

**Progress Report** (Oct 2016 – Feb 2017 inclusive)

**1. New penstock sluices in Snakes Wood and at Burlescombe**

During December 2016, contractors installed several new sluices at Snakes Wood and Fossend Bridge. These will provide a great deal more capacity to let water out of the canal during heavy storms and will enable canal water levels to be safely managed by the Canal Rangers.

At Fossend Bridge in Burlescombe, an old disused sluice has been reopened with a new head wall and 600mm penstock gate fitted out the outlet end of the pipe which runs from the bridge wall. This sluice provides extra emergency outfall capacity and is not likely to be used very often. Some further works are still necessary to make the gate at the inlet end of the culvert (currently fixed in the open position) operable by hand.



In Snakes Wood, two 600mm penstock sluices have been installed above an existing culvert. In recent years, considerable volumes of water have flooded into the Canal at Atherton way in Tiverton. This overflow into the canal has been formalised with open grilles on manhole covers, surrounded by bunds in order to ensure that floodwater is directed into the canal rather than flooding

properties in Atherton Way. The new sluices at Snakes Wood will enable us to let out this floodwater quickly within the same catchment as well as giving us more control of water levels in general. Once the new tilting weir is installed in Burlescombe (see section 3 below) it is very unlikely that both of these penstocks will ever both be fully opened except in the 'once in a lifetime' type storm, but it will be a relief to have the outfall capacity to even deal with the most severe events.



Transporting all of the materials required for the Snakes Wood penstocks by dumper from Manley Bridge made quite a mess of the towpath and so this section was resurfaced in January. The contractors also installed some new gateposts at Tidcombe Bridge and resurfaced the gateway. The Canal Rangers hung a new gate which is a foot wider and is located closer to the road, making it easier to get vehicles on and off the towpath.

## 2. Tree Works

A combination of JAC requests for greater management effort to reduce tree cover / shading along the canal, and the availability of DCC capital funding to fell / coppice trees that threaten the structural integrity of the canal (principally on embankments and cuttings), has meant that we have continued to undertake markedly more tree coppicing and felling work this winter than was the case prior to last winter.

Throughout the winter the Canal Rangers and volunteers have been working from the maintenance barge cutting back overhanging branches and felling small trees growing from the waters edge. In particular they have focussed on cutting back willows right down to the stump (rather than just trimming back the branches over the water) and then in many cases, where the tree is not in a good location, treating the stump with special eco-friendly herbicide pellets (called Ecoplugs) which seal the herbicide in holes drilled into the stump, in order to prevent any regrowth. At the time of writing this work has been completed between Lowdwells and East Manley Bridge, with the remainder of the canal to be completed before the end of March.



Tree surgery contractors have been used to achieve a large amount of tree work this winter. They have completed works in the following locations as of 22/2/17:

- Whipcott Bridge (Felling in cutting / crown-lifting beside bridge)
- Fenacre cutting (Felling and crown-lifting)
- Ebear – main sluice offside (felling to create clear access along embankment crest)
- Ebear Bridge (pollarding willow near bridge)
- Holbrook Bridge (coppicing large offside alder / crown-lifting beside bridge)
- Sampford Peverell winding hole (pollarding offside ashes)
- Sampford Peverell Bridge (re-pollarding offside tree near bridge)
- Battens Bridge (crown-lifting beside bridge)
- Battens – Watton offside (coppicing section of overhanging trees on bend)
- Rock Bridge (crown-lifting beside bridge)



- Greenway cutting (felling large trees overhanging towpath / offside coppicing)
- East Manley moorings (crown-lifting trees overhanging road)
- East Manley Bridge (crown-lifting beside bridge)
- East Manley – Manley Bridge (coppicing offside willows – below)



- Manley Bridge (crown-lifting beside bridge)
- Manley Car Park (felling 3 trees in the triangle of land beside the car park for safety reasons)
- Warnicombe Bridge (removing dead wood and snagged branches from large trees overhanging the towpath)
- Wilcombe Primary School (hedge reduction – below)



- Chaves Close steps (crown-lifting)
- Canal Basin car park (felling two trees beside wall)



- Canal Basin car park (hedge reduction near entrance – see section 7 below)
- The Moorings (crown-lifting tree overhanging offices)

A significant quantity of further tree works will be taking place over the coming months, the majority before the end of March. These include:

- Aqueduct to Crownhill Bridge (hedge reduction)
- Swan's Neck near golf course (felling 3 overhanging offside oaks growing from the waters edge – including the one shown right – plus crown lifting some low branches over the water)
- Sellake Bridge (Crown lifting tree beside bridge)
- Winding hole near Boehill Bridge (hedge reduction on towpath side, coppicing trees on offside bank)
- Boehill Bridge (felling large willows beside bridge)
- Holbrook Bridge (hedge reduction and clearance of fallen tree beside towpath)
- Ayshford Bridge to Westcott Bridge (felling of several offside trees on embankment crest)
- Westcott Bridge (felling of several offside trees on embankment crest)
- Whipcott Bridge to Waytown Limekilns (felling several overhanging offside trees)



- Lowdwells stream (coppicing willows and hazels beside stream).

