

# MONTGOMERY CANAL

## REGENERATION REGENERATION THROUGH SUSTAINABLE RESTORATION

ADDENDUM TO THE CONSERVATION MANAGEMENT STRATEGY – MARCH 2016



# MONTGOMERY CANAL - CONSERVATION MANAGEMENT STRATEGY ADDENDUM

## INTRODUCTION

The Montgomery Canal is a nationally and internationally important wildlife site, and has protection under UK and European Law.

The Conservation Management Strategy (CMS) was written in 2005, to provide a way forward for the restoration of the canal to navigation, in a way that would conserve the biodiversity value of the site.

A link to the CMS is available here: <https://canalrivertrust.org.uk/media/library/186.pdf>

Within the original CMS a series of principles, proposals and actions were identified, which related to:

- Nature conservation
- Built heritage
- Water supply and quality

This update provides information on the progress of the Strategy in the 10 years since it was written with commentary on progress for each area. The update has been prepared with input from member of the Montgomery Canal Partnership, which has representatives covering the full range of interests, including local authorities, conservation organisations and waterway groups.

The organisations that make up the Montgomery Canal Partnership are as follows:

- Canal & River Trust (British Waterways before July 2012)
- Montgomery Waterway Restoration Trust (MWRT)
- Powys County Council
- Shropshire Council
- Natural Resources Wales (formerly Countryside Council for Wales, EA Wales)
- Natural England
- English Heritage
- Cadw
- Royal Commission on the Ancient and Historic Monuments of Wales (RCAHMW)
- Environment Agency
- Shropshire Union Canal Society (SUCS)
- Inland Waterways Association (IWA)
- Shropshire Wildlife Trust
- Severn Rivers Trust

2024 update: Montgomeryshire Wildlife Trust were members of the partnership until withdrawing in May 2022

# MONTGOMERY CANAL - CONSERVATION MANAGEMENT STRATEGY ADDENDUM

## NATURE CONSERVATION

Within the original CMS 36 principles, proposals and actions were identified, which related to nature conservation. These are given below (in bold), with a commentary on progress for each.

### **Actions 1 to 23 related to in-channel vegetation.**

- 1** *The [ecological] baselines for ensuring net gains during and after restoration will be the 2001 Newbold survey for [aquatic plants] in Wales, and the 1980's and 1997 British Waterways [ecological survey data] for England.*
  - Ecological monitoring has followed the protocol detailed in the CMS (Section 10.3 Conservation Objective Setting and Monitoring for the SSSI and SAC).
  - Common Standards Monitoring (CSM) has been undertaken in 2005, 2006, 2007, 2009 and 2014.
  - The data generated from this monitoring has informed the on-going management works undertaken on the canal. An example of this is data on the distribution of *Luronium natans* being used to enable translocation of the plant prior to dredging works.
- 2** *The main means of mitigating and compensating for the loss of aquatic plants will be:*
  - *Specific on-line measures, to ensure continuity and linkage between the nature reserves*
  - *Creation of new off-line reserves*
  - *Undertaking a range of measures to improve water quality*
  - *Mitigating effects of boat traffic, through management of numbers, speed of travel and excellence of boat design.*

To report on each of these proposals in turn:

In-line reserves (refuge areas within the canal channel) have been created at 5 locations within the English and Welsh lengths of the canal. These consist of barriers of geotextile supported by timber posts. These provide a refuge area, at the off-side margin of the channel, which protect plant species from increases in turbidity, and physical damage caused by passing boats. The photograph below shows one of the refuge areas, south of Welshpool, being managed in 2012.



- One new off-line reserve has been created in 2008 adjacent to Aston Bottom Lock. This created 0.7 ha of new aquatic habitat. Following the creation of the reserve some planting of aquatic plants was undertaken. It is intended to undertake a survey of aquatic plants in spring 2015.
- Operational activities undertaken regularly by Canal & River Trust will improve water quality. These include weed management (this will remove an excess of vegetation, which if left to decompose would reduce oxygen levels in the water and increase nutrient levels, neither of which would provide favourable conditions for the notable plants in the canal) and dredging (which will remove excess nutrients and fine silts which can increase turbidity of the water). In addition to these routine activities, a project has been undertaken in 2014-5, in partnership with the Montgomeryshire Wildlife Trust and the Severn Rivers Trust; The Severn Uplands Project (funded by Welsh Assembly Government). The aim of this project is to improve the water quality of water in the canal itself, by excluding stock from the offside of the canal, and creating buffer strips; and

by improving water quality of the feed waters by undertaking actions further up the feeder catchments. As a result of this project 200m of coir soft bank protection has been installed, 2000m of offside fencing with drinking bays, localised shade reduction through coppicing, 1 intercepting reedbed created on a side channel.

