



*Bingley Five-rise locks circa 1890.*

# Conservation Conflicts on the Leeds & Liverpool Canal

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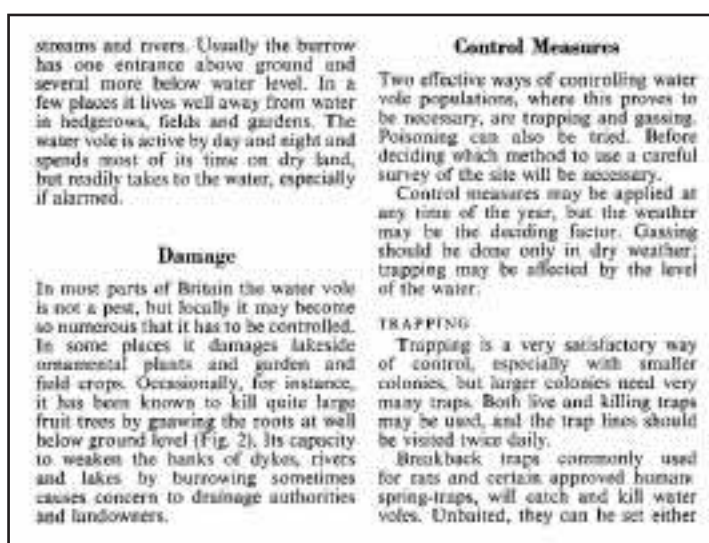
# Conservation Conflicts on the Leeds & Liverpool Canal

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Public access and appreciation of Britain's inland waterways has been encouraged over the past twenty or thirty years, and people have been encouraged to think of waterways as quiet and peaceful natural areas, with promotion often concentrating more on this aspect, than the waterway's industrial heritage. British Waterways, at a regional level, have had ecologists working for them for about thirty years, whilst heritage advisors have only been in place since 2006. There is a need for industrial historians and archaeologists to educate the public about the built nature of the canal environment, and to highlight how little of what we see today is completely 'natural'.

The problem can be seen in the use British Waterways and the Waterways Trust makes of the water vole, an endangered species. For the last fifteen years, British Waterways have used the water vole as an icon of the environmental benefits of canals, and have been encouraging water voles to nest along canal banks, because the areas where water voles lived naturally have, to a great extent, been redeveloped. Design specifications for canal bank repair and maintenance now include features to encourage voles. Yet in earlier days it would have been seen as necessary to kill any voles found near the canal because of the damage they caused to the canal banks.<sup>1</sup> Even the Ministry of Agriculture produced a leaflet about their control.<sup>2</sup> Because of the destruction of their natural habitat they are considered 'at risk' and have to be protected, but should this be used to promote canals, a location always considered unsuitable? It creates a conflict between the historical integrity of canals, and the need to adapt the environment to cope with modern conditions.

*A page from the Ministry of Agriculture leaflet on the control of voles.*



The Environment Agency is beginning to address the problem, with around 100 water voles released into natural waterways in Devon recently as part of a nationwide effort to save one of Britain's most popular animals. Water vole numbers have increased in many areas, such as the Sussex coastal plain, the Somerset Levels and Snowdonia. Perhaps now is the time to re-educate the public, and to stop using them to promote canals, though still allowing them to live on canals.

