

RECOMMENDATIONS FOR FUTURE CONSERVATION AND MANAGEMENT WORK AT RALEIGH PARK

1. **Wildlife survey of the western upslope long extension**, which is fenced off. This has not yet been studied in detail and contains more fen areas that should be assessed for biodiversity.
2. **Calculation of the rainwater catchment upslope to the west of the fen areas in the park**. Once the catchment limits are known, the green areas outside the park in the catchment can be protected from damaging hard surfacing (i.e. development) which would reduce spring water flow in the park.
3. **Removal of scrub and trees from all the fen peaty wetland areas identified in Figure 2**. Any re-growth of herbaceous vegetation should undergo scything and raking-up of arisings at least once annually to reduce the suppressing influence of inedible dominant plants like giant horsetail and hard rush. This will benefit species and habitat diversity overall on site, with the added benefit of making landscape views across the park much more attractive.
4. **Specifically target particular dominant plants, such as hard rush and pendulous sedge, in fen areas** by scything and raking off several times a year. This will control but not eliminate them, so, when weakened, the perennial tussocks of these plants may need digging out to ensure smaller plants can thrive.
5. **Grazing intensity needs to increase to promote the return of species diversity in the grassland**. Suitable stock could be either cows or horses. Without this, flowery species will continue to be lost from the drier grasslands with reduction of insects, such as butterflies.
6. **In connection with previous grazing issues, continue the further removal of a proportion of the dense bramble scrub patches** on drier ground to open up/widen rides for stock access. This will make the interaction between stock and the public easier.
7. **Blackthorn scrub needs to be surveyed annually in winter or spring for the presence of brown and black hairstreak butterflies** by an expert in egg identification. As an egg of a brown hairstreak has recently been found on blackthorn, continue the annual rejuvenation of a proportion of the old blackthorn patches already started in January 2018.
8. **Consider purchasing some Dutch Elm Disease-resistant elm saplings in order to replace the grove of dying English elms in the north-west site corner**. It may be possible to attract white letter hairstreak butterflies to breed on this elm.
9. **Creeping thistle needs control in some grassland areas** by topping combined with removal of arisings before it flowers in summer.
10. **Further surveys to get a better view of site biodiversity** would be useful and could include small mammal trapping, bat survey, moth trapping, glow worm walk, constructing reptile hibernacula and refuges. What about involving local primary children in these activities?
11. **Ponds should be managed with a light touch, when shading willows are all removed**.

Some control of the emergent and floating mat vegetation in the pond would help diversity, if it looked as though open water was disappearing. In this situation a small proportion of the vegetation mat would need to be removed carefully with a crome* annually. This should maintain open water but leave a good thick marginal vegetation fringe for amphibian breeding. **The pond should not be further deepened**, shallow margins with lots of vegetation are best for aquatic species diversity.

*A pond-raking tool resembling a long-handled fork, with 4 tines bent at 90° (Wikipedia).

12. **Once they are clear of scrub, consider re-wetting some of the peaty fen areas in the centre of the site** by using small woody-debris dams at regular intervals across the stream. These will slow water flow off the whole site and spread some sideways. This water retention will help to reduce the likelihood of flooding downslope. To help this process, historic deepening of the stream corridor should be reversed by shallowing the stream bed between woody dams. This will enable even greater retention of spring water on site.

13. **Consider removing one of the large hybrid poplar trees on the south-west high ground**. It has its roots in a fen marginal area (see **Figure 2** – above the pond, on the right) and, without the removal of water via transpiration, more will remain in the fen, enabling it to remain wetter and better survive climate change to drier conditions in future.