

# Vyner Park Survey Report 2024





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# **Summary**

Northumberland Wildlife Trust was commissioned by Swarland and Newton Action on Climate (SNAC) to undertake an assessment of the Vyner Park in Swarland. Habitat maps were produced in accordance with the methodology described in the Handbook for Phase 1 habitat survey (JNCC, 2016). A desk study completed prior to the field visits highlighted any designated features of interest close to the site. A site visit on 19 June 2024 recorded species observed within the site boundary.







# Site Description - Vyner Park, Swarland

Site Survey 19th June 2024 Weather: Sunny, slight breeze, 19c

Northumberland Wildlife Trust (henceforth referred to as NWT) was commissioned by SNAC to undertake an Extended Phase 1 Habitat Survey at Vyner Park, Swarland (Grid reference NU165033).

There are no designated sites within 2km of Vyner Park. Acton Dene, which is just over 1.7km away, is listed as Ancient Semi-Natural Woodland.







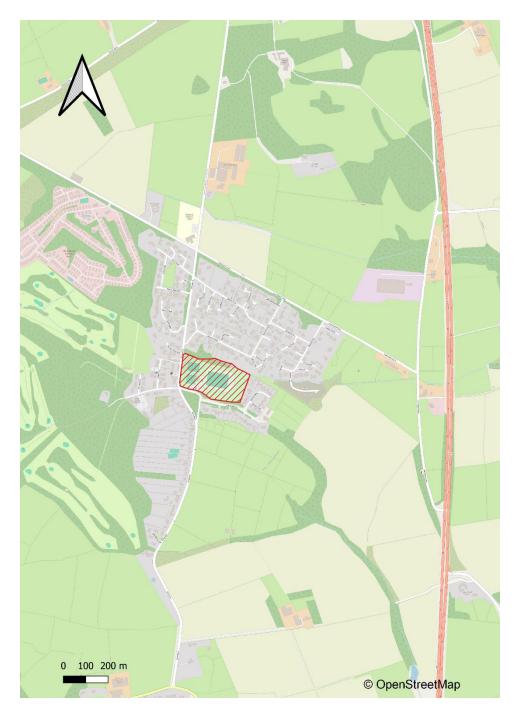


Figure 1: Indicative site boundary (red hatched area) and location. ©OpenStreetMaps







# **Habitat Description and Phase 1 Map**

Notes were made regarding the nature of the habitats present on site, with areas classified following the Phase 1 survey methodology outlined in the 2016 edition of the 'Handbook for Phase 1 habitat survey' by the Joint Nature Conservation Committee (JNCC), to highlight features/areas of potential interest. Target notes were used to provide a brief description of any areas of potential interest. Plant species were identified in accordance with Rose (2006).

A search was also conducted for the presence of Schedule 9 invasive non-native plant species such as Japanese knotweed (*Fallopia japonica*) and Himalayan balsam (*Impatiens glandulifera*).

The Phase 1 survey was completed on the 19/06/2024, by Sara Frisby PGDip BSc Hons and Laura Hindle BSC Hons. Additional notes were made during a site reccy on 16/06/2024.

### **Habitats**

Habitats within the site were a mix of neutral grassland, broadleaved plantation, tall ruderal and scrub. Habitats are described in the following sub-sections. The football pitch, play area and areas surrounding the building are not included in the descriptions.

The results of the Phase 1 survey are shown below, with target notes, species lists, and site photographs provided in **Appendix 1 & 2**.

A cotoneaster (*Cotoneaster bullatus*) and variegated yellow archangel (*Lamium galeobdolon* subsp *argentatum*), **Schedule 9** species, Wildlife and Countryside Act 1981 (as amended), were recorded on site, within the areas of broadleaf plantation woodland. Schedule 9 lists non-native species that are already established in the wild, but which continue to pose a conservation threat to native biodiversity and habitats, such that further releases should be regulated. For an offence to be committed, a release or allowing to escape into the wild or planting or causing to grow in the wild must occur. The legislation aims to prevent the planting of Schedule 9 listed plant material in the wild where it then poses a threat to our native biodiversity and ecosystems.







