



Plumpton Wildlife & Habitat Group Roadside verge survey 2009

Introduction

Lowland meadows are a priority habitat for the UK Biodiversity Action Plan (<http://www.ukbap.org.uk/UKPlans.aspx?ID=10>), where they are taken to include not only hay meadows and unimproved pastures but also churchyard and roadside verges. The Plumpton Habitat Survey identified very few remaining unimproved meadows in the parish but our roadside verges looked as if they may be among the last areas where meadow flowers still flourish.

Traditional management of lowland meadows involved winter grazing, removing the stock in April to allow for a hay cut in June. After that meadows were lightly dressed with farmyard manure and livestock returned for aftermath grazing. This low-nutrient input system allowed flowers and grasses to coexist. Silage production has largely replaced haymaking today, and meadows have been ploughed, reseeded and fertilised to become productive monocultures of grass. Agricultural intensification resulted in a 97% decline in unimproved neutral grassland between 1934 and 1984, and losses have continued since at around 2% a year. It is not surprising that many of our once common wild flowers are becoming rare, and with them the insects that feed upon them.

The typical grassland of grazed hay-meadows treated in the traditional fashion on neutral soils in lowland Britain is classified as Mesotrophic Grassland 5 in the National Vegetation Classification of British plant communities (Rodwell, 1998). It is rich in flowering plants such as bird's-foot trefoil, red and white clovers, common knapweed, yarrow, self-heal, meadow buttercup and lady's-smock. If neglected (i.e. ungrazed) or if artificial fertilizers are used, it becomes dominated by coarse grasses, which suppress the other wild flowers.

Survey methods

Selection of verges

In early spring 2009 a preliminary survey of the roadside verges in the Plumpton parish identified 19 that were of potential interest as wildflower habitat. The selection was made using the following criteria:

- Width: sufficiently wide to provide a reasonable amount of grassland habitat (i.e. more than c. 2 m).
- Length: long enough to provide a reasonable amount of habitat (i.e. more than c. 10 m).
- Vegetation: have a typical grassland cover rather than a sparse vegetation under trees.
- Proximity to other semi-natural vegetation: i.e. verges adjacent to hedge of native species, semi-natural grassland or woodland (this excludes verges in the main part of Station Road where they are isolated from other habitats).

The locations of the selected verges are shown in Figures 1 and 2.

Recording of vegetation

An initial meeting was organized by Jacqui Hutson on 26 April to introduce volunteers to the survey methods. This attracted six people. After the meeting the nineteen verges were divided between three 'leaders' (Jacqui Hutson, Denise Hall and Janet Tuff) who would take responsibility for surveying them. Initially, three surveys (April, June and August) on each verge were planned but in

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practice only two (in April/May and in July/August) appeared to be necessary to be able to record all the flowering species.

Vegetation was recorded by searching the entire verge area, listing the flowering species present and giving an estimate of abundance using the ACFOR scale (A, Abundant, C, Common, F, Frequent, O, Occasional, R, Rare.) Grasses were not included, partly because these are not easily identified by beginners and partly because the potential attractiveness of verges comes from the wild flowers present.

