

# DRAFT STANPIT MARSH NATURE RESERVE MANAGEMENT PLAN 2009 - 2014



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## 1 INTRODUCTION

Stanpit Marsh is one of the UK's best nature reserves. It is of national, regional and local importance for wildlife and people.

Stanpit Marsh Nature Reserve is part of the Christchurch Harbour Site of Special Scientific Interest (SSSI), Avon Valley Environmentally Sensitive Area (ESA), a designated a Local Nature Reserve (LNR) and Public Open Space (POS).

This management plan specifies each of the main habitats and other features of Stanpit Marsh Local Nature Reserve (LNR) and sets out the rationale and management prescription appropriate to keep them in 'favourable condition'. Urban development on the grazing meadows in the twentieth century resulted in fragmentation of the upper marsh and associated grazing meadows. The remnants (known as satellite sites) have also been included within the scope of this management plan.

A primary consideration in writing the plan is the provisions of the *Wildlife and Countryside Act 1981* (as amended). Under Section 28 of the Wildlife and Countryside Act 1981 Local Authorities have a duty to further the conservation and enhancement of SSSIs both in carrying out their operations, and in exercising their decision making functions. The protection of SSSIs, already established in the Wildlife and Countryside Act, is strengthened under the Countryside and Rights of Way Act 2000 which gives Natural England powers to enter into agreements with landowners to ensure better protection and management of SSSIs, and safeguard their existence into the future.

The management plan is explicitly linked to Christchurch Borough Policies. The Christchurch Local Plan recognises the importance of the natural environment and stresses the importance of providing policies to protect it. Chapter 3 (Conservation of the Natural Environment) acknowledges that its protection has a statutory basis, recognising the value of the SSSI's '*varied habitats including salt marsh and wet meadows and great ornithological interest*'.

The Local Plan details planning guidance with respect to the conservation and care of places such as Stanpit Marsh. The policies in the Local Plan that impact on this land are sections on SSSIs, SNCIs, LNRs and Green Corridors (in particular ENV 11, 12, 13, 14 & 15). Paragraph 3.39 discusses the requirement and benefit of management plans for nature conservation sites.

The objectives in the management plan also contribute to advancing the key themes, aims and objectives of the Council's Corporate Policies. Those relevant to the care of the nature reserve are: SHH 1 – 4, CYP1 – 3, PE2, 3, 4 & 5 and include working with the community and partners to sustain a high quality environment; sound finance and income generation; crime reduction, community facilities and public consultation. Other policies that the plan draws on include: Statement of Community Involvement, Consultation Strategy and Environment Policy.

The Stanpit Marsh Management Plan:

1. Provides a detailed description of the site.
2. Identifies the most important features (wildlife, landscape, cultural, recreational)
3. Considers opportunities and constraints acting upon the features including foreseeable changes that may arise during the life of the plan
4. Sets out objectives to deliver and maintain favourable condition for nature conservation, archaeology, recreation, public enjoyment and education.
5. Identifies and explains the management required to achieve the objectives
6. Puts in place monitoring requirements to measure the effectiveness of management

The writing of the draft plan has been overseen by the Stanpit Marsh Advisory Panel, ensuring that members of the local community, interest groups and ward councillors have been engaged in its production.

Stanpit Marsh is a sensitive and fragile wildlife habitat. The diversity of plants (over 300 species) support a strong community of wildlife. There are many invertebrates and, over 300 bird species have been recorded. The marshes are an important place for people and provide opportunities for visitors to enjoy and appreciate nature. The objectives included within the following pages are intended to help sustain the biodiversity and special nature of the reserve for present and future generations.

## **1.1 Location**

Stanpit Marsh Local Nature Reserve (LNR) and its satellite sites are situated within Christchurch Harbour Site of Special Scientific Interest (SSSI), on the eastern side of the Harbour near the confluence of the River Stour and the River Avon. Stanpit lies within the borough boundary of Christchurch, east Dorset (Watsonian vice county VC11) in the south west region of England (OS Landranger map 1:50 000 scale number 195; OS map 1:25 000 scale number OL22), centroid grid reference SZ169920 (fig. 1).

## **2 DESCRIPTION**

### **2.1.1 General**

The Stanpit Marshes are part of the Christchurch Harbour SSSI, which also incorporates the harbour and much of Hengistbury Head. These also have management plans which it is intended to be compatible with this plan. In the future it is considered that it would be desirable to have a single plan, reflecting the integrity of the ecological unit.

Stanpit Marsh has a fine example of estuarine marsh habitat. There are also peripheral areas of coastal sand dune grassland and scrub, particularly adjoining the northern boundary with the Recreation Ground. The SSSI covers 55.3 ha, sub-divided into the following working compartments which are shown on the accompanying map:

1	Stanpit Scrubs	0.3
2	Stanpit North Marsh	6.7
3	Stanpit East Marsh	4.8
4	Crouch Hill	3.7
5	Stanpit Bight	--
6	Stanpit South Marsh	3.5
7	Blackberry Point	1.0
8	Spellers Point	0.4
9	Grimmery Marsh and Bank	10.3
10	Central Marsh	9.8
11	North Scrubs	2.4
12	Priory Marsh	8.9
13	Great Spires	2.9
14	Marginal Banks	0.6
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	TOTAL	55.3

The boundary between Stanpit Marsh and Christchurch Harbour is defined as the High Water Mark of Mean Ordinary Tides (LNR specification). However, the intertidal mudflats are an integral part of the ecosystem and are considered in this plan as well as the Christchurch Harbour Aquatic Management Plan (Dorset Coastal Forum 2008).

The satellite sites in the vicinity of the SSSI managed by CBC are included in this plan for the first time because of their importance for the biodiversity of the whole area. The additional compartments total 12.8 ha and are:

15	Ship in Distress fen	0.8
16	Ashtree fen	0.5
17	Ashtree meadow	2.3
18	Monkswell meadow	0.8
19	Monkswell fen	0.2
20	Monkswell carr	0.5
21	Marsh Lane & Purewell Streams	--
22	Waterloo Stream	0.7
23	Tutton's Well	0.1
24	Stanpit Recreation ground & wildlife corridors (former depot) depot	6.9
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	TOTAL	12.8

### 2.1.2 Climate

The climate is equable, with a mean average annual temperature of 10<sup>0</sup>c. The average total annual rainfall is about 780 mm. There is a lack of very cold weather, and few occurrences of sleet and snow, which produce a moderate climate suitable for a wide variety of plant and animal species.

### 2.1.3 Soils

The soil map of England (Lawes Agricultural Trust 1983) has classified Stanpit Marsh as an unripened gley soil formed from marine alluvium. That is, they are water-logged silts that can be inundated by spring tides. Further detail of the subsurface horizons can be found from reports of boreholes and trial pits (McNeil 1980, Hill Brown Ass. 1988, Integrale 2001, Walls 2005, Taylor 2006).

In summary, the base of the sequence is a dense stratum of Branksome Sand. Above there is usually 2 – 3 m of river terrace gravels and about a metre of alluvial material with variable proportions of organic matter. In between there may be up to 2 m of peat. In some places this sequence is overlaid with up to 2 m of tipped material.

The soils of the satellite sites are not mapped because of the urbanisation. By comparison with adjacent, undeveloped areas, they would be river terrace gravels in the Hucklesbrook association. These are well drained, coarse loams over gravel.

#### **2.1.4 Designations**

The habitats and species found at Stanpit Marsh are nationally important. This is recognised in the suite of designations which the site benefits from.

##### **SSSI - Site of Special Scientific Interest**

SSSIs are the country's very best wildlife and geological sites. They include some of our most spectacular and beautiful habitats. Christchurch Harbour SSSI was notified in 1986 and comprises the drowned estuary of the Rivers Stour and Avon and the peninsula of Hengistbury Head. Relevant to this plan, is the area within the SSSI known as Stanpit Marsh and Priory Marsh (compartments 1-14)

##### **LNR – Local Nature Reserve**

LNRs are designated for both people and wildlife and are places where wildlife or geological features are considered to be of special interest locally. They offer people special opportunities to study, learn about and enjoy nature. Compartments 1-12 were designated as a Local Nature Reserve (LNR) in 1964.

##### **SNCI - Site of Nature Conservation Importance**

(Compartments 15-21 the Ship in Distress fen, Ashtree fen and part of the meadow, Monkswell fen, meadow and carr) (SNCI ref.19/36)

SNCIs are areas of land rich in wildlife; they are important in a county context but are not protected by legislation. They enjoy a measure of protection in Local Development Frameworks and Local Plans.

The habitats found at Stanpit are listed as priority Biodiversity Action Plan (BAP) habitats.

**POS – Public Open Space** The reserve is highly valued by the local community, because of its natural setting and tranquillity. Stanpit Marsh is well used by local people and visitors to the borough for informal recreation including walking, bird watching, jogging, fishing and learning about wildlife. The area is designated as a Public Open Space and there are footpaths that give easy access to and from the town centre.

There are no archaeological or historical designations on any part of the site. However, Crouch Hill and other features appear on the county archaeological sites register.

#### **2.1.5 Past management**

Stanpit Marsh was purchased by the Borough of Christchurch in 1930 and a covenant was included in the Conveyance which stated that “The Corporation will forever hereafter support and maintain the land as and for an open public space for public recreation and playing fields or similar purposes ... providing that this restriction shall not be deemed in any way to prohibit the land from being used for agricultural purposes”. Grazing is an important feature of the marsh.

Priory Marsh, the satellite sites and the tipped land appear to have been small fields delineated by drainage ditches. This is low-lying land, prone to flooding and unsuitable for cultivation. It is believed to have been grazed for a considerable time. The older maps of the saltmarsh have very little detail and it is uncertain whether it was grazed prior to the introduction of the present herd.

The satellite sites were acquired by the Council at different times either, of these only the Ashtree meadow is regularly used by the general public.

In 1964 the main site was declared a Local Nature Reserve which offered a certain amount of protection for wildlife. A volunteer Management Committee consisting of local scientists, naturalists and interested enthusiasts together with nominated Councillors carried out the management function on Stanpit Marsh. From 1979 until 1986 this Management Group employed a summer warden (April – October). In 1980 Christchurch Council employed a countryside warden to patrol the marsh and other countryside areas in the borough. In 1983 the Council formed the Friends of Stanpit Marsh (FOSM) with the objective of supporting the management plan by raising awareness of the special nature of the marsh and co-operating in the care of the nature reserve through the running of educational and fund raising activities. Funds raised by this group have continued to support the employment of a summer warden on the reserve

The Council declared Stanpit Marsh to be an open space on 4th July 1985 and in 1986 Stanpit Marsh it was included for the first time in the Christchurch Harbour Site of Special Scientific Interest (SSSI). This places certain legal requirements upon the landowners and greatly influences the overall management of designated areas. At this time the Management Committee was renamed and restructured and became the Stanpit Marsh Advisory Panel.

In 1987 and 1988 a team of conservation staff from the Manpower Services Commission Community Programme worked in conjunction with Christchurch Council, assisting with wardening the reserve and conducting research. The Council placed an interpretation hut on the reserve in 1986. This together with the further development of the Council's Countryside Service wardening service, educational events and activities of FOSM and other volunteer groups has helped raise awareness of the ecological importance of the site within the town.

### **2.1.6 Present management**

The present management of the habitats is broadly similar to the actions in this management plan.

Stanpit Marsh is currently managed by the Community Services Committee of Christchurch Borough Council. The Council seeks advice on items of specialist or scientific significance in the first instance from Natural England. In addition and at a more local level the Council has set up a Stanpit Marsh Advisory Panel comprised of representatives from local residents' groups and user groups. These, together with scientific and conservation organisations make recommendations about the management of the reserve to the Council. The Panel is chaired by an officer of the Council and comprises:

- Two elected members (Ward Councillors)
- Two representatives from the Stanpit and Mundeford Residents Association.

And one representative from each of the following groups and organisations:

- Bmth & West Hants Wildfowlers Assoc
- Christchurch Angling Club
- Christchurch Harbour Ornithological Group
- Dorset Wildlife Trust
- Friends of Stanpit Marsh

- Natural England
- Mudeford Fisherman's Association

The Panel advises the Council rather than making decisions. The main responsibilities of the panel and its members are:-

- To advise the council on technical and other matters relating to the nature reserve
- To provide an external reference point and sounding board
- To assist with the development of the management plan and to support its implementation
- To report on matters requiring decisions, via the Panel Chairman, through the Council's committee structure
- To act as champions for the nature reserve and its purpose in all dealings with the Council and the wider community

The Panel usually meets on three occasions a year with meetings in the winter, spring and summer.

