



Canal &
River Trust

Keeping people, nature & history connected

Maintenance and Engineering Update

Sam Thomas
Maintenance Manager
22nd October 2014

Recently Completed Works

- General Works Programme (since 04/14)
 - HPNs – 150 of 392 completed
 - Reactive Defects – 295 of 645 completed
 - 732 Planned maintenance tasks completed.
 - Inspections – 92 LI's, 16 AI's, 5 PI's, 86 TA's
- Major Works Programme
 - 3 of 7 projects completed
 - Expenditure
 - Plan - £2.9m
 - Spend to date - £1.5m



Slough Arm Dredging

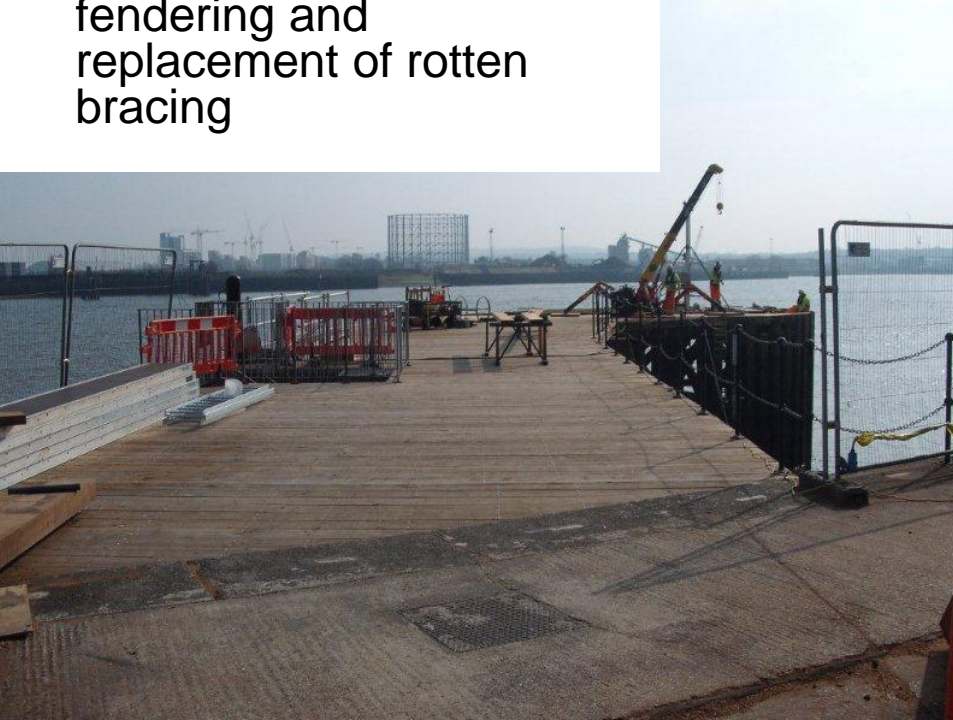
- Cost £853k
- Volume 9,650m³ (13,510 tons)
- Length Dredged 5,670m
- Profile / Issues
- Volume exceeded es
- Supports Partnership Project #1.





Lead In Jetty

- Cost £590k
- New deck, staircase, fendering and replacement of rotten bracing



Bow Locks Footbridge



Docklands Wall Surveys



Amwell Bank Repairs -
Before



Amwell Bank Repairs -
After



Twyford Bank Repairs
- Before



Twyford Bank Repairs
- After



Various Towpath
Repairs



Twyford Bank Repairs
- Before

Various other repairs by
direct labour and contract
such as

- Hawley Lock

[C:\Users\sathomas\LRT
Hawley Lock Time-Lapse
720p.mp4](C:\Users\sathomas\LRT Hawley Lock Time-Lapse 720p.mp4)

Future Works

2014/15

- Hertford - Old Barge Waterway Wall – wall reconstruction – Jan 2015
- Regent's Canal – Waterway wall repairs – Nov 2014
- Docklands – West India Dock Entrance Lock – Gate pintle repairs and other works - Jan 2015
- Roydon – Bridge 7a – stabilisation works, repairs and bank protection – Jan 2015