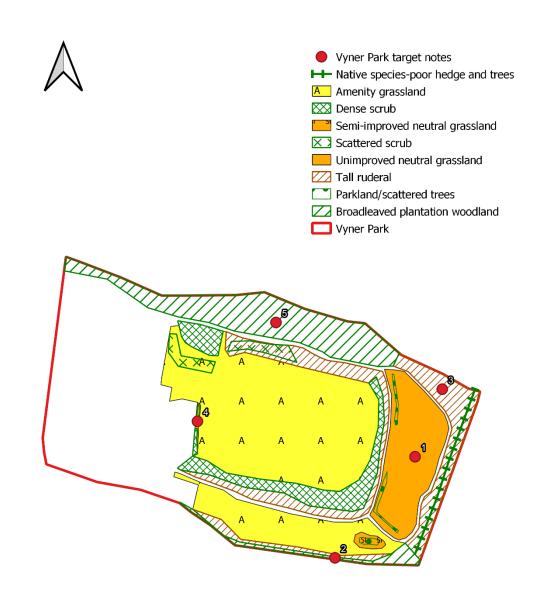


Figure 2: Phase 1 Habitat Map with habitat key.







### **Unimproved Neutral Grassland**

The unimproved neutral grassland ('the meadow'), to the east of the site, is a small species-rich meadow, with a good number of species present. It is managed with a hay cut prior to an annual event held within the Park, however, it had been accidentally cut, with the arisings left, a few weeks earlier. Part of the meadow had been saved from the cut and this area appeared to be more species-rich than the cut area. Species present include bird's-foot-trefoil (*Lotus corniculatus*), selfheal (*Prunella vulgaris*), meadow vetchling (*Lathyrus pratensis*), tufted vetch (*Vicia cracca*), meadow buttercup (*Ranunculus acris*), creeping buttercup (*Ranunculus repens*), red clover (*Trifolium pratense*), common spotted orchid (*Dactylorhiza fuchsii*), common knapweed (*Centaurea nigra*), rough meadow grass (*Poa trivialis*), crested dog's-tail (*Cynosurus cristatus*), Yorkshire fog (*Holcus lanatus*) and sweet vernal grass (*Anthoxanthum odoratum*). The occasional hogweed (*Heracleum sphondylium*) was present in the meadow, which should be monitored to ensure it does not increase. There are a few scattered trees, Italian alder (*Alnus cordata*), planted around the edge of the meadow.

### Scrub

Dense and scattered scrub runs along the boundary of the football pitch and in patches across the site. The main scrub species are hawthorn (*Crataegus monogyna*) and bramble (*Rubus fruticosus* agg.), with occasional elder (*Sambucus nigra*), hazel (*Corylus avellana*) and a patch of gorse (*Ulex europaeus*).

### **Broadleaved Plantation Woodland**

The plantation woodland to the northern and southern boundaries of the site consists of ash (*Fraxinus excelsior*), common alder (*Alnus glutinosa*), silver birch (*Betula pendula*), rowan (*Sorbus aucuparia*), horse chestnut (*Aesculus hippocastanum*), hawthorn (*Crataegus monogyna*), sycamore (*Acer pseudoplatanus*) and some Scots pine (*Pinus sylvestris*) in the southern compartment.

### Tall Ruderal

Tall ruderal vegetation runs along the edges of the broadleaved plantation and scrub, it includes a variety of species but is dominated by a few including nettles (*Urtica dioica*), great willowherb (*Epilobium hirsutum*), rosebay willowherb (*Chamaerion angustifolium*), hogweed (*Heracleum sphondylium*), with some wild angelica (*Angelica sylvestris*), compact rush (*Juncus conglomeratus*), soft rush (*Juncus effusus*) and horsetail (*Equisetum arvense*), amongst others. There is scattered scrub through sections of the tall ruderal.

Table – Incidental records of bird species taken during survey visits, by no means

comprehensive.

Species	Latin name	BoCC Status
Blackbird	Turdus merula	Green
Blackcap	Sylvia atriacapilla	Green
Chaffinch	Fringilla coelebs	Green







Chiffchaff	Phylloscopus collybita	Green
Greenfinch	Chloris chloris	Red
Jackdaw	Corvus monedula	Green
Long-tailed tit	Aegithalos caudatus	Green
Pied wagtail	Motacilla alba	Green
Song thrush	Turdus philomelos	Amber
Swift	Apus apus	Red
Whitethroat	Sylvia communis	Amber
Wood pigeon	Columba palumbus	Amber
Wren	Troglodytes troglodytes	Amber

<sup>\*</sup>BoCC - Birds of Conservation Concern (Stanbury et. al., 2021).