- These are measures that will be acted upon when levels of navigation increase.

**3** *Within Wales in channel conservation standards are crucial to securing connectivity and demonstrable enhancement of nature conservation. They are based on Common Standards Monitoring Type C for SSSI: canals with significant levels of navigation.*

**4** *Within England there will be no specific in-channel conservation standards, but the channel will be developed and maintained to British Waterways' standards for biodiversity. This will include maintenance of soft banks with a rich marginal vegetation and some aquatic plants.*

These standards have been monitored and reported upon through the CSM reports in 2005, 2006, 2007, 2009 and 2014. The monitoring methods used for the canal were reviewed by M Godfrey, but as yet, the recommendations of the review have not been implemented.

**5** *Special protection measures will be put in place for existing concentrations of rare species.*

Whenever operations are undertaken that have a potential to disturb or damage populations of protected or rare species, measures are taken to conserve these populations. An example of this would be during dredging operations, the channel is surveyed for Luronium natans. If the plant is present, it is removed (under licence) and re-located to, either a location that will not be disturbed by works, or to a holding facility (for example those operated by Chester Zoo). These would then be re-introduced once works were completed.

**6** *A series of in-channel reserves will be constructed along the Welsh length of the canal, with boat barriers to exclude navigation and silt membranes to protect water quality.*

See 2i above for progress on this action.

**7** *In-channel reserves will be sited at regular intervals along the canal length, and will average 600 sqm per km of canal open to navigation in Wales*

To date 2 in-channel reserves have been created in the English length of the canal and 3 in Wales. In total they cover approximately 2200 sqm. In Wales the total is approximately 1800 sqm. To meet this target 11400 sqm needs to be created.

**8** *A number of small on-line sites, previously classified as nature reserves in the 1980's, will included in the in-channel reserves programme.*

These sites have not been developed to date but will be if the opportunity arises.

**9** *Dredging programmes in sensitive sections will include a rescue and recovery programme for aquatic plants. A proportion of recovered plants will be replanted in channel, in sheltered locations.*

See report on Action 5 above.

**10** *In the main boated channel other suitable sites will be graded and seeded during restoration or dredging work, to provide aquatic plant habitat.*

During all channel works, specifications for work are used that are sympathetic to the ecological requirements of the aquatic plants and other notable species in the canal. During dredging, margins are left undisturbed if possible and canal channel is dredged to a depth which will favour aquatic plants but will deter marginal plants from encroaching into the channel.

**11** *Opportunities for in-line conservation zones, in conjunction with new on line mooring basins, will be explored and implemented.*

No opportunity has so far arisen.

**12** *Optimum channel profiles and linings will be researched and implemented where appropriate*

In sections of recently restored canal channel designs have been shaped by the work force available. Volunteers have used hand tools with minimal mechanical input if possible. Biodiversity enhancements has been designed into these sections where practicable. This include roughening the bed of the channel with rip-rap to facilitate plant rooting and colonisation by invertebrates. Shelves have been incorporated into banks to allow the development of marginal fringes.

