Emma Creasey

Report of wildflower survey east of Webb's Wood, Three Brooks LNR June 2006

Scope and purpose of report

1. This is a report of a wildflower survey carried out in a patch of grassland to the east of Webb's Wood on the Three Brooks Local Nature Reserve, Bradley Stoke, Bristol in May/June 2006. The area is shown edged in red in **Annex 1** (OS reference ST626815).

2. A management plan for the reserve was drawn up in 2005 by Rupert Higgins of the Wessex Ecological Consultancy. One objective of the plan is "to maintain, and if possible enhance, the nature conservation value of the grasslands" [on the reserve]. As part of meeting this objective, the plan recommends that the patch of grassland should be cut on a two-year cycle, half one year and half the next. The local conservation group has planned to cut the grass at their workday on 1 July 2006. Paul Humphreys of BTCV and John Morris of South Gloucestershire Council requested that the area be surveyed in advance to ascertain which flowers were growing there and avoid damage to any rare species.

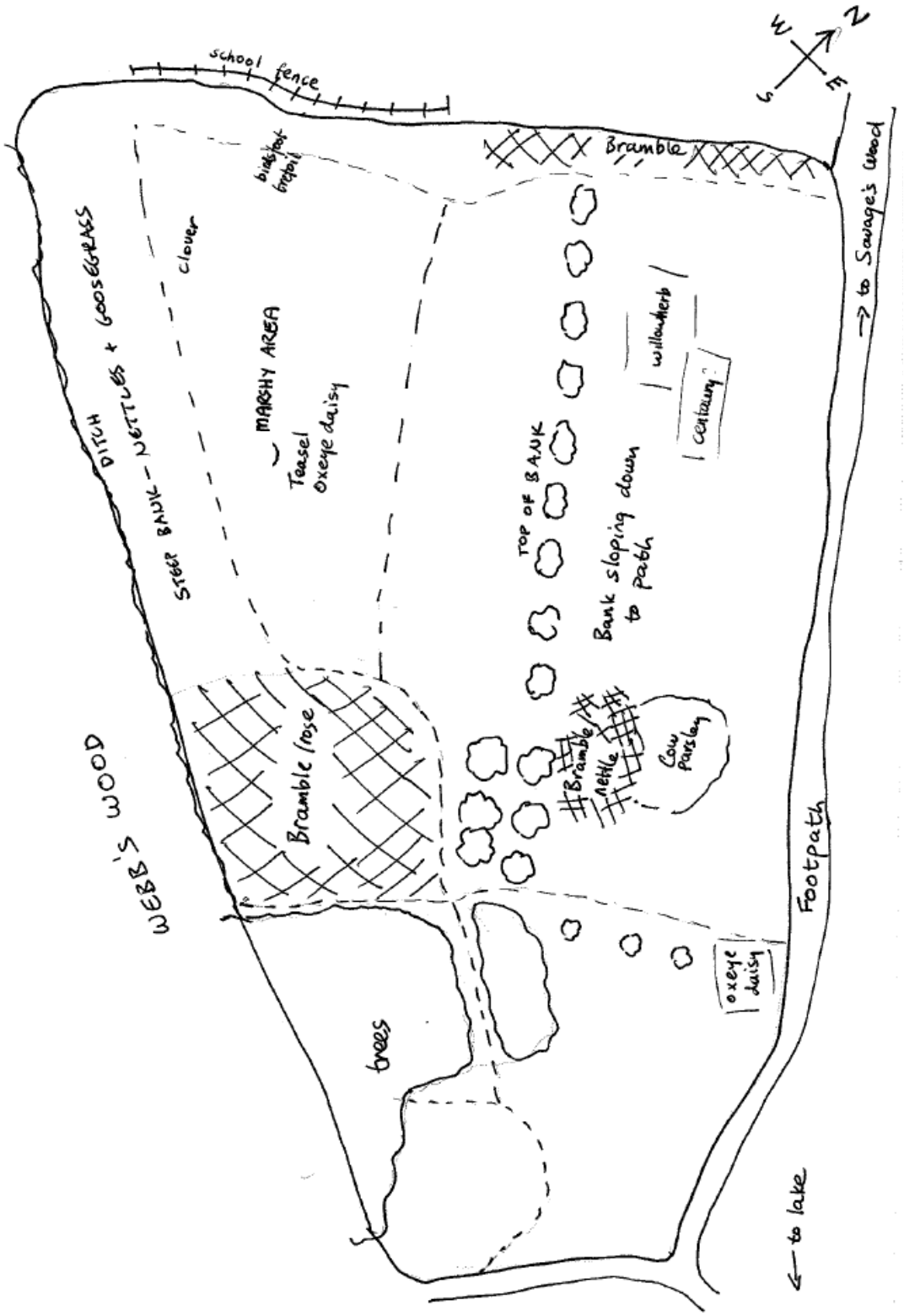
Pre-existing data

3. Rupert Higgins had already surveyed the area as part of his management plan, and I referred to this in order to be aware of any particularly notable species and familiarise myself with their appearance using a field guide. Relevant sections of the plan are reproduced in **Annex 2.** The management plan particularly notes the presence of some rare arable weeds.

Method

4. I surveyed the area on 28 May and 2 June 2006. As I needed to note anything unusual, sampling, e.g. with quadrats, was not an appropriate method. I attempted to cover the whole site by dividing it into sections and then walking up and down these in parallel transects, noting the plant species on either side of my path. Where unknown, I identified flowers using *Wild flowers of Britain and Northern Europe* (Fitter, Fitter and Blamey, pub. Collins, 5th edition).

Map of the area



---- = footpath/track

Findings

(please refer to map on page 2)

