PINS reference APP/J4423/W/20/32558555 CD4.8.1.5

Planning Application Reference: 19/03143/FUL

Town and Country Planning Act 1990 (as amended)

Appeal by: Avant Homes Central

An Appeal Against the refusal of Full Planning Permission for 74 no. dwellings at land off Moorthorpe Way, Sheffield.

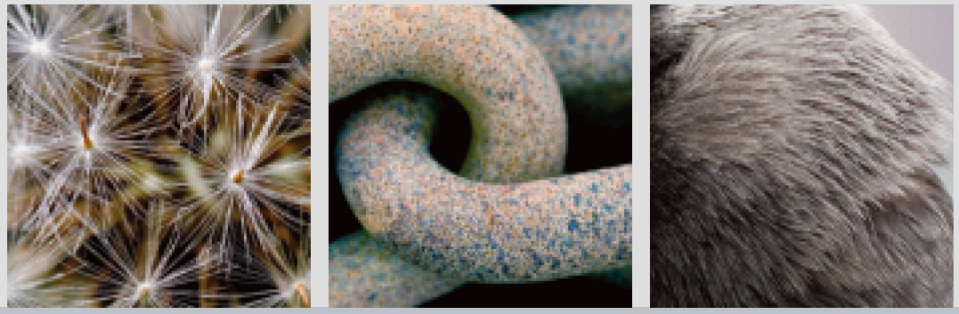
Proof of evidence on

Ecology and Nature Conservation

Appendix 4 BNG Management Brief

By

Andrew Baker BSc (Hons) FCIEEM



bakerconsultants

Moorthorpe Way: Offsite Biodiversity Management Options

Introduction

The proposed development of the site Moorthorpe Way (Planning Application Reference: 19/01343/FUL) will result in the loss of biodiversity in the site. In order to compensate for this loss the applicant proposed the sum of £230,400 to fund offside biodiversity improvements. This was agreed with the Council. The figure is being reviewed in the light of the evidence.

The development site is located adjacent to two Local Wildlife Sites including the Ochre Dike (LWS 296) and Owlthorpe (LWS 266). The Ochre Dike is a narrow strip of semi-natural broadleaved woodland and a small watercourse. The Owlthorpe LWS is a mosaic of broadleaved woodland, scrub, traditional orchard and grasslands (improved and semi-improved) enclosed by hawthorn-dominated hedgerows. There are also stands of immature broadleaved woodland including a block to the southwest of a new medical centre that was previously arable land and a block to the north of Ochre Dike which originated from grassland.

Areas described above that are outside of the development footprint were visited by Baker Consultants Staff: Mark Woods and Isabel Commerford on 3 December 2020 to review the condition of the habitats and to identify management opportunities that could potentially compensate for the loss of biodiversity.

The following appraisal is based on an initial visit and it is recognised that December is not necessarily the ideal time to assess the botanical condition of a habitat, but a visit to woodland and scrub in winter can be very useful to assess the condition of trees, structural diversity, and the extent and type of deadwood. Winter visits can also be useful to review the extent of intervention on a grassland. Management of grasslands to maintain botanical interest will usually aim to remove all or most of the annual growth before the onset of winter. Relaxation of management will often lead to a tall sward with a dense thatch and potential weed issues, which can significantly impact on botanical diversity.

Figure 1 shows the location of features to which the following text refers. For each proposal a rationale for management is provided based on an initial assessment. There is also a suggestion as to the likely costs of implementing the proposed management. If broadly acceptable, it is recognised that detailed prescription will need to be based on negotiation with the existing land managers; a more detailed investigation of the ecological characteristics of each land parcel and will need to consider the requirement of the local population.

The cost presented are based Mark Woods thirty years of experience in conservation management.

Figure 1. Management Units

Management Options

None of the management units that were assessed achieved good condition status when reviewed against the 'Condition Criteria' described in the Biodiversity Metric 2.0 Technical Supplement - Beta Test Final. With regards to connectivity, habitats of high and very high distinctiveness are assigned a medium connectivity score and all other habitats are assigned a low connectivity score. Habitats are classified according to the UK Habitat Classification system. The costs are based on a 30 year period.

Unit 1

Rationale

Unit 1 is classified as Broadleaved Woodland – Other. The habitat is of recent origin and was previously arable land. It contains extensive patches of bramble and shrubs such as goat willow, but there are numerous immature native broadleaved trees throughout the stand. Without intervention the stand will eventually develop into woodland similar to those associated with the Ochre Dike LWS and Owlthorpe LWS, but this could take several hundred years and the uniform canopy and abundance of bramble is likely to constrain the addition of woodland herbs and the development of a diverse woodland structure. Significant enhancement to the woodland could be achieved by the provision of a circular 4m wide ride and control of bramble scrub on the margins in order to introduce woodland wildflowers. A similar approach to immature plantation woodland management has been adopted for woodland in Milton Keynes.