- 13** *Detailed standards for the new nature reserves are based on CSM Type A, the standard for non-navigable waterways.*  
Areas and designs of nature reserves have, and will in the future, adhere to these standards of design and size. Monitoring will take place subsequent to habitat creation once ecological system has begun to establish.
- 14** *New habitat will be situated at a range of sites along the canal, to reflect its linear nature.*  
Due to the nature of the restoration – it being progressed in a piecemeal way – opportunities for nature reserve creation (and associated identification of suitable sites and land acquisition) will be explored as the restoration progresses. The proposed reserve creation at Aston Locks is associated with the continued restoration of channel along the English length of the canal and the future increases in levels of use that will be experienced once this length is completed.
- 15** *In addition to new reserves, existing reserves will be positively managed to achieve CSM Type A.*  
Existing reserves at Rednal, Aston, Wern, Whitehouse and Brithdir have all undergone conservation and visitor access management. Management plans for these sites are being updated in 2015. These management plans will give a list of actions necessary to maintain the wildlife and visitor potential of the sites. These plans will also have in-built reviews so that priorities can adapt over time.  
Guilsfield Arm has not had the necessary level of management to maintain its wildlife potential. It is proposed that an initial suite of works will be undertaken through the HLF project, developing the site to a point after which a level of routine works will be able to maintain the site.  
It is important that the quality of the ecosystems within the reserves is monitored, to inform the restoration process. This is an on-going commitment that it is important for the partnership to address.
- 16** *Plans for restoration will seek to secure land suitable for creating this size of new habitat, through negotiation in the open market.*  
Investigations have taken place looking for suitable sites for reserves in Wales and also looking at habitat creation techniques that would enable greater flexibility in selecting sites. An example would be to use sustainable pumping (wind or solar) to move water from the canal into or out of a reserve if it was not level with the channel.
- 17** *Design guidelines, provided by the wetland Advisory Service, and summarised in [CMS] Table 7.4, will be used as the basis for constructing these new habitats.*
- 18** *Following agreement of the CMS, British Waterways and Countryside Council for Wales, on behalf of the Partnership, will jointly seek support from the Welsh Assembly Government, to steer these proposals through the European Habitat Regulations.*  
Agreements for the creation of Aston Reserves have followed these principles, as will any future proposals.  
Welsh Assembly Government has provided some funding towards biodiversity management on the Canal, through the Ecosystem Resilience and Diversity Fund and latterly the Resilient Ecosystem Fund. The works funded include desilting the canal, excluding stock from the off-side of the canal and establishing buffer strips along the canal corridor.
- 19** *Countryside Council for Wales will recommend the extension of the SSSI designation to include new reserves, once they have reached sufficient quality to merit designation.*  
The restoration project has not progressed to this stage.
- 20** *Criteria for designation, based on CSM Type A, are defined in the standards table in Chapter 10 [of the CMS].*  
Table 10.3 in the CMS gives detailed standards that will enable judgements to be made as to the biodiversity quality of the canal and reserves. These have been used to assess data collected during monitoring. When reserves have become established, and the canal restored, these standards will provide a framework on which to judge how the canal can be managed and used.
- 21** *There will be a presumption in favour of having sites open to the public, with appropriate facilities, including paths, trails and interpretation.*  
All reserves created so are open to the public. Some have interpretation and other facilities such as benches, boardwalks and dipping platforms. The level of use of these sites varies, both in the numbers of visitors and the type of visitors attracted to the sites. Smaller sites, such as Rednal Basin, have

regular but informal visits. Others, such as Wern Claypits and Aston have educational groups looking at the ecology of the sites, as well as casual visitors.

It is recognised that access to certain parts of some sites need to be managed for a variety of reasons, such as protection of species vulnerable to disturbance, or concerns for adjacent landowners. This has been achieved through signage and provision of marked paths, as well as planting of natural barriers.

- 22** *The first reserves will be allowed a minimum of three full growing seasons to establish before navigation is re-introduced or increased in the currently isolated length. Subsequent reserves will have a minimum of two full growing seasons to establish. Monitoring will take place over this period.*

Because of the circumstance of the restoration and the rate of working this principle has yet to be tested.

- 23** *The reserves will be managed as part of the overall canal ecosystem, by British Waterways, with appropriate annual management to maintain optimum conditions.*

See report on Action 15 above.

#### **Actions 24-27 refer to the management of marginal vegetation**

- 24** *Management will seek to attain an average width of 1m each side of the canal, for a target of 75% of the total length, south of Keeper's Bridge.*

Where possible marginal vegetation is retained and left undisturbed during management practices such as vegetation control and dredging. This is because it offers excellent habitat for a wide range of wildlife and stable bank protection. At some locations there may be no marginal vegetation for operational reasons. Examples would be to offer uninterrupted sight lines at bridge approaches and mooring areas.

Generally, with these exceptions marginal habitat is continual through the length of the canal.

- 25** *Innovative piling methods used on the Maesbury to Gronwyn restoration will be used when appropriate. This has included piling in the middle of the bank, rather than water's edge and also double piling, with a front piling sunk in to water level.*

Generally sheet steel piling will only be used for bank protection when there is no soft engineering alternative or when a waterproof seal is required for operational reasons. When piling is used, one of these methods will be used where appropriate.

During recent restoration works, a variety of bank protection methods were used; methods used depended on location and operational requirement.

- 26** *There will be a presumption in favour of allowing or encouraging soft vegetation edges, on both the off-side and towpath, except for built heritage or visitor facilities.*

See report on Action 25 above.

- 27** *New off-line reserves will be designed to incorporate a full marginal fringe of vegetation.*

This action has been implemented through the construction of the Aston Reserve in 2008 and the current proposals. Design of the margins ensures that there is marginal vegetation at the edge of the water bodies, offering valuable habitat to species such as dragon and damselflies, reptiles and amphibians, nesting birds and mammals and spawning fish. However designs will also ensure that emergent vegetation does not encroach from the margins into the open water habitat, outcompeting desirable submerged species.