# **Management Suggestions**

### **Unimproved Neutral Grassland**

The current management of a hay cut (cut, turn, removal of arisings after they have dried and seed has dropped) is perfect for the management of this area. The meadow may increase in species richness over time, with flowering plants increasing and some of the more dominant species being reduced or maintained at a low density. Desirable species such as yellow rattle (*Rhinanthus minor*), orchids and bird's-foot-trefoil (*Lotus corniculatus*) could be monitored to see there is not a general decrease. Quadrat (1m square) surveys could also be carried out, in random spots, to monitor the number of species, on average, per quadrat. The target number is 15 species or more, on average, per quadrat for species-rich grassland.

The meadow should not deteriorate if the cut is missed on occasional years. However, if the meadow is not cut (and arisings removed) over several years there will be an increase in dominant/more rank species such as cock's-foot (*Dactylis glomerata*), hogweed (*Heracleum sphondylium*) and creeping thistles (*Cirsium arvense*) and diversity of species will be lost.

If the hay cut is lost, it is advised that small areas of the meadow are strimmed and raked, each year, to try to maintain species richness. Arisings can be composted in a small, sacrificial area away from the meadow. Seed heads of dominant species such as hogweed, creeping thistle can be removed before the seed is dispersed, if they do begin to increase. Hogweed and thistles are acceptable in small numbers, as they provide nectar for invertebrates and seed for birds. As the meadow is relatively small, any invading scrub should be removed (the tractor will currently be doing this while carrying out the hay cut). Scrub within a meadow can be desirable, as it creates shelter for invertebrates and birds, but with the small size and the surrounding scrub habitat, the maintenance of a species-rich grassland is more important.

It is also important that the grassland is not cut and the arisings left on the meadow. The cuttings will smother some of the more delicate species, create a thatch of dead grass, which prevents seeds from reaching the soil and increases nutrient input. It is better not to cut than it is to cut and leave!

The Italian alder should not be replaced if they die. The trees are non-native, so of limited value to native wildlife and will be inputting nutrients to the meadow, with leaf fall.

### Scrub

The scrub requires little management. It provides nesting habitat, shelter, flowers and fruit for wildlife. If thinning is required, non-native species such as the cotoneaster and twinberry honeysuckle (*Lonicera involucrate*) should be targeted first. Deadwood should be left for invertebrates and fungi. The bramble can become dominant, but it is a very useful species to wildlife in terms of flowers, berries, foliage and thorny protection. If areas of bramble are to be controlled, the best areas to keep are those within full sun, which promotes more flowering and berry

production, with warmth for invertebrates. Removal of bramble, if necessary, should only occur at the end of the summer, once birds have finished nesting and before invertebrates and hedgehogs hibernate or small mammals become less active.

### **Broadleaved plantation woodland**

The main management aim for the broadleaved plantation would be to target nonnative species, if thinning is carried out. If mature trees need to be removed due to health and safety, replacement trees should be locally native species, which will provide greater benefits to a wider variety of our local wildlife. A locally native oak (*Quercus robur or Q. petraea*) can support over 3300 different species, as well as coming into leaf later and not being invasive. Deadwood should be left on site, either in habitat piles or as standing deadwood, if safe to do so.

Currently, no further planting is recommended as the canopy is quite dense for the area. Natural woodlands would have areas of open canopy, where light can penetrate to the groundflora. Woodland edge could be increased at the north east boundary, if desired, with some planting of locally native shrubs, such as hawthorn, holly, hazel on the edge between the plantation and tall ruderal.

Bat boxes could be installed, as many of the trees are relatively young and very few holes will be available. Bird boxes can alter the dynamics of populations, particularly where strongly territorial species, such as blackbird and blue tit, are encouraged, so less territorial species are pushed out. Boxes for tawny owl could be provided, without impacting on other bird species.

### Tall ruderal

The tall ruderal habitat is often found on more nutrient rich or disturbed ground. Nutrients can come from build up of leaf litter (fallen tree leaves and dead vegetation). Many of the species within this habitat are useful to wildlife for pollen/nectar, foliage for larval food and dense vegetation for shelter and protection from predators (including dogs). Many butterfly species will lay their eggs on nettles for instance and elephant hawk-moth (*Deilephila elpenor*) will use willowherb. **Appendix 3** gives a list of butterfly species in the North East of England (not all of these species will be found at Vyner Park), and their larval food plants.

NWT would advise leaving the tall ruderal habitat and not carrying out any management. If the tall ruderal areas are to be managed or removed, we would recommend avoiding summer months and winter, to avoid damage to animals using the habitat for breeding or hibernation.