2015/16

- LN, Springfield Park – Horseshoe Bridge – repairs and repainting
- LN, near A406 – Waterway Wall repairs
- SR, Fieldes Weir – Towpath repairs Fieldes Weir to Lower Lock
- GU, Hayes – Crane Aqueduct – repairs
- RE, Islington – Islington Tunnel and Portal Repairs
- GP, Greenford – Culvert 11 relining
- SR, Roydon – Brick Lock – wall repairs
- GU, Cowley – Roving Bridge repairs

2016/17 (Scope for more projects)

- GU, Hanwell – Bulls Bridge to Hanwell Dredging
- LB, Limehouse – Old entrance wall - repairs

2017/18

- Coppermill Lock area – towpath improvements
- Harlow – Moorhen Lift Bridge
- Cheshunt, Aqueduct Lock – access/towpath improvements

London Winter Stoppage Program

Location	Region	Affected Waterway	Description	Start date	Finish date
Hertford lock No 1	London	Lee	Refurbish top and bottom lock gates at workshop.	03-11-14	19-12-14
Hawley lock No 2	London	Regent's	Install inserts to bottom lock gates	03-11-14	14-11-14
City Road lock No 5	London	Regent's	Install inserts to bottom lock gates. Replace top lock gates with new. Lock ladder repairs	17-11-14	19-12-14
			Christmas		
Tednambury lock No 4	London	Stort	Refurbish top and bottom lock gates at workshop.	05-01-15	06-02-15
Middle lock Hertford Union	London	Hertford Union	Repair bottom gates and bottom stop log cill	05-01-15	23-01-15
Hanwell lock No 92	London	Grand Union	Install inserts to top and bottom lock gates. Lock ladder repairs	02-02-15	13-02-15
Aqueduct lock No 8	London	Lee	Install inserts to bottom lock gates	16-02-15	20-02-15
Hanwell lock No 96	London	Grand Union	Install inserts to bottom lock gates. Brickwork repairs	16-02-15	27-02-15
Widewater lock No 86	London	Grand Union	Install inserts to bottom lock gates	09-03-15	13-03-15



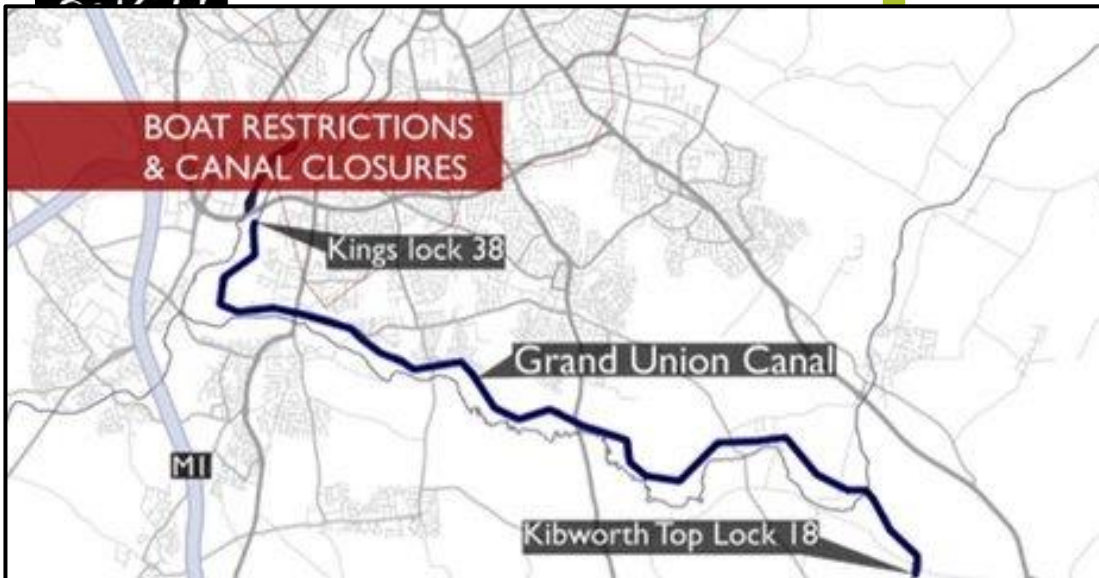
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Water Resources Strategy - London Waterway Forum