#### **Action 28 refers to canal fauna**

- 28** *In order to better inform monitoring, continued research and survey will be encouraged and commissioned, as data is less comprehensive than [that] for the flora.*

There has been a recent survey undertaken by Montgomeryshire Wildlife Trust for water voles which included part of the canal. However no other systematic surveys have been undertaken of canal fauna. It is hope that some surveys can be undertaken through the proposed project.

**Actions 29-32 refer to other habitats, other than those dealt with above.**

**29** *Additional land will be used to enhance the semi-natural habitats, especially native woodlands and species rich grassland and marsh.*

Aquatic habitat is only part of the natural resource that the canal corridor offers wildlife. Towpath verges and hedges provide a valuable food and shelter resource for wildlife, and the corridor links other areas of high biodiversity value. Canal & River Trust endeavours to manage this in a way that protects and, where possible, enhances habitat.

The terrestrial sections of the reserves are often of high value and offer habitat to, amongst others, butterflies, amphibians and reptiles, nesting birds and mammals. These are all managed along with the aquatic sections of the reserves so as to optimise wildlife potential. It is important, for the long term future of the reserves, and the success of the canal restoration, that this on-going management work is maintained and resources are made available for it by the partnership.

**30** *Management [of hedges] will be by careful machine trimming, supplemented by a programme of hedge-laying, and retention of standard trees. In suitable locations a taller hedge or woodland fringe will be allowed to develop.*

In 2013-4 a hedgerow survey was undertaken which identified sections of hedge that can be laid. Shropshire Union Canal Society hedge-laying group have been undertaking management on the canal along with Canal & River Trust volunteers. Training events have also taken place in the canal.

The biodiversity benefits of having trees and hedges close to the canal must be balanced with the need to reduce shade of the channel which inhibits plant growth. Therefore trees are managed rotationally ensuring a mix of levels of shade.

**31** *Summer towpath mowing will be confined to a central walking strip, in order to continue to promote species rich grass margins. Full cuts will be undertaken in late summer and early spring.*

This mowing specification is used along most of the canal. The only exceptions are lengths that are heavily used and run through towns and villages such as Welshpool and Berriew. Along a proportion of the canal a multi-user path has been laid allowing cyclists and users with restricted mobility to use the towpath.

**32** *Offside buffer strips will be encouraged, and used to develop wider marginal vegetation and new hedgerows or woodland strips.*

See report on Action 2iii above for details of work delivered through the Severn Uplands Project, to establish off-side buffer strips along the canal.

**Actions 33 and 34 refer to the management of undesirable species.**

- 33** *The canal will be regularly monitored by canal staff in the course of their normal work regime to enable a quick response to any occurrences of undesirable species.*

Canal & River Trust length inspection staff regularly monitor the canal for non-native species. These are then managed as part of the routine maintenance of the canal.

- 34** *Steps to eliminate Japanese knotweed along the canal will be taken, through a planned spraying programme.*

Canal & River Trust has a procedure in place for certain non-native invasive species (NNIS), to be recorded by length inspectors and reported through the Canal & River Trust notification process. These include Japanese knotweed, giant hogweed and Himalayan balsam. These are then managed as part of routine maintenance. This includes Japanese knotweed, but not some other species that may have a detrimental effect on the native ecology of the canal. It is therefore important that additional efforts are promoted to identify and manage these species. Recently water soldier (*Stratiotes aloides*), has become a problem on the canal and is being managed in the canal during routine vegetation management. However it is a problem in the nature reserve at Brithdir and will need additional management here probably using volunteers.

It is also vital to minimise the risks of new introductions of NNIS. The Partnership should actively promote the Check, Clean Dry initiative at all events.

- 35** *Annual weed cutting of the canal will continue, and expand if necessary, with removal of cuttings. Steps to investigate better collection systems will be pursued.*

Weed cutting is undertaken on the canal annually. This is important from a biodiversity point of view as it removes invasive species, thus promoting less competitive desirable species and also operationally to facilitate water flow through the canal system. Recently a Trunksaw weed cutter has been used which is more effective and efficient. This has enabled a three year rotation of weed cutting to be implemented.

**Action 36 relates to the wider corridor**

- 36** *The Montgomery Canal Partnership will actively support wider environmental schemes which have shared or complementary objectives.*

Canal & River Trust have entered into a partnership with Montgomery Wildlife Trust and Severn Rivers Trust to implement the Severn Uplands project detailed above.



