

A SHIPWRIGHT IN THE COLONIES



THE LATE MR. JOHN CUTHBERT.

JOHN CUTHBERT 1815-1874

ROGER HOBBS

Cover: Image of John Cuthbert published with his obituary in the *Sydney Mail and NSW Advertiser*, 19 December 1874, p. 776.

A SHIPWRIGHT IN THE COLONIES

JOHN CUTHBERT 1815-1874

Shipbuilder, Ship-owner, Merchant
Entrepreneur, Philanthropist

ROGER HOBBS

Nautical Association of Australia, Inc., Melbourne

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Born in 1945 in the North of England, the author trained as an architect in the 1960s, before focussing on his other interests, speleology and mountaineering, for a number of years. Moving to Australia in 1974, he worked in geophysical exploration across Australia and the Pacific for 10 years, before returning to architecture via museum and conservation related work. For the last 30 years he has worked as an architectural historian and heritage consultant, based in Canberra.

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Dr Roger Hobbs
Canberra

Abstract

Shipwright John Cuthbert (1815-1874), born in Cork, arrived in Sydney in 1843, setting up his first shipyard at Milne's Wharf, a slip of land in Darling Harbour, in 1853, at a time when local, inter-colonial and international shipping was developing rapidly. By the 1860s there were a number of ship and boat building yards in Sydney, including that of John Cuthbert at Millers Point, the most extensive in the harbour and considered to be the only one of any consequence in Sydney. A man of honesty and integrity, his tenders were almost always the lowest.

During his active years from 1853 to 1873, as a shipwright trained in building timber vessels, Cuthbert operated the largest shipbuilding enterprise in the colonies, the 1850s and 1860s being his most productive years. By March 1865 Cuthbert had completed 26 vessels, including 7 steam vessels. These ranged in length from 26 to 151 feet and from 50 to 500 tons burden, and included a steam-driven dredge, paddle and screw driven steam vessels and the colonial gunship *Spitfire*, the first naval vessel to be built in Australia. At least 25 craft were built after March 1865, including schooners, steam launches and cutters as well as gigs and yachts. These vessels included the first naval vessels built in Australia for the British (Imperial) Government.

The most successful side of Cuthbert's business was the surveying, overhauling, repairing and refitting of commercial vessels as well as naval ships of the Australian and Flying squadrons and foreign naval vessels, on well over 900 occasions. This was achieved through improved techniques and judicious leasing of patent slips and dry docks. The success of Cuthbert's enterprise provided continuity of employment for an average of 150 shipwrights, apprentices and other tradesmen, often as many as 300-400, and by the 1870s, in his own estimation, he had paid almost £500,000 in wages. Cuthbert also operated as agent, shipowner and merchant and was recognised as one of Sydney's most generous philanthropists.

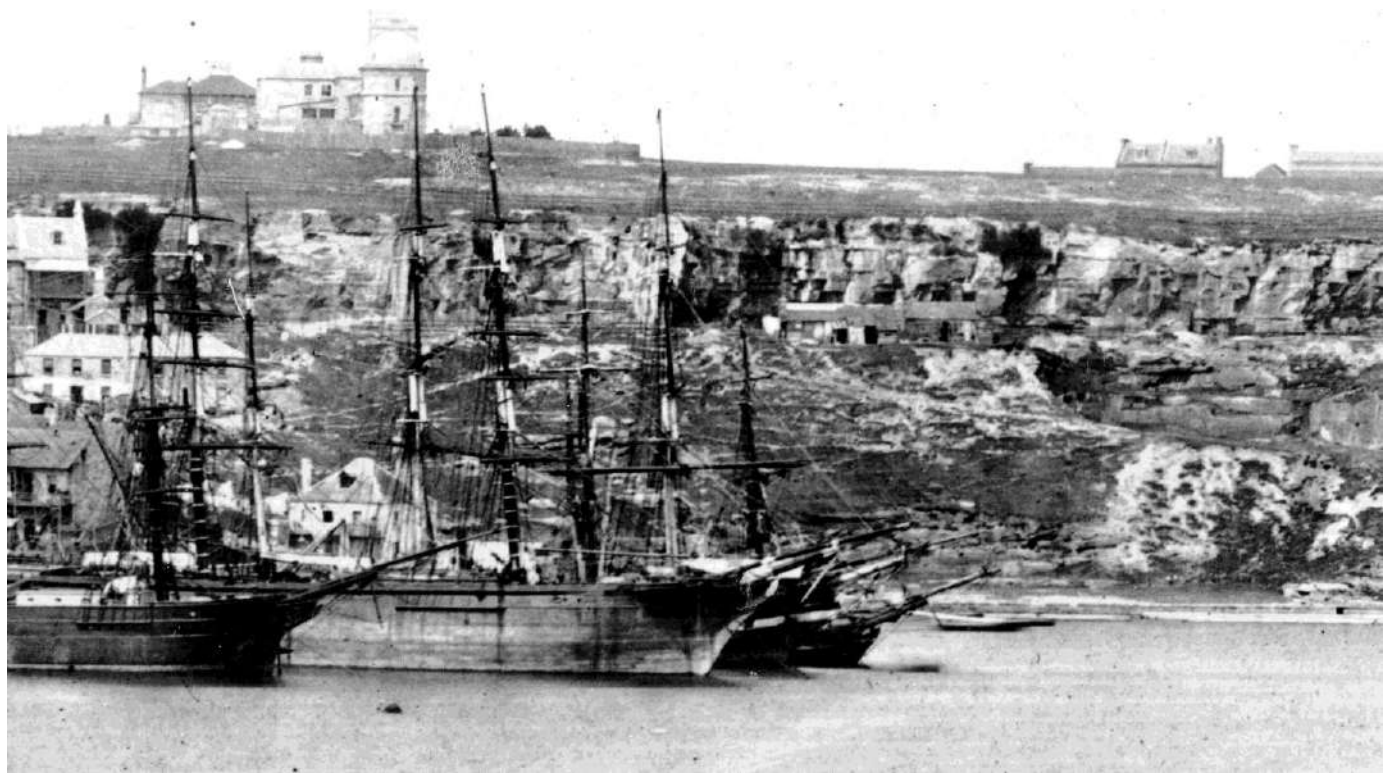
In the 1880s, an observant traveller wrote that 'the water is so deep close to the shore [in Darling Harbour] that in former days, when the merchant's residences were built on the quays, it was said that the bowsprits of their ships might come in at their drawing room windows.'

Illustrated Sydney News, 29 November 1888, pp. 14-17, and 3 January 1889, pp. 11-13.



'Panorama of Darling Harbour from Balmain': John Cuthbert's shipyard at Millers Point, Darling Harbour, extended from behind the 3-storey, waterfront warehouse to the edge of the development on the waterfront at the right-hand side on the opposite page. This image can be dated to the period 1861-1864 since the saw-mill and associated, 2-storeyed loft areas, both completed in 1865, are absent, although Cuthbert's office building is visible. In addition, the large vessel being built on the northernmost of the 3 slipways can only have been built between 1861 and 1868, after which Cuthbert does not appear to have built vessels of this size. Various vessels are tied up to the floating jetty or moored close to the wharf awaiting repair. The wharf, 3-storey warehouse and cranes on the waterfront areas to the left are on land held initially by Bettington and then by Smith.

Source: State Records of New South Wales, Image 27, and City of Sydney Archives, Image 2.



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Preface

A Shipwright in the Colonies: John Cuthbert 1815-1874, a biographical account of the life and business model of shipbuilder John Cuthbert, has its origins in research carried out by the author over many years. Unpublished research papers by the author, which began in 2005 and which identified John Cuthbert as a person of interest in the shipbuilding industry, have included:-

- 2012 - *Shipbuilding and Coastal Trade at Ulladulla: The Warden Family 1839-1860*
- 2013 - *Indigenous Timbers in Ship and Boat Building: New South Wales 1820s-1870s*
- 2014 - *Timbers, Planks and Keels: A Type Profile (Shipbuilding timbers in New South Wales 1820s-1880s)*

These papers were used as the basis for an article titled 'Timbers, Planks and Keels: Timber Shipbuilding in 19th Century New South Wales', published in the Australian National Maritime Museum's *Signals* Number 107 in 2014. The article subsequently acted as a catalyst for this biography, following the need to better understand the use of native timbers in shipbuilding, as a corollary to research into colonial building construction and the similarities and differences between them.

The purpose of this biographical account has not been to describe in detail every vessel built or to identify every vessel repaired by John Cuthbert's enterprise between 1853 and 1873. Rather, it has been developed to gain insights into his business model and those of contemporary shipbuilders in Sydney, as much as into the techniques and timbers employed in timber shipbuilding in the nineteenth century, all subjects of interest to those interested in nautical and maritime history. Research into Cuthbert's role as agent and merchant has been a secondary, often opportunistic, aspect of the story. As a corollary to these it has also been necessary to look at the shipbuilding industry and merchant trade generally in Sydney during his years in business.

Colonial newspapers, in addition to national and state institutions, archives and libraries, have been the major source of information, often containing details of tenders, contracts, shipbuilding materials and labour and wages, as well as details of launches, repairs and costs. However, newspapers are often, by their very nature, secondary sources, in which letters from individuals, commercial and company records, advertisements, shipping arrivals and departures, the Customs records and the NSW Government Gazette have been incorporated. Whilst every attempt has been made to ensure the accuracy of the information included in the biography, there may be errors due to poor reporting in the newspapers of the day and to my interpretation of the language employed.

Inevitably, my research identified the reports documenting and underpinning archaeological work prior to the development of the Barangaroo 1 and 2 sites in Darling Harbour. The author wishes to thank Austral Archaeology Pty Ltd and

Casey & Lowe Pty Ltd for access to the material included in their reports of June 2010, which were available on-line. Whilst every effort has been made to credit sources and authors, there has been some overlap due to prior data acquisition and interpretation. Individuals and non-government organisations who have contributed include Mr Roy Parkhouse, a descendant of the Bass family of Teignmouth, Devon, and the Leichhardt Historical Society.

I would also like to thank the State Library, the State Records & Archives Authority and the Department of the Environment and Heritage, all of New South Wales, in addition to the City of Sydney Archives, Museum Victoria and the Australian National Maritime Museum for access to historical data and images. The National Library of Australia's search engine, Trove, in particular, has been indispensable in accessing the large volume of newspaper articles and other material used in compiling the story of John Cuthbert Esq JP.

Technical assistance and review of the 1st edition was undertaken by Mr John Jeremy AM BE FIEAust RFINA. The Nautical Association of Australia was instrumental in bringing this 2nd edition to fruition, following editorial advice from Professor Howard Dick, President of the Association. That advice included adapting the 1st edition to meet the requirements of the Nautical Association as well as collaboration on an article about Cuthbert's enterprise for the *Log*, the Association's journal, based on the 2nd edition.

Dr Roger Hobbs

Canberra, December 2017

Conventions and Nomenclature

In order to simplify the captions employed with illustrations, sources have been described briefly as e.g. 'State Library of New South Wales, Image 17'. All images used as illustrations have been fully described and attributed under **Sources, Images and Bibliography**, at the end of this publication, by source and image number.

The following terms and standards have been used in describing naval and commercial vessels and the timbers used in construction and repair:

1. While the terms shipbuilding yard, building yard, shipyard and wharf were used the inclusive term **shipyard** has been used, since it covers both the repair and building of vessels. The term was used as early as 1855 in New South Wales and even earlier in Britain and provides continuity through to the present.
2. British naval vessels in the Australian colonies continued to use designations such as H.M.S. (His/Her Majesty's Ship) as a prefix e.g. H.M.S. *Challenger*. This was reinforced by those reporting the events of the day in the colonial newspapers. Qualifying terms such as PS (paddlewheel steamer) and SS (single-screw) were rarely used, vessels being described as e.g. H.M.S. *Blanche*, screw sloop, or as H.M. screw sloop *Blanche*. Similar terms were used to describe paddle-steamers, such as e.g., H.M.S. *Virago*, paddle sloop. For clarity, the terms PS and SS have been used after the name, where appropriate, to differentiate them from sailing ships in the Royal Navy.
3. European naval vessels were given prefixes such as: H.I.M.S. or H.I.R.M. (Austrian); H.I.M., H.I.M.s or H.I.R.M. (Russian); and H.I.M. or H.I.M.S. (French). As early as December 1858 it was lamented in the newspapers that those reporting the presence of these warships were interpreting all the vessels as being 'His Imperial Majesty's Ships', a common honorific in Europe.¹ In colloquial English, this then became H.I.M. and its variants. Since Cuthbert used the prefix H.I.M. in his invoice book for 1868-1873 for these vessels, e.g. H.I.M. *Caledonienne*, the term has been retained for historical continuity. The use of the term U.S. for American warships has been retained for the same reasons.
4. Tonnage and displacement were listed in various ways in the nineteenth century. Where known this is given as, for example, 65 tons builder's measurement, 65 tons register or 65 tons steam-register etc. Most figures identified in the newspapers did not provide this qualifying information and the figures provided are for comparative purposes. In some instances the terms burden and burthen have been retained for historical purposes.
5. Imperial units of measurement have been retained for historical continuity to enable historical sources to be quoted, compared and discussed more easily. For those who wish to convert the figures of tonnage and weight as well as distance,

¹ *Sydney Morning Herald*, 8 December 1858, p. 5.

length, depth, width and thickness, to metric equivalents, the following conversion figures should be used:

- 1 ton = 1.016 metric tonnes where 1 metric tonne = 1,000 kilograms;
 - 1 ton = 2,240 pounds (lb) and 1lb = 16 ounces (oz); and
 - 1 fathom = 6 feet and 1 yard = 3 feet, where 1 foot = 0.3048 metres, 1 foot = 12 inches and 1 inch = 2.54 cm.
6. Currency in the Australian colonies in the nineteenth century was based on the British pound, with lesser denominations of shillings and pence. Whole sums are written as e.g. £5 (5 pounds) with more complex sums written as e.g. £5 6s 7d, where the 6 shillings are represented by '6s' the 7 pence by '7d'. This reflects the accounting system used by Cuthbert's business. Wage rates such as 12 shillings per day have generally been retained rather than abbreviated.
 7. The botanical and common names for colonial timbers have changed over time. Whilst modern usage has been used for generic references to particular timbers, the historical terms have been retained for accuracy and comparative purposes.

Introduction

The phrase ‘tyranny of distance’, coined by Geoffrey Blainey in 1966, has become part of Australia’s mainstream culture and maritime history.² Less well-known is the work of Frank Broeze, whose books, *Island Nation: A history of Australians and the sea* (1998) and *Mr Brooks and the Australian Trade: Imperial business in the nineteenth century* (1993), have led to a better understanding of the scale and importance of transport, trade and communication between Britain and the Australian colonies, as well as the importance of colonial and inter-colonial shipping. In particular, Broeze (1998) proposed that European settlement around the coastline of Australia should be seen as an ‘archipelago of “islands” of settlement’, a concept important in the early maritime history of Australia with its dependency on maritime transport and communication into the twentieth century.³

Following European settlement, shipbuilders and merchant traders had soon established shipyards, wharves and storehouses in the bays and foreshore areas of Port Jackson, including Millers Point and Cockle Bay. The latter, with part of Johnston Bay, would become part of Darling Harbour, named after Governor Darling (1825-1831). Although a small, Government shipyard had been established in Sydney before 1800, vessels such as the *Trimmer*, a ketch of 20 tons for the Hawkesbury River trade, were built as early as 1804 in Cockle Bay.⁴ Such vessels were critical to the development of the resources of the new colony of New South Wales (NSW), with the nascent shipbuilding industry integral to the development of the colonial economy, as well as its role in maintaining communication and trade with Britain.

Schooners, cutters and ketches, built from native timber in shipyards in Sydney and on the coastal rivers of NSW, were the working vessels of the Australian colonies in the nineteenth century. However, steam-powered vessels would soon begin to compete with traditional sailing vessels after the first colonially-built, steam-powered vessel, the *Surprise*, was launched in June 1831 at Mr Millard’s shipyard at Neutral Bay. The wooden paddle-steamer *Surprise*, 26 tons, had an engine imported from England, and, after fitting out, was intended to ply between Sydney and Parramatta.⁵ The first steam-powered vessel to visit Sydney from Britain, the *Sophia Jane*, 256 tons, had arrived in May 1831.⁶

When John Cuthbert arrived in Sydney in 1843 there were numerous wharves and shipyards in Sydney, with merchants’ establishments dominating the bays and

² G. Blainey, *The tyranny of distance: how distance shaped Australia’s history*, Sun Books, Melbourne, 1966.

³ F. Broeze, *Mr Brooks and the Australia Trade: Imperial Business in the Nineteenth Century*, Melbourne University Press, Carlton, Victoria, 1993; F. Broeze, *Island nation: A history of Australians and the sea*, Allen and Unwin, St Leonards, NSW, 1998, p. 1.

⁴ *Sydney Gazette and New South Wales Advertiser*, 8 January 1804, p. 4.

⁵ *Launceston Advertiser*, 6 June 1831, pp. 182-183.

⁶ *Sydney Gazette and New South Wales Advertiser*, 17 May 1831, p. 3.

shores of Millers Point. On the east side of Darling Harbour, shipyards, for building timber vessels, were developed by James Munn (1824) and Henry Thompson Bass (1833) on two of the better sites. To the west, Pyrmont and Balmain also had wharves and shipbuilding establishments, including those of Messrs Chowne, Thompson and Chowne (1839), at Pyrmont, and John Russell (1840), also at Pyrmont. The advantages Sydney had to offer as a port were described in 1844 as 'its commodious wharves, its numerous tradesmen connected with shipbuilding, its extensive mercantile establishment, its patent slip [1832], and all the other requisites for repairing [wooden] ships with facility...'.⁷

The business interests of British merchant Robert Brooks and his colonial counterparts, partners and friends at this time, including merchant and agent Captain Robert Towns from late in 1842, and earlier Captain Fotheringham in the 1820s and 1830s, have been well documented by Frank Broeze (1993) in *Mr Brooks and the Australian Trade*.⁸ Brooks' influence may well have been instrumental in Fotheringham's importing of a Patent Slip in 1832, the first real shipbuilding infrastructure in Darling Harbour. The Patent Slip, located at the bottom of King Street, was used to haul vessels of up to 500 tons out of the harbour, there being no dry dock. In the 1850s, this slip would come under the control of Captain Robert Towns and Captain Benjamin Darley, who purchased a controlling interest from Palmer of Fotheringham and Palmer, when the arrangement was dissolved.⁹

The shipyards established by Munn and Bass and others would provide training and opportunities for shipwrights and many others. However, a crisis of confidence in the 1840s affected the enterprises of merchants and other businessmen in the colony of NSW, with few ships built. In 1842 there were 224 vessels owned in Sydney, although in 1847 the *Australian* noted that there was still little doing in shipbuilding in Sydney.¹⁰ Unlike Munn and Bass, John Cuthbert had little capital on his arrival in NSW. However, he would benefit, like shipbuilder Lawrence Corcoran, from the investment of Munn, Bass and others in shipyards and wharves.

By 1847, the total number of vessels registered in Sydney had increased from 224 in 1842 to 310, with a commensurate increase in the number of steam-powered vessels from 15 in 1842. Of the 310 vessels, 107 were of 20-50 tons (builder's measurement), 46 were of 50-100 tons and 45 were of 100-200 tons, the remainder being over 200 tons. Vessels built in the colony amounted to 158 out of the total of 310, with 28 new vessels registered in 1847. Of these 28 vessels, 21 were of more than 20 tons burden, with 11 from 20-50 tons, 5 from 50-100 tons, 2 from 100-200 and 3 from 200-300 tons. The largest proportion of these vessels consisted of small vessels in the coastal trade,

⁷ *Australasian Chronicle*, 30 March 1841, p. 2, and 14 April 1841, p. 2; *Sydney Morning Herald*, 3 June 1844, p. 3.

⁸ F. Broeze, *Mr Brooks and the Australian Trade*, Melbourne University Press, Carlton, Victoria, 1993, pp. 25, 56, 151, 152, 156, 169.

⁹ *Sydney Morning Herald*, 13 May 1850, p. 1.

¹⁰ *Sydney Herald*, 3 March 1842, p. 2, and 29 December 1852, p. 3; *Australian*, 4 May 1847, p. 2.

in particular 2-masted, wooden schooners up to 130 tons, with most built outside Sydney.¹¹

In 1857 the *Empire* published extracts from the Customs records for Sydney, which showed that in the 7 years to December 1856 the total number of craft constructed in the colony and registered in Sydney was only 162. These vessels collectively measured 6,433 tons burden, with an average burden of only 40 tons. However, in the same period the total number of vessels registered “*de novo*” was 692, a consequence of increased colonial shipping as well as the arrival of large, merchant vessels from overseas.¹²

This seeming paradox was created, in part, by the purchase, overseas and locally, by merchants, of cheap vessels for colonial use, both iron and timber, many built and registered in Britain. The Navigation Laws, repealed in 1849, had, until 1 January 1850, protected Britain’s trade with Australia, as part of the British Empire. Prior to 1850, vessels purchased in Australia, unless placed on Lloyd’s Register, had registration and insurance issues, often with costly delays in port. From 1850, vessels of other nations could now also trade with and from NSW, at a time when self-government was becoming an important issue, with North American ships becoming dominant. The gold-rushes in 1851, coupled with increased immigration, were important in the development and purchase of larger vessels by Sydney merchants, with smaller craft losing their position with freight.¹³

The colonies of Victoria and Queensland separated from NSW following the *Australian Colonies Government Act* of 1850, although limited self-government was not fully achieved until after 1855. However, major developments in shipbuilding were generally still confined to Sydney, which generally took the lead. By the end of 1853, the steamer *Ballarat*, assembled in Sydney from iron frames and plates brought out from England, was 1 of 7 iron vessels out of a total of 27 steam-driven vessels registered in Sydney.¹⁴

This was the context in which John Cuthbert had opened a shipyard at Milne’s Wharf, Darling Harbour, in January 1853, to build and repair timber vessels. The biography focusses on the political and economic events surrounding the development of his successful enterprise and business model, including the conflict between the private sector and the NSW Government in constructing shipbuilding and repairing facilities and developments in the shipbuilding industry in Britain. Overhauling and maintaining British naval vessels, as well as those of other nations, is also an important theme explored in the narrative of Cuthbert’s enterprise and rise to prominence. The discussion includes: the development of the shipbuilding

¹¹ *Sydney Morning Herald*, 3 March 1842, p. 27, 26 November 1842, p. 2, and October 1847, p. 3.

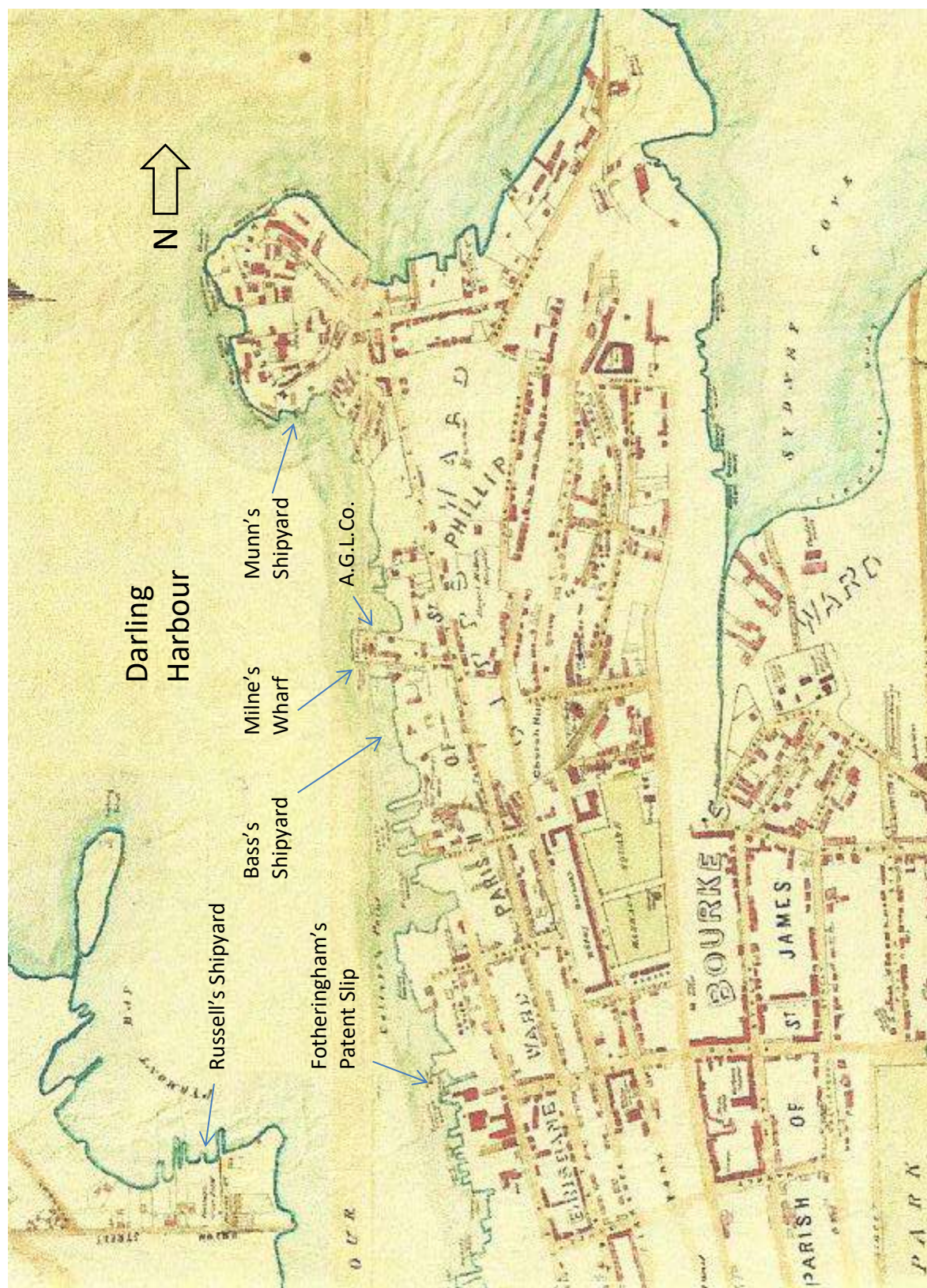
¹² *Sydney Morning Herald*, 24 December 1857, p. 8.