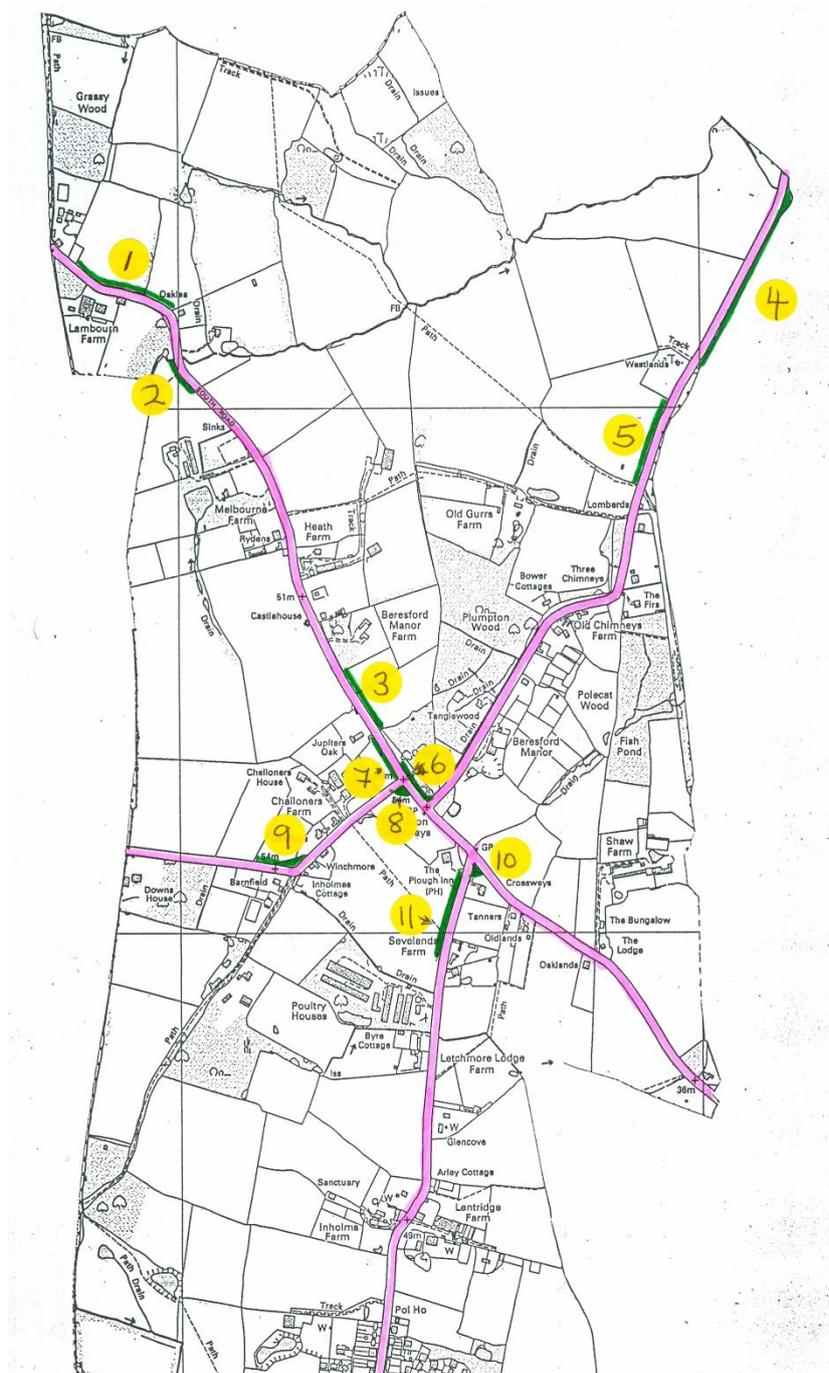


Figure 1. Map showing verges 1-11 in northern end of Plumpton parish.