### **3 EVALUATION OF SITE POTENTIAL**

Because of the importance of the site in conservation terms the site is widely visited by specialists in particular groups of animals or plants. The general public visit for a wide variety of reasons

There have been no formal surveys relating to the public's reasons for visiting the site, although periodic and occasional surveys have been carried out (such as Wilkins 1996, Hurle 2000), which although informal, have provided general information as to site uses and reasons for visiting. Questionnaire design is in itself a specialist task and results can vary considerably depending upon the actual question asked, the attitude of the questioner, the time of day/year and even the weather. Generally speaking, and from the information gathered, it is inferred that the general public visit Stanpit Marsh for one or more of the following reasons:-

- (a) The quality of the landscape and attractiveness of the area.
- (b) Informal, passive recreation – e.g. walking the dog, picnic.
- (c) Informal, active recreation – e.g. jogging, fishing
- (d) Informal, active recreation / scientific hobbies or interest – e.g. birdwatching, archaeology.
- (e) Education – guided walks, school trips.

Each one of these reasons has been considered in the establishment of the management policy. The potential of site for each of these activities has been maximised without detrimental effect to any of the others.

## **4 FACTORS INFLUENCING MANAGEMENT**

### **4.1 Legal Requirements**

#### **4.1.1 Primary Legislation**

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 is the primary legislation which protects SSSIs and certain animals and plants in the UK.

The implications of the designation of Stanpit Marsh as part of the Christchurch Harbour SSSI are that Natural England requires the site to be maintained in 'favourable condition'. The site adjoins the River Avon System Special Area of Conservation (SAC).

As SSSIs are the best wildlife and geological sites in England, knowing the condition of these sites is a vital part of Natural England's statutory responsibility to conserve and protect them. Natural England assesses the condition of SSSIs using standard methods. This standard methodology is used for site assessments throughout the UK. To monitor sites, Natural England divides SSSIs into smaller, more practical monitoring areas called 'units'.

There are several categories of assessment, set out below;

Favourable condition: This means that the special habitats and features are in a healthy state and are being conserved for the future by appropriate management.

Unfavourable – recovering condition: This means that all necessary management measures are in place to address the reasons for unfavourable condition – if these measures are sustained, the site will recover over time.

Unfavourable – no change or Unfavourable – declining condition

These are the terms used to describe sites where the Special Features of a site are not being adequately conserved, or are being lost. If appropriate management measures are not put in place, and damaging impacts are not addressed, these sites will never reach a favourable or recovering condition.

The Government has a Public Service Agreement (PSA) target to get 95% of SSSIs (by area) into favourable or recovering condition by 2010.

Countryside and Rights of Way Act 2002

This Act, amended parts of the Wildlife and Countryside Act and introduced the duty to all public bodies (e.g. Local Authorities) to 'further the conservation and enhancement of SSSIs'.

Clean Neighbourhood & Environment Act 2005

including the updated schedules of protected and controlled species.

Natural Environment and Rural Communities Act (NERC) 2006

The NERC Act introduced a new duty for Public bodies, such as Local Authorities, to conserve biodiversity. This Management Plan aims to conserve and enhance biodiversity outside the statutory designated sites by bringing adjacent council owned habitats into appropriate conservation management.

#### **4.1.2 Bylaws**

The area is subject to two sets of bylaws:

No. 41 Land Drainage Bylaws, 1985

This bylaw is concerned with ensuring drainage is not impeded by watercourses being blocked deliberately or incidentally by specific acts.

No. 39 Stanpit Marsh Nature Reserve Bylaws, 1977

These bylaws assist with the protection and day to day management of the Nature Reserve. There are two bylaws, which consistently require a significant level of Countryside Service wardening with respect to the disturbance of wildlife;

- (b) *a person shall not in the Reserve propel, navigate, moor or leave any boat elsewhere than on a public waterway, mooring site or beach indicated by a notice available for that purpose*
- (j) *a person shall not bring into or permit to remain within the Reserve any dog or other animal unless it is kept under proper control and is effectively restrained from injuring or disturbing any animal or bird*

Bylaw (j) has not, to date, been an effective method for addressing disturbance to birds by dogs. The Council's Countryside Service has for some time experienced difficulties enforcing this byelaw because the wording 'proper control' is not explicit enough and is debateable. This plan proposes that options are considered that will reduce the disturbance to wildlife.

### **Leases and Licences**

Wildfowling rights are owned by the West Hampshire Water Company and leased to the Trustees of the West Hampshire Wildfowlers' Association. These include access to the foreshore of all land adjacent to the river in the harbour area as far as the seaward limits of the Royalty Fishery and extending by the banks of the said harbour to High Water Mark (HWM) of Medium Ordinary Tides.

No shooting is permitted during the following periods or times:-

- (a) Between 28<sup>th</sup> February – 30<sup>th</sup> September;
- (b) During October, except between dawn and 08.00 GMT;
- (c) During November, except between dawn and 08.00 and evening to 1 hour before dusk;
- (d) During December, January and February, except between dawn and 09.30 and evening to 1 hour before dusk;
- (e) On Sundays and Christmas Day.

Members of the West Hampshire Wildfowlers' Association must therefore be permitted to walk across the Marsh with guns unloaded and covered. It should be noted that these rights were acknowledged by the NCC (now Natural England) who hold a copy of the Lease as an appendix to the SSSI Order. The bylaws (no.39) only allow for shooting birds more than 90m from the reserve.

## **4.2 Right of Access**

Although the public has access to Stanpit Marsh but it is not Open Access land as defined in the CROW Act (2000). All areas are sensitive to disturbance to some extent and the public are encouraged to stay on the main pathways provided. Certain areas are particularly sensitive such as Blackberry Point and Stanpit Bight and the public are requested to avoid these sensitive areas at all times.

The Disability Discrimination Act (DDA) 1995 places a duty on the Council to make reasonable adjustments where practical to provide access to disabled people to enable a disabled person to enjoy the Marsh. To provide a suitable track over much of the marsh and some of the adjoining land is clearly unrealistic but consideration will be given to improving access where it is appropriate and practical to do so.

Some adjoining owners have been granted the right to have a gate to allow access on foot directly onto the Council's land from their property.

### 4.3 Public Involvement

Visits to nature reserves such as Stanpit Marsh are an important source of recreation for many people. Access to the natural environment provides people with a range of benefits; health and wellbeing being two of the most important. Equally, people's enjoyment of natural open spaces and the wildlife that they encounter is an important part of recreational activity.

Stanpit Marsh is visited by a wide variety of users for many reasons. The Council is aware of, and attentive to, the comments and opinions of such groups. The Council aims to raise awareness of visitors to the importance and special nature of the site, through informal discussion and interpretation on site and through more formal means such as guided walks and talks. The Council acknowledges that involving the community in their local natural greenspaces helps to ensure that the environment is properly and fully valued and believes that this approach encourages people to actively care for the natural environment.

There is a wealth of specialist knowledge and information available both from local volunteers and national organisations. Such knowledge is regularly sought, and where necessary paid for, in order that the best possible information is available for management.

The Council values the involvement of the variety of local organisations and interest groups involved in the reserve; they add to the knowledge of the reserve with surveys, local expertise etc.

### 4.4 Grazing

The grazing on the Marsh has been an important influence on its development. There are no known records of use before the early 1900s, but it is assumed grazing by livestock and rabbits has commonly occurred for centuries in the past.

The present herd originates from the early 1900s herd owned by Mr Ted Burry. The existing grazing regime is as follows:

From 1<sup>st</sup> March to 31<sup>st</sup> October – 20 unshod ponies (excluding foals up to 6 months) and 10 cattle (excluding calves up to 6 months) on all the land except Priory Marsh or a mixed total of 30 and followers.

10 ponies and 10 cattle (no followers) on Priory Marsh (conditions permitting). From 1<sup>st</sup> November – 28/29<sup>th</sup> February no cattle anywhere, 10 ponies on Central Marsh and East Marsh and 10 ponies on Priory Marsh (conditions permitting).

If conditions do not permit the grazing of ponies on Priory Marsh they should be removed completely. Under no circumstances should they be moved to other areas.

Table 1 is based on general advice on stocking density from Natural England and the RSPB (Crofts & Jefferson 1994, Bestead et al 1997). A more integrated grazing scheme is being drawn up through the Urban Heaths Grazing Animals Project. This will be drafted during this Management Plan period and will include adjacent sites such as Purewell Meadows, adjacent land under the Council's control, and other wildlife sites in the Borough may require and benefit from grazing.

**Table 1. Stocking density**

Grazing compartment		stocking rate for medium cattle*			
		Nov-Mar	Apr-Jun	Jul-Oct	author
A	Stanpit Marsh	0.35	0.60	0.60	Doody 1986
B	Priory Marsh		0.75	1.17	ESA + NCC

C	Ashtree meadow Monkswell	0.63		0.63	acid grassland, 40wks
D	meadow	1.25		1.25	neutral grassland, 52wks
E	Dry Pasture	4			estimate, mowing for remainder of year
	* Livestock units (LU)				

Table 2 applies these densities to the compartments of Stanpit Marsh and Purewell. The numbers of grazing animals is intended as a guide only; it is the sward height in spring and autumn that are the important criteria. Total numbers balance fairly well, so a single herd could be kept entirely within the Stanpit area if there is sufficient feed. The six or so cattle that need grazing elsewhere in the spring might reasonably be alternated between Stanpit and Priory Marshes, depending on wetness and the growth in the previous year.

**Table 2. Sward height and suggested stock numbers**

Grazing compartment	area ha	Indicative head of medium cattle			Critical sward height (cm)	
		Nov-Mar	Apr-Jun	Jul-Oct	Nov	spring
A Stanpit Marsh	42.9	15	26	26	5	5-7
B Priory Marsh	8.9		7	10	5	10-15
C Ashtree meadow	2.3	1		1	5	5-7
D Monkswell meadow	1.0	1		1	5	5-7
E Dry pasture	9.9	14				
Total	79	38	32	39		

Table 2 is intended to be a guide for the longer term. In the first few years of this plan, there is need for high stocking densities in Priory Marsh and Monkswell to restore the sward from years of undergrazing.

## 5 OBJECTIVES, LIMITS AND MONITORING

In this section the habitats are described in terms of priority habitat types (as under EU Habitats and Wildlife Directive 1992), otherwise as the broad habitat type or phase 1 habitat designation (NCC 1993, anon 2003). The locations of the habitats and/or features are indicated by the compartment number (map 2) and the area has also been estimated where this is applicable. Features of interest of the SSSI where appropriate are specifically highlighted.

In the description of vegetation the categories in the National Vegetation Classification (NVC) (Rodwell 2000) have been used as far as possible. Map 4a with the legend (map 4b) is a phase 1 habitat map printed from the digital version and database, where species and NVC information is available. The compartments in the SSSI have been assessed as in favourable condition, or otherwise (appendix 3) and this is noted where appropriate.

### 5.1 Coastal Saltmarsh

#### 5.1.1 Location

Compartments: North Marsh, East Marsh, South Marsh, Grimmerly Marsh, Central Marsh

Area: 27.8 ha.

This feature is in annex 1 of the Habitats Directive and forms part of the special interest of the SSSI. This habitat has a Biodiversity Action Plan

### 5.1.2 Description and management rationale

Saltmarsh forms by accreting sediment at, or just above the normal high water level of estuaries and lagoons. Many of the plants that cause the build up of sediments and subsequently colonise the emerging land are unique to this habitat.

On Stanpit the saltmarsh is being eroded around the edge except where there is some protection from emergent macrophytes in the sheltered bays of Parky Meade Rail and Mother Siller's Channel. These are natural processes, possibly exacerbated by wash from boats travelling at high speed. Projected sea level rises over the next 40 years are expected to increase erosion and probably result in the loss of saltmarsh.

There are two main saltmarsh communities at Stanpit. At the higher level is the *Juncus gerardii* community (SM16) with its associated species: red fescue (*Festuca rubra*), creeping bent (*Agrostis stolonifera*), sea arrowgrass (*Triglochin maritima*), sea milkwort (*Glaux maritima*) and sea plantain (*Plantago maritima*). This can become poached and wetter, when it is invaded by sea clubrush (*Schoenoplectus tabernaemontanii*) and (*Bolboschoenus maritimus*). At a slightly lower level is the *Puccinellia maritima* saltmarsh (SM13) which shares species with SM16 and often has some bare mud where the annual samphires (*Salicornia* spp.) can grow. Amongst the common salt marsh grasses grow more colourful salt tolerant plants such as English scurvy grass (*Cochlearia anglica*), thrift (*Armeria maritime*) and sea lavender (*Limonium vulgare*).

