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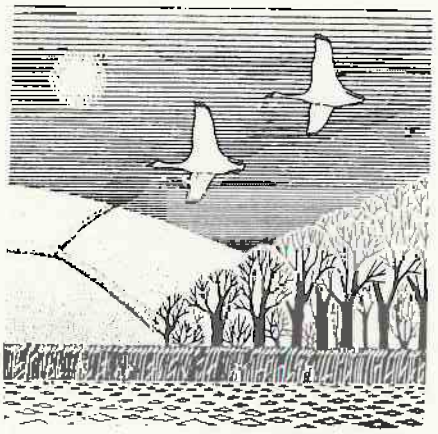

BUTTERFLY JUNCTION

MANAGEMENT BRIEF

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1 INTRODUCTION

The aim of this brief is to assist with the management of the area of land known as Butterfly Junction. This report comprises: a Description section, which summarises the setting and biological and other information on the site; an Evaluation section, which identifies the features of importance; and a Management section, which identifies the site's management requirements, and proposes how these can be met.

2 DESCRIPTION

2.1 General

The site is within the City of Bristol at OS grid reference ST569 723, on an island between the Docks and the New Cut. It occupies an area of flat ground just to the north of the New Cut and around the western, northern and eastern sides of the B Bonded Warehouse. The whole site is on made ground, which was formed during construction of the docks railway, with some later areas of tipping resulting in patches of ground that are raised above the general ground level. The railway is still operational on occasions, with tourist trips from the Industrial Museum terminating at a small platform on the site.

2.2 Ownership

The site is owned by Bristol City Council Docks, who have agreed that Southville Community Development Association (SCDA) can manage the site with the aims of increasing its nature conservation and amenity value.

2.3 Access

Pedestrian access across the site is open, although impeded in places by dense scrub. There is vehicular access via the track that runs between the CREATE centre to the west of the site and the New Cut. A cyclepath runs along the southern edge of the site. There are informal footpaths running from Smeaton Road, to the north of the site, to the railway bridge across the New Cut to the south, although using these involves scrambling down a wall and bank.

2.4 Biological

Vegetation

The site has the following vegetation types; compartment numbers refer to the Habitat Map:

Sparse grassland (Compartment A), which is dominated by Yorkshire fog, creeping bent and red fescue. This has frequent herbs, including red clover, perforate St John's wort, lesser trefoil and wild carrot. It is concentrated at the western end of the site.

Tall grassland (Compartment B), dominated by false oat-grass and cocksfoot, with patches of bramble. Herbs are less frequent here, the most widespread being ribwort plantain. Tall grassland is scattered around the site. An area at the eastern corner (Compartment B1) is on tipped soil and has frequent annual wall-rocket and hedge mustard.

Damp grassland (Compartment C). There is a small patch of damp grassland to the north of the warehouse. Species here include hard rush, tufted hair-grass, glaucous sedge, meadow vetchling and hemp agrimony.

Scrub is scattered around the site, with the largest patch to the east of the warehouse. This patch (Compartment D) is dominated by bramble and buddleia, with other species including dogwood and goat willow. Elsewhere (Compartment E) there are smaller patches of bramble and buddleia, some large bushes of goat willow and other species including ash and Norway maple.

Fauna

The site's butterflies have been well studied, and a total of 19 species was recorded by SCDA members between 2002 and 2005. Breeding species include marbled white, ringlet and common blue, with other species recorded including small copper, clouded yellow and brimstone. Other groups are less well studied. Field, meadow and lesser marsh grasshoppers are all frequent in the grassland, and dark bush-cricket is present in the scrub. There has been no bird survey of the site, but species recorded during other surveys include blackcap, long-tailed tit and goldfinch. Kestrel hunts over the site regularly.

3 Evaluation

3.1 Habitats

The site is one of the few remaining examples of a brownfield habitat in Bristol. These are sites that have developed on land that has previously been developed, in this case as part of the railway. Butterfly Junction illustrates many of the typical features of brownfield sites: there is a mixture of habitat types in a relatively small area; an artificial substrate (railway ballast) has allowed an area of diverse vegetation to develop; and non-native plant species are frequent. Brownfield sites are now unusual in Bristol and their unusual associated flora and habitats have declined significantly in the last ten years.

