

Marlborough Common

Botanical survey

Client: Marlborough Town Council

Ref MTC1 (1.0)

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1. Summary

A botanical survey of Marlborough Common was undertaken in May 2021 to provide a baseline for its botanical quality and to inform the potential siting of a new rugby pitch on the Common.

Areas with high species diversity (a high number of species in a given area) are considered to have a higher value for wildlife than those with a low diversity. However, flower-richness is also of value, even if the flowers are of a limited number of plant species, as they provide important nectar, pollen and seed resources.

The Common was found to have varying botanical value: the fully amenity areas, such as the rugby pitches and the golf fairways, which have very little botanical value; the golf rough and the mown areas, with some value; the areas of the Common managed by hay cutting, with higher value; and the ancient hedgerows with the highest botanical interest.

Guidance for maintaining and further improving the sward for biodiversity is provided.

2. Site description

Marlborough Common is a c45ha tract of land located to the northwest of the town of Marlborough in Wiltshire. The Common is located on a plateau, gently sloping upwards towards the northwest to a height of 185m. The Common lies on chalk bedrock, with a cap of superficial deposits of clay with flints.

The site has no nature conservation designations, and the Wiltshire & Swindon Biological Records Centre report does not yield any species of particular note.

Marlborough Common is a registered common, with open access for those on foot.

Less than half of the Common (12ha) is what might be considered 'semi-natural' grassland (a habitat in which the species assemblage occurs naturally, but its form has been influenced by human activity), while the majority (33ha) is amenity grassland – sports pitches and golf fairways – or planted wooded areas. The amenity areas have very low biodiversity, mostly consisting of closely mown amenity grasses. The wooded areas are more diverse, with a variety of native and non-native tree species. Where these are allowed to become 'scrubby' they are likely to support more wildlife.

Two hedgerows mark out the northeast and northwest Common boundary. These hedgerows are likely to be very old – they are present on the 1886 OS map – and they provide the most species-rich areas of the Common.

3. Method

The survey was undertaken by Debbie Lewis and Alex Cruickshank on the 24th and 25th May 2021.

1. A walkover survey of the Common was undertaken to create a species list and to map the extent of homogenous vegetation stands.
2. The two potential areas for a new rugby pitch were surveyed in detail, with a zigzag walk undertaken across them, stopping every 20 paces to assess a 1m x 1m quadrat.
3. The presence/absence of determined indicator species within the quadrats was noted. This provides an approximate frequency across the whole stand, and a measure of diversity.

4. Results

Extent

Two main semi-natural habitats were identified (see Appendix 1 for map):

- Flower-rich grassland, consisting of coarse and fine grasses with a varying number of widespread flower species.
- Mixed hedgerows, located at the northeast and northwest of the Common boundary.

Extent of vegetation stands:

| | |
|----------------------------|------|
| Flower-rich grassland (ha) | 12.3 |
| Hedgerows (m) | 553 |

Quality

See Appendix 2 for all data.

A total of 73 plant species were identified across the Common, with the most diverse compartments supporting 25 to 28 species. The hedgerow to the northeast of the Common, in the middle of the golf course, was the most species-rich area identified, with 29 species recorded.

Results of quadrat counts:

| Habitat Compartment | Number of quadrats | Mean number of flowering species per quadrat |
|------------------------|-----------------------|--|
| D | 10 | 6.2 |
| G | 10 | 6.5 |

These show that compartment G is marginally more diverse than D. In addition, two positive indicator species (Common Spotted Orchid and Woolly

Thistle) were identified in compartment G. See appendix 2 for all data. These scores are not sufficient for the grassland to be considered 'semi-improved' under DEFRA's criteria.

The areas of rough and the sports pitches were, not unexpectedly, found to be species-poor and dominated by amenity grasses.

5. Discussion and Recommendations.

Marlborough Common is a pleasant place for quiet recreation and more formal sporting activities.

Much of the Common is species-poor having been managed for amenity and sporting use, but some areas are richer in flowers, surviving from when the Common was more natural.

The hedgerows to the northeast and northwest of the Common are the most species-rich features on the Common and should be protected from damaging activities.

Location of an additional rugby pitch.

The provision of an additional rugby pitch (c1ha, if spectator areas are taken into consideration) will cause a significant loss (8.3%) to the most flower-rich area of the Common.

Although compartment G is marginally more diverse than compartment D, it is recommended that, if a further rugby pitch is absolutely necessary, it should be located in compartment G, parallel to the road. This location will preserve more habitat connectivity across the Common.

