Supplementary Submission No 155a

INQUIRY INTO WINDSOR BRIDGE REPLACEMENT PROJECT

Organisation: Hawkesbury City Council

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3 April 2018

The Hon Robert Brown
Chair
Portfolio Committee No. 5
Windsor Bridge Replacement Project
Parliament House
Macquarie Street
SYDNEY NSW 2000

Email: PortfolioCommittee5@parliament.nsw.gov.au

Dear Mr Brown,

Re: Upper House Inquiry - Windsor Bridge Replacement, Thompson Square Windsor

I am writing to advise you that Hawkesbury City Council considered an item in relation to the subject matter at its meeting on Tuesday, 27 March 2018. In doing so, Council considered material presented by Professor Ian Jack regarding the recently exposed heritage drainage system in Thompson Square, constructed in 1814. A copy of Professor Jack's material is attached for your information.

In context of the above Council resolution, I am now writing to alert you to the existence of this recently produced document, as you may wish to consider its contents as part of your current inquiry.

Should you have any queries regarding the above matter, please do not hesitate to contact me on phone

Yours faithfully

Peter Conroy
General Manager | Hawkesbury City Council

AT - 1 The Drainage System in Thompson Square, Windsor - Professor Ian Jack, March 2018

The Drainage System in Thompson Square, Windsor

Ian Jack, March 2018

Thompson Square in Windsor is recognized as having very high heritage values. Dating from 1795, it is the oldest civic square in Australia, the centre for government control and economic management in the newly settled area. Adjacent to the early farms which fed early colonial Sydney, its wharfage made it an important entrepôt at the head of Hawkesbury River navigation throughout the nineteenth century. It was named by Governor Macquarie in 1811 in memory of the first emancipist magistrate in Australia.

The heritage significance of Thompson Square has in 2018 been dramatically enhanced by the archaeological excavation of its early drainage system. What has been revealed under the surface in the lower part of the square is a complex and sophisticated series of brick drains which can be documented in an exceptionally detailed way. A contract for public works in the square, involving drainage, levelling and wharfage, was issued by Governor Macquarie in 1814 to two prominent, entrepreneurial Hawkesbury men. John Howe (who was the chief constable) and James McGrath. This original document and a related contract made in April 1815, both signed by Macquarie himself, were retained by the Howe family and are now in the State Library of New South Wales.[1]

On 8 August 1814 Howe and McGrath agreed to complete three separate commissions within twelve months. One of these was:

> To Sink and Erect one Sewer in the middle of the Square with Channels leading thereto or to Sink and Erect two sewers one on each side of the Square as laid down in the Plan in the possession of His Excellency Governor Macquarie and as His Excellency may please to direct.

This plan has not been located, but it is clear from local knowledge and confirmed by the current excavations that in 1814 Howe and McGrath elected to build a single central drain, with ancillary channels. The governor permitted the contractors to manufacture between 120,000 and 150,000 bricks 'on the Brick Ground now making at Windsor for Government'. Since bricks were not relevant to the other works in the contract, this substantial number was earmarked for the drains.

By 24 April 1815, the date of the second contract, well ahead of schedule, both the new wharf and the barrel drain had been completed.[2] The new contract gives details of the

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1 State Library of NSW, Mitchell Library, ML MSS 106, items 37. 38.

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remaining work. This was the very large enterprise of extending the wharf and reducing the steep angle of the square as it dropped down from George Street to the river.

It is this levelling of Thompson Square which explains why the barrel drain was found no less than 3.5 metres under the present surface. It also offers a satisfying interpretation of the archaeologists' discovery of a series of brick-lined sump-walls going vertically up some two metres from the barrel drain to a brick box drain on the surface. The nature of the bricks found in all three strata is consistent with a Macquarie-period date.

Levelling the square was a substantial operation. Although only six months were allowed for completion, the fee was almost double that for stage 1 in 1814-1815 (£600 against £350, plus spirits in each case). The magnitude of the task was recognized by Macquarie, who added to Howe's copy of the contract a note in his own handwriting, allowing the starting-date for the six months to be postponed for two months until 24 June 1815.

