

## RESTORATION OF THE COTSWOLD CANALS

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### Introduction

For centuries from the Middle Ages onwards, Britain's rivers were used for the transport of goods, due to the poor state of the roads. They played a leading role in providing supply routes during the Industrial Revolution. It was not surprising, therefore, that a waterway linking the Severn and Thames was proposed as early as 1610. It was the late 1700s before one was completed, an outstanding engineering achievement for its time. Restored in some sections, and rich in industrial archaeological interests, it remains largely abandoned, partly lost and completely blocked in many places.

Soon that may well change. Comprehensive, if not complete restoration within the next decade or two now seems probable. It was announced on 19<sup>th</sup> March 2002 that the Cotswold Canals (the Stroudwater Navigation and Thames and Severn) would be in the next group of national waterways to be restored.

This time a reversion to the sight of men towing trows carrying coal from Shropshire, Staffordshire and the Forest of Dean is highly unlikely in the different world of today! The driving force and economic case depends mainly upon the likely recreational and leisure benefits of the restored waterway and its adjacent footpath, together with the jobs which will result. This will be enhanced by the benefits brought by other businesses moving into the area because of the canal. Some freight traffic for niche markets may also develop. It is thought that the restored waterway will be busier at its western end!

What are the changes in interest and attitude which will bring this about? The main factors and issues likely to affect the restoration are described in this paper. This may then make the progress of subsequent restoration plans and achievements easier to follow.

### Background

The history of the Cotswold Canals is well documented elsewhere<sup>1,2</sup>. However, a summary may help to explain their present state. The Stroudwater Navigation was established by the Stroudwater Canal Act 1730. After several unsuccessful attempts, the present canal was a replacement for the Kemmett Canal of 1759. The first stone of the entrance lock from the Severn at Framilode was laid on 30<sup>th</sup> May 1775, and the canal reached Wallbridge on 21<sup>st</sup> July 1779. Subsequent construction of the Thames and Severn Canal enabled vessels to reach Chalford by 31<sup>st</sup> January 1785 and Cirencester by 22<sup>nd</sup> April 1789. The through route to the Thames at Inglesham was completed on 19<sup>th</sup> November 1789.

Eventually, both canals suffered competition. This came initially from the Kennet and Avon Canal completed in December 1810, then more seriously from the Great Western Railway which arrived at Stroud in 1845. Declining trade, silting, water leakage and general deterioration progressively took their toll, not helped by some poor management. These led to frequent closures. Control of the section between Chalford and Inglesham passed discreetly to

the GWR on 11<sup>th</sup> May 1882, at a time when almost everything about the canal was in lower water than it had ever been. This section was closed on 28<sup>th</sup> December 1893 at short notice by the managing committee (not at the behest of the GWR). Ownership passed for an unsatisfactory interim period to a Canal Trust, then eventually to Gloucestershire County Council in 1901. The canal reopened in 1904. The last loaded boat passed over the summit in 1911. Thereafter, use of the waterway decreased even more. Notice of abandonment was given by the Gloucestershire County Council on 7<sup>th</sup> November 1924. The eastern end from Whitehall Bridge in the Golden Valley to Lechlade was abandoned in 1927. The western end of the Thames and Severn to Wallbridge was abandoned in 1933. It soon became derelict. Much of the canal east of Chalford was sold to adjoining landowners.

The Stroudwater Navigation was abandoned in 1954, after several decades of poor maintenance. Fortunately most of it is still owned by the Company of Proprietors of the Stroudwater Navigation.

### **Changing Interests**

Much has been done to protect and restore parts of the Cotswold Canals by a society formed in 1972. This is now known as the Cotswold Canals Trust (CCT), and has well over 3,000 members. Volunteers have reopened short lengths of the waterway and undertaken frequent maintenance programmes. Feasibility and engineering studies initiated by the Trust concluded the canals could be restored to full navigation, and benefits were identified.