# MONTGOMERY CANAL - CONSERVATION MANAGEMENT STRATEGY ADDENDUM

## BUILT HERITAGE

The Montgomery Canal was constructed to transport lime for agricultural improvement. Built between 1797 and 1819 with a later phase completed in 1832, it is a transport infrastructure, largely intact, which clearly expresses its function as an engineered waterway, with associated water controls, operational and domestic buildings for those who used it and a wealth of buildings associated by trade and industry.

Despite only part of it being open to navigation, the canal displays a wealth of significant heritage features, including locks with lobbies and cottages with ranges of rare outbuildings, including privies and pigsties. Many locks have distinctive iron paddle gearing with large cog-wheels and there is further use of iron in small composite aqueducts and in the use of fish-bellied girders for bridge decks.

Vyrnwy Aqueduct is the single largest significant structure on the canal, but there are good groups of structures and/or remains at Carreghofa, Rednal, Belan, Welshpool and Llanymynech, which is a site of prime industrial archaeological importance. Many banks of lime kilns along the whole length of the canal.

With 128 listed buildings and 1 Scheduled Monument, it has great historical and archaeological significance.

Within the original CMS, 20 principles, proposals and actions were identified, which related to the built heritage. These are given in below (in bold), with a commentary on progress for each.

### **Actions 1 to 4 - Built Heritage Survey**

- 1 A number of additional buildings will be added to the British Waterways heritage survey results**
- 2 British Waterways Heritage Register will be expanded to become a resource for the whole Partnership, and include non-listed heritage structures and related buildings within the corridor, but away from the immediate canal**
- 3 The heritage register will be shared with the planning authorities, conservation officers and the Shropshire sites and monuments register, in order to promote understanding and sympathetic management**
- 4 The partnership will support alternative viable uses for historic buildings which respect the heritage**

The British Waterways/ CRT Architectural Heritage Survey for the Montgomery Canal, undertaken around 20 years ago, remains a useful resource and is accessible to CRT staff and its volunteers via the Trust's GIS mapping system. The HLF application includes an action to systematically update the survey working with volunteers with the appropriate skills and experience in the historic environment and industrial heritage. Any canal related structures and buildings can be added to the survey that may have been missed in earlier work. The survey will also provide an up to date photographic record noting condition, location and any designations with references made to the Historic Environment Record maintained by Clwyd Powys Archaeological Trust. The revised survey will provide an opportunity to widen the understanding and appreciation of the historic significance of the canal.

The partnership continues to support alternative viable uses for historic canal-side buildings.

## Action 5 - Conservation Areas

- 5** *The partnership will seek early recognition and protection of these areas (Carreghofa, Burgedin, Belan Locks, Brithdir and Garthmyl), prior to any more general designation. The planning authorities within the Montgomery Canal Partnership commit to early consultation about the establishment of a series of conservation areas, and a wider corridor scheme*

There have been no further canal conservation area designations since 2005. Given staffing levels within local authority planning teams this is unlikely to happen for some time. However, the proposed updated to the Canal & River Trust Architectural Heritage Record and local community input in partnership with Powys and Shropshire Councils could help to provide some of the background research required for any future designations.

## Actions 6 to 9 - Local Distinctiveness

- 6** *For the Montgomery Canal, the following aspects of the built heritage are of particular importance, and will be fully safeguarded:*

- *George Buck paddle gear*
- *Welshpool Lock assemblage including curved cast iron top lock gates, George Buck paddle gear and associated masonry*
- *Fish bellied cast iron beamed bridges*
- *Rural stone pitched wharves e.g. at Crickheath*
- *Nineteenth century corrugated iron and timber sheds*
- *Small structures such as crane bases and iron hoops*
- *Cast iron and stone boundary markers*
- *The larger buildings recorded within the heritage register*

Paddle gear – still in place and protected by grade II listed status

Welshpool Lock assemblage. The partnership still has an aspiration to move the assemblage back to the Montgomery Canal, subject to finding a suitable location. Discussions and investigations are in progress concerning the repatriating of the Welshpool cast iron lock gates from their current location at the National Waterways Museum at Stoke Bruerne near Northampton.

The following works have been undertaken following CRT Heritage Policy and Principles and other CRT best practice heritage guidance for works to heritage assets. Work requiring listed building consent is shown:

- Fish bellied bridges – Repair works to bridge 98 Parsons Bridge carried out in 2010 including repairs to timber handrails and repointing masonry
- Stone pitched wharves – Heritage skills training and series of repairs to Crickheath Wharf wash walls in 2007
- Timber jib replaced on crane at Maesbury Marsh in 2010. Pitch pine sourced for the work and repairs carried out by local waterway team. Listed building consent.
- Hut at bridge 137 was taken down in 2012-13 during towpath surfacing work. A measured survey was carried out and photographs taken; the information was lodged with the local Historic Environment Record. The footprint of the hut was retained on site and incorporated within the towpath surfacing scheme.