¹³ F. Broeze, *Mr Brooks and the Australian Trade*, Melbourne University Press, Carlton, Victoria, 1993, pp. 183-185.

¹⁴ *Colonial Times*, 1 December 1853, p. 2; *World’s News*, 11 September 1929, p. 9.

industry in Port Jackson generally; the development of private and government dry docks and patent slips; the use of indigenous timbers in shipbuilding; the merchant trade; and the role of local government in the development of the waterfronts of Sydney, in particular Darling Harbour.

Shipbuilder Lawrence Corcoran had employed John Cuthbert before 1848, in later years as his foreman. Corcoran's use of Milne's Wharf and Bass's shipyard from 1847 to 1852 played an important role in introducing Cuthbert to colonial shipbuilding, before he set up business on his own account. Cuthbert would operate successfully from the two shipyards; at Milne's Wharf from 1853-1860 and from Munn's shipyard at Millers Point from 1861-1873. Appendices documenting the early development of each of the above shipyards in Darling Harbour in some detail are included at the end of the biography.



Map of Sydney, Francis Webb Shields 1844 (not to scale). Source: City of Sydney Archives, Image 4.



The painting 'View of Millers Point and Darling Harbour' (artist unknown), looking towards the city, shows the landscape and waterfront of Millers Point, John Cuthbert's domain, as seen from Balmain in the mid-nineteenth century. Although this oil painting has been given a notional date of ca. 1870, development of the foreshore areas suggests a date in the mid-to-late 1850s. Of particular note are the state of development of the A.G.L. Co. gas works (chimney to the right) and the continued use of the adjacent area to the right, Milne's Wharf, for shipbuilding and repair. Lawrence Corcoran and John Cuthbert used the Milne's Wharf site for shipbuilding from 1847-1849 and 1853-1860 respectively, after which the site was taken over by the A.G.L. Co. in the 1860s. The picture is bounded by Cuthbert's shipyards at Milne's Wharf and Millers Point, the latter, on the left, purchased in 1858, from the estate of James Munn (land granted in 1824) and occupied by Cuthbert until 1873, when the property was sold to Daniel Macquarie. However, if Cuthbert had been in occupation of the Millers Point shipyard it seems unlikely that the sails of the vessel in the foreground would have obscured his new acquisition.

Whilst the similarity of the two large vessels, in the left foreground, to the gunboat *Spitfire* (1855) and the steam ferry *Kirribilli* (1862) may be coincidental, it is difficult to escape the conclusion that there may be some connection between this painting and John Cuthbert, given that it is bounded by his shipyards. The areas of the painting which cover Cuthbert's shipyards are discussed in some detail as part of the images at the end of Part 1.

Source: Dixon Galleries, State Library of New South Wales, Image 17.

1

John Cuthbert and Lawrence Corcoran 1841-1852

Shipbuilder John Cuthbert (1815-1874) was born on 24 June 1815 in Cork, Ireland, to Gilbert Cuthbert, excise officer, and his wife Catherine, nee McCarthy.¹⁵ Apprenticed to a shipwright, John Cuthbert gained employment in a Government shipbuilding yard at a time when Cork had become important as a British naval port. As a ship's carpenter, Cuthbert was also involved in the timber trade with Quebec. According to his obituary in December 1874 he had arrived in Sydney in 1844 on board the barque *Johnson* as ship's carpenter.¹⁶ However, in 1871, Sydney merchant Mr J. L. Montefiore noted that Cuthbert had arrived in Sydney in 1843, although he does not appear in the shipping records.¹⁷

In Cuthbert's obituary of 9 December 1874 in the *Empire*, it was reported that Cuthbert had worked in the shipbuilding yard of Mr Corcoran in Sydney, as foreman.¹⁸ The evidence suggests that Lawrence Corcoran and John Cuthbert knew each other and worked together; in August 1848 they each donated 5 shillings for the new St Patrick's Church in Sydney.¹⁹ That Cuthbert knew and worked with Corcoran was almost certainly the case, since, in October 1850, a John Cuthbert was reported as travelling on the schooner *Ellen*, built and owned by Corcoran.²⁰ Critically, both Corcoran and Cuthbert were ship's carpenters/shipwrights from Cork, Ireland.

In 1837, when Cuthbert was completing his apprenticeship, the city of Cork was, after Belfast, the dominant trading and shipbuilding port in Ireland. However, by the 1830s, the Baltic trade in timber had been replaced by extensive trading in timber with Canada. Shipbuilding was also improving, with the industry based at 2 shipyards, one at Cork itself, the other at Passage West, nearby. Each yard had a patent slip, the one at Passage West, 5 miles from Cork, a dry dock completed in 1835; together the 2 shipbuilding yards employed about 200 hands. The Passage West yard would take the largest share of the business by the 1840s due to deep water access. However, although shipbuilding remained stable, the city of Cork was increasingly affected by crowding and unemployment in the 1840s, depressing wages and living conditions.²¹

¹⁵ Bede Nairn, 'Cuthbert, John (1815-1874)', *Australian Dictionary of Biography*, Volume 3, 1969, National Centre of Biography, ANU, Canberra, online version accessed 2 October 2013.

¹⁶ *Freemans' Journal*, 12 December 1874, pp. 9-10.

¹⁷ *Sydney Morning Herald*, 30 May 1871, p. 5.

¹⁸ *Empire*, 9 December 1874, p. 2.

¹⁹ *Sydney Chronicle*, 26 August 1848, p. 11.

²⁰ *Shipping Gazette and Sydney General Trade List*, 18 August 1849, p. 212; *Sydney Morning Herald*, 12 October 1850, p. 2, and 12 December 1850, p. 1.

²¹ S. Lewis, *Topographical Dictionary of Ireland*, Samuel Lewis & Co., London, 1837.

During the Napoleonic wars, Cobh or Cove, 9 miles from Cork, was the rendezvous for large fleets and convoys and the depot from which the British navy in Ireland was supplied with provisions. According to Lewis (1837) it was not unknown for 600 merchant sailing vessels to have been at anchor at any one time, with 400 leaving the harbour in one day alone. By 1837 the base had been de-commissioned and converted to other uses, with obvious impacts on the local shipbuilding industry and associated communities.²² The decline of the timber trade with Quebec, Lower Canada, between 1841 and 1844, would also have had a serious impact on shipping and trade and probably contributed to the departure of both Cuthbert and Corcoran from Cork.²³

There was a relative flood of British ships arriving in Australia and New Zealand during a short boom period to 1842, which may also have influenced Corcoran to move to Australia.²⁴ Unlike Cuthbert, Corcoran's arrival in New South Wales (NSW) is well documented, his sponsorship as a bounty migrant suggesting the need to look for new opportunities. The barque *Cadet* arrived in Sydney on 9 August 1841 carrying 200 bounty migrants from Liverpool. Among the passengers were Lawrence Corcoran, a [ship's] carpenter, 29, and his wife Ellen, a housemaid, 28; Roman Catholic, both could read and write and were from Cork, Ireland.²⁵

The first mention of Lawrence Corcoran (abt 1812-1868) in Sydney was in September 1842, when he was listed as an elector living in Clarence Street, Sydney.²⁶ There was no further mention of Corcoran in Sydney until January 1845, when it was reported that, when residing at a house in Prince Street, a pocket book containing 5 £1 notes was stolen.²⁷ The next report of Corcoran's whereabouts was in May 1846, when the licence for the Sea Horse [hotel] at Boyd Town, Twofold Bay, was transferred from Lawrence Corcoran, who had held the licence since 27 June 1845, to a John Abbott Kaye; the fee paid by Corcoran had amounted to £30.²⁸

The 'Sea Horse' [hotel] was named after the steamship *Seahorse*, the property of entrepreneur Benjamin Boyd. Built at Dundee and overhauled at Gravesend, the *Seahorse* had arrived in Sydney on 1 June 1841, Boyd arriving in his yacht the *Wanderer*, in July 1842.²⁹ Boyd's interests included banking, pastoral investment and shipping. As the centre of his shipping, pastoral and whaling activities on the South

²² S. Lewis, *Topographical Dictionary of Ireland*, Samuel Lewis & Co, London, 1837.

²³ 'Dumoine Watershed and the Lumber Industry in the Ottawa Valley', author unknown, 14 July 2013, at <http://dumoinewatershed.blogspot.com.au> site visited 13 December 2015.

²⁴ F. Broeze, *Mr Brooks and the Australian Trade*, Melbourne University Press, Carlton, Victoria, 1993, pp. 145, 149.

²⁵ State Records NSW, Bounty Immigrants lists 1828-1896, *Cadet* 9 August 1841, Reel 2134, Item 4/4788, NLA mfm N 229.

²⁶ *Australian*, 19 September 1842, p. 4; *Sydney Morning Herald*, 22 April 1868, p. 11.

²⁷ *Australian*, 9 January 1845, p. 3.

²⁸ State Records NSW, Treasury: Butts and Certificates of Publican's Licences, May 1844-March 1845 and April 1845-March 1846, Reel 5059, Item 4/77, NLA mfm N 229, Licence 0311.

²⁹ *Sydney Morning Herald*, 11 April 1868, p. 8; *Windsor and Richmond Gazette*, 21 October 1932, p. 14; M. Diamond, *Ben Boyd of Boydtown*, Melbourne University Press, Carlton, Victoria, 1995, pp. 1-2, 93.

Coast of NSW, Boyd developed the private town and port of Boyd Town, Twofold Bay, on land selected in 1842. However, Boyd's financial difficulties, due to poor management, the economic depression of the mid-1840s and unfavourable public opinion, peaked in 1848, Boyd leaving NSW in 1849.³⁰

Anecdotal evidence has suggested that Corcoran was the ship's carpenter on board the steamer *Seahorse*, which had begun to call regularly at Boyd Town by June 1843 and by which time the Sea Horse hotel was being built.³¹ To attract vessels, Boyd Town was advertised regularly as a place where ships could refit, with 'ship chandlery stores...' and, if required, 'the service of experienced shipwrights and boat-builders upon the most reasonable terms'.³² Corcoran may well have been involved in this aspect of Boyd's enterprise, as well as taking out the Publican's Licence in 1845. According to passenger lists for the steamer *Shamrock*, it is possible that John Cuthbert was among those who visited Boyd Town in 1844, even if he did not work there.³³

In April 1846, Corcoran travelled from Boyd Town to Sydney with his wife, Ellen Corcoran, at a time when Eden, as a government town and port, was beginning to dominate the Twofold Bay district and Boyd's ventures were in decline.³⁴ The economic depression of the early 1840s had begun to improve, Corcoran only too aware of Boyd's difficulties. Knowledge of the wharves and shipyards in Sydney would be essential to Corcoran after he left Boydtown.

Milne's Wharf, Darling Harbour, one of the wharves in Sydney Harbour used for re-fitting, as well as loading and unloading Boyd's vessels, would be leased by Corcoran to establish his own shipyard.³⁵ For 2 years, from before March 1847 to early in 1849, Corcoran, as sub-lessee, operated a shipbuilding and repair yard at Milne's Wharf.³⁶ The Milne's Wharf facility was owned by Captain Robert Milne, under a lease from the Australian Gas Light Company (A.G.L. Co.) for 999 years, with a clause giving the A.G.L. Co. the right to re-purchase the property within 14 years, on payment of £916 11s 0d; the property had been leased by Milne since October 1839.³⁷

By March 1847 Corcoran was in the process of building a new brig of 161 tons; the vessel's dimensions were 65 feet 6 inches at the keel, 75 feet 6 inches overall l and 21 feet 8 inches at the beam, the hold 12 feet 9 inches deep. Designed for a large cargo,

³⁰ *Empire*, 20 September 1854, p. 4; M. Diamond, *Ben Boyd of Boydtown*, Melbourne University Press, Carlton, 1995, pp. 1-2, 93, G. P. Walsh, 'Boyd, Benjamin (Ben) (1801-1851)', *Australian Dictionary of Biography*, National Centre of Biography, ANU, Canberra, published in hardcopy in 1966, accessed online 23 June 2015.

³¹ *Windsor and Richmond Gazette*, 21 October 1932, p. 14; *Maitland Mercury and Hunter River General Advertiser*, 10 June 1843, p. 4.

³² *Southern Cross*, 15 June 1844, with similar advertisements in the Sydney papers.

³³ *Australian*, 24 August 1844, p. 2.

³⁴ *Morning Chronicle*, 11 April 1846, p. 3.

³⁵ *Sydney Gazette and NSW Advertiser*, 1, September 1842, p. 2.

³⁶ *Sydney Morning Herald*, 9 March 1847, p. 3, and 2 April 1849, p. 1.

³⁷ *Sydney Morning Herald*, 27 March 1849, p. 4.

the vessel, launched in September 1847, was named *Maid of Erin* and was jointly owned by Corcoran and John Macnamara, an established agent and merchant. By November 1847 the vessel had been fitted out with masts at Struth's Wharf ready for the coastal trade.³⁸ A second brig, 137 tons, owned solely by Corcoran, launched in December 1848, was named the *Wild Irish Girl* by Mrs Corcoran.³⁹

Although Sydney foundries would be more than capable of casting items such as cabooses and windlass parts by 1850, most fitting-out and consumable items were imported from Britain and elsewhere.⁴⁰ These included: brass ship's fittings; blocks, cabooses, davits, and winches; copper and Muntz metal sheeting in various weights, sheathing felt and iron, copper and composition nails and bolts; and Stockholm tar, pitch, linseed oil and black oil. All these items, as well as rope, were readily obtainable from ship chandlers, ironmongers and importers based near Darling Harbour and Circular Quay. Among the importers were: Edward and John Lane, who had established a business as Ship Chandlers and Sail Makers in Lower George Street in February 1846; Rowand, Macnab and Co., who were established at Circular Quay by 1844; and merchants such as John Macnamara, who was importing Muntz metal and copper sheathing as well as other shipbuilding materials in 1845.⁴¹

Milne's Wharf was advertised for sale in February 1848 and again in March 1849, perhaps a necessary sale due to the health of Robert Milne, who died in March 1848. The wharf and associated yard included a range of brick and stone stores of 2 storeys, on the Gas Company's (A.G.L. Co.'s) site boundary, and a weatherboard cottage on the opposite side of the site. In June 1850 the premises were advertised for lease, suggesting that no sale had been made.⁴² There is no evidence that Corcoran had access to Captain J. B. Viles' land, Lot 11, adjacent to Milne's Wharf, although this seems likely, given the limitations of the Milne's Wharf site.

However, by April 1849 Corcoran was advertising that he was operating his business as hitherto, including shipbuilding and repairs, at what had formerly been Bass's shipyard, immediately to the south. The yard comprised a 'Heaving-down wharf, with stages and other gear...' at reasonable rates, the stock including '10,000 feet of prime Cedar, in log and plank, Hardwood Plank, round and square Timber, suitable for shipwork...'.⁴³ Clearly, Corcoran had had an uncertain future at Milne's Wharf and chose to move to Bass's former, larger shipyard, a short distance away.

³⁸ *Sydney Morning Herald*, 18 November 1847, p. 2, and 27 September 1847, p. 2; *Shipping Gazette and Sydney General Trade List*, 10 September 1849, pp. 230-231.

³⁹ *Sydney Morning Herald*, 11 December 1848, p. 2; *Empire*, 13 May 1852, p. 2.

⁴⁰ *Sydney Morning Herald*, 14 March 1850, p. 2.

⁴¹ *Sydney Morning Herald*, 23 February 1846, p. 3, and 27 March 1847, p. 2; *Australian*, 13 September 1845, p. 2.

⁴² *Sydney Morning Herald*, 7 February 1848, p. 4, 27 March 1849, p. 4, and 13 June 1850, p. 3; *Maitland Mercury and Hunter River Advertiser*, 29 March 1848, p. 3.

⁴³ *Sydney Morning Herald*, 2 April 1849, p. 1.

The brigantine *Helen* was completed at the new yard, under contract, by January 1850⁴⁴, followed by the schooner *Ellen*, 40 tons, reported in March 1850⁴⁵. In October 1850 John Cuthbert was reported as travelling from Auckland to Sydney on the schooner *Ellen*, owned by Corcoran, and placed in the inter-colonial and coastal trade by February 1850.⁴⁶ The timber trade with New Zealand may have played a role in Corcoran's business, since, in August 1849, he himself had sailed for Auckland on the brig *Susan*. Given Cuthbert's earlier employment in the timber trade with Quebec it is likely that the visits were connected with the trans-Tasman timber trade in kauri pine, a timber which both men used in shipbuilding.

Not only did Corcoran build a number of new vessels, he undertook the re-building and repair of vessels, including salvage. Anchored off Corcoran's Wharf, late Bass's, the *Louisa*, a fast packet-brig of 181 tons owned by John Macnamara, was repaired in September 1851.⁴⁷ Over the next few months, Corcoran repaired and almost entirely rebuilt the steamer *Tamar* for the A.S.N. Co. at his wharf.⁴⁸ Almost coincident with these activities, Corcoran salvaged the brig *Two Friends*, 206 tons, in December 1851, with a gang of 22 men, probably including John Cuthbert, from the end of South Reef, where the lower mastheads were sticking out of the water.⁴⁹

In December 1851, Corcoran purchased, for £230, an American built brig of 200 tons, the *Algerine*, wrecked in North Harbour; previously recovered by Corcoran, the vessel was repaired at a profit.⁵⁰ Corcoran purchased the barque *Crishna*, 271 tons, for £875 in November 1852, moving the vessel alongside his wharf for repairs. The vessel was to be 'stripped, caulked and new-coppered...' although its future was uncertain.⁵¹ Investment in trading vessels was essential in moving from shipbuilding to merchant trading. Second-hand vessels provided the opportunity to invest, possibly taking-over an established reputation, without the risk of buying a new vessel or waiting for one to be completed with an unknown performance.

The relationship between Corcoran and Macnamara would continue, the pair buying the property known as Buchanan's Wharf for £6,050 in July 1852; by December 1852 the new premises were ready for shipbuilding, repairs and cargo.⁵² However, by the end of 1854, Corcoran had ceased shipbuilding, to concentrate on the merchant trade and marine surveying.⁵³ Lawrence Corcoran died on 10 April 1868 at his home in

⁴⁴ *Maitland Mercury and Hunter River General Advertiser*, 16 January 1850, pp. 2-3.

⁴⁵ *Sydney Morning Herald*, 1 March 1850, p. 1.

⁴⁶ *Shipping Gazette and Sydney General Trade List*, 18 August 1849, p. 212; *Sydney Morning Herald*, 28 February 1850, p. 1, 12 October 1850, p. 2, and 12 December 1850, p. 1.

⁴⁷ *Sydney Morning Herald*, 11 September 1851, p. 1.

⁴⁸ *Maitland Mercury and Hunter River Advertiser*, 24 April 1852, p. 2.

⁴⁹ *Maitland Mercury and Hunter River Advertiser*, 13 December 1852, pp. 2-3.

⁵⁰ *Empire*, 22 November 1852, p. 4; *Maitland Mercury and Hunter River Advertiser*, 24 April 1852, p. 3.

⁵¹ *Empire*, 30 November 1852, p. 3; *Shipping Gazette and Sydney General Trade List*, 4 December 1852, p. 335.

⁵² *Maitland Mercury and Hunter River Advertiser*, 24 July 1852, p. 4; *Sydney Morning Herald*, 29 December 1852, p. 3.

⁵³ *Sydney Morning Herald*, 17 October 1854, p. 7.

Kent Street, Sydney, at 56 years of age.⁵⁴ The departure of shipbuilder H. T. Bass for England in 1853, after selling his shipbuilding yard in 1852, preceded by the death of shipbuilder James Munn of Millers Point in 1848, would also allow new ventures to develop.⁵⁵

Memories of the economic depression of the 1840s had soon been forgotten after the discovery of gold in 1851 and the subsequent increases in immigration and shipping coupled with the expansion of settlement. Many in the maritime trades and professions, as well as Corcoran and Cuthbert, had survived the depression including: Captain Ashmore (surveyor to Lloyd's agent), Captain Viles and James Farmer, marine surveyors; and John Korff, marine surveyor and shipbuilder.⁵⁶ The engineering and foundry firm of Messrs Russell Bros. had not survived the depression of the 1840s, although that of another brother, Peter Nicol Russell, at the Sydney Foundry had. In 1855, a new foundry and engineering firm, that of P. N. Russell and Co., would be formed, to the benefit of the shipbuilding industry.⁵⁷ The Hunter's River Steam Navigation Company had also survived the depression of the 1840s and was reformed as the Australasian Steam Navigation Company (A.S.N. Co.) in March 1851, with the deed of settlement for shareholders executed in July 1851.⁵⁸

Of particular importance to the recovery of the shipbuilding industry would be individuals such as Thomas Sutcliffe Mort, an auctioneer and financier, who had arrived in the colony in 1838, setting up business on his own account in 1843.⁵⁹ New arrivals included Captain Rountree, a ship's captain, whose arrival in 1853 would stimulate the shipbuilding industry and provide competition for new and existing shipbuilders like Cuthbert.⁶⁰ The A.S.N. Co. and Captain Rountree, the latter in partnership with Thomas Sutcliffe Mort, would revolutionise the repair and overhaul of vessels with the construction of patent-slips and dry-docks at Pyrmont and Balmain respectively, all of which would be to John Cuthbert's benefit.

Since 1832, Sydney had had only one patent slip, located at the bottom of King Street, on which to haul vessels out of the harbour, there being no dry dock. In the 1850s, this would become a focus of repair work under the control of Captain Robert Towns and Captain Benjamin Darley, who had purchased a controlling interest in

⁵⁴ *Sydney Morning Herald*, 22 April 1868, p. 11.

⁵⁵ *Sydney Chronicle*, 29 February 1848, p. 2; *Sydney Morning Herald*, 18 February 1853, p. 3.

⁵⁶ *Sydney Herald*, 2 June 1842, p. 2; *Sydney Morning Herald*, 24 July 1845, p. 2, 3 April 1847, p.2, 14 April 1849, p.2, 30 August 1850, p. 3, and 21 December 1863, p. 10; *Empire*, 17 February 1853, p. 4.

⁵⁷ A. Corbett & A. Pugh, 'Russell, P. N. (1816-1905)', *Australian Dictionary of Biography*, Volume 6, MUP, 1976, National Centre of Biography, ANU, Canberra, accessed online on 18 January 2016.

⁵⁸ *Sydney Morning Herald*, 11 July 1851, p. 1.

⁵⁹ Alan Barnard, 'Mort, Thomas Sutcliffe (1816-1878)', *Australian Dictionary of Biography*, National Centre of Biography, ANU, <http://adb.anu.edu.au/mort-thomas-sutcliffe-4258/text16777>, published first in hardcopy 1974, accessed online 16 August 2016.

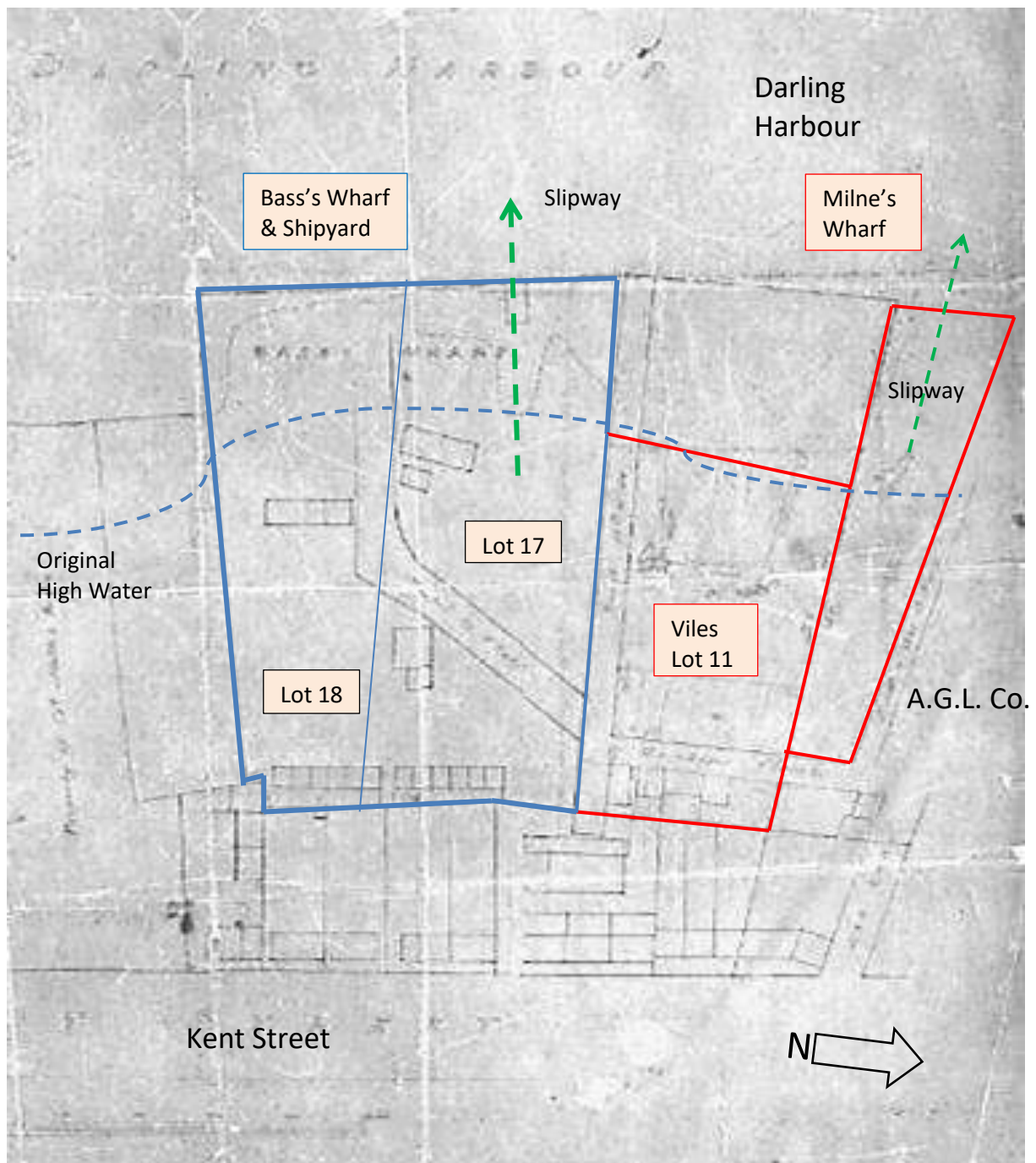
⁶⁰ *Sydney Morning Herald*, 21 July 1853, p. 7, and 17 December 1853, p. 10.

the facility in May 1850 from Captain Fotheringham.⁶¹ Towns would become an influential merchant with a never ending speculative spirit, but an individual whose comments were not always appreciated by others. The old Patent Slip, as it became known, was operated under lease by various proprietors, until competition was provided in 1855 by the A.S.N. Co.'s Patent Slip at Pyrmont and Thomas Mort's Dock at Waterview Bay, Balmain, and, in 1857, by the NSW Government's Fitzroy Dock on Cockatoo Island.⁶²

As foreman for Lawrence Corcoran until late 1852, John Cuthbert would have made the acquaintance of both the merchant and shipbuilding communities in Sydney during the late 1840s and early 1850s. Many of the established shipbuilders, ship's carpenters and other tradesmen would also have been known personally to John Cuthbert in January 1853, when he opened his shipbuilding and repair business at Milne's Wharf, a business with similar functions to Lawrence Corcoran's.

