

Limehouse Lock and the 'GLIAS' winch at Camden Town

by Malcolm Tucker

Differences between the proprietors of the Regent's Canal and the River Lee Navigation caused them to maintain separate entrances to the Thames at Limehouse. When the Lee entrance lock was eventually eliminated in 1968, one of the winches which opened the gates was salvaged by GLIAS and re-erected at Hampstead Road Locks at Camden Town.

The Lee Navigation and the Regent's Canal

The Limehouse Cut connects the River Lee (or Lea) at Bromley-by-Bow with the Thames at Limehouse (London Borough of Tower Hamlets). It was one of the improvements of the River Lee Navigation which John Smeaton recommended, and it was opened in 1770¹. In 1820 the Regent's Canal from Paddington was opened to the Thames, again at Limehouse, with a dock for sea-going vessels.² The two navigations did not connect, but had separate entrance locks originally 200 yards apart.³

A connection on the level was however opened in December 1853, and for the next ten years River Lee traffic was able to pass via the Regent's Canal Dock, so avoiding the ageing and constricted entrance lock of the Lee Navigation. The Regent's Canal Company paid for the works, including a new regulating lock beneath Britannia Bridge⁴ on the Limehouse Cut, and took over the management and toll-collection for the lower end of the Cut (see Fig.1).⁵

The rebuilding of Limehouse Lock

In 1864 the Canal Company claimed they had not profited from the arrangement, and in June they blocked off the connection. This presented the Trustees of the River Lee with a serious problem, for their Limehouse Lock had fallen into very bad repair; it leaked and the walls bulged, and it could not take barges wider than 13'. Upstream, the Navigation had been improved to take barges up to 19'6" beam. The larger barges now had to enter the Navigation via Bow Creek, the twisting tidal section of the Lee, instead of the Limehouse Cut⁶. Then, in March 1865, one wall of the lock collapsed, stopping all traffic through the Limehouse Cut. Hopes for a lock on a new site, in conjunction with an enlarged Regent's Canal Dock, had to be abandoned, and rebuilding on the existing alignment proceeded hurriedly, to the design of the Trustees' engineer, Nathaniel Beardmore^{6,7}.

The new lock chamber was 20' wide and 90' long (internal clear dimensions), with its lower cill 17' below Trinity High Water, for optimum use on spring and neap tides. The entrance dried out at low tide and was protected by an apron. Two road bridges, including that at Narrow Street, were raised by 1' for increased headroom.

The old lock had used land ties to hold back the walls in the poor ground conditions, but difficulty of land acquisition



Plate 1. Paul Carter commences re-assembly of the winch in May 1972.



Plate 2. Winch in its present position at Hampstead Road Locks, Camden Town.

