.J.B., Proctor, M.C.F., Shimwell, D.W., Huntley, J.P., Radford, E., Wigginton, M.J. & Wilkins, P. (1998a). *British Plant Communities. Vol. 1: Woodlands and scrub.* Cambridge University Press, Cambridge.

Rodwell, J.S. (Ed.), Pigott, C.D., Ratcliffe, D.A., Malloch, A.J.C., Birks, H.J.B., Proctor, M.C.F., Shimwell, D.W., Huntley, J.P., Radford, E., Wigginton, M.J. & Wilkins, P. (1998b). *British Plant Communities. Vol. 3: Grassland and Montane Communities.* Cambridge University Press, Cambridge.

Rodwell, J.S. (Ed.), Pigott, C.D., Ratcliffe, D.A., Malloch, A.J.C., Birks, H.J.B., Proctor, M.C.F., Shimwell, D.W., Huntley, J.P., Radford, E., Wigginton, M.J. & Wilkins, P. (2000). *British Plant Communities. Vol. 5: Maritime Communities and Vegetation of Open Habitats*. Cambridge University Press, Cambridge.

Rodwell, S (2006) *National Vegetation Classification: Users' handbook*. Joint Nature Conservation Committee.

Rose, F. (2006) *the Wild Flower Key – How to identify wild plants, trees and shrubs in Britain and Ireland*. Penguin Group, London

Sussex Wildlife Trust., 2001. *The Sussex rare plant register of Scarce and Threatened Vascular Plants, Charophytes, Bryophtyes and Lichens*. Sussex Wildlife Trust.

Shimwell, D, W. (1972) *The Description and Classification of Vegetation*. University of Washington Press, Seattle. 322pp.

Stace, C, A. (2019). *New Flora of the British Isles.* Fourth Edition. C&M Florisitcs

The National Archives. (2011) *Habitat Action Plan, Lowland Calcareous Grassland.* Available at: [ARCHIVED CONTENT] Action plan for Lowland calcareous grassland (nationalarchives.gov.uk) [Accessed 20 July 2023]

Wallace, H (2021) Grasses: a guide to identification using vegetative characters. *Field Studies Council.*

Annex A
Figures and Images

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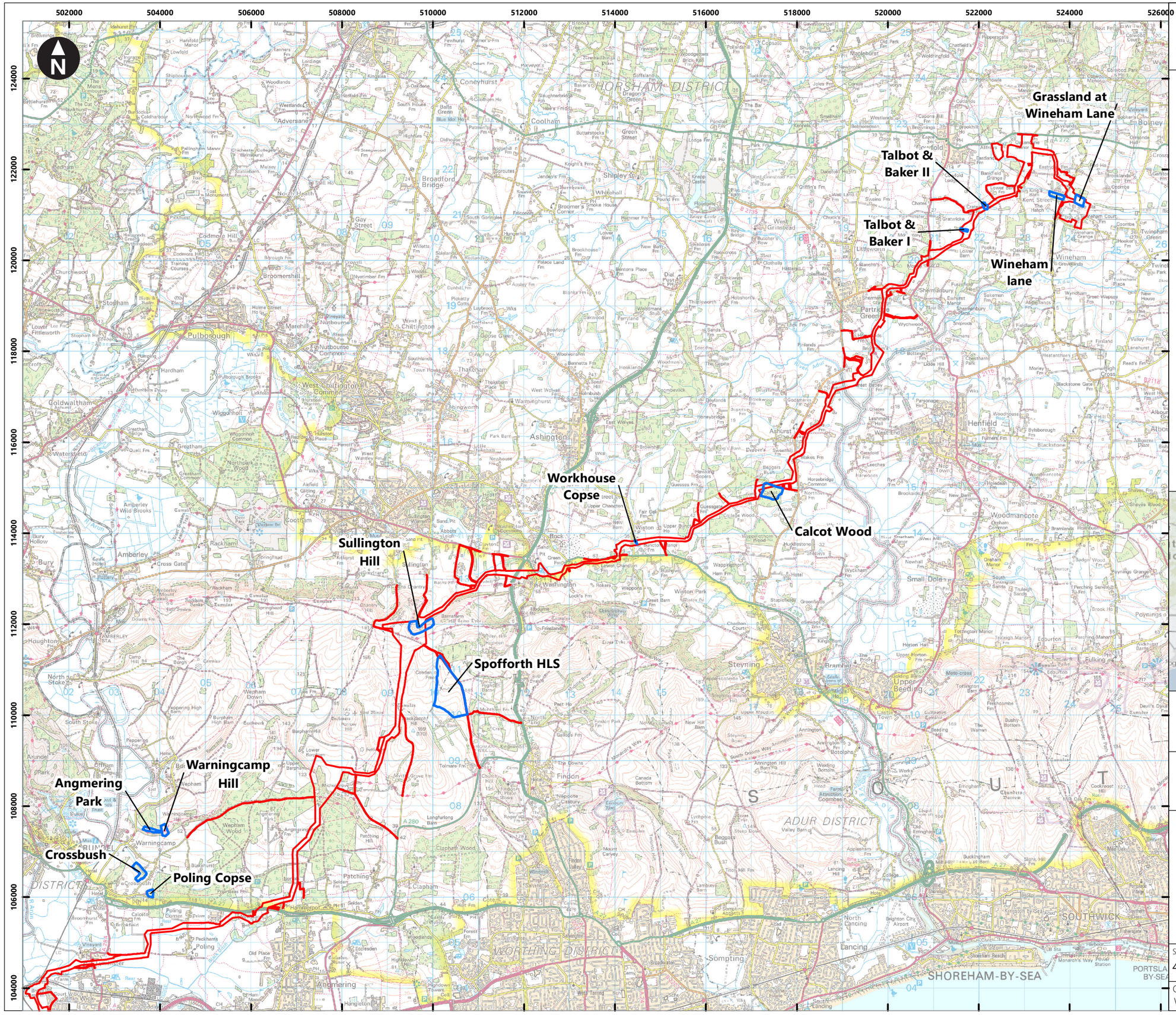

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Key

- Proposed DCO Order Limits
- Survey area

Meters
0 600 1,200 2,400 3,600 4,800

1:80,000

British National Grid Transverse Mercator

Rampion Extension Development

Rampion 2 WIND FARM

Rampion 2 Offshore Wind Farm

Figure 22.4.1 National Vegetation Classification Survey Plots

National Vegetation Classification survey report 2021-2022

Environmental Statement

System Identifier:	Version:
42285-WSPE-ES-ON-FG-OO-7603	1.0

Company:	Drawn By:	Chk/Aprvd:	Drawn Date:	Status:
WSP	HADJE	SUTET	20/07/2023	FINAL

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Table A1 Images referred to in Appendix 22.4.