⁶¹ *Sydney Morning Herald*, 13 May 1850, p. 1.

⁶² D. Shinenberg, 'Robert Towns (1794-1873)', *Australian Dictionary of Biography*, Volume 6, MUP, 1976, National Centre of Biography, ANU, Canberra, accessed online on 20 March 2016.



Bass's Wharf and Shipyard (blue), Darling Harbour, showing the 1850s layout with Milne's Wharf (red) adjoining, the original shoreline at high water and the extent of fill introduced in the 1840s by H. T. Bass. The drawing is based on an un-dated (background) tracing prepared for development purposes (not to scale).

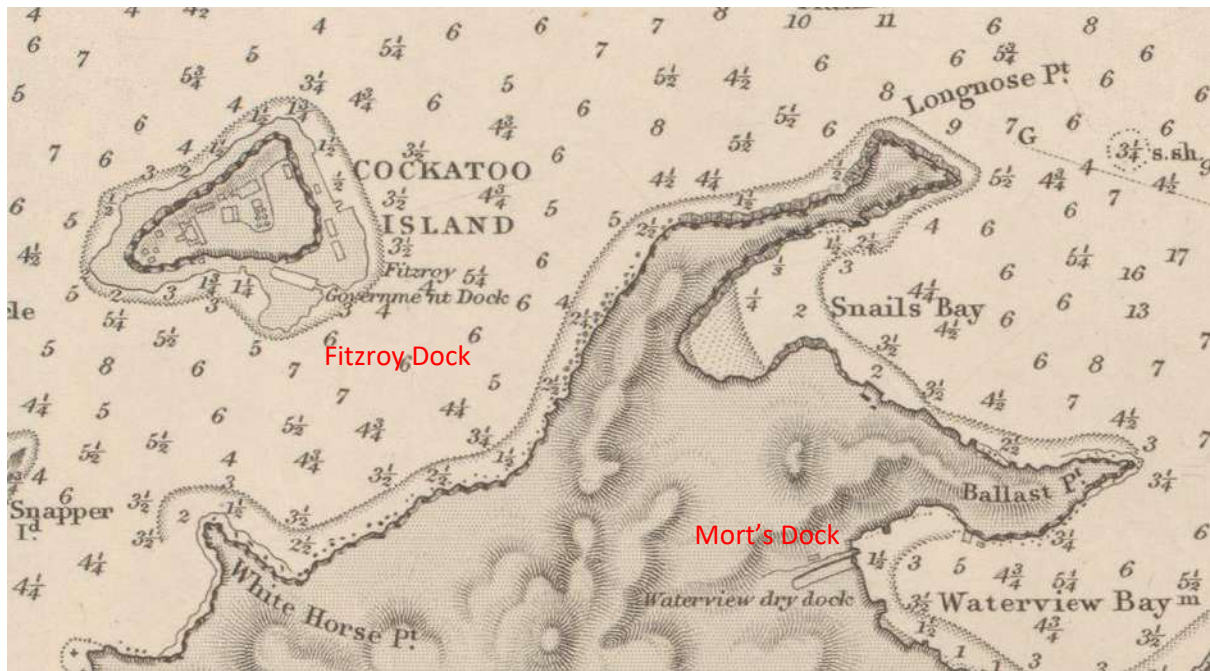
Source: National Library of Australia, Image 10.



The major areas of Port Jackson involved in shipbuilding, ship-repair and refitting as portrayed in a naval survey of Port Jackson in 1857. The chart, which recorded the depth of water in fathoms (1 fathom = 6 feet) was published in London by the Admiralty in 1859 (not to scale).

Darling Harbour was the early location of shipbuilding in Port Jackson due to its proximity to the city, with specialised functions such as dry docks and patent slips taking advantage of the bays and inlets further out in Darling Harbour and Port Jackson. Farm Cove, under the guns of Fort Bennelong, was used by the Navy for refitting, but primarily for mooring. The areas annotated as Dry Docks and Patent Slips are shown enlarged overleaf (not to scale).

Source: National Library of Australia, Image 11.



Detail map showing Fitzroy Dock at Cockatoo Island, operational in 1857, and Mort's Dock at Waterview Bay, Balmain, operational in 1855.



Detail map of Darling Harbour showing the A.S.N. Co.'s Patent Slip on Darling Point, operational in 1855, and the Patent Slip of 1832, built by Fotheringham, in relationship to Cuthbert's Milne's Wharf shipyard and the shipyards of James Munn and Henry Bass.

2

Milne's Wharf Shipyard, January 1853-December 1860

TO SHIP OWNERS, CAPTAINS AND AGENTS:-- The undersigned, having fitted up the Wharf adjoining that of the Gas Company, with heaving-down apparatus, &c. is prepared to execute orders for building and repairing vessels, and having extensive stores, with sail and rigging lofts, trusts that, by strict attention to his business, he will merit a share of their patronage. JOHN CUTHBERT, Ship Builder. N.B.-Timber planks, stages, &c. always on hand. A cargo punt [is] for sale or hire. 3814⁶³

The Milne's Wharf shipyard opened for business in the last week in January 1853 although it was not until the second half of the year that the new shipyard began to produce vessels. The first vessel built by Cuthbert was the cutter *Cleveland*, 40 tons, a speculative vessel completed for Messrs Montefiore, Graham and Co., well-established merchant traders, to bring wool and tallow down the Brisbane River to Cleveland in Moreton Bay. Launched in June 1853, the vessel measured 42 feet in length with a beam of 12 feet and a hold 4 feet 6 inches in depth. Fully loaded, the vessel drew 3 feet of water and was due to sail for Moreton Bay soon after launching.⁶⁴

However, in March 1853, Mr J. Cuthbert, obviously well-known in Sydney by 1853, had been appointed as Shipwright Surveyor to the NSW Steam Navigation Board at a salary of £100 per annum, with Mr E. Moriarty appointed as Engineer Surveyor at the same salary.⁶⁵ Cuthbert's responsibilities included the inspection of steam-driven and auxiliary, steam-driven timber and iron vessels after launching, overhaul or modification, for seaworthiness, a position he would hold until 1867. The vessels would include the timber-built steamer, *City of Melbourne*, 168 tons gross and 128 tons net, in April 1853 and again in May 1854, and, in August 1854, the A.S.N. Co.'s iron steamer *Shamrock* and the G.S.S.S. Co.'s *Croesus*, 2,530 tons, an indication of the position's responsibilities and workload.⁶⁶

Already an auspicious start for Cuthbert, his first year in business would culminate in his marriage to Susan [Susannah] Dawson, the second daughter of Mr M. Dawson, a chronometer, watch and clock maker, formerly of Haddington, Scotland. Cuthbert, a Roman Catholic, married at St Mary's Cathedral (RC) first and then, in his wife's parish, at St Philip's Church (C of E), Sydney, on 19 December 1853.⁶⁷

⁶³ *Sydney Morning Herald*, 28 January 1853, p. 3, 31 January 1853 and 7 February 1853, p. 1.

⁶⁴ *Shipping Gazette and Sydney General Trade List*, 13 June 1853, pp. 176-179; *Sydney Morning Herald*, 30 May 1871, p. 5.

⁶⁵ *Maitland Mercury and Hunter River General Advertiser*, 16 March 1853, p. 2; State Library of NSW, Cuthbert, John, (Ship Builder) Salary as Shipwright Surveyor, Call # A279, Page 53, 1853, Microfilm-CY 1756.

⁶⁶ *Empire*, 19 August 1854, p. 1; *Sydney Morning Herald*, 28 August 1854, p. 5.

⁶⁷ *Sydney Morning Herald*, 30 September 1853, p. 1, 20 December 1853, p. 7 and 14 November 1854, p. 2.

At the beginning of November 1853, Cuthbert had sent 'a few tons...' of materials to Penrith, where the Emu Point ferry across the Nepean River, a 40-foot by 15-foot punt linking Penrith with Blaxland's road across the Blue Mountains, was to be replaced with a new one by the NSW Government. Built in sections at Cuthbert's shipbuilding yard, for transport by land, the new, timber punt featured a double winch system allowing it to be worked from one or both sides of the river and was for passengers, gigs and horses etc.⁶⁸ By January 1854, Cuthbert's foreman, Mr Hayes, was advertising for 4 shipwrights to work 12 miles (?) from Sydney, in the 'country', in all likelihood on the new ferry at Emu Point.⁶⁹

To promote his growing business Cuthbert advertised as a 'Ship and Boat Builder', the *Sydney Morning Herald* reporting in January 1854 that:

There is now a most convenient wharf for heaving down vessels belonging to Mr Cuthbert, situated near the Gas Works, in Darling Harbour; the works are on an extensive scale, and all the necessary gear most complete, to admit of 3 vessels being under repair at once; there is also a building yard, mast house, and sail loft attached. A vessel of 60 tons is at present building for the coasting trade, and the keel of a larger one about being laid down.⁷⁰

The [ship] building yard, mast house and sail loft described above, comprised the facilities at Milne's Wharf, the 3 vessels under repair accommodated on Lot 11, which Cuthbert leased at the same time as Milne's Wharf. The workshops in the building yard were located in a range of 2-storey, brick and stone stores on the boundary adjacent to the A.G.L. Co.'s site, with a weatherboard, 3-roomed cottage, kitchen and stores opposite, which had also been used by Corcoran from 1847-1849.⁷¹

Milne's Wharf was leased from Henry Mace, who, it would appear, had purchased the property in 1849 from Captain Milne, who himself had held the property under a 999 year lease from the A.G.L. Co., which had begun in 1839. Significantly, Cuthbert's tenure of Milne's Wharf had begun only a few months before the expiry of the 14-year re-purchasing period set by the A.G.L. Co. in October 1839, although the leasing arrangements are unknown. The waterfront areas of Lot 11, owned by Captain J. B. Viles since 1839, were critical to Cuthbert's enterprise, and, by 1856, Cuthbert was paying rates on a '240 feet waterfront wharf & concerns' below Kent Street, where he was noted as the landlord. In 1861 Cuthbert paid rates on a wharf, accessed from Jenkins Street, and on a house at 167 Kent Street, both owned by Viles; Cuthbert and his wife lived at 167 Kent Street, a 7-roomed, 3-floored stone house, until the early 1860s.⁷²

⁶⁸ *Sydney Morning Herald*, 22 October 1853, p. 3, 27 October 1853, p. 6, and 1 November 1853, p.2.

⁶⁹ *Sydney Morning Herald*, 9 January 1854, p. 1.

⁷⁰ *Sydney Morning Herald*, 14 January 1854, p. 1, 25 January 1854, p. 4.

⁷¹ *Sydney Morning Herald*, 7 February 1848, p. 4; National Library of Australia, 'Area in vicinity of Sussex Street and the Gas Works, Sydney', 1860-1869, MAP F 719.

⁷² Refer to Appendix 1.2 Milne's Wharf.

To demonstrate his abilities and promote business, Cuthbert built 5 or 6 speculative vessels after the *Cleveland*, including a small ballast boat, the ketch *Uncle Tom*, the cutter *Iron Bark* and the cutter *Catherine Hayes*. The *Catherine Hayes*, 30 tons, launched in September 1854 was the sixth speculative vessel built in his yard in the preceding 15 month period. These vessels ranged in burden from 20 to 65 tons and from 34 to 65 feet in length. Like the cutter *Cleveland*, the vessels were also of relatively shallow draft, at around 4 feet. The *Cleveland* and *Catherine Hayes* were built of well-seasoned Australian hardwoods with kauri pine decks and planking and copper-sheathed and copper-fastened, selling quickly at auction or 'on the stocks'. A Mr Allardice bought the 25 ton cutter *Iron Bark* for the sum of £550 for use at his Duck River Saw Mills as a wharf tender boat. The vessel was built in 6 weeks and measured 27 feet overall with a beam of 10 feet 8 inches and a hold 4 feet 4 inches deep. Critics felt that Cuthbert had done well, despite shortages in the labour market.⁷³

The *Sydney Morning Herald* had announced the launch of a new schooner of 70 tons at Cuthbert's shipyard in October 1853, although the identity of this vessel is unclear. One speculative vessel, for which the keel had been laid in December 1853, was not completed for some time due to the scale of repair and building work. This may have been the vessel noted in September 1854 as a schooner in-frame, although there is no record of its launch. The vessel was larger than the previous speculative vessels with a length of 70 feet, a beam of 16 feet 6 inches and a hold 6 feet deep, Cuthbert increasing the size of his vessels with each speculative build as he became better known.⁷⁴

In October 1853 Cuthbert had proposed to extend his shipyard into the harbour by reclaiming land and aligning it 'with the remaining part of his property...'.⁷⁵ This mostly involved extending Lot 11 into Darling Harbour at the boundary with Bass's shipyard and by February 1855 Cuthbert had finished extending his wharf and yard to accommodate larger vessels and to provide better onshore facilities, although the exact details are unclear.⁷⁶ During the next 6 years at his Milne's Wharf shipyard, Cuthbert would build a number of new commercial vessels, reflecting the trend towards steam-driven and larger vessels, and, at the same time, complete 2 contracts for the NSW Government. All would add to his growing reputation as one of Sydney's best shipbuilders.

A declaration of war by Britain and France, against Russia, in March 1854, had led to fears that Australia might be invaded by Russia during the Crimean War 1854-1856. Discussions in the NSW Legislative Council, as to the best way to protect Port

⁷³ *Sydney Morning Herald*, 17 October 1853, p. 2, 11 February 1854, p. 7, 12 April 1854, p. 7, 27 April 1854, p. 4, 14 July 1854, p. 4, and 1 September 1854, p. 4; *Empire*, 27 April 1854, p. 4, and 20 September 1854, p. 4; *Maitland Mercury and Hunter River General Advertiser*, 22 April 1854, p. 2.

⁷⁴ *Empire*, 1 November 1853, p. 2, and 7 February 1854, p. 2; *Sydney Morning Herald*, 15 October 1853, p. 4, and 1 September 1854, p. 4.

⁷⁵ *Sydney Morning Herald*, 12 October 1853, p. 5.

⁷⁶ *Sydney Morning Herald*, 5 February 1855, p. 2.

Jackson and Sydney, included the acquisition of a gunboat and strengthening the harbour defences. Following the provision of £3,000 for the purchase of a vessel for defence of the harbour, the Government appears to have opted instead for a wooden gunboat at a cost of £1,500, following the advice of Captain Chimmo, Commander of H.M.S. *Torch*. The armed, iron-steamer HMS *Torch*, 350 tons, formerly tender to H.M. survey ship *Herald*, was potentially available for purchase for £5-6,000. In August 1855, the new gunboat was decried by some in the Legislative Council, as having been partly built already in Cuthbert's yard, but not for this purpose and therefore not fit to use as a gunboat. Others would later describe the new, gunboat as a 'very fine vessel for picnic parties'.⁷⁷

On 4 April 1855, the first gunboat in the Australian colonies, H.M. colonial gunboat *Spitfire*, 65 tons, was launched from Cuthbert's shipyard. The naming ceremony was performed by Mrs Cuthbert, the vessel decorated with flags and streamers. The ketch rigged vessel was to carry a 32 pound swivel-gun, mounted amidships. Measuring 52 feet overall, with a beam of 16 feet 6 inches and a hold 7 feet 3 inches deep, the vessel drew 5 feet 6 inches loaded. Built of ironbark and blackbutt, the vessel was 'diagonally dressed with 2 ½ inch hardwood, copper-fastened throughout, the deck-frame...on the most improved principle...' and regarded equal in construction to 'any vessel built in her Majesty's service'.⁷⁸

H.M. gunboat *Spitfire* returned from her trial voyage to Gabo Island in October 1855, Captain Rundle stating that the *Spitfire*'s 'strength and workmanship cannot be surpassed'. The vessel was reported as comfortable in extreme weather, despite the keel having been reduced at the time of building, the vessel probably based on the partly-built, in-frame, 70-foot schooner started in 1853.⁷⁹ It was intended that the vessel would enable the military corps and water police to practice gun exercises, so that a marine body could be formed at any moment.⁸⁰ The *Spitfire* was sold to the Queensland Government by May 1859.⁸¹

No less important, was the Government contract to build 4 punts, completed in September 1858, to take silt from the Hunter River steam-dredge. The punts were to a design by Mr Moriarty, Engineer Surveyor; two punts were 75 feet overall, 15 feet in the beam and 5 feet deep, the other 2 smaller. The frames were of ironbark, the planking of hardwood and kauri pine. The steam-dredge was completed at the same time by Captain Rountree, with the engines and other machinery fitted by P. N. Russell and Co. The machinery, including the screw (propeller) and shaft drive, which was also driven by the engine driving the dredging machinery, had been built

⁷⁷ *Empire*, 3 August, 1855, p. 2; *Sydney Morning Herald*, 27 July 1855, p. 6; *Maitland Mercury and Hunter River General Advertiser*, 11 August 1855, p. 2.

⁷⁸ *Empire*, 5 April 1855, p. 4; *Sydney Morning Herald*, 11 March 1857, p. 7.

⁷⁹ *Maitland Mercury and Hunter River General Advertiser*, 3 October 1855, p. 2.

⁸⁰ *Empire*, 5 April 1855, p. 4

⁸¹ *Sydney Morning Herald*, 30 May 1859, p. 5.

by P. N. Russell and Co. to designs by Mr Moriarty, although the condensing steam-engine had been imported from England by Captain Rountree.⁸²

New commercial vessels built by Cuthbert included the paddle-steamer *Nowra*, 50 tons, for the Shoalhaven Steam Navigation Company (S.S.N. Co.), the paddle-steamer *Ipswich*, 100 tons, for the A.S.N. Co., both under contract, and a brig of 170 tons builder's measurement, the *Lady Denison*, for Cuthbert's own trading. These vessels were for the important colonial and coastal shipping trade, in which investment was a profitable exercise. Although having reduced carrying capacity, due to machinery, engines and coal storage, early paddle-steamers did offer regular services that made profits and importantly transported people and mail.

The paddle-steamer *Nowra*, completed in December 1855 for the S.S.N. Co., was contracted on 6 October 1855, started one week later with the hull finished in just over 8 weeks. The machinery and side-paddles, designed and manufactured by P. N. Russell and Co., were fitted in 4 weeks, the vessel making its trial run on 4 February 1856, when it achieved 9 knots. The *Nowra* featured high pressure oscillating steam engines, also by P. N. Russell and Co., the first to be designed and built in Sydney. Diagonally constructed of the best materials, with a flat bottom and a 2-foot draft, the vessel was ideally suited to working on the Shoalhaven River between Greenwell Point and Nowra. At 85 feet long with a 16-foot beam and a 5-foot deep hold, the vessel was described as a 'very pretty paddle-steamer...', although no details of the timbers used have survived.⁸³

The paddle-steamer *Ipswich*, launched in April 1860, was the last vessel to be built at the Milne's Wharf shipyard. Like the *Nowra*, the hull was diagonally built, the vessel's machinery, constructed by Mr McArthur at the A.S.N. Co.'s workshops at Pymont, driving side-paddles. The flat-bottomed vessel was sharply double-ended for manoeuvring, with rudders at each end, operated from the bridge. There were two, large cabins on deck, with deck-houses at each side for families, but little room for cargo. At 151 feet in length, with an 18-foot beam, a 5-foot hold and deck cabins at both ends, the vessel was said to resemble an American river-boat, with a draft of 3 feet fully loaded. The vessel was the largest yet built by John Cuthbert and was intended for the Bremer and Ipswich rivers, between Ipswich and Brisbane. On the trial trip, the vessel was reported to have reached 12 knots under steam. In contrast to the *Nowra*, construction details of the *Ipswich* have survived:

She is built with two thicknesses of 7/8 inch planks, running diagonally from gunwale to gunwale, with tarred blankets between. The outside planking, which runs longitudinally, is 1 ½ inch thick. She is built with kauri pine, copper-fastened and clinched 6 inches apart; the main keelson is 15 inches square, and

⁸² *Empire*, 10 August 1858, p. 5; *Sydney Morning Herald*, 10 August 1858, p. 10, and 10 September 1858, p. 9.

⁸³ *Empire*, 31 December 1855, p. 3, and 6 February 1856, p. 4; *Maitland Mercury and Hunter River General Advertiser*, 5 January 1856, p. 2; *Sydney Morning Herald*, 31 December 1855, p. 4, and 22 March 1856, p. 4.

both sister keelsons 80 feet long, each fastened with copper bolts 18 inches apart.⁸⁴

Whilst in many respects these 2 steam-driven, commercial vessels built by Cuthbert employed contemporary ideas, they were held in high regard as examples of colonial manufacture. Constructed at the same time, the *Lady Denison* was a speculative, sailing vessel of traditional design and layout, which displayed the full range of Cuthbert's design abilities and use of materials.

The keel of the brig *Lady Denison* had been laid in late 1857, although the vessel was only launched in January 1859, since construction was done when the workforce was not working on contracted vessels. Built entirely of colonial hardwood and kauri pine, the brig had a 'good floor, with sharp ends...' and 'every appearance of proving a clipper, at the same time carrying a full cargo...'. The 'bolt streaks [sic], wales, bilge-streaks [sic] and bottom planks [were] of hardwood, and fastened with copper bolts, driven and clinched on a washer inside and out...'. Overall the vessel was 103 feet, the beam 21 feet 6 inches and the hold 10 feet 6 inches in depth. A raised quarter-deck was to provide accommodation for about 30 passengers, Mr Cuthbert intending to place the vessel 'in the New Zealand trade...' for which she was ideally suited.⁸⁵ By July 1859, the vessel had been purchased by Captain McKinlay for trading with Launceston, in an effort to revive that trade.⁸⁶

For the launch of the *Lady Denison*, with masts and bowsprit in place, the mould-loft had been cleared out and tables spread with many delicacies, wine and liqueurs etc. In reply to Mr Thornton, MLA, John Cuthbert 'assured the company that he would ever earnestly endeavour to advance the mercantile interest of the city and country of his adoption...'.⁸⁷ Celebration of the launch had also celebrated Cuthbert's place in colonial society, such events accompanying the launch of almost every, new vessel.

During the 1850s wealthy members of colonial society, as in Britain, raced sailing vessels of various types. Cutters and yachts, built locally, or imported from Britain when owners saw colonial standards as inferior, were the fastest. In his own cutter-yacht *Enchantress*, builder's measurement 14 tons, completed in January 1855, Cuthbert used diagonally laid planking and displayed his design and technical skills, both essential in promoting his business.⁸⁸ After winning the Balmain Regatta in 1856, but not as captain of the vessel, Cuthbert sold the *Enchantress* in 1858.⁸⁹ Although Cuthbert would be appointed Rear Commodore of the Sydney Yacht Club

⁸⁴ *Sydney Morning Herald*, 9 April 1860, p. 4; *Launceston Examiner*, 24 April 1860, p. 2; *Maitland Mercury and Hunter River General Advertiser*, 19 July 1860, p. 3; *Twofold Bay and Maneroo Telegraph*, 24 July 1860, p. 2.

⁸⁵ *Sydney Morning Herald*, 9 January 1858, p. 8, 10 December 1858, p. 9, and 8 January 1859, p. 6; *Empire*, 10 August 1858, p.5; *Kiama Examiner*, 15 January 1859, p. 3.

⁸⁶ *Shipping Gazette and Sydney General Trade List*, 4 July 1859, p. 105.

⁸⁷ *Kiama Examiner*, 15 January 1859, p. 3.

⁸⁸ *Shipping Gazette and Sydney General Trade List*, 28 July 1856, p. 157; *Sydney Morning Herald*, 13 January 1855, p. 4.

⁸⁹ *Sydney Morning Herald*, 9 December 1856, p. 5, and 13 November 1858, p. 1.

in January 1860, he had resigned the position by December 1860 due to the pressure of work.⁹⁰

As a shipwright trained in the use of timber, Cuthbert had started his shipbuilding business at a time when iron construction and steam-driven vessels had begun to impact on the market, although Australian engineers and shipwrights had yet to develop the full suite of technical skills. However, the large number of timber vessels arriving in Sydney, both locally manufactured and from overseas, resulted in a growing market for surveys, repairs, overhauls and fitting-out, as well as the purchase and sale of vessels. A large part of the repair work involved stripping, caulking and re-coppering as part of cleaning and repairs below the waterline, the damage often caused by vessels running aground.

By July 1856 Cuthbert had imported a sheathing punch, manufactured in Exeter, England, to standardise and speed up the fixing of copper and Muntz metal sheets which formed the outer sheathing of most timber hulls. Cuthbert had also imported a dowelling and treenail cutting machine, manufactured by Hotham and Brown of Exeter, something not used widely until the 1860s. The latter could be set to any gauge, the work of hours being effected in a few minutes. The saving in labour was important in terms of the costs to merchants and shipowners, but also reduced the time vessels had to spend under construction or repair, both important to the trade and to the public.⁹¹ To assist shipowners and ship's captains, Cuthbert also acquired the hulk *Cameo* in July 1856 for £255, using the vessel to offload cargo, making repairs much simpler; the vessel had previously been used as a coaling jetty and before that as a powder hulk and floating magazine.⁹²

During the 8-year period at his Milne's Wharf shipyard, Cuthbert's growing survey, repair, overhauling and refitting business would deal with 165 known, reported commercial vessels, including 6 speculative vessels, purchased for repair and sale, and 1 salvaged vessel. The real commercial figure was much higher, since not all ship-repair and maintenance work was reported in the newspapers with the exception of naval vessels, which were sent to Cuthbert's enterprise on 16 occasions.⁹³

Between 1853 and 1860 Cuthbert also purchased 6 known vessels, some of which he had already repaired or would rebuild, including the ketch *Henry*, 19 tons, the brig *Esperanza*, 140 tons, and the brig *Vulture*, 168 tons. These vessels were purchased as speculative assets on an almost annual basis, for repair and sale. The lack of space in his shipbuilding yard in 1855, and throughout the decade, made this a profitable way to generate revenue in the 1850s and subsequent years.⁹⁴ In some cases, the

⁹⁰ *Australian Home Companion and Band of Hope Journal*, 21 December 1864, p. 7; *Sydney Morning Herald*, 21 December 1860, p. 5.