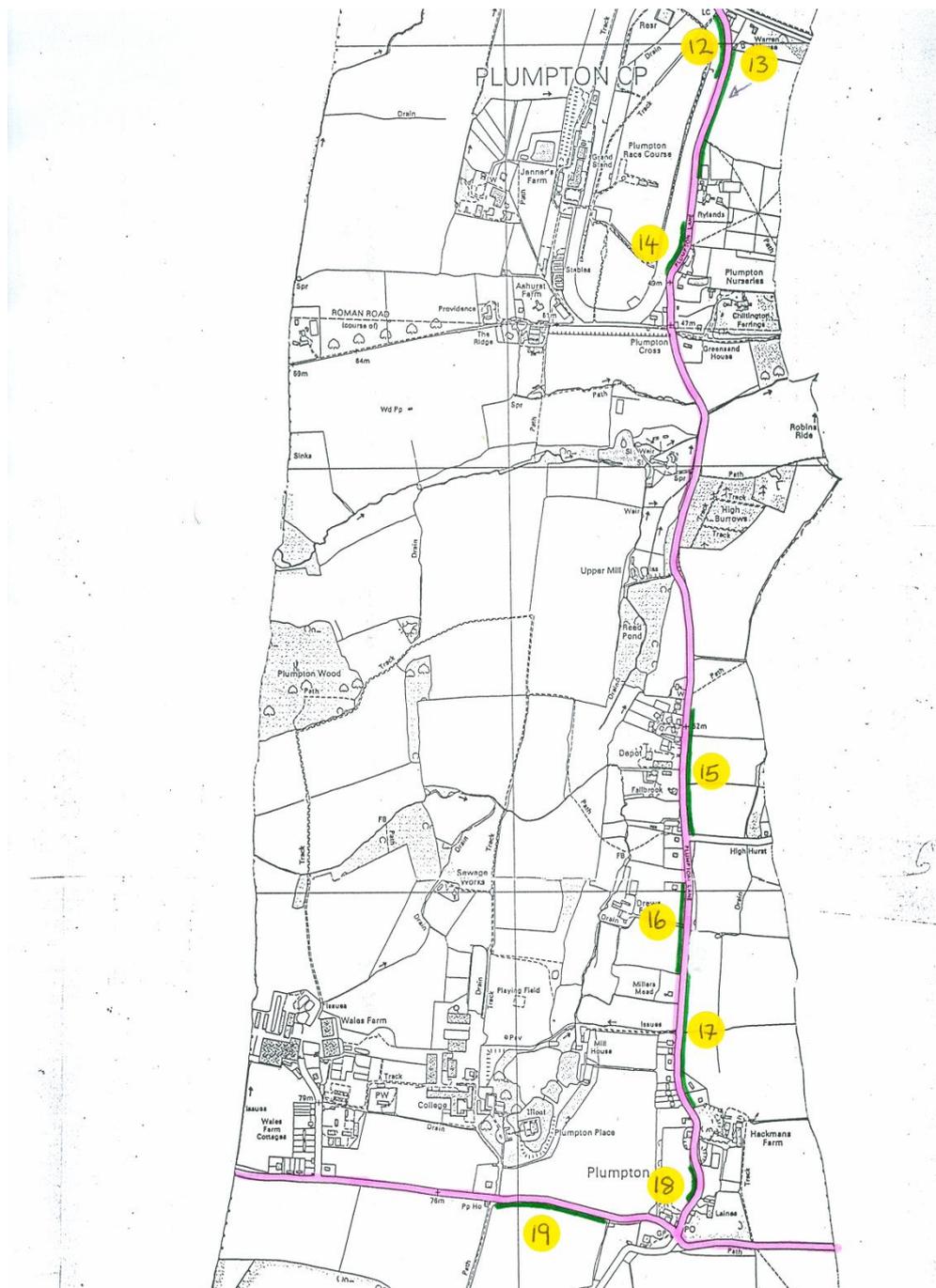


Figure 2. Map showing verges 12 to 19 in southern part of Plumpton parish.

Results

All 19 verges were surveyed and recorded in April/May but Verges 8, 10, 11, 12, 13 and 14 were not recorded in July/August because of time constraints.

Table 1 gives details of location and brief descriptions of each verge.

Spring and summer species counts were combined for all verges (except those for which only spring counts were available) and results are shown in Table 2.

Appendix 1 gives an annotated list of all flowering plants except grasses recorded in the surveys; 125 species were recorded in total, with 51 being the highest number on one verge.

Table 1: Location and brief description of roadside verges in Plumpton		
Verge no.	Grid reference	Location
1	TQ358192	Opposite Lambourne Farm on east side of South Road 2-3 m wide adjacent hedge is hornbeam, hawthorn. Has one large oak on the verge.
2	TQ359190	On west side of South Road between Melbourne Farm and Longridge Stream. Quite shady with two big opak trees and a mixed hedge. Only about 1 m wide. Dense with nettles, dock and hogweed.
3	TQ363184	On east side of South Road opposite Jupiter's Oak. Very overgrown with nettles, cow parsley, bramble and dock. Bordered by a line of trees/hedge.
4	TQ370192	On east side of Beresford Lane beyond Westlands/Bower Farm. Adjacent to arable field with a short hedge. Long, thin and uncut, with long grasses dominant.
5	TQ368189	On west side of Beresford Lane between Old Gurr's farm and Westlands/Bower Farm. Narrow and uncut. Bordered by a mixed hedge and then a field.
6	TQ364182	On corner of Beresford Lane and South Road. Shaded by horse chestnut and bordered by a wood. The verge is cut short.
7	TQ364183	On west side of South Road at junction with St Helena Lane. Bordered by hornbeam/holly hedge and garden. Mown and shady.
8	TQ364183	On south side of junction of South Road and St Helena Lane. Rutted by cars. Bordered by hedge.
9	TQ362181	Opposite Inholmes Cottage/Barnfield in St Helena Lane. South-facing. Bordered by mixed overgrown hedge of hornbeam. On a bend and widens in the middle tapering to nothing at both ends. Rutted from vehicles. Ash coppice in middle. Unknown tree by telegraph pole.
10	TQ365181	The triangle opposite <i>The Plough</i> . 33 ft at widest and 72 ft long. Backing on to a brick wall. A small and large oak tree.
11	TQ365180	On west side of Station Road south of <i>The Plough</i> . Bordered by a hedge with oak trees.
12	TQ365160	On west side of Plumpton Lane just south of the level crossing. Bordered by hawthorn hedge.
13	TQ365158	On east side of Plumpton Lane between level crossing and Rylands. Very long and narrow in places, on a bank. Hawthorn hedge along length
14	TQ364154	On west side of Plumpton Lane just north of Green Cross Length c. 60 yds, average width 2.5 m. Beside racecourse hedge with hawthorn and oaks. One yew tree. On bank. New kerb recently installed so some disturbance.
15	TQ365142	On east side of Plumpton Lane just north from entrance to Novington Manor. Average width 1 m. Long thin grassy verge bordering mixed hedge.
16	TQ363137	On west side of Plumpton Lane by Drews Farm. Average width 2-2.5 m. First 0.5 m at road mown. Mixed hedge on west side with some

