



**Canal &
River Trust**

Making life better by water



A SITE MANAGEMENT FRAMEWORK FOR SITES OF SPECIAL SCIENTIFIC INTEREST NOTIFIED FOR THEIR CANAL HABITAT ON THE CANAL & RIVER TRUST'S ESTATE

Date 25th July 2018

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PART 1 INTRODUCTION

1. The Canal & River Trust

- 1.1. The Canal & River Trust (the Trust) came in to being on 2nd July 2012 and is charged with caring for 2000 miles of canal and river navigation in England and Wales along with its supporting infrastructure, including many miles of feeder streams, towpaths and hedgerows and over 70 reservoirs.
- 1.2. The Trust is a statutory undertaker with all of the legal duties of its predecessor, British Waterways as outlined in section 3. The Trust's purpose is to manage living waterways with the aim of transforming lives. The waterways are an important wellbeing resource and this is the focus of the Trust's work.
- 1.3. In managing its undertakings the Trust must balance its activities with its environmental duties (see section 3) and its charitable objectives to:
 - preserve, protect, operate and manage inland waterways for public benefit for navigation, walking on towpaths; and for recreation or other leisure-time pursuits of the public in the interest of their health and social welfare.
 - protect and conserve for public benefit sites, objects and buildings of archaeological, architectural, engineering or historic interest on, in the vicinity of, or otherwise associated with inland waterways.
 - further for the public benefit the conservation protection and improvement of the natural environment and landscape of inland waterways.
 - promote, facilitate, undertake and assist in, for public benefit, the restoration and improvement of inland waterways.
 - promote and facilitate for public benefit awareness, learning and education about inland waterways, their history, development, use, operation and cultural heritage by all appropriate means including the provision of museums.
 - promote sustainable development in the vicinity of any inland waterway for the benefit of the public, in particular by the improvement of the conditions of life in socially and economically disadvantaged communities in such vicinity; and the promotion of sustainable means of achieving economic growth and regeneration and the prudent use of natural resources.
 - further any purpose which is exclusively charitable under the law of England and Wales connected with inland waterways; provided that in each case where the trust undertakes work in relation to property which it does not own or hold in trust, any private benefit to the owner of the property is merely incidental.

2. The waterway network

- 2.1. The inland waterway network is unique in cutting across catchments and acting as a landscape scale wildlife corridor connecting fragmented habitats.
- 2.2. Our canals and navigable rivers provide an indispensable opportunity to engage people with the natural environment.
- 2.3. The Trust owns, wholly or in part, 13 Natura 2000 sites, 65 Sites of Special Scientific Interest (SSSIs) and more than 1,000 non-statutory wildlife sites. It is responsible for over half of the canal SSSIs in England.
- 2.4. The Trust's SSSI series comprises both operational land, such as navigable canals and water supply reservoirs, and non-operational land, such as small sections of woodlands and meadows.
- 2.5. The Trust has developed a Biodiversity Strategy to align our work with external policies and targets such as the Water Framework Directive and the England Biodiversity Strategy. Ensuring favourable management of landholdings that lie within SSSIs is one of the key elements of the Trust's biodiversity strategy.

3. The statutory framework

- 3.1. The Trust is a "Section 28G Authority" under the Wildlife and Countryside Act 1981 (as amended) and as such the Trust has a general duty to take reasonable steps to further the conservation and enhancement of the features special interest of its SSSI series as well as specific duties to notify NE before undertaking or permitting a third party to undertake any activity that is likely to damage the features of interest of a SSSI, whether the activity would take place within or outside of the designated site.
- 3.2. The Trust is also deemed a "Competent Authority" under the Conservation of Habitats and Species Regulations 2010 (as amended) and therefore has a duty to ensure that it exercises its functions that are relevant to nature conservation, including marine conservation, so as to secure compliance with the requirements of both the Habitats Directive and Wild Birds Directive.
- 3.3. As a statutory undertaker the Trust is also covered by part 3 of the Natural Environment and Rural Communities Act 2006 (which gives further duties to those given to British Waterways under the 1995 British Waterways Act) requiring the Trust to have regard to the conservation of biodiversity as far as is consistent with its function.

4. The site management framework

- 4.1. This document sets out a framework, agreed by the Trust and Natural England (NE) for the management of the Trust's SSSI series. It relies on the Trust's existing environmental duties to streamline the requirements for assenting, provides agreed protocols on certain management activities, and sets out high-level management principles to secure the integrity of the SSSI series.
- 4.2. This site management framework focuses on SSSIs notified for their canal habitat (see Table 2.1 for full list of canal habitat SSSIs owned by the Trust) but also to identify opportunities to positively manage and eliminate threats to the condition of the wider series of SSSIs.
- 4.3. This document sets out guiding principles on how the Trust will manage its SSSI series and work with NE and other stakeholders to help eliminate threats and protect and promote our most important wildlife sites.
- 4.4. The appendices to this document contain information on the conduct of a variety of management activities that have been agreed by both parties. Through agreement of this Site Management Framework, NE provides assent for the Trust to undertake the routine activities as set out in Appendix 1 on those Canal SSSIs listed.
- 4.5. This site management framework includes:
 - A national assent for the Trust's management activities on selected SSSIs
 - An agreed protocol for dredging in SSSIs
 - An agreed protocol on fish population management in SSSIs
 - An agreed protocol on moorings and new marina connections affecting SSSIs
- 4.6. The site management framework is under-pinned and / or complimented by:
 - The Canal & River Trust's environmental policy
 - The Canal & River Trust's Environmental Management System and mandatory requirements for environmental appraisal
 - The Canal & River Trust's Biodiversity Strategy
 - Site-specific action plans that will be drawn up for canal habitat SSSIs (see table 2.1).
 - Site-specific assents for works not covered by the assent at Appendix 1.
 - Existing, and forth-coming, site-specific management plans and management agreements with 3rd parties.
 - The Canal & River Trust's habitats regulations assessments for European sites (see Table 3.5)

5. Framework objectives and outcomes

5.1. The primary objective of this site management framework is to help meet outcome 1A of the England Biodiversity Strategy. In particular, by 2020 to;

- Maintain 50% of SSSI area in favourable condition
- Maintain 95% of SSSI area in unfavourable recovering or favourable condition.

5.2 The Memorandum of Understanding between Canal & River Trust and Natural England states targets from the Trust's 10 Year Strategy that:

- At least 90% of statutory designated sites and bodies of water within our control meeting statutory requirements and the Trust's environmental standards (for SSSI and other designated wildlife sites, the Trust aims to deliver all practicable actions that are under our control to achieve and maintain Favourable condition).
- A 10% increase in net habitat gain over the strategy period (establish a baseline for key habitats in our waterway corridors and deliver increases in extent of habitat in good condition – either by improvements to existing or by creating new).

5.3 In order to meet these targets this framework aims to:

- Address the outstanding remedies for canal habitat SSSIs by committing to the development of site specific action plans for these sites
- Address threats to condition to the remaining SSSIs by identifying a range of environmental management principles and actions and agreed protocols that may be implemented by 2020 where evidence shows there will be a real conservation benefit and where funding allows. These actions will be included in the Trust's lists of local environmental priorities and where appropriate will be incorporated in to site-specific action plans for individual sites.
- Ensure all sites, over which the Trust has an influence, through ownership or operation, are either in Favourable Condition or, through positive actions, moving towards it.

5.4 The secondary objective of this site management framework is to ensure that the Trust's SSSI series and the wider inland waterways continue to deliver biodiversity and recreational benefits that are accessible to all.

6 Scope

6.4 This management framework will cover all SSSIs wholly or partly owned or managed by the Trust within England. The long term assent will initially cover only those Canal SSSIs listed in Table 3.5. The Trust and Natural England may extend this Assent to all the Trust's SSSIs in England over time as further features are given consideration.

PART 2 MANAGEMENT FRAMEWORK

7 Environmental management principles

7.1 In managing the inland waterway network the Canal & River Trust undertakes to implement the following management principles:

- Implement our environmental management system and undertake an Environmental Appraisal for all of our activities and programmes of works.
- Ensure existing work programmes are reviewed by local ecological staff to address any site specific needs.
- Control routine and low risk activities within the SSSI series through applying standard environmental protection measures to ensure there is no impact upon any of the features of interest for each SSSI; these activities will be conducted under a national assent conferred by this agreement.
- Obtain specific assent for non-routine activities (all those not included in the 10 year assent) within the SSSI series.
- Ensure SSSI management is recognised as a priority in our local strategic waterway plans and seek external funding and / or support to assist in maintaining site condition
- Prepare site action plans for SSSIs where the Canal & River Trust has substantial landholding or where its management has the potential to adversely affect site condition.
- Fulfil its obligations as a competent authority under the Conservation of Habitats and Species Regulations 2010 (as amended) and assess the likely significant effect of its programmes of works within all Natura 2000 sites.
- Work with NE and third parties, including local planning authorities in pursuit of opportunities to deliver measures to maintain and improve the condition of SSSIs through planning gain and incentive schemes (external funding).

