

**CROMFORD CANAL**  
**Site of Special Scientific Interest**  
  
**ECOLOGICAL MANAGEMENT PLAN**  
**&**  
**WORK PROGRAMME**  
**for**  
**Derbyshire County Council**  
  
**Sept 2007 – August 2017**

**DRAFT: VERSION 5**

February 2008

*(following discussion with NE Conservation Officer D Abrahams)*

This Management Plan is developed to satisfy the requirements of  
Natural England for a  
Consented Plan.

**Consented by Natural England ....2008**

Authors:

- Annie Cooper Ecologist Conservation & Design Section, Environmental Services Dept., DCC
- Chris Coombs Area Manager, Countryside Service, Environmental Services Dept., DCC
- Rick Jillings Assistant Area Manager, Countryside Service, Environmental Services Dept., DCC

The following organizations will be consulted on the final DRAFT:

- |  |  |
|--|--|
| • Natural England                      | • Derwent Valley Mills WHS Partnership |
| • Derbyshire Wildlife Trust.           | • Derwent Valley Trust                 |
| • Arkwright Society                    | • Network Rail                         |
| • Parish/town councils adjoining canal |  |
| • Derbyshire Dales DC                  |  |
| • Amber Valley BC                      |  |

# Contents

## **OVERALL CONTEXT**

1. Ownership
2. Designations
3. Regulatory Framework
4. UK & Local Biodiversity Action Plans
5. Context of the Management Plan
6. Rationale for the Management Plan
  1. Condition
  2. Management objectives
  3. Management prescriptions
  4. Available Resources
7. Management Plan Targets
8. Implementation
9. Monitoring and Review

## **APPENDIX A: Cromford Canal SUMMARY Ten Year Work Programme**

## **APPENDIX B:**

Ecological Appraisal:

**MANAGEMENT PRESCRIPTIONS FOR EACH OF THE 33 INDIVIDUAL SURVEY  
AND MANAGEMENT COMPARTMENTS, over a 10 year period**

# OVERALL CONTEXT

The County Council manages the Cromford Canal in the context of its World Heritage and SSSI Status. It will seek to do so in a manner that protects the historic environment and will work towards improving the natural habitat whilst ensuring the site is accessible and enjoyed by visitors.

## 1. OWNERSHIP

The whole site is in the direct ownership and management of the County Council. Due to the linear nature of the canal and its construction, relationships with adjacent land owners are of importance.

**Network Rail's** ownership of adjacent structures is critical. Recent clarification by Network Rail of their ownerships and improved communications has been a major step forward. Further clarification with Network Rail is being pursued.

Other important owners with whom DCC needs to maintain a relationship include:

- Severn Trent Water: High Peak Junction WTW to Holmesford riverside and Whatstandwell WTW;
- Arkwright Society: Control the source of the canal's water and lease buildings at Cromford Wharf;
- Cromford Key Estates: the canal and Cromford Meadows share an extensive boundary;
- Pisani: has an outfall to the canal and controls extensive areas of bankside trees;
- Individual owners of buildings at Robin Hood;
- Other individual landowners adjacent to the canal;
- Crich Chase owners: the canal and Chase share an extensive boundary.

Structural integrity of the canal and maintenance of appropriate water control mechanisms to safeguard adjacent ownerships is of primary importance.

## 2. DESIGNATIONS

### SSSI

The Cromford Canal is an SSSI from its commencement at Cromford Wharf to the spillway at Ambergate, where the line of the canal was extinguished many years ago.

In October 2007 under Section 28(E) of the W & C Act 1981 (as amended) Natural England granted a **Consent** until the end of March 2012 to DCC to carry out specified operations.

The Consent is detailed in **Section 7 OUTLINE OF THE MANAGEMENT PLAN AND TARGETS.**

The DCC Countryside Service has benefited from the two training sessions provided in recent years by the NE Conservation Officer. These covered reasons for designation and species of importance.

**In addition to the SSSI parts of the Canal are also covered by other designations:**

The targets within this Ecological Management Plan must be achieved within the constraints set by the following designations.

- **Local Nature Reserve**

The southern section from Whatstandwell to Ambergate is a Local Nature Reserve designated by Derbyshire County Council. Under the terms of a lease from DCC, Derbyshire Wildlife Trust has managed this section for many years; the formal lease has lapsed but the Trust continues to undertake management work on the canal with the agreement of the County Council.

The Trust prepared a Management Plan in 2003; this has not been consented by English Nature since the Trust is no longer a formal tenant. The contents of that draft plan have been incorporated where appropriate in the preparation of this plan which covers the whole of the SSSI. The more detailed proposals of DWT will be considered when work is undertaken in appropriate sections of the canal.

The extent of the LNR and the primary reasons for its original declaration now require revision to reflect the current DCC policies and proposals which seek to manage the canal in its entirety, rather than seeking a differentiation as two distinct compartments.

- **Tree Preservation Orders and Conservation Areas**

The majority of the canal estate is covered by either TPOs or Conservation Areas or both. These include:

- |                       |                              |
|-----------------------|------------------------------|
| • County Council      | TPOs;                        |
| • Derbyshire Dales DC | TPOs and Conservation Areas; |
| • Amber Valley BC     | TPOs and Conservation Areas. |

These designations have direct implications for any tree work and can impact on other maintenance operations e.g. dredging along the majority of the canal; these organizations must be applied to or consulted in respect of any planned works.

The partnership organizations within the **Derwent Valley Mills World Heritage Site partnership** having responsibility for these designations have an important role to play in the successful implementation of both the Conservation Management Plan and this Ecology Management Plan with the aim of:

- a) securing their formal support towards the management proposals and prescriptions in these plans;
- b) providing a firm foundation of support for future applications by DCC with specific proposals in individual locations to further the plans, enabling the aims of both the CMP and this Eco MP to be implemented without delay.

- **Derwent Valley Mills World Heritage Site**

Cromford Canal, its wharves, road bridges and aqueducts, the Leawood Pump house, and the High Peak Junction Goods sheds, workshops and other railway buildings are pioneering examples of industrial development.

They are significant elements in the cultural landscape which constitutes the Derwent Valley Mills World Heritage Site which was inscribed on the UNESCO World Heritage List in 2001 for its critically important contribution to the Industrial Revolution.

- **Scheduled Ancient Monuments, Listed Buildings**

Within the World Heritage Site, a number of the structures mentioned above have specific designations and Scheduled Ancient Monuments or Listed Buildings. Policy 8 of the Cromford Canal Conservation Management Plan (see *Section 5 below*) identifies that the County Council will seek increased statutory protection for the canal and the railway corridor as a whole and for individual features.