Cast iron and stone boundary markers and large buildings– no change. Further recording to be undertaken when Architectural Heritage Survey is redone (refer to actions 1 to 4)

- Carreghofa By-Pass Pond and Spillway - Repairs to brick apron, replacement of timber framing for sluice gate, addition of timber access walkway. Listed building consent.

- Burgedin Spillway, Grade II - Repairs to brick apron, replacement of timber framing for sluice gate, addition of timber access walkway.
- Wern Outfall Weir, Grade II - Repairs to brick apron and side wall, replacement of timber framing for sluice gate.
- Corbetts Bridge 75 – Section of brick bridge parapet rebuilt in 2010 following vehicle strike. Listed building consent

**7 *Where properties are in the ownership of Partnership members ,these structures will be positively retained and sympathetically restored during future restoration schemes***

No opportunity has arisen so far however this still remains an aspiration of the Conservation Management Strategy.

**8 *Private owners of properties of heritage value will be advised and encourage accordingly, through general promotion of the canal heritage, and advice from local authority staff***

The following properties were sold by British Waterways between 2008 and 2012:

- Top Lock Cottage, Pool Quay (2008)
- Byles Lock Cottage, Abermule (2008)
- Nags Head Public House, Garthmyl (2009)
- Former pigsty and privy adjacent to Crowther Hall Lock Cottage near Welshpool (2010)
- Clapton Cottage, Four Crosses (2012)
- Brithdir Lock House near Welshpool (2012)

All the properties except for Byles Lock Cottage are grade II listed and therefore have statutory protection. The pigsty and privy lie within the curtilage of grade II listed Crowther Hall lock cottage. Heritage assessments were carried out by British Waterways Heritage Advisor prior to disposal and heritage protection clauses added into the sale agreements by Estates Team with information passed to the new land owners.

**9 *Consideration will be given to seeking limited funding to support important heritage work to properties in private ownership***

No opportunity has arisen so far, however this still remains an aspiration of the partnership.

**Action 10 - Benign Neglect**

**10 *Steps to raise awareness will be taken as an essential first requirement, but selection protection through inclusion in restoration schemes will also be sought***

- Carreghofa Lock 1 toll gaugers hut – roof repairs and repointing carried out in 2013.
- Privy and pigsty at Crowther Hall Lock sold in 2010 and now being maintained by landowner
- Measured survey of Aston Lock Hut carried out in 2015 pending repairs as part of HLF scheme delivery phase.
- It is hoped that the revised Architectural Heritage Survey as part of HLF project will help to raise awareness of smaller buildings associated with the canal so further consideration can be given to new uses.
- Draft Buildings at Risk strategy has been prepared in 2014 by Powys County Council.

## **Actions 11 to 13 – Sympathetic Restoration**

**11** *The Partnership will seek to establish national British Waterways policy as standard practice, through careful briefing of contractors and training of local staff.*

**12** *Restoration of the currently dry section will follow traditional puddled clay techniques, unless engineering dictates otherwise*

- Efforts continue to be made to encourage original construction techniques wherever possible including the use of puddled clay for restoration for dry sections of the canal.
- Particular local engineering considerations on the recent and current restoration lengths have led us to use a range of other techniques which have proved cost effective and easier for volunteers working on the restoration to manhandle.
- Many different types of canal lining materials are available including puddled clay. The channel linings used to restore the dry section of the canal between Redwith and Pryces Bridges have involved a range of techniques, some of which are proposed for sections to be delivered as part of the delivery phase of the HLF project.
- The channel lining has included two types of materials, the first being a high density bentonite geo-membrane called Rawmat and the second an acrylic impregnated geotextile material called Sahara. The latter is significantly easier to use due to its light weight and it does not require immediate covering with backfill material as required by the bentonite geo-membrane.
- The use of puddle clay requires a significant depth of excavation for the 600 mm depth of clay with consequent disposal of arisings, all leading to high additional cost. In addition puddle clay is a difficult material to work with requiring the material to be of the right consistency and the use of the right type of construction plant with skilled operators, not necessarily available via the use of volunteer organisations. Sourcing and procuring good quality clay in sufficient quantity can be difficult but its use still remains an aspiration of the Conservation Management Strategy.