Image (site)	
1 (Angmering Park)	
2 (Calcot Wood)	

Image (site)	
3 (Crossbush - woodland)	
4 (Crossbush - Scrub)	

Image (site)	
5 (Grassland at Wineham Lane)	
6 (Poling Copse)	

Image (site)	
7 (Spofforth HLS: north and south)	
8 (Sullington Hill LWS)	

Image (site)	
9 (Sullington Hill LWS - scrub)	
10 (Sullington Hill LWS)	

Image (site)	
11 (Talbot & Baker I)	
12 (Talbot & Baker II)	

Image (site)	
13 (Warningcamp Hill)	
14 (Woodland at Wineham Lane)	

Image (site)	
15 (Workhouse Copse)	
16 (Warningcamp Hill Q2)	

Image (site)

17 (Warningcamp Hill tree-line)

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Annex B
Full survey details

Full survey details of the National Vegetation Classification (NVC) surveys are shown below in **Table B1**.

Table B1 Full survey details of surveys undertaken

Date	Survey location	Survey type	Additional information and constraints
15 April 2021	Crossbush	Woodland NVC	Canopy not surveyed; survey focused on ground / field layer
15 April 2021	Wineham Lane	Woodland NVC	Canopy not surveyed; survey focused on ground / field layer. (Quadrats 3-5)
16 April 2021	Wineham Lane	Woodland NVC	Canopy not surveyed; survey focused on ground / field layer (Quadrats 1-2)
16 April 2021	Workhouse Copse	Woodland NVC	Canopy not surveyed; survey focused on ground / field layer
24 May 2021	Crossbush	Woodland NVC	
24 May 2021	Wineham Lane	Woodland NVC	
24 May 2021	Workhouse Copse	Woodland NVC	
25 May 2021	Warningcamp Hill	Grassland NVC	
26 May 2021	Sullington Hill	Grassland NVC	
02 June 2021	Warningcamp Hill	Grassland NVC	
03 June 2021	Sullington Hill	Grassland NVC	
12 April 2022	Calcot Wood	Woodland NVC	
12 April 2022	Poling Copse	Woodland NVC	
14 June 2022	Calcot Wood	Woodland NVC	

Date	Survey location	Survey type	Additional information and constraints
14 June 2022	Talbot & Baker I	Grassland NVC	
14 June 2022	Talbot & Baker II	Grassland NVC	
14 June 2022	Grassland at Wineham Lane	Grassland NVC	Very recent cutting made survey sub-optimal
15 June 2022	Poling Copse	Woodland NVC	
15 June 2022	Spofforth HLS (north and south)	Grassland NVC	
15 June 2022	Angmering Park	Grassland NVC	

Annex C
Scientific species names

Table C1 below lists all species mentioned within this Appendix, note some species mentioned below were not recorded during surveys.

Table C1 Scientific name of species mentioned in this Appendix

English name	Scientific name
Agrimony	*Agrimonia eupatoria*
Annual meadow grass	*Poa annua*
Ash	*Fraxinus excelsior*
Barren strawberry	*Potentilla sterilis*
Bastard-toadflax	*Thesium humifusum*
Beaked hawk's-beard	*Crepis vesicaria*
Beech	*Fagus sylvatica*
Birch	*Betula sp.*
Bird's foot trefoil	*Lotus corniculatus*
Black bryony	*Tamus communis*
Black medic	*Medicago lupulina*
Blackthorn	*Prunus spinosa*
Bluebell	*Hyacinthoides non-scripta*
Bracken	*Pteridium aquilinum*
Bramble	*Rubus fruticosus* agg.
Bristly hawkbit	*Leontodon hispidus*
Broad buckler-fern	*Dryopteris dilatata*
Broad-leaved dock	*Rumex obtusifolius*
Broad-leaved plantain	*Plantago major*

English name	Scientific name
Broad-leaved spurge	*Euphorbia platyphyllos*
Bugle	*Ajuga reptans*
Bulbous buttercup	*Ranunculus bulbosus*
Greater burdock	*Arctium lappa*
Cherry species	*Prunus* sp.
Chickweed	*Stellaria media*
Cleavers	*Galium aparine*
Clematis	*Clematis vitalba*
Cock's foot	*Dactylis glomerata*
Common bent	*Agrostis capillaris*
Common cat's-ear	*Hypochaeris radicata*
Common chickweed	*Stellaria media*
Common dog-violet	*Viola riviniana*
Common feather moss	*Kindbergia praelonga*
Common hogweed	*Heracleum sphondylium*
Common knapweed	*Centaurea nigra*
Common milkwort	*Polygala vulgaris*
Common mouse-ear	*Cerastium fontanum*
Common nettle	*Urtica dioica*
Common ragwort	*Senecio jacobaea*
Common rock-rose	*Helianthemum nummularium*
Common sedge	Carex nigra
Cowslip	*Primula veris*
Crack willow	*Salix fragilis*
Creeping bent	*Agrostis stolonifera*