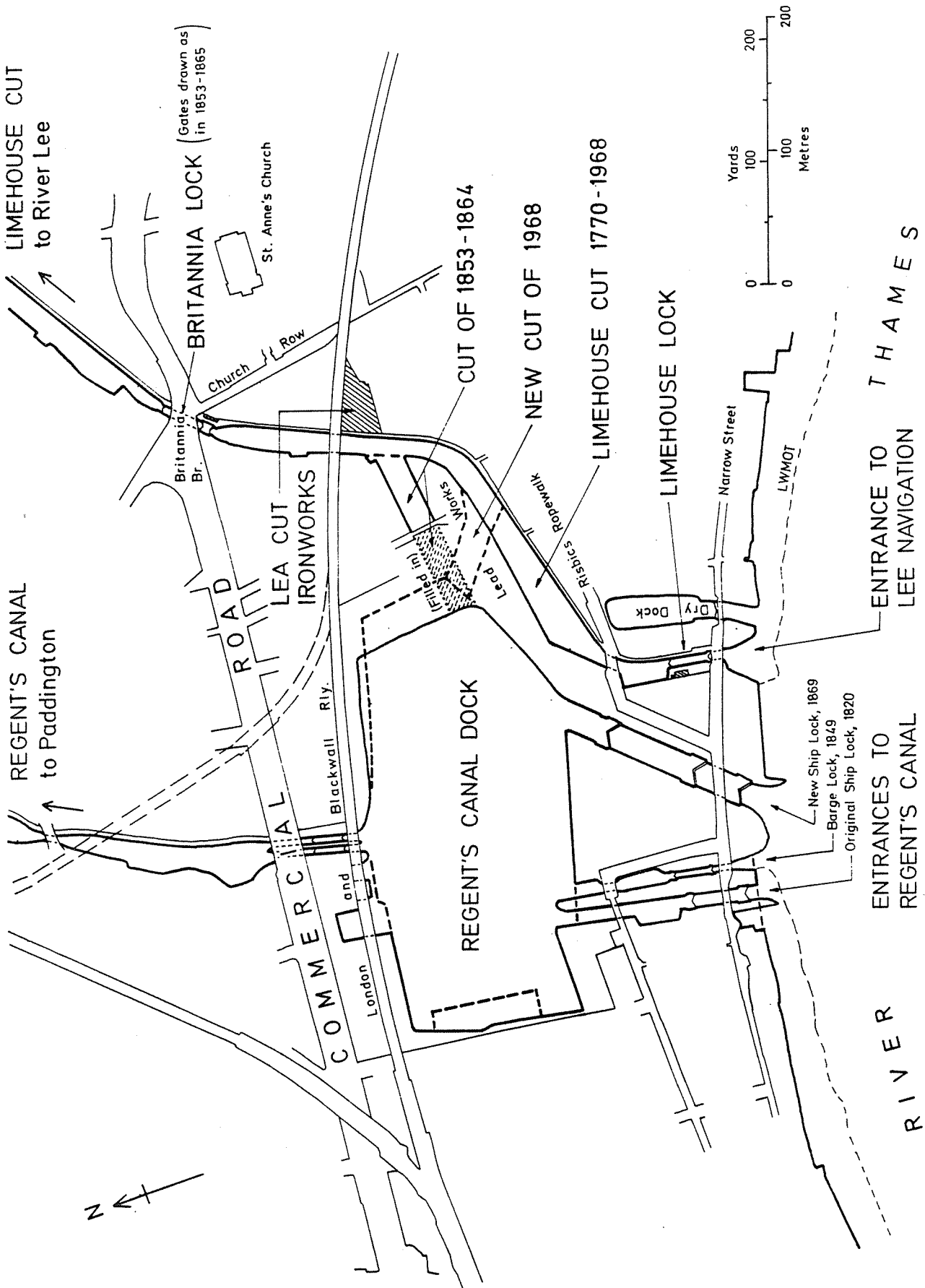


Fig.1. Site plan of Lee Navigation and Regent's Canal Dock in 1870, from Ordnance Survey of the period (later alterations shown dashed)

ruled this out for the widened and deepened lock, which was therefore designed in the 'Dutch fashion', with cast-iron struts overhead on vertical posts to hold the sides apart. The walls were of greenheart, a timber of exceptional durability in wet and dry conditions (see Fig.2)⁸.

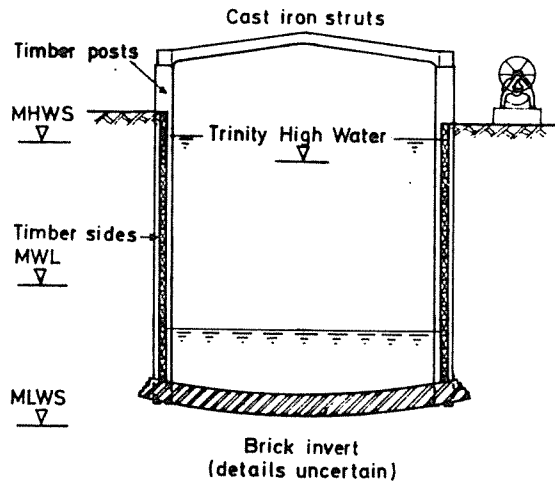


Fig.2. Limehouse Lock, tentative cross-section

'Quicksand' underlay the site, causing further problems; the main cofferdam blew, causing seven weeks' delay, and two adjoining public houses were damaged by subsidence, the 'Sir John Franklin' so severely it had to be rebuilt. The lock was partially opened in January 1866, but the entrance works were not fully completed until September⁷.