# **Appendix 1**

### Phase 1 Habitat Target Notes

Target	Note
1	Species-rich grassland, managed with hay cut
2	Broadleaf plantation, ash, sycamore, horse chestnut, with some
	Scots pine
3	Tall ruderal, with patches of bramble, nettle, willow herb, hogweed
4	Scrub includes hawthorn, elder, gorse and hazel
5	Sycamore, silver birch, horse chestnut, ash, elder

### Phase1 Habitat Species Lists

### Unimproved neutral grassland

Buttercup – creeping (Ranunculus repens)

Buttercup – meadow (Ranunculus acris)

Cat's-ear (Hypochaeris radicata)

Clover – red (*Trifolium pratense*)

Clover – white (Trifolium repens)

Common/black knapweed (Centaurea nigra)

Common cat's-ear (Hypochaeris radicata)

Common mouse-ear (Cerastium fontanum)

Common sorrel (Rumex acetosa)

Cuckoo flower (Cardamine pratensis)

Daisy (Bellis perennis)

Dandelion (Taraxacum officinale agg.)

Grass – cock's-foot (Dactylis glomerata)

Grass – crested dog's-tail (Cynosurus cristatus)

Grass - meadow foxtail (Alopercus pratensis)

Grass – perennial rye-grass (*Lolium perenne*)

Grass – rough meadow-grass (*Poa trivialis*)

Grass – sweet vernal grass (Anthoxanthum odoratum)

Grass - Yorkshire fog (Holcus lanatus)

Hogweed (Heracleum sphondylium)

Orchid – common spotted (Dactylorhiza fuchsii)

Pineapple weed (Matricaria discoidea)

Plantain - greater (Plantago major)

Plantain – ribwort (*Plantago lanceolata*)

Selfheal (*Prunella vulgaris*)

Speedwell - Germander (Veronica chamaedrys)

Stichwort – lesser (Stellaria graminea)

Thistle – creeping (Cirsium arvense)

Trefoil – common bird's-foot (Lotus corniculatus)

Trefoil – greater bird's-foot (Lotus pedunculatus)

Vetch – bush (Vicia sepium)

Vetch - common (Vicia sativa)

Vetch – tufted (Vicia cracca)

Vetchling – meadow (Lathyrus pratensis)

Yellow rattle (Rhinanthus minor)

### Tall ruderal (Non-native species in bold)

Campion - Red (Silene dioica)

Cleavers (Galium aparine)

Colt's-foot (Tussilago farfara)

Comfrey sp. (Symphytum sp.)

Common nettle (Urtica dioica)

Common ragwort (Senecio jacobaea)

Cow parsley (Anthriscus sylvestris)

Dock - broadleaved (Rumes obtusifolia)

Dock - wood (Rumex sanguineus)

Fern – male (*Dryopteris filix-mas*)

Fern – broad buckler (*Dryopteris dilatata*)

Grass – cock's-foot (Dactylis glomerata)

Grass – tufted hair-grass (Deschampsia cespitosa)

Grass – Yorkshire fog (Holcus lanatus)

Herb Robert (Geranium robertianum)

Hogweed (Heracleum sphondylium)

Horsetail – field (Equisetum arvense)

Knotgrass (Polygonum aviculare)

Rush – compact (Juncus conglomeratus)

Rush - soft (Juncus effusus)

Sedge – common (Carex nigra)

Silverweed (Potentilla anserina)

Thistle – creeping (Cirsium arvense)

Thistle – marsh (*Cirsium palustre*)

Thistle – spear (*Cirsium vulgare*)

Vetch - bush (Vicia sepium)

Vetch – common (Vicia sativa)

Vetch - tufted (Vicia cracca)

Wild angelica (Angelica sylvestris)

Willowherb – great (*Epilobium hirsutum*)

Willowherb – rosebay (Chamaenerion angustifolium subsp. angustifolium)

Variegated yellow archangel (Lamium galeobdolon subsp argentatum) \*

### Trees and Shrubs (Broadleaf plantation and scrub) (Non-native species in bold)

**Alder sp.** (Italian?) (*Alnus cordata*)

Alder – common (*Alnus glutinosa*)

Apple – domestic (Malus x domestica)

Ash (Fraxinus excelsior)

Birch - silver (Betula pendula)

Bramble (Rubus fruticosus agg.)

Cherry sp (Wild?) (Prunus sp.)

