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SOUTH BRISTOL CEMETERY

PROPOSED EXTENSION

ECOLOGICAL MITIGATION PROPOSALS

SOUTH BRISTOL CEMETERY, PROPOSED EXTENSION ECOLOGICAL MITIGATION PROPOSALS

1 INTRODUCTION

This report aims to set out the principles that will guide management of both the proposed extension, including a flood alleviation pond, to South Bristol Cemetery and the areas proposed for off-site mitigation to satisfy the requirements of Biodiversity Net Gain (BNG). It sets out in broad terms measures that will be taken, if the proposal goes ahead, to ensure that those parts of the extension that are within the Site of Nature Conservation Interest (SNCI) retain this status in the long term. This report does not aim to be a full management plan; it is proposed that a Landscape and Ecology Management Plan (LEMP) will be prepared if planning consent is granted.

2 SITE DESCRIPTION

This report covers three proposed extension areas: Site 1, to the south of the existing cemetery, which is not included within the Colliters Brook Site of Nature Conservation Interest (SNCI) but is of significant nature conservation value; and Sites 3 and 4, on the north-western side of the cemetery, which are within the SNCI. The sites proposed for off-site mitigation are to the west of Sites 3 and 4; they also form part of the SNCI.

The parts of Sites 1, 3 and 4 proposed for inclusion within the cemetery all support semi-improved grassland with a moderate diversity of herb species, including plants that have become uncommon in the wider countryside due to changes in agricultural management. Site 1 is grazed by horses and this has damaged the sward to a significant extent in places; Sites 3 and 4 are grazed by cattle, a regime that in general is maintaining the site's nature conservation value. The areas of Sites 3 and 4 that would form part of the extension are on flat land at the northern end of the two fields; the grassland on the slopes to the south of here is more diverse and of higher nature conservation value.

The SNCI has been notified largely for its unimproved and semi-improved neutral grassland and also supports important habitats in the form of ancient species-rich hedges and a river. The proposals, which would affect areas of semi-improved neutral grassland, therefore have a potential impact on the features for which the SNCI is designated. However, the aim of management here will be to maintain SNCI status, as required by planning policy. The ancient hedges would not be affected and there would be a minor localised impact on the river where a drainage outfall is proposed.

Proposals to enhance the nature conservation interest of parts of the cemetery will be included in the LEMP. It is hoped that the interest of some parts of the cemetery can be enhanced to a level that will allow designation within the SNCI; this is not intended as replacement for the interest of the extension areas.

3 AIMS

- 1 To maintain and, where possible, the interest of grassland habitats within the extension areas.
- 2 To provide a range of wetland and wet grassland habitats around the proposed attenuation pond.
- 2 To enhance the hedges between the existing cemetery and Sites 1 and 3.

4 OBJECTIVES

- 1 To implement an enhanced management regime at Site 1 until it is incorporated into the cemetery.
- 2 To maintain the existing management regime at Sites 3 and 4 until the former is incorporated into the cemetery.
- 3 To manage burials in such a way that impacts on grassland are minimised.
- 4 To enhance the hedge between the existing cemetery and Site 3.
- 5 To maximise the nature conservation value of the attenuation pond.
- 6 To manage the grassland in the extension areas whilst burials are ongoing and in the long term.
- 7 To manage the retained parts of Site 1
- 8 To provide off-site mitigation by restoring species-rich grassland elsewhere in the SNCI.
- 9 To provide interpretive material within Site 3.
- 10 To enhance the nature conservation value of parts of the existing cemetery.

5 PRESCRIPTIONS

Objective 1 To implement an enhanced management regime at Site 1 until it is incorporated into the cemetery.

Intensive horse grazing has damaged the sward in parts of Site 1, to the extent that some parts of the field are no longer of significant nature conservation value. Before the area is incorporated into the cemetery a more sensitive management regime will be implemented.

- 1.1 Graze this area at a lower intensity than at present.
- 1.2 If this is not possible, mow annually in early August, gather and remove the arisings.

Objective 2 To maintain the existing management regime at Sites 3 and 4 until the former is incorporated into the cemetery.

There will be a delay between the planning consent (if granted) and implementation of the scheme. In parts of Site 3 this is likely to extend to many years. It is important that the grassland continues to be managed during this period, preferably by grazing with beef cattle as at present.

2.1 Support Yewtree Farm in continued management of these areas before the cemetery is extended.

2.2 Maintain fencing between the burial area and the retained grazing land to allow access by cattle to as large an area as possible, moving the fence line as additional areas come into use for burials.