3.2 Scarce Plants

Seven plant species that are defined in the Flora of the Bristol Region as Avon Notable Species have been recorded on the site. This is a high total for a small site. The species are:

- Blue fleabane – a species that is typical of freely-draining soils on brownfield sites;
- Rat's-tail fescue – another species typical of railway ballast and similar situations;
- Fern-grass – a species of dry rocky grassland and wasteland;

- Flattened meadow-grass – a plant of walls, dry grassland and similar places;
- Sea couch – a coastal species of upper saltmarshes, which has spread to the site from the nearby New Cut;
- Small toadflax – a typical species of railway ballast; and
- Great lettuce – an uncommon species of the Avon Gorge and the docks area of Bristol.

3.3 Grassland Plants

One of the most important features of many brownfield sites is that they provide a refuge for many grassland plants that have been excluded from modern farmland by intensive agriculture. At Butterfly Junction such species include wild carrot, bird's-foot trefoil, meadow vetchling and glaucous sedge.

3.4 Scrub

The most valuable plant and insect species recorded on the site are associated with grassland and other open habitats, but the scrub is of value for birds and insects and in providing shelter for grassland areas. The most common scrub species here are bramble and buddleia. Bramble is of value to a range of animal species in providing blossom and fruit, and its leaves are a larval foodplant for many moths. The flowers of buddleia provide a nectar source, but excessive quantities are present on and around the site and in places it threatens more valuable plant communities. The most noteworthy of the other scrub species is goat willow, particularly two large mature bushes close to the buildings. Goat willow provides a very valuable nectar source early in the year and its leaves are eaten by many species of insect.

3.5 Invertebrates

The site is of known interest for butterflies, with the presence of marbled white being of particular note, since this is an uncommon species of herb-rich grasslands. Habitat features such as the mix of sparse and tall grassland, the presence of bare stones and steep banks, and the rotten wood provided by old railway sleepers suggest that Butterfly Junction is also likely to be of interest for a wide range of other invertebrates.

3.6 Wider Context

Butterfly Junction forms part of a larger network of wildlife habitats, including saltmarshes along the River Avon and New Cut and smaller areas of brownfield habitat along the railway lines and around the docks. It contributes to the value of these other sites and its interest therefore extends beyond its own boundaries.

3.7 Amenity

Butterfly Junction is of high amenity value. It is readily accessible to the large numbers of people who use the cyclepath and who visit the CREATE centre.

4 Management

4.1 Rationale

The main priority on the site is to stop and reverse the trends for coarse grassland to overwhelm sparse grassland and for scrub to encroach across grassland. Comparison with a survey carried out in 1995 suggests that these trends are progressing slowly, and frequent radical intervention is therefore not required. It should also be remembered that scrub provides a valuable habitat for birds and other animals and that tall grassland provides a breeding habitat for butterflies and other invertebrates. However, there has been some loss of both sparse grassland and damp grassland and management would be beneficial. Growth of trees is threatening grassland with shading in places. These are mostly non-native trees of little wildlife value and plenty of valuable tree cover is present elsewhere in the local area.

Other management priorities are to maintain the site in a tidy and litter-free condition, in order to discourage inappropriate activities, and to publicise the interest of the site.

4.2 Aims and Objectives

The aims of management are:

To maintain and enhance the site's nature conservation value; and
To maximise the education and amenity value of the site.

The objectives of management are:

To maintain and slightly expand the areas of sparse and damp grassland.
To diversify the sward in areas of tall grassland.
To reverse the trend of bramble encroachment across tall grassland.
To diversify scrub edges.
To remove litter from the site.
To promote the nature conservation and amenity value of the site.
To record and monitor wildlife present and the effects of management.
To organise events and activities for local people.

4.3 Resources

Management of the site will be largely dependent on volunteer input. The management proposals are therefore relatively limited in scope and are prioritised, so that only the most important need be carried out depending on resources.