⁹¹ *Sydney Morning Herald*, 29 July 1856, p. 4.

⁹² *Sydney Morning Herald*, 25 July 1856, p. 5; *Empire*, 11 August 1856, p. 4.

⁹³ *Sydney Morning Herald* and other newspapers, January 1853 to December 1860.

⁹⁴ *Maitland Mercury and Hunter River General Advertiser*, 6 June 1855, pp. 2-3.

vessels were used in the coastal trade by Cuthbert, although most were quickly disposed of at a profit, Cuthbert's reputation for quality never in doubt.⁹⁵

The vessels repaired would range from the ketches *Vision*, wrecked and recovered at Kiama in 1854, and the *Henry*, a Hawkesbury Trader, to the larger coastal trading vessels and steam-dredges, as well as merchant vessels from around the world. Cuthbert was also involved in salvage, and accompanied a Customs vessel looking for any survivors, wreckage and cargo from the ill-fated *Dunbar*, which had been wrecked at South Head, Sydney, on the night of 20 August 1857.⁹⁶ The earliest, known vessels under repair at Cuthbert's shipyard were the *Monumental City* and the *Almeda*, in June 1853 and July 1853 respectively. The *Almeda*, an American brigantine, 190 tons register, was 98 feet in length with a 23-foot beam and a hold 11 feet deep. The *Almeda* included accommodation of a superior description and in July 1853 was thoroughly overhauled by Cuthbert at a cost of £1,100.⁹⁷

Repairs to vessels appear to have increased quickly, although only 9 known and reported vessels have been identified in 1854. Some idea of the scale of the repair operation can be gained from contemporary accounts of the work at Cuthbert's Milne's Wharf shipyard in 1855 and 1856:

6 June 1855

He has at present four vessels alongside his wharf under extensive repairs. The schooner *Camilla* has now had new topsides, and general repairs, and is now caulking and coppering; the *Gazelle*, brig, that was run into by the ship *Anna* some time ago, and dis-masted and otherwise damaged, has had to get new masts, bowsprit, jib-boom etc, new bows, stanchions, and to be thoroughly caulked; the barque *Brighton*, that got ashore at Newcastle, has been hove down, stripped, caulked, and sheathed, and is now finishing; the barque *Launceston*, that sprung a leak on her passage from Newcastle to Melbourne, is caulking and sheathing and receiving large repairs. Besides these, repairs are being made aboard the *Rose of Sharon*, and a new mainmast and rudder are building in the yard for her. Added to them, the Government dredge has received a new framework, and the mud barges [punts] are having new bottoms. Everything about the yard betokens great activity, and no time can be spared to lay down new vessels, owing to the press just now of ships requiring extensive repairs. – [Empire]⁹⁸

20 May 1856

From the month of May 1855, till the same month, 1856, Mr Cuthbert has repaired 30 schooners, 17 brigs, 11 barques and 3 ships. The English ship *Rose of Sharon*, received new spars and rudder; H.M.S. *Fantome* almost a

⁹⁵ *Sydney Morning Herald*, 9 February 1854, p. 8, 8 March 1855, p. 1, 24 February 1858, p. 1, 13 May 1858, p. 1, and 5 April 1859, p. 4; *Shipping Gazette and Sydney General Trade List*, 12 September 1859, p. 148.

⁹⁶ *Sydney Morning Herald*, 25 August 1857, p. 5.

⁹⁷ *Sydney Morning Herald*, 24 June 1853, p. 1, 18 January 1854, p. 6, and 1 September 1854, p. 4.

⁹⁸ *Maitland Mercury and Hunter River General Advertiser*, 6 June 1855, pp. 2-3.

new stern and foremast; the *Exodus*, a ship of 1400 tons, new spars; the *Gilmore*, another large ship, new stanchions and rails; together with many other important pieces of work executed...⁹⁹

However, H.M.S. *Fantome*, a 12-gun brig of 464 tons, required considerably more skill than normal, when, in September 1855, the vessel was found to be damaged by dry rot. Due to the 'peculiar construction of vessels of war generally...the repair out of a naval yard...' was considered difficult. The whole of the timber on the starboard side of the elliptical stern needed to be replaced. Some 19 new frame pieces above the deadwood, new stern ports, ceilings, stringers and planking were fitted before re-coppering. In addition, a new fore-mast, deck beams and new knees were fitted, with repairs to the rudder. Completed in Cuthbert's yard, the repairs were considered to have been done as well as if in the Royal Dockyards in England.¹⁰⁰

In June 1855 Cuthbert had repaired the hull of the steam-dredge in Sydney, at a cost of £400 to the NSW Government, as well as [a] punt at a cost of £300. These costs were queried in discussions in the Legislative Council, between the Treasurer and Auditor-General, in September 1855. It would seem that Cuthbert had been the only person to send in a tender but that his tenders were almost always the lowest. The character of Cuthbert, as attested by Henry Parkes, was known to reflect his 'intelligence and integrity...' with 'the best work...always performed...'.¹⁰¹

The surveying, repairing, overhauling and refitting work undertaken by Cuthbert was more extensive and often more technically demanding than new building work. In particular, Cuthbert's shipyard was unable to handle vessels of large tonnage, the nearby Patent Slip on Sussex Street only carrying vessels of up to 200 tons.¹⁰² The wide range of vessels and varying degrees of repair work undertaken by Cuthbert and other shipbuilders would require the use of large patent slips and dry docks, set up as private, business enterprises and by the NSW Colonial Government. An attempt in 1853 to form 'The Sydney Dry Dock Company', to construct graving docks and slipways, failed, although a small dry dock had been built in Melbourne before 1843, by a shipbuilder on the Yarra.¹⁰³

Opened in January 1855, Waterview Bay Dry Dock (Mort's Dock) at Balmain, the property of a company founded by Captain Rountree, as lessee and manager, and funded by Thomas Mort, would potentially make the shipwright's and shipbuilder's work easier.¹⁰⁴ Mort's Dock measured 422 feet overall at the top and could be separated into 2 smaller docks; 80 feet wide, the dock reached a maximum depth of 21 feet at high tide.¹⁰⁵ The A.S.N. Co.'s hydraulically operated patent slip at Pyrmont,

⁹⁹ *Sydney Morning Herald*, 20 May 1856, p. 4.

¹⁰⁰ *Cornwall Chronicle*, 13 October 1855, p. 4; *Colonial Times*, 10 May 1855, p. 2.

¹⁰¹ *Empire*, 6 September 1855, p. 2; *Sydney Morning Herald*, 6 September 1855, pp. 4-5.

¹⁰² *Sydney Morning Herald*, 28 January 1865, p. 10, 1 March 1865, p. 5, and 21 November 1865, p. 4.

¹⁰³ *Sydney Morning Herald*, 22 October 1853, p. 3; *Geelong Advertiser*, 7 September 1843, p. 3.

¹⁰⁴ *Sydney Morning Herald*, 21 May 1855, p. 5; *Argus*, 27 February 1855, p. 4.

¹⁰⁵ *Sydney Morning Herald*, 27 September 1855, pp. 4-5; *Empire*, 8 March 1860, p. 2.

opened some months later, in May 1855, was capable of taking vessels of 2,000 tons, or 3 smaller vessels, depending on their size, with numerous cranes, and was the largest ever constructed.¹⁰⁶

In the 12 months to 24 April 1856, 4 ships, 12 barques, 10 brigs, 7 schooners and 31 steamers were taken on the A.S.N. Co.'s Patent Slip.¹⁰⁷ As early as May 1855, the local barque *Favourite*, 198 tons, had been stripped, repaired and re-coppered by Cuthbert on the newly-opened Patent Slip, in the space of 18 hours, setting new standards for such work.¹⁰⁸ Prior to this, Cuthbert had relied on the practice of hauling vessels onto his slipways for repairs and replacement of the copper or Muntz metal sheathing, a practice continued for many smaller vessels, the wharf being equipped with heaving-down equipment for vessels of any size.¹⁰⁹

By October 1855, Cuthbert was utilising the A.S.N. Co.'s Patent Slip on an almost permanent basis, having an arrangement whereby he was able to take any vessel for cleaning or repairing on the slip.¹¹⁰ Within a few days in October 1855, Cuthbert placed 4 vessels, including the *Sea Bird*, the *Mercedes* and the *Fanny Fisher* on the slip. The *Fanny Fisher*, like many vessels handled by Cuthbert, was 'stripped, caulked and re-coppered'. The *Sea Bird* merely required cleaning, although the *Mercedes*, a Chilean ship of 611 tons, required extensive repairs to the masts, including a new, kauri pine main-mast and spars as well as stripping, caulking and re-coppering, after a heavy storm at sea.¹¹¹

The problem of maintaining ships which were almost continually at sea was demonstrated in October 1856, when Cuthbert made extensive repairs to the *City of Sydney*, a brig of 734 tons. The brig was placed in Cuthbert's hands on its arrival in Sydney, for the purpose of being stripped and caulked, a result of leaks which had developed. On removing the copper sheathing and felt under the counter on the starboard side, a large rat-hole was discovered, 2 ½ inches in diameter, only 8 feet from the keel. This occurrence showed the necessity of vessels being 'smoked...' to reduce problems caused by rat infestations, particularly in coastal vessels.¹¹²

The growth of merchant shipping, both colonial and international, had enabled shipbuilding to prosper, with competition also growing. By June 1857, there were a number of shipbuilding and ship repairing companies operating in close proximity to Cuthbert's yard in Darling Harbour. The proprietors of the old Patent Slip in Sussex Street had reduced their rates by half to retain a share of the repair trade, whilst Hely, Drake and Harper had opened a wharf immediately north of the A.G.L.

¹⁰⁶ *Empire*, 24 May 1855, pp. 4-5.

¹⁰⁷ *Sydney Morning Herald*, 26 April 1856, p. 4.

¹⁰⁸ *Empire*, 24 May 1855, pp. 4-5.

¹⁰⁹ *Empire*, 21 June 1855, p. 4; *Sydney Morning Herald*, 31 October 1856, p. 4.

¹¹⁰ *Sydney Morning Herald*, 25 October 1855, p. 4.

¹¹¹ *Empire*, 14 August 1855, p. 4; *Sydney Morning Herald*, 27 September 1855, pp. 4-5, 25 October 1855, p. 4, and 27 October 1855, p. 4; *Argus*, 31 October 1855, p. 4.

¹¹² *Sydney Morning Herald*, 7 October 1856, p. 4.

Gas Works, where they offered the same services as Cuthbert at the 'shortest notice and lowest charges'.¹¹³ In addition, other ports of call in the East, in particular in Indonesia, the Malay Peninsula and China, would begin to offer cheaper, competitive services, with a Patent Slip and Dry Dock Company established in Singapore by September 1860.¹¹⁴

Significantly, Cuthbert had advertised his 'Ship Building and Ship Repairing Establishment' at Cuthbert's Wharf, Darling Harbour, in January 1857. Repairing had quickly become a major function of his enterprise, generating much of his revenue, his advertisements including the A.S.N. Co.'s Patent Slip at Pyrmont by the end of 1857.¹¹⁵ In March 1857, Cuthbert's 'Ship-Building Yard' at Milne's Wharf was reported as making a main-mast for the ship *Matoaka*, a vessel of 1,092 tons, his shipyard affording every accommodation for such purposes. Ships of the largest tonnage could be 'spared from his yard with the best materials in the colony', with the ship *Lord Warriston*, a vessel of 1,144 tons, at the wharf to fit new lower-masts.¹¹⁶

The repair and building yards at Milne's Wharf were almost continually busy during these early years with repairs, with little time to build new vessels. One of Cuthbert's most challenging commissions at this time was to refit and modify the 'slow and sure...' paddle-steamer *William the Fourth*, built in 1831 by Marshall and Lowe on the William River near Newcastle, over some months in 1857. The 'hull and fittings... [under-went] extensive improvements at the hands of Mr Cuthbert...', the vessel being considered equal to a new one. The inadequate '12-horse [power]...' (12 hp) auxiliary engine was replaced by a new 40 hp engine built by Messrs Napier and Co. of Sydney, a speed of over 9 knots being achieved during trials. The *William the Fourth* (*William IV*) had always been considered one of the best sea boats on the coast, the improved vessel now set to trade between Sydney and Merimbula.¹¹⁷

In expanding his business, Cuthbert leased the A.S.N. Co.'s Patent Slip at Pyrmont in January 1858, for a period of 3 years. This arrangement had come about due to the failure of Captain Rountree to effectively manage his leased dry dock, Mort's Dock, at Waterview Bay, Balmain, in conjunction with the A.S.N. Co.'s Patent Slip. Cuthbert had previously used the Patent Slip by arrangement, but now managed the overall use of the Patent Slip, an arrangement which continued until 1864.¹¹⁸ Cuthbert charged 1 shilling per ton for docking and 6d per ton/per diem while vessels were under repair.¹¹⁹

¹¹³ *Sydney Morning Herald*, 20 June 1857, p. 1.

¹¹⁴ *Sydney Morning Herald*, 8 September 1860, p. 1, and 8 November 1865, p. 2.

¹¹⁵ *Empire*, 8 January 1857, p. 1; *Sydney Morning Herald*, 14 November 1857, p. 1.

¹¹⁶ *Empire*, 10 March 1857, p. 4.

¹¹⁷ *Illawarra Mercury*, 12 October 1857, p. 2; *Sydney Gazette and New South Wales Advertiser*, 24 September 1831, p. 3.

¹¹⁸ *Sydney Morning Herald*, 30 January 1858, p. 4, 10 February 1858, p. 7, 1 March 1865, p. 5, and 21 March 1865, p. 5; *Empire*, 6 June 1864, p. 5.

¹¹⁹ *Empire*, 19 September 1860, p. 1.

During the 6 months to the end of June 1858 alone 38 vessels were repaired alongside Cuthbert's wharf, receiving new masts, yards, decks and rigging, with most hull repairs done on the A.S.N. Co.'s Patent Slip at Pyrmont.¹²⁰ Newspaper reports offer little support for the above figure, although there is no reason to doubt its validity, given that Cuthbert had repaired 30 schooners, 17 brigs, 11 barques and 3 ships at his shipyard in the 12 months from May 1855 to May 1856.¹²¹

The A.S.N. Co. had maintained use of their patent slip as necessary, the directors pleased with the leasing arrangement to Cuthbert, and made a good profit in the 6 months to the end of June 1858. Over the 6 month period, Cuthbert's workforce hoisted 26 vessels onto the Patent Slip for inspection before stripping, repairing, caulking and re-coppering, the aggregate tonnage being 7,614 tons; the largest timber vessel was the *Lawrence Brown*, 1,070 tons. Also during this period the *Swarthmore*, an iron ship of 1,123 tons, and 21 iron steamers, for the most-part not worked on by Cuthbert, were placed on the slipway, making a total of 47 vessels.¹²² The total number of vessels handled by Cuthbert and his men for the 6 year period of consecutive leasing of the patent slip to 1864 is unknown.

Almost inevitably, Cuthbert's abilities and the speed with which he could execute work became common knowledge in the maritime world. In an open letter in January 1858, Captain F. Dougherty of New Bedford stated that, on the basis of the speed and care which Cuthbert had demonstrated in repairing his whaling vessel, he would recommend that American ship's captains could place their trust in him.¹²³

In July 1858, Cuthbert's shipbuilding enterprise was reported as employing an average of 150 men whilst a large store of timber was kept on hand, from hardwood timber for frames, keels, planks and treenails, to kauri pine that would make spars and masts for ships of 1,000 tons and more. In addition to the usual lifting apparatus, a jib-head crane, for lifting the heaviest of timbers, had recently been added.¹²⁴ In addition, Cuthbert would employ an experienced diver by 1860, to undertake submarine work.¹²⁵

Cuthbert's daily expenses, with over 150 men on varying rates of pay and leasing costs, would have amounted to a substantial sum. In January 1860, Captain Thomas Rountree, of Mort's Dry Dock at Waterview Bay, Balmain, noted that, since 1857, the general cost of repairs, including labour and materials, had fallen by at least 50%, although labour was a major part of the cost. Repairs to the sheathing and caulking of the hull of the ship *Speedy*, 1,031 tons, in 1857, had been completed by Rountree for the sum of £360 7s 11d, of which labour had accounted for £274 15s 0d.¹²⁶ While

¹²⁰ *Sydney Morning Herald*, 30 January 1858, p. 4, and 10 July 1858, p. 10.

¹²¹ *Sydney Morning Herald*, 20 May 1856, p. 4.

¹²² *Sydney Morning Herald*, 30 January 1858, p. 4, and 10 July 1858, p. 10.

¹²³ *Empire*, 9 January 1858, p. 7.

¹²⁴ *Sydney Morning Herald*, 10 July 1858, p. 10.

¹²⁵ *Empire*, 19 September 1860, p. 1.

¹²⁶ *Empire*, 19 January 1860, p. 8.

some foremen still received up to 20 shillings a day, most shipwrights in Sydney could only expect to receive 12 shillings a day by the 1860s.¹²⁷

The most difficult commercial repair work Cuthbert undertook was in 1860, to the ship *Castilian*, 1,200 tons, which had struck a reef near Hong Kong. The A.S.N. Co.'s Patent Slip was used, the hull requiring a new keel and all ribs, iron-knees and planking re-fastening before re-coppering; in effect the vessel was partly dismantled and almost entirely rebuilt, and was reportedly the heaviest such work ever undertaken in the colonies.¹²⁸

Naval vessels required the use of dry [graving] docks and large patent slips in view of their size and weight. During the late 1850s Cuthbert's work load had escalated considerably, attracting barely veiled criticism of his success from other shipbuilders and tradesmen. His seeming ease of access to the Government Dockyard at Cockatoo Island and control of the Patent Slipway at Pyrmont, leased from the A.S.N. Co., caused anxiety amongst the other shipbuilders, who felt that Cuthbert was receiving unfair advantages, often without the need to tender, although Cuthbert's tenders were sometimes rejected.¹²⁹ This had been the case with the provision of a Buoy Boat for Moreton Bay, in December 1856, when fresh tenders were called-for by the NSW Government.¹³⁰ However, in April 1855, Cuthbert had converted the schooner *Bramble* into a lightship for Sydney Heads, amidst criticism from merchants and other shipbuilders, who argued that there had been no tender process.¹³¹

The NSW Government's dry dock, Fitzroy Dock on Cockatoo Island, completed in 1857, would be open to the vessels of Colonial governments, to British naval vessels and to men-of-war of all nations. The construction of such a dock had been proposed in Sydney in 1847, the British Treasury considering, but questioning its construction, due to the costs involved.¹³² The Civil Engineer in charge, Gothe Mann, reported to the recently created Department of Lands and Public Works after August 1856, but in August 1859, Gothe Mann, also superintendent of the Penal Establishment on Cockatoo Island, reported to the Department of Public Works and to the Legislative Council.¹³³ Although the use of convict labour in the construction of the dry dock was paramount, proximity to the convict establishment resulted in security issues after the dry dock was completed.

The Fitzroy Dry Dock would accept vessels drawing 19-20 feet of water, with a maximum 60-foot beam and a maximum length of 330 feet.¹³⁴ Not commissioned until December 1857, the first naval vessel to be docked was H.M.S. *Herald*, which

¹²⁷ *Sydney Morning Herald*, 21 March 1865, p. 5.

¹²⁸ *Shipping Gazette and Sydney General Trade List*, 6 August 1860, p. 129.

¹²⁹ *Empire*, 22 June 1855, p. 5, 6 July 1855, p. 3, and 21 January 1860, p. 5.

¹³⁰ *Empire*, 5 December 1856, p. 7.

¹³¹ *Sydney Morning Herald*, 2 April 1855, p. 4.

¹³² *Melbourne Argus*, 18 May 1847, pp. 2-3.

¹³³ NSW State Records, Agency 3417, Civil Engineer, Dry Dock, Cockatoo Island, 1847-1870.

¹³⁴ *Sydney Morning Herald*, 13 September 1859, p. 8, and 21 March 1865, p. 5.

entered the dock on 1 December 1857 and, after cleaning the copper sheathing of growths, was undocked for surveying duties on 5 December 1857.¹³⁵ Although Cuthbert may not have been associated with H.M.S. *Herald* in 1857, he stripped, repaired, caulked and re-coppered the Hospital Quarantine Hulk *Harmony* in Fitzroy Dock, over the period 29 June-7 September 1858, soon after H.M.S. *Herald* was undocked.¹³⁶ On 23 September 1858 the NSW Legislative Assembly had approved a sum of £600 for repairs to the *Harmony*, only a few days before the work, suggesting that this was Cuthbert's tender.¹³⁷ The *Harmony* appears to have been the first vessel repaired by Cuthbert in Fitzroy Dock.

Tenders were also requested by the Department of Public Works for repairs to the steam-dredge *Hercules* in April 1860, then in Fitzroy Dock, although Cuthbert may have been unsuccessful. The work required 'Stripping, Caulking, and Coppering the steam-dredge *Hercules*...', with tenders to state the rate per 1,000 feet of caulking, and the rate per sheet (of copper or Muntz metal) for stripping, cleaning down, tarring and re-coppering with 24 oz copper or Muntz metal. The contract would require a penal sum of £100 as a bond for satisfactory completion.¹³⁸

In 1859 the title 'Australian Squadron' had been given to the British naval force assigned to the Australia Station, which provided surveying and policing support to the Australasian colonies. The Squadron was a small fleet of sailing and auxiliary, steam-driven, timber warships, based in Sydney for tours of duty of 4 to 5 years. However, the isolation of the Australian colonies potentially led to neglect, with some vessels already near the end of their lives. Auxiliary engines had been seen as important during the Crimean War (1854-1856), with screw-driven vessels proving superior.¹³⁹ The suffixes SS, single screw, and PS, paddlewheel steamer, have been used to differentiate auxiliary vessels from sailing vessels in the British fleet.

Some vessels had been adapted for other purposes, including H.M.S. *Herald*, launched in 1822 in Cochin, India, as H.M.S. *Termagant* a 26-gun corvette, and then re-commissioned in 1824 as H.M. yacht *Herald*. After the First Anglo-Indian War (1839-1842), the *Herald* was converted to a survey ship, when the guns were reduced to 8. The ship was eventually re-commissioned again in 1852 to continue the work of H.M.S. *Rattlesnake* surveying the Australian and Fijian coastlines.¹⁴⁰

¹³⁵ *Maitland Mercury and Hunter River General Advertiser*, 3 December 1857, p. 5; *Sydney Morning Herald*, 7 December 1857, p. 5; *Empire*, 2 December 1857, p. 4.

¹³⁶ *Sydney Morning Herald*, 10 July 1858, p. 10.

¹³⁷ *Sydney Morning Herald*, 24 September 1858, p. 8.

¹³⁸ *Sydney Morning Herald*, 12 April 1860, p. 8.

¹³⁹ P. Dennis, J. Grey, J. E. Morris & R. Prior, *The Oxford Companion to Australian Military History*, OUP, Melbourne, 2nd edition, 2008, p. 67; R. Winfield & D. Lyon, *The Sail and Steam Navy List: All the Ships of the Royal Navy 1815-1889*, Chatham Publishing, London, 2004, p. 291.

¹⁴⁰ R. Winfield & D. Lyon, *The Sail and Steam Navy List: All the Ships of the Royal Navy 1815-1889*, Chatham Publishing, London, 2004, p. 113; R. Gillett & M. Melliar-Phelps, *A Century of Ships in Sydney Harbour*, Rigby Publishers Ltd, 1980, p. 12.

During such tours of duty, naval vessels were often damaged in uncharted waters, as well as requiring overhauls before the voyage back to Britain. Sydney, as the focus of international shipping and trade played an important role in the Squadron's maintenance. Repairs to British and other naval vessels were increasingly 'placed in the hands of Mr Cuthbert...' by 1860.¹⁴¹ There are few requests for tenders for naval repair work in the newspapers of the 1850s or early 1860s. However, due to Cuthbert's reputation, he may well have been asked to repair British and other nations' naval vessels, an issue which caused resentment among other shipbuilders, who saw him as avoiding the tender process.¹⁴²

By July 1860, Cuthbert had superintended repairs in Fitzroy Dock to a number of British and European naval vessels as well as NSW Government vessels (Table 1). These included, but were not limited to: the Quarantine Hulk *Harmony*, 1858; H.I.M. frigate *Novara*, Austrian, 1858; H.I.M. storeship *Herault*, French, 1859; H.M.S. *Pelorus* (SS), 1859; H.M.S. *Niger* (SS), 1859 and 1860; and H.I.M. armed-schooner *Caledonienne*, French, 1859. The following naval vessels were also repaired in Fitzroy Dock before July 1860, with the docking and surveying, if not all of the repairs, almost certainly done by Cuthbert as the NSW Government's Shipwright Surveyor to the Steam Navigation Board: H.M.S. *Herald*, 1859; H.M.S. *Iris*, 1858 and 1859; H.M.S. *Cordelia* (SS), 1859 and 1860; H.M.C.S. *Victoria*, a colonial vessel, 1858; and H.M.S. *Elk*, 1858.¹⁴³

The small fleet of vessels on the Australia Station included the following Men-of-War by July 1860: H.M.S. *Iris*, flagship frigate, 26 guns; H.M.S. *Cordelia*, (SS) sloop, 11 guns; H.M.S. *Herald*, survey-ship, 8 guns; H.M.S. *Pelorus* (SS), corvette, 21 guns; H.M.S. *Niger* (SS), survey-sloop, 8 guns; and H.M.S. *Fawn* (SS), sloop, 17 guns.¹⁴⁴

In order to repair the Austrian (Austro-Hungarian) 41-gun, steam frigate H.I.M. *Novara*, registered at over 2,000 tons, Cuthbert used Fitzroy Dock in November 1858, as was customary for foreign naval vessels. The repairs to the largest vessel to dock in Australia included the hull's copper sheathing, with the deck and wales recaulked and new spars and rigging fitted. The repairs were carried out by some 70 of Cuthbert's workers, and who, as on a previous occasion (the Quarantine Hulk *Harmony*), required 'general permission for his men to visit... the Fitzroy Dock, Cockatoo Island, daily...' due to the dry dock's proximity to the large, convict establishment.¹⁴⁵

¹⁴¹ References to naval vessels being surveyed or under repair in the Sydney newspapers from mid-1859.