But very significant impetus was added when timely Government support also arrived. A White Paper in 1998 on the future of transport<sup>3</sup>, which described the Government's plans for developing an integrated and sustainable transport system, was followed by a second document in 2000<sup>4</sup>. This contained the Government's proposals for the inland waterways. These stated clearly its desire to protect and conserve this vital part of Britain's heritage, as well as to promote its use for a range of activities. These included leisure and recreation, urban and rural regeneration.

Three more organisations involved in promotional waterway restoration must now be mentioned because of their increasing involvement.

The first is British Waterways (BW). This public corporation is responsible for managing over 2000 miles of navigable canals and rivers across the United Kingdom. It has already played a critical role in the promotion, restoration and conservation of many of the country's waterways in recent years.

The Environment Agency (EA) manages its waterways as an integral part of other water management functions, and is primarily a regulatory body. Both are overseen by the Department of the Environment Food & Rural Affairs (Defra) , which sets grant levels according to planned expenditure.

The Waterways Trust (TWT) is a national charity established in 1999 to ensure that the waterways of the UK are supported, valued and enjoyed by all sections of the community, whatever their interests and circumstances. Its UK-wide remit includes the conservation

and promotion of waterways for navigation, economic benefit and recreation. The Waterways Trust has the endorsement of Government. All three organisations are already much involved in the local restoration programme.

### **Feasibility**

The feasibility of restoring the Cotswold Canals has been set out recently in the report prepared by British Waterways on behalf of The Waterways Trust, published in July 2001. It was concluded that it is feasible to restore these canals at a cost of about £82 million. (cf. original: construction costs of £240,000!) A phased approach was recommended. This would involve two stages:

1. Full restoration of the Stroudwater Navigation and the canal link between the River Thames and Siddington, along with the restoration of a continuous walking route between Saul junction and the River Thames.
2. Full restoration of both navigation and towpath links between Saul junction and the River Thames.

It was suggested that work in the first phase could be started very quickly, subject to funding (£40m), and completed within 5-7 years. Completion of the link through the Cotswolds would be more difficult to fund unless water transfer were to be involved too. This could drive Phase II, enabling it to be completed within 5-10 years after the completion of Phase I.

One major attraction is to provide a navigational route from the Thames to the Cotswold Water Park. This now seems likely to be the revised primary objective of Phase I, reducing estimated costs to £35 m. It is not foreseen that the canal would pass through the lakes, in which the water levels are at different heights, and also for other environmental reasons.

### **Physical Obstructions**

Over fifty blockages have been identified. These range from infills of civic waste and silage to housing, factories, bridges and roads. This means that precise restoration is unlikely to be possible, even if it were desirable. However, in the majority of cases, there will be no need to change the historic route, but some local changes will be inevitable.

Some 80% of the original canal line of 37 miles (59km) remains intact, and 15% is in water. It is envisaged at this stage that the original total of 57 locks will remain the same, with new locks on realigned sections.

The five main blockages are associated with the M5/A38 roadway systems, Ebley Mill, Brimscombe Port, Sapperton Tunnel and the village of Kempsford. Circumventing some of these may involve diverting the canal along nearby river courses where appropriate, making new cuts for the canal and rivers as necessary. These would be the subject of consultation and detailed engineering assessments in due course. However, it was announced in July 2002 that British Waterways had purchased the greater part of the former Brimscombe Port area. This will greatly facilitate the construction of the canal through the area in the future.

Sapperton tunnel, perhaps the most ambitious engineering feat of its day, needs major repair. This is likely to be expensive rather than difficult, and would include the reopening of some construction shafts for ventilation. Legging is hardly likely to be acceptable these days!

Provisional costs of £12 million have been included in the initial estimates to cover this work, which could well be the last to be done.