English name	Scientific name
Creeping buttercup	*Ranunculus repens*
Creeping cinquefoil	*Potentilla reptans*
Creeping thistle	*Cirsium arvense*
Crested dog's-tail	*Cynosurus cristatus*
Crested hair-grass	*Koeleria macrantha*
Crisped dock	*Rumex obtusifolius*
Crosswort	*Cruciata laevipes*
Curled dock	*Rumex crispus*
Cut-leaved crane's-bill	*Geranium dissectum*
Cut-leaved geranium	*Geranium dissectum*
Daisy	*Bellis perennis*
Dandelion	*Taraxacum* agg.
Dog mercury	*Mercurialis perennis*
Dog rose	*Rosa canina* agg.
Dog's mercury	*Mercurialis perennis*
Dogwood	*Cornus sanguinea*
Dove's-foot crane's-bill	*Geranium molle*
Downy oat-grass	*Helictotrichon pubescens*
Dwarf thistle	*Cirsium acaule*
Elder	*Sambucus nigra*
Enchanter’s-nightshade	*Circaea lutetiana*
English elm	*Ulmus minor*
European larch	*Larix decidua*
Fairy flax	*Linum catharticum*
False brome	*Brachypodium sylvaticum*

English name	Scientific name
False oat-grass	*Arrhenatherum elatius*
False-brome	*Brachypodium sylvaticum*
Feather moss	*Kindbergia praelonga*
Field forget-me-not	*Myosotis arvensis*
Field madder	*Sherardia arvensis*
Field maple	*Acer campestre*
Field wood-rush	*Luzula campestris*
***Fissidens* moss species**	*Fissidens* sp.
Fleabane	*Pulicaria dysenterica*
Germander speedwell	*Veronica chamaedrys*
Glaucous sedge	*Carex flacca*
Greater plantain	*Plantago major*
Ground ivy	*Glechoma hederacea*
Guelder rose	*Viburnum opulus*
Hairy sedge	Carex hirta
Hairy violet	*Viola hirta*
Hard shield-fern	*Polystichum aculeatum*
Hart's-tongue fern	*Phyllitis scolopendrium*
Hawkweed oxtongue	*Picris hieracioides*
Hawthorn	*Crataegus monogyna*
Hazel	*Corylus avellana*
Heath speedwell	*Veronica officinalis*
Heather	*Calluna sp.*
Hedge bedstraw	*Galium mollugo*
Herb Robert	*Geranium robertianum*

English name	Scientific name
Hogweed	*Heracleum sphondylium*
Holly	*Ulex europaeus*
Honeysuckle	*Lonicera periclymenum*
Italian rye-grass	*Lolium multiflorum*
Ivy	*Hedera sp.*
Lady's bedstraw	*Galium verum*
Lesser celandine	*Ranunculus ficaria*
Lesser hop trefoil	*Trifolium dubium*
Lesser stitchwort	*Stellaria graminea*
Lesser trefoil	*Trifolium dubium*
Lords-and-ladies	*Arum maculatum*
Marsh foxtail	*Alopecurus geniculatus*
Marsh marigold	*Caltha palustris*
Meadow barley	*Hordeum secalinum*
Meadow fescue	*Festuca pratensis*
Meadow foxtail	*Alopecurus pratensis*
Meadow vetchling	*Lathyrus pratensis*
Mouse-ear hawkweed	*Hieracium pilosella group*
Neat feather-moss	*Pseudoscleropodium purum*
Nettle-leaved bellflower	*Campanula trachelium*
Parsley piert	*Aphanes arvensis* agg.
Pedunculate Oak	*Quercus robur*
Perennial rye-grass	*Lolium perenne*
***Plagiothecium* moss species**	*Plagiothecium sp.*
Prickly poppy	*Argemone mexicana*

English name	Scientific name
Prickly sow-thistle	*Sonchus asper*
Primrose	*Primula vulgaris*
Pyramidal orchid	*Anacamptis pyramidalis*
Quaking-grass	*Briza media*
Ragwort	*Senecio jacobaea*
Red bartsia	*Odontites vernus*
Red campion	*Silene dioica*
Red clover	*Trifolium pratense*
Red fescue	*Festuca rubra agg.*
Ribwort plantain	*Plantago lanceolata*
Rosebay willowherb	*Chamerion angustifolium*
Rough goose neck moss	*Rhytidiadelphus triquetrus*
Rough hawk's-beard	*Crepis biennis*
Rough meadow-grass	*Poa trivialis*
Rough-stalked meadow-grass	*Potentilla anserina*
Salad burnet	*Sanguisorba minor*
Scaly male-fern	*Dryopteris affinis*
Scarlet pimpernell	*Anagallis arvensis*
Scots pine	*Pinus sylvestris*
Self-heal	*Prunella vulgaris*
Sessile oak	*Quercus petraea*
Sheep's fescue	*Festuca ovina agg.*
Sheep's sorrel	*Rumex acetosella*
Silver birch	*Betula pendula*
Silverweed	*Potentilla anserine*

English name	Scientific name
Slender thistle	*Carduus tenuiflorus*
Smaller cat's tail	*Phleum bertolonii*
Smaller cat's-tail	*Phleum bertolonii*
Small-flowered buttercup	*Ranunculus parviflorus*
Small-leaved lime	*Tilia cordata*
Smooth bedstraw	*Cruciata laevipes*
Smooth hawk's-beard	*Crepis capillaris*
Smooth meadow grass	*Poa pratensis sens.lat.*
Soft brome	*Bromus hordeaceus*
Spear thistle	*Cirsium vulgare*
Sphagnum moss species	*Sphagnum* sp.
Spindle	*Euonymus europaeus*
Spring sedge	*Carex caryophyllea*
Springy turf-moss	*Rhytidiadelphus squarrosus*
Sterile brome	Anisantha sterilis
Stiff saltmarsh-grass	*Puccinellia maritima*
Stinging nettle	*Urtica dioica*
Strawberry clover	*Trifolium fragiferum*
Swan's neck thyme-moss	*Mnium hornum*
Sweet chestnut	*Castanea sativa*
Sweet vernal-grass	*Anthoxanthum odoratum*
Sycamore	*Acer pseudoplatanus*
Thyme-leaved sandwort	*Arenaria serpyllifolia*
Timothy	Phleum pratense sens.lat.
Toadflax	*Linaria vulgaris*