### **3. Burlescombe tilting weir**

Work to install this 3m x 1m tilting weir has begun. A coffer dam has been created beside the main sluice, sealing off the fixed weir which the tilting weir will replace.



The existing sluice will remain operational in case of severe rainfall, but the penstock sluices in Snakes Wood will provide the main method of controlling levels whilst the works take place. Once the tilting weir is installed it will operate automatically to maintain levels within a desired range and can also be controlled remotely via a website (e.g. to let water out in advance of a severe weather event or for maintenance purposes) or manually on site (e.g. if the power or electrical systems failed). The sheet piles will be cut off underwater once the project is complete.

### **4. Atherton Way stream**

A contract to clean out, widen and surface the base of the stream which runs parallel to the canal beside Atherton Way and Francis Crescent is currently out to tender. The designs have been drawn up by DCC engineers and as well as reducing flooding in Atherton way and overtopping into the canal, should also make the clearance of debris that accumulates along the stream bed much easier to remove in future.

### **5. Canal Basin toilets**

A number of works have been completed in the public toilets in the Canal Basin car park in order to make them more pleasant for visitors to use. The paint on the suspended metal grille ceilings which was peeling away has been scrubbed off and the grilles repainted. A number of loose and missing tiles have been replaced and slipped slates on the roof have also been fixed back into place.



## 6. Canal Basin Play Area

This project has now achieved its funding target thanks to a contribution from Tiverton Town Council and success in the Tesco Bags of Help funding scheme. Throughout January, customers in an area of the South West spanning Barnstaple, Glastonbury and Honiton had the opportunity to vote for their favourite of three projects, including the canal play area. The play area proved to be the most popular and so will receive a grant of £5000 towards the play equipment. The play equipment has now been delivered and is in storage awaiting installation, but this has been delayed by the wall-moving project outlined below.

## 7. Wall-moving project

As reported in the last Progress Report, the opportunity to set this wall back by 1-2m in order to improve visibility for cars leaving the car park has presented itself. DCC's consultants Jacobs are currently designing the new wall and preparing the procurement documents and it is anticipated that the work will be undertaken in the spring.

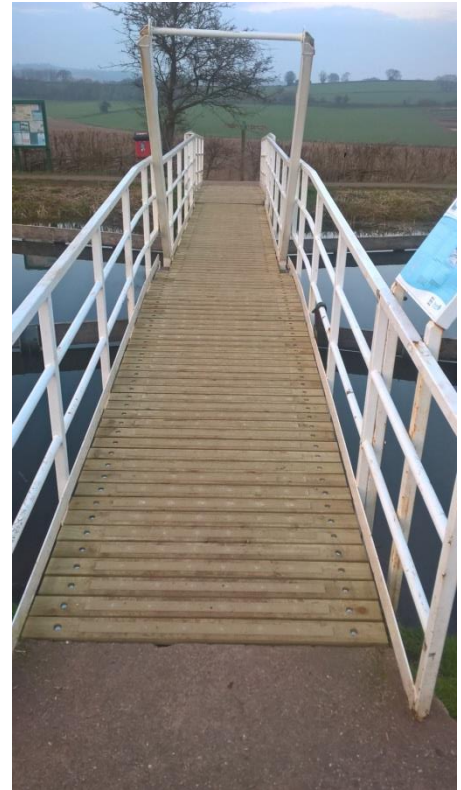
As part of the design and planning process, a number of cores have been drilled and trial pits will be dug. In order to assess the stability of the wall on the car park side of the land, the trees and bushes beside the wall have been coppiced, the hedge reduced in height and the ivy removed from the wall.



## 8. Dudley Weatherley Jubilee Bridge

A number of the planks decking this lift bridge had recently snapped and the weldmesh which had been fitted a few years ago to reduce the slip hazard was also breaking and so the decision was made to replace the decking. Incised and pressure treated planks have been used topped with anti slip strips which are more pet-friendly (a number of dog-owners had complained about the weldmesh) and easy to replace if necessary.

Although the planks are of the same dimensions as those they replaced, they weigh considerably more due to higher moisture content and at present the bridge is very difficult to open. Stoneman Engineering of Willand, who built the bridge, are currently making up some new counterbalance weights to make the bridge much easier to open.