The methods to be used by Howe and McGrath were carefully specified. A new wooden 'Wharf or Platform' was to be created along the whole length of the riverside part of the square 'in a line with the present Jetty or Wharf but three feet higher [than the deck of the wharf]'. There were to be three rows of piles, 550 in all, to support the new structure. The improved wharf was 276 feet long and 33 feet wide, according to the *Sydney Gazette*, whereas the first Howe wharf was only 50 by 18 feet.[3] The piles on the landward side, taking the full weight of the infill, which was to reach the top of the new wharf, were to be:

> well secured with Land Ties and Caps and planked with sound two inch Planks and not more than six inches wide to be spiked with five inch spikes.

It was envisaged that 5,000 such spikes would be needed from government stores. Although the dimensions of the vertical piles were not specified in 1815, the earlier contract had stipulated that each pile should measure between 16 and 18 inches and that the piles should be placed from three to four feet apart. Standing at least three feet above the land-surface, the reinforced landward side of the wharf was a substantial buffer for the weight of the fill required to diminish the slope.

Obviously the greatest quantity of fill would be required in the lower part of the square. Howe had already in 1814 and early in 1815 built the large barrel drain just below the

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The wharf was in use by early March 1815 (*Sydney Gazette*, 4 March 1815, p.2); the completion of the barrel drain is inferred since it is not included in the new contract in April 1815.

Sydney Gazette, 3 June 1815, p.2; State Library, ML MSS 106, 3+ item 37.

original surface. To maintain an efficient drainage system, as the barrel drain was to be covered with a great deal of fill, an additional drainage channel on the surface would be necessary, connected to the barrel drain by a series of brick-lined sumps. The box drain now excavated was therefore added by Howe once the land-fill had altered the landscape of the square, particularly the part closer to the river. Further minor brick drains running to the surface box drain have been identified by the archaeologists. These are the 'Channels' stipulated in 1814 but first constructed only after the initial levelling of the square was complete in 1815.

The 1815 wharf was, however, severely damaged in the 14-metre flood of June 1816, when it was reported that:

> all the planking is carried away and there is no part of the wharf that can be built on again.[4]

The 1816 flood would have implications for the new landfill and for the new surface drains. Under the direction of Francis Greenway, Howe and McGrath constructed a third wharf between 1816 and 1820 and it is probable that replacement infill, new box drains and new side-channels were required, with further repairs likely after the 14-metre flood of February 1817 and the 12-metre flood of March 1819 which postponed completion of the new wharf. Howe and McGrath received their final payment for 'filling in Thompson Square and Erecting a Sewer and laying drains' only on 15 February 1820.[5]

Since 1820, there have, of course, been further changes in the topography and soils of Thompson Square through recurrent floods, the creation of road cuttings to reach Windsor Bridge after 1874 and various uses of the open parts of the square. These have affected the context of the drains, but they do not affect the interpretation.

The very precise terms of the contracts make the conclusion inescapable that both the barrel drain and the box drain were conceived and built between 1814 and 1820 as a striking realisation of challenging commissions to two local entrepreneurs.

What has been partially uncovered in Thompson Square early in 2018 should be understood as remarkable physical evidence of a complex drainage and land-fill system conceived under Governor Macquarie in 1814 and completed by 1820 through the energy

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Report by Cox, Mileham and Fitzgerald, 4 July 1816, State Archives NSW, Reel 4045, 4/1735, p.83; D.G Bowd, *Macquarie Country*, rev. ed, 1973, p.42.

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Colonial Secretary Correspondence, State Archives NSW, Reel 6050, 4/1746, p.209.

of John Howe and James McGrath. This is the earliest public works of its sort surviving in the colony and the barrel drain is the key element in the sophisticated water management system. There is an overwhelming case for conservation, preservation and display.

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