English name	Scientific name
Tor-grass	*Brachypodium pinnatum*
Tufted hairgrass	*Deschampsia cespitosa*
Upright brome	*Bromopsis erecta*
Water mint	Mentha aquatica
Wavy-hair grass	*Deschampsia flexuosa*
Wayfaring tree	*Viburnum lantana*
White clover	*Trifolium repens*
White dead-nettle	*Lamium album*
Wild cherry	*Prunus avium*
Wild garlic	*Allium ursinum*
Wild privet	*Ligustrum vulgare*
Wild service tree	*Sorbus torminalis*
Wild thyme	*Thymus serpyllum*
Wood anemone	*Anemone nemorosa*
Wood avens	*Geum urbanum*
Wood dock	*Rumex sanguineus*
Wood meadow-grass	*Poa nemoralis*
Wood sedge	*Carex sylvatica*
Wood speedwell	*Veronica montana*
Yarrow	*Achillea millefolium*
Yellow archangel	*Lamium galeobdolon*
Yellow oat-grass	*Trisetum flavescens*
Yorkshire fog	*Holcus lanatus*

Annex D
Floristic tables

The following tables provide information on species recorded along with their DOMIN score and frequency. Q1-Q5 refers to quadrats sampled.

Table D1 Angmering Park

Species	Q1	Q2	Q3	Q4	Q5	Frequency
Bulbous buttercup	2	0	0	0	2	II
Common sedge	2	3	1	1	1	V
Creeping buttercup	0	1	0	1	0	II
Hairy sedge	6	5	5	5	5	V
Marsh foxtail	1	0	0	1	0	II
Perennial Rye	5	5	5	5	5	V
Rough-stalked meadow-grass	2	0	1	0	1	III
Silverweed	4	4	4	4	4	V
Water mint	2	2	0	2	2	IV
Yorkshire fog	9	9	9	9	9	V

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Table D2 Calcot Wood

Species	April 2022					June 2022					Combined *					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Layer: Canopy																
Scots pine	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	V
Sessile oak	4	4	5	4		4	4	5	4		4	4	5	4		IV
Standing deadwood	1					1					1					I
Sitka spruce					5					5					5	I
Silver birch		4	2	1			4	2	1			4	2	1		III
Layer: Understory																
Layer: Field & Ground																
Annual meadow grass				1										1		I
Bluebell	1	1	6	1	2	4	1	4			4	1	6	1	2	V
Bracken		1	2		4		4			6		4	2		6	III
Bramble	3	5	7	5		4	7		5	7	4	7	7	5	7	V

Species	April 2022					June 2022					Combined *					Frequency
Brown bent	1										1					I
Bryophyte cover	4	8	4	4	2	4	8	4	4	2	4	8	4	4	2	V
Common bent			1		5								1		5	II
Common chickweed									3					3		I
Common dog violet					2					2					2	I
Common ragwort					1									1		I
Creeping bent	3			4				3	4	3	3		3	4	3	III
Creeping soft grass					2									2		I
Foxglove	5		4			7		4			7		4			II
Heath speedwell	2										2					I
Holly (sapling)							1					1				I
Honeysuckle		6	4	4	5		5			4		6	4	4	5	IV
Marsh bedstraw									2					2		I
Marsh willowherb									1					1		I
Perforate St. John's wort						2		2			2		2			II
Red fescue									4					4		I

Species	April 2022					June 2022					Combined *					Frequency
Rough meadow grass						2		2			2		2			II
Slender St. John's wort	1			1							1			1		II
Soft rush	1			2	3						1			2	3	III
Spring sedge					3										3	I
Sweet vernal						3		1	4		3		1	4		III
Tufted hair grass					2					3					3	I
Velvet bent			1	2	2								1	2	2	III
Wood sage	4	4	1	2			4		3		4	4	1	3		IV
Yorkshire fog	3			4	4	3			4	4	3			4	4	III
Dead leaves/bare ground	8	6	5	4	4	8	5	6	7	4						V
Standing deadwood	1					1					1					I

Table D3 Crossbush

Species	April 2021					May 2021					Combined *					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Layer: Canopy																
Ash						1	6	7	7	5	1	6	7	7	5	V
Beech						8	8	7	6	8	8	8	7	6	8	V
European larch								1	4				1	4		II
Field maple								4	3				4	3		II
Norway maple						1	1		1	4	1	1		1	4	IV
Pedunculate oak						8	4	6	6	5	8	4	6	6	5	V
Layer: Understory																
Blackthorn										1					1	I
Elder										3					3	I
Hawthorn					1					3					3	I
Hazel					1					1					1	I
Holly	3	1	1	4	5	3	1	1	4	5	3	1	1	4	5	V
Ivy	3	1	3			3	3				3	3	3			III

Species	April 2021					May 2021					Combined *					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Wild service tree				1					1					1		I
Layer: Field & Ground																
Ash (sapling)						3	1				3	1				II
Bluebell	1	9	9	9	8	8	8	9	9	5	1	9	9	9	8	V
Bracken			3										3			I
Bramble	1		3	1			5	7			1	5	7	1		IV
Cleavers		3	2	2	2	1	7	3	3	3	1	7	3	3	3	V
Common dog violet					2										2	I
Common sorrel										3					3	I
Curled dock					1		1			5		1			5	II
Dog's mercury				1	1					7				1	7	II
Feather moss		3							3			3		3		II
Gooseberry						3					3					I
Lesser celandine		3			1							3			1	II

Species	April 2021					May 2021					Combined *					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Lords-and-ladies				1										1		I
Male fern							4	7				4	7			II
Primrose					2					2					2	I
Rough meadow-grass							3			4		3			4	II
Common nettle										2					2	I
Wild garlic				2										2		I
Wood anemone		1	1									1	1			II
Wood meadow-grass					3										3	I
Dead leaves/bare ground	3		3	4							3		3	4		III

Table D4 Grassland at Wineham Lane

Species	June 2022	Q1*	Frequency**
Greater burdock		1	5
Cock's-foot		3	5
Creeping buttercup		1	2
Crested dog's-tail		7	2
False brome		3	1
False oat-grass		1	1
Red clover		1	1
Rough stalked meadow grass		1	2
Spear thistle		1	1
Sterile brome		2	1
Timothy		1	1
Wood speedwell		1	1
Yorkshire fog		7	1

*Only one quadrat had data that was appropriate for analysis due to recent cutting

**To classify individual quadrats cover values were converted into constancy using relationship published by Dring (2000) as follows: I if cover <2%, II cover 2-5%, III cover 5-10%, IV cover 10-20%, V cover >=20%.