### **3. REGULATORY FRAMEWORK**

In addition to the requirement under the W & C Act to receive consent from NE for operations, the following regulatory framework applies:

- **Felling Licenses:** The Forestry Act (1967), as amended, requires landowners to apply for a licence for the felling of growing trees. Details of exemptions can be found at <http://www.forestry.gov.uk/forestry/INFD-75EKZU>
- **Habitat Regulations** in respect of protection of European protected species bats.
- **W & C Act:** in respect of water vole and Grass snake and breeding birds.
- **Local Development Framework:** relevant local authority policies.
- **Rights of Way:** maintain access to canal towpath which is a public footpath.



#### 4. UK and Local Biodiversity Action Plans

The Cromford Canal lies within the Peak Fringe Natural area and is covered by the Lowland Derbyshire Biodiversity Action Plan.

Priority Habitats: Implementation of this Eco Management Plan will contribute to the '*Standing open water, including ponds, lakes and canals*' Action Plan'.

Priority Species: In addition to the species mentioned above which are covered by specific legal protection, Toads occur on the canal.

#### 5. CONTEXT OF THE MANAGEMENT PLAN

This Ecological Management Plan should be read in conjunction with:

⇒ **Cromford Canal: Conservation Management Plan Summary 2007 and supporting documents 2005 – 2007.**

This CMP was prepared for the County Council by Mansell Architects as part of the Cromford Cultural Landscape Heritage project, funded by the Heritage Lottery Fund.

Work undertaken for the CMP included:

- A time line of the development and history of the canal
- An assessment of the heritage significance of all features along the canal
- Cross-reference to and a summary of the ecological significance of the canal
- Identification of major management issues and establishment of policies to address these and identification of some specific opportunities for action.
- An outline of implementation of these policies, together with monitoring and review.

⇒ **'Ecological Appraisal of Cromford Canal and Recommendations for Restoration'** January 2005

This study was prepared for Derbyshire County Council by Scott Wilson for the Cromford Cultural Landscape Heritage project, funded by the Heritage Lottery Fund.

Work undertaken for this report included:

- Compilation and assessment of the existing biodiversity records;
- Carrying out specific surveys to fill data gaps;
- Identifying the main biodiversity features relevant to the SSSI;

- Identifying and assessing the main ecological issues influencing the canal's restoration, together with the future operational regime and ongoing management.

The findings of this 'Ecological Appraisal' are referred to elsewhere in this Plan as appropriate.

⇒ **Cromford Canal Water Level Management Study July 2007** by Scott Wilson for DCC

The aims and objectives of this study were to:

- Develop a scientific understanding of the Canal,
- Develop a hydrological and hydraulic understanding of high flow regimes in the canal,
- Develop a management strategy for high water levels in the canal in both the short term and the longer term,
- Assess the effects on water levels of restoring the canal to an 'ideal ecological state' according to Natural England

The main conclusions of the study are:

- The canal can be looked at as two distinct reaches – north and south of the Derwent Aqueduct;
- Were the Derwentside and Robin Hood weirs to be widened to 4m this would reduce water levels sufficiently to prevent overtopping, though a low spot at Whatstandwell would still be susceptible even with the Foundry Paddle open
- To maintain the canal to Natural England's ideal would require in each section a channel of at least 4m width and a depth of at least 0.5m to be maintained. However, this would result in only a decrease of 10mm in water levels when compared to the base scenario and therefore overtopping would still be evident at Whatstandwell and Derwentside.
- To prevent overtopping on the southern reach, it is recommended that the bank towpath at Whatstandwell be raised by up to 30mm to a level of 83.20mAOD. Similarly it is recommended that the bank towpath at Derwentside Weir is also raised by 200mm, though overtopping might still be possible.
- Therefore it is also recommended that the Derwentside and Robin Hood Weirs are widened to 4m.

In addition, the Countryside Service has identified the possibility of additional spillways as a means of reducing the likelihood of overtopping and as an alternative to raising the towpath at Whatstandwell at:

- Whatstandwell water treatment works
- Simms Bridge

⇒ **Engineering Study 2008**: by DCC engineers



This is planned for completion by end March 2008. The aim is to identify the current condition and future maintenance and restoration needs of the canal as a structure.

⇒ **EMDA Waterways Recovery Initiative 2007**

Together, the studies set out above have expressed the scope of necessary works. In response the Countryside Service made a major bid to EMDA for funding in 2007. This has been successful; it has secured funding for 2008-11 for canal enhancement. This includes a sum of £200,000 for de-silting to be undertaken over three years.

To utilise the EMDA funding, a detailed three year scheme for de-silting and provision of a 4m channel throughout the canal, as advised by the Water Level Management Study, will be drawn up once the engineering study is complete. The implementation of this scheme forms part of this Ecological Management Plan, once it has been 'Consented'.

***Conclusion in relation to studies and initiatives:***

The recommendations of all these studies must be examined to assess how far they will assist in implementing the ecological objectives and how they can be achieved without adverse impact on the interests of the SSSI.

Site specific recommendations (e.g. new paddles, spillways, revetments etc) proposed in these studies are incorporated into this plan - see *APPENDIX A*.

The DETAILED specifications and proposals for these individual recommendations will be discussed with Natural England and any other appropriate organization on an annual basis prior to the commencement of works.

## 6. RATIONALE FOR THE MANAGEMENT PLAN

Rationale for the management plan is based on the following considerations:

### 6.1 Condition

The EN SSSI Condition summary for the canal at August 2006 (see extract from EN website) summarises condition as set out below. These condition assessments are “interim” assessments that have been carried out by DWT through the Reserves Enhancement Scheme (RES). The units need to be assessed by Natural England to the common standards approach adopted by SNH, CCW and EN (Natural England). Natural England has advised that this will almost certainly result in a different assessment of condition.

#### Unit 1: Cromford Wharf to Gregory Winding Hole:

Interim assessment: **Unfavourable** no change (may change when assessed by Natural England);

#### Unit 2: Gregory's Winding Hole to Ambergate:

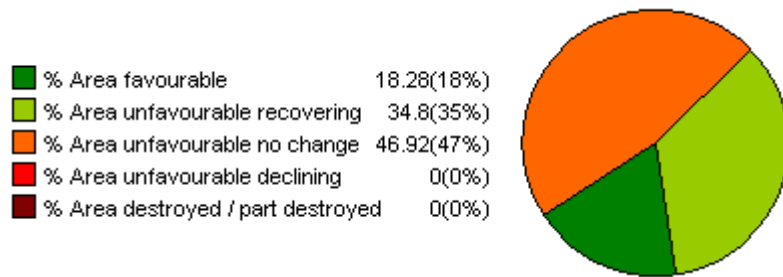
Interim assessment: **Unfavourable recovering** based on the establishment of an agreed management plan which is actively being implemented. Without action this assessment could change when next assessed by Natural England to **unfavorable declining or unfavorable no change**.