5. The grassland comprises two distinctly different areas. The edges of the patch slope down to the surrounding footpaths. These slopes are covered with dense, long grass (I did not attempt to identify the grass species). At the top of the slope is a flat area which, when I visited, was very boggy and contained several pools of standing water. By contrast with the slopes, this area has more of a marshland appearance. The type and abundance of species differs between these two areas.



Grassy slope



Marshland area

6. Between the grassland and the wood is a deep ditch. The bank sloping down to this ditch shows different vegetation again, being covered in nettles and goosegrass; these are not present in large quantities elsewhere.

7. Not all of the wildflowers were in bloom and it was not always possible to identify them from the leaves only. Species given in *italics* are those where I have guessed at their identity.

8. Species occurring in large patches are shown on the map on page 2, but in general, species were spread throughout the area.

9. Species found:

Birdsfoot trefoil - only occasional plants on the slopes, large patches in the marshy area
Black medick *(poss. lesser trefoil?)*
Bluebell - *Spanish hybrid?* - slopes only
Wild carrot
Centaury - 1 patch only on northern slope
Creeping buttercup
Cow parsley - slopes only
Meadow buttercup
Cinquefoil
Red clover
Cut-leaved cranesbill* - slopes only
Other cranesbill – slopes only
Daisy
Curled dock
Ground ivy* - slopes only
Jack-go-to-bed-at-noon (only 1 example found)
Hogweed
Mint *(Corn mint?)*
Field mouse-ear
Nettle
Oxeye daisy - occasional on slopes, numerous in marsh
Plantain/ribwort plantain
Ragwort
Sorrel - marsh only
Teasel - occasional on slopes, numerous in marsh
Thistle
Common vetch*
Tufted vetch*
Meadow vetchling
Willowherb *(rosebay willowherb?)*
Yarrow

Unless otherwise specified, all these species were present throughout the grassland, albeit in varying densities. Those marked * are commonest nearer to the woodland edge.

10. In addition to these species the grassland is being encroached upon by wild rose and bramble that is growing out from the woodland edge. In the marshy area, there were also tussocks of a tough grass which was not found on the slopes.