2.3 Retain access for cattle to areas not incorporated into the cemetery.

2.4 Monitor the extent to which grazing of these areas remains sufficient; if this is not the case either modify access arrangements or, as a last resource, implement a hay-cutting regime.

2.5 Where areas are enclosed by the cemetery fence, but not yet in use for burials, they will be managed by taking an annual hay cut in late July.

3 To manage burials in such a way that impacts on grassland are minimised.

It is possible to maintain significant nature conservation interest in areas used for burials: parts of the current cemetery support diverse grassland supporting species such as common bird's-foot trefoil, lady's bedstraw and strawberry clover, and are of interest for birds and fungi. The key principals in achieving this are that soils should be disturbed as little as possible during burials; that soil fertility is not raised through the use of fertilisers or the importation of topsoils; and that as much as possible of the area remains available for management by the cemetery team, rather than being managed by plot owners.

It is inevitable that management as part of the cemetery will involve the use of vehicles, for excavation and soil handling. Recent burials will require grading as measures to reverse the effects of graves collapsing will be required to allow future management. The impacts of these activities will be minimised.

Some of the prescriptions below are currently used on the cemetery; others will be more demanding than is current practice.

3.1 When graves are dug, handle soils with care: remove and stack turf; remove and store topsoil and subsoil separately; return soils and turfs appropriately; and avoid excessive compaction.

3.2 Measures will be taken to avoid compaction of soils and damage to grassland: vehicular movements will be minimised as far as is practicable; use of areas prone to waterlogging will be avoided following wet weather; and measures will be taken to reverse severe compaction and to make good any areas damaged during works.

3.3 No fertilisers, soil conditioners etc will be used and soils will not be imported to the cemetery from elsewhere.

3.4 Restrict memorialisation to a small stone and a container for flowers. Explain rationale to plot holders and remove any surplus material.

3.5 Minimise the extent of paths and other areas of hard surfacing.

3.6 Identify any areas of particularly species-rich grassland that will be lost to paths etc and translocate turfs to areas of lower diversity, either within the extension areas or within the existing cemetery.

3.7 Re-seeding will be avoided as far as possible, but will be necessary in some instances, for example where burials re-graded. Where possible areas will be re-seeded with green hay taken from species-rich grassland on the site. If this is not possible, bare soil will be sown with red fescue (*Festuca rubra*) at an application rate of 4g/m², to allow regeneration by other species.

3.8 Monitor compliance with these measures annually and impose new restrictions if necessary.

4 To enhance the hedge between the existing cemetery and Site 3.

This hedge is very different in nature to the historic hedges on the SNCI. The hedge between the cemetery and Site 3 is a line of scrub dominated by bramble and suckering English elm. The hedge is of nature conservation value, particularly for breeding birds, but there is potential to enhance this value by planting a greater range of tree and shrub species.

4.1 Plant additional trees within and adjacent to the boundary.

5 To maximise the nature conservation value of the attenuation pond.

The attenuation pond will provide a range of habitats, including a water body with fluctuating water levels and wet grassland in the base of the pond and species-rich grassland on the banks of the pond. Since the water quality of the run-off will be reasonably high the pond can be expected to be of nature conservation value and micro-habitats in the area have potential to be of particular value to invertebrates. The species that colonise such features are difficult to predict and can be of considerable interest. It is therefore important that the pond is monitored as it becomes established, and that management is modified to accommodate any features of interest that develop.

5.1 Do not import soils or use fertilisers or similar materials during construction.

5.2 Develop and implement a design that incorporates micro-habitat features such as banks of bare soil and ephemeral pools and maximises the use of nutrient-poor soils for the formation of grassland and other habitats.

5.3 Sow banks with a mix of fine-leaved grass species at a low application rate, to maximise opportunities for natural re-colonisation of the area.

5.4 Survey the developing habitats annually to identify any features of interest or requirements for further intervention. Develop management proposals accordingly; in the medium and long terms it should be possible to reincorporate some of the area into the agricultural grazing regime.