**13** *In order to assist best practice, the Partnership will seek to*

- *Make advice available to private land owners*
- *Update and make available existing information on local distinctiveness*
- *Ensure detailed information on small structures is readily available through the British Waterway GIS system and consulted as standard procedure*
- *Provide ongoing training for local staff and interested volunteers and residents in heritage techniques*
- *Major restoration schemes of listed structures will require close consultation with English Heritage and Cadw and the preparation of individual conservation plans*
  - CRT requires 100% heritage compliance - liaison with regulators when working on designated heritage assets to determine whether consent is needed and apply for consents when required.
  - CRT heritage policies and key documents – CRT (and previously British Waterways) have three key documents for the conservation and management of its heritage structures:
    - Heritage Mandatory Standard: CRTs heritage policies
    - Heritage Management Standard: CRT heritage management process
    - Heritage Works: Best practice guidance for repairs to waterways heritage structures
  - Heritage awareness and practical skills training is provided where needed to ensure staff, volunteers have appropriate skills before carrying out repairs to historic structures. Further training will be needed during the delivery phase of the HLF project for volunteers working on historic structures. Heritage skill training was provided to volunteers working at Crickheath Wharf in 2007.
  - Welshpool lock gate replacements 2010 – Lock stoppage open day in partnership with Powysland Museum at Welshpool allowed the public to view repair works at close hand. A programme of lock gate replacements have taken place along the Montgomery Canal since 2005, with gates only generally having a lifespan of around 25 years.

- Information relating to designated sites is kept up to date within CRT's heritage layer in GIS system and is available to all staff.

## **Actions 14 to 20 – The Wider Corridor**

### **Llanymynech**

- 14 ***The partnership will support schemes to safeguard the built and archaeological heritage of Llanymynech and the surrounding area***  
Canal side building at heritage area restored for use as a visitor centre and base for boat trips at Llanymynech.
- 15 ***The historic wharves at Llanymynech will be restored as an early phase of construction. Main works are scheduled for completion in 2006.***  
No restoration works have been undertaken to the wharves to date. Volunteer work parties in 2013 have been managing vegetation around the wharves.
- 16 ***The Partnership will support potential plans to designate the whole Heritage area as a Scheduled Ancient Monument.***  
Lime kilns, associated tramways, structures and other buildings at Llanymynech designated a Scheduled Monument in 2006.
- 17 ***The Partnership will support any proposals to extend or replicate the Llanymynech HERS scheme to other settlements along the canal corridor***  
No known schemes currently operating across this area.

### **Welshpool**

- 18 ***The Partnership look forward to supporting an appropriate scheme for the redevelopment of the old canal workshops and adjacent area, partly currently operated as a builders' yard***  
At 2016 the buildings are in use by carpentry and building contracting business.

### **Newtown**

- 19 ***Safeguarding the remaining canal heritage will be supported***  
A measured survey is to be undertaken at Freestone Lock Cottage to assist with planning its future use.
- 20 ***The canal route into Newtown will be safeguarded in future development plans, along the route identified in the recent feasibility study***  
The current adopted plan in Powys is the Unitary Development Plan 2001- 2016 and there are policies relating to the canal and its restoration included. This will be replaced by a Local Development Plan in due course – the council are currently consulting on a revised deposit draft (Policy TD3).

# MONTGOMERY CANAL - CONSERVATION MANAGEMENT STRATEGY ADDENDUM

## WATER SUPPLY AND QUALITY

Within the original CMS 22 principles, proposals and actions were identified, which related to water supply and quality. These are given below (in bold), with a commentary on progress for each.

### Actions 1-7 relate to water supply

- 1 ***The current assisted passage through Frankton will continue, with additional flows [from the Llangollen Canal] through the by-wash.***  
The aim of this action is to ensure adequate water supply to the canal. This continues to be how the canal is operated.
- 2 ***It is essential that British Waterways achieve control over the volumes of water [from the Morda Brook] entering the canal at this point [Peates Mill] and minimise the volumes, to emergency use only.***  
The reason for this action is to maintain water quality in the canal; the quality of the Morda Brook is poor. This is currently how the water supply is operated.
- 3 ***Engineering work to secure the Penarth and Tanat feeder supplies will be developed and implemented.***  
Routine maintenance works are undertaken to safeguard the supply from these sources. This involves dredging river gravels from the intake at Penarth and dredging and Weedcutting in both feed channels.
- 4 ***To maintain water flow volumes a phased programme of dredging is essential, including significant lengths of the section only open to trail boats.***  
The canal channel has undergone a programme of dredging through the Welsh length of the canal, in order that water supply is safeguarded to the whole of the canal.
- 5 ***The volumes available during regulation will be reviewed.***  
This may be an issue when use of the canal increases and more water is lost through lockage etc. however at present it is not thought to be an issue.
- 6 ***In general minimisation of water loss by leakage will be essential. To maintain and increase flows.***  
The canal channel is under a constant cycle of inspection and maintenance. Any leaks are recorded and stopped as soon as practical.
- 7 ***The feasibility of increasing water supply will be explored with the Environment Agency.***  
*Update to be added*