8 General actions to address threats to the SSSI series

8.1 These are generic actions to protect and enhance the SSSI series that will be delivered through a variety of mechanisms including direct works, third party works, external funding and planning gains.

- The Trust will routinely record and manage Non-native Invasive Species where they have potential to affect site condition.
- The Trust will work together with NE to identify threats to site condition, ensuring resources are committed where they make a positive contribution to site condition.

- The Trust will work together with NE to review the findings of individual site condition assessment reports to identify any further measures to improve or safeguard site condition.
- The Trust will not significantly alter existing management regimes in any of our operational or non-operational SSSIs without consulting NE.
- The Trust will assess whether third party activities are likely to cause damage to any SSSIs and will notify NE under Section 28I of the Wildlife and Countryside Act before permitting any third party activities that the Trust considers likely to cause damage.
- The Trust will raise awareness of the SSSI series and encourage responsible behaviour through seeking external funding to improve information and interpretation for individual sites.

9 Actions to address threats to aquatic SSSIs

9.1 These actions will be prioritised in Trust's Local Plans. The Trust will undertake vegetation management to ensure biodiversity potential is maximised.

- The Trust will liaise with NE to encourage adjacent landowners to manage trees within their land ownership for the benefit of the SSSI
- The Trust will work with partners identify measures required to meet WFD objectives.
- The Trust will work together with NE and partners to identify sources of water pollution and to encourage land managers to implement resource protection measures such as fencing and riparian buffer zones.
- The Trust will implement the fish population management protocol outlined in Appendix 2.

10 Management actions to address threats to canal SSSIs

10.1 These actions will be highlighted as waterway environmental priorities and incorporated in to our local strategic plans

10.2 Dredging:

- The Trust will implement the dredging protocol outlined in Appendix 3.

10.3 Management of Aquatic and Marginal Plants with respect to boat traffic:

- Where evidence indicates that navigation poses a threat to the canal habitat or the species it supports the Trust and NE will undertake an options appraisal to investigate all options to conserve the habitat while maintaining recreational use of the waterway. A plan will then be produced based on the conclusions of the options appraisal. Once

money has been committed and work started on the ground the boat traffic remedy will be considered underway. Indicative options to be considered include

- opportunities to protect macrophytes in situ through spatial exclusion or promoting voluntary speed limits on navigation, trialling novel management techniques to improve habitat and population condition.
- ex-situ and compensatory measures where operational impacts cannot be avoided.

10.4 Bank Protection:

- Areas of degraded and eroded bank will be identified and prioritised for remedial action to prevent sediment input to the canal and improve marginal habitat.
- Where practicable, priority will be afforded to 'soft bank' techniques that maximise biodiversity benefit.
- Where harder bank reinforcement is required, this will be kept to a minimum and employed only once alternative 'softer' measures such as managing temporary moorings have been considered. The Trust and NE will encourage local landowners to implement measures on their land to stop cattle poaching banks. Where possible, defined cattle drinking points will be provided where fencing is installed.

10.5 Boating practices:

- The Trust will support the development of new "off line" marinas to reduce the pressures from linear moorings through the implementation of the new marina protocol outlined in appendix 4.
- No new commercial linear moorings will be approved within navigable SSSIs.
- The Trust will encourage new commercial hire operators to use boat designs with low impact designed boats.
- Through its website the Trust will raise awareness of all its navigable SSSIs with boaters and encourage them to "go slow" to avoid creating a breaking wash.

10.6 Raising awareness and appropriate behaviours amongst all users:

- Subject to funding and any heritage/ planning constraints the Trust will also erect signage identifying the entrances to each SSSI.
- Both parties will explore opportunities to raise awareness of the SSSI series through their own and 3rd party future publications (e.g. waterway maps and boater's guides).

11 Actions to improve the wider value of the SSSI series

- 11.1 The Trust will implement its Environmental Asset Management approach to add value to the SSSI series and ensure it continues to provide a valuable resource for the people and wildlife of England and Wales. This approach is detailed in Waterways and Wildlife –

Managing our Natural Environment, <https://canalrivertrust.org.uk/media/original/33561-waterways-and-wildlife-managing-our-natural-environment.pdf?v=7d192b>)

11.2 Emphasis will be on the following areas of work:

- Vegetation Management:
 - Regularly review our towpath mowing and vegetation management specifications to ensure they are optimal for biodiversity and customer safety, and add value to our SSSI series.
- Habitat improvements:
 - Incorporate environmental enhancements to engineering, maintenance and repair works within our waterway network wherever possible.
- Landscape scale enhancements/ maintain coherent ecological network:
 - Pursue opportunities to use the canal and river network to create links to existing or future wildlife and recreation sites.

12 Management of incidents and emergencies

12.1 For the purposes of this document, relevant incidents and emergencies are unplanned events that may cause an adverse impact upon the SSSI. In the event of a relevant incident or emergency affecting a SSSI the Trust will implement the following procedure.

- The Trust's Duty Officer or Duty Engineer will contact the Trust's local Environment Manager or Ecologist as soon as possible.
- The Trust's Environment Manager or Ecologist will attend the site at the earliest opportunity.
- The Trust's Environment Manager or Ecologist will contact NE no later than the next working day to discuss the impacts and potential mitigation measures associated with the emergency.
- The Trust will contact the Environment Agency if required.
- Where an incident or emergency adversely impacts upon the special nature conservation interests of the site, the Trust will endeavor to agree appropriate mitigation or restoration with NE and the offending party.

Table 2.1 Canal habitat SSSIs wholly or partly owned by the Canal and Rivers Trust which are a focus for the site management framework

| SSSI Name | Canal name |
|---|---|
| Ashby Canal | Ashby Canal |
| Cannock Extension Canal | Wyrley & Essington Canal (Cannock Extension Branch) |
| Chesterfield Canal | Chesterfield Canal |
| Derwent Ings | Pocklington canal |
| Grantham Canal | Grantham Canal |
| Huddersfield Narrow Canal | Huddersfield Narrow Canal |
| Kilby - Foxton Canal | Grand Union Canal |
| Kinoulton Marsh and Canal | Grantham Canal |
| Leeds - Liverpool Canal | Leeds - Liverpool Canal |
| Melbourne and Thornton Ings | Pocklington canal |
| Montgomery Canal, Aston Locks - Keeper's Bridge | Montgomery Canal |
| Prees Branch | Langollen Canal Prees branch |
| Pocklington Canal | Pocklington Canal |
| Rochdale Canal | Rochdale Canal |

PART 3 AGREED PROCEDURES

APPENDIX 1 – NATIONAL ASSENT AGREEMENT AND LIST OF CANAL & RIVER TRUST SSSIs FOR WHICH THIS ASSENT APPLIES

Natural England assents to the operations set out below (Tables 3. 1-3.3) for the SSSIs set out in Table 3.5 subject to adherence with the following conditions:

1. Implement the Canal & River Trust's Environmental Management System and undertake an environmental appraisal for every activity, which will be validated by a Canal & River Trust Ecologist;
2. Implement standard controls for each activity, as outlined in Tables 3.1 and 3.2;
3. Ensure a competent Canal & River Trust Ecologist provides specific advice for all activities outlined in Table 3.3, ensuring measures are put in place to mitigate against any potential damage. Where specific advice is given a record of this advice and activity should be supplied to Natural England;
4. Notify Natural England before undertaking, or permitting a 3rd party to undertake, any operation that has been assessed by a competent Canal & River Trust ecologist as being likely to damage the features of interest of any SSSI.
5. Natural England will undertake a review of the works undertaken as part of this Assent after the first 12 months to ensure all appropriate site safeguards have been included and executed. The Canal and Rivers Trust and Natural England will undertake a joint review after 5 years to ensure that the Assent remains relevant to both parties.
6. This Assent covers Natural England's permission only, and it does not allow the Canal & Rivers Trust to undertake or permit the specified operations without first having obtained all of the necessary permissions needed to undertake the operation lawfully. If the Canal & Rivers Trust do not obtain all of the permissions requires, and carry out the work anyway, they may face enforcement action from other authorities or parties.
7. As the grantee of this Assent, the Canal & Rivers Trust are responsible for carrying out the assented operation(s) safely and in all ways according to the law.

Natural England advises that, provided that the above conditions are met, the operations should not cause significant damage to the special interest of the SSSI.