**Chestnut – horse** (Aesculus hippocastanum)

Cotoneaster - hollyberry (Cotoneaster bullatus)\*

Dog rose (Rosa canina)

Elder (Sambucus nigra)

Gorse (Ulex europaeus)

Hawthorn (Crataegus monogyna)

Hazel (Corylus avellana)

Holly (*Ilex aquifolium*)

Honeysuckle (Lonicera periclymenum)

Honeysuckle – twinberry (Lonicera involucrate) Ivy (Hedera helix) Rowan (Sorbus aucuparia) Scots pine (Pinus sylvestris)

Sycamore (Acer pseudoplatanus)
Whitebeam (Sorbus aria) (UK native, not to Northumberland)

Willow – grey (Salix cinerea)

\*Schedule 9 species

# **Appendix 2**

# Site Photographs

Photo 1 – Dog walking area, amenity grassland, scrub, tall ruderal



Photo 2 – Species-rich meadow, unimproved neutral grassland



Photo 3 – Mown edges to meadow and broadleaved plantation in background



Photo 4 – Area of tall ruderal, north edge of football pitch



Photo 5 – Hedgerow, east boundary, and tall ruderal vegetation



# **Appendix 3**

The table below contains the species likely to be found in north-east England, along with their most common caterpillar food plants and adult flight season. Species in green could be found at Vyner Park, using the tall ruderal habitat.

