

LNR SUMMARY MANAGEMENT PLAN
PARADISE LOCAL NATURE RESERVE,
CAMBRIDGE

2001 - 2010

Cambridge City Council
April 2001

SITE DETAILS

Name:	Paradise Local Nature Reserve
Local Planning Authority:	Cambridge City Council
Nature of legal interest:	Freehold owned by Cambridge City Council
Area:	2.17 Hectares
Grid Ref:	TL 447 574
Warden:	Christine A. Newell (Voluntary)
Conservation Status:	Statutory LNR declared 1996. City Wildlife Site in Cambridge Local Plan(NE12-14). The site qualifies as a County Wildlife Site because it supports at least 0.5 ha of NVC community W6 (Alder – Stinging Nettle woodland) and also qualifies as a City WS for Greater Pond Sedge swamp NVC community S6. The site is also within the Wildlife Corridor in Cambridge Local Plan (NE15).
Byelaws:	None
Access:	The site has free, open access throughout. There are pedestrian access points from Llamas car park and from Owlstone Road, Newnham.

Site Description

Paradise lies on the west bank of the River Cam as it enters the City. The site is within the flood plain.

The River Cam forms the south and east boundaries. A drainage ditch carrying road storm water forms part of the west boundary along with Owlstone Road. Llamas car park lies to the north. To the south lies a small channel from the river, which delimits Paradise Island, and along with the road leading to Paradise House forms the southern boundary.

The site lies on Alluvium and Terrace deposits, over Gault clay at an altitude on 10m OD. The site is flat and is a fragment of semi-natural secondary woodland, with a central marsh and tall marsh community. The marsh is usually inundated in winter, while some of the remainder of the reserve floods in extreme weather conditions.

The marsh is dominated by Reed Sweet Grass and Reed Canary Grass. Four Sedge species have been found along with Gipsywort, Marsh Woundwort, Amphibious Bistort, Celery Leaved Buttercup, and Square-stalked St John's Wort. Lady's Smock is found in the damp Willow carr surrounding the marsh, and Butterbur and the introduced Few-flowered Leek along the riverbank. The Butterbur is notable as it has been recorded in that location for 400 years.

Recent records show that Early Marsh Orchid and Southern Marsh Orchid inhabited marshy ground south of the present car park. The tall herb/grassland community is dominated by Common Nettle, Goosegrass, Cow Parsley and Hogweed.

The woodland consists of several compartments. A belt of Willow carr surrounds the marsh. Fourteen Willow species have been recorded. An area of recently planted Alder with Nettle ground cover lies adjacent to the river in the southern half of the reserve.

Woodland that has developed on the site of an old tennis court is mostly Ash. The remaining mixed woodland consists mainly of Willow with Ash, Grey Poplar, Horse Chestnut, and Hawthorn. The woodland ground flora is mostly Nettles, Cow Parsley and Comfrey, the latter being a native variant in East Anglia. There are several mature maiden Willows along the river.

The nationally scarce Musk Beetle has been recorded recently and recent records show two Red Data Book Diptera species occurring here. Mammals recorded include Pipistrelle Bat, Common Shrew, Pygmy Shrew and Harvest Mouse.

Bird species include Black Cap, Treecreeper and Wren. Sedge Warblers and Siskins have also been seen regularly on Alder. Whitethroat has been recorded as nesting in the tall herb/rank grassland next to the car park. Snipe were recorded in passage in the 1980's.

The site is well used by local people for picnics, walks and sunbathing by the river and for the residents of Newnham the woodland trees are an important visual amenity, as well as a semi natural area in the heart of their community. Visitor pressure has resulted in wide muddy paths some of which pass through areas where notable species grow, and informal paths which criss-cross the marsh area.

Key Aim

To conserve existing and, where possible, enhance habitat and species typical of low lying wet land river valley by prioritising national and local BAP targets for the enjoyment of local people.

Site Objectives

- 1 To enhance the marshland habitat and ensure that it does not dry out. (LHAP for Cambridgeshire - Fens)
- 2 To enhance the ditches which form the site boundary and run through the site. (LHAP for Cambridgeshire – Drainage Ditches)
- 3 To maintain areas of Willow carr. (LHAP for Cambridgeshire – Wet Woodlands)
- 4 To enhance the woodland areas and encourage diverse structure in the ground flora. (LHAP for Cambridgeshire – Wet Woodlands)
- 5 To enhance grassland/tall herb habitats. (LHAP for Cambridgeshire – Meadows and Pastures)
- 6 To maintain and if possible enhance populations of notable species, such as Butterbur and Musk Beetle.
- 7 To survey for notable species – Orchid species, Harvest Mouse etc. and to enhance opportunities for these species.
- 8 To maintain existing and where possible enhance infrastructure
- 9 To enhance access opportunities and use of site by Cambridge people.
- 10 To enhance the educational value of the site.