¹⁴² *Empire*, 21 January 1860, p. 5.

¹⁴³ *Sydney Morning Herald*, 10 July 1858, p. 10, 10 December 1858, p. 9, 11 February 1859, p.7, and 13 September 1859, p. 8; *Cornwall Chronicle*, 9 November 1859, p. 2 (from the *Argus*); *Empire*, 25 November 1859, p. 4; *Shipping Gazette and Sydney General Trade List*, 9 July 1860, p. 113; *Maitland Mercury and Hunter River General Advertiser*, 21 July 1860, p. 3.

¹⁴⁴ *Sydney Morning Herald*, 21 July 1860, p. 9.

¹⁴⁵ *Sydney Morning Herald*, 10 December 1858, p. 9; *Illawarra Mercury*, 6 December 1858, p. 3; NSW State Records/Archives Office NSW 'Colonial Secretary's Correspondence-Inwards' series, index for 1858 (5/2497, Reel 2945), 48/4060 10 November 1858, M316.

Table 1: Fitzroy Dock - Vessels repaired September 1857-July 1860

Vessel	Dates	Known Repairer
Punt of steam-dredge <i>Hercules</i>	30 September- 8 October 1857	
H.M.S. <i>Herald</i>	1-5 December 1857	
Steam-dredge <i>Hercules</i>	10-24 March 1858	
H.M.S. <i>Iris</i>	29-31 March 1858	
Quarantine Hulk <i>Harmony</i>	29 June-7 September 1858	John Cuthbert
Colonial steam-dredge <i>Hunter</i>	14-23 September 1858	
H.I.M. frigate <i>Novara</i> (Austrian)	13-20 November 1858	John Cuthbert
H.M.C.S. <i>Victoria</i>	1-2 December 1858	
H.M.S. <i>Elk</i>	28 December 1858-7 January 1859	
H.I.M. <i>Herault</i> (French)	22 February-7 March 1859	John Cuthbert
H.M.S. <i>Herald</i>	15-19 March 1859	
H.M.S. <i>Cordelia</i> (SS)	30 March-2 April 1859	
H.M.S. <i>Iris</i>	18-20 May 1859	
R.M.S. <i>Benares</i> (1st commercial)	26 May-1 June 1859	P. and O. Co.
H.M.S. <i>Pelorus</i> (SS)	16 August-4 September 1859	John Cuthbert
H.M.S. <i>Niger</i> (SS)	8-10 September 1859	John Cuthbert
H.I.M. <i>Caledonienne</i> (French)	17-23 November 1859	John Cuthbert
<i>Granite City</i> (2nd commercial)	11-17 January 1860	Hely Drake Harper
<i>Woodlark</i> (commercial)	2-9 February 1860	Hely Drake Harper
Colonial steam-dredge <i>Hunter</i>	-----ditto-----	
H.M.S. <i>Cordelia</i> (SS)	27 February-8 March 1860	
<i>Eli Whitney</i> (commercial)	12-15 March 1860	Hely Drake Harper
<i>Susan</i> (commercial)	28-31 March 1860	Hely Drake Harper
<i>Adolphus Yates</i> (commercial)	-----ditto-----	Hely Drake Harper
Colonial steam-dredge <i>Hercules</i>	11 April-8 May 1860	
H.M.S. <i>Niger</i> (SS)	9-20 July 1860	John Cuthbert
H.M.S. <i>Herald</i>	July 1860	

Sources used in compiling Table 1 include:

1. Parliamentary papers - 'Minutes of Evidence' taken before the Select Committee on the Fitzroy Dry Dock, pp. 1057- 1081 in *Votes and Proceedings of the NSW Legislative Assembly, 1859-1860*, Vol. 4, pp. 1064, 1067, 1071, 1073, 1075 and 1079.
2. Newspaper reports including - *Empire*, 1 September 1859, p. 4, 25 November 1859, p. 4, 16 January 1860, p. 8, 17 January 1860, p. 5, and 21 January 1860, p. 5; *Sydney Morning Herald*, 31 March 1858, p. 5, 10 April 1858, p. 10, 10 July 1858, p. 10, 10 December 1858, p. 9, 23 August 1859, p. 4, 1 September 1859, p. 4, 13 September 1859, p. 8, 12 November 1859, p. 7, 10 January 1860, p. 4, 9 March 1860, p. 4, 12 April 1860, p. 8, 21 July 1860, p. 9; *Maitland Mercury and Hunter River General Advertiser*, 21 July 1860, p. 3; *Shipping Gazette and Sydney General Trade List*, 9 July 1860, p. 113; and *Sydney Mail*, 7 July 1860, p. 4.

Her Majesty's steamship *Pelorus*, 1,400 tons, with 21 guns, was stripped of its sheathing, caulked and re-coppered throughout in Fitzroy Dock between 16 August and 4 September 1859 by Cuthbert. In replacing the sheathing of Muntz metal and copper, Cuthbert's workforce of 80 men was employed for over 2 weeks in similar circumstances to the docking of the *Novara*.¹⁴⁶

A major issue by the end of 1859 was the seeming monopoly held by the owners and lessees of Mort's Dock at Waterview Bay (lessee Captain Rountree) and the A.S.N. Co.'s Patent Slip at Pyrmont (lessee John Cuthbert), as well as Cuthbert's dominance in the repair of naval vessels at Fitzroy Dock. This state of affairs was brought to a head by the use of Fitzroy Dock from 26 May-1 June 1859, for repairs to a Royal Mail Ship the R.M.S. *Benares*, owned by the Peninsular and Oriental Steam Navigation Company (P. and O. Co.).¹⁴⁷ According to Captain Towns, Rountree, who's lease over Mort's Dock cost him about £3,000 per annum, was asked to dock and repair the R.M.S. *Benares* but had reportedly refused, even though asked to do so by the Colonial Secretary in what was an emergency situation, with Fitzroy Dock being the only alternative.¹⁴⁸

The docking of the *Benares* in May 1859 had been to the 'extreme dissatisfaction...' of both Cuthbert and Rountree, since it had been stated in Parliament in 1853, that the establishment would be 'extensively devoted to the reception of British and foreign naval vessels of war...'. In November 1859 the *Sydney Morning Herald* reported that Captain Rountree had relinquished his lease over Mort's Dock, although retaining his position as general superintendent. This was a direct consequence of the use of the Government's Fitzroy Dock by a private company, which thereby potentially benefitted from the use of a publicly funded dry dock in competition with privately owned facilities. The P. and O. Co. quickly took over the lease on Mort's Dock, owned by T. S. Mort, 'for a term of years, on conditions very advantageous to the company...'.¹⁴⁹

Following undocking of the RMS *Benares* on 1 June 1859, Cuthbert legitimately used Fitzroy Dock between 16 August and 23 November 1859, for repairs to H.M. steamships *Pelorus* and *Niger* and to the French vessel H.I.M. armed-schooner *Caledonienne*. However, on 9 January 1860 a second commercial ship, the *Granite City*, 771 tons, under Captain Leask, was towed to Fitzroy Dock to be overhauled, beginning months of claims and counterclaims as to the proper use of Fitzroy Dock.¹⁵⁰ In a letter printed in the *Sydney Morning Herald* on 10 January 1860, a 'Colonist' referred to the financial impact on a well-known shipbuilder's new wharf and shipyard at Millers Point (Cuthbert's) and questioned the right of the

¹⁴⁶ *Sydney Morning Herald*, 13 September 1859, p. 8.

¹⁴⁷ *Sydney Morning Herald*, 13 June 1859, p. 7.

¹⁴⁸ *Empire*, 8 March 1860, p. 2.

¹⁴⁹ *Sydney Morning Herald*, 13 June 1859, p. 7, and 12 November 1859, p. 7.

¹⁵⁰ *Sydney Morning Herald*, 10 January 1860, p. 4.

Government to allow the '*Granite City*, lately arrived from London, to be docked and repaired under the immediate auspices of the Government' at Fitzroy Dock.¹⁵¹

This led to a spate of letters, including that of 16 January 1860, from 'An Older Colonist', which suggested, that the 'well known ship-builder was asked by Captain Leask to tender for sundry repairs...' to the *Granite City*, but endeavoured to obtain the work without proper tenders. Furthermore, 'the well-known ship-builder might have left it to others to complain of the acts of the Government, he having had the privilege of doing all the work that has heretofore been done at the Fitzroy Dock...' besides bringing him 'a very handsome profit.'¹⁵² (Refer to Table 1 for Cuthbert's known commissions in Fitzroy Dock at this time).

In responding, Cuthbert, in his letter of 17 January 1860, supposed that he might be the well-known ship-builder and stated that the 'remarks were too contemptible to notice...' and 'it is hardly necessary for me to remind him...that the repairs executed by me at the Fitzroy Dock were carried under the immediate auspices of a Government ever jealous and watchful against incurring any unnecessary expense, or admitting of any overcharge in any shape'.¹⁵³ The Legislative Assembly (LA) noted at this time, that the Government generally charged a higher rate than private docks and that there was no inducement for the public to use Fitzroy Dock.¹⁵⁴

However, on 21 January 1860 the *Empire* printed a letter from Hely, Drake and Harper, a firm of shipbuilders, which had undertaken the repair work to the *Granite City* and 4 other commercial vessels in Fitzroy Dock. Unfortunately, the letter referred to Cuthbert as a 'carpenter', exacerbating the poor relationship between themselves and other shipbuilders as well as Cuthbert. The letter also stated that they tried to have nothing to do with matters in which Captain Rountree and Mr Cuthbert were concerned and that they had hoped to avoid a 'newspaper war', but were responding to protect them from further criticism. In concluding, and in support of the public use of Fitzroy Dock, the letter stated that many private vessels were taken into the Government docks at Portsmouth and elsewhere with many private docks in Britain open to workmen who might require their use. However, a conciliatory note was struck, the letter noting that Rountree had 'within the last few days offered to allow us to take vessels into the Waterview Bay Dry Dock (Mort's Dock) to repair...'.¹⁵⁵

Such issues were onerous to merchants such as Captain Robert Towns, who also thought that Fitzroy Dock should be available for public use, having been constructed by convict labour with public money. Competition with 'Mort's Dry Dock and the Patent Slips, the great results of free labour and private capital...' was

¹⁵¹ *Sydney Morning Herald*, 10 January 1860, p. 4.

¹⁵² *Empire*, 16 January 1860, p. 8.

¹⁵³ *Empire*, 17 January 1860, p. 5

¹⁵⁴ *Empire*, 20 April 1860, p. 5.

¹⁵⁵ *Empire*, 21 January 1860, p. 5.

seen as unjustifiable.¹⁵⁶ As a merchant and entrepreneur, Towns was, or had been, part owner of the old patent slip in King Street, a property he had purchased with Benjamin Darley in 1850. Although still operating, the old patent slip, referred to as Darley's Patent Slip, was now underperforming due to its age and required work to bring its capacity back up to 500 tons, according to evidence presented to a Select Committee of the LA in April 1860, although now surpassed by the A.S.N. Co.'s Patent Slip and Mort's Dock.¹⁵⁷

A petition by Captain Rountree, presented in January 1860 to the LA, did not support leasing Fitzroy Dock to other shipbuilders for reasons of 'unjust competition with private companies...' and that Mort's Dock, designed and built by him, had opened 18 months before Fitzroy Dock. Cuthbert, whose petition was presented to the LA in April 1860, agreed in principal with Rountree, but had 'prayed...' that if it were to be used for repairing private vessels, then this should only be 'by competitive tender and on an annual basis'.¹⁵⁸

These petitions and a third, submitted by Dr Lang, in support of private use on behalf of 79 people, including 'merchants, owners, agents, masters of vessels, shipwrights and others...' were discussed by a Select Committee of the LA, formed on 10 April 1860. The Select Committee questioned the petitioners and reviewed other evidence, including the conditions of use and charges. However, by May 1860, given that, as Cuthbert had stated, there was no evidence that Sir Charles Fitzroy had made a specific pledge that the dock should not be brought into competition, the Committee made a political decision. This was to continue public use without long term leasing, since they felt that 'under all the circumstances...' they did 'not feel justified in suggesting any specific alteration in the management of Fitzroy Dock'.¹⁵⁹

As Shipwright Surveyor to the NSW Steam Navigation Board, Cuthbert had also experienced controversy as an expert witness and surveyor. This position required Cuthbert to regularly survey steam vessels, such as the A.S.N. Co.'s *Shamrock* in 1854, for seaworthiness. However, he was also called as an expert witness in the cases of the steam-vessel *City of Melbourne*, damaged between Sydney and Brisbane, in August 1854 and the overloading of the steam ferry *Herald*, in August 1855.¹⁶⁰

¹⁵⁶ *Empire*, 8 March 1860, p. 2.

¹⁵⁷ 'Minutes of Evidence' before the Select Committee on the Fitzroy Dry Dock, pp. 1057- 1081 in *Votes and Proceedings of the NSW Legislative Assembly*, 1859-1860, Vol. 4, pp. 1062-1074; *Sydney Mail*, 9 March 1861, p. 5.

¹⁵⁸ *Sydney Morning Herald*, 13 June 1859, p. 7, 12 November 1859, p. 7, 13 February 1860, p. 6, and 4 April 1860, p. 5.

¹⁵⁹ *Empire*, 4 April 1860, p. 5, and 2 June 1860, p. 4; *Sydney Morning Herald*, 1 June 1860, p. 5; Petitions submitted to the Legislative Assembly regarding the use of Fitzroy Dry Dock, pp. 1051-1056, and 'Minutes of Evidence' taken before the Select Committee on the Fitzroy Dry Dock, pp. 1057-1081, in *Votes and Proceedings of the NSW Legislative Assembly*, 1859-1860, Vol. 4.

¹⁶⁰ *Empire*, 19 August 1854, p. 1; *Sydney Morning Herald*, 28 August 1854, p. 5, and 14 August 1855, p. 5; *Maitland Mercury and Hunter River General Advertiser*, 29 March 1854, pp. 2-3.

By 1860 Cuthbert had the largest workforce and shipyard in Sydney and extensive experience, as lessee of the A.S.N. Co.'s Patent Slip and a major repairer of naval vessels, in handling large vessels. In further developing his business Cuthbert had, by August 1860, made arrangements to use Mort's Dry Dock at Waterview Bay on a permanent basis, with a sub-lease from the P. and O. Co. as the principal lessee from Thomas Mort.¹⁶¹ Advertisements placed by Cuthbert at this time listed the services available, including mast-making and ship-smithing, shipbuilding and ship-repair, with dedicated access to both the A.S.N. Co.'s Patent Slip at Pyrmont and Mort's Dock at Balmain.¹⁶² Importantly, this new lease enabled Cuthbert to bypass the issues associated with the commercial use of Fitzroy Dock, although he continued to repair both naval and commercial vessels there.

The Milne's Wharf shipyard south of the Gas Works had been too small for some time, a large part of Cuthbert's business being conducted at 'the Dry-docks, at the Patent Slip and in other parts of the harbour...'.¹⁶³ In February 1858 Cuthbert had taken advantage of the sale of James Munn's shipyard at Millers Point, purchasing Lots 1 and 2 and the 3 adjacent wharf areas from the estate of the late James Munn Esq.¹⁶⁴ The new property at Millers Point comprised Munn's own house at 1 Munn Street and the adjacent building allotment above the wharf areas with 240 feet of frontage to the harbour and a depth of 200 feet above the high water mark.¹⁶⁵

Reclamation of seaward land and levelling of existing land, involving cut and fill and the construction of retaining and sea walls, took considerable resources. In addition to acquiring Munn's property Cuthbert also acquired other sections of waterfront land, including that of A. B. Sparke, one of the original primary grant holders, although further research is required in this respect. However, in October 1860, Cuthbert would advertise his new waterfront property at Millers Point to let, in whole or in part, the property advertised as 600 feet deep with a 500-foot water-frontage, after reclamation and excavation.¹⁶⁶ There appears to have been little interest in such a large property given the limited opportunities for growth in shipbuilding at that time.

The purchase had been based on the need for larger premises and freehold title. Both Munn and Cuthbert were respected shipbuilders and it was fitting that Cuthbert took over and eventually built on Munn's operation, albeit 11 years after Munn's death, although it was not until January 1861 that Cuthbert advertised that he had moved his operation to the new shipyard.¹⁶⁷

¹⁶¹ *Sydney Morning Herald*, 21 August 1860, p. 1, and 8 November 1865, p. 2.

¹⁶² *Sydney Morning Herald*, 8 September 1860, p. 1; *Empire*, 19 September 1860, p. 1.

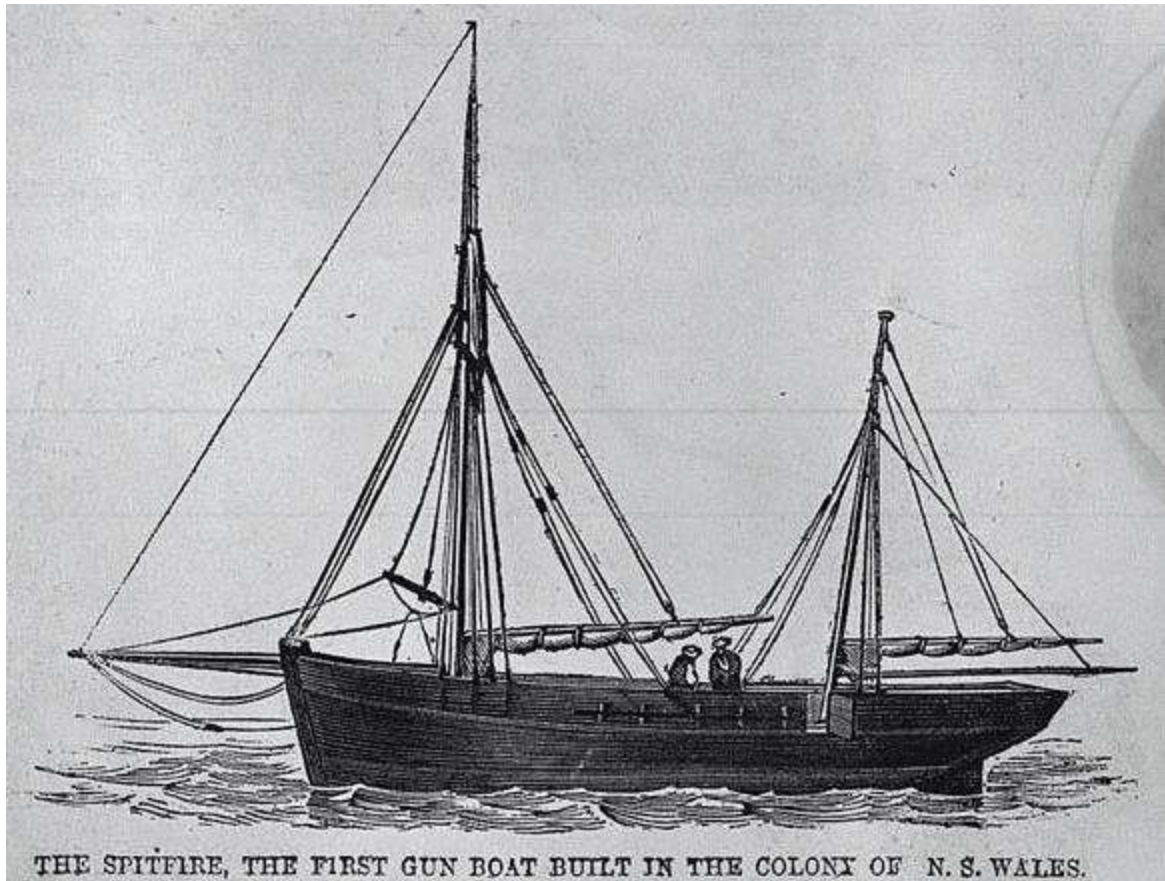
¹⁶³ *Sydney Morning Herald*, 21 May 1861, p. 5.

¹⁶⁴ *Sydney Morning Herald*, 10 December 1858, p. 4.

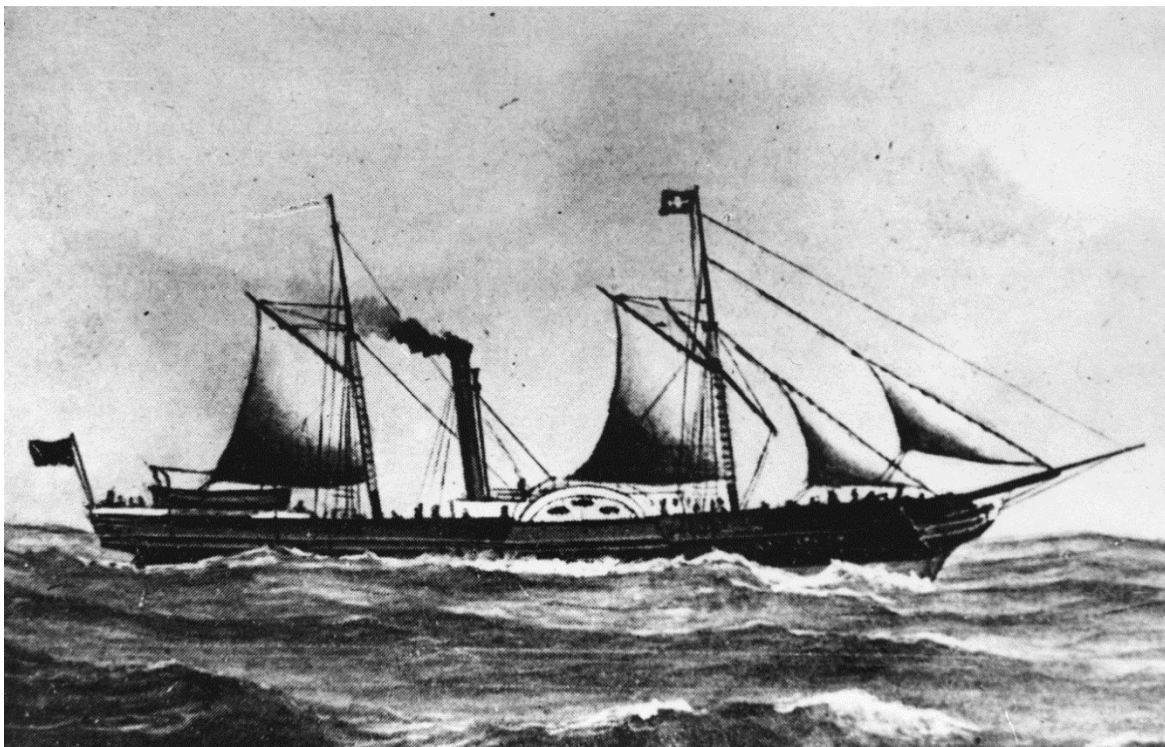
¹⁶⁵ *Sydney Morning Herald*, 9 February 1858, p. 7.

¹⁶⁶ *Empire*, 20 October 1860, p. 8.

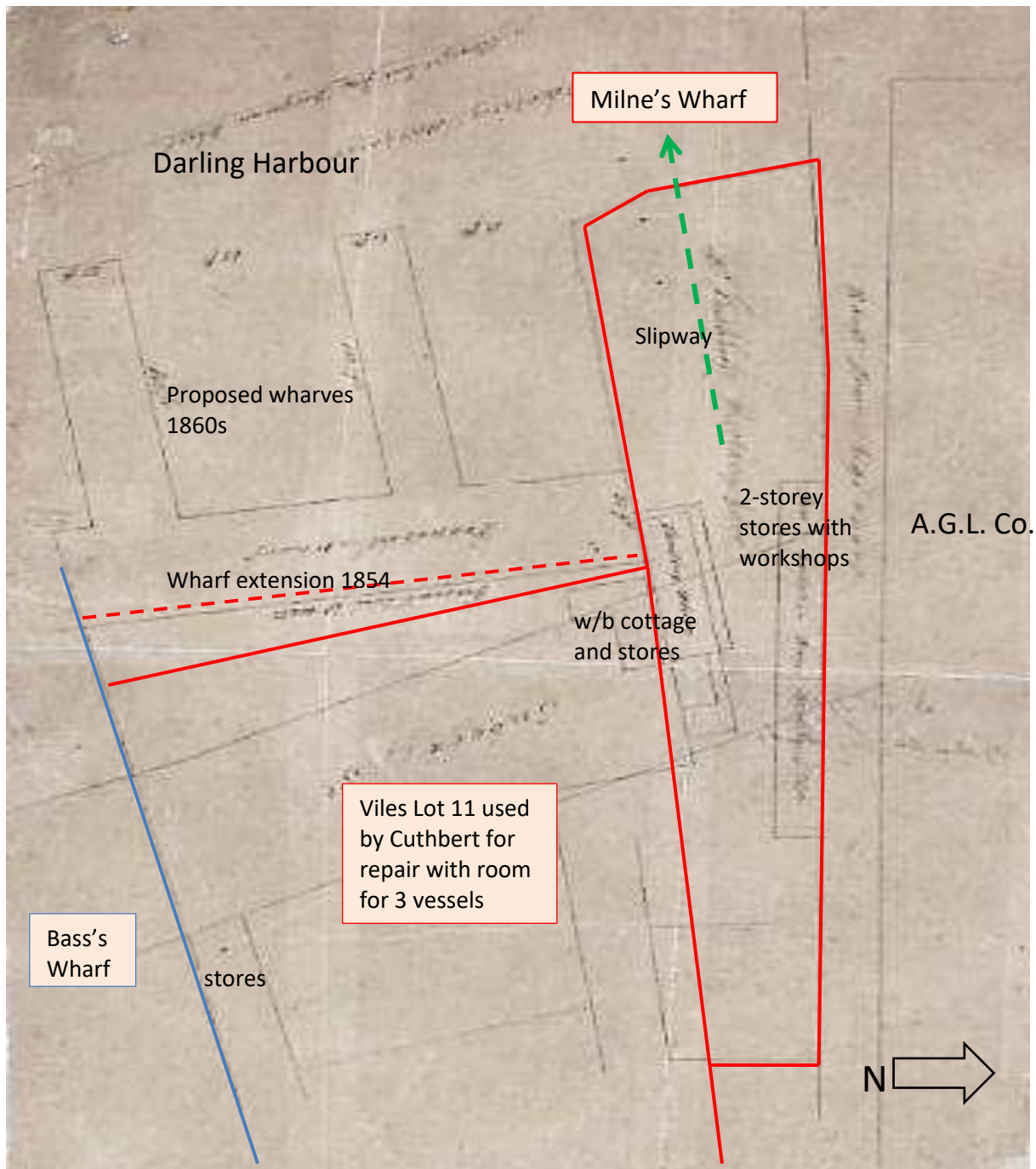
¹⁶⁷ *Sydney Morning Herald*, 23 February 1861, p. 12; *Empire*, 12 January 1861, p. 1.