Small Skipper (Thymelicus sylvestris)         Yorkshire Fog (Holcus lanatus)         Jun-Aug           Large Skipper (Ochlodes venata)         Cock's-foot (Dactylis glomerata)         Jun-Aug           Dingy Skipper (Erynnis tages)         Common Bird's-foot-trefoil (Lotus corniculatus)         May-Aug           Clouded Yellow (Colias croceus)         Clovers (Trifolium spp.) Lucerne (Medicago sativa)         May-Oct (Rare)           Large White (Pieris brassicae)         Wild Mignonette (Reseda lutea) Wild or cultivated varieties of cabbage (Brassica oleracea)         Apr-Oct           Small White (Pieris rapae)         Wild or cultivated cabbage (Brassica oleracea)         Apr-Sep           Small White (Pieris rapae)         Wild or cultivated cabbage (Brassica oleracea)         Apr-Sep           Garlic Mustard (Sisymbrium officinale)         Garlic Mustard (Alliaria petiolata)         Apr-Sep           White (Pieris napi)         Cuckooflower (Cardamine pratensis)         Apr-Sep           Orange Tip (Anthocharis cardamines)         Cuckooflower (Cardamine pratensis)         Apr-Sep           Green Hairstreak (Callophrys rubi)         Common Rock-rose (Helianthemum nummularium) Common Bird's-foot-trefoil (Lotus corniculatus) Gorse (Ulex europaeus) Broom (Cytisus scoparius) Dogwood (Cornus sanguinea) Buckthorn (Rhamnus cathartica) Bramble (Rubus fruticosus agg.)         Apr-Sep           Purple Hairstreak (Favonius quercus)         Oak (Quercus robur and Q.         Jun-Sep <th>Species</th> <th>Caterpillar Food Plant(s)</th> <th>Flight Season</th>	Species	Caterpillar Food Plant(s)	Flight Season
Large Skipper (Ochlodes venata)   Cock's-foot (Dactylis glomerata)   Jun-Aug (Ochlodes venata)	Small Skipper	Yorkshire Fog (Holcus lanatus)	Jun-Aug
Cock's-foot (Dactylis glomerata)   Jun-Aug	(Thymelicus		
Cochlodes venata   Dingy Skipper (Erynnis tages)   Common Bird's-foot-trefoil (Lotus (Erynnis tages)   Colvers (Trifolium spp.)   Colvers (Trifolium spp.)   Covers (Trifoli	sylvestris)		
Common Bird's-foot-trefoil (Lotus corniculatus)	Large Skipper	Cock's-foot (Dactylis glomerata)	Jun-Aug
(Erynnis tages)         corniculatus)         May-Oct (Rare)           Clouded Yellow (Colias croceus)         Clovers (Trifolium spp.)         May-Oct (Rare)           Large White (Pieris brassicae)         Wild Mignonette (Reseda lutea)         Apr-Oct           Small White (Pieris rapae)         Wild or cultivated varieties of cabbage (Brassica oleracea)         Apr-Sep           Charlock (Sinapis arvensis) Nasturtium (Tropaeoleum majus) Hedge Mustard (Sisymbrium officinale) Garlic Mustard (Alliaria petiolata)         Apr-Sep           Green-veined White (Pieris napi)         Garlic Mustard (Alliaria petiolata)         Apr-Sep           Water Cress (Rorippa nasturtium-aquaticum) Charlock (Sinapis arvensis)         Apr-Sep           Orange Tip (Anthocharis cardamines)         Cuckooflower (Cardamine pratensis)         Apr-Sep           Green Hairstreak (Callophrys rubi)         Common Rock-rose (Helianthemum nummularium)         Apr-Jul (Moorland species)           Green (Vetisus scoparius) Dogwood (Cornus sanguinea) Buckthorn (Rhamnus cathartica) Bramble (Rubus fruticosus agg.)         Apr-Jul (Jun-Sep           Purple Hairstreak         Oak (Quercus robur and Q.         Jun-Sep	(Ochlodes venata)		
Clouded Yellow       Clovers (Trifolium spp.)       May-Oct (Rare)         Large White (Pieris brassicae)       Wild Mignonette (Reseda lutea)       Apr-Oct         Small White (Pieris rapae)       Wild or cultivated varieties of cabbage (Brassica oleracea)       Apr-Sep         Small White (Pieris rapae)       Wild or cultivated cabbage (Brassica oleracea)       Apr-Sep         Charlock (Sinapis arvensis)       Nasturtium (Tropaeoleum majus)       Apr-Sep         Hedge Mustard (Sisymbrium officinale)       Garlic Mustard (Alliaria petiolata)       Apr-Sep         Green-veined White (Pieris napi)       Garlic Mustard (Alliaria petiolata)       Apr-Sep         Water Cress (Rorippa nasturtium-aquaticum) Charlock (Sinapis arvensis)       Apr-Sep         Orange Tip (Anthocharis cardamines)       Cuckooflower (Cardamine pratensis)       Apr-Sep         Green Hairstreak (Callophrys rubi)       Common Rock-rose (Helianthemum nummularium)       Apr-Jul (Moorland species)         Grose (Ulex europaeus)       Broom (Cytisus scoparius)       Dogwood (Cornus sanguinea)       Buckthorn (Rhamnus cathartica)       Bramble (Rubus fruticosus agg.)         Purple Hairstreak       Oak (Quercus robur and Q.       Jun-Sep	Dingy Skipper	Common Bird's-foot-trefoil (Lotus	May-Aug
(Colias croceus)       Lucerne (Medicago sativa)       (Rare)         Large White (Pieris brassicae)       Wild Mignonette (Reseda lutea) Wild or cultivated varieties of cabbage (Brassica oleracea)       Apr-Oct         Small White (Pieris rapae)       Wild or cultivated cabbage (Brassica oleracea)       Apr-Sep         Charlock (Sinapis arvensis)       Nasturtium (Tropaeoleum majus)       Apr-Sep         Hedge Mustard (Sisymbrium officinale)       Garlic Mustard (Alliaria petiolata)       Apr-Sep         Green-veined White (Pieris napi)       Garlic Mustard (Alliaria petiolata)       Apr-Sep         Water Cress (Rorippa nasturtium-aquaticum)       Cuckooflower (Cardamine pratensis)       Apr-Sep         Orange Tip (Anthocharis cardamines)       Cuckooflower (Cardamine pratensis)       Apr-Sep         Garlic Mustard (Alliaria petiolata) Hedge Mustard (Sisymbrium officinale)       Apr-Sep         Green Hairstreak (Callophrys rubi)       Common Bird's-foot-trefoil (Lotus corniculatus)       Apr-Jul (Moorland species)         Gorse (Ulex europaeus)       Broom (Cytisus scoparius)       Dogwood (Cornus sanguinea)       Buckthorn (Rhamnus cathartica)       Bramble (Rubus fruticosus agg.)         Purple Hairstreak       Oak (Quercus robur and Q.       Jun-Sep	(Erynnis tages)	corniculatus)	
Colias croceus)       Lucerne (Medicago sativa)       (Rare)         Large White (Pieris brassicae)       Wild Mignonette (Reseda lutea)       Apr-Oct         Small White (Pieris rapae)       Wild or cultivated varieties of cabbage (Brassica oleracea)       Apr-Sep         Small White (Pieris rapae)       Wild or cultivated cabbage (Brassica oleracea)       Apr-Sep         Charlock (Sinapis arvensis)       Nasturtium (Tropaeoleum majus)       Apr-Sep         Hedge Mustard (Alliaria petiolata)       Apr-Sep         Green-veined White (Pieris napi)       Garlic Mustard (Alliaria petiolata)       Apr-Sep         Water Cress (Rorippa nasturtium-aquaticum) Charlock (Sinapis arvensis)       Apr-Sep         Orange Tip (Anthocharis cardamines)       Cuckooflower (Cardamine pratensis)       Apr-Sep         Garlic Mustard (Alliaria petiolata) Hedge Mustard (Sisymbrium officinale)       Apr-Sep         Green Hairstreak (Callophrys rubi)       Common Rock-rose (Helianthemum nummularium) Common Bird's-foot-trefoil (Lotus corniculatus) Gorse (Ulex europaeus) Broom (Cytisus scoparius) Dogwood (Cornus sanguinea) Buckthorn (Rhamnus cathartica) Bramble (Rubus fruticosus agg.)       Apr-Jul (Moorland species)         Purple Hairstreak       Oak (Quercus robur and Q.       Jun-Sep	Clouded Yellow	Clovers (Trifolium spp.)	May-Oct
Large White (Pieris brassicae)Wild Mignonette (Reseda lutea) Wild or cultivated varieties of cabbage (Brassica oleracea)Apr-OctSmall White (Pieris rapae)Wild or cultivated cabbage (Brassica oleracea)Apr-Sep(Pieris rapae)Wild or cultivated cabbage (Brassica oleracea)Apr-SepCharlock (Sinapis arvensis) Nasturtium (Tropaeoleum majus) Hedge Mustard (Sisymbrium officinale) Garlic Mustard (Alliaria petiolata)Apr-SepGreen-veined White (Pieris napi)Garlic Mustard (Alliaria petiolata) Purple HairstreakApr-SepOrange Tip (Anthocharis cardamines)Cuckooflower (Cardamine pratensis)Apr-SepOrange Tip (Anthocharis cardamines)Cuckooflower (Cardamine pratensis)Apr-SepGarlic Mustard (Alliaria petiolata) Hedge Mustard (Sisymbrium officinale)Apr-SepGreen Hairstreak (Callophrys rubi)Common Rock-rose (Helianthemum nummularium) Common Bird's-foot-trefoil (Lotus corniculatus) Gorse (Ulex europaeus) Broom (Cytisus scoparius) Dogwood (Cornus sanguinea) Buckthorn (Rhamnus cathartica) Bramble (Rubus fruticosus agg.)Apr-SepPurple HairstreakOak (Quercus robur and Q.Jun-Sep	(Colias croceus)	Lucerne (Medicago sativa)	(Rare)
(Pieris brassicae)Wild or cultivated varieties of cabbage (Brassica oleracea)Small WhiteWild or cultivated cabbage (Brassica oleracea)(Pieris rapae)Wild or cultivated cabbage (Brassica oleracea)Charlock (Sinapis arvensis) Nasturtium (Tropaeoleum majus) Hedge Mustard (Sisymbrium officinale) Garlic Mustard (Alliaria petiolata)Apr-SepGreen-veined White (Pieris napi)Garlic Mustard (Alliaria petiolata) Cuckooflower (Cardamine pratensis)Apr-SepOrange Tip (Anthocharis cardamines)Cuckooflower (Cardamine pratensis)Apr-SepCuckooflower (Cardamine pratensis)Cuckooflower (Cardamine pratensis)Apr-SepGarlic Mustard (Alliaria petiolata) Hedge Mustard (Sisymbrium officinale)Apr-SepGreen Hairstreak (Callophrys rubi)Common Rock-rose (Helianthemum nummularium) Common Bird's-foot-trefoil (Lotus corniculatus) Gorse (Ulex europaeus) Broom (Cytisus scoparius) Dogwood (Cornus sanguinea) Buckthorn (Rhamnus cathartica) Bramble (Rubus fruticosus agg.)Apr-Jul (Moorland species)Purple HairstreakOak (Quercus robur and Q.Jun-Sep	Large White		Apr-Oct
Cabbage (Brassica oleracea)	_	,	'
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Bramble (Rubus fruticosus agg.)  Purple Hairstreak Oak (Quercus robur and Q. Jun-Sep		` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	
Purple Hairstreak Oak (Quercus robur and Q. Jun-Sep		` ,	
	Purple Hairstreak		Jun-Sep
(ravornao gaoroao)   potraoa)	(Favonius quercus)	petraea)	'