		mature ash on field side of hedge.
17	TQ363135	On east side of Plumpton Lane opposite Miller's Mead to Hackman's quarry. Long narrow verge bordered by sparse hedge. Flat and grassy with bank and hedge.
18	TQ363132	On west side of Plumpton Lane just north of <i>The Half Moon</i> . Length c. 44 m, average width 1-1/2 m. Bordered by tall hedge.
19	TQ360132	On south side of Underhill Lane east of Plumpton College entrance. Approx. 90 m long and 2-2.5 m wide. Bordered by mixed hedge and trees.

Table 2. No of species (excluding grasses and tree/shrub seedlings, climbers)

Verge	No. Species	MG5 species	MG/Total	Shade - lovers	Shade-lovers/total	Nutrient lovers	Nutrient-lovers/total
1	42	18	43%	5	12%	9	21%
2	23	10	43%	2	9%	9	39%
3	20	6	30%	2	10%	11	55%
4	39	17	44%	1	3%	11	28%
5	34	15	44%	1	3%	15	44%
6	30	18	60%	2	7%	3	10%
7	38	14	37%	9	24%	10	26%
8	20	8	40%	4	20%	7	35%
9	48	20	42%	9	19%	9	19%
10	14	7	50%	1	7%	5	36%
11	26	11	42%	4	15%	8	31%
12	18	11	61%	1	5%	6	33%
13	31	12	39%	7	23%	11	35%
14	36	12	33%	10	28%	10	28%
15	37	12	33%	6	16%	16	43%
16	33	16	48%	3	9%	7	21%
17	51	18	35%	6	12%	17	33%
18	33	13	39%	6	18%	15	45%
19	34	16	47%	3	9%	10	29%

Verge 17 had the highest number of flowering species (51) (excluding grasses, tree/shrub seedlings/suckers, and climbers). This was followed by Verge 9, with 48, and Verge 1 with 42. The verges with the lowest percentages of nutrient-demanding species were: Verge 6, with 10%, followed by Verge 9 with 19% and Verges 1 and 16, with 21% each.

Shade-tolerant species were most abundant on Verge 14, with 10 species, followed by Verges 7 and 9 (with 9 species each).

Verges with the highest number of species characteristic of MG5 plant communities were Verge 9 (20 species). Followed by Verges 1, 6 and 17 (with 18 species each), Verge 12 had the highest percentage (61%) of MG5 species but had only 18 species in total of which 11 were members of the MG5 community.

Conclusions

The verges all have a good variety of wild flowers but some are dominated by coarse grasses, nutrient-demanding species such as nettles and docks, and scrub invasion, especially bramble. There are relatively few introduced species on the verges: only Michaelmas daisies, winter heliotrope, cultivated daffodils and Russian comfrey occur, each on only one verge.

While it would not be possible to introduce traditional meadow management, involving livestock grazing, to Plumpton's roadside verges it may be possible to enhance the attractiveness of the grasslands and increase their value as wildlife habitat by introducing a cutting regime that enables wild flowers to flourish and set seed as well as to reduce the dominance of coarse grasses. Cutting in late summer and autumn would allow both the spring and summer flowers to survive and bloom. Coarse grasses and shrub invasion are suppressing wild flowers on many of our verges and appropriate cutting would help control these. Additional treatments could involve green hay spreading, seeding and or plant plugs using native plants of local provenance, and seeding of yellow rattle, which suppresses the vigour of grasses.

Taking into account the size, the numbers of species recorded, the numbers of MG5 species present and the relative low occurrence of nutrient-demanding species, the verges that would seem most promising for enhancement for are: Verge 1 with 42 species, 43% of which are MG5 members; Verge 9 with 48 species, 42% of which are MG5 species; Verge 16, with 33 species of which 48% are members of MG5; and Verge 17, with 51 species of which 35% are MG5 members.

