Scottish Natural Heritage

ST MARGARET'S MARSH
Site of Special Scientific Interest

SITE MANAGEMENT STATEMENT

Site code: 1659

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Purpose



This is a public statement prepared by SNH for owners and occupiers of the SSSI. It outlines the reasons it is designated as an SSSI and provides guidance on how its special natural features should be conserved or enhanced. This Statement does not affect or form part of the statutory notification and does not remove the need to apply for consent for operations requiring consent.

We welcome your views on this statement.

Natural features of St Margaret's Marsh SSSI	**Condition of feature** (and date monitored)
Transition saltmarsh (reedbed)	Favourable declining (August 2011)
Saltmarsh	Unfavourable recovering (July 2016)

Description of the site

St Margaret's Marsh Site of Special Scientific Interest (SSSI), located on the northern shore of the Firth of Forth at Rosyth, comprises an area of reedbed and saltmarsh situated immediately above the high water mark. The southern boundary is a narrow intertidal mudflat with a stone faced seawall along its length, to the west is an area of brownfield land (and beyond that Rosyth dockyard), on the north-western boundary is an industrial railway line, and the northern and eastern boundary runs along the embankment of the B981.

The 13.7 ha reedbed is formed of almost pure stands of common reed and is the largest coastal reedbed in the Firth of Forth and one of the largest reedbeds in Fife. This habitat occurs in two distinct patches divided by a bund running north to south through the centre of the site. Located on the south-east boundary of the SSSI, the 2.25 ha saltmarsh forms less than 1% of the Firth of Forth total but shows good transition from lower marsh, through low-mid marsh and mid-upper marsh to drift line communities. The remaining areas are dominated by tall herbs, principally great willowherb, with herb rich grassland around the bund and scattered hawthorn, gorse, bramble and goat willow scrub.

The reedbeds provide habitat for breeding birds such as sedge warbler and reed bunting.

The site has been monitored as part of SNH's Site Condition Monitoring (SCM) programme. Over recent years the condition of both the reedbed and saltmarsh declined due to lack of inundation by sea water, and possible nutrient enrichment from groundwater. The reedbed became dominated by common reed (*Phragmites australis*) resulting in low floristic diversity, and gradually common reed spread on to the saltmarsh.

Reedbed	Saltmarsh
	

Past and present management

St. Margaret's Marsh developed on reclaimed intertidal land formed by the tipping of dredged waste during the development of Rosyth naval dockyard between 1905 and 1945. In 1943 a seawall was built to retain further material from dredging although the full capacity was never reached, leaving unfilled lagoons. Between 1945 and 1964 Dunfermline Burgh used the site for tipping domestic waste and also built a sewage works on the northern part of the site. During this period the lagoons were largely open water with fringing reedbeds and were well used by wintering wildfowl. Small scale wildfowling, mostly by naval personnel, occurred on the lagoons while there was still open water available. Between 1965 and 1977 the reedbeds encroached upon the open water, which virtually disappeared along with the associated waterfowl. Today there is no open water and the area of saltmarsh has decreased as the reedbeds have expanded.

About 1990 a 30m x 30m area of common reed was dug out and translocated to the Valleyfield lagoons at Torry Bay to set up a reedbed sewage filtration system. It was hoped that the area from which the reeds were extracted would form an area of open water but they quickly regrew to their former state in just a few years.

Bird records for BTO's Common Bird Census have been collected annually since 1994.

The SSSI was under an SNH Management Agreement with the owner between 2003 and 2006; this supported the maintenance of a sluice that allowed sea water to enter the site at spring tides. The sluice then fell into disrepair with detrimental consequences for the saltmarsh.

In 2008 2.4 hectares of scrubland at the extreme west of the site was denotified as it did not contain either of the notified features and did not perform the hydrological buffer role for which it had originally been included.

The major infrastructure project to construct the Forth Replacement Crossing started in 2011, with the Queensferry Crossing opening in August 2017. This project required the rerouting of the B981 resulting in the destruction of 4.62 ha of the SSSI, with the loss of 1.92 ha of reedbed and 2.70 ha of non-qualifying habitat. To compensate for this loss of habitat the requirement for positive management of the SSSI was included in the Forth Crossing Act 2011. The Management Plan was developed in consultation with SNH and finalised in 2011. Work has been carried out to improve the site since then.

This involved the installation of three new sluice gates through the seawall to allow inundation of the site with sea water at high tides. A series of channels were excavated through the reedbeds to allow this inundating sea water to penetrate further into the site, and a number of pipes were installed through bunds within the site to allow sea water to flow over a wider area. It is hoped that more regular inundations of sea water may slow down the growth of the reeds, allowing a greater diversity of plants and animals to develop, and allowing the saltmarsh to thrive and even expand. Areas of rank grass have been cut and removed, and with regular inundation these may develop into a more saline influenced grassland, or even saltmarsh.

Transport Scotland and the Steering Group are committed to monitoring and continuing this programme of work and are currently reviewing the site's Management Plan.

Objectives for Management (and key factors influencing the condition of natural features)

We wish to work with the owner to protect the site and to maintain and where necessary enhance its features of special interest. SNH aims to carry out site survey, monitoring and research as appropriate to increase our knowledge and understanding of the site and its natural features.

1. To maintain the extent of the reedbed and saltmarsh habitats

This site has been in constant transition since its creation. Currently the extensive reedbeds form a significantly large proportion, both locally and nationally, of a scarce habitat. If natural succession were to continue, scrub woodland would develop within a few decades. The preferred option is to manage the reedbeds in order to maintain the remaining saltmarsh and to recreate some open water in order to increase the site's diversity. Increasing the salinity by facilitating frequent flooding at high tides, potentially coupled with reed management by rotational cutting, will hopefully prevent further colonisation of the saltmarsh and open up the reedbeds. The Management Plan details the annual programme of works with monitoring to gauge success.

2. To maintain the network of sluices across the site

Maintenance of the three sluices in the seawall is essential to allow salt water to enter the site at high tides leading to the maintenance of the saltmarsh. Three seawall sluices and several internal sluices and pipes were installed across the site in 2015. These were linked by a network of excavated channels to ease the flow of salt water around the lagoons. The increased ingress of saline water should prevent further colonisation by non-salt tolerating plants, arresting the colonisation of scrub and the spread of the reedbed and so help to maintain the saltmarsh. Ongoing monitoring of high tide inundation levels is planned.

3. To control scrub and non-native invasive species.
The Management Plan includes the requirement to control scrub invading the reedbed and the control of giant hogweed and Japanese knotweed on the western boundary of the SSSI.

4. **To improve access and interpretation**
The Management Plan details the potential for providing a footpath around the site with information boards. With the infrastructure project completed the Steering Group are now planning implementation of this work.

Other factors affecting the natural features of the site

A small amount of hydrocarbon runoff from the M90, via field drains, was recorded on the marsh prior to the commencement of the Forth Replacement Crossing. Groundwater monitoring has been in place throughout the Forth Replacement Crossing Project.

Date last reviewed: 20 February 2019