This assent covers the period **25/7/2018-25/7/2028**

If you intend to carry out any of the proposed operations without complying with the above conditions you must first:

- Give notice to Natural England of when the proposed operation will start. The start date must not be sooner than 28 days from the date of this second notice.
- Give notice to Natural England of how, if at all, you have taken account of the advice of Natural England contained in this letter.
- Carry out the operation in such a way as to give rise to as little damage to the SSSI as is reasonably practicable, taking account in particular of the advice contained in this letter.
- Restore the site to its former condition, so far as is reasonably practicable, if any damage does occur.

In addition, you are under a duty under S28G of the 1981 Act to take reasonable steps, consistent with the proper exercise of your functions, to further the conservation and enhancement of the SSSI.

Table 3.1 Positive Management Actions

The activities listed below contribute towards the achievement or maintenance of favourable condition of our SSSI series and will be carried out in accordance with the Canal & River Trust's Environmental Appraisal (EA) and biosecurity protocols prepared for the relevant activity.

| ACTIVITY | OPERATIONS REQUIREING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|---|---|-------------------------|--|
| <p>Ecological surveys and further investigations Ecological surveys of the site, including grapnel surveys for aquatic plants.</p> | 11 | | <p>Surveys to follow current best practice e.g. condition assessment CSM methodology, or CRT organisational licence where <i>Luronium natans</i> is present. Ecological surveyors to be competent and appropriately licenced to undertake surveys. Survey data to be shared with Natural England.</p> |
| <p>Floating and bankside litter collection & disposal Including emptying existing refuse and dog bins and skips, removing debris from booms and trash screens / grilles.</p> | | | <p>Hand pickers and scoops to be used to collect land based and floating litter. Avoid disturbance of features of interest when removing floating litter by boat. Waste material to be removed from SSSI for disposal in line with Duty of Care and current waste legislation.</p> |
| <p>Removal of fly tipping and abandoned vehicles</p> | | | <p>Oil containment booms and absorbent pads to be placed around vehicle as soon as practicable to contain oil etc. Vehicle to be removed from site as soon as practicable and inform Canal & River Trust Ecologist. Waste material to be removed from SSSI for disposal in line with Duty of Care and current waste legislation.</p> |

| | | | |
|--|-----------|---|--|
| <p>Water control Management of water levels using existing feeders and overflows. Including testing and maintenance of sluices</p> | <p>14</p> | <p>Temporary or permanent introduction and/or use of new water supplies, including new surface water discharges Long term changes to water resource management plans. Intentional extensive and/ or long term dewatering of sites designated for aquatic habitats or species.</p> | <p>Existing water control practices to be continued unless there is evidence to show that alterations are necessary to improve site condition.</p> |
| <p>Conservation management: Where a site management plan has been agreed between CRT and NE management detailed in the plan including management of vegetation, introduction of aquatic macrophytes and marginal vegetation, and creation of artificial habitats e.g. habitat piles and refugia.</p> | | <p>Alterations to agreed management plans</p> | <p>Site management plans to be developed by the Canal & River Trust Ecologist in partnership with local NE officers.</p> |

| | | | |
|--|------------|---|--|
| <p>Tree management Trimming, coppicing, pollarding, selective felling of dangerous trees or trees that pose a threat to the integrity of waterway structures or navigation or trees that are causing shading of features of nature conservation interest and therefore their management has been highlighted in the conservation management plan.</p> | 6, 11, 13c | Large scale clearance of trees i.e. more than a single tree at one location for purposes other than those identified in a conservation management plan. | <p>Local authority tree officer to be informed in advance of works if necessary.</p> <p>Works to be, undertaken outside the bird breeding season (March to August) except for emergencies (dangerous or diseased trees).</p> <p>Trees to be assessed for bat roost potential by a competent person prior to work commencing.</p> <p>Cut material to be prevented from entering any water body.</p> <p>Works to be carried out in accordance with BS 3998:2010 Tree Work – Recommendations.</p> <p>Cut surfaces may be treated with herbicide if necessary. Work to be undertaken in accordance with the Canal & River Trust's mandatory process on herbicide use.</p> <p>Only products authorised for use in or near water will be permitted.</p> <p>Herbicides to be used in strict accordance with the label.</p> <p>Operatives applying herbicides must hold NPTC certificates, PA1 and PA6AW.</p> <p>Records of herbicide applications to be kept.</p> |
| <p>Management of shrubs and hedgerows Trimming and laying hedges to maintain structure Removal of saplings from structures on operational estate.</p> | 6, 11, 13c | Removal of hedgerows | <p>Tree management to be undertaken in accordance with BS 3998:2010 Tree Work - Recommendations.</p> <p>Work to be undertaken outside of the bird breeding season (March to August) unless there is a pressing health and safety issue</p> <p>Cut material to be prevented from entering a water body and significant arisings to be removed from the site.</p> |
| <p>Removal of carcasses</p> | - | | <p>Carcass to be removed for off-site disposal in line with Duty of Care and current waste legislation.</p> |

| | | | |
|--|--------------|--|---|
| <p>Control of invasive non-native and locally non-native plant species</p> <p>Management of terrestrial, marginal and aquatic invasive plant species, including mechanical, biological, environmental and chemical control.</p> | <p>6, 11</p> | <p>General channel, marginal and terrestrial vegetation management for operational purposes.</p> <p>Use of aquatic herbicides.</p> | <p>Work to be undertaken in compliance with a validated environmental appraisal.</p> <p>Work to be undertaken in accordance with best practice for specific species.</p> <p>Biosecurity best practice to be implemented to avoid fragmentation and spread.</p> <p>Cut material to be prevented from entering or remaining within any water body.</p> <p>Work to be undertaken in accordance with the Canal & River Trust's mandatory process on herbicide use.</p> <p>Only products authorised for use in or near water will be permitted.</p> <p>Herbicides to be used in strict accordance with the label.</p> <p>Operatives applying herbicides must hold NPTC certificates, PA1 and PA6AW.</p> <p>Treatment of non-target species to be avoided.</p> <p>Records of herbicide applications to be kept.</p> |
|--|--------------|--|---|

Table 3.2 Routine Operational Activities

The activities listed below will be undertaken in accordance with an environmental appraisal, biosecurity protocols and standard actions, and are unlikely to damage any features of special interest.

A validated environmental appraisal action report will be prepared for each activity.

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|---|--|--|--|
| Grass cutting Mowing and strimming towpath and other grassed areas. | 11 | Mowing of any SSSI meadow or areas of grassland interest | Environmental appraisal to be completed and validated for programme of works. Canal & River Trust ecologist to determine appropriate grass cutting regime. Grassed areas to be maintained to the Trust's Customer Service Standards/ or reservoir engineer's requirements. Cut material to be prevented from entering a water body and significant arisings to be removed from the site. Disturbance of breeding birds to be avoided. Reservoir grassland management to follow historic timing to avoid disturbance to breeding birds. |

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|--|--|-------------------------|--|
| <p>Clearance of vegetation, silt and debris from water control structures e.g. feeder channels, by-wash channels, drainage ditches and overflow channels</p> <p>Clearing of watercourses to facilitate inspection, maintenance and repair or to prevent structural damage from root systems, or to ensure conveyance.</p> | 13c | | <p>Environmental appraisal to be completed and validated for programme of works including consideration of sponges on hard surfaces.</p> <p>Canal & River Trust Ecologist to undertake survey for protected species (e.g. water voles) and other ecological features of interest prior to works commencing if required.</p> <p>Works not to be undertaken during the bird breeding season (March to August) if possible.</p> <p>Bird nesting survey required prior to any vegetation clearance during bird breeding season</p> <p>Measures to prevent spread of silt, sediment and suspended solids to be implemented.</p> <p>Cut material to be prevented from entering a water body and significant arisings to be removed from the site.</p> <p>Work to be undertaken in accordance with the Canal & River Trust's mandatory process on herbicide use.</p> <p>Only products authorised for use in or near water will be permitted.</p> <p>Herbicides to be used in strict accordance with the label.</p> <p>Operatives applying herbicides must hold NPTC certificates, PA1 and PA6AW.</p> <p>Records of herbicide applications to be kept.</p> |

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|--|--|-------------------------|---|
| <p>Clearance of vegetation from structures e.g. bridges and embankments</p> <p>Clearance of unwanted vegetation from structures to facilitate inspection, maintenance and repair or to prevent structural damage from root systems.</p> | 11 | | <p>Environmental appraisal to be completed and validated for programme of works.</p> <p>Canal & River Trust Ecologist to undertake survey for protected species (e.g. bats) and other ecological features of interest prior to works commencing, where required.</p> <p>Clearing vegetation during the bird breeding season (March to August) to be avoided if possible.</p> <p>Bird nesting survey required prior to any vegetation clearance during bird breeding season</p> <p>Cut material to be prevented from entering a water body and significant arising to be removed from the site.</p> <p>Vegetation to be removed from structures by cutting off deep roots and treating stem/root with authorized herbicides if necessary.</p> <p>Work to be undertaken in accordance with the Canal & River Trust's mandatory process on herbicide use.</p> <p>Only products authorised for use in or near water will be permitted.</p> <p>Herbicides to be used in strict accordance with the label.</p> <p>Treatment of non-target species to be avoided.</p> <p>Operatives applying herbicides must hold NPTC certificates, PA1 and PA6AW.</p> <p>Ensure that records of herbicide applications are kept.</p> |