H.M. gunboat *Spitfire* as illustrated in 1857. Source: National Library of Australia, Image 8.



The steamer *William IV* in 1857 after modification and refitting. Source: John Oxley Library State Library of Queensland, Image 25.



Milne's Wharf, Darling Harbour, used by Lawrence Corcoran from 1847-1849 and by John Cuthbert from 1853-1860. Cuthbert's use of Lot 11 is well documented, although there is no evidence for Corcoran's use of Lot 11, although likely. The boundary between Lot 11 and Milne's Wharf appears to have been drawn incorrectly in the undated (background) tracing, sketched for the purpose of new development after 1860 (not to scale).

Source: National Library of Australia, Image 9.



The A.G.L. Co. Gas Works at Darling Harbour with Milne's Wharf, John Cuthbert's first shipyard, to the right. The image, part of 'View of Millers Point and Darling Harbour', shows a vessel in-frame, on the stocks, and a stack of timber. To the right can be seen part of Bass's former shipyard site with terraced and 3 free-standing buildings. A large, dis-masted hulk, possibly the *Cameo*, bought by Cuthbert in 1856, is moored at the waterfront, extended in 1854, suggesting that the painting which this image is taken from dates to the period 1856-1860, when the site was being used by Cuthbert. However, this shipyard site was also used by Lawrence Corcoran from 1847-1849, when Cuthbert was his foreman, before Cuthbert opened a shipyard on the site in 1853. Cuthbert used the Milne's Wharf site and Lot 11 until the end of 1860, when he transferred his operation to Millers Point.

Source: Dixon Galleries, State Library of New South Wales, part of Image 17.



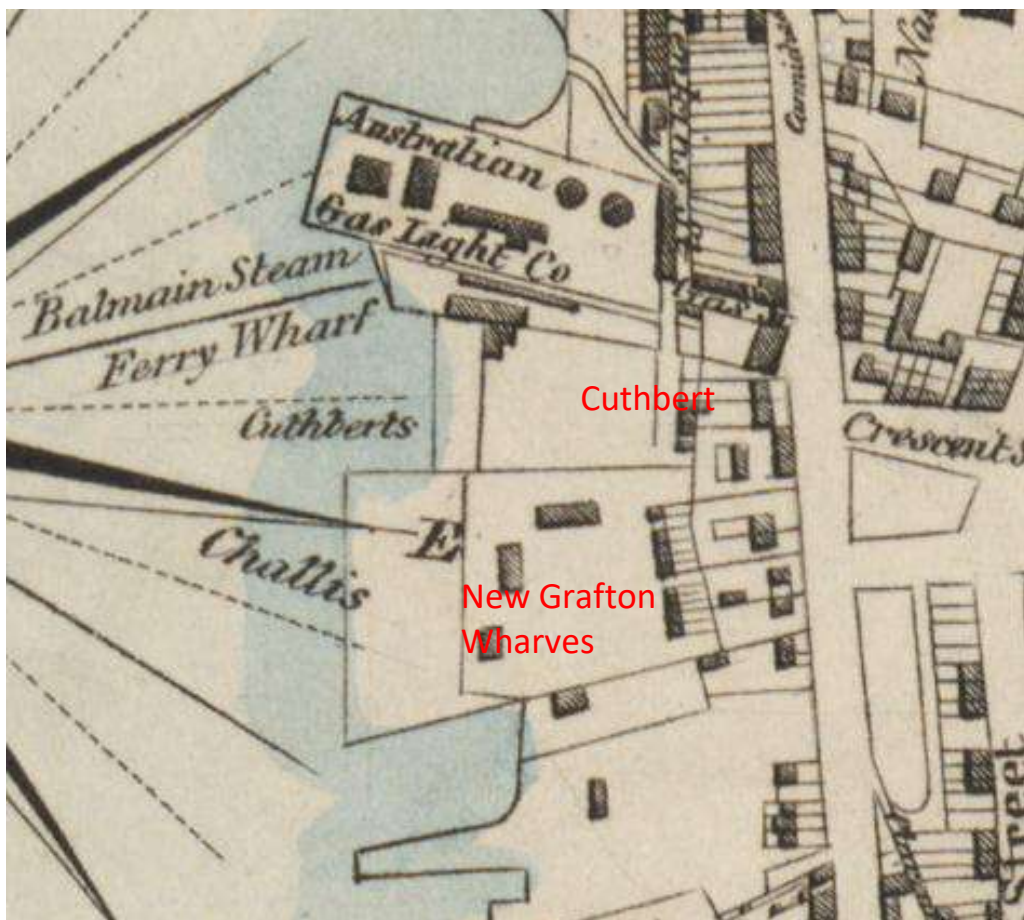
Map of Darling Harbour in 1854. The map shows (1) Waterview Bay, Balmain, site of Mort's Dock (1855); (2) A.S.N. Co. Engineering Depot and future Patent Slip (1855); (3) Bass's former shipyard; (4) Milne's Wharf (leased by Cuthbert) (5); Fotheringham's Patent Slip (1832); and (6) Munn's shipyard, the latter purchased in 1858 by Cuthbert (not to scale).

Source: State Library of New South Wales, Image 18.

The shipyards occupied jointly by Cuthbert from 1858-1860, showing the relative states of development and activity in 1854 (to the same scale). There had been little or no land reclamation by Munn at Millers Point compared to that on the neighbouring grants to Martin and Sparke to the east, used for housing. Munn had died in February 1848, the property then managed by executors until 1858. At Milne's Wharf, Cuthbert was unable to extend further into the harbour and had limited space behind (not to scale). Source: State Library of New South Wales, Image 18.



Munn's Millers Point Shipyard in 1854.



Cuthbert's Milne's Wharf Shipyard in 1854.



Millers Point, Darling Harbour, with James Munn's shipyard on the left, called Mill Port in the 1820s. This image is part of the painting 'View of Millers Point and Darling Harbour'. James Munn died in February 1848, the shipyard leased out to shipbuilder Kenneth Mathieson in 1851, although used for repairs and fitting out until the mid-1850s. Note that there is a dis-masted hull in the embayment formed by reclamation of Martin's grant, although the detail is poor. Since Cuthbert purchased Munn's shipyard in February 1858, he may have owned the Millers Point property when the painting was completed. However, in this respect, there are no obvious, new structures which might have been built by Cuthbert between February 1858 and January 1861, when he developed the new site. The image is part of a painting dated to the period 1856-1860 (refer to previous part image), when John Cuthbert was still operating at Milne's Wharf.

Source: Dixson galleries, State Library of New South Wales, part of Image 17.

3

Millers Point Shipyard January 1861-July 1867

After he completed his move to Millers Point in January 1861, Cuthbert proposed to construct a patent slip for vessels up to 1,000 tons at his new yard. Some 'docking apparatus...' had been wanted for some time, in consequence of 'the increasing number of ships entrusted to him for repair'. The area of the new shipyard had been levelled, with a wide road at the rear, supported by massive stonework, with the deep-water frontage faced with a stone wall 225 feet in length. On the northern half, the commercial wharf would include space for 2 vessels to dock as well as a storage hulk. The shipbuilding and repair yard on the southern half of the site was equipped with 3 slipways, a mould loft, blacksmith's shops, carpenter's sheds, sail lofts and every eventuality for building, repairing and fitting out vessels, including 2 steam-kilns, 40 and 60 feet long, for steaming planks.¹⁶⁸

In October 1862 Cuthbert applied to extend his shipyard 258 feet into the harbour by erecting a new wharf. This proposal was well beyond the boundaries of the commercial wharf and shipbuilding facilities completed before the launch of the steam-dredge *Lytton* in September 1861, but may relate to the construction of the floating jetty, which provided docking for 2 vessels and a storage hulk.¹⁶⁹ A powerful saw-mill, with a loft 170 feet x 40 feet for workshops above, would be added near the Clyde Street boundary by March 1865.¹⁷⁰

By 1863 John and Susannah Cuthbert appear to have been living at 1 Munn Street, Millers Point, Darling Harbour, having initially leased out the property. The 6-roomed, stone house, with a slate roof, had a detached kitchen, coach house, stable, walled yard and garden, and had been built by James Munn before 1844. The Cuthberts lived in the small, but comfortable house, facing the shipbuilding yard and Darling Harbour, close to the trade he loved. In addition, Cuthbert was recorded in 1861 as owning a number of houses in Unwin Street, which adjoined his yard.¹⁷¹

The extensive landholdings included part of James Munn's original land grant, part of Martin's grant and another part granted to A. B. Sparke, all of which had, by the 1860s, access to Darling Harbour and streets with the potential for housing. Criticism of Cuthbert for his reclamation of land at the public's expense and protests by

¹⁶⁸ *New South Wales Government Gazette*, Sydney, 19 April 1859, p. 873; *Sydney Mail*, 4 March 1865, p. 3; *Sydney Morning Herald*, 21 May 1861, p. 5, and 17 January 1874, p. 14; *Empire*, 6 June 1864, p. 5.

¹⁶⁹ *Sydney Morning Herald*, 21 September 1861, p. 8, and 29 October 1862, p. 5.

¹⁷⁰ *Sydney Morning Herald*, 26 June 1865, p. 4, and 27 December 1866, p. 8.

¹⁷¹ *Sydney Morning Herald*, 6 June 1860, p. 1; City of Sydney Archives, Assessment and Rates Books 1845-1948: Record 17/6/10A, Control CSA027328_072, Gipps, 1861, Books 1-9, Page 72, Unwin Street; Record 17/6/11, Control CSA027329_071, Gipps, 1863, Book 2, Page 2, 1 Munn Street; and Record 17/6/15, Control CSA027334_071, Gipps, 1871, Book 6, Page 6, 1 Munn Street.

Sydney Councillors, as to why the existing streets could not be taken across this land, were also matters he had to deal with. As Cuthbert was to explain, in his letter of 30 July 1863 to the Editor of the *Sydney Morning Herald*, he was able to reclaim land under the existing regulations if he did not interfere with shipping, nor had the Municipal Council offered to defray any of the £12,000 outlay he had incurred in setting up the new shipyard. In point-of-fact, Cuthbert acquired almost one and a half acres of new foreshore land for the sum of only £75, under the Crown Lands Alienation Act of 1861.¹⁷²

The steam-dredge *Lytton* was Cuthbert's first contract in the new shipyard. The joint tender from Cuthbert and P. N. Russell and Co., one of four, had been accepted in September 1860, with a 'penal bond of £1,000', the dredge to be delivered to Moreton Bay. Work was underway in the new shipyard by November 1860, with the vessel launched in September 1861 for the machinery to be fitted. The *Lytton* was built for the newly established Queensland Government, which, in the Legislative Assembly, had voted £10,500 for the steam-dredge in the Estimates. The dredge had a central well, 38 feet x 4 feet, for the bucket-ladder, which was supported 18 feet above the deck, with the machinery 'abaft the well...' With a builder's measurement of 330 tons, the length overall was 102 feet, the beam 26 feet and the hold 8 feet 6 inches in depth; the framing was of ironbark, with box, blackbutt and kauri pine planking. The 30 hp steam-engine and machinery, constructed at P. N. Russell and Co.'s foundry, would enable the dredge to remove 1,000 tons of sand and mud daily.¹⁷³

Described as eminent firms, the enterprises of P. N. Russell and Co. and Mr Cuthbert were considered to be the most 'qualified to undertake the task'. The design had been prepared by the Engineer for Harbours and Rivers in Sydney, before the separation of Queensland in December 1859. However, there had been considerable discussion as to whether an iron-hulled dredge should be built, given the life expectancy of timber-hulled dredges. Additional funds were voted for the steam-dredge *Lytton*, by the Legislative Assembly in Brisbane in May 1861. The funds included a £1,000 excess for the steam-dredge (the contract had been signed for £12,699) and £3,600 for 3 mud punts. The *Lytton*, which required a tender tug, was towed to Moreton Bay in July 1862 by the steamer *Yarra Yarra* with a single punt.¹⁷⁴

After the launch of the *Lytton* in September 1861, dignitaries, including Sir John Young, were shown over the shipbuilding yard by Cuthbert. Among the many items inspected was the 'beautifully modelled cutter yacht...' the *Peri*, being built for Mr C.

¹⁷² *Sydney Morning Herald*, 30 July 1863, p. 8; *Empire*, 19 August 1863, p. 6.

¹⁷³ *Sydney Morning Herald*, 25 November 1857, p. 5, 24 September 1860, p. 4, 21 May 1861, p. 5, 18 September 1861, p. 7, and 21 September 1861, p. 8; *Moreton Bay Courier*, 1 September 1860, p. 4, and 6 November 1860, p. 4; *Geelong Advertiser*, 10 July 1860, p. 3.

¹⁷⁴ *Sydney Morning Herald*, 24 September 1860, p. 5, 11 May 1861, p. 5, and 21 May 1861, p. 8; *Sydney Mail* 25 August 1860, p. 6; *Courier*, 24 July 1862, p. 2; *Rockhampton Bulletin and Central Queensland Advertiser*, 17 February 1870, p. 2.

Dangar.¹⁷⁵ Like Cuthbert's yacht *Enchantress*, raced successfully between 1856 and 1858, the *Peri* (18 tons) won its first race against the best boats in Sydney in February 1862.¹⁷⁶ The *Peri* was also sailed competitively against a much bigger boat, the *Xarifa* (31 tons), probably the best yacht produced in Sydney in the mid-1860s and built by specialist yacht builder Dan Sheehy of Woolloomooloo Bay.¹⁷⁷

Competition for work was still evident, with rivalry among the merchants and shipbuilders for government and other contracts. Cuthbert's position as Shipwright Surveyor was an onerous one, despite the remuneration, with his judgement often called into account, as was the case with the schooner *Sea Witch* in February 1862. Purchased for conversion to a Pilot Boat, the *Sea Witch* was to be altered to correct a curved keel, despite Cuthbert's survey stating that the keel was perfectly straight and level. The views of the Harbour Master, members of the Legislative Assembly and Captain Robert Towns were dismissed when, on docking the vessel, the keel was found to be just as Cuthbert had stated.¹⁷⁸

The matter of the *Sea Witch* resulted in a vituperative letter in October 1862, from merchant Captain Robert Towns, about Cuthbert's professional abilities as the Government's Shipwright Surveyor. In response, Cuthbert wrote that "if anything emanating from so excitable a gentleman could surprise me, it would...", and dispassionately dissected the events leading to the purchase. In concluding, Cuthbert asserted that he had 'never received a shilling of the Government's, nor any man's money, without giving him fair value for it...' and that Towns' letter used some 'very ridiculous phrases...' and that he ought not to talk 'falsely or disparagingly of his neighbour...'¹⁷⁹

The progress of shipbuilding in Sydney, before and after Cuthbert's move to Millers Point, had been limited in extent and scope and almost wholly confined to small coastal vessels, with steam-driven and iron vessels continuing to make inroads into traditional timber shipbuilding.¹⁸⁰ By July 1862, Cuthbert was trying to sell or lease his new shipbuilding yard, unsuccessfully, in the face of the downturn in business and the costs involved in developing his new establishment at Millers Point.¹⁸¹

However, in September 1862, Cuthbert renewed his sub-lease for Mort's Dock and the associated workshops, the P. and O. Co., as principal lessee, continuing to retain use of the Dock for 6 days in each month. A branch of the firm of P. N. Russell and Co. was also located in the Engine Works at Mort's Dock, the proprietors sub-leasing

¹⁷⁵ *Sydney Morning Herald*, 18 September 1861, p. 7

¹⁷⁶ *Sydney Mail*, 1 February 1862, p. 2.

¹⁷⁷ *Sydney Morning Herald*, 18 September 1861, p. 7, and 3 March 1865, p. 5; *Maitland Mercury and Hunter River General Advertiser*, 3 December 1861, p. 3; *Bell's Life in Sydney and Sporting Chronicle*, 1 February 1862, p. 4, and 18 August 1866, p. 2; *Sydney Mail*, 18 February 1865, p. 6, 24 November 1866, p. 9, and 24 November 1866, pp. 10-12

¹⁷⁸ *Sydney Morning Herald*, 29 February 1862, p. 4.

¹⁷⁹ *Empire*, 4 June 1862, p. 8, and 17 October 1862, p. 8; *Sydney Morning Herald*, 5 June 1862, p. 2.

¹⁸⁰ *Argus*, 26 September 1862, p. 7; *Sydney Morning Herald*, 21 May 1861, p. 5.

¹⁸¹ *Sydney Morning Herald*, 2 August 1862, p. 10.

from Cuthbert before June 1862, having had a working relationship with Cuthbert's firm for some time. The firm of P. N. Russell and Co. undertook metalworking and foundry casting, including the construction of iron vessels and the repair and construction of steam engines, and would play an important role in supporting Cuthbert's enterprise. Both P. N. Russell and Co. and Cuthbert advertised their new joint-venture and existing services in Sydney, Melbourne and Launceston, as well as other major ports.¹⁸² However, P. N. Russell and Co. was also in competition, the firm completing an iron steam-dredge for the Shoalhaven River in September 1862.¹⁸³

In June 1862, newspaper reports, in describing Cuthbert's leasing of the A.S.N. Co.'s Patent Slip and the Waterview Bay Dry Dock (Mort's Dock) had also painted a glowing picture of Cuthbert's enterprise. The associated engineering works of P. N. Russell and Co., at Mort's Dock, were available, enabling steamers or sailing ships to have equal facilities for repairing. In the 3 months to June 1862, 4 large steamers and 18 ships had been placed in Mort's Dock alone for repairs (15 of these have been included in the commercial repairs). The vessels amounted to over 15,000 tons of shipping, to which could be added the vessels under repair in the Government Dock, Fitzroy Dock, and at Cuthbert's shipbuilding yard at Millers Point.¹⁸⁴

Towards the end of 1862 the industry appears to have improved significantly, Cuthbert advertising his new shipbuilding yard as open for business as usual:

TO SHIPOWNERS, Steam Ship Proprietors, Captains and agents. — The undersigned having become the lessee of Mort's DRY DOCK (capable of taking in ships of the largest tonnage), in addition to his establishment in Darling Harbour and the Pyrmont Patent Slip, is now prepared to execute with economy and dispatch any orders with which he may be entrusted. An efficient staff of shipwrights, caulkers, shipsmiths, and other mechanics connected with shipping, constantly employed. Muntz metal, spars, and timber of every description always on hand.

JOHN CUTHBERT, ship builder, &c, Darling Harbour.

Office – Cuthbert's Wharf, Millers Point, Darling Harbour.¹⁸⁵

Other work followed and Cuthbert soon began to get a reputation for building steam vessels. The large, screw-driven steamers required by the steam navigation companies had usually been built to order in Britain, in ports such as Glasgow, although by the early 1860s the first such vessels were underway in Sydney, powered by engines developed at the A.S.N. Co.'s works at Pyrmont, by the Chapman Brothers and by the firm of P. N. Russell and Co..¹⁸⁶ By August 1864 there were 105

¹⁸² *Sydney Morning Herald*, 20 August 1864, p. 9, 21 March 1865, p. 5, 21 April 1865, p. 5, and 8 November 1865, p. 2; *Age*, 8 July 1862, p. 6; *Launceston Examiner*, 8 July 1862, p. 6; *Sydney Mail*, 22 April 1865, p. 6.

¹⁸³ *Sydney Morning Herald*, 20 September 1862, pp. 8-9.

¹⁸⁴ *Maitland Mercury and Hunter River General Advertiser*, 24 June 1862, p. 3.

¹⁸⁵ *Sydney Morning Herald*, 1 November 1862, p. 1.

¹⁸⁶ *Argus*, 26 September 1862, p. 7.

steam-powered vessels, of both iron and timber construction, connected with the port of Sydney, including 4 vessels built by Cuthbert.¹⁸⁷

Something of an authority on steam-dredges by now, Cuthbert won the contract to build the 3 mud punts for the steam-dredge *Lytton* for £2,850, as well as the contract for 2 mud punts for the Shoalhaven River steam-dredge.¹⁸⁸ In October 1862, the *Sydney Morning Herald* reported that Cuthbert's establishment at Millers Point had a large amount of work in hand. A screw-driven collier was under construction, with the keel of a second also laid down. Five large punts were under construction, with the *Sharmut*, an American ship of 1,000 tons, receiving extensive repairs, the vessel having gone ashore in New Zealand; more than 180 men were employed in the establishment at this time.¹⁸⁹

A small steam ferry, fast approaching completion at Cuthbert's shipbuilding yard, had been reported in May 1862 by the *Empire* as a 'remarkably pretty model...', '[which would] prove very fast for her size...', when operating between Sydney and Milson's Point, and was about to receive 'her engines...'. The vessel was the carvel-built *Kirribilli*, driven by a 6 hp engine(s) and registered as 8 tons; the ferry was reported variously as able to carry 30 or 60 passengers, although 30 appears more likely¹⁹⁰. The *Empire* reported in October 1862 that Cuthbert's shipbuilding yard had 5 or 6 vessels on the stocks, plus a small steamer ready for launching, to be used as a ferry for the north shore¹⁹¹. It is unclear whether this was the *Kirribilli*, although the number of steam vessels built by Cuthbert to 21 March 1865, reported as 7, suggests that this was the same vessel.¹⁹²

The North Shore Steam [Ferry] Company had begun operations in 1855 from Circular Quay, although defunct by July 1860.¹⁹³ A ferry service then ran irregularly until January 1863, when a new ferry company was proposed due to the poor service. The first ferry operated by the new North Shore Ferry Co. (principal investors James Milson, Charles Firth, Francis Lord and William Tucker), was the *Kirribilli*, 8 tons, which had been built by Cuthbert in the year leading up to the formation of the company. The *Kirribilli* began operating from Circular Quay to Milson's Point in April 1863, the steamer *Alexandra* also operating from March 1864.¹⁹⁴

¹⁸⁷ *Australian News for Home Readers*, 25 August 1864, p. 16.

¹⁸⁸ *Sydney Mail*, 6 September 1862, p. 3; *Sydney Morning Herald*, 11 May 1861, p. 5; *Rockhampton Bulletin and Central Queensland Advertiser*, 17 February 1870, p. 2.

¹⁸⁹ *Sydney Morning Herald*, 21 October 1862, p. 9.

¹⁹⁰ *Evening News*, 4 April 1879, p. 1; *Sydney Morning Herald*, 28 July 1864, p. 4, and 27 July 1871, p. 1; *Sydney Mail*, 3 May 1862, p. 5.

¹⁹¹ *Empire*, 18 October 1862, p. 5.

¹⁹² *Sydney Morning Herald*, 21 March 1865, p. 3.

¹⁹³ *Sydney Morning Herald*, 19 January 1858, p. 5; *Freemans Journal*, 18 July 1860, p. 3.

¹⁹⁴ *Sydney Mail*, 3 May 1862, p. 5, and 18 April 1863, p. 9; *Sydney Morning Herald*, 12 December 1862, p. 8, 11 April 1863, p. 1, 28 July 1864, p. 4, 27 July 1871, p. 1, and 19 March 1932, p. 7; *Empire*, 7 March 1864, p. 1.

The auxiliary, steam-powered colliers under construction followed Cuthbert's decision to build a fleet of timber, screw-driven colliers. The schooner-rigged vessels were to have a 19-foot beam and a 125-foot keel, with a hold 10 feet deep, and were to be built with 2 layers of diagonally-laid, kauri-pine planking. Designed to carry 200 tons of cargo with a loaded draught of 7 feet, the engine and other machinery were to be supplied by P. N. Russell and Co. A company of 'eight gentlemen extensively engaged in mercantile pursuits in Sydney...' had been formed by October 1862 to fund the first vessel, to be built under Cuthbert's direction.¹⁹⁵ The company comprised Messrs Metcalfe, Norris, Milson, [P. N.] Russell, Murnin, Brewster, Cape and Cuthbert, with the vessel insured for £6,200.¹⁹⁶

According to contemporary reports, the first auxiliary collier, the 136 ton (steam register) *Commodore Burnett* (renamed *Pluto* in May 1863), launched in February 1863, was the first, screw-driven vessel built entirely in the Australian colonies, and was intended for the coal trade between Sydney and Newcastle. The trial trip of the *Commodore Burnett/Pluto* was in May 1863, after the 40 hp engine and 3-bladed screw had been fitted and the vessel schooner rigged. In addition to the diagonally laid planking, the timber-framed vessel employed iron knees between the deck beams and keelsons for extra strength.¹⁹⁷ After 9 successful trips between Sydney and Newcastle, the vessel, despite being described as first class, was a total loss at sea during a disastrous, southerly storm in June 1863.¹⁹⁸

On 2 December 1863 the *Susannah Cuthbert*, the second collier, was launched from Cuthbert's shipyard. Rigged as a 3-masted schooner, the vessel was fastened more strongly than its sister ship, the *Pluto*, and had a 50 hp engine. Of similar dimensions to the *Pluto*, the main deck was flush fore-and-aft, with cabins fore-and-aft for crew and officers and with room on deck for further cabin accommodation. Under canvas the average speed was 12 knots and under steam the vessel approached 9 knots. The *Susannah Cuthbert*, wholly owned by Cuthbert, was sold for £5,500 to the Clarence and New England Steam Navigation Co. in April 1865.¹⁹⁹

Six months later, on 6 June 1864, the *Empire* reported that the works in progress at the shipbuilding yard included: a steam-tug for the dredge at Newcastle, to be launched in 3-4 weeks; a cargo-boat of 70 tons for the Clarence and Richmond River Company; and main and fore-masts, 90 and 92 feet overall of kauri pine and hardwood, with yards, for the P. and O. Co.'s mail-steamer *Northam*.²⁰⁰ The cargo-boat was in fact a cargo punt, ready for launching in July 1864, as was the

¹⁹⁵ *Sydney Morning Herald*, 20 September 1862, pp. 8-9, 21 October 1862, p. 9, and 21 February 1863, p. 4.