Sam Thomas

22 October 2014

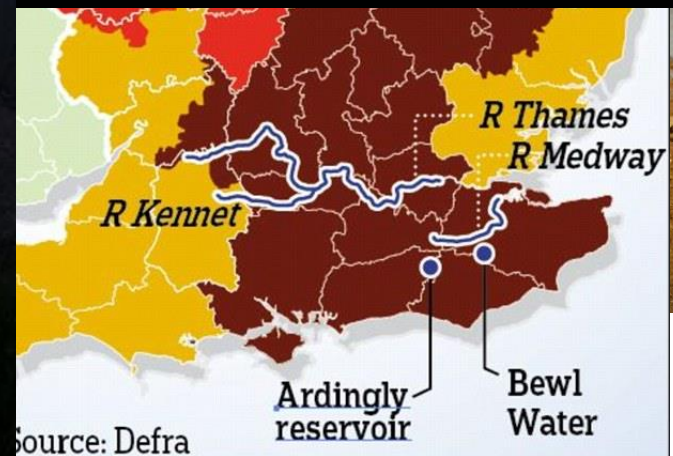


ONE WET MONTH
V
TWO DRY YEARS
WE ARE STILL IN DROUGHT

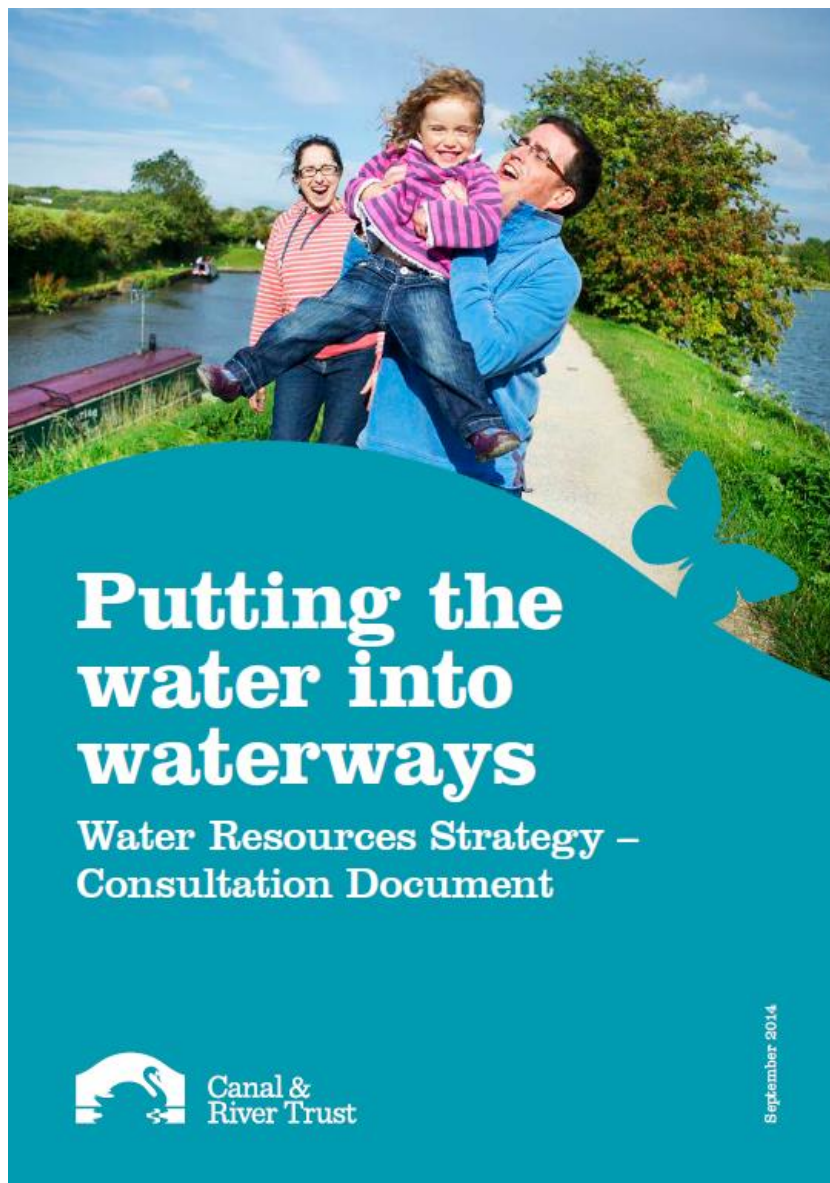
ne rain or shine, please use water wisely.