4.4 Management Proposals

Management proposals are shown on the attached map. It must be stressed that when grassland is mown the arisings, or cut grass, must be gathered and removed, or it will act as mulch and reduce grassland diversity.

High Priority:

Along boundary with CREATE car-park (western boundary of Compartment A) remove buddleia, cotoneaster and Norway maple saplings, in order to prevent encroachment across and damage to sparse grassland through shading and leaf-fall. Fell trees and shrubs at base and, if possible, treat with herbicide.

In northern corner of boundary with CREATE car-park remove buddleia and Italian alder, in order to prevent encroachment across and damage to sparse grassland. Fell at base and, if possible, treat with herbicide.

Mow two metre wide ride taking sinuous course through sparse grassland (Compartment A) in order to create diversity of sward height and to prevent development of coarse grassland. Mow every three years in September and change course of path on each occasion. Gather and remove arisings

Mow two metre by two metre block in tall grassland north-west of railway (Compartment B) each year, varying location, in order to diversify sward structure and to prevent scrub encroachment. Carry out in September and gather and remove arisings.

Remove dumped buddleia cuttings from south-western part of site, and request that cyclepath team do not use the site for disposal, in order to prevent degradation of habitat and to preserve appearance of site.

Block off vehicular access to the site, in order to prevent fly-tipping.

Cut back buddleia, cotoneaster and bramble from edges of both areas of damp grassland (Compartment C), in order to prevent further scrub encroachment and to extend extent of habitat. If possible treat re-growth.

Remove debris from around portacabins east of warehouse in order to maintain appearance of site.

Remove litter from around the site on a regular basis.

Continue to monitor butterfly populations, using methods already established.

Carry out breeding bird and invertebrate surveys.

Set up a photographic monitoring programme, so that changes to the appearance and vegetation cover of the site can be compared from year to year. Take photographs of the site from fixed position. If possible include fixed point of reference (eg railway bridge) to aid relocation of photographs in future.

Promote the wildlife interest of Butterfly Junction through exhibits in the CREATE centre.

Run wildlife activities and education sessions annually to promote the site and increase people's enjoyment and awareness.

Set up working group to manage the site and organise workdays as appropriate.

Set up management committee to oversee the management, protection and promotion of the site.

This plan should be reviewed after five years. The review should take into account the success with which the tasks proposed above have been undertaken, any problems encountered in carrying out the tasks, the effects of the management on the site's nature conservation and amenity value and any new threats or opportunities that have been encountered.

Medium Priority:

Mow two metre by two metre block in tall grassland east of railway each year (Compartment B), varying location, in order to diversify sward and prevent scrub encroachment. Gather and remove arisings

Cut back bramble encroaching onto tall grassland at locations shown in Compartment B in order to prevent further scrub encroachment across grassland.

On bank above wall, cut back cotoneaster, bramble and buddleia and fell two ash saplings, in order to prevent encroachment across and shading of grassland.

Cut bays 1 metre by 1 metre into bramble scrub alongside railway in Compartment D, concentrating on locations where some grass persists, in order to diversify scrub edge and to restore grassland habitats.

Clear any encroaching saplings and bramble as necessary from grassland area at eastern end of site (Compartment B1), in order to prevent loss of grassland habitat. If possible treat stumps and re-growth with herbicide.

Low Priority:

