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'Nobody wanted  
them nearby'

# NOBODY wanted them NEARBY

*The canal network and the boats of the Royal Gunpowder Mills at Waltham Abbey were described in last year's September and December issues of WW. Now Christine Richardson tells of the lethal shipments via the Lee Navigation and river Thames – fraught with peril and fear*

**T**he cargoes were deadly, the general public nervous, the sailing regulations strict. Vast quantities of gunpowder, cordite and gun-cotton came from the Gunpowder Mills; by 1869 the site's spritsail barges were carrying over 40,000 barrels every year. Added to that destructive total they carried the output of the adjacent Royal Small Arms works at Enfield – cartridges, Gatling guns, shot, rifles, all types of armament. Everything was taken down the Lee Navigation through London's heavily populated East End. Passage was via the tidal locks into Bow Creek, and then down the Thames to the Royal Arsenal at Woolwich and the great magazines at Purfleet.

The vessels on this work were true canal sailing barges, rather than river craft, and they were designed for carrying dangerous cargoes. For the risks they took, the bargemen enjoyed benefits almost unknown elsewhere on 19th century waterways – job security, sick pay, hospital care, and a pension on retirement. However, the strict regulations they had to obey made their lives difficult.

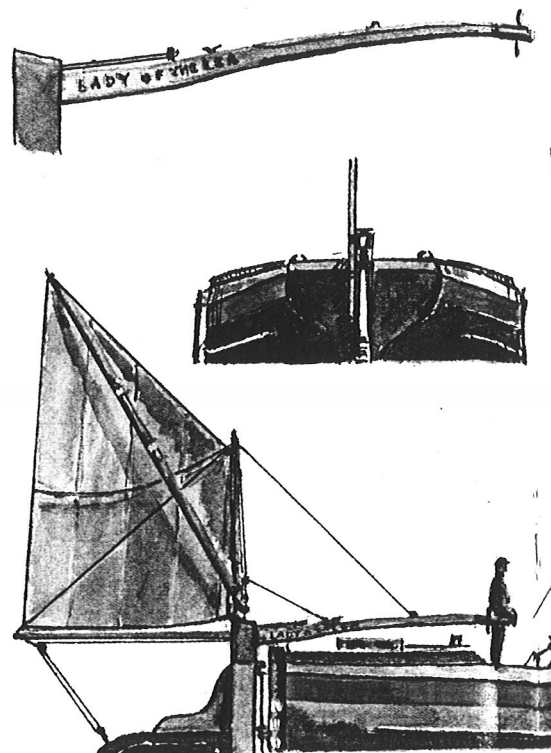
War Office regulations stated that no fires were allowed on board any barge carrying explosives. In the winter that meant no heating in a crew cabin, sometimes for a week or more. So the boatmen could not make hot food, nor could they dry wet

clothing. The return trip from Purfleet often carried damp gunpowder from the Royal Navy to be dried at Waltham Abbey – and the regulations still applied. If a barge was on a weekly schedule it could be a month before a damp cabin was aired.

No exemptions were made for the sailing barges of the Royal Gunpowder Mills, even though they were built with many safety features. Double bulkheads – lined with lead sheeting – separated the cabins from the holds. Each vessel had four scuttles – two forward, two aft – so large that it could be sunk within minutes in an emergency. To prevent sparks from boots, the barges were built with treenails (wooden nails), and each carried a wooden dustpan and brush to deal with explosive dust. Repainted annually and kept very clean, they must have looked very smart.

However, the people who lived and worked along the southern-most section of the Lee were oblivious to their charms. Everyone knew the craft with the dangerous cargoes, even more easily identified after 1875 when an 18in broad red band was painted round their hulls. Everyone knew them – and everyone wanted to keep their distance – not easy in the heavily populated area of Bow through which the navigation passes.