6 To manage the grassland in the extension areas whilst burials are ongoing and in the long term.

The success of these measures will be crucial in maintaining SNCI status on the site. The Cemetery Service have committed to a maintenance regime that sustains a sward of moderate height, which allows low growing plant species such as bird's-foot trefoil and meadow vetchling to flower but has a formal appearance. Swards of this height can be of value for groups such as mining bees and some grassland fungi, which cannot compete with tall grasses. Strips of taller grassland will be managed around the edges of the areas and along internal hedge lines, in order to provide habitat for insects and small mammals. This approach will be different to that used within the existing cemetery where grass is cut at a lower height. The cemetery service will develop a communications plan to support this, include installation of interpretation material identified in section 9 below.

Identification of a desired state of the swards and monitoring, followed when necessary to modification to management, will be crucial to assuring success to management of the areas.

6.1 Develop a definition of desired state, based on the existing composition of the swards in the various areas and the continued survival of key species.

6.2 Maintain restrictions on memorialisation, so that the grassland can be managed by the cemeteries team.

6.3 Fertilisers, herbicides and similar materials will not be used on the areas.

6.4 Mow the bulk of the grassland within these areas once a month between May and September, with mower blades set at 15cm.

6.5 Establish strips of tall grassland alongside hedges (locations to be identified in LEMP) and mow once annually in late August. Gather and remove arisings.

6.6 Survey grasslands annually and measure outcomes against an agreed set of criteria. If necessary, identify modifications to management or, if absolutely necessary, further off-site mitigation.

7 To manage the retained parts of Site 1

Part of Site 1 will be incorporated into the cemetery but will not be required for burials. This area will be managed as a hay meadow.

7.1 No fertilisers or herbicides will be used on this area.

7.2 The grassland will be unmown between April and late July, when a cut will be taken. Arisings will be gathered and removed.

7.3 A second cut will be taken in early September; arisings will again be gathered and removed.

7.4 A one metre wide strip alongside paths will be mown short using a standard amenity cut in order to maintain a formal appearance.

8 To provide off-site mitigation by restoring species-rich grassland elsewhere in the SNCI.

Species-rich grassland is the key habitat type within the SNCI, as recognised in the criteria sheet and designation. The SNCI continues to support grassland of citywide nature conservation value but there has been a loss of grassland to scrub encroachment, as shown on the aerial images included below. This loss has been significant in places. It is proposed that off-site mitigation be provided by removing areas of scrub to restore grassland. This will benefit the plant, fungus and insect populations depend on this habitat type.

It should be emphasised that the aim of this management is not to remove scrub entirely from the SNCI – the importance of this habitat type for birds in particular is acknowledged – but to return the balance of habitats closer to the state that it was in when the SNCI was originally designated. The historic cores of hedges and their associated trees will not be affected.

It will be possible to commence this work in advance of the extensions to the cemetery.

8.1 Remove scrub from areas outlined in red on the map below, using a work planner to be developed in the LEMP. Clearance will be carried out over the first five years of the plan, starting with areas of scrub isolated within grasslands, moving onto areas adjacent to hedges.

8.2 The cleared areas will be accessible to grazing cattle.

8.3 Cleared areas will be monitored in order to assess the success of grassland reinstatement.

8.4 Scrub control will be repeated on a rolling basis, targeted at areas where grassland restoration has been most successful.

9 To provide interpretive material within the extension areas.

The SNCI currently lacks any interpretive material. Encouraging people to appreciate the special features of the area and to enjoy the site in ways that do not compromise its management and wildlife would be beneficial.

9.1 Provide interpretive material in both the extension areas, describing both the interest and management requirements of the cemetery extension and those of the wider SNCI.

10 To enhance the nature conservation value of parts of the existing cemetery.

Management of the existing cemetery has not prioritised nature conservation, but the site is of ecological interest. Some of this interest, such as breeding populations of bird species of conservation concern, is widely distributed across the cemetery. Other features, such as areas of species-rich grassland and the tree-planting belt along the northern edge of the site, is more localised. There is potential to enhance some of the features with more localised distributions through development of a management plan for the existing cemetery.

10.1 Prepare a management plan for the existing cemetery, to include the following prescriptions.

10.2 Improve structural diversity in the tree planting belt on the northern edge of the cemetery.

10.3 Improve the setting of the mature oak trees close to the northern edge of the cemetery.

10.4 Relax mowing regime on areas of species-rich grassland to allow plants to flower. Introduce measures to diversify surrounding areas of less diverse grassland in order to link-up and expand existing areas of interest.



Map 1: 2003 Aerial Image



Map 2: 2022 Aerial Image, illustrating extent of scrub encroachment in twenty years.



Map 3: Proposed scrub clearance location outlined in red.