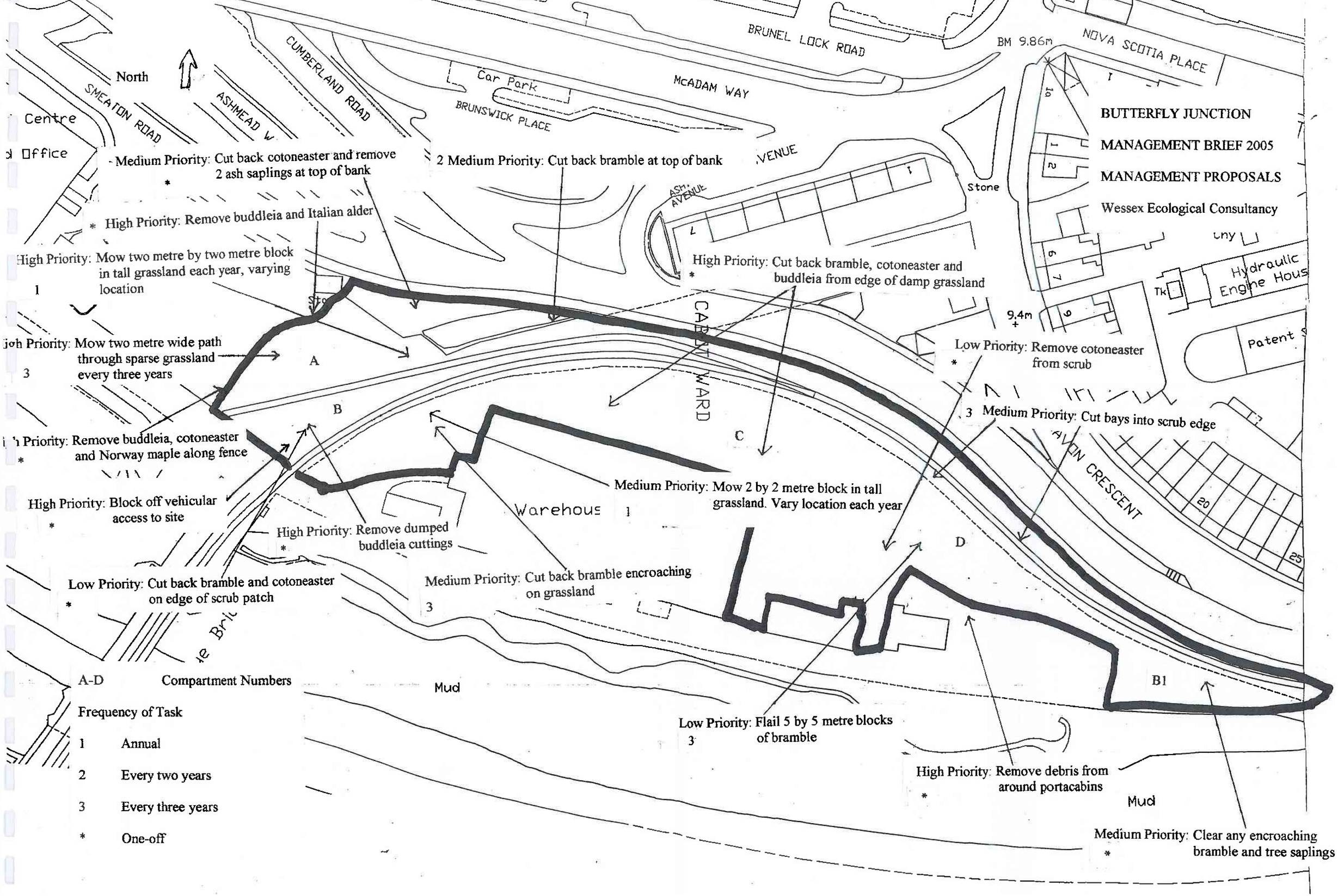
Cut back bramble and cotoneaster on edge of scrub patch at south-western corner of Compartment B in order to create additional grassland habitat.

Flail five metre by five metre patches in main area of bramble scrub at eastern end of site (Compartment D) flailing one patch every five years, in order to create young bramble growth and diversify structure of scrub patch.

Remove cotoneaster from main block of scrub (Compartment D), in order to prevent this non-native species from becoming dominant at the expense of native shrub species. Fell cotoneasters and, if possible, treat stumps and re-growth with herbicide.