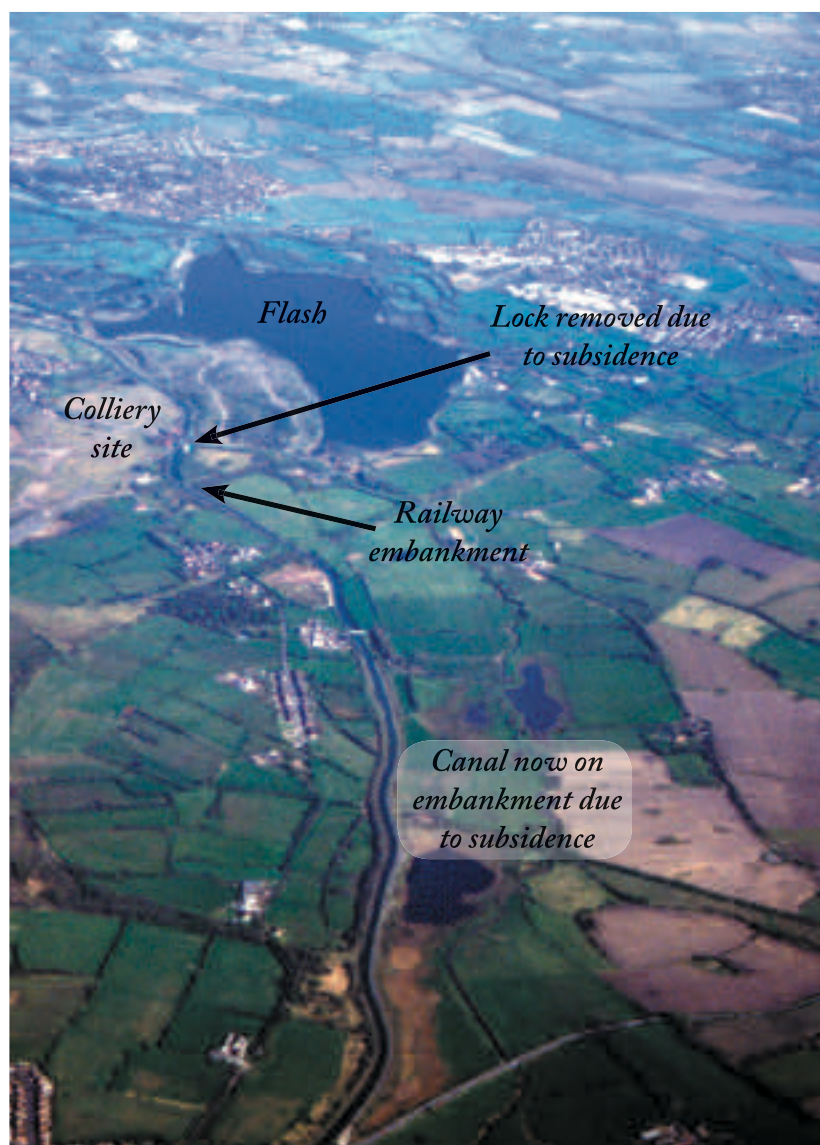
Although canals are totally man-made, it is the natural environment they provide that usually finds its way into planning decisions, often at the expense of the historic built environment. The Leeds & Liverpool Canal provides some good examples of this. The canal is 203 km long, and passes through several historically-important industrial areas: around Wigan were many deep coal mines, Blackburn and Burnley were Britain's largest cotton weaving towns, and the Aire Valley was a major centre for the worsted and other woollen textile industries. The canal has never closed, though commercial use effectively ended in the early 1970s. Today it is seen as being central to the economic development of the towns along its banks. It is

also promoted as an important environmental benefit for the local ecology, and this has created a challenge for the conservation of its industrial heritage.

For instance, developers want to demolish an old warehouse in Shipley, and to build flats and offices. Council officers have recommended the proposals despite some opposition from transport authorities, and the Yorkshire Wildlife Trust is recommending improving the canal banks to maintain and improve the wildlife corridor for habitats to be provided for otters, water voles, reptiles, amphibians and many invertebrates. Many of these would never have survived on the canal when it was operating commercially. At the same time, with the destruction of the warehouse, little thought is given to conservation of the canal's built environment.

The conservation of coal mining structures is another area where conservation of the natural environment is taking precedence over the built environment. Subsidence from coal mining has always been a problem for the Leeds & Liverpool Canal, particularly from the 1880s as deeper mines were developed around Wigan. The Leigh branch of the canal suffered particularly badly, three locks with a total of around 6 metres fall being moved up to five kilometres towards Wigan so that the level of the canal could be maintained relative to the local landscape. Even so, long stretches of the canal are today on high embankments, and it is possible to look down over 2 metres from the current canal level onto the isolated remains of canal basins, where coal was loaded into boats. As a result of this relative isolation, these former canal basins are slowly disappearing. No conservation is considered as this would affect the natural environment.

Other canalside structures related to coal mining have disappeared more rapidly over the last twenty five years, partly as a result of political pressure to remove any vestiges of the coal industry. The result is that today, people using the canal can see little of its relationship to the coal industry, once the prime reason for the canal's development. The coal industry had a poor environmental record, and local authorities have been



*Left: an aerial view in 2001 of the Leeds & Liverpool Canal near Leigh. The now closed and demolished Plank Lane Colliery was centre left, and the large lake, locally called a 'flash', is a result of subsidence. The railway embankment, shown below, is to the right of the canal, just below the abandoned colliery site. The amount of subsidence can be judged by the fact that this railway once crossed the canal by a bridge, whose abutment can be seen in the foreground, next to the towpath. This photo was taken circa 1975, when subsidence was still taking place.*





*Above: The lock at Plank Lane was moved closer to Wigan because of subsidence, with these photos taken c1910 and c1990. Note that the overbridge in the older photo has now replaced by a lift bridge, and the disappearance of the colliery headstocks.*

*Right: Below the canal embankment is a former basin, coal for carriage by boat being delivered from the colliery by a railway, the old track bed visible in the distance. This phot was taken c1975, and today most of the remains are invisible, covered by vegetation.*



enthusiastic removers of many traces of the industry. The canal is one of the few places where remains of the mining industry are easy to interpret, but without suitable encouragement, local authorities will continue to destroy their local heritage in their enthusiasm for environmental ‘improvement’.