There is a small area of a taller, grass dominated community (SM24) around Speller's Point. The saltmarsh communities on the east side are characteristic of higher salinity water than those to the west of the main track from the information hut to Grimmerly Bank (Central Marsh and Grimmerly Marsh). Most notable is the sward dominated by bulbous foxtail (*Alopecurus bulbosus*) a national rarity together with its hybrid (*Alopecurus xplettkei*) which is even rarer.

Within the saltmarsh are numerous small, shallow pools and ditches. Some of these dry out between tides, whilst others usually stay full. These are important for mud dwelling invertebrates and scarce aquatic plants (*Ruppia maritima*, *Ranunculus baudotii*, *Hippuris vulgaris*).

Although a recent colonist, English cordgrass (*Spartina anglica*) is a new species that originated in Southampton Water from a sterile hybrid. It is not invading large areas to the detriment of other species. As sea levels rise and the present saltmarsh erodes, it could well be this plant that expands into drowned land to stabilize the sediments and in time raise substrate levels for a new saltmarsh which can protect the vulnerable tipped land.

The invertebrates of the saltmarsh have been studied (Budd 2003). Mammals and reptiles appear to be scarce, although there are no thorough studies. The most prominent group of animals are the birds, and these are well studied. The grazed saltmarsh around Stanpit Bight provides an important "open view" roosting site for gulls, wildfowl and waders at high tide. There is some disturbance to wildlife by dogs recorded here, and possibly a further disturbance threat from canoes, windsurfers and jet skis (Bird disturbance survey and incident logs CBC 2007 – see Appendix 7) Bird nesting opportunities exist in the taller sward of Central and Grimmerly marshes. Here too, disturbance by dogs can be a problem and escaped mink are a threat.

Grazing is crucial to maintaining the sward. Traditionally, the marshes have been grazed as an open system with the acid grassland and scrub on the SSSI. As a general rule, the higher the salinity of the sward, the more tightly it is grazed. It may be that nutrients limit plant growth rate on the eastern marshes, but it is clear that both horses and geese have a preference for North and East marshes.

A report by Dr. Doody of the Joint Nature Conservation Committee (JNCC) commissioned in 1985 to assess the effect of grazing on the Marsh and make recommendations about levels of grazing, suggested an increase in stocking during the winter months and a reduction in stocking during the summer. Current opinion from Natural England and local ecologists is that lighter grazing in the summer will be beneficial for a period to enable more plants to flower and to provide greater sward diversity for invertebrates.

The saltmarsh is being eroded along the shoreline except where there is some protection from emergent macrophytes. Projected sea level rises over the next 40 years are expected to increase erosion and probably result in the loss of present saltmarsh (EA prediction for 1:100 year flood). The impact is not anticipated within the duration of this plan. The strategy in the present shoreline management plan (Halcrow 1999) is 'do nothing'.

The east side of the marsh is tightly grazed by horses and wildfowl. Central and Grimmerly marshes are less grazed and not as disturbed by human activities, enabling some breeding by skylark and meadow pipit. Increased nesting by these birds may be employed as a convenient means to monitor the health of the saltmarsh. Some poaching of the damp ground is evident

### **5.1.3 Current condition**

The SSSI condition is: favourable maintained (appendix 3), although enhancement is desirable in some areas i.e. a lighter grazing regime during the summer months as described above.

**Currently the saltmarsh interest is meeting the objectives for the site.**

### **5.1.4 Objectives**

Maintain the favourable status of the saltmarsh habitat, and if possible improve the structure of the sward, where:

- The majority of the sward has a minimum height of 5cm during the summer and autumn.
- There is no loss of plant diversity.
- There are at least 3 pairs of skylark and 4 pairs of meadow pipit breeding each year.
- *habitat extent\** - no net loss, unless offset by expansion of other features, as assessed by comparison with baseline map
- *physical structure\** - no anthropogenic alteration of drainage system by expansion and creeks to bare mud and loss of pans, beyond an established baseline, as assessed by e.g. aerial photo
- *vegetation structure\** - zonation (main saltmarsh zones are all represented - proportions to be "site specific", assessed by line transect), and sward structure ("maintain site specific structural variation" by grazing,
- *vegetation composition\** - characteristic species present in pioneer zone, low-mid marsh zone, and mid-upper marsh zone, with "appropriate" species in terrestrial species transition zone, assessed by structured walk transect

- *negative indicators\** - signs of disturbance, pollution, turf cutting, bare substrate caused by vehicle damage or trampling in vulnerable locations, livestock poaching causes <25% extent of bare mud, assessed by visual inspection

\* Denotes generic objectives for SSSI saltmarsh from JNCC and NE. These will be refined further to make them more site specific during the plan period.

### 5.1.5 Actions

- a. Continue to deliver the grazing management as set out above (and which is detailed in Higher Level Stewardship (HLS) Agreement that the Council has with Natural England
- b. Reduce grazing levels during the summer for a two year trial period and review the effects.
- c. Warden the reserve and, in accordance with the byelaws, ensure dogs are kept under proper control and effectively restrained from disturbing wildlife. Consider available options to further reduce disturbance on the marsh.
- d. Provide input into the Christchurch Harbour (aquatic) Management Plan to address waterborne disturbance issues such as the landing of boats, canoeing, placement of buoys etc.

### 5.1.6 Monitoring

- The saltmarsh will be assessed by Natural England as part of the cycle of SSSI monitoring.
- Sward height at selected points throughout the year using a dropped disc for the grazing trial.
- Annual breeding bird survey.
- Bird feeding and roosting numbers, frequency and causes of disturbance.
- Vegetation in the exclosures and control plots.
- Incident recording

## 5.2 Lowland meadow and pasture (neutral grassland)

### 5.2.1 Location

Compartments: \*Priory Marsh, \*Central Marsh, Monkswell Meadow and Wildlife Corridor area of the former Stanpit Depot  
Area: 4.7ha.

\* These habitats form part of the special interest of the SSSI.

### 5.2.2 Description and management rationale

The largest area of meadow is in Priory Marsh where the vegetation is grassland on permanently damp soils (closest to MG13 or MG11 in the NVC). A small area of similar vegetation is present in the NW of Central Marsh next to Purewell Stream and east of Stanpit Scrubs. The vegetation of Monkswell Meadow was more open in the past but the grassland that remains has become rank (a form of MG1).

Priory Marsh has become dominated by reed sweet grass (*Glyceria maxima*). Various reports unanimously conclude that harder grazing is required in Priory Marsh. The spread of reed sweet grass was investigated from aerial photographs (Woodhead 1990). The latest vegetation survey (Walls 2006) indicates a possible reduction in the extent of reed grass and succession to other fen species, suggesting that recent increase in grazing pressure may be having the desired effect. However lapwing,

redshank and snipe have not yet nested despite prospecting each year and even with the management actions proposed in this plan, it may be some time before breeding waders are established on Priory Marsh. Future management is intended to restore more suitable conditions for these birds by maintaining the current grazing regime through the summer and especially during Autumn (subject to ground conditions) in order to achieve the right sward condition in the spring for breeding waders. Alongside grazing management, this Management Plan proposes a ditch restoration programme for Priory Marsh. A network of relic ditches is present on Priory Marsh and during this Plan period, the ditches will be restored over a 2-3 years. The aim of the ditch restoration is to de-silt the ditches creating a ditch profile that is shallow with gently sloping sides. This will be beneficial in a number of ways; the ditches will support aquatic and marginal plants, as well as open water, which will in turn benefit invertebrates such as dragonflies and damselflies. An enhanced ditch network will also be particularly beneficial for breeding waders as they will feed in the shallow margins of the ditches where the ditch invertebrate interest is highest. A further improvement to the biodiversity of Priory Marsh will be that the extent of prolonged water logging will be reduced by the enhanced drainage function of the ditch network, reducing the swampy conditions and the dominance of reed sweet grass.

Disturbance is not as prevalent on Priory Marsh as on the saltmarsh, largely because the vegetation is higher and the footpath is not as popular as the main footpath on Stanpit Marsh. However, with a shorter sward and improvements to the main footpath, this situation could change with levels of disturbance rising. This plan proposes enhancements to the newly established public footpath that runs adjacent to the golf course which overlooks Priory Marsh. This path is drier and provides easy access for visitors wishing to enjoy views over the reserve. It is proposed to undertake some scrub management to improve views in strategic locations over Priory Marsh, along with some interpretation and a joint initiative with the River Avon and Avon Valley Initiative (RAAVI) and Christchurch Harbour Ornithological Group (CHOG) to give members of the public an opportunity to learn about its ornithological interest.

New Zealand pigmyweed (*Crassula helmsii*) has invaded the grassland in Central Marsh.

### 5.2.3 Current condition

The Priory Marsh SSSI condition is: unfavourable recovering.

Priory Marsh has been undergrazed for many years and under the current grazing regime will take some time to recover.

Monkswell Meadow has been ungrazed since closure of the riding stables in the 1980s and very little grassland remains.

**Currently the neutral grassland interest is not meeting the objectives for the site; however this will be addressed during the plan period by ditch restoration and continued grazing at current levels on Priory Marsh and the re-introduction of grazing at Monkswell Meadows.**

### 5.2.4 Objective

Restore the biological richness and the structure of the grassland, where:

- The majority of the sward has tussocky structure of between 5cm and 15cm during the bird breeding season and late season grazing achieves a short sward of around 5cm for over-wintering birds and breeding waders in spring.
- There is an increase in plant diversity.
- The optimum conditions for breeding waders are present.

- *habitat extent\** - no net loss, unless offset by expansion of other features, as assessed by comparison with baseline map
- Negative indicator\*: NZ Pigmyweed *Crassula helmsii* is not present
- Negative indicator\*: Scrub does not increase beyond 5% cover of grassland areas (see Scrub and trees 5.9 below)
- Negative indicator\*: *Glyceria maxima* cover to be no more than 10%

\* Denotes generic objectives for SSSI neutral grassland from JNCC and NE. These will be refined further to make them more site specific during the plan period.

### 5.2.5 Actions

- a. Continue to deliver the grazing management as set out above (and which is detailed in the HLS Agreement) i.e. 1 April – 30 May: average sward height 10 – 15 cm with taller vegetation over 30-40% of the compartment. July – October graze down to 5cm.
- b. Introduce grazing to Monkswell meadow and continue with appropriate grazing levels until the rank grass has been cleared and invading scrub is under control. Then revert to a similar regime to Priory Marsh.
- c. Ensure dogs are kept under close control, in accordance with the bylaws and reduce disturbance to wildlife to a tolerable/sustainable level
- d. Continued and sustained management to eradicate New Zealand pigmyweed
- e. Undertake a programme of scrub management of Monkswell Meadow to restore the grassland.

### 5.2.6 Monitoring

- The neutral grassland at Priory Marsh will be assessed by Natural England as part of the cycle of SSSI monitoring.
- Sward height at selected points monthly from April to October using a dropped disc.
- Annual breeding bird census.
- An NVC survey the vegetation in 2011; compare with the 2006 survey.
- Incident recording

## 5.3 Acid grassland

### 5.3.1 Location

Compartments: \*Stanpit Scrubs, \*North Scrubs, \*Crouch Hill, Ashtree meadow  
Area: 6.0 ha.

\*These habitats form part of the special interest of the SSSI.

### 5.3.2 Description and management rationale

This type of grassland occurs on free draining soils, deficient in nutrients and above flood level. As such, growth is poor during dry summers, when grazing can destroy the sward. If rested during the growing season (winter and spring) the vegetation becomes a valuable resource for stock that has to be moved from flooded compartments. However, rabbit grazing may be more of a problem than domestic animals.

The two largest areas of acid or calcifugous grassland are on Crouch Hill and Ashtree Meadow. Both are U1 grasslands with Ashtree being a semi-improved sward. Both are over-grazed, leaving opportunities for weed species to invade. Crouch Hill also has bare sand due to rabbits and excessive wear from the public and horses. Smaller areas of

acid grassland are found amongst the scrub of North Scrubs and extent of grassland here should increase as shrubs are cleared.

### **5.3.3 Current condition**

Acid grassland has been assessed by Natural England in 2005 as a component part of the Stanpit Marsh saltmarsh unit. The SSSI condition is: favourable maintained.

Natural England considered at the time of the assessment that a programme of scrub management was needed on Crouch Hill and in North Scrubs to restore the extent of acid grassland in these areas. This management programme has been undertaken. This Management Plan does not propose further scrub management works at this time although it is envisaged that further work will be needed over the next 5 to 10 years to keep any scrub encroachment in check and in order to ensure a varied age range of scrub.