Other obvious obstructions include the railway bridge at the Ocean where the original bridge structure is thought to be intact; restrictions and buildings in the Chalford area; and the drive to Thames Head House, which follows the original line of the canal. A house sits on the site of the Siddington Lower Lock, and the Smerrill viaduct across the Cirencester to Kemble road no longer exists, nor could readily be replaced.

Fortunately, with commendable foresight, a box culvert has been provided under the new A419 at Latton. New cuts and a new lock will be required to link with this. All the relevant local planning authorities have protected the original line in their plans in recent years.

### **Land Requirements**

The land needed to restore the waterway is in multiple ownership at present. Over 90 landowners are involved, mainly along the former Thames and Severn Canal. Three own nearly half of the former line of this canal. Most of the Stroudwater Navigation still belongs to the Company of Proprietors of the Stroudwater Navigation, making restoration more straightforward.

Understandably, some of the present landowners may not wish to sell their land, so negotiation will be necessary. As in similar restoration programmes elsewhere, it is hoped that recourse to any compulsory purchase powers which might become available will not be necessary.

### **Water Resources**

The original water supply system is no longer acceptable.

Rivers, streams and springs were the main supply sources, coupled with land run-off and essential top-ups at the summit from the Thames Head pumping station. However, the continuing decline in water levels of both the underlying aquifer and associated water courses means that significant abstraction from these and the upper reaches of the Thames seems unlikely east of the summit, except during some of the winter.

West of the summit, the River Frome shares its channel with the canal at some locations, but once again, falling water levels make permanent extractions increasingly unlikely. Whereas potential supplies from the Cotswold Water Park complex are a possibility on the eastern side, there are no other sources of water supply available on the west side of the summit.

Thus one of the problems of the original waterway has not gone away. At first sight it seems to have got worse. Certainly the basic geology of the line has not changed. The original water supply proved to be inconsistent and inadequate, repeatedly exacerbated by the lock spacing and depths incorporated in the design. Prodigious leaking didn't help. Leakage in any restoration must be kept low by adequate lining of the canal.

None of this sounds particularly encouraging for a restored waterway. It is recognised that there is a comprehensive water demand factor to be managed.

Two options have been suggested so far:

1. Back pumping from the east and west to meet all demands.
2. Back pumping from the west only to meet all demands.

However, there are serious environmental concerns about transferring water from the Severn to the Thames catchment areas. These are associated with the differences between the water from the two catchment areas which could lead to problems. Because of this, the cheapest option of pumping water from the Gloucester and Sharpness Canal or from on-line storage at Slimbridge to supply the canal, without the need for any storage on the eastern side, is not necessarily going to be the favoured option. The alternative of pumping from the east as far as the summit, perhaps from the Cotswold Water Park, but from the west only as far as Whitehall Lock, is another option likely to be considered. Local flood alleviation and other water control issues also need to be taken into account.

The restoration project is not free-standing in this respect. Further water resources are required in the Upper Thames catchment area to cope with population growth in particular. Use of this canal to transfer water from west to east could well be a significant benefit, provided environmental concerns can be resolved. This would give added financial justification and drive to its restoration.

### **Environmental Assessment**

The original canal constructors did not have to face the plethora of environmental considerations (nor, indeed, Health and Safety Regulations) which have to be satisfied today!

Most of the length is protected on ecological grounds under various local and structure plan policies, although no part has any specific legal environmental protection.

Recent Cotswold Water Park and Gloucestershire biodiversity action plans (BAP) refer specifically to canals as habitats for wild life. Several sites of specific scientific interest (SSSI) adjoin the Thames and Severn.

Protected and important species are known to occur along the canal. Full assessment of all the main environmental issues will be part of a comprehensive Environmental Impact Assessment for the whole canal. The conclusions and recommendations should be available by mid 2003. In turn, this should enable the restoration programme to proceed carefully and sensitively, by taking into account any biodiversity aspirations, together with other environmental, conservation and enhancement recommendations. The recommendations should also help to reduce any adverse impacts of the construction works.