Perhaps the most intrusive ‘green’ feature to flourish on canal banks are trees.<sup>3</sup> Once they were continually removed by canal bank maintenance men — around 1900 the canal’s Engineer stated that he needed at least three men for five kilometres of canal for maintenance, today there are perhaps a dozen or so full-time men employed directly on maintaining the canal’s 230 kilometres of towpath. Trees are seen by the public as part of the canal environment, but British Waterways has no national policy on tree management. One needs to be established, with due consideration given to both natural and built environment.

Trees were grown by some canal companies, not just for fencing, but for use as sawn timber, with coppices being set out close to the side of the canal. What happened elsewhere in Europe? In France, many canals are lined with plane trees. These seem to have been introduced on the Canal du Midi in the late eighteenth



*Two European examples of trees being grown alongside canals. On the left is Ludwigs Canal, in Bavaria, and on the right the Canal du Midi, in France.*

century, at the same time as Napoleon and Frederick the Great were building their tree-lined roads. It has been suggested that this was to provide shade for troops on the roads, but on canals the problems are slightly different. Shade could reduce evaporation, but tree roots could also damage canal banks and take water from the canal. There are also the orchards on the embankments on the summit level of Ludwig's Canal in Bavaria, possibly planted to stabilise the sides of the embankments. Recent research suggests that in the right place, trees can be beneficial, but elsewhere they can be a problem, especially if unmanaged. The move by British Waterways away from in-house control of the environment to the employment of contractors, has led to increased tree growth on the canal banks in Britain. It shows the importance of an effective environmental management plan in the organisation of tow path work, and thus for improving views and access for the visitor.

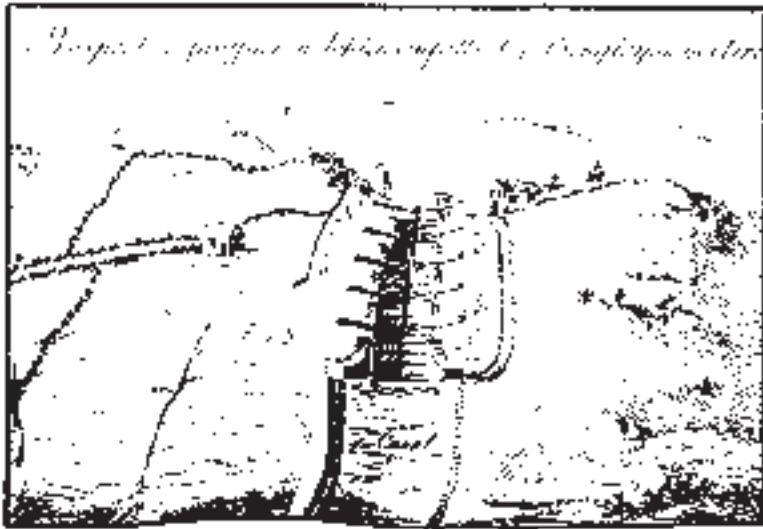
The five-rise locks at Bingley are a good example of this. They have a grade 1 listing, one of the few historic waterway structures in England with such a high level of protection. What is so important about them to give them such a high level of protection? The technology of riser locks, where one lock chamber is connected directly to the next, was out-of-date by the 1770s, when they were built. From a technological history point-of-view, there are also more important locks in France; construction of the seven-rise locks at Rogny, on the Canal de Briare, was begun in 1610, some 160 years before those at Bingley. Riser locks on the Leeds & Liverpool Canal were probably used to keep costs down as the project was financed privately, without any government funding. It also shows that the promoters did not expect canals to be so successful in generating new trade. Riser locks use much more water than conventional ones and, as trade increased, the five-rise locks at Bingley created a constant water supply problem for the canal company.