<u>Comparison to management plan</u>

11. From the plants listed in the management plan I was able to find common ragwort, wild carrot, meadow vetchling, tufted vetch, centaury (possibly) and bird's-foot trefoil.

12. I was not able to find common fleabane, grass vetchling, glaucous sedge, hop trefoil or black knapweed. Apart from mint, I did not find the arable species noted by Rupert, although I looked for them particularly near the school perimeter fence where the soil has been disturbed most recently. One reason for this may be that they were not in flower when I visited, but as the arable species need frequent disturbance of the soil to flourish these may be disappearing as the area settled.

13. The local conservation group has heard anecdotally that a rare bee orchid has been seen in the marshy area. I did not see one, but they do not flower until June-July.

Other findings

14. Although I was not carrying out an invertebrate survey, the area is clearly a valuable invertebrate habitat, as noted in the management plan. Snails were numerous throughout and I found a number of chrysalises.

Suggestions/observations re July workday

15. None of the species I identified are particularly rare, so there should not be too much of a problem with carrying out a cut in July. However, it may be worth quickly looking over the site again first as other flowers may be in bloom, and ensuring that workers are familiar with pictures of the rarer species such as spurge and orchid. In terms of health and safety, volunteers should also be able to identify the hogweed as the sap is an irritant if it contacts skin.

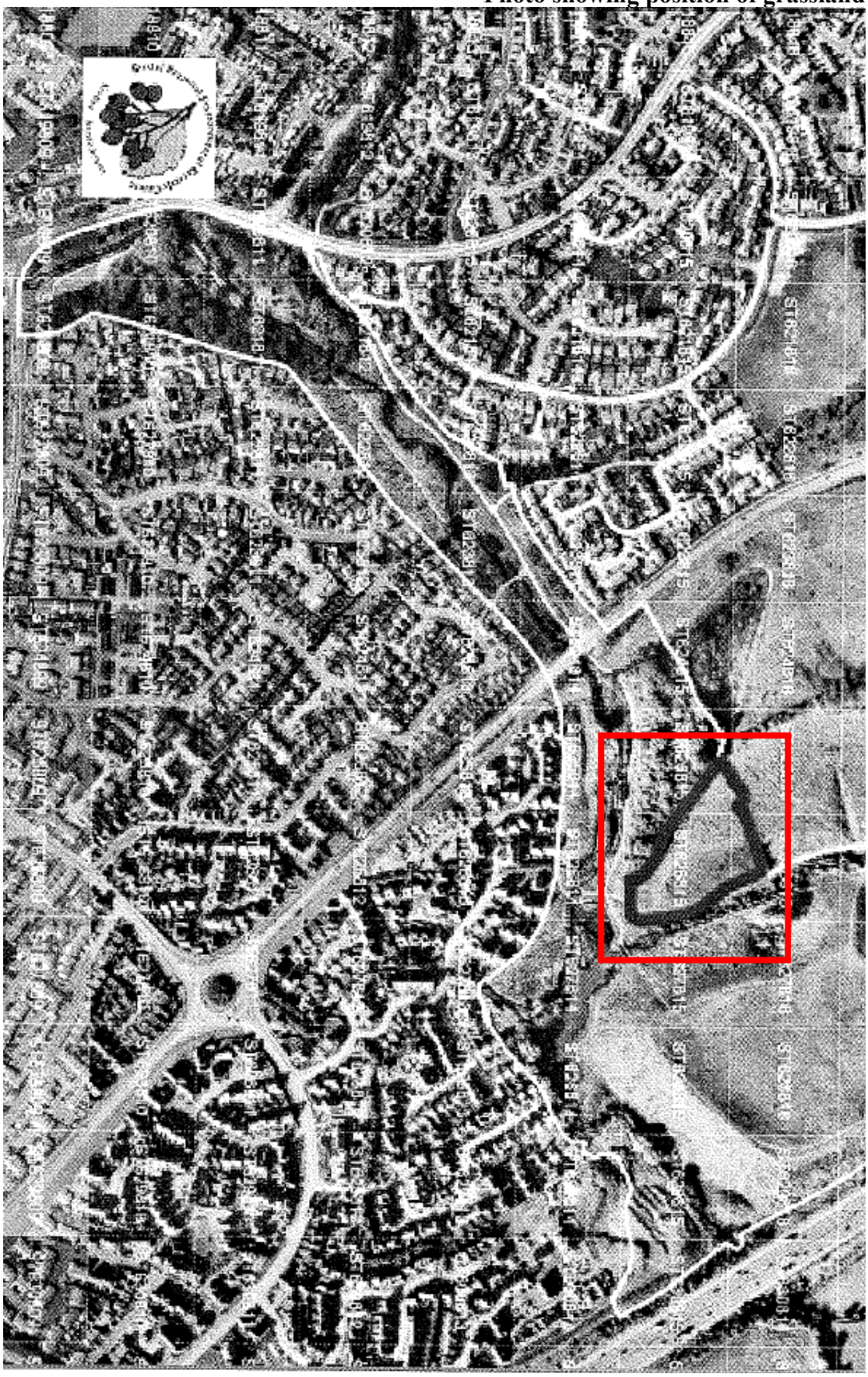
16. As the marshy area is less dense in grass and different in vegetation it may be that it should be treated differently from the slopes, but I would await an opinion from Paul Humphreys on this.