### **Economic Benefits**

The expected benefits are based mainly on the increased leisure opportunities and tourism arising from the scheme. It has been estimated<sup>5</sup> that 1.8 million new visitor days to the canals

(including locals going to school, walking dogs etc.) could bring in new revenue of £8.5 million annually to the local economy, supporting local shops and businesses. According to this report, up to 500 new permanent jobs could be created, and 1400 temporary construction jobs. Added to this is the attraction for new businesses to move into a canal-related environment. These could catalyse other developments, creating permanent employment and potential revenue.

There is also potential for water transfer already described. Less easily assessed are the benefits of creating sustainable heritage and wildlife habitats to attract walkers and cyclists, perhaps linked to other footpaths and bridle ways.

### **Funding**

The results of an application submitted to the Heritage Lottery Fund in April 2002 for Phase 1 of the restoration should be known in January 2003. Other sources, as yet undefined in detail, are likely to include public, private and charitable funds (perhaps through The Waterways Trust), and also European funding. The Cotswold Canals Trust has already launched its own appeal, which has raised over £150,000 so far<sup>6</sup>.

The South West Regional Development Agency (SWRDA) has agreed to fund half the cost of three key studies to move the project beyond the feasibility stage, enabling the Environmental Impact Assessment (£150,000), M5/A38 Obstacle Design Assessment (£50,000) and Commercial Opportunity Study at Brimscombe (£7,000) to be started. Matched funding is coming from BW (in kind), the EA (cash and kind), the local authorities, and the CCT.

The quality of estimates for further work will be improved as the results of initial assessments and the investigations of possible alternatives become available. Much benefit is expected to be drawn from comparable experience resulting from work on the restoration of the Kennet & Avon canal.

### **Implementation**

Many organisations will be involved in the successful implementation of the restoration programme. These include those organisations already mentioned, together with the Wiltshire County Council and local District Councils, the Inland Waterways Association, the South West Tourist Board, the Gloucestershire Wildlife Trust, Country Landowners Business Association and the Cotswold Water Park Society.

The project is being led by professionals. British Waterways appointed a Regeneration Programme Manager (Mr. Andrew Stumpf) to take charge of the Cotswold Canals restoration scheme, at the beginning of this year. Experienced in restoring canals in Scotland, his expertise is already proving beneficial, helping consultation and partnership with all the relevant parties. A project manager (Mr. John Laverick) has joined the team full time from the Kennet & Avon Canal, so a management structure and key appointments are in place.

Overall control is with a formal partnership (The Cotswold Canals Partnership) between The Waterways Trust, British Waterways, Cotswold Canals Trust, South West Rural Development Agency, Country Landowners Business Association, Gloucestershire Wildlife Trust, Company of Proprietors of the Stroudwater Navigation, Gloucestershire County Council, Wiltshire County Council and Stroud, Cotswold and North Wiltshire District Councils. This

was launched in July 2001, to build on the work carried out so far and drive restoration plans forward<sup>7</sup>. Initial consultations are well advanced.

### **Conclusion**

The opening words of the British Waterways Press Release (7) were "Historic Waterways in the Cotswolds, abandoned for half a century, will be restored back to full use". In addition to the local economic and leisure benefits, it will complete a major waterways ring through the River Thames, Oxford Canal, Grand Union Canal, North Stratford Canal, Worcester and Birmingham Canal and the River Severn. What a diversity of industrial archaeological interests this will open up for boating enthusiasts! On the other hand, perhaps sadly, the popular and peaceful walk from Chalford through the Golden Valley to Daneway will never be the same! But new popular and peaceful walks will be opened up for people to enjoy all the way to Lechlade. To quote Andrew Stumpf: "It's going to happen!" When it does it will be the largest and most far reaching restoration likely to be seen in Gloucestershire for decades.