#### Unit 3: Gregory's Winding Hole:

Interim assessment: **favourable** condition (but may change when next assessed by Natural England to **unfavourable declining or unfavourable no change** if active management has been insufficient to maintain condition.

#### SSSI name: Cromford Canal

% Area meeting PSA target	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining	% Area destroyed part destroyed
53.08%	18.28%	34.80%	46.92%	0.00%	0.00%



Unfavourable units are assigned “adverse reasons” for their unfavourability. The adverse reasons for unit 1 (and probably unit 2) are:

1. Forestry and woodland management (shading by trees)
2. Inappropriate water levels (low water levels)
3. Inappropriate weed control (growth of glyceria swamp)
4. Inappropriate weirs dams and other structures (lack of spillways etc)
5. Siltation (accumulation and depth of silt)
6. Water abstraction (water source compromised by Cromford Mill)

For a unit to be in favourable condition, **ALL** of these adverse reasons need to have been addressed.

For a unit to be in unfavourable recovering condition, there needs to be some mechanism (e.g. management plan) that has been agreed and consented to address **ALL** of the adverse reasons. The funding also needs to be there to enable any necessary capital works to go ahead.

## 6.2 Management Objectives

The **Countryside Service Strategy** (DCC 2004) establishes the overriding objectives for the County Council, which is to manage its estate to address all liabilities and ensure legal compliance. Specifically:

*2.1A Manage all countryside sites open to the public to recognized best practice standards.*

*2.2A Rationalise our estate and the role of sites based on public benefit, public access, legal responsibility, landscape, sustainable tourism, heritage conservation and wildlife value within available resources.*

*2.4A Produce, maintain and implement up to date site management plans and/or work programmes, marketing plans and business plans, for all countryside sites as appropriate.*

The **Ecological Appraisal** identified 17 **Strategic Management objectives**; these have been refined as follows:

1. To manage the canal to aim to achieve favourable condition for the SSSI designated features of interest. To maintain and enhance the diversity of habitats and species along the canal.
2. To ensure that any ecological management and restoration strategies are developed in partnership with proposals for the conservation of historical structures and landscape restoration strategies.
3. To maintain and where appropriate improve the use of the site as an educational and recreational resource, and increase visitors enjoyment of nature.

### **6.3 Management Prescriptions**

Individual Management Prescriptions were provided in the Ecological Appraisal for each of the thirty three survey compartments (Ecological Appraisal pp35-43).

Individual management prescriptions were related back to the strategic management objectives.

The necessary prescriptions for the achievement of the strategic objectives can be summarised by 3 principle types of works:

- i. Long-term dredging or pumping regime enabling raising of water levels and sufficient flow to avoid future siltation problems;
- ii. On-going tree works to reduce shading to no more than 30%. Natural England have been consulted on appropriate means of measuring this. DCC's suggestion is : - when read with a hand held light meter standing on the towpath;
- iii. Structural works and installation of water control devices at key locations to resolve water level issues.

In addition, the guarantee of water supply for the canal through Arkwright's Mill will be a long term requirement.

#### 6.4 Available resources

The County Council recognises its duties:

- under Section 28G(2) of CROW Act 2001 '*to take reasonable steps consistent with the proper exercise of the authority's functions, to further the conservation and enhancement of the flora, fauna or geological or physiological features by reason of which the site is of special scientific interest*'.
- Under Section 40 of the NERC Act 2006 '*every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity*'

A pragmatic evaluation of the necessary works to achieve the strategic management objectives with the resources available now and in the foreseeable future to the County Council indicates that a ten year plan of works will be necessary to achieve the objectives.

This assumes that, in addition to the hydrological study, the engineering study will confirm the authority's officers' current views concerning the potential needs for additional spillways. It does NOT include any major, but as yet undetermined, engineering requirements, which might prejudice the ongoing ecological restoration of the canal.

The resources available include:

- **DCC Countryside Service** 2 full time canal wardens with skills appropriate to the task.
- **DCC Countryside Service** annual management budget to be identified
- **Natural England –** potential 50% contribution to capital works each year

In addition to the above resources it is anticipated that **major EMDA** funding will be available for April 2008 – March 2011 as follows:

Capital costs	Year 1	Year 2	Year 3	Future years	Total
Structural repair/restoration: <ul style="list-style-type: none"><li>•</li></ul>	20000	40000	40000		
Structural/land assessment: <ul style="list-style-type: none"><li>•</li></ul>	29000				
Decontamination works: Cromford Wharf possible works	50000				
Dredging/water management: <ul style="list-style-type: none"><li>• dredging</li><li>• spillway Sims</li><li>• spillway Whatstandwell</li></ul>	70000	70000	60000		
Access work :	225000	70000			

<ul style="list-style-type: none"> <li>towpath to disabled access standard</li> <li>footbridge at Whatstandwell</li> </ul>					
Habitat management: <ul style="list-style-type: none"> <li>Tree works</li> </ul>	8000	6000	6000		
Building improvements: Boiler repair Leawood Pump House	55000				
	457000		106000		

A number of organisations currently provide manpower through work days on the canal, for instance **DWT** ( including on the LNR) *5 days x 10 people = 50 person days/pa*, **BTCV Enterprises**, currently contracted to 80days /pa, **BTCV** currently 30days pa., **Friends of Cromford Canal** 50 pd/pa.

The authority is exploring with these and other organisations to formalise such agreements and increase the amount of volunteer work on the management of the canal. The Eco Management Plan, together with the Conservation Management Plan, provides the basis from which to develop work programmes with appropriate organisations.

Given the large amount of work required and its specialist nature, in particular extensive tree felling or trimming, the use of **outside contractors** will be required, but this is dependant upon the financial resources available.

## **7. MANAGEMENT PLAN TARGETS**

**These targets should be read in conjunction with:**

- **APPENDIX A: Cromford Canal Ten Year Work Programme**
- **APPENDIX B: MANAGEMENT PRESCRIPTIONS FOR EACH OF THE 33 INDIVIDUAL SURVEY AND MANAGEMENT COMPARTMENTS**
- and with the overall context of other plans and policies as set out in Section 4.