If the provision of an extra rugby pitch does go ahead, then it is recommended that a number of habitat enhancements (see below) are undertaken to partially offset the loss of biodiversity across the Common.

Potential wildlife enhancement activities

Enhancing the wild flower species diversity across the Common:

This can be done in a number of patches across the Common, allowing the flowers to spread in future years.

After cutting short and a light harrowing, over-sow in autumn with a wild flower seed mix like [Emorsgate EM6F](#), or similar.

These patches should immediately be rolled and kept mown short the following year.

Further advice should be sought if this is to be undertaken.

Ensure that the hedgerows are managed to maximise their value.

An assessment of the hedgerows at the northeast and northwest edges of the Common can be undertaken to determine what management would best suit them. A combination of in-filling the gaps with new plants, laying and coppicing is likely to be beneficial.

Enhance compartment 'I' through mowing.

Compartment 'I' has become very rank and dominated by negative indicator species like nettles and docks.

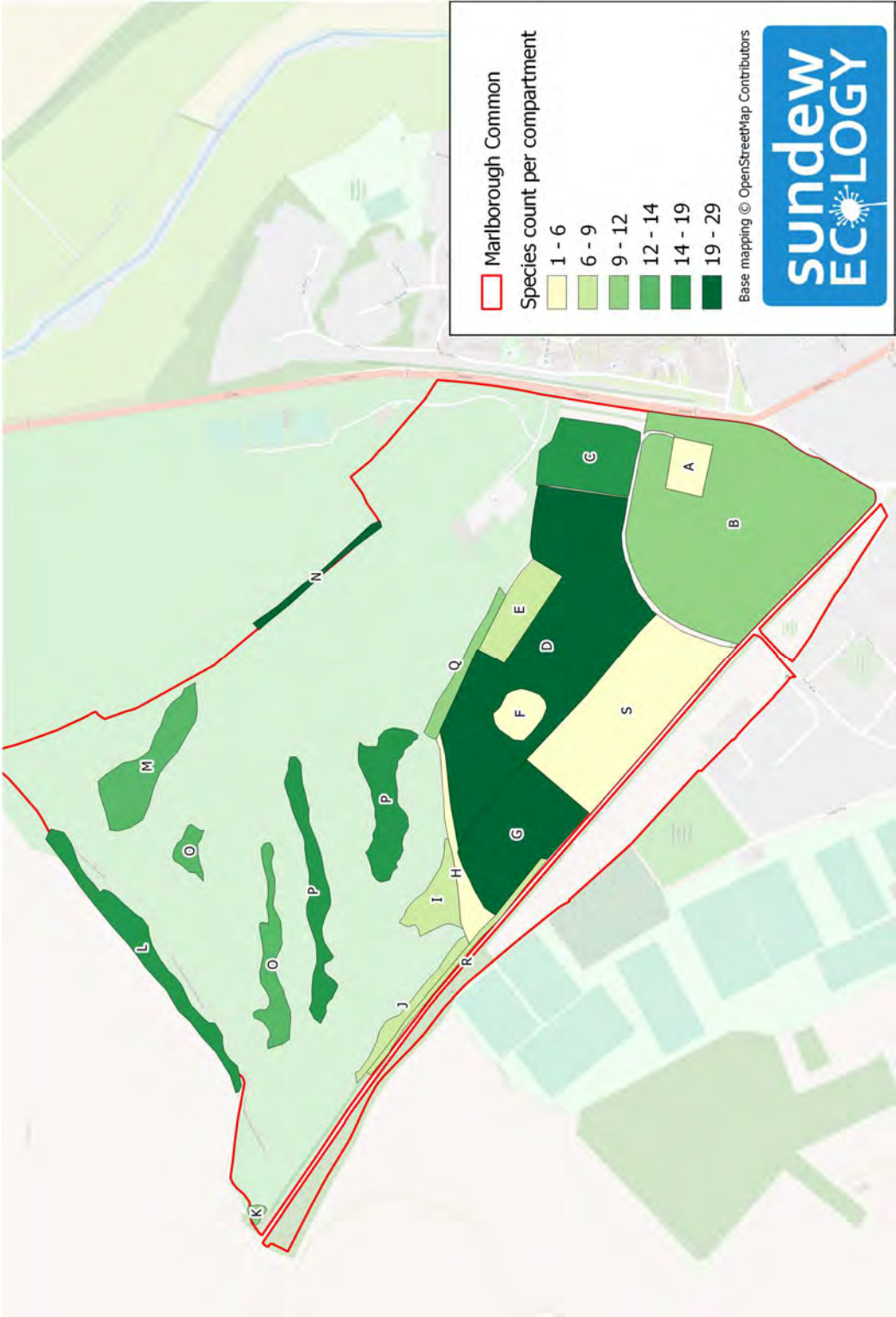
It will be beneficial to bring it into a mowing regime to decrease the negative indicators and increase its diversity. All cuttings should be collected. This could also be a location for wild flower seeding (see above).