Butterfly Junction Management Plan - Five Year Work Planner

	Year 1	Year 2	Year 3	Year 4	Year 5
High Priority					
Remove saplings and scrub along boundary with CREATE centre car-par	Nov-Feb				
Remove buddleia and Italian alder from north-western corner of site	Nov-Feb				
Mow ride through sparse grassland in compartment A	September			September	
Mow blocks in tall grassland in compartment B (west of railway)	September	September	September	September	September
Remove dumped buddleia cuttings in south-western part of site	March				
Block off vehicular access to site	February				
Cut back scrub encroaching on damp grassland in compartment C	Nov-Feb		Nov-Feb		Nov-Feb
Remove debris from around portacabins	March				
Remove litter	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing
Monitor butterfly populations	April-Aug	April-Aug	April-Aug	April-Aug	April-Aug
Carry out breeding bird survey	April-May				
Carry out invertebrate survey	April-Aug				
Set up photographic monitoring programme	August	August	August	August	August
Promote Butterfly Junction though exhibits at CREATE centre		Ongoing			
Run wildlife activities and education sessions	May-Aug	May-Aug	May-Aug	May-Aug	May-Aug
Set up working group	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing
Set up management committee	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing
Review management plan					December
Medium Priority					
Mow blocks in tall grassland in compartment B (east of railway)	September	September	September	September	September
Cut back bramble encroaching onto tall grassland in compartment B		Nov-Feb			Nov-Feb
Cut back scrub above wall			Nov-Feb		
Cut bays in scrub on edge of railway and compartment D		Nov-Feb			Nov-Feb
Clear scrub and saplings from compartment B1			Nov-Feb		
Low Priority					
Cut back bramble on edge of srub patch in south-western part of site		Nov-Feb			
Flail blocks of bramble in eastern part of site	Nov-Feb			Nov-Feb	
Remove cotoneaster from compartment D			Nov-Feb		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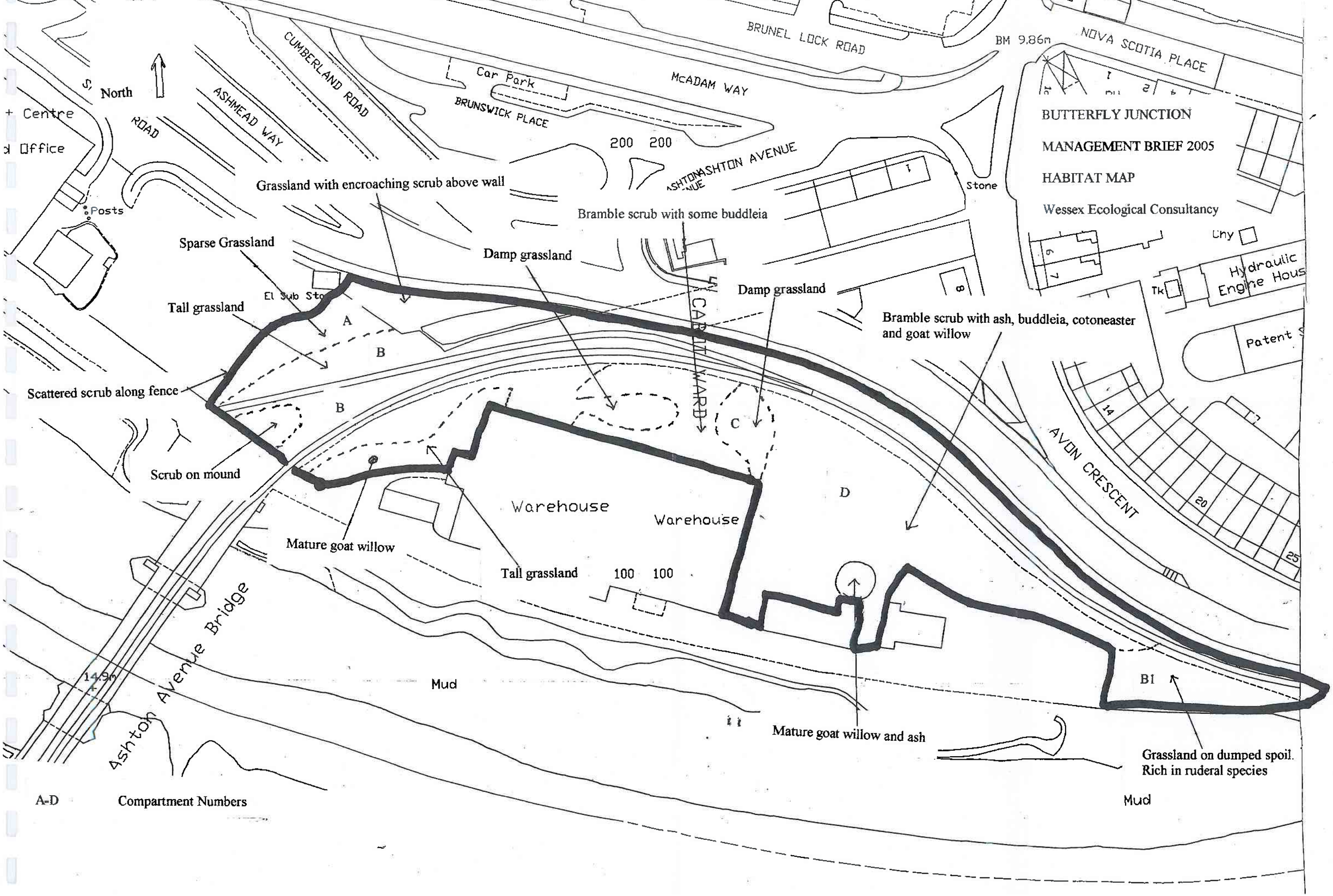
MANAGEMENT PROPOSALS
Wessex Ecological Consultancy
North
BRUNEL LOCK ROAD
NOVA SCOTIA PLACE