## 9. Minnows landing stage

The wooden landing stages along the canal were all built around the same time and it seems that they are all starting to fail at the same time. After repairing and re-decking the East Manley landing stage last year, we now need to repair the landing stage beside Minnows Touring Park. Some structural beams and posts need to be replaced and then a new deck installed on top. The timber has been delivered, and the Ranger Service plan to do the in early March prior to Minnows opening on March 6<sup>th</sup>.

## 10. Crownhill gateway and ramp

Following the failure of the gate hanging post on the northern side of Crownhill Bridge, an excavator contractor and the Canal Rangers spent a day scraping out the grass along the edge of the ramp to widen the path and installing a new hanging post. They also re-surfaced the gateway area to remove the step which had formed beside the road tarmac.





## 11. Sampford Peverell Wharf

The wharf at Sampford Peverell is regularly used by the Canal Rangers for loading and unloading and mooring the maintenance barges and the weedboat, and it is also used by adjacent residents for parking. The grass verges had become very wide and muddy and potholes have also formed in places. An excavator contractor was engaged to scrape back the edges and resurface the area with road planings.



## 12. Lowdells interpretation panel

The content and designs for a new interpretation panel to be located beside Lowdells Lock have been finalised. The panel achieves several tasks: It provides visitors with an interesting insight into the history of the canal and the lock; it explains what can be found along the disused section of the Grand Western Canal beyond the lock, including historic remains and local businesses; and it marks the end of the Country Park (previously there was nothing to mark the end of the Country Park for those who followed the towpath as far as Lowdells).

# Lowdells Lock

**You are standing beside the remains of Lowdells Lock.**  
**Nowadays a bund across the centre of the lock marks the end of the in-water section of the Grand Western Canal, but once this was just a staging point on the journey to or from Taunton, where the Grand Western connected to the Bridgwater and Taunton Canal.**

The idea of a canal across the South West peninsula was conceived by a group of Taunton businessmen in 1768. Canals were new and proving highly successful and such a route would alleviate the hazardous voyage around Land's End and enable cheap and efficient distribution of bulky cargoes like coal and limestone. Eventually a route proposed by John Reeve from Topham to Taunton was approved by the proprietors and an Act of Parliament was obtained in 1796. However, the ensuing Napoleonic Wars delayed the start of construction and it was not until 1800 that work commenced.

The decision to start cutting the Taunton branch first proved unfortunate as unexpected engineering problems consumed all the money raised for the whole project. The project came to a halt at Lowdells in 1814 but the suspension of trade between there and Taunton was far less than hoped for and often (contrary to what the firm's idea and domestic coal and fuel to be brought in by horse and cart to the end of the Canal.

This situation continued until the Bridgwater and Taunton Canal was completed in 1827 and a decision was made to join the two waterways. James Green, who had already built canals elsewhere in Devon, put forward an idea for a sub-basal canal which would include seven locks and an inclined plane in order to descend 240ft from the summit level at Lowdells Lock to the Bridgwater and Taunton Canal at Taunton. This was accepted and the canal finally opened through to Taunton in June 1838.

The sub-basal was designed so that four would fit in the Bridgwater and Taunton Canal locks at the same time and could carry eight tons each. The Company ruled that a maximum of four boats should be towed in line at any time. The size of this lock at Lowdells was determined by the size of the Bridgwater and Taunton Canal locks.

Two artist's impressions of Lowdells Lock by Tony Probert.

Lowdells Lock is situated near the location where John Reeve's broad canal changed to James Green's sub-basal canal. The broad canal probably ended at the Waypoint Lock about 750m downstream from the lock. It was probably Green who cut the raised gauge section through the Waypoint Tunnel to the point, where he then built the 41ft x 15ft lock with a 30ft rise capable of passing four sub-basal boats at once.

From here the route to Taunton then crossed an aqueduct over the nearby road. The road marks the end of Devon County Council's Grand Western Canal ownership and from here on the canal falls into the ownership of adjacent landowners once the sub-basal canal became abandoned in the 1860s.

From this point you can trace the former route of the sub-basal canal for 30 miles to the remains of Hymeshed Lift near Hymeshed along a public footpath that follows the original towpath. The remains of the lift have been well studied and interpretation panels are provided.

A shorter circular walk taking in several historic features of the sub-basal canal, some of the towpaths and a path halfway round is shown in the map above. If you have a mobile phone you could take a photo of the map to help follow the route, or you can find it on the canal website at [www.gwcanal.co.uk](http://www.gwcanal.co.uk). The basic orange route is 4.5 miles long and the extended purple route, taking in Waypoint Lock, is 5.5 miles long.

7 x 35.88 in



The panel is currently in production and should be installed before Easter. Many thanks to Cllr Ray Radford for providing the funding from his Locality Budget and to Robert Hodgson and Denis Dodd of the Friends of the Grand Western Canal for providing the historic detail and the circular route.