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|--|--|---|---|
| <p>Minor brickwork and masonry repairs Maintenance and repair of existing brickwork and masonry.</p> | 22, 23, 24, 26 | <p>Major refurbishment of structures. Construction of new structures.</p> | <p>Environmental appraisal to be completed and validated for programme of works. Canal & River Trust Ecologist to undertake protected species surveys (bats) and provide specific advice prior to works commencing. Construction or waste material to be prevented from damaging features of interest.</p> |
| <p>Graffiti removal Removal of graffiti from surfaces.</p> | - | | <p>Environmental appraisal to be completed and validated for programme of works. Pressure washing or steam-cleaning to be used if possible. Use low eco-toxic cleaning products if required. Chemicals or washings to be prevented from entering any water body.</p> |
| <p>Cleaning surfaces (e.g. signs, lock ladders, jetties, swing bridge apron etc.)</p> | - | | <p>Use clean, cold water only, no detergents to be used. No solid matter to be deposited or allowed to run off in to any water body.</p> |
| <p>Clearing silt traps, interceptors and drainage channels on structures.</p> | - | <p>Clearance requiring major dredging</p> | <p>No solid matter to be deposited or allowed to run off into any water body. Measures to prevent spread of silt, sediment and suspended solids to be implemented within water bodies</p> |
| <p>Painting and surface treatments Removal of surface coatings from materials in preparation for painting or some other form of treatment Treatment and decoration of lock gates and other surfaces to provide a protective coat or attractive finish or for signage (e.g. Cill markers).</p> | 7 | | <p>Environmental appraisal to be completed and validated for works. Protective and decorative coatings to be applied when necessary to maintain existing fabric and to enhance the appearance of structures. Ensure protective or decorative coatings do not enter any water body. Protective sheeting, drip trays, and/or absorbent pads to be used to prevent debris or coatings from entering water or staining masonry and brickwork.</p> |

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|---|--|--|---|
| <p>Use of vehicles / plant / craft Use of land-based vehicles and plant along towpaths and access tracks for waterway maintenance Use of work-boats for waterway maintenance</p> | 26 | Use of vehicles and plant on canal bed. | Vehicles and plant to be refuelled off-site if possible; otherwise re-fuel over drip-trays or 'plant nappies'. Spill-kits to be retained on site at all times. Biodegradable hydraulic oil to be used in plant when working adjacent to, in or over the channel. |
| <p>Disposal of brash/ cuttings / plant arisings Disposal of arisings from mowing, strimming, tree and hedge management</p> | 7 | Burning | Environmental appraisal to be completed and validated for programme of works. Arisings to be disposed of promptly and safely, by shredding, spreading or habitat pile creation on site or remove from site for disposal. Disposal option to be determined by agreement with the Canal & River Trust Ecologist and taking in to account the surrounding environment, Cut material to be prevented from entering a water body and significant arisings to be removed from the site. Spreading of arisings to ensure no release of leachate in water bodies. |
| <p>Pest control Treatment of wasps nests rats, rabbits, moles and pigeon control</p> | 10 | Control of species not listed | Pest control to be undertaken by a member of the British Pest Control Association. |
| <p>Routine mooring maintenance Management of vegetation, litter collection and repairs to existing mooring points.</p> | 4, 11 | Installation of new moorings | Environmental appraisal to be completed and validated for programme of works. |
| <p>Routine maintenance of mechanical or electrical facilities Greasing components; replacement of life-expired parts; oil changes etc.</p> | | Major refurbishment of mechanical or electrical facilities | Standard pollution control measures and waste removal actions to be implemented through an environmental appraisal action report. Treatment of non-target species to be avoided. |

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|--|--|-------------------------|---|
| <p>Signage Provision and maintenance of directional and interpretive signage around the Canal & River Trust's network.</p> | 21, 23 | | <p>Environmental appraisal to be completed and validated for works. Signage options and locations to be determined to minimise visual impact on and character of setting. Damage to tree roots and adjacent structures to be avoided. Construction materials or arisings to be prevented from entering any water body or damaging the features of interest.</p> |
| <p>Fencing Repair, maintenance or replacement of existing fencing.</p> | 21, 23 | | <p>Environmental appraisal to be completed and validated for works. Fencing design and materials to be selected to minimise visual impacts on character of setting and shading of the canal. Construction materials or arisings to be prevented from entering any water body or damaging the features of interest</p> |
| <p>Asset inspection Inspection of water bodies and other Canal & River Trust structures (including embankments, aqueducts and tunnels). Including ground investigations where there will be no impact upon the features of interest</p> | 20 | | <p>Environmental appraisal to be completed and validated for programme of works. Canal & River Trust Ecologist to inform works to ensure there is no impact or disturbance to any features of interest or definitions of favourable condition.</p> |

| ACTIVITY | OPERATIONS REQUIREING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|---|---|---|---|
| <p>Emergency fish rescue Removal of fish for planned and reactive maintenance, and emergency management of fish welfare in the event of environmental stress e.g. pollution incident or unplanned de-watering. Use of electrofishing equipment and small seine nets within SSSI canal sections and associated water bodies</p> | | <p>Operations to introduce fish into SSSI canals for the enhancement of natural fish stocks for angling</p> | <p>All operations to be undertaken in accordance with the angling and fisheries management Site Management Framework Relevant Environment Agency permits/permissions must be obtained Consent only applicable to CRT staff and the Trust's appointed fisheries management team contractors Natural England to be informed of all fish removals prior to routine works or at the earliest opportunity for emergency works. Methodology, fish removed, location of released fish and plans for return to original location must be provided Stock densities within SSSI canals should be managed below 200kg/ha with a presumption against carp and bream. Invasive non-native fish species must not be returned to the waterway. Humane euthanasia methods to be used if removing invasive non-native fish species. Carcasses to be removed for off-site disposal in line with Duty of Care and current waste legislation. Records of culled individuals and/or populations to be maintained</p> |

Table 3.3 Low Risk Engineering Works and Other Interventions

The activities listed below have a moderate potential to damage features of special interest if undertaken recklessly. Each activity will be assessed through an environmental appraisal, biosecurity protocols will be adhered to and a Canal & River Trust ecologists will provide **site-specific advice** to ensure there is no impact upon the features of special interest. Natural England will be informed of all works.

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|--|--|--|---|
| <p>Minor repairs to sluices, weirs and overflow structures</p> <p>Maintenance and repair of existing structures to ensure integrity where temporary or partial draw-down is required.</p> | <p>13b, 21, 22, 23, 24</p> | <p>Major refurbishments. Works where ecological assessment determines that drawdown is sufficiently long-term to compromise the features of interest without implementation of ex-situ protection measures (e.g. works where translocation of aquatic plants is necessary)</p> | <p>Canal & River Trust Ecologist to undertake survey and site specific assessment to avoid impacts upon features of interest.</p> <p>Ecological assessment to determine duration and extent of drawdown and likely impact upon features of interest.</p> <p>Canal & River Trust Ecologist to determine any in-situ measures necessary to avoid damage to features of interest.</p> <p>Where practicable, operating water level in watercourse/ water body to be maintained.</p> <p>Extent of drawn down area to be minimised</p> <p>Construction or waste materials to be prevented from entering the canal.</p> <p>Aquatic features of interest to be protected in situ.</p> |

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|--|--|--|---|
| <p>Minor bank repairs, bank protection and leak prevention Maintenance and repair of existing bank protection where temporary or partial draw-down is not required and where method does not require entry into or deposition of material into a designated water body.</p> | <p>13b, 21, 23</p> | <p>Installation/ repair of extensive lengths of bank i.e. >20m. Change of soft bank to hard bank protection. Use of clay for leak stopping in locations where features of interest may be present. Works where ecological assessment determines that drawdown is sufficiently long-term to compromise the features of interest without implementation of ex-situ protection measures (e.g. works where translocation of aquatic plants is necessary)</p> | <p>Canal & River Trust Ecologist to undertake survey and site specific assessment and develop mitigation plan to avoid impacts upon features of interest bearing in mind both the submerged and emergent/riparian vegetation form part of canal habitat SSSIs. Ecological assessment to assess likely impact upon features of interest and identify any in-situ measures necessary to ensure works do not affect features of interest or site integrity. Construction or waste materials to be prevented from entering the canal.</p> |