White-letter	Flm (Illmun ann.)	Jul Aug
Hairstreak	Elm ( <i>Ulmus</i> spp.)	Jul-Aug
(Satyrium w-album)		
,	Common Sorral (Pumoy agotage)	Apr-Oct
Small Copper	Common Sorrel (Rumex acetosa) Sheep's Sorrel (R. acetosella)	Apr-Oct
(Lycaena phlaeas)	Common Rock-rose	Moy Con
Brown Argus		May-Sep
(Aricia agestis)	(Helianthemum nummularium) Dove's-foot Crane's-bill (Geranium)	(Rare)
	molle)	
	Common Stork's-bill ( <i>Erodium</i>	
	cicutarium)	
Northern Brown	Common Rock-rose	Jun-Jul/Aug
Argus (Aricia	(Helianthemum nummularium)	(Rare)
artaxerxes)	(Tiellantinemann hairinnalanann)	(itale)
Common Blue	Common Bird's-foot Trefoil (Lotus	May-Oct
(Polyommatus	corniculatus)	Ividy Oct
icarus)	Black Medick ( <i>Medicago lupulina</i> )	
100100)	Common Restharrow (Ononis	
	repens)	
Holly Blue	Holly (Ilex aquifolium)	Apr-Oct
(Celastrina argiolus)	Ivy (Hedera helix)	
Red Admiral	Common Nettle (Urtica dioica)	Mar-Nov
(Vanessa atalanta)		
Painted Lady	Thistles (Cirsium spp. and	Mar-Oct
(Vanessa cardui)	Carduus spp.)	
Small Tortoiseshell	Common Nettle (Urtica dioica)	Nearly all year
(Aglais urticae)	Small Nettle ( <i>U. urens</i> )	
Peacock	Common Nettle (Urtica dioica)	Nearly all year
(Inachis io)		
Comma	Common Nettle (Urtica dioica)	Nearly all year
(Polygonia c-album)	5	B.4. A
Small Pearl-	Common Dog-violet (Viola	May-Aug
bordered Fritillary	riviniana)	
(Boloria selene)	Marsh Violet (V. palustris)	Luca Aura
Dark Green	Common Dog-violet (Viola	Jun-Aug
Fritillary (Argynnis	riviniana)	
aglaja) Speckled Wood	False Brome ( <i>Brachypodium</i>	Mar-Oct
(Pararge aegeria)	sylvaticum)	IVIAI-OUL
(i alaiye aeyella)	Cock's-foot (Dactylis glomerata)	
	Yorkshire Fog (Holcus lanatus)	
	Common Couch ( <i>Elytrigia repens</i> )	
Wall (Brown)	Tor-grass ( <i>Brachypodium</i>	Apr-Oct
(Lasiommata	pinnatum)	1
megera)	False Brome (B. sylvaticum)	
	Cock's-foot (Dactylis glomerata)	
	Bents ( <i>Agrostis</i> spp.)	
	Wavy Hair-grass (Deschampsia	
	flexuosa) Yorkshire Fog (Holcus	
	lanatus) <sup>'</sup>	
Grayling	Sheep's Fescue (Festuca ovina)	Jul-Sep