It is proposed that possibilities and feasibility for verge enhancement should be discussed with the Parish Council, Lewes District Council and East Sussex County Council as well as residents who may be interested in becoming involved. It is noted that a part of the playing field is now being managed as a wild-flower meadow, thanks to Claire Eastwood and Plumpton Parish Council, and this is a very welcome development.

Reference

Rodwell, J.S. (1998). *British Plant Communities. Volume 3: Grasslands and montane communities*. Cambridge University Press.

Jacqui Hutson, 30 November 2009

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Appendix 1. Roadside verges in Plumpton: results of 2009 surveys		
Species	English name	Notes
<i>Acer campestre</i>	Field maple seedlings	
<i>Acer pseudoplatanus</i>	Sycamore seedlings	
<i>Achillea millefolium</i>	Yarrow	MG5 species
<i>Agrimonia eupatoria</i>	Agrimony	MG5 species
<i>Ajuga reptans</i>	Bugle	
<i>Alliaria petiolata</i>	Garlic mustard	
<i>Allium triquetrum</i>	Three-cornered garlic	Introduced species
<i>Anemone nemorosa</i>	Wood anemone	
<i>Anthriscus sylvestris</i>	Cow parsley	
<i>Artemisia vulgaris</i>	Mugwort	
<i>Arum maculatum</i>	Lords-and-ladies	
<i>Asternovi-belgii</i> agg.	Michaelmas daisies	Introduced species
<i>Bellis perennis</i>	Daisy	MG5 species
<i>Calystegia</i> sp.	Bindweed	
<i>Campanula trachelium</i>	Nettle-leaved bellflower	
<i>Cardamine pratensis</i>	Lady's-smock	MG5 species
<i>Carex flacca</i>	Glaucous sedge	MG5 species
<i>Carex pendula</i>	Pendulous sedge	
<i>Carex</i> sp.	Sedge unidentified	
<i>Carpinus betulus</i>	Hornbeam seedlings	
<i>Centaurea nigra</i>	Knapweed	MG5 species
<i>Centaurea scabiosa</i>	Greater knapweed	
<i>Centaureum erythraea</i>	Common centaury	
<i>Cerastium fontanum</i>	Common mouse-ear	MG5 species
<i>Chenopodium bonus-henricus</i>	Good King Henry	
<i>Circaea lutetiana</i>	Enchanter's nightshade	
<i>Cirsium arvense</i>	Creeping thistle	MG5 species
<i>Cirsium vulgare</i>	Spear thistle	
<i>Clematis vitalba</i>	Old-man's beard	
<i>Conium maculatum</i>	Hemlock	
<i>Conopodium majus</i>	Pignut	MG5 species
<i>Convolvulus arvensis</i>	Field bindweed	
<i>Cornus sanguinea</i>	Dogwood seedling	
<i>Corylus avellana</i>	Hazel seedlings	
<i>Crataegus monogyna</i>	Hawthorn seedlings	
<i>Daphne laureola</i>	Spurge laurel	
<i>Dipsacus fullonum</i>	Wild teasel	
<i>Dryopteris filix-mas</i>	Male fern	
<i>Epilobium hirsutum</i>	Great willowherb	
<i>Equisetum</i> sp.	Horsetail sp.	
<i>Euonymus europaeus</i>	Spindle	
<i>Eupatorium cannabinum</i>	Hemp-agrimony	