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|---|--|--|---|
| <p>Maintenance and repair of towpaths/ foot paths and access points</p> <p>Maintenance of existing towpath surfacing including weed spraying of towpaths and locks and import of new fill material to replace like with like material.</p> | <p>1, 7, 9, 11, 13b, 21, 22, 23</p> | <p>Creation of new public footpath routes or access points and surfacing of previously unsurfaced paths.</p> | <p>Canal & River Trust Ecologist to undertake survey and site specific assessment to avoid impacts upon features of interest.</p> <p>Grassy margins to towpaths/ footpaths to be retained where possible.</p> <p>Tree roots to be protected during excavation and grading.</p> <p>Disturbance of breeding birds to be avoided.</p> <p>Existing footpath width must not be significantly increased</p> <p>Footpaths to be graded to prevent ponding, boggy margins and run off into water body.</p> <p>Chemically inert surfacing material to be used to avoid localised changes in water or soil quality</p> <p>Canal & River Trust Ecologist to be consulted when re-seeding to determine grass-seed mix of native species and local provenance.</p> <p>Construction or waste materials to be prevented from entering the canal.</p> <p>All herbicide applications to be undertaken in accordance with the Canal & River Trust's mandatory process on herbicide use.</p> <p>Only products authorised for use in or near water will be permitted.</p> <p>Herbicides to be used in strict accordance with the label</p> <p>Treatment of non-target species to be avoided.</p> <p>Operatives applying herbicides must hold NPTC certificates, PA1 and PA6AW.</p> <p>Records of herbicide applications to be kept.</p> |

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|---|--|--|---|
| <p>Replacement of existing angling pegs and pond dipping platforms</p> | <p>16a, 27</p> | <p>New installations of angling pegs and pond dipping platforms</p> | <p>Canal & River Trust Ecologist to undertake survey and site specific assessment and develop mitigation plan to avoid impacts upon features of interest. Increased pressures associated with angling upon features of interest must be avoided.</p> |
| <p>Temporary dewatering or drawdown of pounds and lock chambers</p> <p>Drawdowns considered unlikely to damage the features of interest of a site. E.g. those typically retaining at least 600mm of water or lasting less than 24 hours,</p> <p>Installation of new lock gates involving temporary or partial drawdown of water levels</p> | <p>14</p> | <p>Long term or extensive dewatering where the ecological assessment indicated that ex-situ protection is required or the operation is considered likely to damage the features of interest.</p> | <p>Canal & River Trust Ecologist to undertake survey and site specific assessment to avoid impacts upon features of interest.</p> <p>Ecological assessment to determine duration and extent of drawdown and likely impact upon features of interest.</p> <p>Canal & River Trust Ecologist to determine any in-situ measures necessary to avoid damage to features of interest.</p> <p>Where practicable, operating water levels to be maintained in watercourse/ water body and extent of dewatered area to be minimised.</p> <p>Construction or waste materials to be prevented from entering the canal.</p> <p>Aquatic features of interest to be protected in situ</p> |
| <p>Culvert or pipework inspection, cleaning and minor repairs</p> <p>Minor vegetation removal for access, jetting of sediment from culverts and inspection with CCTV camera</p> <p>Minor repairs to brickwork including pointing.</p> | <p>13b, 13c</p> | <p>Relining culvert</p> | <p>Environmental appraisal to be undertaken for programme of works. Canal & River Trust ecologist to inform works to ensure there is no impact or disturbance to features of interest, protected species or definitions of favourable condition.</p> |

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|---|--|--|--|
| Spot dredging | 13b | Large scale continuous dredging Dredging in locations where in situ protection is not possible. | Canal & River Trust ecologist to undertake site specific assessment and implement dredging protocol agreed with Natural England Measures to prevent spread of silt, sediment and suspended solids to be implemented within water bodies Arisings to be removed for off-site disposal in line with Duty of Care and current waste legislation. |
| Improvement of existing access points/ replacement of existing steps down embankments Vegetation management and installation of fencing/ /timber steps to provide safe access down embankments etc. | 1, 7, 9, 11, 13b, 21, 22, 23 | New access points/steps | Canal & River Trust Ecologist to undertake survey and site specific assessment to avoid impacts upon features of interest. Trees and their roots to be protected during excavation and grading. Vegetation clearance to avoid removal of trees and dense scrub where possible. Installation of fencing and steps to be limited in scale. Footpath to be graded to prevent ponding, boggy margins and run off into water courses. Chemically inert surfacing material to be used. Canal & River Trust ecologist to be consulted to advise on grass-seed mix of native species and local provenance when reseeded. Construction or waste material to be prevented from entering the canal. Only herbicides authorised for aquatic use to be used. Herbicides to be used in strict accordance with the label Ensure that no herbicide enters the canal. Herbicides to be applied only by persons with NPTC certificates, PA1 and PA6AW |

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | ACTIVITIES NOT INCLUDED | MEASURES TO BE EMPLOYED |
|--|--|-------------------------|---|
| <p>Lock gate refurbishment or replacement</p> <p>This can involve full draw-down for the duration of the repair</p> | <p>13b, 14, 22, 23</p> | | <p>Canal & River Trust Ecologist to undertake survey and site specific assessment to avoid impacts upon features of interest.</p> <p>Canal & River Trust Ecologist to determine any in-situ measures necessary to avoid damage to features of interest.</p> <p>Construction or waste materials to be prevented from entering the canal.</p> <p>Aquatic features of interest to be protected in situ</p> |

Table 3.4 Operations Requiring Specific Assent

The activities listed below have the potential to damage features of special interest and are likely to require detailed mitigation plans and therefore separate Natural England assent is required to cover these specific activities. This list is not exhaustive for any activity not covered in tables 3.1-3.3 Natural England should be notified.

Natural England will be consulted at the earliest opportunity and an **application for their assent should be submitted at least 28 days before the activity is to be undertaken.**

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | DESCRIPTION | MEASURES TO BE EMPLOYED |
|---|--|---|---|
| Extensive tree felling in SSSIs | 6, 11 | Extensive clearance of trees which are not dangerous (i.e. more than single tree at one location) | Undertake specific environmental assessment. Consult and obtain appropriate permissions from Natural England. |
| Burning | 8 | Disposal of waste materials by burning | |
| Major engineering works to sluices, weirs and overflow structures (except in cases of emergency that threatens structural integrity, property or persons) | 13b, 21, 23, 24 | Installation of new, and refurbishment of existing structures Works where draw-down of canal pounds is required. | |
| Major engineering works to canal walls and embankments, reservoir works, canal relining and leak prevention (except in the case of an emergency which threatens canal integrity, persons or property) | 13b, 14, 21, 22, 23, 24 | Works that may affect feature of interest e.g. piling or import of clay in sensitive areas, long term draw-down of water levels or installation/repair of extensive lengths of bank. | |
| Large scale dredging | 7, 11, 13b, 21, 23 | Dredging large sections of any water body where features of interest are present, in situ protection is not possible and the protocol within the national site management framework cannot be applied | |

| ACTIVITY | OPERATIONS REQUIRING NATURAL ENGLAND'S CONSENT | DESCRIPTION | MEASURES TO BE EMPLOYED |
|--|--|--|---|
| <p>Significant changes to existing management that may affect site condition e.g. alterations to water management regime, meadow management or significantly increased boat numbers.</p> | 14 | | |
| <p>Long term or extensive dewatering considered likely to damage the site's features of interest (except in the case of an emergency which immediately threatens canal integrity, persons or property)</p> <p>This may typically include drawdowns lasting longer than 24hr or where less than 600mm water depth is retained.</p> | 14 | <p>Non-routine dewatering or drawdown for maintenance or inspection purposes, where an environmental assessment has determined that the operation has the potential to adversely affect the conservation objectives of the site.</p> | <p>Undertake specific environmental assessment. Consult and obtain appropriate permissions from Natural England.</p> |
| <p>New water supplies or water transfers</p> | 14 | <p>Development and use of new water supplies to feed site directly, indirectly or water transfers</p> | <p>Undertake specific environmental assessment. Consult and obtain appropriate permissions from Natural England and Environment Agency.</p> |
| <p>New water abstractions</p> | 14 | <p>Authorisation of new abstractions/ water sales from the site or associated watercourses</p> | |
| <p>New discharges</p> | 7, 14 | <p>Authorisation of third party discharges into the site or associated watercourses</p> | |
| <p>Any other works</p> | | <p>Any other activities or works included on the list of 'Operations likely to damage the special interest' and not specifically defined in Tables 3.1, 3.2, or 3.3</p> | |

Table 3.5 Sites of Special Scientific Interest notified for their canal - SSSIs wholly or partially owned or managed by the Canal & River Trust. The Assent applies to these listed sites only.