**Currently the acid grassland interest is not meeting the objectives for the site because of over-grazing during spring and summer on Crouch Hill by rabbits and ponies.**

### **5.3.4 Objective**

Restore to favourable condition, where:

- The majority of the sward has an average minimum height of 5cm during summer and autumn.
- Habitat extent\* - no net loss, unless offset by expansion of other features, as assessed by comparison with baseline map
- Negative indicator\*: Scrub forms between 5-10% cover of defined acid grassland habitat areas (cross reference to Scrub and Trees 5.9 below)
- Negative indicator\*: Rye grass no more than x% cover

\* Denotes generic objectives for SSSI neutral grassland from JNCC and NE. These will be refined further to make them more site specific during the plan period.

### **5.3.5 Actions**

- a. Reduce grazing to a suggested maximum of 0.6 LU/ha during the autumn and winter.
- b. Control rabbit numbers.

### **5.3.6 Monitoring**

- The acid grassland at Couch Hill and North and Stanpit Scrubs will be assessed by Natural England as part of the cycle of SSSI monitoring.
- Sward height at selected points throughout the year using a dropped disc for a period of 2 years during the grazing trial.
- An NVC survey the vegetation in 2011; compare with the 2006 survey.
- Check scrub encroachment via available aerial photograph comparisons.
- Monitor rabbit numbers

## **5.4 Improved (amenity) grassland**

### **5.4.1 Location**

Compartments: Tutton's Well, Recreation ground, Waterloo Stream bank.

Area: 6.7 ha.

#### **5.4.2 Description and management rationale**

The Recreation ground and Tutton's Well are seeded or turfed lawns and a new area has been created at the top of the Waterloo Stream between the Civic Offices and the R.Avon. At Tutton's Well it is anticipated taller grass and reeds will be restored in the damp, lower ground at the SW end of the site when mowing is restricted to the dry ground, although some management is required as this area of reeds has not been managed for some time and may require some cutting.

The recreation ground grassland was originally marshy grassland. In the last century it was used as landfill and subsequently capped and seeded to make the recreation area present today. Currently the recreation ground has a high proportion of ryegrass (*Lolium perenne*) and is kept short by mowing. Wildlife diversity is generally low, although may increase as wild flowers begin to grow in older swards. This can be encouraged by not using fertilizers or herbicides, but generally this habitat currently has little value for wildlife. Clearly it is not feasible to reinstate the original grassland, and in any case, the recreation ground is a valuable asset for recreational play but it is possible to improve the species diversity and create a more visually interesting place. *Modified maintenance regimes may help to provide new opportunities for wildlife and compliment and link existing habitats around the recreation ground*

#### **5.4.3 Current condition**

These areas are not subject to Natural England's condition assessment as they are outside the SSSI. However, the recreation ground is generally unfavourable for wildlife and could be enhanced for wildlife, complementing its use for a wider range of recreational activities.

#### **5.4.4 Objectives**

Consider the creation of a richer environment for wildlife and enjoyment by the public, where:

- All existing informal games, sports and special events can continue to take place.
- During the lifetime of the plan a more varied landscape is considered and that designs are brought before committee and taken through public consultation before implementation
- There is no litter

#### **5.4.3 Actions**

- a. Reduce dog fouling through education and enforcement of existing byelaws
- b. Within the lifetime of this plan to bring forward proposals for public consultation on the design, for the recreation ground.

#### **5.4.4 Monitoring**

- Floral composition.
- Fauna
- Public opinion.

### **5.5 Reedbed, fen & swamp**

#### **5.5.1 Location**

Compartments: \*North Marsh, \*East Marsh, \*South Marsh, \*Grimmery Marsh, \*Central Marsh, \*Priory Marsh, \*Great Spires, Ship in Distress, Ashtree fen, Monkswell fen.

Area: *Phragmites* 3.5 ha; other fen and swamp vegetation 5.1 ha.

Reedbeds have a national Biodiversity Action Plan.\* These habitats form part of the special interest of the SSSI.

### **5.5.2 Description and management rationale**

The term 'reed bed' is used loosely for a number of communities. Usually identified by a single, dominant species, these communities are distributed within many of the compartments where water level is at or above ground level most of the time.

Common reed, reed sweet grass, sea club rush (*Bolboschoenus maritimus*) and great pond sedge (*Carex riparia*) are the four most widespread species that dominate stands. Small stands of English cord grass (*Spartina anglica*) are found in the more saline places. Other species such as iris (*Iris pseudacorus*), grey club rush (*Schoenoplectus tabernaemontani*) and smaller herbs do occur when the density of the dominant species permits. The optimum salinity is different for each of these species and between them they encompass the salinity experienced in the harbour. The range may well change with sea level, affecting the location and relative dominance of any one species. This is important in the context of coastal erosion – one of the species ought to be able to form protecting colonies.

Extensive reed beds are important feeding stations for migrant passerines and nesting sites for reed, sedge and cettis warblers, reed bunting, moorhen and water rail. Great Spires particularly is a suitable breeding area for water rail and bearded tit. Proposals for cutting reeds are made from time to time. Trial areas have been cut in the past when the impact on growth was found to be minor and short-lived (pers.comm.). On balance, there does not seem to be a compelling case for instituting an annual programme of cutting unless the reeds are losing vigour because of the build up of litter.

The margin of a reed beds is often distinct when the ground level changes abruptly, but can be diffuse elsewhere. Transition zones are maintained by grazing with the reeds advancing in years when grazing is light. These dynamic zones often exhibit higher diversity than the more stable communities either side.

Reed sweet grass is particularly problematic on Priory Marsh where it has invaded grassland on drier ground to cover large areas in a monoculture of little value to other wildlife. Although young shoots are grazed readily, older stems and leaves become unpalatable.

Bramble and bindweed appear to be over-running the reed beds in the Ship in Distress Fen. This may be indicative of drying out due to being hydrologically separated from other wetlands. It has also become isolated from other wetlands ecologically. Water level changes may be a permanent impact of the Russell Drive development. A low weir on the ditch as it leaves the fen could help retain a higher water table. The problem of isolation can be tackled by restoring links for wetland species by clearing scrub and opening up the stream to Ashtree fen.

### **5.5.3 Current condition**

The general condition is: favourable maintained. However, stands of reed sweet grass are too extensive in Priory Marsh and scrub may be invading the Ship in Distress Fen

**Currently the reedbed, fen and swamp habitats are meeting the objective for the site; the increased grazing pressure on Priory Marsh is addressing the spread of Reed sweet grass.**

#### 5.5.4 Objective

Maintain favourable conditions where:

- Reed beds and other stands of tall monocotyledons are growing vigorously and not smothered by leaf litter and flotsam.
- Full height reed sweet grass is largely confined to the ditches and pools on Priory Marsh.
- At least 60% of the Ship in Distress compartment has swamp communities.
- At least 25 pairs of reed warbler, 5 pairs of sedge warbler, 12 pairs of reed bunting and 4 pairs of water rail nest each season.
- There is no loss of extent/area of reedbed fen & swamp
- Reed, fen & swamp areas are connected to other habitat by sufficient wildlife habitat
- \*Negative indicator: full height Reed Sweet-grass *Glyceria maxima* does not occur outside ditches and pools on Priory Marsh. In other identified reed fen & swamp habitat areas Reed Sweet-grass cover is no more than x%
- \*Negative indicator: scrub such as Bramble *Rubus fruticosus* agg. and Bindweed *Convolvulus* sp forms no more than x% of vegetation present

\* Denotes generic objectives for SSSI Reedbed, fen and swamp from JNCC and NE. These will be refined further to make them more site specific during the plan period.

#### 5.5.5 Actions

- a. Discourage people from entering and creating paths through reed beds
- b. Regular patrol and clearance of accumulated litter as required.
- c. Increase grazing pressure, especially early in the growing season, to keep reed sweet grass in check.
- d. Investigate the hydrology of Ship in Distress Fen with a view to ensuring water levels are maintained as high as practical
- e. Consider construction of weir mentioned in 5.5.2
- f. Creation/establish habitat corridors where appropriate
- g. Contribute to national BAP targets where appropriate

#### 5.5.6 Monitoring

- The SSSI compartments of the Reedbed, fen and swamp will be assessed by Natural England as part of the cycle of SSSI monitoring
- Annual breeding bird survey.
- Visual inspection/structured walk x times/year
- Incident recording

### 5.6 Mudflats and islands

#### 5.6.1 Location

Compartments: Stanpit Bight, Mother Siller's Channel, Blackberry Point, Parky Meade Rail.

Area: Blackberry Point 1.0 ha. The boundary of the mudflats is undefined, but total area about 16 ha.

This feature is in annex 1 of the Habitats Directive. This habitat has a national Biodiversity Action Plan

These habitats form part of the special interest of the SSSI.

### 5.6.2 Description and management rationale

The intertidal sediments are devoid of vascular plants but may have extensive cover by algae (*Enteromorpha*). Their importance lies in the invertebrates within the mud (infauna) vital to the survival of waders. Studies (Walls 1985, Wills 1986) indicate relatively few species are present, but populations are substantial. None of the species is considered rare or threatened. Good numbers of dunlin, ringed plover, redshank, greenshank, lapwing, curlew, oystercatchers and other waders are usually present.

A gravel bank, extending from Crouch Hill through South Marsh, has been eroded to leave a string of islands culminating in Blackberry Point. The intermediate islands are remnants of saltmarsh and have almost gone. Blackberry Point is gravel with sparse vegetation and a long spit of sand extends northwards. Greater black-backed gulls, herring gulls and cormorants have taken over what would otherwise be an ideal nesting site for smaller waders or terns. Oystercatchers have attempted to nest here virtually annually but rarely raise a brood due to trampling and loss of eggs to predators.

Birds feeding on the mudflats are vulnerable to disturbance from a wide range of events (Wills & Greaves 1986). Not only does this result in a loss of feeding time between tides, but also uses energy and could jeopardise a successful migration. At other times of year, food is important for raising young birds and during harsh winter weather.

Angling and wildfowling are two legitimate activities that potentially conflict with birds. In practice the associations regulating these activities have voluntarily agreed to avoid the critical areas and disturbance from angling or shooting is very rare. Boating, windsurfing, jet skiing etc. are more problematical as this is largely unregulated and the harbour is used by holidaymakers unaware of the need to stay away from important feeding and roosting areas.

The islands are prone to erosion and inundation as sea levels rise. It is probable that the mudflats will accumulate material and rise with the water levels. Intervention is not considered appropriate in these areas; nevertheless, close monitoring is desirable to detect adverse impacts as soon as possible.

### 5.6.3 Current condition

The SSSI condition is: favourable maintained

**Currently the mudflat and saltmarsh interest is meeting the objectives for the site; however, there is concern that birds are regularly disturbed by walkers, their dogs and to a lesser extent, by water based activities.**

### 5.6.4 Objective

Maintain the mudflats and islands in favourable condition and as disturbance free areas, where:

- Roosting and feeding birds are rarely disturbed by people and dogs
- Water-borne access, fishing and wildfowling over mudflats are minimal.
- There is no decline in the numbers of roosting birds nor in the number of different species of roosting birds
- We have a greater understanding of the implications of sea level rise and coastal erosion and their effects on the intertidal habitats

### **5.6.5 Actions**

- a. Raise public awareness of the need for birds to feed and roost undisturbed on the mudflats and Blackberry Point and continue to discourage visitors from approaching or walking out to these sensitive wildlife areas'
- b. In accordance with the byelaws prevent disturbance by dogs ensuring that they are effectively restrained from disturbing wildlife and roaming freely off the main footpaths across the saltmarsh and shallow water
- c. Promote exclusion zones for boats and water activities in Stanpit Bight, Parky Meade Rail and Mother Siller's Channel.
- d. Place buoys around sensitive areas, although they must be placed with due regard for other legitimate activities.
- e. Place signs to discourage small craft from landing on the islands, Blackberry Point, East Marsh and South Marsh
- f. Disseminate information on responsible use of the harbour (coordinate with the Christchurch Harbour aquatic management plan).
- g. Seek to better understand the future coastal process affecting the marsh and the harbour and, as a registered stakeholder, contribute to the review of the Shoreline Management Plan for the area'
- h. Contribute to national BAP targets where appropriate

### **5.6.6 Monitoring**

- Bird census and counts (bird feeding numbers, frequency and causes of disturbance)
- Record disturbance incidents.
- Carry out a monitoring programme of recreational activity in sensitive areas to assess levels of use and disturbance
- Recreational activity
- Contribute to relevant monitoring proposals which may be forthcoming in the Shoreline Management Plan for the area, especially erosion of the islands and shoreline.