**TARGET 1: To ensure the structural integrity of the canal and to ensure that the appropriate water control mechanisms are in place.**

**TARGET 2: At the end of 10 years for Units 1 and 2 to both be recovering from unfavourable condition and Unit 3 to remain in favourable condition.**

**By the end of the 10 year plan**, the priority must be to attempt to create a continuous channel. This will require works in all three management units.

**Over and above this major task, in the first five years** works will concentrate on:

- Unit 1 (Cromford Wharf – Gregory's Tunnel) which is in unfavourable condition;
- Whilst Unit 3 (Gregory Winding Hole) which is in favourable condition and Unit 2 (Gregory's Winding Hole to Ambergate) which is in unfavourable recovering condition, will receive sufficient management to retain them in current condition.

In addition to the above concentrations of effort, if resources are secured, spillways will be installed at Sims Bridge and at Whatstandwell.

*However, if the formal condition assessment to be undertaken by Natural England in summer 2008 indicates that Units 2 & 3 are declining, then this programme will be reviewed.*

**In the second 5 years of the plan** restoration effort will concentrate on:

- Gregory's Winding Hole to Ambergate - Unit 2.

The aim is, after 10 years, for Units 1 and 2 to both be recovering from unfavourable condition and Unit 3 to remain in favorable condition. The primary way in which this will have been achieved is by providing a channel throughout and increasing water depth and flow. This work cannot be undertaken without the prior siding up of canal-side trees. Reducing tree shading will be a secondary but important task.

- This overall target must be achieved within the limitations imposed by the Consent from Natural England (see *below*) or as otherwise agreed in annual discussion with Natural England in relation to the details of the Annual Work Programme as set out

**Consent granted by Natural England for period 8 October 2007 - 31 March 2012:**

- ***Reed/silt clearance to establish and maintain an open water channel*** of up to 4 m width. Clearance not to exceed 850 m in any one year and not to exceed 350m in any one single stretch. Where rare plants e.g. Hornworts are known to be present, work is to be done by hand pulling. All clearance to be done October – March.
- ***Bankside vegetation management*** – biennial rotational block cutting of tall herb bankside. All cut vegetating to be raked and removed away from the canal. All cutting to be done after 15 June in anyone year.
- ***Tree pruning*** – any overhanging branches are to be removed and left as deadwood in as large a piece as is manageable. Clearance not to exceed 500m in any one year and not to exceed 250m in any one single stretch. All clearance to be done October – March.

**TARGET 3: By the end of the first five years create a 4 metre open water channel throughout the canal.**

- Wherever possible, work would commence at the southern end of individual reaches and working northwards (but see notes on general principles below). A 4m channel would be created through each major silt bank/vegetation stand. Once there was confidence that water could flow freely down the length and would not overtop in times of high water, then the northernmost siltbank would be removed.

The following general principles are currently applied:

- As per NE Consent: Reed/silt clearance to establish and maintain an open water channel of up to 4 m width. Clearance not to exceed 850 m in any one year and not to exceed 350m in any one single stretch. Where rare plants e.g. Hornworts are known to be present, work is to be done by hand pulling. All clearance to be done October – March.
- Where it is necessary to drain down the canal for dredging the following principles will apply: the work will only be undertaken during September – March inclusive, or as otherwise agreed at the annual work programme meeting. Reason: to avoid damage to invertebrates from heavy frost/cold weather and damage to amphibians in early spring. Areas will be left drained for the minimum of time.
- Dredge channel as deep as possible to restrict disturbance of silt and encroachment of vegetation, without damage to canal base.



- Leave reed fringe to maximum width possible, compatible with maintaining open water communities between the central channel and fringe
- Draw up and implement a programme of transplantation of rare/sensitive species to dredged areas to avoid loss of rare species.
- Where possible, dredge whilst canal is in water, causing less disruption than de-watering and then dredging.
- Introduction of silt traps immediately after dredging has been completed in stretches which are known to suffer from silt deposition from streams and drains entering the canal.
- Dredge in an upstream direction, allowing seeds to recolonise downstream in newly dredged areas to mitigate effect of removal of silt which will also remove seeds and may cause a decline in some species.
- Dumping areas to allow dredgings to dry before removing them will be identified as part of each annual programme of works; HPJ wharf buildings or in leased fields may be favoured to reduce transport costs.

Dredging works will be undertaken in conjunction with maintenance and enhancement of the canal banks and supporting structures, creation or enhancement of spillways and other works identified as part of the Engineering Study.

**TARGET 4: By the end of the first five years retain the current condition of Unit 2.**

- Through the process of desilting as described above and tree removal.

**TARGET 5: Arisings will be removed from the SSSI site.**

Canal dredgings are defined as controlled waste in regulations under the Control of Pollution Act 1974 and Environmental Protection Act 1990 and will require a waste management license unless specifically exempted under the Waste Management Licensing Regulations 1994.

A sediment survey would be required at sample points along the canal to determine the nature of contamination. Where there are silt contaminants, this may require arisings to be disposed of only in a specially licensed tip.

Sites which are to receive dredgings are also required to have a tipping license.

Silts with little or no contamination from heavy metals etc could be dealt with differently from heavily contaminated sediments. "Clean" dredgings can be applied to agricultural land for example.

However some locations will be required for disposal of small scale localized and emergency dredgings; these will be located in locations where there is no detriment to local ecology.

**TARGET 6: Dredging will be timed so as to avoid impacts on protected species including water vole, bats and nesting birds.**

- All work in channel will be undertaken between the end of August and end of March See NE consent.
- Pre-surveys for water vole activity would be undertaken in those compartments where water vole has previously been recorded and appropriate schemes of works designed to avoid or mitigate impact;
- Trees to be felled would be assessed for their potential as bat roosts and work would only be done at appropriate time of year.

**TARGET 7: By the end of ten years to achieve no more than 30% channel shade throughout the majority of the length of the canal.**

Throughout the 10 years of the plan a programme of tree works would be undertaken to complement the stretches being desilted, so as to enable desilting operations, reduce leaf litter and increase light levels. The long term target would be no more than 30% channel shade throughout the length of the canal, as identified in the management prescriptions in the Ecological Appraisal.

Tree works would be programmed generally in the vicinity of, or upstream from, stretches most recently desilted.

The retention of limited lengths of more heavily shaded sections to provide a mosaic of heavy, light shade and open areas will be concentrated in places where management is dependent on neighbours who may be unlikely to carry out substantial tree works, and where the aquatic vegetation has gone.