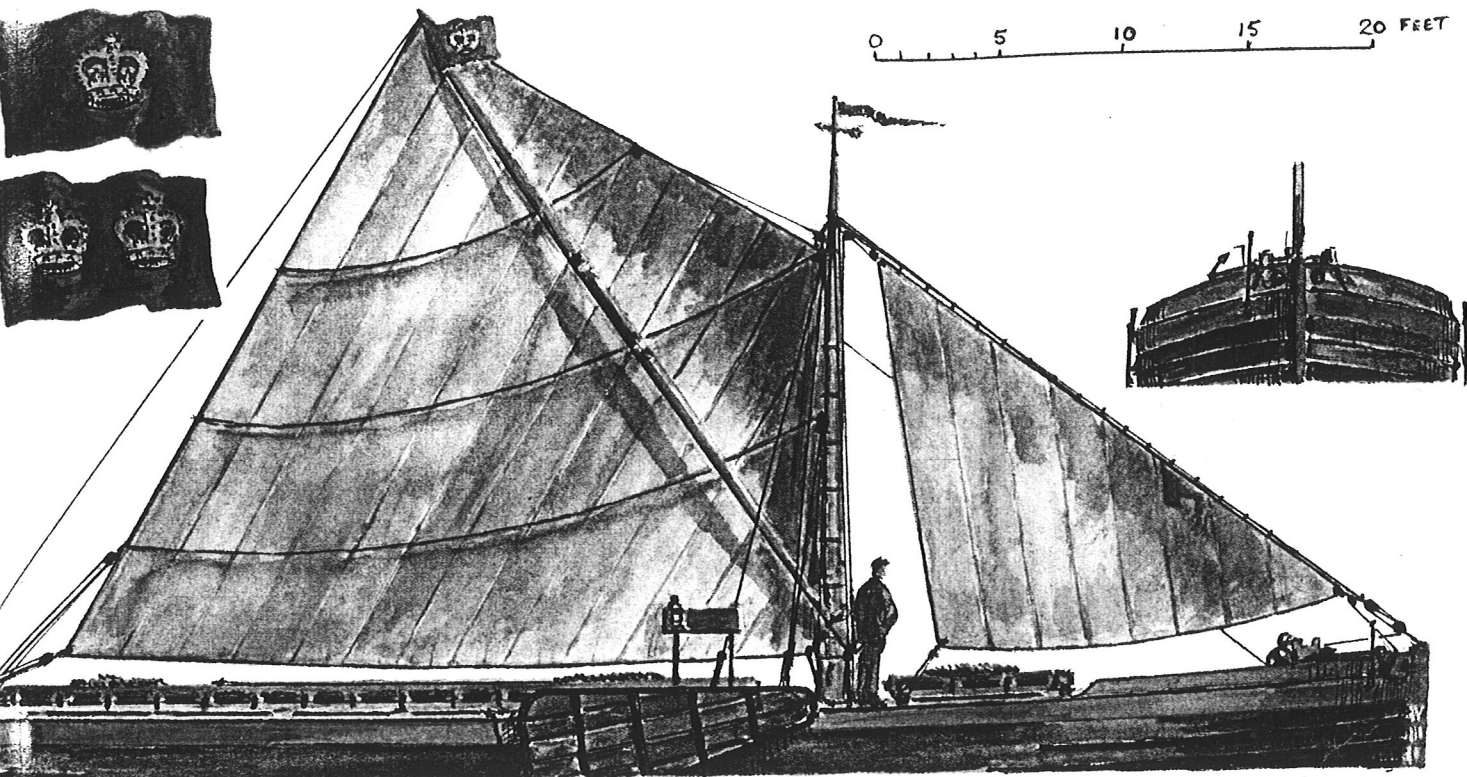
Up until 1914 each bridge under which a gunpowder barge passed was cleared of traffic until she was deemed out of range. Such organisation needed police involvement and telegrams



were used to keep everyone informed of a barge's progress. In 1883 the system was that the master would send a telegram to the Bow police when he was ready to leave Purfleet with returned explosives. In it he would estimate his time of arrival in Bow Creek, and say whether his barge would be staying the night on the tideway or at Old Ford Locks on the Lee Navigation. Wherever moored or anchored the crew kept 4-hour watches overnight.

An on-going problem was the necessity for the barges to wait for the tide at Bow Locks. The Superintendent at the Royal Gunpowder Works made the suggestion that his barges should be given precedence at the locks so that they could catch the tide and clear the populated areas without delay. One dangerous incident was in September 1874 when the riverside Bromley flour-mill was destroyed by a huge fire. The Conservators of the Lee Navigation vehemently complained that the crew of a gunpowder barge had deserted their craft near the fire.