BM 9.86m
McADAM WAY
Car Park
BRUNSWICK PLACE
CUMBERLAND ROAD
SMEATON ROAD
ASHMEAD W
Centre
Office
ASH AVENUE
Stone
Hydraulic Engine Hous
Patent
CARDIFF WARD
AVON CRESCENT
Warehous
Mud
Medium Priority: Cut back cotoneaster and remove 2 ash saplings at top of bank
2 Medium Priority: Cut back bramble at top of bank
High Priority: Remove buddleia and Italian alder
High Priority: Mow two metre by two metre block in tall grassland each year, varying location
High Priority: Cut back bramble, cotoneaster and buddleia from edge of damp grassland
Low Priority: Remove cotoneaster from scrub
3 Medium Priority: Cut bays into scrub edge
High Priority: Mow two metre wide path through sparse grassland every three years
High Priority: Remove buddleia, cotoneaster and Norway maple along fence
High Priority: Block off vehicular access to site
High Priority: Remove dumped buddleia cuttings
Medium Priority: Mow 2 by 2 metre block in tall grassland. Vary location each year
Low Priority: Cut back bramble and cotoneaster on edge of scrub patch
Medium Priority: Cut back bramble encroaching on grassland
Low Priority: Flail 5 by 5 metre blocks of bramble
High Priority: Remove debris from around portacabins
Medium Priority: Clear any encroaching bramble and tree saplings
A-D Compartment Numbers
Frequency of Task
1 Annual
2 Every two years
3 Every three years
* One-off


BUTTERFLY JUNCTION
MANAGEMENT BRIEF 2005
HABITAT MAP
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Grassland with encroaching scrub above wall
Bramble scrub with some buddleia
Sparse Grassland
Damp grassland
Tall grassland
Damp grassland
Bramble scrub with ash, buddleia, cotoneaster and goat willow
Scattered scrub along fence
Scrub on mound
Mature goat willow
Tall grassland
Mature goat willow and ash
Grassland on dumped spoil. Rich in ruderal species
Mud
Mud
A-D Compartment Numbers
A
B
B
C
D
B1
Warehouse
Warehouse
Car Park
BRUNEL LOCK ROAD
McADAM WAY
BRUNSWICK PLACE
CUMBERLAND ROAD
ASHMEAD WAY
ROAD
North
Centre
Office
Posts
ASHTON AVENUE
ASHTON AVENUE
CARDIFF WARD
NOVA SCOTIA PLACE
BM 9.86m
Stone
Chy
Hydraulic Engine Hous
Tk
Patent
AVON CRESCENT
Ashton Avenue Bridge
14.9m
El Sub Sta
200 200
100 100