**TARGET 8: To achieve biennial rotational block cutting of tall herb-rich, bankside grassland,** as identified in the management prescriptions in the Ecological Appraisal.

**TARGET 9: To take prompt action, within the appropriate regulatory framework to control and eradicate alien species.**

- Work will be designed to minimize ecological impacts
- NE will be consulted by other relevant agencies for comment and appropriate consent.

**TARGET 10:**        To achieve ‘access for all’ standard throughout the length of towpath, including widening surface to accommodate wheelchairs and regular maintenance of bankside vegetation to keep path open.

- Works will be designed to have minimal ecological impacts.
- Maintenance will be undertaken so as to retain seed bank and nectar sources.
- A scheme for improvement for access for all will be drawn up in consultation with NE.
- Separate consent will be sought from NE – possibly section by section - and this will be combined with a detailed bankside vegetation maintenance programme.

**TARGET 11:**        To review the LNR designation with a view to extending the designation northwards.

- The extent of the LNR and the primary reasons for its original declaration will be reviewed to reflect the current DCC policies and proposals which seek to manage the canal in its entirety, rather than seeking a differentiation as two distinct compartments.
- The possibility of extending the designation northwards to Wayfarers Cottage will be considered in conjunction with the development of a clear policy on recreational zoning.

**TARGET 12 :**        To secure the endorsement of World Heritage Site partners to relevant plans for the Canal:

- The partners to the WHS having responsibility for these designations will be consulted on both the Conservation Management Plan and this Ecology Management Plan with the aim of:
  - c) securing their formal support towards the management proposals and prescriptions in these plans;
  - d) providing a firm foundation of support for future applications by DCC with specific proposals in individual locations to further the plans, enabling the aims of both the CMP and this Eco MP to be implemented without delay.

## **8. IMPLEMENTATION**

- The **Targets** will be achieved through implementation of the **Actions** identified for each Target.
- These **Actions** have been worked up into a **Ten Year Work Programme – APPENDIX A.**
- Each year an **Annual Work Programme** will be developed from the further detailed from the **Ten Year Work Programme.**
- The **Annual Work Programme** for the forthcoming year will be submitted to **Natural England** in January or February of each year for consideration of technical aspects and guidance on detailed implementation.
- **Natural England** will be invited to an **annual site inspection** in January/February/March each year to agree technical aspects on site.

## 9. MONITORING AND REVIEW

### Condition monitoring

Natural England has a requirement to monitor each SSSI unit at least every 6 years; Natural England's monitoring will include:

- invertebrate assemblage;
- habitat i.e. swamp and open water communities.
- Natural England will undertake condition monitoring in the summer of 2008 – to provide a baseline against which the implementation of this management plan can be monitored.
- Natural England will repeat condition monitoring at the mid point of the three year EMDA funded work programme (summer 2011)work.

### Water vole monitoring

In order to ensure no breaches of legislation, prior to works there may be a need for:

- buying in surveys for protected species, in particular water vole and grass snake, bat (DWT preferred), which are not currently part of the SSSI *Reasons for Notification*
- Alternatively, training could be bought in to enable staff to undertake the necessary species protection surveys and to add to existing GIS mapping layers for protected species locations.

### Monitoring more immediate impacts of change

Vegetation monitoring before and after dredging should not generally be required since the aim is to leave bankside vegetation in situ. Where rare plants e.g. Hornworts are known to be present, monitoring should be undertaken in the summer before and after works undertaken.

### Fix point photography

Fixed point photography is an invaluable tool which should be used to record change and enable monitoring.

- A series of fixed point locations should be established and a system for storing and retrieval of photos established.

### Use of GIS

The Countryside Service now has the availability of MapInfo. The implementation of both the Conservation Management Plan and the Ecological Management Plan will be considerably aided by the use and development of GIS layers.

A considerable amount of ecological and cultural information now exists as digitized layers;

- A Workspace will be developed to combine all the relevant layers to aid reference to and identification of all issues which require to be considered when specific proposals are being developed.

**Review**

There will be a need for review of objectives and targets at a minimum at the end of three years.

## APPENDIX A: Cromford Canal Ten Year Work Programme

### Note.

Individual tasks should be referred back to the ecological management plan for full details of what is required. This list does not highlight protective species issues and the requirement for mitigating measures before work being carried out. This will need to be agreed before work is planned in.

Year	2007/8
Comp	Item
All	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed
All	Maintain water channel by reed clearance
1	Selective tree and scrub removal along right bank of southern feeder stream. Retain lime and elm.
1	Consider pollarding or crown reduction of large ash, beech and sycamore at western end of feeder stream (H&S issue).
2	Leak repair.
5	Complete tree work
6	Undertake leak repairs. (3 No).
6	Sycamore, elder and hawthorn scrub behind stone wall to landward of left towpath. One large sycamore for removal opposite garden centre (bat roost assessment essential).
7	Ongoing erosion control should utilize geo-textile - on left bank to spread/ minimise impact of dogs on margins. Erect explanatory notice board. In the long term replacement of timber revetment edging would be an ideal.
8	Undertake repair to swing bridge.
10	Alder and sycamore removal urgently needed on right bank in old docking area under ETL just upstream of winding hole and on in front of outflow. Also remove small alder opposite on left bank side in same area
16	Repair handrail and re-surface path in Gregory Tunnel. Purchase over length stop planks for emergency use.

<b>Year One                      2008/9</b>	
<b>Comp</b>	<b>Item</b>
All	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed
All	Maintain water channel by reed clearance
All	Undertake structural assessment of canal and water controls
All	Carry out first year priority structural repairs
All	Undertake tree survey to identify trees that need to be removed for safety or structural reasons. Instigate phase 1 of programme to deal with unsafe or damaging trees
3	Repair collapsed retaining wall onto Meadows.
6	remove sycamore /elder hawthorne behind towpath wall
9	Remove or pollard beech tree by Brown's Bridge, retain elm tree.
11	Scrub and tree clearance needed on Leawood arm.
12	Purchase stop planks for Railway Aqueduct
14	Widen weir on overflow at Derwentside and Robin Hood.
14?	Tree removal / thinning Derwentside
15?	Tree removal / thinning Leawood
16	Repair handrail and re-surface path in Gregory Tunnel.
26	Dredge silt under Whatstandwell Road Bridge (150m) Thin and remove tree cover adjoining and immediately upstream of dredged area.
27	Dredge silt banks Crich Chase

Thin and remove tree cover adjoining and immediately upstream of dredged area.