## **5.7 Running water**

### **5.7.1 Location**

Compartments: R.Avon, Purewell Streams, Waterloo Stream, Marsh Lane Stream.  
Area: < 0.1 ha.

### **5.7.2 Description and management rationale**

Strictly speaking, the R.Avon is not included in this management plan. However it is an international site (SAC, Ramsar) and forms a substantial boundary around Priory Marsh. During the winter its waters flood across the marsh.

The many small streams that collect into the Purewell Stream and discharge into Parky Meade Rail have been canalised so that their courses reflect old field boundaries. Their origins are obscured by development, but they would have been fed by the many small springs and seepages around Purewell. Water quality is not analysed regularly but it generally looks clean. The water from Tutton's Well was analysed in 2005 and this may be representative of ground water throughout Purewell and Stanpit. Limited testing from boreholes on the depot site and Ship in Distress fen in 1988 suggest a circum-neutral water in surface layers and a more acid water a few metres down and in the fen.

Some sections are included in the Stanpit SNCI. Water vole burrows and feeding stations have been recorded from all the water courses except the Ship in Distress ditches (Bruce 2003). Water voles are a protected species with a BAP.

There are no well established names, but the Council have numbered the ditches (Walls 1998) and used informal names as follows:

- Ditch 5a Purewell Stream from Pelham Close to Stanpit Marsh SSSI (culverted under Disraeli Rd for part of its length).
- Ditch 5b Ashtree ditch, running along the back of the houses of Russell Drive and Gladstone Close.
- Ditch 5c From the Ship in Distress to its junction with Purewell stream at Ashtree Fen.
- Ditch 6 Marsh Lane Stream, from Monkswell Green to junction with Purewell Stream above the cycle track around the recreation ground.
- Ditch 7 Waterloo Stream, from the Civic Offices to Priory Marsh, with a connection to R.Avon along the north side of the marina.

Only Purewell Stream flows continuously, the other watercourses are stagnant much of the year, or in the case of Ashtree, dry out at times. All ditches are important for flood management and road drainage discharges. There is potential for pollution from spills, unofficial discharges and dumping, but this has not been studied and no instances have been officially recorded. Dumping of garden waste has been evident near Monkswell Green and in the Ashtree Ditch. The water courses are suitable for a range of invertebrates, so long as the water quality is satisfactory, although there have not been any recent surveys.

The section between Priory Marsh and Central Marsh is being opened up through a programme of reed cutting and removal that began in 2007. Prior to this area was almost choked with reeds which have established since the stream was completely fenced out from grazing. Despite clearing in 1993 by volunteers from the Territorials, the wildfowling and others, reeds grew back quickly. In the 1980's there was a small colony of dwarf spike-rush in this reach as part of a larger population which remains in Stanpit Bight.

A vigorous stand of floating pennywort (*Hydrocotyle ranunculoides*) was discovered in 2006 at the junction of Ashtree Ditch and Purewell Stream extending some distance along both streams. New Zealand pigmyweed (*Crassula helmsii*) has invaded Purewell Stream in Central Marsh near the entrance to the SSSI. Japanese knotweed (*Fallopia japonica*) has established on the banks at the top of the Ashtree Ditch. The gravelly bank of the River Avon and the Waterloo Stream have Himalayan balsam (*Impatiens glandulifera*) and Monkey Flower (*Mimulus guttatus*) in small quantities. These invasive species have the potential to destroy native species if left unchecked.

At the footbridge where Marsh Lane crosses the stream, a scarce pondweed (*Potamogeton trichoides*) has been recorded. Water whorl-grass (*Catabrosa aquatica*) was recorded in Ashtree Ditch in 2006, soon after it had been cleared

The section of Waterloo Stream between the marina entrance and Priory Marsh has very little vegetation due to the heavy shade. It was cleared of the overgrown privet hedge and tall willows (*Salix fragilis*) early in 2007. This section held a population of a scarce orchid, the Isle of Wight helleborine (*Epipactis phyllanthes* var. *vectensis*) and is part of the SSSI. The ditch tends to become cluttered with flotsam and cut twigs.

The section from the marina to the Civic Offices was also cleared in the spring of 2007. The more open sections allow the growth of water cress (*Rorripa nasturtium-aquaticum*), fools cress (*Apium nodiflorum*), kingcups (*Caltha palustris*) and clumps of sedges (*Carex acutiformis*, *C. riparia*). Between the ditch and the R.Avon is an area of privately owned ground made up of high level swamp of reed grass (*Phalaris arundinacea*) and nettle, now invaded by Himalayan balsam (*Impatiens glandulifera*), backed by bramble and willow scrub. Water is fairly static in this ditch and it is slightly tidal (markedly so when the R.Avon is high).

The Ship in Distress fen may be drying out and is isolated (see section 5.5). Some mitigation for the development that may have caused could be gained by widening the link (ditch 5c) to the Ashtree fen and damming the stream to maintain high water levels for as long as possible in dry seasons.

### **5.7.3 Current condition**

The watercourses (as a set of freshwater habitats) are not subject to Natural England's condition assessment as they are (mostly) outside the SSSI.

The general condition is: unfavourable no change.

For some years the ditches appeared to be neglected as tipping and house building claimed the old fields. Certain sections are heavily shaded and attract a certain amount of rubbish or are silting up. It is believed that the tidal flushing is much less effective now than in the past due to constrictions in the channel and possibly higher water table levels. However, the channels fulfil their land drainage functions and an annual programme of clearance work and opening up of sections of the streams has been initiated by the Council in partnership with local residents and volunteers. The programme which visits different sections of streams in rotation is carried out during the autumn and winter. The Council are also making strenuous efforts to tackle and contain the floating pennywort and the results of this programme are being assessed. Efforts to contain the New Zealand pigmyweed have not succeeded so far.

**Currently the streams and watercourses are not meeting the objectives for the site.**

### **5.7.4 Objective**

Restore the streams to favourable condition, where:

- Japanese knotweed, Himalayan balsam, New Zealand pigmyweed and floating pennycress have been eradicated.
- Healthy stands of emergent macrophytes, native marginal plants and in section trees grow along the margins.
- Water voles are present along the waterways
- The channels fulfil their land drainage functions and provide wildlife corridors between wetlands.
- Water quality, as indicated by invertebrate assemblages, is classed as good.

### **5.7.5 Actions**

- a. Clear moribund shrubs from the banks, especially on the linking ditch between Ashtree and the Ship in Distress.
- b. Investigate the possibility of profiling the S bank of ditch 5c to provide a better wildlife corridor to the Ship in Distress fen. Investigate the possibility of constructing a low weir to maintain a minimum water level in the fen.

- c. Dredge and clear channels as necessary for efficient drainage, having regard for wildlife interest and following best practice guidelines.
- d. Control the alien species and investigate a more permanent solution
- e. Contribute to regional BAP targets where appropriate

### **5.7.6 Monitoring**

- Check invert levels throughout the ditch system (in conjunction with drainage plans).
- Annually map the extent of the alien species.
- Survey the watercourses for aquatic invertebrates and calculate BMWP scores or similar metrics.
- Survey watercourses for water voles annually: between April and June or September
- Visual inspection/structured wade twice a year

## **5.8 Standing open water**

### **5.8.1 Location**

Compartments: Grimmerly Marsh, Priory Marsh

Area: 1.0 ha.

This habitat forms part of the special interest of the SSSI.

### **5.8.2 Description and management rationale**

Small, brackish water pools and tidal rills occur throughout the saltmarsh and are discussed under that feature. The only large pool on the saltmarsh is at the back of Grimmerly Bank, created by depositing the dredged material along the edge of the saltmarsh. It is fringed by sea club-rush and appears to be unsuitable for submerged vascular species. The blue-tailed damselfly (*Ishnura elegans*) is tolerant of brackish water and seen in the vicinity in the summer.

The ditches and temporary pools on Priory Marsh are essentially freshwater, although there is probably some saline influence. The origin of the pools is uncertain. The most recent date suggested is that they first appeared in the mid 1970's after tipping and infilling the land north of Priory Marsh. Another hypothesis is that they are medieval fish ponds. If the latter is the case, any deepening would need to be carried out with due regard for their archaeological significance. They are very shallow and dry up in the summer. Although appearing vulnerable to invasion by grasses and the surrounding tall monocotyledons, they do not seem to have changed much in size over thirty years. Over this period the southern portion of Priory Marsh may have become wetter and a new pool has replaced the wet meadow habitat where the board walk crosses the marsh. The hydrology is not well understood.

The pools provide a habitat for freshwater waders and duck and their potential for this may increase if the pools were dug out and not allowed to dry up. A more important reason for maintaining bare mud is that it is the habitat for mudwort (*Limosella aquatica*), a scarce annual which grows abundantly here in some years. In a few pools the spike rush (*Eleocharis palustris*) has become dominant.

Although the pools have changed little on Priory Marsh, the ditches have ceased to function due to siltation and growth of emergent macrophytes. Research has shown that

open ditches are important in attracting breeding redshank (Milsom et al 2000, Smart et al 2006). Mare's-tail was found in one place in the ditches in 1994, when the warden commented on its vulnerability to reed-grass encroachment. It seems to have disappeared a few years later.

### **5.8.3 Current condition**

The general condition is: favourable maintained.

The pools and ditches are not subject to Natural England's condition assessment however Natural England has made recommendations for the restoration of these habitats (specifically ditches) in connection with the overall management programme for Priory Marsh.

**Currently, the ditches are not meeting the objectives for the site. This will be addressed during the plan period. The pools are meeting the objectives of the site**

### **5.8.4 Objective**

Maintain the pools and ditches on Priory Marsh where:

- Good numbers of mudwort are seen each year in the temporary pools.
- Insofar as weather patterns permit, pools contain water for as long as possible into spring and summer.

### **5.8.5 Actions**

- a. Clear out the main ditch through Priory Marsh and set up a maintenance scheme for the ditch network by clearing ditches in rotation, thereby retaining a range of conditions.
- b. Investigate the hydrology of the temporary pools.
- c. Investigate the scope for installing a simple water-control structure (such as a drop-board) in order to manage water levels in the ditch network of Priory Marsh.
- d. Investigate the origin of the Priory Marsh pools

### **5.8.6 Monitoring**

- Estimate numbers and area of mudwort each year
- Frequent visual inspections

## **5.9 Scrub & trees**

### **5.9.1 Location**

Compartments: \*Stanpit Scrubs, \*Crouch Hill, \*Speller's Point, \*North Scrubs, \*Marginal banks, \*\*Monkswell Meadow, recreation ground, Waterloo Stream.

Area: 7 ha.

\* Denotes habitat that forms part of the special interest of the SSSI

\*\* Denotes habitat that forms part of the SNCI interest

### **5.9.2 Description and management rationale**

Stanpit and North Scrubs are wind pruned and browsed bramble (*Rubus fruticosus*), gorse (*Ulex europaeus*) oak (*Quercus rubra*), holly (*Ilex aquifolia*) and birch (*Betula* sp.) together with nettles (*Urtica dioica*), honeysuckle (*Lonicera periclymenum*) and in

the damper parts, willow (*Salix cinerea*). One plant of particular note growing around the margin of the scrub is marsh mallow (*Althea officianalis*). Two scarce plants also occur in North Scrubs (*Lotus subbiflorus*, *Thalictrum flavum*). Recent scrub clearance has left bare areas which it is anticipated will develop acid grassland.

Crouch Hill has scattered gorse scrub which has become leggy and is now in a management regime to regenerate younger, dense growth. Speller's Point is now largely gorse and bramble scrub and currently un-managed. Early attempts to keep this area open to encourage tern and wader breeding were unsuccessful. An unwarranted amount of work would be required to remove and maintain a scrub-free environment unless there is a clear benefit to be gained.

The Marginal Banks around the golf course have seen some management since their creation through a programme of tree and shrub planting carried out by the Council and volunteers. Initially cattle would rest on the dry slopes, but with the planting and the building of a fence along the foot of the slope it became more fully vegetated and bramble is now the dominant shrub, with a certain amount of gorse. The planting was carried out in the 1980s and this accounts for the birch, field maple and hawthorn components. Substantial stands of bramble also exist along the ditch bank on the north side of the recreation ground, along the SE side and in the old depot site.

Bramble has invaded large areas of Monkswell Meadow and the north end of Ashtree Meadow. Small stands of scrub occur elsewhere and their size is controlled by grazing.