17. As well as cutting the grass, it may be worth slashing back the encroaching rose and bramble before it takes over the area.

18. If arable species are not observed in July, and there are sufficient workers, there could be value in turning over the soil immediately next to the school fence to encourage further growth of these species.

19. Arrangements need to be made for removal of the cuttings (they could be tipped down the nettle bank as this is clearly already rich in nutrients).

Annex 1
Photo showing position of grassland



Annex 2
Relevant sections from 3 Brooks LNR management plan

The area immediately to the east of Webb's Wood supports the most diverse grassland on the site. The dominant grass species here are creeping bent, Yorkshire fog, timothy and red fescue. Locally there are large patches of hairy sedge. Frequent herb species include common ragwort, wild carrot, common fleabane, meadow vetchling and tufted vetch. Other species present in smaller quantities include grass vetchling, glaucous sedge, centaury, hop trefoil, black knapweed and bird's-foot trefoil. A particular feature of this area is the presence of arable species where the sward has been disturbed, largely by motorbikes. Species present include broad-leaved spurge, corn mint and scarlet pimpernel. On the northern edge of the area, adjacent to the school fence, construction works in 2004 created areas of bare soil on which broad-leaved spurge, broad-fruited cornsalad and sharp-leaved fluellen were amongst the species that germinated.

The area to the east of Webbs Wood is the most diverse in unimproved grassland indicators, including greater bird's-foot trefoil, meadow vetchling, glaucous sedge and common fleabane. One of the plants of unimproved grassland, grass vetchling, is listed in The Flora of the Bristol Region as an Avon Notable Species. The most uncommon plants here, however, are arable weeds: broad-leaved spurge is a nationally scarce species that is included on the national BAP long list; broad-fruited cornsalad is a nationally rare Red Data Book Species that is included on the national BAP, and therefore one of the rarest plants present in South Gloucestershire; and sharp-leaved fluellen and field pepperwort are Avon Notable Species. This area is also important for invertebrates. The existing records show that it supports a variety of grassland species, such as common blue and small heath butterflies; latticed heath and *Cochylis dubiana* moths; and short-winged conehead.

The area of grassland to the east of Webbs Wood is of nature conservation value in a South Gloucestershire context for its plants and invertebrates.

Half of the area to the east of Webbs Wood (shown on the enclosed map) should be mown every year and the other half the next year. The arisings should be gathered and removed.

Rupert Higgins, Wessex Ecological Consultancy