PLEASE
USE WATER
WISELY

This poster features a dark, textured background with a torn paper effect at the bottom. The text is in large, bold, white capital letters. A small circular logo with a water drop and the text 'PLEASE USE WATER WISELY' is in the bottom right corner.



Consultation document



Canal &
River Trust

September 2014

Executive summary

Delivering a long term security of water supply to the waterway network will help the Canal & River Trust achieve its vision of *living waterways that transform places and enrich lives*. To enable this, we are developing a Water Resources Strategy to allow us to plan successfully for the future. The strategy sets out our aspirations for the next five years, but looks as far ahead as 2050 to understand the longer term pressures and challenges.

The consultation outlines the key issues that we wish to understand and manage better, and seeks the views of all our customers and users to help influence the work we do in the future. It is the first time that these issues have been openly presented by the Trust and we believe this embodies our values of being caring, open, local, involving and demonstrating excellence in our work.

Our Values



Caring



Open



Local



Involvement



Excellence

The consultation document introduces and explains the key concepts and definitions in our approach to managing water resources, such as **hydrological units** (sections of waterway that share a common source(s) of water supply to meet demands for water), **navigational drought** (interval of time where closure within a particular hydrological unit is required as a result of a shortage of water resources), **levels of service** (the frequency we would expect a navigational drought to occur) and **navigational drought closure** (navigation being available for less than five hours in a day, on seven or more consecutive days due to drought). Views on these definitions are sought from customers and users.

**“Water is vital to the Canal & River Trust
It is the lifeblood of the canals and
rivers that we care for, and it needs to be
carefully managed, particularly in
times of drought.”**

Canal River Trust, March 2014



The consultation explores the various levels of service currently in place for the Trust's network, and presents a range of costings for three differing levels of service for three key hydrological units, to illustrate the range of investment the Trust might need to make in the future. These estimates are presented in terms of the whole-life costs for a variety of different schemes (such as reducing canal losses, installing new backpumps to recirculate water, or accessing new sources of water). The way the Trust will assess and prioritise future investments in water resource improvements, on the basis of their benefit-cost ratio is also presented. Currently, the aspirational level of service is 1 in 20 years, i.e. the Trust maintains and operates the canal network so that drought closures are implemented, on average, less than once every twenty years. Another way to express this is in terms of a drought closure having a 5% probability of occurring in any single year. Views are sought on whether this level of reliability is appropriate for our range of customers and users, and if our approach to prioritising investment is acceptable.

The possible impact of future pressures on the Trust's water resources are explored in the consultation, with a focus on restorations and new canals, climate change, new legislation, changes to boating patterns, water transfers, water sales and water rights trading. The document outlines how we propose to investigate and quantify the impact of these pressures, primarily through further research, hydrological modelling, and reference to industry best practice.

The consultation also describes the Trust's views on three key issues that are frequently raised by our customers and users whenever water resources and droughts are being debated, namely: lock leakage, side ponds and dredging. There is often a misconception about the effect of these three issues on our overall water resources reliability. The consultation takes the opportunity to clarify a number of areas of misunderstanding and it presents our current view on these issues, as the viewpoints/perceptions can be quite different to the technical facts.