### Other Work

- 10 Building improvements, Workshops and Ticket Office.
- 11 Boiler repair Leawood Pumphouse

### Year Two 2009/10

Comp	Item
------	------

- |       |   |
|-------|---|
| All   | Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed. |
| All   | Maintain water channel by reed clearance  |
| All   | Carry out second year priority structural repairs   |
| All   | Towpath improvement programme High Peak Junction – Ambergate (Year 1)   |
|       | Undertake phase 2 of programme to deal with unsafe or damaging trees  |
| 1     | Purchase and store stop-planks for inlet arm  |
| 14?   | Tree removal / thinning Derwentside   |
| 15?   | Tree removal / thinning Leawood   |
| 17    | prepare scheme for the management of Gregory Winding hole   |
| 17    | Finish tree work on southern portal of tunnel and adjacent bank   |
|       | Construct new spillway Sims / Whatstandwell   |
| 32/33 | Silt dredging Meadow View farm  |



Thin and remove tree cover adjoining and immediately upstream of dredged area.

### Other work

11 Prepare scheme for disabled access to the pump house.

11 Prepare video of pump house.

### Year Three 2010/11

Comp	Item
------	------

All	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed
-----	--

All	Maintain water channel by reed clearance
-----	--

All	Carry out third year priority structural repairs
-----	--

All	Towpath improvement programme High Peak Junction – Ambergate (year 2)
-----	---

Undertake phase 3 of programme to deal with unsafe or damaging trees

4	purchase and store stop planks for lawns Bridge
---	---

8	Cut grassland on left bank to expose historic wall
---	--

16	sycamore removal
----	------------------

19	Remove silt bank south of Leashaw farm Thin and remove tree cover adjoining and immediately upstream of dredged area (as far as brick sluice).
----	---

33	Improve spillway at Ambergate and Leashaw Farm.
----	---

Year Four 2011/2012		
Comp	Item	
All	Remove all tree whips and seedlings growing out of and on the canal banks. Buddleia, ash and sycamore trees to be removed.	top of
All	Maintain water channel by reed clearance.	
6	Silt Dredging.	
6	Tree removal on right bank / thin trees by garden centre	
8	Thinning and cutting programme in paddock area	
10	Remove willow and scrub upstream of the pump house and raise crown of large oak.	
12	Replace stop planks at end of aqueduct.	
12/13	Tree removal / thinning on Derwentside bank side	
19	Silt dredging south of Leashaw Farm	

Years Five –Ten 2012/17		
Comp	Item	
All	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed	
All	Maintain water channel by reed clearance	
1	Refurbish roadside paddle	
3/4/5/7 8/10/11 12/14/15 16/	Silt dredging required.	

- 7        Side trim canal bank trees / remove rail side trees for landscape enhancement
- 10       Replace bank side revetment with “soft engineering option” and deal with Himalayan balsam
- 13       Side lopping of trees on the left hand bank

Note all work in compartments 18 – 33 to be undertaken in years 5 – 10 unless specifically scheduled in

## APPENDIX B:

### MANAGEMENT PRESCRIPTIONS FOR EACH OF THE 33 INDIVIDUAL SURVEY AND MANAGEMENT COMPARTMENTS, over a 10 year period

Table takes prescriptions from Ecological Appraisal for each compartment, but reordered to provide easier visual appreciation of how works would be accommodated within the plan period.

Priority/comments column provides additional information/guidance.

#### **PRIORITIES in bold in all columns**

- There is a need for the canal to be walked and work assessed in each of these compartments and more detail added to the table.
- Recommendations on engineering and hydrology study to be added.

SHADING DENOTES WATER VOLES RECORDED IN 2003/4

Compartment numbers 1-32 **Ecology Appraisal/** Compartment numbers 1-26 follow **Conservation Management Plan:**

e.g. eco1/cmt1 or eco14/cmp 11 & 12

COMPARTMENT	SSSI UNIT	LOCATION	YEARS	PRIORITY/ COMMENTS	DESILTING	TREE WORKS – these prescriptions require to be reviewed on the ground and amended as necessary.	STRUCTURAL OR WATER CONTROL WORKS	MOWING
eco1/ cmp1	1	Cromford Wharf  101m	1-5	<b>Continuous removal of Himalayan Balsam or knotweed from Wharf important to prevent colonisation on for entire length of SSSI.</b>		Selective tree and scrub removal along right bank of southern feeder stream. Retain lime and elm  Consider pollarding or crown reduction of large ash, beech and sycamore at western end of feeder stream (H & S issue)  Remove all tree whips and seedlings growing out of and on top of the canal		

						banks. Buddleia, ash and sycamore trees to be removed , although large ash require discretion		
eco 2/ cmp1	1	C Wharf side stream – 65m	1-5			Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed , although large ash require discretion.  Remove large sycamore		
eco3/ cmp2	1	Bank reinforce 84m	1-5		<b>Clear reed sweet grass in winter to allow a minimum 4 meter wide channel.</b> Silt dredging needed.	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed , although large ash require discretion.  Remove hawthorns in left canal wall on landward side.		Biennial rotational block cutting of tall herb-rich, bankside grassland
Eco4/ cmp2	1	Beech left bank 202 m	1-5		<b>Clear reed sweet grass in winter to allow a minimum 4 meter wide channel.</b> Silt dredging needed.	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion  Remove hawthorns in left canal wall on landward side.		Biennial rotational block cutting of tall herb-rich, bankside grassland
eco5/ cmp3	1	Lawn Bridge 160m	1-5		<b>Clear reed sweet grass in winter to allow a minimum 4 meter wide channel.</b> Silt dredging needed.	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion.  Remove elder on left bank by footbridge. Clean limb adjacent canal-side alder and remove one tree.  Raise crowns on old hawthorns especially either side of bridge to enhance views		Biennial rotational block cutting of tall herb-rich, bankside grassland

						back to Wharf as part of the landscape restoration.  Ensure veteran ash on towpath boundary is protected and any necessary tree surgery undertaken with extreme care by specialists.		
eco6/ cmp4 & 5 & 6	1	Wire fence wood boundary 691m	1-5		<b>Silt dredging needed</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion.  <b>Urgent tree removal works required along right bank adjacent to the grassland. Retain elm.</b>  <b>Thin trees along right bank top by garden centre in consultation with them.</b>  Remove sycamore, elder and hawthorn scrub behind stone wall to landward of left towpath. One large sycamore for removal opposite garden centre (bat roost assessment essential)		
eco7/ cmp7	1	Pisani outfall 316m	1-5	Replace bankside timber reinforcement with geotextile on left bank to spread/minimise impact of dogs on margins. Erect explanatory notice board.	<b>Silt dredging needed</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion.  <b>Side trim all canal bankside trees. Priority work where it will enhance existing stands of channel macrophytes. Identify trees for work in summer when macrophytes are still visible</b>		