The gate winches

Space restrictions required the lock gates to be opened and closed by chains and winches rather than balance beams, in the manner common on dock gates but also used elsewhere on the Lee. The hand-operated cast-iron winches for Limehouse were supplied by Redpath & Leigh of Lea Cut Ironworks. The ironworks was close at hand on the east bank of the Limehouse Cut (at TQ 366810). The firm, earlier Brown & Redpath, was a well-established supplier of marine equipment.

'Patentees and manufacturers of ships pumps and ships fire hearths to HM Royal Navy, ironfounders, smiths, tank makers &c'

says their entry in Kelly's directory for 1866. The winches remained in use until 1968.

The elimination of Limehouse Lock

The Regent's Canal Co. built a quay across the line of the connecting cut, and the two navigations remained aloof until united by nationalisation in 1948. By the 1960s the condition of Limehouse Lock was again causing concern, and in 1968 the British Waterways Board once more connected

the Limehouse Cut into the Regent's Canal Dock, along a different alignment to avoid modern buildings. The 200' long cut was hailed as the first canal opened in southern England since the Slough Arm of 1882. Hopefully its life and that of the commercial traffic still carried on the Lee will be considerably longer than its predecessor's.

Limehouse Lock was filled in. The site and its derelict lock cottages may be seen from Narrow Street bridge (TQ 363807). The entrance walls on the river side are listed as of historic interest, Grade II.

The restoration of the 'GLIAS' winch

One of the gate winches was salvaged for restoration by GLIAS. An arrangement was made to re-erect it in safer and more accessible surroundings beside the Regent's Canal, near the roving bridge above Hampstead Road Locks at Camden Town (TQ 287841). This section of towpath was shortly to be opened to the public under the auspices of Camden Borough Council. The council provided a concrete plinth and general encouragement. To remove accumulated paint and grease, the winch components were first shot-blasted. Two coats of red-oxide primer were applied, and GLIAS volunteers re-assembled the winch on its plinth one May evening in 1972 (Plate 1). With a final coat of black paint and the maker's name picked out in white, it is now a valued canalside feature, if somewhat removed from its place of origin (Plate 2).

Special credit must be given to Paul Carter, GLIAS's first secretary, and Hugh Morrison, for their enterprise and effort in carrying through this project.

References

1. Boyes, J. & Russell, R. *The Canals of Eastern England*, David & Charles, 1977.
2. Hadfield, C. *The Canals of the East Midlands*, 2nd edition, David & Charles, 1970.
3. They were, however, linked from 1830 by the Hertford Union Canal, two miles to the north.
4. Advantage was taken of the rebuilding of Britannia Bridge (Commercial Road) to construct this lock, known as Britannia Lock. It was needed to accommodate variations in water levels caused by floods, high tides or the working of the Regent's Canal entrance locks. It remained as a stop lock until the River Lee flood-relief works of the 1930s, and its hollow quoins for three pairs of gates can still be seen.
5. Trustees of the River Lee, *Minutes, 1850-1858*, Public Record Office, RAIL 845/14
6. *Ibid*, *Minutes, 1859-1864*, PRO, RAIL 845/15
7. *Ibid*, *Minutes, 1864-1869*, PRO, RAIL 845/16
8. For a photograph of the lock chamber, see Dennehy, M. *London's Waterways*, Batsford, 1977, plate 5. The same structural principle can be seen on the Suffolk Stour, e.g. the well-known Flatford Lock, and in the modern Stratford Lock on the Warwickshire Avon.