Identify additional areas of grassland that could be enhanced.

Large areas of the Common are subject to amenity style mowing. It would be beneficial to identify all areas that can be left to grow long and cut just once a year, with all cuttings removed. These areas could also be over-sown with an appropriate wild flower seed mix (see above).

6. Appendices

Appendix 1, habitat compartment map



Appendix 2, survey data

Table 1 – full species list for each compartment

| Compartment | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S |
|-----------------------|----------|---------|-----------|-----------|-----------|------|-----------|------|------------|-------|-------|-------|-------|-------|-------|-------|-----------|-------|---------|
| Species Description | surfaced | amenity | grassland | grassland | grassland | mown | grassland | mown | rank grass | rough | rough | hedge | rough | hedge | rough | rough | grassland | hedge | amenity |
| Birds-foot Trefoil | | | | ✓ | | | ✓ | | | | | | | | | | | | |
| Black Medick | | | | | | | | ✓ | | | | | | | | | | | |
| Blackthorn | | | | | | | | | | | | ✓ | | ✓ | | | | | |
| Bramble | | | | | | | | | | | | ✓ | | ✓ | | | | | |
| Broad-leaved Dock | | | | | | | | | ✓ | | ✓ | | | ✓ | | ✓ | | | |
| Broom | | | | | | | | | | | | | ✓ | | | | | | |
| Burdock | | | | | | | | | | | | ✓ | | | | | | | |
| Bush Vetch | | | ✓ | | | | ✓ | | | | | | | | | | | | |
| Cleavers | | | | | | | | | ✓ | | ✓ | ✓ | | | | ✓ | | | |
| Cocksfoot | | | ✓ | ✓ | | | | | | | | | | | | | | | |
| Common Gorse | | | | | | | | | | | | | ✓ | | | | | | |
| Common Knapweed | | | | ✓ | | | ✓ | | | | | | | | | ✓ | | | |
| Common Mouse-ear | | | ✓ | ✓ | | | ✓ | | | | | | | | | | ✓ | | |
| Common Ragwort | | ✓ | | ✓ | | | ✓ | | | | | | | | | | ✓ | | |
| Common Spotted Orchid | | | | | | | ✓ | | | | | | | | | | | | |
| Common Vetch | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | |
| Cow Parsley | | | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| Crab Apple | | | | | | | | | | | | | | ✓ | | | | | |
| Creeping Cinquefoil | | | | ✓ | | | | | | | | | | | | | | | |
| Creeping Thistle | | | ✓ | | | | ✓ | | ✓ | | | | | ✓ | | ✓ | | | |
| Cut-leaved Cranesbill | | ✓ | | | | | | | | | | | | | | | | | |
| Daisy | ✓ | | | | | | | | | | ✓ | | | | | | ✓ | | |
| Dandelion | | ✓ | ✓ | ✓ | | | ✓ | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | | | |
| Dog Rose | | | | | | | | | | | | | | ✓ | | | | | |
| Dog's Mercury | | | | | | | | | | | | ✓ | | | | | | | |
| Elder | | | | | | | | | | | | ✓ | | ✓ | ✓ | | | | |
| English Elm | | | | | | | ✓ | ✓ | | | | | | ✓ | | | | ✓ | |
| False Oat-grass | | | | | | | ✓ | | | | | | | | | | | | |
| Field Maple | | | | | | | | | | | | | | | | | | ✓ | |
| Field Woodrush | | | | ✓ | ✓ | | ✓ | | | ✓ | | | ✓ | | ✓ | ✓ | ✓ | | |
| Germander Speedwell | | ✓ | ✓ | ✓ | | | ✓ | | | ✓ | ✓ | | | | | ✓ | ✓ | | |
| Greater Plantain | | ✓ | | | | | | | | | | | | | | | | | |
| Ground Elder | | | ✓ | | | | | | | | ✓ | | | ✓ | | | | ✓ | |
| Ground Ivy | | | | | | | | | | | | | | ✓ | | ✓ | | | |
| Groundsel | | | | | | | | | | ✓ | | | | | | | | | |
| Hawthorn | | | | | | | ✓ | | | | | ✓ | | ✓ | | | | | |
| Hazel | | | | | | | | | | | | ✓ | | ✓ | | | | | |