						Remove railside trees and scrub for landscape enhancement		
eco8/ cmp 7	1	STW aerator 154m	1-5	Ensure no more than 5% channel shading. This is a priority open macrophyte section	Silt dredging	Remove all tree whips and seedlings growing out of and on top of the canal banks		Biennial rotational block cutting of tall herb-rich, bankside grassland. Assess possibility of maintaining 25% of tall bankside grassland on left bank as short grassland to expose historic canal wall
eco9/ cmp7 & 8	1	HPJ Brown's Bridge 231 m  NB areas outside canal and towpath NOT in SSSI	1-5	Ensure no more than 5% channel shading. This is a priority open macrophyte section  Opportunity for re-introduction of Grass wrack pondweed in sections 8, 9, 10  Suggest area possibly reviewed as own individual project:		Remove all tree whips and seedlings growing out of and on top of the canal banks.  Remove beech tree by Brown's Bridge, retain elm tree  Picnic area on right side at High Peak Junction and area to roadside to be reviewed and assessed in terms of tree and shrub removal and raising crowns of mature trees. Assess possibility of restoring grassland between road and old stone wall. Remove trees along front of wall fringing south western edge of picnic area to restore historic views. Some very selective removal of silver birch in picnic area		

Eco10 / cmp8	1	STW old works 144m  NB areas outside canal and towpath NOT in SSSI	1-5	<p><b>Ensure no more than 5% channel shading. This is a priority open macrophyte section</b></p> <p>Look to replace revetment on right bank with soft engineering option. Review clearing Himalayan balsam to north of canal wall by pump house and planting area with dogwood and guelder rose</p>	Silt dredging	<p>Remove all tree whips and seedlings growing out of and on top of the canal banks Buddleia, ash and sycamore trees to be removed, although large ash require discretion.</p> <p><b>Alder and sycamore removal urgently needed on right bank in old docking area under ETL just upstream of winding hole and on in front of outflow. Also remove small alder opposite on left bankside in same area</b></p> <p>Remove willow trees and scrub upstream of pumphouse and raise crown of large common oak to enable views of pumphouse.</p>		
eco11 / cmp8	1	Wigwell Aqueduct only 131m	1-5	<p>Review clearing Himalayan balsam to north of canal wall and planting area with dogwood and guelder rose. Ensure work does not encroach on willow holt by river as otters using local area.</p>	Silt dredging needed	<p>Remove all tree whips and seedlings growing out of and on top of the canal banks Buddleia, ash and sycamore trees to be removed , although large ash require discretion</p> <p><b>No woody shrubs to be tolerated along aqueduct walls. Ensure treatment of any scrub bases. Maintain 0% channel shading.</b></p> <p>Scrub and tree clearance needed on Leawood arm</p>		
Eco12 / cmp 9 & 10	1	Aqueduct Cottage 100m	1-5	<p>Interpretive material needed to be developed in partnership with DWT IRT?? meadows and scrubland between canal and river.</p>	Silt dredging needed	<p>Remove all tree whips and seedlings growing out of and on top of the canal banks Buddleia, ash and sycamore trees to be removed, although large ash require discretion. <b>Very shaded and needs urgent action along right side in partnership with DWT, particularly to create open views south to river and increase light getting to channel.</b></p>		



						Left bank requires side lopping of overhanging trees		
<b>eco13 / cmp 10 &amp; 11</b>	<b>1</b>	<b>80 m down stream of Aqueduct Cottage 310m</b>	<b>1-5</b>	<b>See 12 above</b>	<b>Replace revetment works</b>			
<b>eco14 / cmp1 1 &amp; 12</b>	<b>1</b>	<b>Railway Aqueduct 282m</b>	<b>1-5</b>	Interpretive material needed to be developed in partnership with DWT IRT meadows and scrubland between canal and river.	<b>Silt dredging needed</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks Buddleia, ash and sycamore trees to be removed, although large ash require discretion.  Left bank requires side lopping of overhanging trees		
<b>Eco15 / cmp 12 &amp; 13</b>	<b>1</b>	<b>Weir Board 244m</b>	<b>1-5</b>		<b>Silt dredging needed</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks Buddleia, ash and sycamore trees to be removed, although large ash require discretion		Biennial rotational block cutting of tall herb-rich, bankside grassland
<b>eco16 / cmp 13 &amp; 14</b>	<b>1</b>	<b>Spring culvert under canal 265m</b>	<b>1-5</b>		<b>Silt dredging needed</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks Buddleia, ash and sycamore trees to be removed, although large ash require discretion Remove alder on left bank just upstream of the tunnel and sycamore sapling on the right slope before tunnel		Biennial rotational block cutting of tall herb-rich, bankside grassland
	<b>1</b>	<b>Gregory's tunnel 60m</b>	<b>1-5</b>			Remove trees upstream of and growing over tunnel including ash and hazel. But take care with mature oaks re dead wood and possibly bat interests		

eco17 / cmp 14	3	Gregory Winding Hole east portal 92m	1-5	<p><b>Priority: Hold back succession in swamp and aquatic communities. Swamp and willow herb removal needed. To reinstate a greater area of open aquatic vegetation and reduce the amount of drying swamp. Some willow/alder also needs removal/pollarding from along the left bank. Assess possibility of reinstating grazing along left bank. Allow discretionary selected areas of fen to be removed along the right bank near the tunnel to demonstrate historic stone canal wall</b></p>	<b>Silt dredging.</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks Buddleia, ash and sycamore trees to be removed, although large ash require discretion		
Eco 18/ cmp 15	2	Wire fence left bank 220m	<p><b>1-5 MAINT-ENANCEW ORK ONLY 6-10 MAJOR</b></p>	Discretionary ivy removal from retaining walls for landscape restoration	<b>Silt dredging and clearance of reed sweet grass from channel to allow minimum of</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks Buddleia, ash and sycamore trees to be removed, although large ash require discretion. Especially young oaks on right bank just upstream from weir board and elderberry on Leashaw bridge	<b>Priority: Remove stop plank over sluice outflow on left bank to allow</b>	