r .		
(Hipparchia semele)	Red Fescue (F. rubra)	
	Bristle Bent (Agrostis curtisii)	
	Early Hair-grass (Aira praecox)	
Gatekeeper	Fescues (Festuca spp.), Bents	Jun-Sep
(Pyronia tithonus)	(Agrostis spp.) and Meadow-	(Rare)
,	grasses ( <i>Poa</i> spp.)	
<b>Meadow Brown</b>	Fescues (Festuca spp.)	Jun-Sep
(Maniola jurtina)	Bents (Agrostis spp.)	
	Meadow-grasses (Poa spp.)	
	Cock's-foot (Dactylis glomerata)	
Ringlet	Cock's-foot (Dactylis glomerata)	Jun-Aug
(Aphantopus	False Brome (Brachypodium	
hyperantus)	sylvaticum)	
	Tufted Hair-grass (Deschampsia	
	cespitosa)	
	Common Couch (Elytrigia repens)	
	Meadow-grasses (Poa spp.)	
Small Heath	Fescues (Festuca spp.)	May-Oct
(Coenonympha	Bents (Agrostis spp.)	
pamphilus)	Meadow-grasses (Poa spp.)	
Large Heath	Hare's-tail Cottongrass	Jun-Aug
(Coenonympha	(Eriophorum vaginatum)	(Rare)
tullia)		-