NB: Those rows highlighted denote SSSIs that form part of a Special Area of Conservation and are therefore subject to the provisions of the Conservation of Habitats and Species Regulations 2017 and require a Habitats Regulations Assessment for relevant works.

| SSSI Name | Site Area (ha) | CRT Area (ha) | CRT Asset type | Feature of Interest | Responsible CRT Environment Manager | NE responsible officer |
|---|----------------|---------------|----------------|---|-------------------------------------|------------------------|
| Ashby Canal | 24.90 | 14.33 | Canal | Canal | Oda Dijksterhuis | Martin Banham |
| Cannock Extension Canal | 5.16 | 4.84 | Canal | Canal/ <i>Luronium natans</i> | Oda Dijksterhuis | Jaclyn Lake |
| Chesterfield Canal | 33.10 | 28.07 | Canal | Canal | Becki Anderson | Brian Dunning |
| Grantham Canal | 12.69 | 9.34 | Canal | Canal | Becki Anderson | Martin Banham |
| Huddersfield Narrow Canal | 18.04 | 11.53 | Canal | Canal/ floodplain fen and vascular plant assemblage | Becki Anderson | Amy Cowburn |
| Kilby - Foxton Canal | 36.90 | 21.99 | Canal | Canal | Richard Bennet | Martin Banham |
| Kinoulton Marsh and Canal | 2.94 | 0.58 | Canal | Swamp & standing water, canal? | Richard Bennet | Ruth Tall |
| Leeds - Liverpool Canal | 19.50 | 17.50 | Canal | Canal | Becki Anderson | Michelle Dickinson |
| Montgomery Canal, Aston Locks - Keeper's Bridge | 7.28 | 5.81 | Canal | Canal | Oda Dijksterhuis | Vicki Howden |
| Prees Branch | 2.185 | | Canal | Canal & <i>Glyceria maxima</i> swamp | Oda Dijksterhuis | Robin Gilbert |
| Rochdale Canal | 25.70 | 23.81 | Canal | Canal & <i>Luronium natans</i> | Becki Anderson | Amy Cowburn |

APPENDIX 2 – SSSI SITE MANAGEMENT FRAMEWORK: FISH POPULATION MANAGEMENT

Natural England and the Canal & River Trust agree to follow the protocol outlined in relation to the management of fish populations within, or likely to affect, designated sites.

BACKGROUND

The Trust recognises the value of angling and angling clubs and supports its continuation as an integral part of its vibrant mixed-use network. The Trust also has a statutory duty to provide fishing on its cruising waterways as set out in the 1968 Transport Act. The Trust will support angling clubs in the preparation of fishery management plans, subject to agreement with the Trust's national fisheries team.

Many designated sites on the Trust's estate are notified for features that may be damaged or disturbed through fisheries management or angling related activities (amongst other activities). Appropriate fishery management, particularly the maintenance of suitable species and population densities, is necessary to protect the aquatic environment and prevent deterioration of water quality and aquatic plant and animal populations.

ANGLING AGREEMENTS

The Trust will ensure all angling clubs with waters within, or connected to, designated sites are made aware of the Trust's and their own responsibilities in relation to the sites. Where they own the fishing rights, the Trust will ensure that all suitable specific requirements are expressly stated within future angling club agreements or licenses.

OBTAINING PERMISSION TO STOCK

The Trust will ensure that its angling licenses require angling clubs to obtain the Trust's permission prior to introducing new fish, or removing fish, anywhere on its network (including the requirement not to return rod caught non-native invasive fish species and non-native crayfish). It will be the responsibility of the Trust to obtain the necessary permissions for fish movements from the Environment Agency.

Any changes to the management of fish populations within a designated site, whether proposed by the Trust or any angling club, including fish stocking and fish rescue operations, will be agreed by the Trust's national fisheries team, who will apply to the Environment Agency for any consents necessary under fisheries legislation.

The Trust's national fisheries team will consult the local Canal & River Trust environment team and complete an Environmental Appraisal, applying the guidelines below, before applying to the Environment Agency for permission to add or remove fish, and before permitting any changes to fishery or habitat management.

Under the Live Fish Movement Scheme, the Environment Agency consults Natural England on applications to stock or remove fish on designated sites. Natural England will use the joint Natural England, Environment Agency, CCW fish stocking guidance (Clarke 2008) and any site specific Natural England fishery management plans when assessing any fish stocking applications likely to affect a SSSI, SAC or in a non-designated water which supports *Luronium natans*.

GUIDANCE ON FISH STOCKING

With respect to the canal fish stock the aim is to support a native, balanced, mixed fish assemblage within canal SSSIs. To protect its designated sites, the Trust will apply the following guidance when stocking or altering the management of fish populations within any designated site. The Trust's national fisheries team will apply the same guidance when approving stocking applications for waters adjacent to any SSSI, unless it is demonstrated that there is a sufficient barrier present to prevent migration into the SSSI. A suitable barrier/buffer may be a lock flight, watershed or single pound supporting sub-optimal habitat for a length greater than five kilometres.

- The Trust will not permit any additional fish stocking, particularly common carp and common bream, unless the applicant can produce documentary verification that the canal has supported populations of the species intended to be stocked, at the densities intended to be stocked, for at least 15 years (the age at which maximum size is likely to be attained) whilst the SSSI has remained in favourable condition.
- The Trust will not permit applications that may result in a total projected biomass of over 200kg/ha unless it can be demonstrated with documentary evidence that the site has previously supported a higher density and been maintained in favourable condition for at least 15 years.
- Stocking applications which form part of a shift away from a carp or bream dominated fishery to a fish community less damaging to the ecology of the canal e.g. consisting of tench, perch, rudd, gudgeon or chub may be looked on favourably, provided densities are appropriate (total projected biomass less than 200kg/ha).
- The Trust, in collaboration with Natural England, will investigate reasons for deterioration where a SSSI condition assessment indicates that condition may be deteriorating due to fisheries management pressures implementing remedial actions where necessary.

Remedial actions

- Where site condition has deteriorated and fish biomass exceeds the limit or the species assemblage has the potential to be causing the issue further stocking will be suspended and the Trust will consider altering the fish stocks.
- Poor water quality and / or a decline in macrophyte abundance will be used as a trigger for further investigations. The Trust will consult the Environment Agency and Natural England to identify potential causes of poor site condition. Where necessary this may include boom boat electric-fishing surveys or wrap around seine netting surveys and subsequent removal / translocation of fish.

Estimating biomass

- To improve site knowledge the Trust will keep a record of estimated biomass and species recovered during fish rescues and fish mortality assessments in designated sites. These data will be sent to the NE responsible officer for the site. This information will be used to inform future management and condition assessments.
- The Trust will encourage angling clubs to record **all** catches from matches including number of match participants, species, number of fish and total weight of fish caught by each individual in

the match. These data should be sent to the Trust and Natural England. This will indicate trends in fish biomass to support requests to stock/ remove fish.

FISHERIES MANAGEMENT

Fish rescues

- When undertaking planned or emergency fish rescues, fish may be removed from a site under the national assent, however a site specific assent will be required for releasing the removed fish into a SSSI or into a site which may affect a SSSI.
- Particular care will be given to identifying suitable receptor sites ensuring the 200kg/ha limit is not exceeded in SSSI stretches.
- In short pounds and lock flights, fish will be moved to the next suitable upstream pound.
- In larger pounds fish can be retained in a fully watered section through the use of temporary dams or stop planks or moved to the next suitable upstream pound.
- If this would result in biomass exceeding 200kg/ha within the SSSI the fish will be moved outside the SSSI into the next suitable pound, whilst giving consideration to the location and extent of the relevant angling clubs waters.
- When moving fish, the Canal & River Trust fisheries team, will use their knowledge of the fish stocks in that length of waterway to identify a receptor site so that the 200kg/ha limit will not be exceeded within the SSSI.

Habitat management

Angling clubs and the Trust will be encouraged to improve habitat for fish and consequently the angling customer experience in designated sites e.g. providing cover and refuges for fish and careful thought to habitat requirements and retention for all the life cycle stages of fish in Trust maintenance works. Where feasible, the Trust's fisheries and angling team, in collaboration with Natural England for designated sites, will make their expert knowledge available to angling clubs and Trust internal teams to educate, assist and facilitate improved habitat / fisheries management. These improvements will reduce the requirement for stocking across the waterway.

Bio-manipulation

There is a presumption against the removal of predators such as pike to improve existing fish stocks, due to the uncontrolled changes to the ecosystems that may result. However, where there is confidence that unauthorised introductions have taken place, pike populations may be redistributed in order to maintain a balanced mixed fish assemblage.