| Compartment | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S |
|----------------------|---|----|----|----|---|---|----|---|---|---|----|----|----|----|----|----|----|---|---|
| Hedge Bedstraw | | | | ✓ | ✓ | | | | | | | | ✓ | | ✓ | ✓ | | | |
| Hedge Garlic | | | | | | | | | | | | | | ✓ | | | | ✓ | |
| Herb Robert | | | | | | | | | | | | | | | | ✓ | | | |
| Hogweed | | ✓ | ✓ | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | |
| Holly | | | | | | | | | | | | ✓ | | ✓ | | | | | |
| Honeysuckle | | | | | | | | | | | | | | ✓ | | | | | |
| Ivy | | | | | | | | | | | | ✓ | | ✓ | | | | | |
| Lady's Bedstraw | | | | ✓ | | | ✓ | | | | | | | | | | | | |
| Lesser Celandine | | | | | | | | | ✓ | | ✓ | | | | | | | ✓ | |
| Meadow Buttercup | | ✓ | ✓ | ✓ | | | ✓ | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | | |
| Meadow Vetchling | | | | | | | ✓ | | | | | | | | | | | | |
| Meadow Foxtail | | | | ✓ | | | | | | ✓ | | | | | | | | | |
| Oak | | | | | | | | | | | | | ✓ | ✓ | | | | | |
| Pignut | | | | ✓ | ✓ | | ✓ | | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | |
| Red Campion | | | | | | | | | | | | ✓ | | ✓ | | ✓ | | | |
| Red Clover | ✓ | | ✓ | ✓ | | | | | | | | | | | | ✓ | ✓ | | |
| Red Fescue | | | ✓ | ✓ | ✓ | | ✓ | | | | | | ✓ | | | | | | |
| Ribwort Plantain | ✓ | | ✓ | ✓ | ✓ | | ✓ | | | | | | | | ✓ | | ✓ | | |
| Rosebay Willowherb | | | | | | | | | | | | | | | ✓ | | | | |
| Rough Hawks-beard | | | | ✓ | ✓ | | | | | | | | | | | | ✓ | | |
| Rough Meadow Grass | | | | ✓ | | | | | | | | | | | | | | | |
| Rye Grass | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Selfheal | | ✓ | | | | | | ✓ | | | | | | | | | | | |
| Sheep Sorrel | | | ✓ | ✓ | ✓ | | ✓ | | | ✓ | | | ✓ | | ✓ | ✓ | | | |
| Silver Birch | | | | | | | | | | | | | ✓ | | | | | | |
| Spear Thistle | | | | | | | | | | | | | | | ✓ | | | | |
| Stinging Nettle | | | | | | | ✓ | | ✓ | | ✓ | | | ✓ | | ✓ | | | |
| Sweet Vernal Grass | | | ✓ | ✓ | | | ✓ | | | | | | | | | | | | |
| Sycamore | | | | | | | | | | | | | | ✓ | | | | ✓ | |
| Tormentil | | | | ✓ | | | | | | | | | | | | | | | |
| White Dead Nettle | | | | | | | | | | | | ✓ | | ✓ | | | | ✓ | |
| Wild Arum | | | | | | | | | | | | | | ✓ | | | | ✓ | |
| Wood False Brome | | | | | | | | | | | | ✓ | | | | | | | |
| Woolly Thistle | | | | | | | ✓ | | | | | | | | | | | | |
| Yarrow | ✓ | | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | | | | |
| Yellow Rattle | | | | ✓ | | | ✓ | | | | | | | | | | ✓ | | |
| COUNT | 5 | 10 | 18 | 28 | 8 | 1 | 25 | 4 | 9 | 9 | 12 | 16 | 13 | 29 | 13 | 19 | 12 | 9 | 1 |
| Holly Blue Butterfly | | | | | | | | | | | | ✓ | | | | | | | |
| Blackcap | | | | | | | | | | | | ✓ | | | | | | | |
| Brown Hare | | | | | | | | | | | | | | | ✓ | | | | |

Positive indicator species in grassland

Negative indicator species in grassland

Table 2: Positive indicator species counts in 10 quadrats across compartments D and G

| Quadrat | Compartment | |
|---------|-------------|-----|
| | D | G |
| 1 | 5 | 7 |
| 2 | 8 | 6 |
| 3 | 4 | 6 |
| 4 | 5 | 7 |
| 5 | 7 | 5 |
| 6 | 6 | 8 |
| 7 | 7 | 6 |
| 8 | 7 | 6 |
| 9 | 5 | 8 |
| 10 | 8 | 6 |
| TOTAL | 62 | 65 |
| Average | 6.2 | 6.5 |