An official enquiry at the Royal Gunpowder Works found that the crew had not run away. Indeed they had man-hauled their barge into open countryside, three-quarters of a mile away, and no burning embers had landed near them. Nevertheless, it was stated that in future barges carrying explosives would not stay overnight in built-up areas. Instead they would moor in the countryside



● Featured in WW for September 1989 as Colours of the Cut No 23, the *Lady of the Lea* appears again to illustrate this article, drawn and described by Edward Paget-Tomlinson. The *Lady* is now shown with mainsail and foresail set and with cross sections at bow and stern to the same scale as the side view. The tiller is to twice that scale but the flags are not to scale. The *Lady of the Lea* was built in 1931 by Hyam & Oliver of Rotherhithe, the last of the Government powder barges and the last wooden spritsail barge of any type to be built. Like her predecessors in a government service dating back to 1787 when the Royal Gunpowder Factory was established at Waltham Abbey on the Lee Navigation, the *Lady* had double lead-lined bulkheads between the hold and the cabin, a lightning conductor, and scuttles fore and aft which when opened would sink the barge within minutes if an explosion threatened.

Sold out of Government service in 1947 the *Lady* is believed to have gone to France then returned as a houseboat on the Thames. In the 1970s she was bought by students from Kingston Polytechnic,

among them Brian Pain and Caroline Ware. They restored and rigged her, adding a topmast, for the 'stumpy' rig was found too slow.

Whereas the steerer's name and number should most probably be on the stern, these are not now, and the only identification is on the tiller, the only place the name was displayed. The flags indicate the carriage of Government explosives, the two crown one was flown when there was a Government official aboard. For a spritsail barge the *Lady* is small, 72ft long overall and 13ft extreme breadth with a 70-ton capacity, although she would rarely be loaded to this. Details of the barge have been provided by Elizabeth and David Wood of the Society for Spritsail Barge Research, David Wood being the author of *Powder Barge WD* in which Peter Ferguson's scale drawings appear. These have provided the inspiration for the illustrations here and many thanks to Peter Ferguson for sanctioning this. Note, by the way, the apparently truncated skipper at the tiller. He is in fact standing in a shallow well.

above Old Ford Locks, before progressing through to the tidal lock.

No matter how well designed the barges were, nor how stringent the crew regulations, nervous officials and residents still watched the explosives barges with apprehension. Numerous complaints were made to the Superintendent at the Gunpowder Works. In 1886 a crew was called before a board of enquiry to face the allegation that a 'fuzee' was found near the tiller of their barge. A 'fuzee' was a match used for lighting a pipe in a wind and, therefore, much used by boatmen in general. It flamed and glowed for some time so its use would be highly dangerous around explosives. Everyone in the area knew that crews were not allowed to smoke on board, nor were they allowed to have the relevant items on their person for use ashore. The barge, and the crew's clothing, was searched. The police also searched all the people who

had anything to do with loading, hauling, and cleaning the barge but no evidence of smoking was found. An open verdict was returned.

It was an understandable, but tiresome, fact that every action of the crew of a gunpowder barge was watched, and often reported. It was a secure job with many compensations, but it must have been frustrating to have one's every movement watched and judged. Such was the magnitude of the destruction that their cargoes could have wrought that the bargemen were also watched when out on the wide Thames tideway.

In 1880 the master of the *Lady of Lorne* was reported for being at Blackwall with a cargo of 500 barrels of gunpowder – and no explosives warning flag flying, in contravention of Thames regulations. A frustrated master explained that he had only just come out of the Lee and had anchored in mid-stream to prepare for making

sail on the wide tideway, and to raise the flag. The Thames Conservancy inspection launch had come alongside before he could do either and, in a counter complaint, he stated that the steam-powered launch had approached him from windward, with the resultant danger of sparks from her funnel blowing down onto the barge.

Everyone had to be careful when near a barge of the Royal Gunpowder Mills.

The information for this item is from David Wood's book *Powder Barge WD*, published in 1977, ISBN 0 905270 03 7. It is the definitive work on the gunpowder barges and is full of information.

Currently out of print, a second edition is at the planning stage. Details from David Wood, The Spritsail Barge Society, 11 The Embankment, Twickenham, Middlesex TW1 3DU (0181 892 3039). The Royal Gunpowder Mills Study Group can be contacted c/o Dr Alan Crocker, 6 Burwood Close, Mewar, Guildford, Surrey GU1 2SB.