*A comparison in the sites of the two most historic riser locks. Above, at Rogny, the locks are placed at right angles to the slope of the hillside. On the right, Bingley can be seen from a distance rising majestically along the side of the valley, a much more dramatic location.*



Despite its technical problems, Bingley still became an iconic structure, and was illustrated by Hogrewe in his book on English canals published in 1780. They became well-known both in Britain and elsewhere, and today they remain a major tourist attraction, and are one of the most heavily visited sites on England's waterways. But why are they so important, given that they were outdated technically? The answer lies in their location. Compared with other riser locks, those at Bingley are much grander visually, as they raise the canal upwards along the valley side rather than at right angles to the slope. Seen from below the associated three-rise locks, the two sets of locks once dominated the landscape, providing a forceful example of the success of canal builders in overcoming the natural environment. Bingley five-rise locks are important from a cultural and geographic perspective, rather than technological. It is a pity therefore that over the last fifty years they have become more and more obscured by trees.



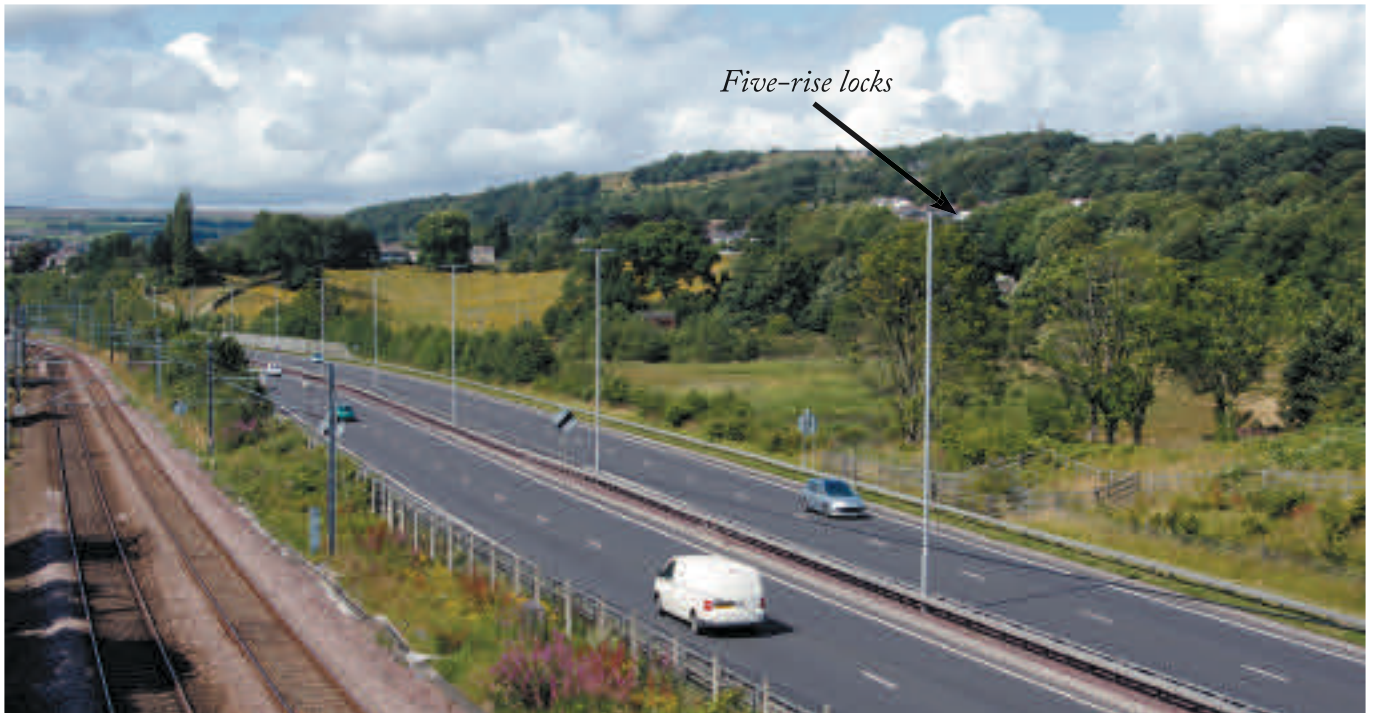
*Hogrewe's drawing of Bingley Five-rise Locks on the Leeds & Liverpool Canal in 1780. The hills in the drawing are a poor representation of the location, but the site obviously made a great impression on Hogrewe, as it is the only such drawing in his book. All the others are of a more technical nature.*

Whilst the canal was successful commercially, the trees alongside it were controlled, with early photographs showing little vegetation close to the Bingley locks. However, since the 1960s, the number of men employed on canal maintenance has declined. Over the last thirty years or so, there has been little or no control of vegetation beyond grass cutting. As a result, many self-sown trees have established themselves on the canal's banks. As the area around the locks is now part of a Conservation Area, it has proved extremely difficult to obtain permission to control the trees, which now hide all but the most restricted of views of the five-rise locks.