Table D5 Poling Copse

Species	April 2022					May 2022					Combined *					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Layer: Canopy																
Hazel	9	9	9	9	7	9	9	9	9	7	9	9	9	9	7	V
Sessile oak	7	6	6	8	7	7	6	6	8	7	7	6	6	8	7	V
Holly	4	5				4	5				4	5				II
Silver birch	2					2					2					I
Sycamore	1	7	6	4	4	1	7	6	4	4	1	7	6	4	4	V
Honeysuckle		1		5		3			4		3	1		5		III
Layer: Understory																
Honeysuckle	3			4		1		2			3		2	4		III
Sycamore	2		4			2		4			2		4			II
Bramble	2		2	4	2	2		2	4	2	2		2	4	2	IV
Silver birch			1					1					1			I
Layer: Field & Ground																
Ash sapling	2	2	2				3			1	2	3	2		1	IV

Species	April 2022					May 2022					Combined *					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Black bryony		1										1				I
Bluebell	10	9	1	9	2	3	4				10	9	1	9	2	V
Bramble							3	1	2	1		3	1	2	1	IV
Broad-leaved dock					2										2	I
Cleavers					6					3					6	I
Common nettle					2			1		4			1		4	II
Dog mercury					1										1	I
False brome				8	3					3				8	3	II
Ground ivy					2					5					5	I
Holly sapling			1			1					1		1			II
Ivy			1	4	5				2	9			1	4	9	III
Lesser celandine				1	9									1	9	II
Lords-and-ladies					3										2	I
Primrose					2					1					2	I
Scaly male fern				1										1		I

Species	April 2022					May 2022					Combined *					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Wood dock					2					3					3	I
Wood sedge					3		1					1			3	I
Bryophytes	1		3			1		3			1		3			II
Dead leaves/bare ground	2	4	9	5		2	4	9	5		2	4	9	5		IV

Table D6 Spofforth North

Species	June 2022					Frequency
	Q6	Q7	Q8	Q9	Q10	
Bird's-foot trefoil			1			I
Bulbous buttercup		3		1	3	III
Chickweed	3	3	3	3	3	V
Cock's-foot	6	5	6	5	5	V
Creeping bent		5	5	5	3	IV
Creeping buttercup	2	3	2	1	3	V
Creeping thistle	2		1			II
Crosswort			2			I
Cut-leaved geranium		1				I
Daisy		3	2	2	3	IV
Dandelion	4	3	3	2	2	V
Dove's-foot crane's-bill	2			4	2	III
Fairy flax	2	2	2		1	IV
Field madder	2	2			1	III
Germander speedwell	2	3	2	1	3	V
Lesser hop trefoil		3			3	II
Ragwort	1	1		1		III
Red clover			4			I
Red fescue	7	7	7	7	7	V
Ribwort plantain			1		1	II
Scarlet pimpernell			1			I
Smaller cat's-tail	1		3	1	2	IV
Smooth hawk's-beard		1	3	1	2	IV

Species	June 2022					Frequency
	Q6	Q7	Q8	Q9	Q10	
Soft brome	5	4	6	3	4	V
Spear thistle					1	I
White clover	4	3	4	5	2	V
Yarrow		3				I
Yorkshire fog	5	3	1			III
Bare ground	0	10	<5	<5	<5	

Table D7 Spofforth South

Species	June 2022					Frequency
	Q1	Q2	Q3	Q4	Q5	
Annual meadow-grass		2	1			II
Bird's-foot trefoil		4				I
Black medick	2	3	3			III
Bulbous buttercup			3	2	3	III
Chickweed		3	3	2	2	IV
Cock's-foot	6	6	7	6	6	V
Common cat's-ear			1			I
Common mouse-ear		2				I
Creeping bent	5			2	4	III
Creeping buttercup	3	4		3	3	IV
Creeping thistle	2	1				II
Cut-leaved geranium	3	3	2	2	2	V
Daisy	1	3	4	4	4	IV
Dandelion	1	1	1	1	4	V

Species	June 2022					Frequency
	Q1	Q2	Q3	Q4	Q5	
Dove's-foot crane's-bill	2	3		2	2	IV
Fairy flax			2			I
Field madder	3	3	1		1	IV
Germander speedwell	3	2	2	3	2	V
Ground ivy				2		I
Lesser hop trefoil			4			I
Lesser stitchwort	1	1	1			III
Perennial rye-grass	1					I
Ragwort					1	I
Red bartsia	2	3		3		III
Red clover		3		3	1	III
Red fescue		7	7	7	6	IV
Ribwort plantain			1	1		II
Rough hawk's-beard	1	1	1			III
Self-heal			1			I
Smaller cat's-tail	4	5	4	5		IV
Smooth hawk's-beard		2	2	2	2	IV
Soft brome	6	4	4	6	7	V
Spear thistle	2	1	1		1	V
Toadflax				1		I
White clover	4	4	3	4	5	V
Yarrow	3	2	2			III
Bare ground	3	0	0	5	0	

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Table D8 Sullington Hill LWS

