Doveside, Wombwell

Management Plan



Great Burnet *Sanguisorba major* at Doveside, June 2017

Introduction

Doveside is a small area on the north bank of the River Dove at Darfield, just north of Wombwell Ings, central grid reference SE412038. It is owned by Barnsley MBC and is unmanaged as a nature reserve.

The site forms part of the Wings across the Ings/Doveside planning application which received planning permission in October 2018, a condition of which was that a water level management plan was to be agreed by Barnsley MBC planning authority prior to commencement of works.

This report draws on habitat and species data gathered on 14 and 15 June 2017 in connection with proposals for wetland habitat improvements, together with the plans and discussions with JBA Consulting and local residents in 2017 and 2018.

The site will be managed by the Yorkshire Wildlife Trust under agreement with Barnsley MBC. This document forms the initial management plan to guide future management of the site.

Habitats

The main site comprises a rich mixture of meadow, open water, swamp, fen, reedbed, wet woodland and inundation communities.

Meadow communities are largely neutral grassland (approximating to MG5) with a diverse range of characteristic species. Of more interest in the eastern meadow are patches of Great Burnet *Sanguisorba major*, with some Meadow Foxtail, indicating a remnant fragment of MG4 floodplain meadow.

The ***open waters*** comprise two large ponds and a small pond in the north-east corner. The larger ponds have some large demersal fish in them (Carp spp.) which unfortunately seem to have stirred all the sediment up such that there appear to be very few aquatic plants apparent (White water-lily in the western pond looks like an introduced ornamental, and some fragments of *Ceratophyllum* and *Elodea* there also). A notable feature were large numbers of Swan Mussels albeit only empty shells could be seen – further investigation of an extant population would be desirable. It is likely that the fish have been introduced along with the lilies.

The ***swamp, fen and reedbed*** communities are extensive, luxuriant and diverse around the main ponds. There are large populations of many marginal plants such as Water Mint, Water Forget-me-not, Gipsywort, patches of Common Reed, Bulrush, Common Spikerush. Of particular note are some areas of fen in both the west and east meadows and which form part of an interesting cline from meadow to fen, to swamp and open water, and which are dominated by Brown Sedge, Common Sedge, Water forget-me-not *M. cespitosa*, and Creeping Bent.

Wet woodland comprises scattered bushes of Grey Willow with a large stand of Sallow in the middle. There is also a notable line of hedge and mature trees on the riverside comprising Crack Willow and Aspen.

Some ***inundation communities*** are found as patches in the meadow areas and support plants such as Marsh Foxtail, Marsh Cudweed, Silverweed and Flote-grass.

Species

Some notable plants in a Barnsley context include White Briony (in the wood adjacent to the east of the site), Brown Sedge, Water Forget-me-not *Myosotis cespitosa*, Marsh Cudweed, and Great Burnet.

Despite the short visit, notable Odonata included Banded Demoiselle and Broad-bodied Chasers, with some commoner butterflies, and of the birds Willow Tit, Kingfisher and a range of warblers including Reed, Lesser Whitethroat and Common Whitethroat carrying food.

The Swan Mussel population is of note. Some very large empty shells were found (indicating animals > 40 years old).

Evaluation

There is already a good range of habitats in a small area with a diverse range of species (almost 100 plant species on the visits) including some uncommon and restricted species in a Barnsley context. The quality of the swamp, fen and inundation communities is excellent with a wide range of species, and abundant populations of some, and there are excellent examples of ecological clines from grassland through to fen, swamp and open water. The remnant MG4 grassland is notable. Some notable vertebrates were seen including Willow Tit, Swan Mussel and Banded Demoiselle (although this species is now found widely along the River Dove).

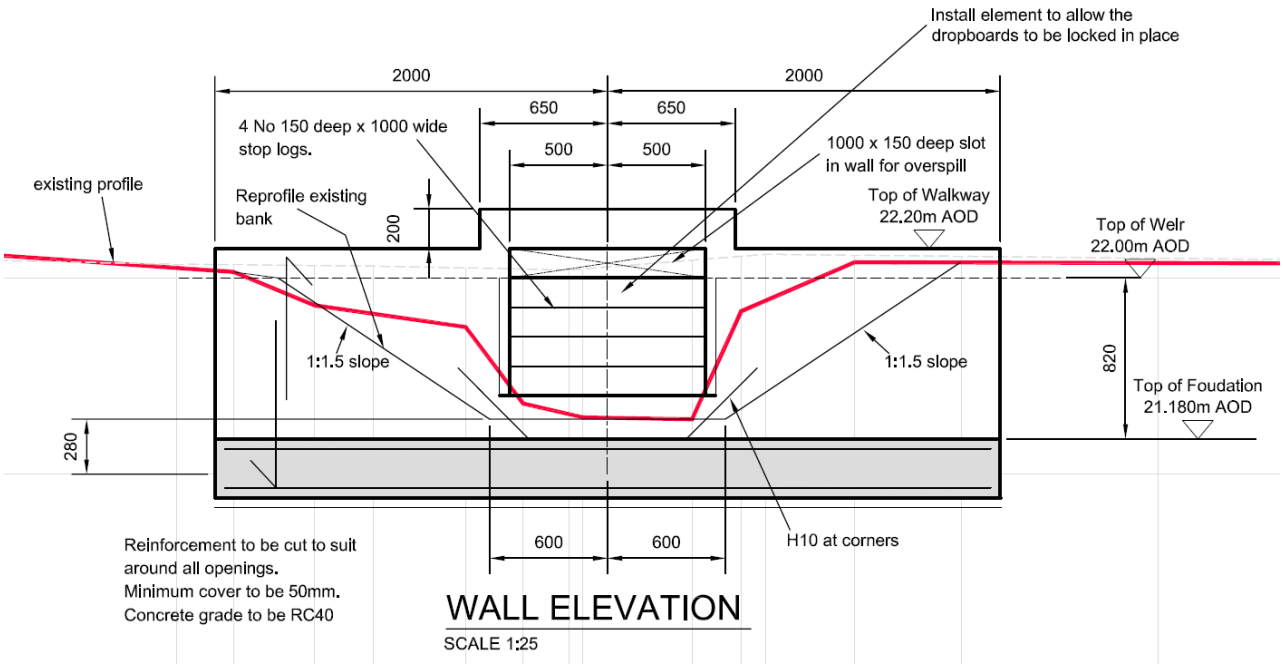
The main negatives were a significant population of *Crassula helmsii*, and the open waters being churned up by introduced Carp/Koi.