### **13. Weedcutting**

The Canal Rangers have continued to use the weedboat on most Mondays during the winter, removing blanket weed and water soldier from the bed of the canal. The number of days the boat is used will increase during March as the focus shifts away from tree and hedge management work.

### **14. Picnic benches**

There are two picnic benches with concrete bases located on tarmacked areas in the Canal Basin and one at Tiverton Road Car Park. These benches are easier for people in wheelchairs to use. However all three were starting to rot and needed replacing. Three new timber kits have been purchased and installed.

### **15. Hedgelaying**

Volunteers and rangers have laid several sections of hedge this winter. These have included a hedge beside the pond on the offside at Ebear (pictured below), a section between Battens Bridge and Watton Bridge and a section near Manley Bridge. Another section near Manley Bridge is also likely to be laid in early March.



### **16. Bank and hedge cutting**

All of the banks and hedges have now been trimmed by a contractor using a tractor-mounted flail. In some areas the tyres of the tractor have squashed mud out onto the

towpath and work has already started in clearing this off in order to leave the path more presentable and accessible and to reduce the problem in future years.

### **17. Car park signs**

None of the outlying car parks along the canal had name signs at the entrances and this was proving confusing for some visitors trying to find them or establish which one they were at. Also there was a need to publicly state some of the byelaws relating to litter and overnight camping. New signs have been produced and installed at the entrances to all of the outlying car parks.

### **18. Vegetation around bridges**

In order to keep views of the canal's bridges clear, and prevent damage to the pointing, the ivy which continually grows on them is periodically cleared off. The Canal Rangers and a specialist herbicide contractor have focussed on this during the autumn and winter and will continue to remove the dead ivy during the coming months. In addition, tree surgeons have undertaken crown lifting works on trees beside several bridges (as listed under section 2 above) to remove low branches which were obscuring views of the bridges.

### **19. Ranger Service training**

In the autumn 2016, the Canal Ranger Service staff all completed a two-day boat-handling course on the Kennet and Avon Canal near Bath. Although all very experienced in using the Canal's maintenance boats, their successful completion of the RYA Inland Waterways Helmsman's Certificate (advised to be the most appropriate for our

circumstances by the Marine and Coastguard Agency) means they now have the paperwork to back that up. They also gained some new knowledge and experience relating to the use of narrowboats and the proper procedures for navigating through structures not found on the Grand Western Canal, such as locks and swing bridges.

They also completed a chainsaw refresher course as required every three years according to DCC policy. The course was tailored for the Canal Ranger Service and focussed mainly on safe use of chainsaws and the chipper when working on the maintenance barge.





## **20. Mid Devon Attractions Association**

The Canal Manager continues to attend the meetings of this group, currently chaired by Philip Brind, which is currently focussing on creating a brand for tourist attractions in Mid Devon. Consultants have been engaged to help with this and the Country Park will seek to play its part in developing and communicating the new brand over the coming months.

## **21. Volunteers**

The Canal Ranger Service continues to be strongly supported by volunteers, in particular Lee and Craig, who usually work 3-4 days a week and have been with us for over a year. They are invaluable as they are such hard workers and now have a great deal of experience. There are also several work experience placements from Bicton and Petroc Colleges working one or two days per week. Weekday volunteers have worked a total of 177 days between October and February (inclusive).

Volunteer Days continue to be held on the second Sunday of each month between November and March and in the 4 days held so far there have been a total of 37 volunteer days spent undertaking hedgelaying and pond restoration.

## **22. Events**

On 11/10/16 Jo Roberts attended the Farmwise event at Westpoint, providing a display about the Canal and leading a tree identification activity

On 4/12/16 Jo led a successful Christmas Wreath event which 18 people attended.

## **23. School visits**

21/10/16 – Sampford Peverell Primary School – 30 children – The children cycled along the towpath doing activities along the way then met Jo at the Canal Basin to do some pond - dipping before cycling back to school.

27/2/17 – Blundells School Activity Day – 12 students undertaking hedgelaying and hedge planting with the Canal Rangers near Manley Bridge.

## **Future programme of works**

- Tree works to be undertaken by contractors as listed in section 2 above
- Completion of cutting back offside branches by Canal Rangers
- Re-decking Minnows landing stage
- Ongoing ivy removal from bridges
- Ongoing mud scraping along edges of towpath
- Installation of tilting weir at Burlescombe
- Atherton Way stream widening/deepening
- Canal Hill wall moving project
- Installation of new play area equipment / surfacing / fencing

- Replacement of rock-mounted interpretation panels at top and bottom of Canal Basin steps with updated ones.
- Production and distribution of updated Canal Visitor Guide
- Running events and leading healthy walks
- Leading school visits
- All usual sign / noticeboard / fence / gate repairs and maintenance
- All usual mowing, strimming and weedcutting.