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<i>Filipendula ulmaria</i>	Meadowsweet	MG5 species
<i>Fragaria vesca</i>	Wild strawberry	
<i>Fraxinus excelsior</i>	Ash seedlings	
<i>Galeobdolonluteum</i>	Yellow archangel	
<i>Galium aparine</i>	Goosegrass	
<i>Galium verum</i>	Lady's-bedstraw	MG5 species
<i>Geranium dissectum</i>	Cut-leaved crane's-bill	
<i>Geranium molle</i>	Dove's-foot crane's-bill	
<i>Geranium robertianum</i>	Herb Robert	
<i>Geum urbanum</i>	Wood avens	
<i>Glechoma hederacea</i>	Ground-ivy	
<i>Hedera helix</i>	Ivy	
<i>Heracleum sphondylium</i>	Hogweed	MG5 species
<i>Hyacinthoides non-scripta</i>	Bluebell	
<i>Hypericum perforatum</i>	Perforate St-John's-wort	
<i>Lamium album</i>	White dead-nettle	
<i>Lamium purpureum</i>	Red dead-nettle	
<i>Lapsana communis</i>	Nipplewort	
<i>Lathyrus pratensis</i>	Meadow vetchling	MG5 species
<i>Lathyrus vinifolius</i>	Bitter vetch	
<i>Leucanthemum vulgare</i>	Oxeye daisy	MG5 species
<i>Ligustrum vulgare</i>	Wild privet seedlings	
<i>Lonicera periclymenum</i>	Honeysuckle	
<i>Lotus corniculatus</i>	Bird's-foot trefoil	MG5 species
<i>Lotus pedunculatus</i>	Greater bird's-foot trefoil	MG5 species
<i>Luzula campestris</i>	Field woodrush	MG5 species
<i>Malva sylvestris</i>	Common mallow	
<i>Matricaria discoidea</i>	Pineappleweed	
<i>Medicago lupulina</i>	Black medick	
<i>Mercurialis perennis</i>	Dog's mercury	
<i>Narcissus sp</i>	Daffodils	Introduced species
<i>Odontites vernus</i>	Red bartsia	
<i>Petasites fragrans</i>	Winter heliotrope	Introduced species
<i>Picris echioides</i>	Bristly oxtongue	
<i>Plantago lanceolata</i>	Ribwort plantain	MG5 species
<i>Plantago major</i>	Greater plantain	
<i>Polygonum aviculare</i>	Knotweed	
<i>Potentilla anserina</i>	Silverweed	
<i>Potentilla erecta</i>	Tormentil	MG5 species
<i>Potentilla reptans</i>	Creeping cinquefoil	MG5 species
<i>Potentilla sterilis</i>	Barren strawberry	
<i>Primula vularis</i>	Primrose	
<i>Prunella vulgaris</i>	Self-heal	MG5 species
<i>Prunus spinosa</i>	Blackthorn suckers	
<i>Pteridium aquilinum</i>	Bracken	MG5 species
<i>Pulicaria dysenterica</i>	Common fleabane	

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<i>Quercus robur</i>	Oak seedlings	
<i>Ranunculus acris</i>	Meadow buttercup	MG5 species
<i>Ranunculus ficaria</i>	Lesser celandine	
<i>Ranunculus repens</i>	Creeping buttercup	MG5 species
<i>Rosa arvensis</i>	Field rose	
<i>Rosa canina</i>	Dog rose	
<i>Rubus fruticosus</i> agg.	Bramble	
<i>Rubus idaeus</i>	Raspberry	
<i>Rumex acetosa</i>	Common sorrel	MG5 species
<i>Rumex obtusifolius</i>	Broad-leaved dock	
<i>Senecio erucifolius</i>	Hoary ragwort	
<i>Senecio jacobaeae</i>	Ragwort	MG5 species
<i>Silene dioica</i>	Red campion	
<i>Sonchus asper</i>	Prickly sow-thistle	
<i>Sonchus oleraceus</i>	Smooth sow-thistle	
<i>Stachys officinalis</i>	Betony	MG5 species
<i>Stachys sylvatica</i>	Hedge woundwort	
<i>Stellaria graminea</i>	Lesser stitchwort	
<i>Stellaria holostea</i>	Greater stitchwort	
<i>Stellaria media</i>	Common chickweed	
<i>Symphytum x uplandicum</i>	Russian comfrey	Introduced species
<i>Tamus communis</i>	Black bryony	
<i>Taraxacum officinale</i> agg.	Dandelion	MG5 species
<i>Torilis japonica</i>	Upright hedge-parsley	
<i>Tragopogon pratensis</i>	Goat'sbeard	
<i>Trifolium campestre</i>	Hop trefoil	
<i>Trifolium pratense</i>	Red clover	MG5 species
<i>Trifolium repens</i>	White clover	MG5 species
<i>Tussilago farfara</i>	Colt's-foot	
<i>Urtica dioica</i>	Common nettle	
<i>Verbascum thapsus</i>	Great mullein	
<i>Veronica chamaedrys</i>	Germander speedwell	MG5 species
<i>Veronica serpyllifolia</i>	Thyme-leaved speedwell	
<i>Vicia cracca</i>	Tufted vetch	MG5 species
<i>Vicia sativa</i>	Common vetch	
<i>Vicia sepium</i>	Bush vetch	
<i>Viola hirta</i>	Hairy violet	
<i>Viola riviniana</i>	Dog violet	