			<b>WORK</b>		<b>4m wide open water channel.</b>	Side trim overhanging trees to achieve target of maximum 30 % channel shade.	<b>greater canal flushing</b>	
<b>eco19 / cmp 15 &amp; 16</b>	<b>2</b>	<b>Leashaw Bridge 159m</b>	<b>1-5 MAINT-ENANCEW ORK ONLY 6-10 MAJOR WORK</b>		<b>Silt dredging done but needs control of silt from drain outfall – stilling box?</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks Buddleia, ash and sycamore trees to be removed, although large ash require discretion.  Side trim overhanging trees to achieve target of maximum 30 % channel shade.	<b>Remove stop plank in canal to increase water flow.</b>	
<b>Eco 20/ cmp 16</b>	<b>2</b>	<b>Pond in field right bank 224m</b>	<b>1-5 MAINT-ENANCEW ORK ONLY 6-10 MAJOR WORK</b>			Remove all tree whips and seedlings growing out of and on top of the canal banks Buddleia, ash and sycamore trees to be removed, although large ash require discretion.  <b>Side trim overhanging trees to achieve target of maximum 30 % channel shade.</b> Ensure that Robin Hood vista remains hidden within distant views.	<b>Remove stop plank in canal to increase water flow.</b>	
<b>Eco 21/ cmp1 6</b>	<b>2</b>	<b>Robin Hood gardens 39m</b>	<b>1-5 MAINT-ENANCEW ORK ONLY 6-10 MAJOR WORK</b>			Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion.  <b>Side trim overhanging trees to achieve target of maximum 30 % channel shade.</b>		
<b>eco22 / cmp1 6 &amp; 17</b>	<b>2</b>	<b>Down stream RH gardens 189m</b>	<b>1-5 MAINT-ENANCEW ORK ONLY 6-10</b>		<b>Silt dredging</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion.		

			<b>MAJOR WORK</b>			<b>Side trim overhanging trees to achieve target of maximum 30 % channel shade.</b> Some tree removal from adjacent woodland, but limit impact in old wooded areas		
<b>eco23 / cmp1 7</b>	<b>2</b>	<b>Small weir above Sim's Bridge 82m</b>	<b>1-5 MAINT-ENANCEWORK ONLY 6-10 MAJOR WORK</b>		<b>Silt dredging</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion.  <b>Side trim overhanging trees to achieve target of maximum 30 % channel shade.</b> Some tree removal from adjacent woodland, but limit impact in old wooded areas		
<b>Eco24 / cmp 17</b>	<b>2</b>	<b>Sims Bridge 163m</b>	<b>1-5 MAINT-ENANCEWORK ONLY 6-10 MAJOR WORK</b>			Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion.  <b>Side trim overhanging trees to achieve target of maximum 30 % channel shade.</b> Some tree removal from adjacent woodland, but limit impact in old wooded areas		
<b>eco25 / cmp1 7 &amp; 18</b>	<b>2</b>	<b>Midway to Whatstand well Bridge 166m</b>	<b>1-5 MAINT-ENANCEWORK ONLY 6-10 MAJOR WORK</b>			Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed , although large ash require discretion.  <b>Side trim overhanging trees to achieve target of maximum 30 % channel shade.</b> Some tree removal from adjacent woodland, but limit impact in old wooded areas		

eco26 / cmp 18	2	Derwent Hotel Buildings/ Whatstand well station 77m	1-5 MAINT- ENANCEW ORK ONLY 6-10 MAJOR WORK	Everything in this section a priority, the aim should be to undertake a comprehensive scheme of habitat restoration and management together with landscape improvement and improvement to car park, setting of bridge, views west of canal etc and ecological interpretation including macrophyte community, small teasel, tall herbs and hoverfly diversity.	Clear sycamore from left side of channel.  Silt dredging needed, especially upstream of Whatstandwell bridge. Work gradually down from section 26	Priority: Silt trap needed for road runoff entering canal on left back just downstream of Whatstandwell bridge. Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed , although large ash require discretion.  Side trim overhanging trees to achieve target of maximum 30 % channel shade. Some tree removal from adjacent woodland, but limit impact in old wooded areas Cut back scrub and trees to enhance tall grassland.		Biennial rotational block cutting of tall herb-rich, bankside grassland
Eco27 / Cmp 18 & 19 & 21	2	556m	1-5 MAINT- ENANCEW ORK ONLY 6-10 MAJOR WORK	Priority: Remove rhododendron from bankside and adjacent land and young alder from channel Removal of road discharge	Silt dredging and clearance of reed sweet grass from channel to allow minimum of 4m wide open water channel	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion.  Side trim overhanging trees to achieve target of maximum 30 % channel shade.		
eco28 / cmp2 0 & 21	2	30 m downstrea m of stone wall on left 889m	1-5 MAINT- ENANCEW ORK ONLY 6-10		Silt dredging	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion.		

			<b>MAJOR WORK</b>			<b>Side trim overhanging trees to achieve target of maximum 30 % channel shade.</b>  Remove tree fallen over canal		
<b>eco29 / cmp2 2 &amp; 23</b>	<b>2</b>	<b>Chrch Chase Bridge 531m</b>	<b>1-5 MAINT-ENANCEWORK ONLY 6-10 MAJOR WORK</b>		<b>Silt dredging</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion.  <b>Side trim overhanging trees to achieve target of maximum 30 % channel shade.</b>		
<b>eco30 / cmp 23 &amp; 24</b>	<b>2</b>	<b>SK341526 Spring discharge 431m</b>	<b>1-5 MAINT-ENANCEWORK ONLY 6-10 MAJOR WORK</b>		<b>Silt dredging</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion. Remove small alder from margins  <b>Side trim overhanging trees to achieve target of maximum 30 % channel shade.</b>		
<b>eco31 / cmp 24 &amp; 25</b>	<b>2</b>	<b>Canal Cottage , Moulds wharf 345m</b>	See above					
<b>Eco 32/ cmp 25 &amp; 26</b>	<b>2</b>	<b>Gratton's Bridge 291m</b>	<b>1-5 MAINT-ENANCEWORK ONLY 6-10 MAJOR WORK</b>	Consider erection of interpretive material explaining history and importance of aquatic communities/tall marsh land	<b>Silt dredging and clearance of reed sweet grass/branch and bur-reed from channel to allow minimum of</b>	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion		

				/invertebrates and water voles.	4m wide open water channel.			
Eco 33/ cmp 26	2	Poyser's Bridge - end	1-5 MAINT- ENANCEW ORK ONLY 6-10 MAJOR WORK		Silt dredging	Remove all tree whips and seedlings growing out of and on top of the canal banks. Buddleia, ash and sycamore trees to be removed, although large ash require discretion.  Side trim overhanging trees on left bank to achieve target of maximum 30 % channel shade.		