Species	May 2021					June 2021					Constancy
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Bird's foot trefoil	2	3		3		3	2	2	1	3	IV
Bristly hawkbit						1	1	2			II
Bulbous buttercup	3	4	4	2	2	3	3	3	4	4	V
Cock's-foot	1	3	3	3		4	4	5		3	IV
Common bent							2	3			I
Common chickweed						1	2				I
Common knapweed		3	4		2		2	1		4	III
Common milkwort	3	3			1	1		3	2		III
Common ragwort	1	1				2	2	1			III
Common rock-rose									5		I
Cowslip					1			2			I
Daisy	1	1	2		3		4		1		III
Dandelion	1		1		1	2	1	2	1	2	IV

Species	May 2021					June 2021					Constancy
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Dwarf thistle									1	1	I
Field wood-rush	3	2		2		2	3	1		3	IV
Germander Speedwell	2	1	3	1	1	2	3	4	2	3	V
Glaucous sedge	1	3	3	5	3	2		3		3	IV
Hairy violet			2		1	1	1	1	2		III
Hawkweed oxtongue	3	3	3	3	1		1				III
Heath speedwell						1	1				I
Hedge bedstraw	1	2	1	4	1	1	2	3		2	V
Lady's bedstraw						3	3	3	1	3	III
Lesser trefoil							3	2			I
Meadow fescue									5		I
Mouse-ear hawkweed	1	1	5	5	4	4	4		5		IV
Parsley piert							3				I
Perrenial rye-grass				1							I
Ribwort plantain	1	2		4	2	1	2	1	2	2	V

Species	May 2021					June 2021					Constancy
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Greater plantain								1	3	1	II
Quaking-grass						4			3		I
Red clover	2	2		3		3	2	2		2	IV
Salad burnet	4	5	5	5	6	4	4	4	5	4	V
Selfheal	2									1	I
Sheep's fescue	7	7	5	7	7	7	8	8	7	8	V
Sheep's sorrel						3	3				I
Small-flowered buttercup							1	1			I
Smaller cat's tail						3	3			3	II
Smooth bedstraw		2									I
Smooth hawksbeard								1	1		I
Smooth meadow grass			2		2						I
Spear thistle	3	4	3	3	4	1	2	2	3	2	V
Spring sedge				2			5				I
Sweet vernal-grass		3						1		3	II

Species	May 2021					June 2021					Constancy
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Thyme-leaved sandwort						2		3	3		II
Upright brome	6	6			7	7	7		7		III
Wild thyme	3	3			4	3					II
Yarrow	3	3		3	3	2	2	3	2	2	V
Yorkshire fog				3		3		3		3	II
Bare ground		4		1	1					2	II

Table D9 Talbot & Baker I

Species	June 2022					
	Q1	Q2	Q3	Q4	Q5	Frequency
Broad-leaved dock			1			I
Creeping buttercup		1			1	II
Italian rye-grass	10	10	10	10	10	V
Yorkshire fog	1			1		II
Bare ground	0	0	0	0	0	

Table D10 Talbot & Baker II

Species	June 2022					
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Frequency**
Annual meadow-grass	2					I
Broad-leaved dock	2	4		1	2	IV
Cock's-foot		5	8	4	4	IV
Common hogweed			1	1		II
Common Nettle	1				1	II
False oat-grass		3	1	8		III
Lesser stitchwort			3			I
Marsh foxtail		1				I
Meadow barley	7	4	4		7	IV
Meadow foxtail	6	7	7	5	6	V
Rough-stalked meadow-grass	2					I
Tufted hairgrass	3			3		II
Yorkshire fog	7	7	7		5	IV
Bare ground	0	0	0	0	0	

Table D11 Warningcamp Hill

Species	May 2021					June 2021					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Agrimony			1				1				I
Barren strawberry			3					3	3		II
Beaked hawk's-beard		2		2							I
Birch sapling							1				I
Bird's foot trefoil	3		3	3	4	3	3	3	4	3	V
Black medic	3								2	3	II
Bristly hawkbit	4	2				4					II
Bulbous buttercup	3	3	3	4	5	4	4	3	5	6	V
Cock's-foot	4	4	4	4	4	5	4	4	4		V
Common bent				7	4				7	4	II
Common mouse-ear			2	2	2		2	2	1	2	IV
Common ragwort		3	4	3	4	1	2	2	2	4	V
Cowslip						1					I
Creeping cinquefoil		2	2	4	3	2	3	3	3	2	V
Crested dog's-tail										5	I
Crested hair-grass		2				4	4				II
Cut-leaved crane's bill			2	2	2	1	1	2		1	IV
Dandelion								1	2	2	II
False oat-grass		3				4	2			1	II
Field wood-rush			3	4	3			3	2	3	III

Species	May 2021					June 2021					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Germander Speedwell	3	2	3	3	3	3	3	3	3	3	V
Glaucous sedge						2					I
Ground ivy	1	3	3	3			3		3		III
Hairy violet			1					1	1		II
Hedge bedstraw						2			3	3	II
Lady's bedstraw	3	3	3		3	2	5			3	IV
Lesser trefoil				2	3				1	2	II
Meadow fescue	3	3	3	2			2	6	6	4	IV
Neat feather-moss	4	6				5	7				II
Prickly sow-thistle								1		2	I
Red clover		3	3	3	3				4	3	III
Ribwort plantain	4	3	3	3	4	3	2	4	2	3	V
Salad burnet	4		2		2	4			4	3	III
Selfheal	1					2	3		1		II
Sheep's fescue	8	8	7	8	5	7	8	6	6	5	V
Smaller cat's tail	3					3	3		3	3	III
Smooth bedstraw	3			4	1	4		1	5		III
Smooth hawksbeard							2		1	1	II
Smooth meadow grass	3		4	4	7	2		6	2	7	IV
Soft-brome								1			I
Spear thistle		2	4	2				1	2	1	III
White clover						2	2	3			II