Main Management Operations

- 1.1 Cut northern area of marsh once per annum in late summer and remove all cuttings.
- 1.2 Cut one third of marsh area each year in late summer and remove all cuttings.
- 1.3 Encroaching Willow carr to be cut back.
- 1.4 Monitor marsh conditions and take appropriate steps to ensure it remains wet
- 1.5 Review current marsh condition to ascertain whether it could achieve local BAP target.
- 1.6 Contact Environment Agency about hydrological regime for Cam

- 2.1 Remove silt from ditches. Remove all arisings from site.
- 2.2 Reprofile ditches where appropriate.
- 2.3 Monitor and review management of ditches

- 3.1 Willow car surrounding Marsh to be coppiced on a seven year cycle in three compartments.
- 3.2 Use arisings of willow coppicing to block paths.

- 4.1 Manage alder woodland with a view to increasing age structure and increasing diversity of ground flora.
- 4.2 Remove invasive/inappropriate species from woodland.
- 4.3 Manage riverside Willows and plant Willows to grow on to maidens.

- 5.1 Mow grassland/tall herb communities one/two cuts per annum.
- 5.2 Monitor and review management on grassland/tall herb community.

- 6.1 Survey populations of Musk Beetle and monitor/review management to ensure that habitat opportunities are enhanced
- 6.2 Survey populations of Butterbur and monitor management.
- 6.3 Control the width of the path through the Butterbur

- 7.1 Survey for Harvest Mouse and monitor management.
- 7.2 Survey for Orchid species and monitor management.

- 8.1 Erosion control of River Cam banks using bioengineering principles.
- 8.2 Maintain improve as appropriate gates and fences.
- 8.3 Review condition of trees and make safe any which are dangerous.

- 9.1 Improve access points for all visitors
- 9.2 Mow grass paths 6 cuts per annum.
- 9.3 Contain paths by hard surfacing, boardwalks etc
- 9.4 Provide/repair waymarker posts as necessary
- 9.5 Organise and promote guided walks and events in the reserve.
- 9.6 Write and distribute leaflets.
- 9.7 Provide casual seating near river using log off cuts.
- 9.8 Provide site interpretation boards.
- 9.9 Monitor use of site and seek to reduce conflict eg providing board walks

- 10.1 Notify schools and offer support.

Site Maps

Map 1 shows the location of the main areas of scrub and grassland, the pond the location of the notable species

Map 2 shows the desired state of the site

Map 3 shows the different management operations and the area to which they apply

ACTION	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1.1	Cut area north of marsh	Cut area north of marsh	Cut area north of marsh	Cut area north of marsh	Cut area north of marsh	Cut area north of marsh	Cut area north of marsh	Cut area north of marsh	Cut area north of marsh	Cut area north of marsh
1.2	Cut 1/3 remaining marsh area	Cut 1/3 of remaining marsh area	Cut 1/3 remaining marsh area	Cut 1/3 remaining marsh area	Cut 1/3 remaining marsh area	Cut 1/3 remaining marsh area	Cut 1/3 remaining marsh area	Cut 1/3 remaining marsh area	Cut 1/3 remaining marsh area	Cut 1/3 remaining marsh area
1.3	Cut back willow			Cut back willow			Cut back willow			Cut back willow
1.4	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
1.5	Review	Review	Review	Review	Review	Review	Review	Review	Review	Review
1.6	Contact Environment Agency									
2.1	Remove silt from ditches	Remove silt from ditches	Remove silt from ditches					Remove silt from ditches	Remove silt from ditches	Remove silt from ditches
2.2	Reprofile ditches	Reprofile ditches	Reprofile ditches					Reprofile ditches	Reprofile ditches	Reprofile ditches
2.3							Monitor and review			
3.1	Coppice willow		Coppice willow		Coppice willow			Coppice willow		Coppice willow
3.2	Block paths		Block paths		Block paths			Block paths		Block paths
4.1	Manage alder woodland				Manage alder woodland			Manage alder woodland		
4.2	Remove invasive species	Remove invasive species	Remove invasive species		Remove invasive species			Remove invasive species		
4.3	Manage riverside willows	On going	On going	On going	On going	On going	On going	On going	On going	On going
5.1	Mow grassland 1-2cuts	Mow grassland 1-2 cuts	Mow grassland 1-2 cuts	Mow grassland 1-2 cuts	Mow grassland1-2 cuts	Mow grassland1-2 cuts	Mow grassland1-2 cuts	Mow grassland1-2 cuts	Mow grassland1-2 cuts	Mow grassland1-2 cuts
5.2					Monitor					Monitor

This table ascribes actions to various partner organisations within the Steering Group. The actions will be under constant review to improve and refine management procedures. Major departures from the programme will be reported back to the Steering Group.

The City Council will undertake the routine tasks of management and maintenance of the site. The Wildlife Trust will generally undertake specialist tasks.

Before any major departures from the management plan are undertaken the wildlife of the area should be ascertained beforehand so that the wildlife of the area is not inadvertently lost.

Advice to be taken from English Nature's Species Officer (David Denman) when legally protected species are known to occur.

All funding requests and applications for grant aid are to be initiated by the Steering Group.

	Wildlife Trust (to report back to Steering Group)
	Cambridge City Council (to report back to Steering Group)
	Cambridge City Council in conjunction with Steering Group
	Cambridge Sustainable City