Finally, the consultation explains our proposals for a five-year update cycle for the Trust to produce and implement its Water Resources Strategy. This will incorporate each of the themes and priorities summarised above, allowing progress to be made in key areas, whilst ensuring that lessons are learned and feedback improves the overall management of water resources across the 2000 mile network of canals and river navigations. This will help the Trust to deliver its vision of living waterways that transform places and enrich lives.

Comments are invited to the consultation by email, post or online at www.canalrivertrust.org.uk/about-us/consultations, and the consultation period runs for 8 weeks, from **9 September to 4 November 2014**.

Image: Jack Perks

Putting the water into waterways

The Canal & River Trust is consulting on our Water Resources Strategy. We have set out the overarching vision for how the Trust intends to manage water resources across the network through to 2050.

• Why is a strategy needed?

Water is vital to the Canal & River Trust. Without enough, navigation would not be possible, the natural environment would suffer, businesses and communities would not thrive and the experience for many of our different towpath visitors (such as cyclists, walkers, anglers) would be much poorer. A reliable water supply will help us to meet our vision of living waterways that transform places and enrich lives.

It is therefore vital that the Trust delivers long term security of water supply to our canal network. To achieve this, we are developing a Water Resources Strategy to allow us to plan successfully for the future.

• Drought & Level of Service

To understand how reliable our water supplies are we need to know how often the canals are likely to be closed as a result of dry weather – we call this the level of service. In the consultation we are setting out some key terms, such as a 'navigational drought' and a 'drought closure'.

• What will it cost to reach a different Level of Service?

Currently, the aspirational level of service is 1 in 20 years, i.e. the Trust maintains and operates the canal network so that drought closures are implemented, on average, less than once every twenty years.

To change from a 1 in 20 year level of service to a more or less demanding standard will have a financial impact on the Trust. The consultation provides illustrations of those costs, for three different parts of the network.

• What are the Future Pressures we need to address?

Within the Water Resources Strategy we will assess the impact of:

- Climate change
- Reduced funding causing asset deterioration
- Environmental legislation (likely reduction in abstraction volumes)
- Changes to boating patterns (increased network usage)

We also set out how we plan to deal with restorations and new canals, water transfers, water sales and water rights trading.

• Five Year strategy Cycle

In the consultation, we are proposing a five year cycle, in which we will carry out detailed modelling of the balance between water supply and demand, before we identify and assess a range of schemes to address any deficits and allow us to meet our target level of service. The cycle will conclude by reviewing the baseline to see what has changed (future pressures) before we publish a new strategy to cover the subsequent five years.

• Our modelling approach

In the majority of cases, we will model the water resources of our canals using the industry standard Aquator modelling software package. Within five years the majority of the canal network will be modelled, the remainder will be modelled in subsequent cycles of the Water Resources Strategy.

• Prioritisation of water resource improvement schemes

Where we predict a water resource deficit we use our models to assess the benefits, in terms of improvements in the level of service, of various schemes to enhance water supplies and/or reduce water demands.

Water resources schemes will continue to be prioritised based solely on whole life costs and water resources benefits (expressed in £ per MI/d) as these methods are robust, transparent and well understood.

• Dredging, side ponds and lock leakage

Dredging, side ponds and lock leakage are frequently raised by our customers and users whenever water resources and droughts are being debated. There is often a misconception about the effect of these three issues on our overall water resources reliability. We have reviewed them from a water resources perspective and have made a number of recommendations.

We need your views on our plans

A copy of our consultation document, which contains 15 key questions, can be found at:
www.canalrivertrust.org.uk/about-us/consultation

The consultation runs from **9 September to 4 November 2014**



How to get involved

- Total of 15 questions posed
- 8 week consultation period
- Opened 9 September 2014
- Closes 4 November 2014
- Online survey to complete
- Details at:

www.canalrivertrust.org.uk/about-us/consultations