¹⁹⁶ *Maryborough Chronicle, Wide Bay and Burnett Advertiser*, 9 July 1863, p. 1.

¹⁹⁷ *Sydney Morning Herald*, 16 May 1863, p. 4, and 21 February 1863, p. 4; *Newcastle Chronicle and Hunter River District News*, 9 May 1863, p. 4.

¹⁹⁸ *Maryborough Chronicle, Wide Bay and Burnett Advertiser*, 9 July 1863, p. 1.

¹⁹⁹ *Sydney Morning Herald*, 5 December 1863, p. 1; *Queanbeyan Age and General Advertiser*, 3 December 1863, p. 2; *Empire*, 21 December 1863, p. 3; *Rockhampton Bulletin and Central Queensland Advertiser*, 28 January 1864, p. 4; *Armidale Express and New England Advertiser*, 29 April 1865, p. 3.

²⁰⁰ *Empire*, 6 June 1864, p. 5; *Sydney Morning Herald*, 6 June 1864, p. 4.

Government steam-tug *Cyclops*.²⁰¹ Two steam-driven vessels for the Illawarra Steam Navigation Company (I.S.N. Co.), built in association with P. N. Russell and Co., followed the steam-tug, the 3 vessels demonstrating the importance of the coastal shipping-trade with Sydney and its expansion into the shallow coastal rivers.

Launched in July 1864, the Government steam-tug *Cyclops*, built of hardwood with diagonal, iron bracing, was designed to help in keeping the port of Newcastle open. The tug was to act as a tender to the iron steam-dredge being constructed by P. N. Russell and Co., the firm which also built the engines to power the side-mounted, paddle-wheels. At 90 feet in length with a 16-foot beam and an 8-foot deep hold, the vessel had a draft of 4 feet, ideally suited to harbour and river work. Soon after the launching of the *Cyclops*, to have the oscillating engines fitted, the keel of the first of 2 paddle-steamers was laid for the I.S.N. Co.²⁰²

The first of the I.S.N. Co.'s paddle-steamers, the *Comerang*, was commissioned from Cuthbert to replace the *Mynora*, a vessel lost at sea. According to the I.S.N. Co.'s Board, this was for two reasons: firstly that the vessel might be constructed to suite local conditions; and secondly that time would be saved compared to building a vessel in England. Launched by Mrs Cuthbert in January 1865, after 4 months construction, the frame was built using hardwood and iron to create a 'composition ship', much as was being done in Europe. The frames and beams of colonial hardwood were diagonally trussed with iron and the hull strengthened inside with iron strapping and knees. The vessel was to be driven by side paddle-wheels, powered by 2 steam-engines built by Stewart and Co. in London. Flat-bottomed, the vessel was 145 feet at the keel, with a 22-foot beam and a hold 7 feet deep; the vessel was rated at 400 tons, builder's measurement, could carry up to 300 tons of cargo and drew 4-5 feet of water when fully loaded.²⁰³

The second paddle-steamer built for the I.S.N. Co., also a river vessel, the *Coolangatta*, was commissioned specifically for the Shoalhaven River trade. Completed in 3 months and launched in June 1865, the *Coolangatta*, driven by a stern-mounted paddle-wheel, was to be fitted with 2 engines constructed by Chapman Brothers of Sydney. Sponsons ran fore and aft, increasing the deck cargo space. The vessel, 100 feet at the keel with an 18-foot beam and 5 feet 6 inch deep hold and a draft of 2 feet, was rated at 87 tons gross, 67 tons net. The timber used in its construction (no details identified) was cut using the steam saw-mills just erected by P. N. Russell and Co. in Cuthbert's shipyard; the *Coolangatta* was the first vessel to be built by Cuthbert using timber cut this way in his shipyard.²⁰⁴

²⁰¹ *Empire*, 7 July 1864, p. 4.

²⁰² *Maitland Mercury and Hunter River General Advertiser*, 23 April 1864, p. 3; *Sydney Morning Herald*, 7 July 1864, p. 4; *Empire*, 21 July 1864, pp. 2-3.

²⁰³ *Sydney Morning Herald*, 18 February 1865, p. 8, and 26 October 1865, p. 1; *Empire*, 24 January 1865, p. 4; *Illustrated Sydney News*, 16 February 1865, pp. 5, 8.

²⁰⁴ *Sydney Morning Herald*, 26 June 1865, p. 4, and 21 July 1865, p. 5.

Speculative vessels continued to be built in the Millers Point shipyard. The clipper ketch *Teal* was advertised for sale in February 1865 as 'coppered and copper fastened...with a centreboard, and all the newest improvements...carries 55 tons on 4 ½ feet of water, and is a remarkably fast sailer'.²⁰⁵ For more practical small craft Cuthbert seems to have sought tenders, e.g. 6 boats were required in July 1864, perhaps for completing large vessels under construction in his yard.²⁰⁶

The brigantine-rigged, clipper schooner *Zephyr*, launched in December 1866, appears to have been the last of Cuthbert's speculative, commercial vessels, and the largest schooner built in his yards. At 118 feet overall, with a beam of 22 feet and hold 10 feet 6 inches deep, the vessel was generally listed as of 210 tons burthen, although able to take up to 250 tons of general cargo. The hull, of well-seasoned timber, was framed and planked with hardwood to the bilges, but with kauri pine planking above the bilges. A good sea boat, the *Zephyr* was tested on its first run, leaving Sydney in September 1867, for Shanghai, China, calling in at 2 ports en-route the voyage taking 4 ½ months with cargo. On the return voyage from Foo-Chow, in February 1868, the schooner was caught in severe storms outside Sydney although the cargo of tea suffered no damage.²⁰⁷ The *Zephyr* was advertised as 'For Sale, Freight or Charter' and was sold in April 1868 to the firm of James Chesney and Co. for £2,000 for the New Zealand trade.²⁰⁸

The repair side of Cuthbert's business continued to be profitable, his enterprise dealing with 62 known, reported commercial vessels and 31 naval vessels under repair or docked for repairs, based on reports in the newspapers between January 1861 and July 1867. The actual number of commercial repairs was probably much higher, given the limited coverage of such newspaper reports. Many naval and merchant vessels from overseas were also of much larger than average tonnage, perhaps accounting for a reduction in the number of vessels repaired.

The 62 known, commercial vessels repaired during this period included an estimated 13 speculative purchases for charter, lease and sale. Among Cuthbert's purchases were the screw-yacht *Sir John Burgoyne*, purchased in Melbourne in December 1864, and the clipper brigantine *Sarah Ann*, purchased in Sydney in August 1862. The *Sir John Burgoyne*, 110 tons, rigged as a clipper schooner was overhauled and the engines repaired by P. N. Russell and Co. at considerable cost, perhaps reflecting poor judgement. However, the *Sarah Ann* was quickly chartered by the '[British] Imperial Government' to convey stores to the new settlement at Port Denison in Western Australia, after being offered for sale, lease or charter.²⁰⁹

²⁰⁵ *Sydney Morning Herald*, 28 February 1865, p. 1, and 3 April 1865, p. 7.

²⁰⁶ *Sydney Morning Herald*, 18 July 1864, p. 1.

²⁰⁷ *Sydney Morning Herald*, 17 February 1868, p. 4, and 1 April 1868, p. 7.

²⁰⁸ *Sydney Morning Herald*, 12 December 1866, p. 4, 11 July 1867, p. 1, 28 September 1867, p. 6, 25 January 1868, p.3, 17 February 1868, p. 4, and 1 April 1868, p. 7.

²⁰⁹ *Sydney Mail*, 5 November 1864, p. 9; *Sydney Morning Herald*, 23 August 1862, p. 6, and 2 August 1862, p. 8; State Library of NSW, Bank of Australia Records 1826-1894, ML MSS. 1591, Item V111 Records of John

A much bigger proposition was the ship *Anglo-Indian*, 1,500 tons, which had been sold on the orders of the Vice-Admiralty Court, to offset counter claims as to pay and responsibility for damage between the owners, captain and crew. With serious damage to the hull and deck beams, the ship was purchased in January 1867 by Cuthbert for £1,180. Built of the best 'hackmitach and oak...' the hull was strengthened by Cuthbert with colonial hardwood and refastened wherever defects were found due to the heavy straining suffered. Before the works the 'hull was opened-out and thoroughly examined by the most competent surveyors in the colony...'. The ship was to be laid on for London within a few weeks, Cuthbert's name being sufficient 'guarantee of good workmanship and material'. On the last day of June 1867, the ship *Anglo-Indian* was towed to the Sydney Heads fully-laden and bound for London, with 3 cheers being given for Mr Cuthbert.²¹⁰

The returns made by Cuthbert from trading ventures, with vessels such as the schooner *Rebecca*, 105 tons, may well have helped to fund the purchase, in August 1862, of the brigantine *Sarah Ann*, 135 tons, 8-100 tons register, built in 1849 in Pattison in the United States. The *Rebecca* had just arrived back from the South Sea Islands with 1,700 lb of tortoiseshell, 10 tons of pearl shell and 5 tuns (barrels) of superior, humpback whale-oil. Jointly owned by Cuthbert and Captain Devlin, the auctioneers, Messrs W. Dean & Co., were instructed to sell the *Rebecca's* cargo on the vessel's return. Subsequently, the *Rebecca* was sold in December 1862 for £720, the final cargo of tortoiseshell and pearl shell selling for 10 shillings per pound and £9 5s 0d per ton respectively at auction.²¹¹

During this period Cuthbert's enterprise recovered 3 wrecked/ sunken vessels on the basis of salvage tenders or by arrangement with the owners and underwriters, including purchase for repair and sale. Cuthbert would raise the following vessels: the *Medway*, 612 tons, in 1863, scuttled with the cargo on fire;²¹² the barque *Ada*, with 500 tons of coal, sunk near Garden Island, in 1865;²¹³ and the barque *Esk*, wrecked at Miner's Point, in 1866.²¹⁴ In September 1861 Cuthbert had offered to raise the *Sovereign of the Seas*, scuttled in shallow water in Sydney Harbour, although his offer was not accepted.²¹⁵ The issues surrounding salvage were revealed in a letter by Cuthbert to the *Sydney Morning Herald* in September 1861, in response to an editorial letter.

Cuthbert, 1868-1873; being an invoice book re-shipbuilding business (Vol. ML MSS. 1591/14) pp. 16/2 and 17/A.

²¹⁰ *Sydney Morning Herald*, 23 July 1866, p. 8, 22 January 1867, p. 4, 9 February 1867, p. 5, 1 March 1867, p. 3, and 1 July 1867, p. 4.

²¹¹ *Sydney Morning Herald*, 5 January 1861, p. 2, 12 October 1861, p. 6, 2 August 1862, p. 8, and 3 December 1862, p. 8.

²¹² *Sydney Morning Herald*, 6 June 1863, pp. 7-8; *Sydney Mail*, 30 May 1863, p. 9.

²¹³ *Freeman's Journal*, 6 June 1865, pp.7-8; *Illustrated Sydney News*, 16 September 1865, p. 4.

²¹⁴ *Clarence and Richmond Examiner and New England Advertiser*, 24 July 1866, p. 2; *Illustrated Sydney News*, 15 September 1866, p. 3

²¹⁵ *Argus*, 26 September 1862, p. 7; *Empire*, 24 September 1861, p. 4.

RAISING THE SOVEREIGN OF THE SEAS

To the Editor of the Herald

Sir, -- I observe in your contemporary a report respecting the raising of the above-named ill-fated ship, I cannot, in justice to myself, allow such a statement to go forth to the world un-contradicted. At the same time, allow me to say distinctly that I do not mean in any way to detract from the credit due to captain McKay for the very able manner in which he has acted in connection with raising the *Sovereign of the Seas*. I will take notice of what concerns myself and the other tradesmen of Sydney. The report contains the following statements:-

No. 1—"To raise her from her present position has puzzled the ingenuity of everyone consulted on the subject."

No. 2—"A great many suggestions were offered and plans sent in, but all, or nearly all, bore the mark of impracticability about them."

No. 3—"Under the old system of raising vessels it would have taken full 3 months to accomplish what was done by Captain McKay's method in 3 days."

No. 4—"Hence the value of the saving of at least 1 month in time in raising the *Sovereign of the Seas*."

With reference to the above statements I beg to inform you that: -

1st It never puzzled me how to raise her.

2nd That I never offered a suggestion or sent in a plan.

3rd and 4th. I offered to raise the vessel and have all the cargo, stores, gear &c, discharged on Campbell's Wharf, within 4 weeks from Tuesday last, the 17th September.

I have the honour to be, Sir, yours respectfully,

JOHN CUTHBERT, shipbuilder.

September 23²¹⁶

The wreck of the barque *Ada*, purchased by Cuthbert for £500 in July 1865, illustrates the traditional method used to raise a vessel from the bottom, in this case 11 fathoms. To move the wreck to shallower water, 2 large hulks were positioned on either side, connected by large cross-beams. Normally heavy cables were passed under such a wrecked vessel by sweeping, but in this case a strong cable was passed around the vessel, under the tuck, with 'purchases' then fastened to the heavy cross-beams. A diver, Mr McNab, was probably employed in positioning the cables. At low water the purchases were tightened and as the tide rose the submerged vessel also rose several feet, being towed into progressively shallower water by steam tugs after each tide. The hull was then temporarily patched, the deck being far above the water, before towing the vessel to his shipyard, where the water was pumped out, the cargo removed and the vessel repaired.²¹⁷

²¹⁶ *Sydney Morning Herald*, 24 September 1861, p. 4.

²¹⁷ *Freemans Journal*, 6 June 1865, pp. 7-8; *Illustrated Sydney News*, 16 September 1865, p. 4.

Many of the overhauls and repairs to smaller, commercial vessels required repairs to the masts, yards, decking and copper sheathing, which could be done fairly quickly by Cuthbert's workforce in the Millers Point shipyard or at the A.S.N. Co.'s Patent Slip. Cuthbert maximised his returns by using Fitzroy Dock in conjunction with Mort's Dock and the A.S.N. Co.'s Patent Slip, both of which he leased until 1864, for repairing some commercial vessels. In November 1862 the *Sydney Morning Herald* reported that Mr Cuthbert had, on 7 November, docked the French ship *Afrique and Madeira* in Fitzroy Dock and placed the barque *Elizabeth* and steamer *Breadalbane* in Mort's Dock at Waterview Bay.²¹⁸ However, tenders for rigging the *Prince Consort*, under repair, were called in July 1864, suggesting that some specialist tasks were outsourced.²¹⁹

Cuthbert had continued to lease Mort's Dock, renewing his lease in 1864, but early in 1866, when the P. and O. Co.'s lease with Thomas Mort collapsed, he lost his dedicated use of the facility.²²⁰ His proprietorial interests, through leasing, were stated in advertisements of the day when the dock had often been referred to as 'Cuthbert's Dry Dock'.²²¹ Unimpeded access to dry docks and patent slipways was becoming more difficult for Cuthbert with competition increasing.

Cuthbert had also lost his lease over the A.S.N. Co.'s Patent Slip at Pyrmont by June 1864, when the A.S.N. Co.'s Pyrmont works were adapted for engineering and shipbuilding works.²²² Rather than building a new patent slip at Millers Point, as he had proposed earlier, he obtained a 10-year 'improvement lease' over the old Patent Slip on King Street. Captain Darley, co-owner of the Patent Slip, had died in June 1864, when his interest and that of Captain Towns appear to have been acquired by the I.S.N. Co.²²³

In January 1865, Cuthbert advertised that he had become the proprietor of the old Patent Slip at the bottom of King Street, increasing the capacity from 200 to 500 tons by November 1865 and then to 600 tons by December 1866; the changes required new 'groundways...' and a new iron cradle.²²⁴ The old Patent Slip, maximum load 200 tons, had been charged out at '1 shilling per ton and 6 pence per ton per day slip-hire' in 1859, based on the registered tonnage. When improved by Cuthbert to take 600 tons, the return was of the order of £1,000 per annum.²²⁵ The *Emile*, a French barque of over 500 tons, was the largest vessel ever taken on the improved slip,

²¹⁸ *Sydney Morning Herald*, 8 November 1862, p. 4.

²¹⁹ *Sydney Morning Herald*, 18 July 1864, p. 1.

²²⁰ *Sydney Morning Herald*, 9 January 1864, p. 1, 8 November 1865, p. 2, and 9 June 1868, p. 5.

²²¹ *Sydney Morning Herald*, 7 January 1865, p. 6, and 16 January 1866, p. 1.

²²² *Empire*, 6 June 1864, p. 5.

²²³ *Clarence and Richmond Examiner and New England Advertiser*, 28, June 1864, p. 3; *Sydney Morning Herald*, 3 February 1869, p. 6.

²²⁴ *Sydney Morning Herald*, 28 January 1865, p. 10, 1 March 1865, p. 5, 21 November 1865, p. 4, and 27 December 1866, p. 8.

²²⁵ *Sydney Morning Herald*, 6 August 1859, p. 1, and 23 April 1872, p. 7.

when, in January 1867, the ship was re-caulked and coppered, the vessel being ready for repair within 1 hour of taking on the Patent Slip.²²⁶

In January 1866, Thomas Mort, the owner of Mort's Dry Dock, formed an 'Engineering and Shipwright's Establishment' with Thomas McArthur, for shipbuilding, engineering and foundry work, and by 1868 had completed a patent slip. Thomas McArthur had been the Superintendent of the A.S.N. Co. Patent Slip at Pyrmont, having a close working relationship with Cuthbert, until he joined Thomas Mort at Waterview Bay. The new company, Messrs Mort and McArthur, quickly became competitive and capable of delivering not just iron vessels, but timber vessels and marine steam engines, quickly marginalising other shipbuilders in its operation of a dedicated dry dock and a new patent slip, under construction in June 1868 with ways over 740 feet long of ironbark. The carriage was 200 feet long and capable of carrying vessels of up to 1,500 tons.²²⁷

A Floating Dock had been completed in December 1862 by Messrs Hely, [Drake] and Harper, north of the A.G.L. Co.'s Gas Works, which was seen as second in importance to the A.S.N. Co.'s patent slip by 1865. As early as June 1864 Cuthbert had proposed building a floating dock to take lighter vessels, given the competition from Messrs Hely and Harper's shipyard and floating dock, although this was never completed.²²⁸ Ship-owners and shipbuilders had had access to a floating dock as early as 1856 at Williamstown in Victoria, Sydney behind for some years.²²⁹

At least 10 large, commercial vessels and 6 naval vessels have been identified as surveyed, repaired and re-fitted by Cuthbert in 1866. The heavy workload carried by Cuthbert's enterprise is clearly illustrated by descriptions in the newspapers of the naval and commercial work at his Millers Point shipyard, at Fitzroy Dock on Cockatoo Island and at his Patent Slip in Sussex Street. A report of the activity at 'Cuthbert's Ship-Building Yard' in July 1866 sets the scene:

The resources of this establishment have been fully employed during the past month. H.M. ship *Curacoa*, 21guns, Commodore Sir W. Wiseman, has undergone a thorough overhaul, and been caulked and partially re-coppered. H.M.S. *Eclipse* has been in hand some time [at Fitzroy Dock]...The ship *Flying Cloud*, [a Black Ball liner] of 1,400 tons, has been placed in [Fitzroy] dock and supplied with a portion of false keel, and decks caulked...The *Kestrel*, barque, 495 tons, is now under repair. The steamship *Hero*, 700 tons, is in the Fitzroy Dry Dock, being cleaned and placed in a thorough state of efficiency...The *Inspector Puls*, [barque] 349 tons, has been in the Patent Slip, Sussex Street, and was caulked and re-coppered, and is now alongside the yard completing the necessary repairs. The

²²⁶ *Sydney Morning Herald*, 5 January 1867, p. 4.

²²⁷ NSW Government, Office of Environment and Heritage, Heritage Item Details, Mort's Dock, sighted online on 15 September 2015; *Sydney Morning Herald*, 27 January 1866, p. 4, and 9 June 1868, p.5; *Maitland Mercury and Hunter River General Advertiser*, 29 July 1869, p.3.

²²⁸ *Empire*, 6 June 1864, p. 5; *Sydney Morning Herald*, 21 March 1865, p. 5.

²²⁹ *Sydney Gazette and Sydney General Trade List*, 26 May 1856, p. 105.

clipper barque *Charlotte Andrews* [barque, 356 tons] is now on the slip and will be re-coppered etc.²³⁰

Large commercial ships, such as the steamship *Hero*, 700 tons, and the American-built clipper *Flying Cloud*, 1,400 tons, were taken into the Fitzroy Dock, as well as most naval vessels. This continued the arrangements made in 1860, whereby commercial vessels could be placed in the dock for short periods with the permission of the Superintendent of the Dock. Amongst the larger, mercantile vessels repaired were: the *King of Italy*, 1,363 tons and 245 feet in length, placed in Fitzroy Dock in July 1866; and the *Great Pacific*, 2,088 tons and 270 feet in length, placed in the Fitzroy Dock in March 1867. The repairs to both vessels tell us something of Cuthbert's problem-solving skills and expertise.

The clipper ship *King of Italy* required re-fastening of the hull, because the 'ship [was] hogged forward and leaking badly - in fact, a general weakness was evident throughout the hull...' The work was described as requiring:

2 sister keelsons, 60 feet long by 15 inches square, placed from the foremast section, leading aft from these keelsons; leading to the lower deck beams, are 5 diagonal timbers at an angle of 45 degrees, with iron lodging knees below the lower deck. In the 'tween decks, on the lower deck beams, are two fore-and-aft stringers 16 inches square, and running in lengths from 50 to 65 feet; attached to these is a third stringer 14 inches square, dowelled and dovetailed in the beams, and the whole are bolted right through the side. From the lower deck beams to the upper deck are placed additional iron diagonal knees, and lodging knees are also fitted in the upper deck beams; there are 20 of them, wood and iron alternate, these being also strongly fastened, right through... The vessel was then taken into Fitzroy Dock, and on taking the carefully laid blocks came down in her original shape; all the above ...was then securely fastened...she was then caulked throughout and sheathed with Muntz metal...[receiving] a first-class certificate [from the surveyor Captain Donald]...²³¹

The *Great Pacific*, an auxiliary, fully-rigged, screw-driven clipper of the Black Ball Line, was, according to the *Hobart Mercury*, the largest ever commercial vessel docked in NSW and was immediately placed in Cuthbert's hands on arriving in Sydney at the end of March 1867. Built in Bordeaux in 1858, the ship was damaged while carrying 650 migrant passengers and 2,000 tons of railway plant to Keppel Bay. The work took 5 days, during which the hull was re-coppered to 24 feet above the keel. Some idea of the size of the vessel can be gained from the fact that the entire width of Fitzroy Dock was taken up, the caulkers being able to work from the stepped sides of the dock. More than '3,300 sheets of copper were used on her, and 1 ton of oakum driven into the seams, and the butts horned and chunamed...'.²³²

²³⁰ *Sydney Morning Herald*, 26 June 1866, p. 4, 11 July 1866, p. 4, and 23 July 1866, p. 8.

²³¹ *Sydney Morning Herald*, 22 September 1866, p. 9.

²³² *Mercury*, 28 March 1867, p. 2.

The shipbuilding enterprise also undertook repair work in New Caledonia and Queensland. In March 1861, the French vessel H.I.M. war-steamer *Coetlogon* had collected a new mainmast for H.I.M. armed-schooner *Caledonienne* for the French Government; taken to New Caledonia, the mast was 80 feet long.²³³ Two vessels, the *Castle Eden* and the *Melmerby*, dis-masted in violent storms off the Queensland coast, were taken to Brisbane for repair in 1864 and 1866 respectively. Limited facilities at Brisbane's port led to the vessels' captains and owners ordering new masts and other materials from Mr Cuthbert of Sydney, the work managed in both cases by Cuthbert's foreman, Mr Fegan, under contract. The *Melmerby*, 1,510 tons, required the 'mainmast and all its gear and the mizzen and foretop masts, topgallant masts, and the royal masts, with their yards and rigging and a jib-boom'. All were made in Sydney and shipped to Brisbane on board the barque *City of Melbourne*, the mainmast weighing 11 tons with an overall length of 60 feet.²³⁴

The Millers Point shipyard and wharves were also advertised widely as available to ship's Captains and owners for 'Quay Berths for Ships of any tonnage or draught of water to load or discharge cargo...'.²³⁵ Newspaper reports document the type of stock imported by Cuthbert for his own use and for sale. These included: 'Spars-Kauri and American, from 40 inches [diameter] downwards'; 'Muntz's Patent Metal and Nails, all sizes'; anchors and chain; as well as all the materials required for planking, decking, caulking and sheathing a hull.²³⁶

By the 1860s, the reputation of Cuthbert's shipbuilding and repairing enterprise was widespread in both the naval and mercantile spheres, his business seemingly controlling harbour infrastructure and a large part of the shipbuilding workforce of Sydney. In June 1864, Cuthbert was paying almost £100 daily in wages to the average, 200-strong workforce of men and boys at his Millers Point shipyard, at the Waterview Bay Dry Dock, at the Fitzroy Dock, Cockatoo Island and on various vessels afloat on the harbour requiring repairs.²³⁷

To add to the perceptions of undue influence and monopoly, which had first emerged in 1860, Cuthbert was also still employed by the NSW Government, as a Shipwright Surveyor to the Steam Navigation Board. In March 1866, Cuthbert's role as Shipwright Surveyor was questioned in the Legislative Assembly, when the alternative of using a shipwright carpenter, already employed at Fitzroy Dock, was considered. With each steam vessel surveyed costing £1 10s 0d, at least once a year, this would have meant a saving of £150 per annum. However, the shipwright carpenter was not qualified to survey steam vessels, the legislation requiring a

²³³ *Maitland Mercury and Hunter River General Advertiser*, 28 March 1861, p. 3.

²³⁴ *The Sydney Morning Herald*, 31 December 1864, p. 6; *Brisbane Courier*, 18 December 1865, p. 2, 11, January 1866, p. 2, and 7 February 1866, p. 2.