Planning proposals

The proposed scheme involves the creation of two shallow scrapes on land already seasonally wet. It will also open up the central outfall ditch and install a weir which will allow the water levels to be controlled and then discharged to the River Dove. Two further outfall pipes will be installed to the west and east which will also aid water flow to the river.

Water control will be improved by installation of a weir. The proposal is to control water levels using stop logs on the weir at 22m AOD. This will allow water from the river into the site when the wetland system is full or nearly full to allow a flow of water through the site. This will increase the open water wetland extent. The weir will include 4 dropboards each 150mm dep to allow the water levels on site to be adjusted. Removing all four dropboards, will allow the water levels to be controlled at the outfall by the existing culvert (which has an invert of 21.6mAOD).

Figure 1: Dropboard Weir



Overall approach of management

Since much of the site already possesses rich and valuable habitats, the main objective of management must be to maintain these and enhance them where possible. The MG4 and Brown Sedge communities are particularly significant, so maintenance of a seasonal flooding regime, and low-intensity grazing would be required to move them into more optimal condition. The drier meadow areas would also benefit from controlled grazing, or a hay-cut followed by a period of grazing. The wet woodland will require some management to prevent the area becoming too dense and drawn (leaving just a canopy and dark ground underneath), allowing some underscrub to develop and incorporating dead stumps and trunks particularly to favour Willow Tits.

The planning proposals will increase the area of open water through the creation of some small scrapes and the re-profiling of the main ponds, and re-connect the water-bodies to the River Dove by a controlled weir. At this stage, monitoring of water levels would be a priority to establish under what conditions there is a flow to and from the river and the central ditch, and to what extent this can be adjusted to allow free movement of water over the site. The aim of water management across the site would be regulate the existing regime in a more controlled fashion, aiming for slightly higher levels in winter and spring but lowering the levels for summer and autumn. The

levels will be controlled via stop logs in the weir, whereby individual logs can be removed to lower the levels, or replaced to increase the levels.

The system establishes the water levels which can be managed and adjusted. The height at which water levels are managed during the winter can be lowered if it is causing unexpected issues for surrounding receptors.

During the first winter of operation regular inspections will be undertaken and available for local residents to view on request. . Where residents express an interest in joining the inspection they will be invited. If the first winter has below average rainfall (based on Met Office data[1]), this will be repeated until a wet year occurs. After that water levels will be reviewed on a yearly basis.

Involvement of the local community in the monitoring of the weir will be an effective way of more regular monitoring of the levels leading to greater understanding of the system.

Removal of the introduced fish in the ponds (Carp already recorded which are bottom-feeders and thereby create muddy and turbid water conditions) would enable a more diverse aquatic flora and fauna to develop.

Further monitoring and survey work should be undertaken on other faunal groups and aquatics, including confirming whether the Swan Mussel population is extant, as well as monitoring the *Crassula* and implementing control measures where appropriate.

Management proposals

- Meadow – hay-cut in early July followed by seasonal grazing at low density (July-October). If no equipment can be found to cut the hay, then grazing permissible at low density (1-2 beasts); maintain scrub/grassland proportions as now
- Fen/marsh/reedbed – rotational cutting (25% per annum) and removal of arisings (these could form the basis of seed source for other projects)
- Wet woodland – thin where the trees are too dense and straggly; introduce dead standing wood and piles, allow adjacent bramble scrub to encroach in identified areas
- Scrub – monitor to ensure proportion of scrub/meadow stays as now

[1] https://www.metoffice.gov.uk/climate/uk/summaries/anomacts

- Inundation communities – will be regulated through the water level management, but aim for very shallow water over these areas in Winter/Spring followed by a small draw-down to summer and autumn levels
- Open water – will be increased through the works, but removal of bottom-feeding fish would be desirable to create a more diverse fish population as well as animal and plant diversity. Regulate levels via the stop-logs in the weir, aiming for the ponds and scrapes to be filled with water during Winter/Spring followed by a gradual drawdown to drier conditions in Summer/Autumn. Install a gauge board and record levels throughout the year.
- Management for specific species
    - Willow Tit – wet woodland as above; maintain scrub areas; install dead stumps for nests; liaise with neighbouring residents to supply winter feeding and monitoring
    - Swan Mussel – investigate population (at time of excavation)
- Monitoring – regular monitoring of the site would help to understand the system better as well as detect any other species and communities of note; through aerial photography, annual habitat survey, specific species surveys
- Water level monitoring:
    - As detailed above.
- Public engagement/promotion/access – the site is a peaceful, little disturbed part of the Dearne/Dove river valley and as such is a valuable addition to the types of habitats and places elsewhere in the wider locality. This should stay the same, with just informal and occasional access by interested parties.