Non-native species

- Check clean dry protocols will be promoted to all anglers using the canal SSSI network.
- The stocking or transfer of non-native and locally non-native fish will not be permitted within designated sites or waters directly connected and in continuity with them.
- Where non-native fish species covered by the Wildlife and Countryside Act (Section 14) and the EU Invasive Alien Species Regulation are present within the water body their removal will be looked on favourably and be seen as best practice.

APPENDIX 3 SSSI SITE MANAGEMENT FRAMEWORK: DREDGING DESIGNATED SITES

Natural England and the Canal & River Trust agree to follow the protocol outlined below when planning and undertaking dredging within canal SSSIs.

BACKGROUND

Canals and river navigations are artificial or heavily modified habitats with shallow depths that require occasional management to maintain sufficient depth for navigation and maintain optimal habitat conditions and reduce pressures on aquatic plants. Submerged, floating leaved and marginal vegetation can be lost due to lack of dredging as ecological succession would result in loss of open water habitat, increasing cover of emergent plants and eventually colonisation by carr and scrub. Regular channel clearance is necessary to halt this succession and to retain high biodiversity interest. Furthermore, in navigable canals silt accumulation can impact upon aquatic features of interest through re-suspension due to boating generated turbulence.

Dredging is the most frequent means of halting succession and removing accumulated silt. It has the potential to cause major short-term impacts. However, in the medium term is likely to have a positive impact on biodiversity interest by:

- Restoring open water and suitable rooting substrate;
- Reducing the biomass of competitive species;
- Removing nutrient rich sediment (and reducing overall nutrient concentrations)
- Increasing the cross-sectional area of the channel reducing wave velocities and the impact of navigation.

Dredging at an appropriate interval is necessary to safeguard the biodiversity interest of canal SSSIs with biological features of interest.

SSSI DREDGING PROTOCOL

1) General principles

The Canal & River Trust will undertake an environmental appraisal prior to all dredging projects to highlight any environmental constraints and recommend any actions required to manage any adverse effects.

In validating any appraisal to dredge within a SSSI the Trust's local ecologist will determine whether there are any aquatic features of interest that require protection within the target length and will ensure that:

- Aquatic features of interest are appropriately protected
- The length to be dredged is appropriate to the sensitivity of the site
- An appropriate dredging profile is applied

If the ecologist is uncertain as to the presence of any aquatic features of interest, they will indicate that a pre-dredging survey is required.

All work that may affect floating water plantain will be undertaken under licence.

2) Management of aquatic features of interest

Aquatic features of interest present in length

If any aquatic features of interest (submerged, floating or marginal plant species) are present they will be protected from the short term disturbance caused by dredging.

- Where possible features will be preserved using in channel measures (in-situ). Features will be preserved **in-situ** where the dredging can be undertaken in such a manner as to avoid the population either spatially through applying the SSSI dredging profile (i.e. by leaving margins or off-sides untouched) or temporally (e.g. by undertaking dredging during winter and ensuring seed/propagules are not lost). Silt curtains may also be installed around sensitive features present in the margins of the canal, such as aquatic plant populations, to prevent indirect impacts via silt re-suspension during dredging. Consideration will also be given to using silt curtains across the canal channel if the canal is closed to navigation to prevent silt movement.
- Where in situ protection is not appropriate the features will be removed from the canal and retained **ex-situ** in tanks or elsewhere on the canal for reintroduction later. This approach has been employed successfully for floating water plantain *Luronium natans* and pondweeds *Potamogeton* spp, and is likely to be required when longer lengths of canal (>500m) must be dredged for navigation.

No aquatic features of interest present in length

If there are no discreet populations of sensitive or rare species in the length to be dredged, the Trust's ecologist will apply the advice below on appropriate lengths and dredging profiles.

3) Appropriate Dredging Length

Historically, it was thought that the best way of protecting canal SSSIs was to dredge very short lengths at a time. However, this approach is not cost effective and is unlikely to create optimal habitat conditions for the features of interest and better outcomes are likely to be achieved through dredging longer sections of canal, whilst retaining areas of vegetation to allow re-colonisation.

The appropriate length to be dredged will be determined on a site by site basis by the Trust's local ecologist taking into consideration:

- Presence or absence of aquatic features of interest
- Need for in situ or ex situ protection measures
- Likely impact upon any aquatic features and likely recovery time
- Actual dredging profile to be used

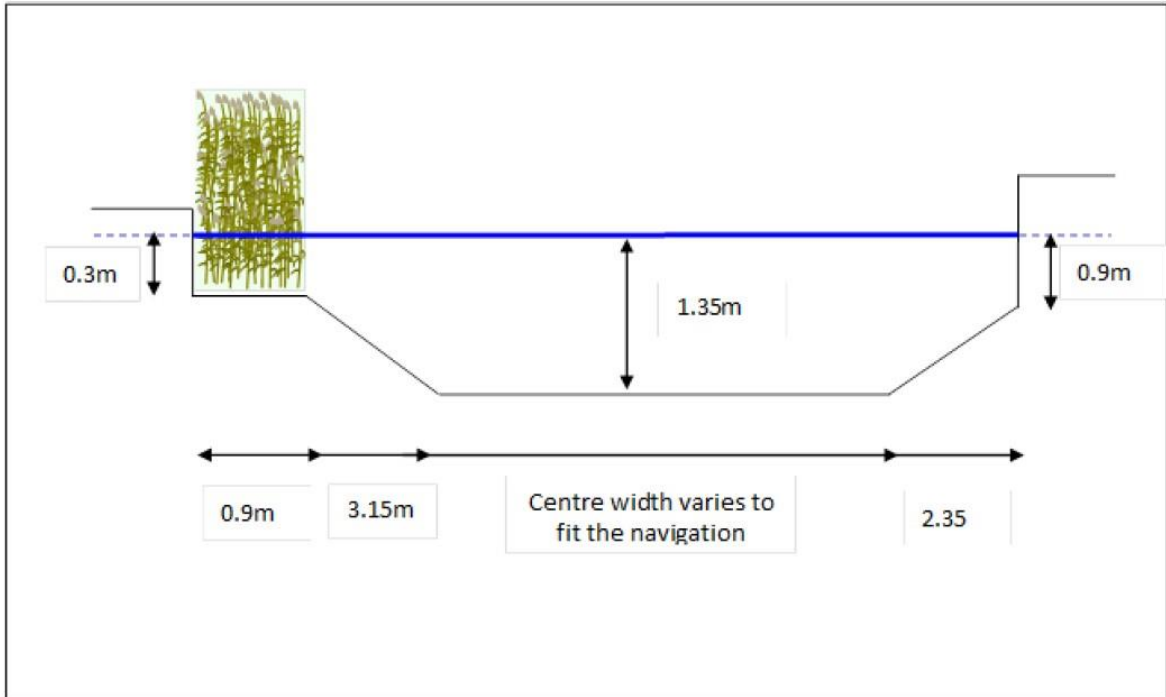
It is always more cost effective to dredge a continuous length, therefore wherever possible any potential impacts on the features of interest will be mitigated to allow dredging of the desired length. However, where mitigation cannot fully avoid any impacts on the features of interest no more than 50% of the total SSSI length will be dredged in any two year period, but consideration should be given for the ability of propagules to recolonise the canal before the next length is dredged. For instance botanically depauperate canals are unlikely to recover in 2 years, equally if 50% constitutes a long length this will limit the capacity of the propagules to re-colonise the full length in 2 years. Where there are significant populations of features of interest that cannot be protected through applying in-situ or ex-situ measure, hit and miss dredging may be necessary.

4) SSSI Dredging Profile

Studies have shown that increasing the cross sectional profile of a navigable channel (excluding margins) will reduce pressures on the features of interest by reducing propeller and bow wave velocities, which in turn reduce bed disturbance and bank erosion.

Therefore, to improve habitat conditions and reduce navigational pressures, where constructed depth allows, all navigable canal SSSIs will be dredged to a greater depth than required solely to maintain navigation. Where the depth and width of the canal allows a dredging profile based on the dimensions below (fig 1) will be applied.

Where water quality and clarity is high it will be possible for aquatic plants to grow across the canal channel but in boated channels shallower water near the margins is very important as aquatic plant habitat. An asymmetric cross-section which retains a shallow berm on the off-side is fairly typical and should be suitable provided there are also deep areas (>60cm) out of the main boated area suitable for submerged and floating aquatics – these areas might be around bridges, winding holes or off-line. Where possible the creation of suitable deeper habitats throughout the dredging length will also be considered.



APPENDIX 4 - SSSI SITE MANAGEMENT FRAMEWORK: MOORINGS AND MARINA DEVELOPMENTS

Natural England and the Canal & River Trust agree to follow the protocol outlined below for new moorings and marinas.

BACKGROUND

The Canal & River Trust supports the development of the inland waterway network as a valuable mixed use resource with wildlife and recreational benefits that provide the opportunity to connect people with the countryside. As such the Trust supports the sustainable use and expansion of the waterway network through the creation of new marinas and mooring opportunities.