The hedgerow at the north end of the unit is scheduled for removal. The new boundary provides an opportunity to replace the original hedgerow with a species-rich hedgerow containing five trees along its length

Management

Clear a circular woodland ride, leave cut materials in-situ to decay naturally and maintain ride by mowing 1-2x annually.

Cut back and clear bramble 2m from the edge of the ride into the woodland. Purchase and plant woodland plugs (bluebell, primrose, red campion, yellow archangel, wood avens etc..) into cleared areas. Manage by routine clearance of regenerating bramble.

Plant a species-rich hedgerow with trees along the revised northern boundary of Unit 1 and make provision for adequate aftercare including triennial trimming.

Cost

Initial clearance, planting plugs and aftercare, routine ride mowing (and raking of clippings) - **£6,000**.

Unit 2

Rationale

Unit 2 is classified as a Traditional Orchard. The habitat also contains a patch of dense scrub. The orchard is not in good condition because of the extent of bramble scrub and the height of the unmanaged grassland sward. To achieve good condition requires routine intervention and modification through the addition of more fruit trees.

Management
Clear bramble and hawthorn scrub and control re-growth.
Cut grassland twice a year (July and early March) and rake or remove cuttings to a dedicated composting location.
Prune existing apple trees to enhance condition and intervene when necessary to maintain in optimum condition.
Increase number of fruit trees – plant plum / damson trees and make provision for appropriate aftercare.

Costs
Scrub clearance, mowing, supplementary planting and aftercare, arboricultural care **- £1,500**.

Unit 3

Rationale
Unit 3 is classified as Neutral Grassland – other, but it has the potential to be classified as Lowland Meadows with appropriate management. Lack of intervention during the 2020 growing season (and possibly in previous years) has resulted in a dense thatch, presence of coarse grasses and tussocks, unwanted shrubs, presence of pernicious weeds, build up of lawn moss and limited cover of positive indicator species. All of which are easily rectified through appropriate management.

Management
If routine grazing with suitable livestock can be secured then that option should be preferable to others.
Alternatively, cut grassland in mid-August and again in late September-early October every year when the ground is sufficiently dry to avoid rutting. Collect arisings and compost at pre-determined (permanent) locations.
Harrow grasslands with a light brush roller every 3-4 years
Apply suitable herbicide to pernicious weeds by knapsack sprayer – review requirements annually.
Create a series of pathways on the perimeter of grasslands (alongside hedgerows) to link to existing surfaced tracks and fence off the field side of the footpath to control access to remainder of grassland. Make provision for footpath maintenance and repair.
Leave one field without fenced off footpaths for informal recreation.
Provide interpretative signage and route markers
Provide litter bins and make provision for routine collection.

Costs
Grassland management, footpath creation and repair, fence installation and maintenance, signage, waymarking, litterbins and collection - **£125,000**

Unit 4

Rationale
Unit 4 is classified as Modified Grassland and at the present time is being grazed by horses. It is relatively species-poor with a short, uniform sward, but it did have some fungal interest.

The details of the grazing contract are not known, but if options to modify the agreement were available, grazing with horses would have to be modified or stopped to achieve any gain for biodiversity.
Removal of horses would provide the opportunity to incorporate the grasslands into the same management regime that is proposed for unit 3. It would also provide more suitable options for grassland management, because access would have less of an impact than it would on semi-improved grasslands.

Management
See Unit 3

Costs
An additional **£15,000** to what is proposed for Unit 3

Unit 5

Rationale
Unit 5 is at present the same grassland type as unit 3, but the southern field contains many more trees and shrubs. There is a mosaic of habitats within the Owlthorpe LWS. The Owlthorpe LWS has a more formal layout than other surrounding areas and the boundary between woodland and grassland is fairly distinct. Less well-defined boundaries will create ecotones, which often zones of species-richness being occupied by species associated with more than one habitat. The provision of a parkland type landscape with grassland managed in the same way as unit 3 and native broadleaved trees that are managed in order to minimise shade can provide an excellent intermediate between grassland and woodland and reinstate a once common and now rare habitat type. Mowing instead of grazing is a feature in Scandinavia where such habitats are referred to as wood meadows. They are often as species-rich as the UK wood pasture that still remains.

Management
See Unit 3 for grassland details
Allow access to the northern field but control access to the south by surfaced footpath provision and fencing. Include signage, waymarking and litter bins.
Scrub and tree removal (non-natives).
Select trees for retention and aftercare, supplement by planting oak standards. Enclose with appropriate guards and supports and convert to pollards after ten years
Manage pollards by cropping every ten years.