The scrub offers nesting sites for small birds such as: lesser whitethroat, longtailed tit, linnet, whitethroat, blackcap, Dartford warbler, chiffchaff, song thrush, meadow pipit, cettis warbler. The area is extensively inhabited by rabbits as well as various smaller mammals such as mice and voles. The higher ground within the SSSI is also a refuge for grazing animals when the marsh floods and the few trees provide some shade during hot weather.

There is constant debate over the appropriate quantity of scrub and the age of the existing scrub. As an early successional habitat, it needs to be cut back severely or allowed to proceed to woodland as a long term aim. Vigorous scrub growth where it is not threatening priority habitats is clearly of value for invertebrates, small mammals and birds. Consideration for additional scrub planting may be proposed in appropriate areas (see that feature). The older scrub probably has value for some invertebrates, although there are no specific studies available.

Although wild mammals are not a designated conservation feature of the SSSI they nevertheless add to the overall interest of the reserve. Because most of them use scrub habitats and as few appear elsewhere, it is appropriate to list the species here. The species mentioned in wardens' reports are: rabbit, brown rat, fox, water shrew, pygmy shrew, common shrew, wood mouse, roe deer and pipistrelle bat. Recent reports have also recorded mink, water vole and otter on the R.Avon. A survey of the area by the local mammal study group will improve our knowledge of this group. Mink is a particularly destructive alien predator which should be eradicated if possible.

### **5.9.3 Current condition**

The general condition is: favourable maintained.

Scrub was assessed by Natural England in 2005 as a component part of the Stanpit Marsh and Crouch Hill unit. The SSSI condition is: favourable maintained. Natural England considered at the time of the assessment that a programme of scrub

management was needed on Crouch Hill and in North Scrubs to restore the extent of acid grassland in these areas. This management programme has been undertaken.

It is envisaged that further work will be needed over the life of this plan in order to ensure a varied age range of scrub across the Reserve, to keep any scrub encroachment into adjacent acid grassland habitats, to restore pasture and fen habitat in Monkswell Green and Ashtree Fen.

**Currently the scrub and trees are meeting the objectives for the site but it is important that they do not invade areas designated for other priority habitat**

#### **5.9.4 Objective**

Maintain scrub in good condition where:

- It is suitable for nesting birds. At least 15 pairs of whitethroat, 3 pairs of linnet and 3 pairs of song thrush nest each season.
- Lesser whitethroat and Dartford warbler nest most years.
- Scrub does not invade areas designated for other habitats (see appropriate features)
- There is an increase scrub cover in selected areas of adjoining land (e.g. . recreation ground and wildlife corridors)
- Scrub does not invade areas designated for other habitats
- There is no presence of American Mink *Mustela vison*

#### **5.9.5 Actions**

- a. Clear scrub from Monkswell Meadow and restore to grassland.
- b. Draft proposals and consult on any future rotational cutting on Crouch Hill and North Scrubs.
- c. Consider selected planting of scrub as part of the landscaping of the adjoining.
- d. Cut back scrub along the ditch between the Ship in Distress and Ashtree Fen.
- e. Control mink if the population becomes too large.
- f. Review the proposal to restore Speller's Point to habitats suitable for tern and wader breeding in the light of resources and the probability of success.
- g. Maintain the views from along the Golf Course footpath by reducing the height of scrub in intermittent blocks

#### **5.9.6 Monitoring**

- Survey invertebrates in scrub of various ages
- Breeding birds census in the main blocks of scrub.
- Occurrence of mink
- Scrub coverage survey by aerial photo every 5 years

### **5.10 Carr**

#### **5.10.1 Location**

Compartments: Monkswell Carr, Ship in Distress.

Area: 0.5 ha.

These habitats do not form part of the SSSI but are designated as SNCIs

### **5.10.2 Description and management rationale**

Carr is wood and scrub on permanently wet soil, often with a seasonally fluctuating water level. It is important for a specialist group of animals and plants, many of which are declining as a result of drainage schemes.

Sallows along the boundaries of the Ship in Distress Fen are maturing into a woodland. If the fen is drying out, as suggested by a recent survey (Bruce 2003), the best option may be for the succession to continue. At present the intermediate stage is rather dull and may be contributing to the drying of the fen. Subject to investigations into the hydrology the preferred course of action at this point in time is to cut back the sallows.

A more mature carr has established in the Monkswell land along the stream. Although dominated by crack willow (*Salix fragilis*) with a great pond sedge (*Carex riparia*) understorey, the NVC is closest to W6b *Alnus glutinosa-Urtica dioica* woodland. This wood appears to have a satisfactory structure and the trees provide good shelter for the meadows.

Wet woodland can be a valuable habitat for specialist invertebrates. There are no records of the fauna and a more detailed study is warranted.

### **5.10.3 Current condition**

Carr habitat is not subject to Natural England's condition assessment, however the general condition is considered to be favourable - maintained in the case of Monkswell carr, but otherwise is unfavourable – no change.

**Currently the carr interest is not meeting the objectives for the site.**

### **5.10.4 Objective**

Maintain carr woodland in good condition where:

- It has a well established woodland structure and is suitable for nesting birds.
- It does not invade areas designated for other habitats (see appropriate features)
- There is no loss in current extent of carr woodland habitat

### **5.10.5 Actions**

- a. Cut back scrub along the ditch between the Ship in Distress and Ashtree Fen.
- b. Review the extent of the Monkswell fen when grazing has been re-established in the meadow.

### **5.10.6 Monitoring**

- Breeding bird census annually.

## **5.11 Therophyte community**

### **5.11.1 Location**

Compartments: Grimmerly Bank, Crouch Hill.

Area: < 0.1 ha.

### **5.11.2 Description and management rationale**

The drought-prone sandy soils locally support a suite of plants that aestivate. That is, they survive the summer as seeds or bulbous propagules. Many of these are scarce

nationally because they cannot compete with more vigorous species in less stressful habitats. A certain amount of trampling assists in keeping the habitat open.

Typical species are *Poa bulbosa*, *Trifolium glomeratum*, *T.suffocatum*, *T.scabrum*, *Moenchia erecta*. These plants can survive in quite small patches along footpath margins where the soil is free draining

### **5.11.3 Current condition**

The therophyte community is not subject to Natural England's condition assessment; however the general condition is considered to be favourable – maintained, although losses due to erosion are of concern.

The suitable habitat on Crouch Hill will be lost as permanent grasslands recover in response to management actions necessary for the maintenance of other features. Unless exceptional examples of the therophyte community or rare species are found in this compartment, the grassland regeneration should be accepted.

### **5.11.4 Objective**

Maintain open sandy areas, where:

- There are at least five substantial patches of *Poa bulbosa* and a number of smaller groups of plants.
- There is a substantial patch of *Trifolium glomeratum* that is not in danger of erosion, with a similar sized area into which it could reasonably spread.
- Excessive wear or erosion is not detrimental to other features.

### **5.11.5 Actions**

See monitoring

### **5.11.6 Monitoring**

- Map the extent of *Poa bulbosa* and *Trifolium glomeratum* on Grimmerly Bank and compare with previous surveys (Cooke 2004, Wilkins 1996) on an annual basis.
- Extend the survey to plot other scarce plants on Grimmerly Bank and Crouch Hill.

## **5.12 Dwarf spikerush**

### **5.12.1 Location**

Compartments: Parky Meade Rail (map 5)

Area: < 0.1 ha

Dwarf spikerush forms part of the special interest of the SSSI.

### **5.12.2 Description and management rationale**

Dwarf spikerush (*Eleocharis parvula*) is a very rare plant in Britain. It is classed as vulnerable in the new Red Data Book (Cheffings & Farell 2006) and is protected under the Wildlife and Countryside Act 1981 (schedule 8). It has been monitored intermittently in Parky Meade Rail (Woodhead 1998, 2003) and briefly surveyed in 2006 (appendix 11).

There is a stable and extensive population on the south side of Parky Meade Rail on substrate that is exposed at extreme low tides. This is the *Eleocharis parvula* saltmarsh community, SM13 in the NVC. Colonies on the north side, by Great Spires were not found in 2006 and the colonies in the lowest reach of Purewell Stream have disappeared except for a very few plants surviving amongst the taller vegetation invading the left bank of the stream as it enters the bay.

The lowest level at which *E.parvula* can survive is not known for certain, but is expected to be the low water springs. With rising sea levels it is likely that the colony will be lost from its present site within 30 years and there is a risk it will be lost from the harbour altogether if it cannot migrate up-stream. A confounding factor is that at Stanpit it only grows in gravel based substrates. With rising water levels, any material accumulating on the bed will probably be silty or organic in nature. This could smother the plants, even if water levels are suitable.

### **5.12.3 Current condition**

The general condition is: unfavourable - declining.

The main colony looks stable, but the other sites have either been lost or are severely reduced from their former extent. This is believed to be due to invasion by taller plants resulting from fencing out stock from the stream. This may be the first species to be lost as a result of sea level rise if it cannot migrate to new areas.

### **5.12.4 Objective**

Maintain the colony and restore the former range of the plant, where:

- The main stand covers an area of >150 m<sup>2</sup> at a density of at least one plant per cm<sup>2</sup>.
- At least three other stands totalling over 100 plants exist in the Purewell Stream estuary.

### **5.12.5 Actions**

- a. Remove the fence between Central Marsh and Purewell Stream.
- b. Manually cut the reeds from the concrete bridge between Priory Marsh and Central Marsh to the mouth of Purewell Stream.

### **5.12.6 Monitoring**

- Monitor the extent of the colony at an extreme low tide each autumn.
- Record the suitability and area of sites for colonisation as sea levels rise.

## **5.13 Rare & scarce plant species**

### **5.13.1 Location**

Compartments: all (map 5)

### **5.13.2 Description and management rationale**

Dwarf spike rush is the only red data book plant on the marsh, requiring a specific habitat which is itself scarce and declining and the only protected plant species. A number of other rare and scarce plants are to be found. To some extent their management is incorporated into the prescription for the habitat in which they grow. In this section the species are tabulated and the most important areas marked on map 3.

**Table 3. Scarce plants**

taxon	vernacular name	location <sup>†</sup>	habitat	10km sq <sup>°</sup>
<i>Eleocharis parvula</i>	dwarf spike-rush	Parky Meade Rail	upper limit of tidal influence, avoiding strongly saline areas.	10
<i>Alopecurus × plettkei</i>	hybrid foxtail	South Marsh	damp grassland near the sea	9
<i>Epipactis phyllanthes var. vectensis</i>	Isle of Wight helliborine	Waterloo stream	sparsely vegetated, shaded places	90*
<i>Alopecurus bulbosus</i>	bulbous foxtail	South Marsh	coastal grazing marsh	58
<i>Poa bulbosa</i>	bulbous meadowgrass	Grimmery bank	well drained and trampled soil	58
<i>Puccinellia fasciculata</i>	Borrer's saltmarsh grass	East Marsh	doubtful	68
<i>Trifolium.suffocatum</i>	suffocated clover	Crouch Hill	well drained and trampled soil	75
<i>Althea officinalis</i>	marsh mallow	North Scrubs, Ship in Distress	Transition zone between the upper saltmarsh and freshwater habitats. Intolerant of grazing.	77
<i>Limosella aquatica</i>	mudwort	Priory Marsh	muddy edges of pools and ditches	80
<i>Vulpia ciliata</i>	bearded fescue	Crouch Hill, Grimmery Bank	disturbed sandy soil	80
<i>Lotus subbiflorus</i>	hairy birdsfoot trefoil	North Scrubs	dry, open grassland on relatively sheltered banks	84
<i>Parapholis incurva</i>		doubtful		85
<i>Crassula tillea</i>	mossy stonecrop	1980	well drained and trampled soil	91
<i>Trifolium glomeratum</i>	clustered clover	Grimmery bank	well drained and trampled soil	94
<i>Moenchia erecta</i>	upright chickweed	Crouch Hill	well drained and trampled soil	182
<i>Ruppia maritima</i>	beaked tassel weed	Central and Grimmery marshes	shallow water in coastal lakes, pools on saltmarshes and ditches near the sea.	208
<i>Stellaria palustris</i>	marsh stitchwort	Priory Marsh	doubtful	212
<i>Ranunculus baudotii</i>	brackish water crowfoot	Central and Grimmery marshes	brackish pools and rills	234
<i>Parapholis strigosa</i>	hard grass	1994	doubtful	291
<i>Puccinellia distans</i>	reflexed saltmarsh grass	Central and East marshes	doubtful	323
<i>Isolepis cernua</i>	slender clubrush	1980	doubtful	323
<i>Atriplex litoralis</i>		1980	doubtful	333
<i>Apium graveolens</i>	wild celery	Mother Siller's Channel, Speller's Point	Sea-walls, beside brackish ditches and the uppermost saltmarshes	348
<i>Carduus tenuiflorus</i>	slender thistle	Grimmery bank	dry, coastal grasslands	389
<i>Anthriscus caucalis</i>	bur chervil	South Marsh	doubtful	423
<i>Oenanthe lachenalii</i>	parsley water dropwort	Central Marsh	saltmarsh	427
<i>Eleocharis uniglumis</i>	slender spike-rush	Priory Marsh	brackish grassland and base-rich, wet meadows	435
<i>Butomus umbellatus</i>	flowering rush	Purewell Stream, Priory Marsh	At the edges of ditches and swamps; often eutrophic	478
<i>Hippuris vulgaris</i>	mares-tail	Central Marsh	at edge of and ponds, in swamps	1054

<sup>†</sup> Where the location is not clear the date of the last record is entered in this column

\* No data available for the subspecies, this is the number for all forms of the species

Fungi have not been studied in any detail. There is a list of species by compartment from 1988 (anon.).