What is needed is an environmental management plan for the site, balancing the need for a distant view of the locks with the need for trees to provide a barrier to noise from the new by-pass. The question should be put as to what is more important, a small number of self-seeded trees, or to view a Grade 1 listed structure in its entirety. Not many trees would need to be removed, leaving the rest to provide shade and colour for the



*Cutting back the trees on the right would define the perimeter of the locks, and removing branches on the left would open out the view. However, the trees do provide useful cover for visitors and they see trees as an important part of the canal environment. Today, it would be almost impossible to return the canal to its original specification, without trees.*



*A management plan also needs to consider the benefit trees provide in controlling noise from the new road. For this reason, opening up the view of the locks would also need additional tree planting along the edge of the road.*

visitor, and noise reduction for the local population. However, an environmental management plan could also consider opening up views away from the canal, across the valley towards the town centre, as a further benefit to the visitor.

What would happen if such a policy was not implemented. We only have to look to the problems on the Landwehr Canal in Berlin<sup>4</sup>, where green environmentalists have prevented trees damaging the canal bank from being cut down. Some trees have even had supports erected around them to stop them from falling over. Such a short-term vision only comes about when people become entrenched in their views and are incapable of considering the opinions of others. A good environmental management plan should be able to overcome such problems.

Over the last thirty years, those involved with the natural environment have been more effective at creating legislation and public involvement than the industrial historian. This paper is a request for more consideration of the problems at the interface of natural and built environment. What is needed is an open discussion between both sides to create guidelines for the control of the natural environment around important built structures. This paper is a start, but what is needed is more interaction, especially at local level, between both experts and the public to produce a sustainable long term solution.

*Tree supported by scaffold alongside the Landwehr Canal in Berlin.*



## Endnotes

<sup>1</sup> The article on Canals in Rees' *Cyclopedia*, written c1805, states: *It is an essential point of good management to have experienced mole and rat-catchers employed from time to time upon the line of a canal, to extirpate these hurtful vermin; and in every instance of discovering one, to trace out all his burrows and holes, and have them carefully stopped up and filled in every part, as well for preventing the harbouring of other animals of the same sort, as for preventing the water from making its way into and through them. ... the duty of the mole and rat-catchers ought not to be limited to the company's ground, but in all fields, banks, ponds, or brooks within 100 yards or more of the canal, on each side, they ought to be equally attentive to the destruction of such vermin, and the demolishing of their secret retreats.*

<sup>2</sup> Ministry of Agriculture, Fisheries and Food, Advisory Leaflet 490, reviewed 1973.

<sup>3</sup> What were towpaths and canal edges like when first built? Little research has been published, but there was some contemporary discussion in the *Gentleman's Magazine* in 1792 when 'Dendrophilus' suggested that growing trees along a canal would reduce evaporation and encourage the formation of dew, create shade for canal workers in summer, and provide a good source of timber. 'A Southern Faunist' replied that it would be expensive, and in wet weather the water dropping from the leaves could be troublesome to workers and damage cargoes. 'Dendrophilus' replied that he thought the most difficult problem will be stopping boatmen from cutting the trees to make tillers or masts.

The best description is, once again, in Rees' *Cyclopedia*: *The Towing-Path, horse-path, or hauling-way of a canal, should always be on the lower side if possible, the traffic on the same having a tendency to consolidate the new made bank, to prevent the accumulation of weeds and the harbour of vermin, that by lodging in and perforating the bank might endanger the same. ... In forming the towing-path, care must be taken to make the ground sound, and to cover it with a proper thickness of good gravel; and we cannot but recommend the raking or sorting of this as it is laid on, throwing the large or irregular stones forward to be covered with better gravel, to that the surface may be smooth and even, without rough and large stones to throw the horses down, and render the use of the path unpleasant. ...*

*The fencing of the sides of a canal is a business deserving of more attention than has been usually paid to the same. Quick-set or other live fences ought by all means to be made, except in the case of a rocky country, where good and durable walls can be built at an easy expense: rail or pale fences are very improper, except in and near towns, on account of their heavy expense in repairs. The continual weeding, which quick fences require, the great injury which the plants sustain from weeds, if the same are at any time suffered to grow up, and the damage which the pulling or hoeing up of weeds so repeatedly, do, in wearing away the soil, and more or less exposing the roots of the quicks, and besides these, the plants being often wounded in their tender bark by the hoes used by the weeders, are most serious difficulties in the railing of quick-fences.*

<sup>4</sup> See: [www.baeme-am-landwehrkanal.de](http://www.baeme-am-landwehrkanal.de)

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