Costs
Grassland management, scrub and tree removal, tree retention, planting and aftercare, tree pollarding, signage, bins, footpaths and fences - **£20,000**.

Unit 6

Rationale
Unit 6 is a new species-rich hedgerow that appears to be approximately 5 years old. In a couple of years the trees and shrubs will be of sufficient size to remove the guards and to consider laying the hedgerow to create a continuous intact, dense structure, which will be suitable for routine trimming every 3-4 years. It is assumed that the hedgerow will be laid,

because there has obviously been a programme of hedge-laying of other field boundaries across the LWS.
It is assumed that such work is done by volunteer groups because it is a favoured activity, but there are plenty of professional, experienced hedge layers who can carry out the work

Management
Hedge-laying and trimming over a 30 year period.
There is also a need to trim other field hedgerows every 3-4 years to maintain a satisfactory condition and this can be included in the package of proposals.

Costs
Hedge-laying and routine trimming (tractor mounted mower) over 30 years - **£10,000**

Unit 7

Rationale
Unit 7 is classified as Lowland Mixed Broadleaved Woodland. Substantial sections particularly to the west are in relative good condition with structural diversity, extensive field layer vegetation, plenty of deadwood and obvious regeneration of trees and shrubs. There are, however, several issues that reduce the condition of the woodland resource to moderate and with management the overall condition could be good.
There are patches of box-leaved honeysuckle, cherry laurel and what appears to be a vigorous holly cultivar that is increasingly evident in Sheffield and East Midlands woodlands. Without control these species can out-compete the native shrubs
On the south side of the Ochre Dike, the woodland has many areas where the diversity of trees and shrubs is very limited and there is structural uniformity with many 'spindly' oaks growing between much more mature standards. Selective thinning and if necessary planting with understorey shrubs would enhance structural and species diversity and create a much more dense woodland that would be of benefit for woodland birds and invertebrates.
Thinning may promote the development of a more extensive cover of field layer vegetation, but this may be constrained by compaction of the soils from heavy visitor use. Creation of temporary enclosures and planting with native woodland herbs, similar to what is suggested from unit 1 will create a more diverse field layer and enhance the amenity value of the woodland.

Management
Selective thinning of canopy species and retention of cut materials as fallen deadwood
Removal of non-native invasive shrubs.
Underplanting with native shrubs and aftercare.
Create temporary enclosures and plant with native woodland herbs (bluebell, yellow archangel, primrose, red campion, wood avens etc.) and aftercare.

Costs
Thinning, non-native shrub removal, planting shrubs and wildflowers with aftercare - **£5,000**.

Unit 8

Rationale

This area of immature woodland is similar to unit 1 and is also classified as Broadleaved Woodland – Other. More mature scrub species are present in this stand, particularly hawthorn and there are fewer native trees. The field layer is dominated by bramble and the same non-native species occur that are also present in Unit 7. In a few hundred years the woodland is likely to be similar to the neighbouring oak dominated stands, but intervention could accelerate the development towards oak woodland and have an immediate benefit by increasing structural and species diversity.

Management

Selective thinning of hawthorn and retention of cut materials to increase deadwood resource.
Selective control of bramble to promote development of woodland field layer vegetation
Control of non-native invasive shrubs.
Create temporary enclosures and plant with native woodland herbs (bluebell, yellow archangel, primrose, red campion, wood avens etc.) and aftercare.

Costs

Thinning, control of invasive species, planting and aftercare of woodland herbs - **£2,000**.

Summary Of Costs

Unit	Habitat	Management	Cost
1	Broadleaved Woodland	Ride creation and maintenance, botanical enhancement	£6,000
2	Orchard	Restore grassland, scrub control, planting and maintenance	£1,500
3	Unimproved Grassland	Mowing, harrowing, weed control, footpaths, signage, liiter bins and collection	£125,000
4	Modified Grassland	As above - no fertiliser inputs	£15,000
5	Parkland	Grassland management, scrub and tree removal, tree retention, planting and aftercare, tree pollarding, signage, bins, footpaths and fences	£20,000
6	Hedgerow	Laying, trimming	£10,000
7	Broadleaved Woodland	Control of non-natives, thinning, underplanting, sowing wildflowers	£5,000
8	Broadleaved Woodland	Control of non-natives and bramble, thinning, sowing wildflowers	£2,000
NA	All	ECoW & Monitoring - Habitat Condition, target species (Years 1 to 5 and then at 5 yearly intervals)	£25,900
NA	All	Administration, legal and project management, community and volunteer co-ordination and support	£20,000
		Total	£230,400