Species	May 2021					June 2021					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Yorkshire fog	3	4	3	5		4	4	4	5	5	V
Bare ground	0	0	0	0	0	0	0	0	0	0	

Table D12 Woodland at Wineham Lane

Species	April 2021					May 2021					Combined*					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Layer: canopy																
Ash						3	6	5	5	5	3	6	5	5	5	V
Cherry						4	1	4	4	6	4	1	4	4	6	V
Crack willow							1	1				1	1			II
Field maple						5	7	4	6	5	5	7	4	6	5	V
Hawthorn						4	2		2	2	4	2		2	2	IV
Sessile oak						8	7	4	6	5	8	7	4	6	5	V
Silver birch						1				1	1				1	II
Small-leaved lime						1	1	6	7	7	1	1	6	7	7	V
Spindle						1	1	1	1	1	1	1	1	1	2	V
Layer: understory																
Blackthorn	6	4	5	1	4	5	4	4	3	1	6	4	5	3	4	V
Bramble	6	4	8	5	6	6	6	7	8	7	6	6	8	8	7	V

Species	April 2021					May 2021					Combined*					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Dog rose		1	4				1	4	5	5		1	4	5	5	III
Dogwood						2	1			1	2	1			1	III
Guelder rose							2					2				I
Hazel					1					1					1	I
Wayfaring tree						1					1					I
Wild Privet					5	5				5	5				5	II
Layer: Field & ground																
Broad buckler-fern	2										2					I
Bugle	1	3			2						1	3			2	III
Chickweed	1				2						1				2	II
Common bent	3	7									3	7				II
Common feather moss				3										3		I
Common mouse-ear			2										2			I
Common nettle	1										1					I
Creeping buttercup	1				1						1				1	II

Species	April 2021					May 2021					Combined*					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Creeping cinquefoil			1	1	2								1	1	2	III
Crisped dock		2										2				I
Dandelion	1										1					I
Fleabane								4					4			I
Hogweed			1										1			I
Lords-and-ladies	2										2					I
Meadow vetchling	2	2									2	2				II
***Plagiothecium* sp.**					2										2	I
Rosebay willowherb			3										3			I
Rough meadow-grass							3	7				3	7			II
Spear thistle		1	3					4		3		1	4		3	III
Springy turf-moss			3										3			I
Sweet vernal							3					3				I
Wild privet					1										1	I
Wood avens	1	2		1	2						1	2		1	2	IV

Species	April 2021					May 2021					Combined*					Frequency
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	
Wood meadow-grass		4	3	3	3							4	3	3	3	IV
Wood sedge	1										1					I
Wood speedwell					3										3	I
Dead leaves/bare ground	8	7			8						8	7			8	III
Standing deadwood (Ash)								3	2	1			3	2	1	III

Table D13 Workhouse Copse

Species	April 2021 Q1**	May 2021 Q1**	Combined* Q1**	Frequency
Layer: canopy				
Pedunculate Oak		4	4	III
Scots pine		8	8	V
Sweet chestnut		8	8	V
	Q1**	Q1**	Q1**	
Layer: understory				
Beech		2	2	II
Cherry		1	1	II
Elder		4	4	III
English elm		4	4	III
Field maple		4	4	III
Hazel		6	6	V
Holly		4	4	III
Sycamore		2	2	II

Layer: Field & Ground	Q 1	Q 2	Q 3	Q 4	Q 5	Q 1	Q 2	Q 3	Q 4	Q 5	Q 1	Q 2	Q 3	Q 4	Q 5	
Bluebell	8	7	1	9	2	8	7	1	9	2	8	7	1	9	2	V
Cleavers		1					1					1				I
Common feather moss	3					3					3					I
Common nettle		1			4		1			4		1			4	II
Crisped dock		1					1					1				I
Dog's mercury		4			5		4			5		4			5	II
***Fissidens* sp.**					3					3					3	I
Ground-ivy					3					3					3	I
Hard shield-fern				1	1				1	1				1	1	II
Hart's-tongue fern					1					1					1	I
Lesser celandine	5	5		3	4	5	5		3	4	5	5		3	4	IV
Lords -and-ladies		1					1					1				I
Primrose					2					2					2	I
Red campion					1					1					1	I
Swan's neck Thyme-moss	3	3		3		3	3		3		3	3		3		III
White dead-nettle					4					4					4	I
Wood anemone	7	6				7	6				7	6				II
Fallen leaves/bare ground	1	6	4	5		1	6	4	5		1	6	4	5		IV

Annex E
MAVIS output

Survey location	MAVIS output Community, top 10 coefficients provided
Angmering Park	NVC: MG10a 43.26 NVC: MG10 38.42 NVC: MG10b 35.79 NVC: SD17 33.30 NVC: SD17d 33.30 NVC: SD17a 33.23 NVC: SD17c 32.87 NVC: MG11a 32.75 NVC: MG13v2 32.56 NVC: MG13 32.00
Calcot Wood	Group 0: April 2022 NVC: W25b 46.10 NVC: W10d 39.55 NVC: W25 39.22 NVC: OV27 34.76 NVC: W23c 34.25 NVC: W23 33.42 NVC: W10 32.41 NVC: W22a 31.87 NVC: OV27b 31.19 NVC: OV27c 31.06 Group 1: June 2022 NVC: W25b 45.51 NVC: W10d 44.27 NVC: W25 43.98 NVC: OV27 42.86 NVC: W22 39.34 NVC: W23 38.64 NVC: W22a 37.36 NVC: W23c 35.93 NVC: W10 35.88 NVC: W10a 34.40 Group 2: Combined NVC: W25b 47.15 NVC: W10d 45.15 NVC: W25 43.88 NVC: OV27 42.13