The Trust does, however, recognise that increased use of the network has the potential to adversely affect the features of interest of some of our SSSIs in two ways:

- 1) Directly through physical loss or damage, e.g. where a proposed new marina or online mooring is located within the boundaries of a statutory site
- 2) Indirectly through disturbance during operation, e.g. where the operation of a proposed marina or mooring may result in an increase in navigational pressures within a SSSI.

The Canal & River Trust will implement the protocol outlined below to ensure these potential impacts are addressed.

Casual Moorings

- Boat users may wish to moor outside of marinas and long-term moorings, these may be used when cruising the network or in cases of emergency.
- Boat users have the right to moor anywhere on the network for 48 hours although this may be subject to local byelaws.
- In order to prevent damage to vulnerable habitats it is not desirable for casual mooring to take place in all locations.
- In such situations mooring may be discouraged by vegetation management and dredging standards, by creating shallow margins with wetlands fringes.
- Casual mooring can also be encouraged where it is appropriate by creating/maintaining moorings with hard engineered banks, mooring rings and other facilities.
- Within a SSSI the management of the banks to discourage mooring should be considered along its length to protect existing habitats and to allow habitat improvement in areas currently under pressure from boat traffic.
- These considerations may also identify areas where there is little opportunity for development of good habitat and these can be developed/maintained as casual mooring sites.
- To reduce bank scouring and sedimentation the Trust will ensure that there is suitably robust bank protection in place at all agreed temporary or visitor mooring sites within a SSSI, or within 1km of such a designated site. There is not an intention to proliferate hard engineered banks, but where there is no alternative they may be used to prevent erosion.

NEW MOORINGS

- The Trust agrees that no new long term online moorings will be permitted unless there is evidence that they will have no adverse effect upon any SSSI.
- The Trust will promote the development of sustainable offline moorings or marinas as a way of creating new water space and reducing the impacts on navigable SSSIs.

- In accordance with the Trust's existing mooring policy the trust will seek to reduce the number of online moorings as new offline mooring becomes available. For every 10 offline berths created at least 1 online mooring within a 30km radius will be taken out of use. Where possible online moorings within or adjacent to navigable SSSIs will be targeted for removal.
- The Trust will consider the indirect effects of new permanent online moorings on adjacent navigable SSSIs.
- The Trust will notify NE under S28h or S28i of the Wildlife and Countryside Act of any new moorings considered likely to damage the features of interest of any SSSI.

NEW MARINAS

The Canal & River Trust has a New Marina Unit, which provides advice to prospective marina developers. The Unit is able to provide guidance and advice to developers throughout the development process. More information on our New Marina Process can be found here: <http://canalrivertrust.org.uk/new-marinas-unit>.

As part of the Expression of Interest phase the Trust undertakes an environmental appraisal, which will highlight whether the project has the potential to impact on any SSSI.

As the Trust is a statutory consultee, the Local Planning Authority will ask for our comments on any developments that may affect our network. The Trust aims to be able to support most planning applications for marina developments by providing relevant advice and keeping all parties fully informed of any potential risks at the appropriate stages. The Trust will ensure that any potential impacts upon a SSSIs are incorporated in to its consultation response to the local planning authority and suggest that NE is consulted at an early stage.

Notification requirements

Therefore, the Trust will informally notify Natural England of any proposed new marina developments that meets the following criteria once a planning application has been submitted:

- The development is within 30km of a navigable canal SSSI
- The SSSI has aquatic features of interest that are sensitive to boat traffic
- The projected increase in boat traffic is greater than 1% of existing levels or is on a SSSI where boat traffic is already considered a reason for unfavourable condition.

Fig 1 illustrates this decision making process.

Should the development receive planning approval the Trust will submit a formal notification to NE to permit the marina connection under S28i. The Trust will not impose any further conditions upon its approval under the assumption that the necessary measures have been agreed through planning.

Operation of the marina

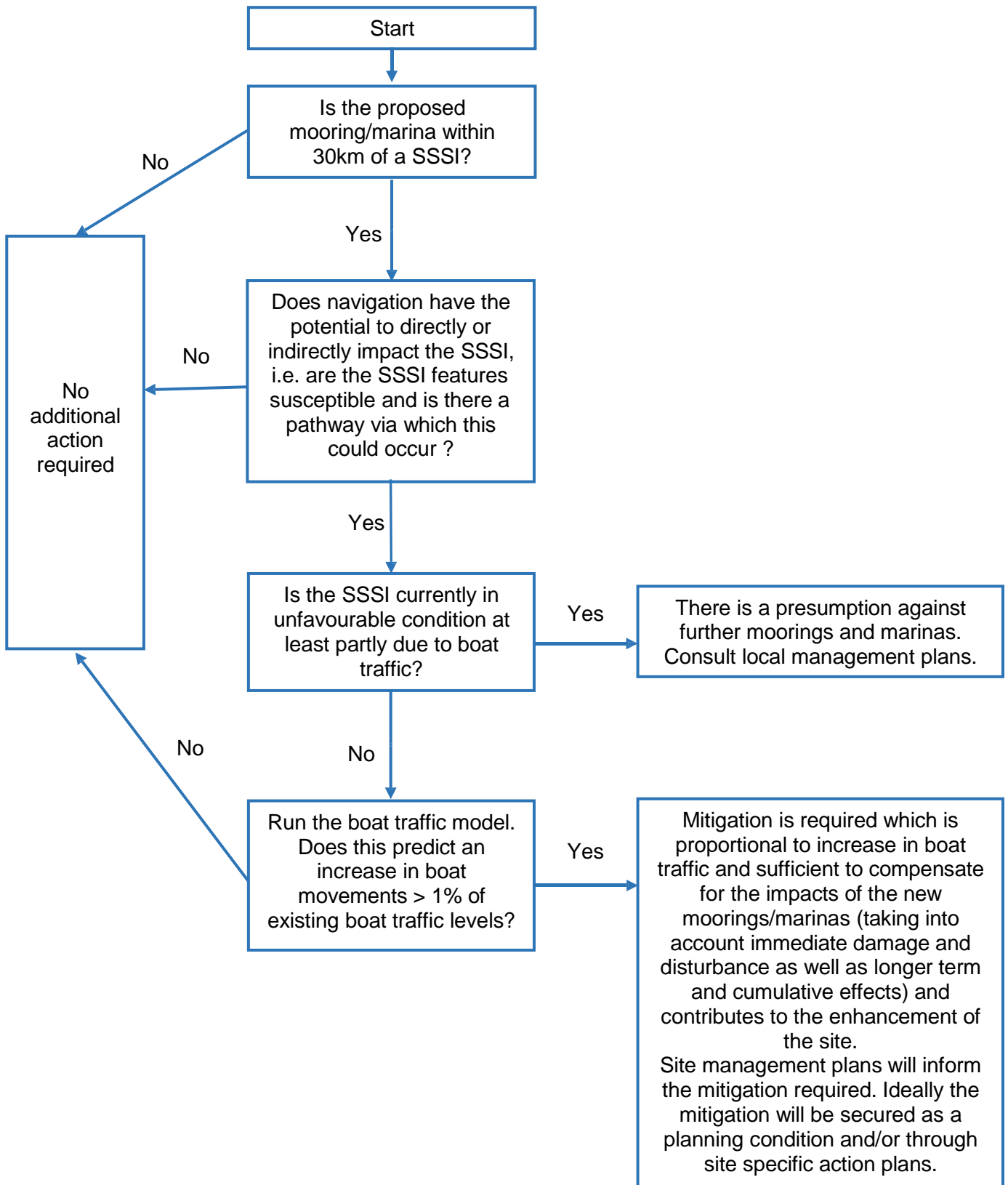
Any marina development that meets the notification requirements has the potential to impact upon a SSSI and will be expected to contribute towards the achievement of the Trust's vision to protect and enhance its SSSI series, through the implementation of the actions outlined within the Site Management Framework.

Additional operating requirements have the potential to be implemented through the Trusts operational agreement with the marina operator to protect SSSIs.

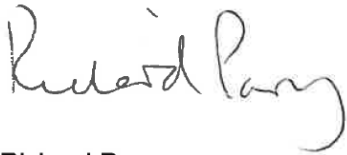
Securing necessary mitigation

Where possible any necessary mitigation should be addressed through the planning process. Where it is not possible to achieve this through the planning process, general actions to improve site condition will be implemented through the Trust's site specific action plans, which will be delivered either through our general business plan, volunteer lead projects or external funding.

Figure 1 New marinas and moorings decision tree



Signed



Richard Parry

**For and on behalf of
the Canal and Rivers Trust**

Signed



James Cross

**For and on behalf of
Natural England**