### **5.13.3 Current condition**

The general condition for most of these plants is: favourable - maintained.

The location and abundance of some of these species is recorded by the Council's Countryside Staff, volunteers and contractors at varying intervals. Many reports contain maps, counts and a commentary on the species and the threat to the populations. The species vulnerable to population reductions are:

- Bulbous meadow grass and clustered clover – erosion of the bank from the trampling and waves.
- Bearded fescue and a number of the plants have not been recorded recently and in some cases the record is of doubtful validity.
- Mares-tail has declined markedly since 1986 for reasons that have not been established.

Other species on the list were recorded some time in the past and should be sought. Past records which are less credible have been left out of the list.

### **5.13.4 Objective**

Maintain healthy populations of all scarce plants, where:

- None of the species is lost from the site
- The location of all scarce species is known
- There is no reduction in current populations and extents of listed species on the site

### **5.13.5 Actions**

- a. Renourish Grimmery beach when required using local material.
- b. Research the reasons for decline in mares-tail.
- c. Record as complete a list of plant species as possible, making a special effort to find the scarce species with doubtful records.

### **5.13.6 Monitoring**

- Location, abundance and vulnerability of the scarce species

## **5.14 Invertebrates**

### **5.14.1 Location**

Compartments: all

The assemblage of invertebrates forms part of the special interest of the SSSI.

### **5.14.2 Description and management rationale**

The Council have organised two substantive surveys for invertebrates, one covering the fresh and brackish water species and the other concentrating on the terrestrial species:

- Aquatic macroinvertebrate survey (Blofield A. 2003)
- Stanpit Marsh invertebrate survey (Budd P. 2003)

In the aquatic survey 63 taxa were identified to species or genus and a number of other groups such as nematodes, water mites and copepods noted. The terrestrial survey recorded 290 species by compartment and covered a wide range of orders (beetles, bugs, flies, butterflies, moths, bees, ants, molluscs etc). Casual records and occasional surveys add to the database. The countryside wardens usually monitor butterflies and dragonflies on a standard walk, but otherwise there is no systematic recording.

Inevitably there are 'specialists', species that are restricted to particular habitats, and there are a few notable species in the lists. A full assessment of the importance of the invertebrates, beyond being a food source for larger animals, has not been written. Despite this, there is no doubt that invertebrates are important components in the ecology of the site. Past management has assumed that maintaining a satisfactory range of habitats in good condition (from a botanical perspective) with reasonable numbers of birds is sufficient to conserve the less visible invertebrates. The understanding of the many invertebrate groups should be improved so that future management can be better informed.

#### **5.14.3 Current condition**

The current status of invertebrates is unknown.

#### **5.14.4 Objective**

Maintain communities and populations of invertebrate species where:

- Scarce and specialist invertebrates are present as viable populations.
- Populations of common species are robust enough to support their predators.
- The requirements of significant species are understood.
- There is no loss of notable invertebrate populations.

#### **5.14.5 Actions**

- a. Ask an expert to review and assess the accumulated invertebrate records.
- b. Survey for the rarer and most important species and estimate abundance.
- c. Modify the management plan if the needs of significant species are missing.

#### **5.14.6 Monitoring**

- Butterfly and dragonfly transects for six months between April – September each year.
- Moth trapping.
- Specialist surveys to improve knowledge of significant species.

### **5.15 Birds**

#### **5.15.1 Location**

Compartments: all (map 6)

The assemblage\* of birds forms part of the special interest of the SSSI

\* Variety of wintering bird species; Variety of bird species on passage; Assemblage of breeding bird species

#### **5.15.2 Description and management rationale**

Map 6 indicates the most important areas for birds.

Over the high tide periods, waders use the saltmarsh and islands (see map 2) to rest up as they wait for the mud to again become exposed. It is during these times that the birds need to be able to rest unhindered, else any energy generated by previous feeding will be lost. Most of the waders will be using Stanpit as a staging post on their journeys between the breeding quarters in Scandinavia or Siberia and their wintering grounds in Africa or southern Europe. It is therefore essential the birds take in and maintain as much energy as possible to see them through these arduous journeys. Energy spent flying around as a result of disturbance is simply a waste.

There is widespread appreciation of this issue amongst Christchurch Borough Council (CBC), Bournemouth and West Hants Water Company (BWH), Christchurch Angling Club (CAC), Christchurch Harbour Ornithological Group (CHOG), Friends of Stanpit Marsh (FOSM) and West Hants Wildfowlers (WHW); all of whom have already undertaken initiatives to reduce the possibilities of inadvertent disturbance. Local byelaws, particularly in relation to the control of dogs and general disturbance, are designed to meet the objectives of the nature reserve whilst allowing a considerable level of public access

One of the sensitive areas is South Marsh that forms the western edge of Stanpit Bight. It is from the north-eastern and south-western corners of South Marsh that most bird monitoring and observation takes place. The presence of a hide in either of those locations would provide a focal point for all those who are interested in learning about the birds and other nature of the reserve, as well making a clear visual boundary beyond which disturbance is likely.

Table 4. lists the birds of conservation concern (bocc) that have nested on the site at some time. Nearly 60% of the species in the table are not particularly associated with wetland habitats and this is even more marked if the more common breeding birds are included (a full list of breeding species appear in the appendix).

**Table 4. Breeding birds on the red and amber lists**

species	habitat	nest location <sup>†</sup>	breeding pairs average 2003-5	bocc listing
Bearded tit	reed beds	Great Spires	0.3	A
Cetti's warbler	scrub	Priory Marsh, Marginal banks W	7.5	A
Dartford warbler	scrub	Crouch Hill	0.5	R
Duncock	scrub	Ashtree meadow	2.0	A
Lapwing	open fields	no breeding records	0	A
Linnet	scrub	Crouch Hill, N.Scrubs	3.3	R
Meadow pipit	meadow	Central Marsh	4.7	A
Mute swan	reed beds	Great Spires	2.3	A
Oystercatcher	gravel banks	1985	0	A
Redshank	wet meadow	1972	0	A
Reed bunting	reed beds	Great Spires	9.7	R
Ringed plover	gravel banks	1972	0	A
Shelduck	burrows	Crouch Hill	0.7	A
Skylark	open fields	Central Marsh	2.7	R
Song thrush	scrub	Marginal banks W, N.Scrubs	2.3	R
Water rail	reed beds	Great Spires, Priory Marsh	4.0	A
Yellowhammer	scrub	1972	0	R

<sup>†</sup> Only the main sites mentioned. Where the location is not clear the date of the last record is entered in this column

There seems to have been a large decline between 1972 and 1985, but thereafter, fairly steady breeding success, although numbers fluctuate from year to year. Some birds, such as yellowhammer, may be permanently lost as breeding species due to the national decline and loss of habitat. Others, like lapwing, are potential breeders and the

edaphic conditions would seem to be suitable for other species if the habitat is managed sympathetically. Mink are a threat, particularly to ground-nesting birds and control measures may need to be put in place.

### **5.15.3 Current condition**

Bird populations are not assessed by Natural England, however there are regular wintering and breeding bird surveys co-ordinated and undertaken by members of CHOG.

#### **Currently the bird interest is not meeting the objectives for the site.**

The lack of waders breeding on Priory Marsh and general disturbance on Stanpit Marsh are of concern.

### **5.15.4 Objective**

Maintain viable populations of rare, scarce or vulnerable birds, where:

- Redshank and possibly lapwing regularly breed within the SSSI on Priory Marsh
- Breeding, roosting and feeding birds are rarely disturbed by people and dogs.
- Scrub supports about 4 breeding pairs of passerines per hectare.
- There is no reduction in the number of birds nesting, roosting and feeding
- A management programme for the control of American mink *Mustela vison* is implemented
- There are at least 3 pairs of skylark and 4 pairs of meadow pipit breeding each year (see saltmarsh monitoring)

### **5.15.5 Actions**

- a. Clear the main ditches on Priory Marsh in rotation.
- b. Investigate the practicality of installing a simple water control structure to facilitate the management of water levels on Priory Marsh.
- c. Manage scrub to maintain it in a healthy condition
- d. Graze appropriately to encourage redshank and lapwing breeding.
- e. Control mink populations and other harmful predators such as foxes when this proves necessary.
- f. Warden the marsh and enforce the bylaws to reduce disturbance to wildlife
- g. Erect notices to encourage responsible use by the public and thereby minimise disturbance of birds
- h. Consider a review of the bylaws relating to disturbance of birds on the nature reserve to enable effective wardening
- i. Contribute to national BAP targets where appropriate
- j. Consider the construction of a public bird hide made of suitable materials within the gorse scrub area that overlooks Stanpit Bight

### **5.15.6 Monitoring**

- Annual survey of nesting birds.
- Continue the WeBS.
- Monitor presence and impact of foxes on ground nesting birds
- Monitor disturbance to wildlife

## **5.16 Natterjack toad**

### **5.16.1 Location**

Compartments: North Scrubs

### 5.16.2 Description and management rationale

Stanpit Marsh is within the former range of the natterjack toad, although there are no historic records. The Hengistbury Head population died out in the 1950s and a re-introduction has been very successful. The Herpetological Conservation Trust (HCT) were keen to take spawn from this population to introduce a colony to Stanpit Marsh as a contribution to the UK biodiversity action plan for this endangered species (it is protected under the WCA).

Temporary pools were set up in the enclosure on Crouch Hill as a nursery for natterjack toads and a permanent pond was constructed in North Scrubs. The first spawn and tadpoles were introduced in 2001.

Successful establishment has not occurred yet, as table 5 shows. Over this period the number of strings laid in the Hengistbury Head ponds has fluctuated between 18 and 44; the lowest number being in 2002 and the highest in 2004.

**Table 5 Natterjack toad population**

	2001	2002	2003	2004	2005	2006	2007	2008
spawn transferred	460	4 strings	0		0	0	tbc	tbc
tadpoles transferred	1000	~2000	yes		0	0	tbc	tbc
spawning on site	0	0	0	0	2 pairs	0	tbc	tbc
tadpoles hatched					1400		tbc	tbc
toadlets dispersed	1073	~2500	2671		110	0	tbc	tbc
adults recorded	0	0	0	0	calling, 2 observed	calling	tbc	tbc

### 5.16.3 Current condition

The Natterjack Toad is not subject to Natural England's condition assessment. However, the current condition is considered to be unfavourable as a self-sustaining population has yet to become established. Low numbers of adults have been observed or heard in the last two seasons. The populations of grass snakes, herons, little egrets and other predators may be too voracious for many toadlets to survive near the saltmarsh.

### 5.16.4 Objective

A thriving population of natterjack toads, where

- The adult population is estimated to include at least 50 mature females
- Or, abandon the project by 2012 if investigations show that the population is unsustainable without artificial reinforcement from other populations.

### 5.16.5 Actions

- a. Maintain the pond in North Scrubs in suitable condition
- b. Remove the nursery pool on Crouch Hill.
- c. Re-assess the suitability of the site if the population declines or never reaches a viable level.
- d. Investigate constructing another pond away from the areas frequented by waders, such as the old depot and any other management actions which may be needed for the existing population.
- e. Contribute to national BAP targets where appropriate

### 5.16.6 Monitoring

- Record the presence of calling males (count if possible).
- Count egg strings

- Assess numbers of toadlets.