Survey location	MAVIS output Community, top 10 coefficients provided
	NVC: W23 40.49 NVC: W22 38.01 NVC: W10 37.76 NVC: W23c 37.31 NVC: W22a 36.33 NVC: W10a 35.26
Crossbush	NVC: W21b 43.04 NVC: W25 42.73 NVC: W21 42.55 NVC: W25a 42.14 NVC: W10a 41.69 NVC: W8d 41.69 NVC: W10c 40.58 NVC: W8 40.36 NVC: W10 40.27 NVC: W8b 39.66
Grassland at Wineham Lane	Group 0 NVC: MG7B 31.02 NVC: MG1b 30.83 NVC: MG1c 30.28 NVC: MG9b 29.93 NVC: MG1a 29.51 NVC: MG6a 28.17 NVC: MG1 26.93 NVC: MG7 26.22 NVC: MG6d 24.87 NVC: OV23b 24.63
Poling Copse	Group 0: April 2022 NVC: W8d 42.82 NVC: W10a 38.29 NVC: W10c 37.04 NVC: W10 36.74 NVC: W8 36.32 NVC: W12a 36.16 NVC: W8b 35.26 NVC: W8a 34.99 NVC: W8c 34.26 NVC: W12 33.98 Group 1: June 2022 NVC: W10c 40.24 NVC: W10a 37.07 NVC: W8d 37.06 NVC: W10 35.12

Survey location	MAVIS output Community, top 10 coefficients provided
	NVC: W12a 34.59 NVC: W8 32.94 NVC: W21a 32.63 NVC: W21 31.51 NVC: W8a 31.25 NVC: W21c 31.19 Group 2: Combined NVC: W8d 43.33 NVC: W10c 39.34 NVC: W10a 39.19 NVC: W12a 38.41 NVC: W8 38.11 NVC: W10 37.41 NVC: W8a 36.65 NVC: W8b 35.84 NVC: W8e 35.13 NVC: W21 35.06
Spofforth North	Group 1: North NVC: MG11a 43.38 NVC: MG11 41.97 NVC: MG6c 41.90 NVC: MG6a 41.64 NVC: OV23 41.61 NVC: MG7E 41.01 NVC: SD8d 40.70 NVC: MG7F 40.16 NVC: SD8a 39.98 NVC: MG11b 39.76
Spofforth South	Group 0: South NVC: OV23 45.17 NVC: MG6a 42.20 NVC: OV23c 41.52 NVC: MG6c 40.24 NVC: MG7E 39.98 NVC: OV23a 39.95 NVC: SD8a 39.63 NVC: MG7F 39.22 NVC: MG6 39.11 NVC: MG11 39.02
Sullington Hill LWS	Group 0: May 2021 NVC: CG3b 51.08

Survey location	MAVIS output Community, top 10 coefficients provided
	NVC: CG3 49.98 NVC: CG4 49.86 NVC: CG2d 49.68 NVC: CG4b 49.36 NVC: CG2a 48.59 NVC: CG4c 48.52 NVC: CG2 47.74 NVC: CG3d 46.94 NVC: CG2c 44.81 Group 1: June 2021 NVC: CG2c 52.69 NVC: CG3b 51.52 NVC: MG5b 51.49 NVC: CG2d 51.05 NVC: CG3 50.55 NVC: CG4b 50.18 NVC: CG2 49.51 NVC: CG4 49.00 NVC: CG2a 48.80 NVC: CG3c 48.32 Group 2: Combined NVC: CG2d 53.51 NVC: CG3 52.87 NVC: CG3b 52.41 NVC: CG2 51.19 NVC: CG4 51.09 NVC: CG2c 50.82 NVC: CG4b 50.66 NVC: CG2a 50.56 NVC: CG3c 49.07 NVC: CG4c 48.14
Talbot & Baker I	Group 0 NVC: MG7A 30.30 NVC: S28c 28.07 NVC: MG13 24.46 NVC: OV26a 21.65 NVC: MG7 21.51 NVC: MG10a 20.49 NVC: S5 19.90 NVC: OV27 19.29 NVC: SD6c 18.10 NVC: MG11a 17.95
Talbot & Baker II	

Survey location	MAVIS output Community, top 10 coefficients provided
	Group 0 NVC: MG9b 40.30 NVC: MG1b 40.10 NVC: OV25b 37.69 NVC: MG9 35.93 NVC: MG1c 34.82 NVC: OV26d 34.06 NVC: OV27b 33.98 NVC: OV27 33.50 NVC: MG1a 32.15 NVC: MG7D 32.04
Warningcamp Hill	Group 0: May 2021 NVC: MG1d 47.47 NVC: MG1e 47.24 NVC: MG5b 46.37 NVC: CG4c 46.20 NVC: MG5 45.38 NVC: CG6 44.08 NVC: MG5a 43.95 NVC: SD8 43.20 NVC: CG4 43.14 NVC: SD8a 43.07 Group 1: June 2021 NVC: MG5b 50.44 NVC: MG5 49.44 NVC: CG4c 48.96 NVC: CG2c 48.25 NVC: MG1d 48.13 NVC: MG5a 48.13 NVC: MG1e 48.09 NVC: CG6 46.95 NVC: MG1 44.65 NVC: SD8a 44.47 Group 2: Combined NVC: MG5b 50.83 NVC: CG4c 49.43 NVC: MG5 49.05 NVC: CG2c 48.60 NVC: MG1d 48.56 NVC: MG1e 48.51 NVC: MG5a 47.73 NVC: CG6 47.39 NVC: CG4 45.65

Survey location	MAVIS output Community, top 10 coefficients provided
Woodland at Wineham Lane	NVC: W8d 37.91 NVC: W8a 37.05 NVC: W8 34.07 NVC: W10c 33.39 NVC: W8c 32.53 NVC: W8e 32.39 NVC: W10 32.33 NVC: W8b 31.25 NVC: W21c 31.21 NVC: W10a 31.15
Workhouse Copse	NVC: W8b 38.66 NVC: W8 37.42 NVC: W8d 37.08 NVC: W10a 36.62 NVC: W8f 35.29 NVC: W21b 34.20 NVC: W12a 33.66 NVC: W10 33.52 NVC: W10c 33.06 NVC: W8e 32.88

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Rampion 2
WIND FARM