Scottish Natural Heritage

LOWER RIVER CREE
Site of Special Scientific Interest

SITE MANAGEMENT STATEMENT

Site code: 1106

Holmpark Industrial Estate
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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 Lower River Cree SSSI	**Condition of feature (and date monitored)**
Smelt (*Osmerus eperlanus)*	Favourable, maintained (March 2004)

Description of the site

The Lower River Cree Site of Special Scientific Interest (SSSI) lies due south of Newton Stewart, from the tidal limit on the edge of the town extending approximately 9km south into the Cree estuary. The smelt or sparling is a fish that was formerly widespread both around the Solway and within other British estuaries. The lower section of the River Cree is now the only site in Scotland with a confirmed breeding population of smelt. The fish migrate from estuarine into freshwater in the spring to spawn, aiming for the rocky and gravel areas around the upper limit of tidal influence. The journey may take a number of tides to complete. During the low tide periods, the fish anchor themselves to the gravel river bed or to in-channel stonework. They then return to the more saline estuary waters and, it is thought, head out to sea.

Past and present management

The river banks have been strengthened by gabion baskets and earth banking in a number of locations. Angling and netting of salmon, sea trout, sprat and smelt has taken place for many years.

Fishing continues to be the main management activity within the site. Maintenance of river banking and outflow ditches is carried out, whilst some dredging of the Carty Pool takes place outwith the sparling spawning period.

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

We wish to work with the owners and occupiers 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 and monitor the effectiveness of its management.

1. **To maintain the extent of spawning habitat for smelt**
   Minimise activities that could change flows and substrate used by smelt in the upper reaches of the tidal extent of the site.

2. **To maintain and avoid changes in the quality of water reaching the lower stretches of the river that may affect the ability of the water to hold oxygen**
   This could affect the viability of spawn or young fish. The quality of the water of the river in terms of the ability to hold oxygen and low level of sediments should be maintained, particularly at times of low flow. Changes in the turbidity or sediment load carried by the water or increases in the growth of algae could smother the gravel beds that are necessary for spawning. Some fish are also known to be sensitive to changes in nutrient levels and acidity of the water. The new sewage treatment works in Newton Stewart should result in improved discharges into the river. Improvements could also be made to reduce the fluctuations in the acidity and nutrient load of the water. These works, however, would need to be carried out outwith the site, higher in the catchment. Better forestry management practices and restructuring of plantation forestry within the Cree catchment should lead to long term improvements.

3. **To maintain natural flow regimes in the river**
   These fish appear to have poor swimming capability, instead relying on the assistance of tides to assist with migration upriver. Changes in the flooding regime, such as an increasing trend towards flash flooding during the migratory period, may adversely affect the population. Low summer flows may also present problems for spawn and young fish through decreases in the amounts of available oxygen and build-up of sediment or algae on the spawning grounds.

4. **To manage sustainable fisheries on the river**
   Fish enter the river on migration in large groups over a short period of time. This increases the potential for large numbers to be caught, thereby increasing the chances of over-fishing taking place. The smelt fishery should be managed to allow a sustainable harvest. Options such as licensing, quotas, close seasons and catch-and-return should be investigated. A programme to increase the awareness of fishermen about the rarity and sensitivity of smelt should be undertaken.

5. **To maintain natural substrates required by smelt**
   Although the fish use rock and stone features as anchor points whilst waiting for tides during their migration, engineering works, such as the installation of gabion baskets, could affect the water flow to the detriment of the gravel spawning beds. Engineering work could, however, be of benefit in allowing fish to reach the higher sections of the river above the weir in Newton Stewart.

Other factors affecting the natural features of the site

Climate change may lead to changes in the availability of optimum habitat through changes in flow regimes, warmer water and tidal inundation. No details of these potential impacts are currently available.

Date last reviewed: 26 November 2010