## **5.17 Prehistoric uses and Archaeology**

### **5.17.1 Location**

Compartments: Crouch Hill, North Scrubs, Grimmerly Marsh. (maps 7a, 7b)

Area: undefined

Although not formally designated, the importance of Stanpit Marsh is seen in the wider context of the harbour and Hengistbury Head (Ancient Monument). There is a link with the burial mounds and the Mesolithic site at Hengistbury Head. It is imperative that all features are protected.

The Historic Environment Record Information for Stanpit Marsh was provided by the Dorset Senior Archaeologist at County Hall, Dorchester (appendix 5). A better understanding of the remaining archaeological records associated with North Scrubs and the marsh sediments awaits further investigations. There is likely to be more unrecovered archaeology in the sediments of the harbour and marshes, where there is also ample potential for palaeo-environmental investigations.

### **5.17.2 Description and management rationale**

Feature 17a. Burial mound, Crouch Hill

The main feature is a low mound on Crouch Hill, which is probably a barrow or prehistoric burial mound. It was recognised through excavations in 1921 by St. George Gray and in 1969 by M. Ridley and published by Cunliffe (1987). A considerable amount of pottery was recovered, some Bronze Age, but mostly Neolithic grooved ware. At least one Early Bronze Age cremation was deposited but at what stage the mound was erected can probably no longer be determined. As a result, the site remains something of an enigma. Flint implements were also recovered including scrapers, cores and a transverse arrowhead.

Feature 17b. Mesolithic site, Mother Siller's Channel, Grimmerly Marsh

S. Palmer (1970) recovered hearths and flint microliths from an open site in Mother Siller's Channel, positively identified to the Later Mesolithic (Barton 1992). Excavations at the base of Crouch Hill recovered a small industry with much waste material characteristic of a camp site. The feature, located between the channel and Crouch Hill, is occasionally liable to flood and vulnerable to erosion

Other features

All other records for the marsh require confirmation by the Senior County Archaeologist. It is therefore necessary to ensure that erosion and damage is not brought about by management practices.

### **5.17.3 Current condition**

The archaeology is not subject to Natural England's condition assessment. However, the

The current condition is considered to be unfavourable no change

The past few decades have witnessed significant impacts to the feature with over-grazing by livestock and rabbits, scrub development and path erosion.

- As far back as 1921, St. George Gray recorded that the mound was riddled with rabbit burrows.
- In spite of the disease Myxomatosis in the 1950s and some degree of rabbit control and poaching, rabbits are still active there today and present a threat to the feature by grazing and burrowing.
- At no time is the reserve rested from livestock grazing. At times of flood, notably in winter when the grass is dormant, animal presence on higher and drier ground is excessive. On Crouch Hill, this has contributed to a very short turf often broken to expose underlying sands which can quickly enlarge through the rolling activity of horses. In the late 1970s a large area of exposed mound was fenced to permit its recovery.
- Gorse Scrub (*Ulex europaeus*) has developed naturally and has been a peripheral feature of Crouch Hill for decades. It is considered to be useful both to the grazing animals (shelter) and the wildlife including birds. It is not considered to be a serious threat to the archaeology provided it is controlled.
- Path erosion in recent decades along the route across Crouch Hill has led to soil compaction and instances of erosion to bare ground.

#### **5.17.4 Objective**

Restore the state of the archaeologically significant sites, where:

- There is no reduction in the size, extent or structural integrity of the features
- The Crouch Hill burial site is an open grassed mound.
- The features are protected without restricting public access.
- Gorse scrub is limited to the periphery of the Crouch Hill and is not encroaching on the Mesolithic site.
- There is no disturbance by rabbits.
- There is greater public awareness of the importance of Stanpit Marsh in relation to Christchurch Harbour and Hengistbury Head. There should be a low key approach to interpreting this feature.

#### **5.17.5 Actions**

(In consultation with the County Senior Archaeologist)

- a. Audit and report on all features which are thought to be of historic or archaeological significance.
- b. Adjust the grazing regime to establish a summer sward height of 10cm.
- c. Clear all scrub in the fenced enclosure. Cut it to ground level and treat with herbicide (avoiding ground disturbance). Retain enclosure fencing until the grassland has recovered.
- d. Remove enclosure fencing as and when appropriate. Posts cut to ground level (preferred option). If posts are removed, holes must be suitably restored.
- e. Remove rabbits.
- f. Continue with established rotational management of peripheral Gorse on Crouch Hill
- g. Approach an Archaeological Consultancy to undertake a preliminary mapping survey of Crouch Hill features (mapped to GIS). Following this, obtain their advice as to the suitability of the location for a geophysical survey. There is potential for Palaeo-environmental research in the sediments linked to that in the harbour and on Hengistbury Head
- h. Excavation within the next five years is not recommended – it may well not produce any helpful information.

#### **5.17.6 Monitoring**

- Assess damage now and in the future.

- Assess effects of grazing and disturbance and record recovery.

## 5.18 Cultural Features - Historic Past and Present use

Many local people still regard the recreational function of the reserve as being the main priority and visit the reserve for scenery, fresh air and unspoilt qualities. However, it is increasingly understood that these qualities only exist because of marsh's scientific and ecological importance.

The Council's user survey in May to October 2000 (Hurle 2000) did not produce estimates of total numbers of visitors. However, it is estimated that more than 100,000 people visit the reserve annually. Random counts showed that visitor numbers peak in August and are at their lowest in October. The most popular activity (37%) was walking. Dog walking was next (27%), then fishing (12%) and bird watching (10%). Less significant were cycling (3%) and activities including jogging, pond dipping and sunbathing (11%).

The user group disturbance survey over the summer of 2006 (Forster) demonstrated that walkers and dog walkers caused most disturbance to wildlife (48%). The other categories included anglers (20%), walkers (14%), bird watchers (10%) and canoeists (7%) – See Appendix 7. This conforms with an earlier survey (Wills & Greaves 1986) targeted at disturbance in Stanpit Bight. However, snap shot surveys carried out over nearly 60 hours in 2007 and 2008 at different times of the year show the greatest disturbance to be waterborne from canoeists entering the sensitive Stanpit Bight with walkers, dog walkers, birdwatchers and anglers creating fewer disturbances. The surveys are not comparable but whilst the data is showing different user groups creating differing amounts of disturbance at different times it is clear that a significant number of disturbance incidents are occurring on and close to the nature reserve.

The Council have engaged in positive discussions with local residents and user groups such as Christchurch Angling Club both on site through wardening and through the Stanpit Marsh Advisory Panel. In this way it is raising awareness amongst members of the public about sensitive areas of the reserve. This has led to some groups to modify their use of the marsh in sensitive areas. The Council has also fed information on this issue into the Christchurch Harbour Aquatic Management Plan with particular reference to the waterborne disturbance.

The one area where this is not proving successful in reducing disturbance to birds is in relation to dogs running freely. Byelaw No 39 (j) states that any dog is to be 'kept under proper control and effectively restrained from injuring or disturbing any animal or bird'. However, Byelaw (j) has not to date been an effective tool for the Council and the wardens have experienced difficulty over many years enforcing this byelaw. It is considered that the wording 'proper control' is too ambiguous and can be interpreted a number of ways. The byelaw is also worded in such a way that it does not, in practice, prevent disturbance from occurring.

It should be noted that the majority of people (including dog walkers, bird watchers, anglers, etc.) enjoy their visits to the nature reserve without causing any disturbance to the wildlife. Stanpit Marsh is an important and vital area for public recreation and there is a growing awareness amongst the people of the importance of the site as a wildlife habitat as well gentle public enjoyment and relaxation. There is a history of school visits and project work by students which should be responsibly encouraged to help with the

above aims. The data from fieldwork undertaken is often a useful contribution to reserve records.

### **5.18.1 Objectives**

- a. Ensure that present and future user groups do not cause damage or disturbance to the habitats and wildlife.
- b. Ensure that management practices including livestock and rabbits do not damage or disturb habitats or archaeology.
- c. The site is interpreted effectively and students are encouraged to undertake supervised and responsible fieldwork.
- d. Consider ideas to develop aspects of the recreation ground to make it more attractive for dog walking to help relieve pressure from the SSSI.

### **5.18.2 Actions**

- a. Enforce byelaws
- b. Consider options to reduce wildlife disturbance and to ensure that enforcement is effective.
- c. Develop the interpretive materials for the new information centre and at appropriate outside locations e.g. edge of the recreation ground looking over East & South marsh and on the new golf course footpath overlooking Priory and Grimmer marshes.
- d. Consider whether there needs to be restrictions on cycling on the marsh e.g. bikes to be pushed, not ridden.

### **5.18.3 Monitoring**

- A full visitor survey providing data on numbers, categories of use and impact (damage and disturbance)

## **5.19 Information centre**

### **5.19.1 Location**

Compartments: Recreation ground  
Area: < 0.1 ha

### **5.19.2 Description and management rationale**

Stanpit Marsh LNR is an important wildlife site and a well used open space. For many years there has been a hut near one entrance with some interpretive material. A new information centre was completed in 2008 which will be more effective at informing visitors of the importance of the Marsh, and indeed the whole of Christchurch Harbour SSSI. It is anticipated that a better informed visitor will be a more responsible visitor. The new centre will provide enhanced facilities for wardening and it is hoped it will provide the impetus towards the continued development of a volunteer wardening system on the reserve.

It is considered by some that there should be a public convenience situated in the vicinity to serve the many people who visit the area.

### **5.19.3 Current condition**

The information centre and facilities are in favourable condition

### **5.19.4 Objective**

Operate a centre that will:

- Provide a focus point for activities on the marsh and satellite sites and offer basic facilities.
- Assist the wardening staff and volunteers to maintain the features and facilities of the marsh and satellite sites in favourable condition
- Provide information that benefits the conservation and archaeological features of the site
- Helps to reduce conflict between user groups

### **5.19.5 Actions**

- a. Complete the interior interpretation
- b. Discuss with the other departments in the Council whether a public convenience should be provided
- c. Consider building a web site

### **5.19.6 Monitoring**

- Numbers of visitors and usage of facilities
- Events and guided walks
- Survey effectiveness of interpretative facilities and public information

## **5.20 Access and footpaths**

### **5.20.1 Location**

Compartments: all

### **5.20.2 Description and management rationale**

There is a good footpath and cycleway from Stanpit to the Leisure Centre and along Marsh Lane. Elsewhere footpaths are not well defined. Disabled access is limited. Vehicular and stock access is restricted by gates at:

- N end of Priory Marsh
- Leisure Centre car park
- W end of N.Scrubs
- Stanpit scout hut (to recreation ground and to N.Marsh)
- Disraeli Rd.

Most able-bodied people can walk around the marsh on the well defined circular walk on all but the highest floods. It is desirable to improve access for all. Some of this work has already been achieved through wider gates and entrances but further work will take place where practical. Works to improve the footpath across Priory Marsh are underway (2008/09) but this route is impassable at some states of the tide and waterproof footwear is required for much of the year. In some respects the recently opened footpath around the golf course is an alternative route.

Disturbance of wildlife by the public is potentially detrimental and birds are especially vulnerable. Improved access could exacerbate the problem. However it has been found that a well constructed path network discourages people from venturing elsewhere, thereby improving the seclusion of much of the reserve. Further, the provision of a hide

overlooking Stanpit Bight would indicate that area is particularly sensitive and, in common with many similar nature reserves, provide members of the public, small school parties, etc. with educational opportunities and the opportunity to view the birds without disturbing them.

### **5.20.3 Current condition**

Access and ground conditions are subject to the natural condition found on the site (tides etc.) In some places the condition of footpaths has been found to be unfavourable.

### **5.20.4 Objective**

Access to the site is favourable when:

- The public can walk safely and easily around traditional routes at most states of the tide.
- Improved access with DDA requirements in mind is available where this is practical.
- Vehicles can quickly get close to most areas for maintenance or emergencies.
- Stock can be moved onto or off the grazing compartments.
- Areas sensitive to disturbance are not easily accessible or are avoided by agreement.
- The archaeological features are avoided or protected by a suitably constructed walkway.
- Wildlife is not disturbed by recreation and other human activities.

### **5.20.5 Actions**

- a. Audit the access arrangements for all users.
- b. Encourage the use of the new path around the golf course as a replacement for the footpath across Priory Marsh because that one becomes impassable for much of the year.
- c. Improve the main circuit around Stanpit Marsh for the people where this is practical.
- d. Consider future design and access arrangements for the recreation ground
- e. Prepare a map showing areas that should be avoided at certain times for the benefit of the wildlife.
- f. Warden the marsh to inform the public and ensure disturbance is minimised.

### **5.20.6 Monitoring**

- The condition of the main footpaths is inspected at least once a week.
- Irresponsible and damaging activities are recorded.