### Actions 8-21 relate to water quality

- 8 ***The Environment Agency will undertake an assessment of the current water quality and an investigation of the possibility of modelling the effect of the restoration of the canal on the water quality of both sections (including the Welsh SAC site).***  
This, in part relates to issues raised through connecting waters from the English section of the canal (from River Dee) to the Welsh section (River Severn). Options for minimising the effects of mixing waters from the two catchments are being explored through the engineering aspects of the restoration, including proposals for a stop lock in the section between Crickheath and Llanymynech.
- 9 ***It is proposed to keep the separation of the Llangollen [River Dee] and Tanat supplies through the installation of a stop lock between Aston Bottom Lock and Llanymynech.***  
See Action 8 above.
- 10 ***The water flows and discharges for this solution will be reviewed with the Environment Agency.***  
The Environment Agency will be involved when this component of the restoration is undertaken.

- 11 ***Dredging must be planned in discrete lengths, to allow recovery of plant populations, by colonisation from adjacent undredged sections. Particularly important plant lengths must be programmed to be spread out in time, and subject to rescue and replanting programme.***  
 During dredging operations, the channel is surveyed for Luronium natans and other notable plants. If the plant is present, it is removed (under licence) and re-located to, either a location that will not be disturbed by works, or to a holding facility (for example those operated by Chester Zoo). These would then be re-introduced once works were completed.
- 12 ***The Partnership (including the Environment Agency) will investigate and will work with relevant landowners to seek to deliver a solution [to poor water quality for Morda Brook]***
- 13 ***British Waterways are seeking to have the treatment works upgraded in the next round of the authorities' capital investment programme (AMP4) but before then water from this source must be minimised.***  
*SM not aware of progress on this action.*
- 14 ***Future developments on adjacent land must be designed to ensure minimum risk of canal pollution.***  
 This refers to the Rednal Feeder, where historically there was an agricultural pollution issue. The source of the pollution was identified and resolved, however the land that drained into the feeder was prone to diffuse pollution. To inform the management of this issue the drainage network of this area was mapped to help identify future pollution issues.
- 15 ***A policy of working with farmers to erect stock fencing will be pursued, with grant aid for the Environmental Stewardship and Tir Gofal being made available. Drinking troughs will need to be provided to protect farm interests and occasional defined hard ramp drinking points.***
- 16 ***Buffer zones, with fencing set further back, will be encouraged where landowners are interested.***  
 The Severn Uplands Project, a partnership project between the Canal & River Trust, Severn Rivers Trust and Montgomeryshire Wildlife Trust has been progressing these actions. Fencing, watering points and off-side buffer strips have been installed in the Welsh section of the canal.
- 17 ***Opportunities to install silt traps and/or vegetation filtration systems e.g. reeds on minoe `drainage inflows will be taken up.***  
 As part of the Severn Uplands Project the feasibility of such features were investigated. However where inflows entered the canal, it proved impractical to install silt interceptors.
- 18 ***Tir Gofal and Environmental Stewardship schemes on adjacent land will be promoted, as they further encourage extensive farming, and reduce run-offs of fertiliser and pesticide.***  
*Need to get info from Natural Resources Wales and Natural England about targeting Agri-environment schemes.*
- 19 ***Effective oil filters can be installed into existing boats, and this should become a requirement for all boats based on the Montgomery Canal.***  
*Not sure of any progress made against this action.*
- 20 ***Further research to determine the various loadings, from agricultural run-off, main feeder supplies, grey water, urban run-off and point sources will be encouraged.***
- 21 ***Planning applications that are within the potential catchment of the canal will continue to be scrutinised to ensure best practice, and minimise potential pollution and eutrophication***  
 As a SAC/SSSI the canal does gain protection through planning process. Any planning decision made by the planning authority must take its protected status into account. Canal & River Trust as a statutory consultee will make comments regarding the environmental sensitivity of the canal.

**Action 22 refers to the management of other environmental issues.**

- 22 ***During the design, planning and implementation of restoration works, the Partnership and appointed consultants/contractors will establish appropriate environmental management systems to implement best environmental practices in the works.***

All works undertaken by Canal & River Trust or by third parties are assessed using the Canal & River Trust Environmental Assessment process. This ensures that all regulatory processes and environmental issues are addressed. Best methods of work can be identified through the appraisal and these are implemented where possible.