### **References**

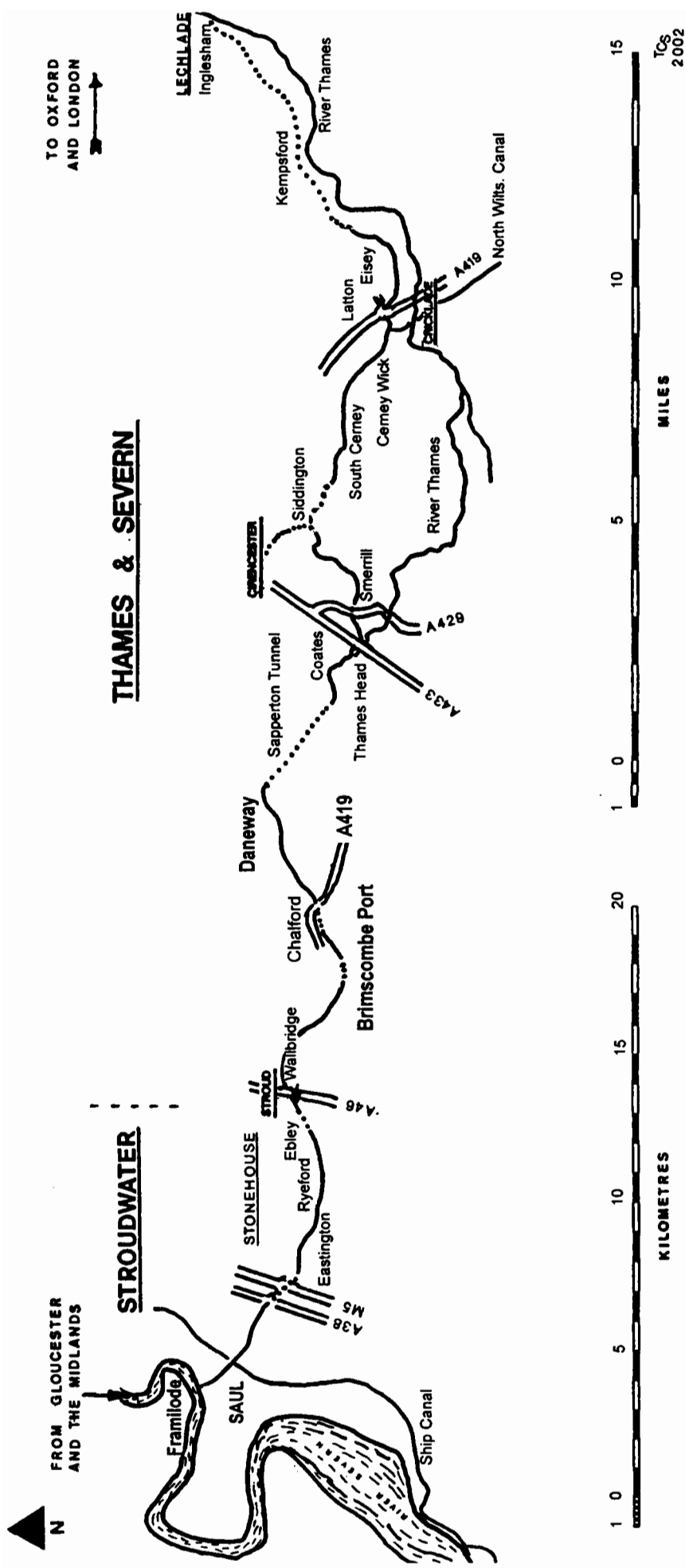
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The author gratefully acknowledges frequent use of information contained in the publications referred to above, and also other material made available to the public by British Waterways through reports and talks. A special word of thanks is due to the Cotswold Canals Trust for its help with specific information.

### **Postscript**

This compilation represents the situation as currently understood by the author in mid-2002. Changes and advances will certainly occur over the coming years.



Route of the Cotswold Canals