²³⁵ *Sydney Morning Herald*, 3 February 1863, p. 1.

²³⁶ *Empire*, 13 February 1860, 1; *Sydney Morning Herald*, 6 February 1863, p. 7; *Sydney Mail*, 10 March 1866, p. 10.

²³⁷ *Empire*, 6 June 1864, p. 5.

shipwright surveyor. It was felt that the public had confidence in Mr Cuthbert, his payment for work done subsequently amounting to £200 per annum by November 1866.²³⁸

Following a decline in shipbuilding in 1861, the industry had improved by 1862. The vessels placed in Fitzroy Dock over 236 days in 1862 comprised 14 naval vessels and 39 commercial vessels with an aggregate tonnage of 9,285 tons, although the numbers would fluctuate from year to year. The number of commercial vessels docked had fallen to 16 in 1864, although the number of naval and government vessels docked remained fairly constant.²³⁹ The *Empire* reported in June 1864 that Cuthbert 'conducts all the operations at the dry dock on Cockatoo Island for the Government, supplying the labour and material, and undertaking the entire superintendence', as he had done for some time, and that he maintained his own yard at Fitzroy Dock.²⁴⁰

Advertisements by Cuthbert in 1865 and 1866 referred to Mort's Dock at Waterview Bay and to the Patent Slip on Sussex Street, which he had just purchased, but there was no mention of Fitzroy Dock as part of his operations.²⁴¹ Although Cuthbert had leased Mort's Dock in August 1860, reducing his need to place commercial vessels in Fitzroy Dock, the matter of Cuthbert's role in the superintendence of Fitzroy Dock and its use needs to be addressed, since he continued to repair both naval and commercial vessels in Fitzroy Dock.

The need to apply to the Government, in writing, to use the dock was a necessary administrative hurdle. Such requests were registered in order of receipt, with naval vessels taking precedence over any commercial vessels, commercial vessels only being considered after the undocking of naval vessels.²⁴² Conditions and a scale of charges for the use of Fitzroy Dock had been presented to the Select Committee on Fitzroy Dock in April 1860, during the hearing of evidence. Following the recommendation that private use could continue, the conditions and charges appear to have been reviewed for approval by the Executive Council of the Government. Subsequently, his Excellency, the Governor-in-Chief, approved the new conditions and scale of charges, in accordance with which, 'for the future...', vessels could be placed in the Fitzroy Dock. These were published in the *Government Gazette* on 30 August 1861, the revised conditions, set out at Table 4, requiring that all consumable materials and labour were to be provided by the user.²⁴³

²³⁸ *Empire*, 15 March 1866, pp. 3-4, and 30 November 1866, p. 3.

²³⁹ G. K. Mann, 'Fitzroy Dock-Report from Engineer-in-Chief, 8 May 1865', pp. 309-312 in *Journal of the NSW Legislative Council*, 1865-6, Vol. 13.

²⁴⁰ *Empire*, 6 June 1864, p. 5.

²⁴¹ *Sydney Morning Herald*, 8 July 1865, p. 1, and 20 January 1866, p. 1.

²⁴² *Sydney Morning Herald*, 18 December 1862, p. 10.

²⁴³ *Sydney Mail*, 14 September 1861, p. 5.

Fitzroy Dock Conditions and Charges August 1861

CONDITIONS

1. All vessels belonging to H. M. Navy, the Colonial Government, and the men-of-war of other nation's will be admitted to repair in the Fitzroy Dock, Sydney harbour, free of any dock dues or rates, but they will be required to repay all actual expenditure of stores, wages, and material.
2. All other vessels will be liable to a minimum dock rate of 6d per ton, per diem, if of 1,500 tons register or upwards, and an additional 1/8th of a penny per ton for every decrease of 50 tons or portion of 50 tons down to a maximum rate of 9d per ton for a vessel of 300 tons, and all below, as set forth in the scale attached hereto.
3. Double rates will be charged for the day of docking.
4. The dock dues will include and cover the cost of pumping, shoring, wedging and blocking [of the vessel], and the cost of all labour connected with opening and closing the dock, and all the incidental labour connected with the actual operation of docking a vessel.
5. The Government will not undertake the repairs of a vessel, and all parties availing themselves of the use of the dock will be required to make their own arrangements for this service, and provide all necessary labour and materials for the same.
6. The Government will not hold themselves responsible for any accident occurring to a vessel whilst docking, undocking or in dock.
7. The officers, crews, and workers of any vessel, whilst in dock, will be required strictly to adhere to the regulations of the establishment.
8. The captain, master or pilot of a vessel, after making fast to any buoy or bollard off the mouth of the dock for the purpose of entering, will thenceforth be required to attend to the directions of the officer of the Dockyard superintending the docking or undocking of the vessel.

WORKSHOPS AND MACHINERY

9. Vessels in dock and private engineering establishments will be permitted to avail themselves of any portion of the machinery of the dockyard and workshops on payment of a rate per hour, preference being always given to the requirements of a vessel in dock. These charges will be in addition to dock dues, and in accordance with the rates mentioned in the authorised schedule.
10. All parties using the machinery will be permitted to employ thereof such skilled labour as may be deemed by them requisite, but the officer in charge of the establishment will retain full power to dismiss any incompetent or workman or reject any work that he may deem injurious to the machinery.
11. The rate for the machinery will include the cost of putting and maintaining the machine in motion, the use of the 20 ton overhead traversing tramway and all tools belonging to the machine in use, but nothing further.²⁴⁴

²⁴⁴ *Sydney Mail*, 14 September 1861, p. 5.

Tenders for the supply of shipbuilding materials and other services to be provided at Fitzroy Dock, were requested by the Government on an annual basis. For the 1861-1862 financial year and subsequent years, P. N. Russell and Co. were successful in winning the contract to supply iron and brass castings to the Government dockyard on Cockatoo Island, whilst timber merchant John Booth supplied shipbuilding timber in some years.²⁴⁵ No tenders for the operation of Fitzroy Dock appear to have been requested and it is thought that Cuthbert's role in docking vessels evolved to take account of the Government's position on the matter of responsibility for vessels during docking, repairs and undocking (Items 6, 8) , as much as for his role in naval repairs. Responsibility for his clients' vessels would have been paramount, leading to responsibility for the safety of vessels in the dock passing to Cuthbert's staff rather than remaining with Government employees.

In this respect, the one surviving Invoice Book for Cuthbert's enterprise, which covers the period 1868-1873, includes invoices in which Cuthbert charged for his shipwrights' time, when spent docking commercial, naval and Colonial Government vessels. This was invoiced separately to the charges for shipwrights' time associated with repairs. In particular, some of the vessels covered by these docking invoices, all of which were sent to the Department of Public Works, Fitzroy Branch, were not listed as vessels repaired by Cuthbert. This suggests that there is some truth in the claim that he superintended operations at Fitzroy Dock, although this may have been a perception in part, as in 1860, because he undertook most of the repair work.²⁴⁶

With a reliable, large workforce and materials always at hand, and with a demonstrated ability to survey and repair naval vessels, Cuthbert's enterprise continued to be entrusted with the repair of naval vessels visiting Sydney. Although small vessels could be repaired at his Millers Point shipyard, larger vessels with hull damage or for major overhaul were generally taken to Fitzroy Dock, with a small number taken to Mort's Dock at Waterview Bay.

The number of naval and government vessels identified in the government records as placed in Fitzroy Dock were 5 in 1861, 14 in 1862, 8 in 1863 and 13 in 1864, with partial information for 1865.²⁴⁷ The Australian Squadron's vessels and French naval vessels reported in the newspapers in the 1860s as docked, surveyed and repaired at Fitzroy Dock by Cuthbert between January 1861 and July 1867 are listed and discussed below. The 2 sets of figures suggest that Cuthbert may only have repaired about half of the naval and government vessels placed in Fitzroy Dock in the 1860s, a consequence of the tendering process, with further research required in this area.

²⁴⁵ *Sydney Mail*, 10 May 1862, p. 3.

²⁴⁶ For further discussion of the Invoice Book for the period 1868-1873 see Chapter 6.

²⁴⁷ G. K. Mann, 'Fitzroy Dock-Report from Engineer-in-Chief, 8 May 1865', pp. 309-312 in *Journal of the NSW Legislative Council*, 1865-6, Vol. 13.

Australian Squadron vessels repaired by Cuthbert in Fitzroy Dock 1861-1867

1861: H.M.S. *Fawn*, sloop, 17 guns; H.M.S. *Cordelia* (SS), sloop, 11 guns;

1862: H.M.S. *Pelorus* (SS), corvette, 21 guns; H.M.S. *Miranda* (SS), sloop, 15 guns; H.M.S. *Pioneer* (SS), barque, 6 guns; H.M.S. *Orpheus* (SS);

1863: H.M.S. *Pioneer* (SS), barque, 6 guns; H.M.S. *Eclipse* (SS), barque, 4 guns; H.M.S. *Miranda* (SS), sloop, 15 guns; H.M.S. *Harrier* (SS), sloop, 17 guns;

1864: H.M.S. *Curacoa* (SS), frigate, 21 guns; H.M.S. *Eclipse* (SS), barque, 4 guns; H.M.S. *Falcon* (SS), clipper-sloop, 16 guns; H.M.S. *Esk* (SS), corvette, 21 guns;

1865: H.M.S. *Curacoa* (SS), frigate, 21 guns; H.M.S. *Brisk* (SS), sloop, 14 guns; H.M.S. *Eclipse* (SS), barque, 4 guns; H.M.S. *Falcon* (SS), clipper-sloop, 16 guns;

1866: H.M.S. *Falcon* (SS), clipper-sloop, 16 guns; H.M.S. *Curacoa* (SS), frigate, 21 guns; H.M.S. *Esk* (SS), corvette, 21 guns; H.M.S. *Brisk* (SS), sloop, 14 guns; H.M.S. *Eclipse* (SS), barque, 4 guns; and

1867: H.M.S. *Salamander* (PS), surveying ship, 4 guns.²⁴⁸

In February 1862, H.M.S. *Pelorus* had 'her mainmast taken out, and received new cheeks, and [lashed?]; a new mizzen-topmast mast and mizzen-topsail yard [were] also...supplied. The ship...had her topsides and deck caulked, and when re-fitted [would] leave for England'. These repairs were carried out by Mr Cuthbert after tenders were called, including 9,700 feet of caulking.²⁴⁹ More serious problems were encountered when ships were diagnosed with dry-rot. In 1862, H.M.S. *Miranda* was placed in Cuthbert's hands for extensive repairs, when dry-rot was discovered in many places in the hull. Placed in Fitzroy Dock, the ship was opened up, stripped, the hull opened up and defective framing timbers replaced with colonial timber, which was less prone to fungal attack. The work was described by the ship's officers as being equal to anything done in the Royal Dockyards in England.²⁵⁰

Her Majesty's ships *Curacoa* and *Brisk* are good examples of the general type of repairs conducted in Fitzroy Dock. In October and November 1865 respectively, H.M.S. *Curacoa* and H.M.S. *Brisk* were overhauled, the decks and hulls stripped, caulked and re-coppered; Mr Cuthbert had over 100 men employed on the 2 vessels alone.²⁵¹ Other repairs were much more extensive; in July 1866 it was reported that H.M.S. *Eclipse* 'had been in-hand for some time, it being found necessary to replace the deck beams, involving considerable labour, and the employment of a large number of Cuthbert's shipwrights...' at Fitzroy Dock and Millers Point.²⁵²

²⁴⁸ *Sydney Morning Herald*, 13 May 1863, p. 4, 19 February 1862, p. 8, and 21 August 1862, p. 9, 21 July 1864, p. 8, and 17 September 1864, p. 9, 22 May 1865, p. 4, 21 September 1865, p. 9, and 21 November 1865, p. 4, and 26 June 1866, p. 4; *Sydney Mail*, 27 April 1861, p. 5, and 6 July 1861, p. 4, 21 March 1863, p. 9, 8 November 1862, p. 5, 16 June 1866, p. 10, and 11 August 1866, p. 9; and 26 February 1866, p. 4; *Newcastle Chronicle*, 22 May 1867, p. 2.

²⁴⁹ *Sydney Morning Herald*, 7 February 1862, p. 1, 19 February 1862, p. 8.

²⁵⁰ *Sydney Morning Herald*, 21 July 1863, p. 9.

²⁵¹ *Maitland Mercury and Hunter River General Advertiser*, 23 November 1865, p. 3.

²⁵² *Sydney Morning Herald*, 26 June 1866, p. 4, 11 July 1866, p. 4, and 23 July 1866, p. 8.

A letter from the French *Charge d’Affaires, Marine Imperiale*, in December 1864, had awarded a gold watch to Captain Gother Mann, Engineer-in-Chief of the [Fitzroy] Dock Establishment, for repairs to French vessels of war. Significantly, all the shipwright and machine repairs had been carried out by John Cuthbert and the firm of P. N. Russell and Co., their contribution to the economy of Sydney recognised publicly, yet again.²⁵³

French Imperial vessels repaired by Cuthbert in Fitzroy Dock 1861-1867

1861: H.I.M. war-schooner *Gazelle*; H.I.M. war-steamer *Coetlogon*; H.I.M. war-steamer *Caledonienne*;

1862: H.I.M. transport-ship *Bonita*;

1863: H.I.M. war-steamer *La Touche Treville*;

1865: H.I.M. war-steamer *Iphigenie*; and

1866-1867: H.I.M. transport-ship *Gazelle*.²⁵⁴

The French transport *Gazelle* ‘received new frames, together with all the dead wood, stern-post, &c, from the after part of the mid-ship section aft, which had been completely destroyed by dry-rot...’ in 1867. The material and workmanship were reported as of the usual quality that marked Cuthbert’s well-known establishment.²⁵⁵ The increasing importance of Cuthbert’s shipyard to French commercial, as well as naval vessels, had been recognised earlier, in April 1863, when Cuthbert was appointed as ‘*Constructeur Expert, Du Registre Maritime de Bordeaux*’, i.e. as surveyor to the Sydney branch of French Lloyd’s.²⁵⁶

In addition to the repair of British and French naval vessels Cuthbert also undertook work for the NSW Colonial Government. In February 1867 he began work on converting the frigate-built ship *Vernon*, 1,000 tons, which was to be fitted out as a ‘Reformatory and Training Ship’, its large size and quarters being seen as ‘admirably suitable...’. The conversion, at the Millers Point shipyard, entailed rigging the ship as a 400-ton ship, the vessel already equipped with gun ports for the proposed uses.²⁵⁷ However, the *Empire* reported in March 1867 that [Robert] Towns and Co. had purchased the worn-out vessel for £200, selling it on to the Government for £2,800 as the opportunity arose, with the expected repair costs reported in the *Empire* as increasing daily, to Cuthbert’s benefit.²⁵⁸

The 1850s and 1860s were Cuthbert’s most productive years, however, he had been ‘unwell for some time...’, possibly due to consumption (tuberculosis), exacerbated

²⁵³ *Sydney Morning Herald*, 21 December 1864, p. 7.

²⁵⁴ *Sydney Morning Herald*, 1 June 1861, p. 4, 29 August 1861, p. 4, 17 September 1861, p. 4, 15 March 1862, p. 4, 7 November 1863, p. 6, 1 March 1865, p. 5 and 23 January 1867, p. 7.

²⁵⁵ *Sydney Morning Herald*, 30 January 1867, p. 3.

²⁵⁶ *Sydney Morning Herald*, 25 April 1863, p. 1.

²⁵⁷ *Sydney Morning Herald*, 1 February 1867, p. 4, and 1 March 1867, p. 3.

²⁵⁸ *Empire*, 8 March 1867, p. 4.

by years of heavy work.²⁵⁹ Due to his extensive workload, John Cuthbert had withdrawn from the selection of candidates for the Legislative Assembly in November 1864, after he had been asked to stand as a candidate for Western Sydney.²⁶⁰ He had already accepted a commission as Lieutenant in the Volunteer Naval Brigade by July 1863 and in July 1864 had been appointed as a Commissioner in the New Commission of Peace by the Superintendent of Police, acting as a JP in cases brought by the Water Police.²⁶¹

In March 1865, Cuthbert had attempted to lease-out parts of his shipyard and wharves, including his private customs wharf, the 'Sufferance Warf'.²⁶² By December 1866 he was advertising his entire shipyard for sale or lease:

TO ENGINEERS, SHIPBUILDERS, TIMBER MERCHANTS &c—To LET, or for SALE, those extensive PREMISES known as CUTHBERT'S WHARF, Darling Harbour, comprising—1. The Commercial Wharf, with the floating jetty, capable of taking two of the largest ships (at a trifling expense might be made room for four large ships). 2. The Shipbuilding Yard, with stages, workshops, smithy, &c. 3. Extensive Saw-mill, with loft for workshops, &c, 170x40. 4. The Patent Slip, lately rebuilt and enlarged, and now capable of taking up vessels of 600 tons. With the above will be sold the entire stock and plant, which is without exception the largest and best in the Southern Hemisphere. For terms (which will be reasonable) apply to John Cuthbert, Cuthbert's Wharf.²⁶³

There do not appear to have been any interested purchasers, Cuthbert continuing with his plans to return to Britain, returning in 6 months should his health improve. In anticipation of his not returning, his phaeton, made by Wilson of Northampton, and his bay gelding horse were sold at auction prior to his departure.²⁶⁴ Cuthbert also resigned his position as Shipwright Surveyor to the NSW Steam Navigation Board, his successor, Mr Evans, appointed in September 1867.²⁶⁵

On 20 July 1867 a complimentary, farewell banquet was given to John Cuthbert Esq. JP, by his employees, in the Masonic Hall, with over 250 people seated. Among the thanks were those from St Patrick's Sunday-school to Mr and Mrs Cuthbert for their pecuniary aid. In particular, Mr George Thornton, MLA, the Chairman at the banquet, pointed out that Cuthbert had risen from the 'position of a ship's carpenter to be the proprietor of one of the largest ship building establishments in the Australian colonies - an establishment which at times employed not less than three hundred first-class mechanics of various sorts...'. In responding to a toast in his

²⁵⁹ *Empire*, 8 November 1865, pp. 2-3.

²⁶⁰ *Sydney Morning Herald*, 18 November 1864, p. 5, and 21 November 1864, p. 2.

²⁶¹ *Freemans Journal*, 8 July 1863, p. 6; *Sydney Mail*, 30 July 1864, p. 3.

²⁶² *Sydney Morning Herald*, 15 March 1865, p. 8.

²⁶³ *Sydney Morning Herald*, 27 December 1866, p. 8, and 22 January 1867, p. 8; *Argus*, 3 January 1867, p. 8; *Empire*, 23 August 1867, p. 2.

²⁶⁴ *Sydney Morning Herald*, 19 July 1867, p. 7, 20 July 1867, p. 10 and 22 July 1867, p. 5.

²⁶⁵ *Empire*, 5 September 1867, p. 6.

honour, Cuthbert was 'deeply affected...by the assemblage...merchants, lawyers, members of Parliament and last but not least his fellow-workers...' ²⁶⁶

John Cuthbert left the colony on the mail steamer *Avoca* on 26 July 1867 with Mrs Cuthbert, the couple returning to Sydney, via Melbourne, from Britain on 29 April 1868 aboard the *City of Adelaide*.²⁶⁷ Whilst overseas, Mr Cuthbert was visited by many officers of the Royal Navy who had heard of him from fellow officers. The editor of the *United Services Gazette* wrote a letter thanking him for his assistance, the result of which would be that Cuthbert was, again, invariably entrusted with the execution of any work required by the Royal Navy in Sydney.²⁶⁸

Prior to his departure for England Cuthbert had placed responsibility for his shipyard under the superintendence of Mr George Verey and Captain James Banks, late Marine Superintendent for Mackay, Baines, and Co. of the Black Ball Line, which sailed from Liverpool to Australia. The foremen attached to the venture would, he believed, 'give satisfaction to all parties...'.²⁶⁹ During Cuthbert's absence, the shipyard at Millers Point operated efficiently under the management of Captain Banks and the foreman-shipwrights. No building contracts or speculative purchases appear to have been made during Cuthbert's absence, although major overhauls and repairs continued to be carried out. Naval vessels were docked 5 times, with 4 known commercial repairs, including 2 rescued vessels. Cuthbert's shipyard, the A.S.N. Co.'s Patent Slip and Fitzroy Dock, as well as Cuthbert's Patent Slip in Sussex Street, were fully occupied in looking after naval and commercial vessels.

Repair work on smaller vessels, such as Cuthbert's screw-driven yacht, the *Sir John Burgoyne*, advertised for sale in January 1868, continued during Cuthbert's absence.²⁷⁰ In addition, two vessels were rescued before Cuthbert's return in April 1868: the barque *Esmeralda*, 730 tons, beached and de-masted near Port Stephens; and the barque *Salween*, 601 tons, with a cargo of wool, tallow and hides.²⁷¹ Taken in tow on 19 January 1868, the *Salween* was taken to Sirius Cove before scuttling by Captain Banks, but raised the next day and towed to Cuthbert's Wharf.²⁷² Stranded on the Broughton Isles, the *Esmeralda* was floated by Captain Banks on 25 February 1868 and towed to Port Stephens, thence to Sydney. The vessel was taken on the A.S.N. Co.'s Patent Slip in Sydney, but there was little evidence of any serious damage.²⁷³

The *Sydney Morning Herald* of 11 August 1867 noted the complex nature of the alterations and repairs to the *Staffordshire*, 1,157 tons, carried out by Cuthbert's

²⁶⁶ *Sydney Morning Herald*, 22 July 1867, p. 5.

²⁶⁷ *Empire*, 23 August 1867, p. 2; *Sydney Morning Herald*, 30 April 1868, p. 4.

²⁶⁸ *Sydney Morning Herald*, 1 June 1868, p. 5.

²⁶⁹ *Argus*, 27 July 1867, p. 1.

²⁷⁰ *Sydney Morning Herald*, 8 January 1868, p. 7.

²⁷¹ *Sydney Morning Herald*, 29 February 1868, p. 8; *Queensland Times, Ipswich Herald and General Advertiser*, 1 February 1868, p. 2; *South Australian Advertiser*, 1 February 1868, p. 2.

²⁷² *Sydney Morning Herald*, 20 January 1868, p. 4.

²⁷³ *Empire*, 26 February 1868, p. 2; *Sydney Morning Herald*, 27 March 1868, p. 11.

shipyard by 100 men in August 1867 in Mort's Dock in 5½ days, the vessel having been repaired by Cuthbert in February that year:

Those unacquainted with shipbuilding can have no conception of the amount of care and judgement required in arranging and properly fastening the mass of wood and metal which, when completed form a 1,000 ton ship... We may premise that the vessel was weak, and of necessity required strengthening, and this has been done as follows:- A centre keelson, 15 inches by 16 inches, made of spotted gum, and taking in the heels of the 3 masts, has been fitted, as also two sister keelsons, 17 inches by 10 inches, of hardwood. Ten diagonal pointers have been placed on either-side, five raking forward and five raking aft; these are made of ironbark, and the whole fastened with metal and copper, the keelson bolts going through the keel, and clenched. The bolts of the iron knees in the lower hold have all been backed out and replaced, and knee-pieces in the wake of the mast slips added, together with new stepping pieces under the fore and main masts, 66 feet long by 14 inches square. It may also be noted that all the scarfs [joints] in the keelsons have been keyed. The original waterways on the beams on [the] lower deck were of softwood; these have been replaced by hardwood, 14 inches square, let down and dovetailed over the beam ends; also a new spurketon strake over the waterways, all being through fastened and clenched; new double stringers, 12 inches square, run fore and aft under the upper deck beams. All the perpendicular 'tween deck and iron knees have been taken out and converted into diagonals, raking fore and aft from the amidships part of the vessel and the bolts of the vessel renewed... The outside of the hull has been stripped and re-caulked and sheathed with very superior Kauri pine 1 ¼ inches thick and varying in length from 50-70 feet in length [prior to re-coppering]... the ship will be coppered with 26, 24 and 22 oz. Muntz metal, a new rudder is ready for hanging... the additional height of the new keelson necessitated either the shortening of the masts or lengthening of the rigging; the former idea was adopted, and by means of heavy screws the heavy masts, with all gear aloft, [were] successfully lifted, cut, and re-stepped without the aid of shears. The whole of this work has been carried out by Mr Kendal, Mr Cuthbert's [chief] foreman, in a manner which reflects the highest credit on [him] and the workmen employed...²⁷⁴

At Cuthbert's shipyard, the clipper-sloop H.M.S. *Falcon* (SS), 16 guns, had the topsides and decks re-caulked with other repairs also carried out.²⁷⁵ The naval dockyard at Cockatoo Island continued to be used for the maintenance and repair of naval vessels. On 10 December 1867, H.M.S. *Charybdis* (SS), a corvette of 21 guns, was placed in Fitzroy Dock 'for the purpose of being sighted and undergoing any necessary repairs, by Mr Cuthbert'. However, the vessel was not undocked until 18 December 1867, indicating extensive repairs. The *Charybdis* had arrived in Sydney

²⁷⁴ *Sydney Morning Herald*, 1 March 1867, p. 3, and 24 August 1867, p. 6; *Mercury*, 12 September 1867, p. 2.

²⁷⁵ *Sydney Morning Herald*, 31 August 1867, p. 6.

from England in mid-June 1867, having sailed from Plymouth on 17 February; an official cruise had then taken the vessel to New Zealand.²⁷⁶

These normal events were overshadowed by the arrival of H.M.S. *Galatea* (SS) in Sydney, on 21 January 1867, under the Duke of Edinburgh as Captain. On 3 February 1868 a decision was made by Commodore Lambert that H.M.S. *Galatea* was to be placed in Fitzroy Dock. Over the next 2 days, the ship's stores and armaments were off-loaded onto a 1,000 ton hulk, the *Galatea* being towed to Fitzroy Dock the following day, 6 February, and into the dock the following day. A gang of carpenters, led by Mr Kendal, Cuthbert's chief foreman, then shored up the sides of the vessel before the water was pumped out of the dock and the bilges shored up, once the vessel was secure. The 26-gun, Royal steam-frigate, 3,227 tons, spent over 2 weeks in the dock, being re-floated on 24 February after repairs to the bearings of the propeller shaft, a general inspection and the fitting of a new false keel. Over 140 men were also placed on board from Cuthbert's establishment to re-caulk the topsides and decks.²⁷⁷

The shipwrights at Cuthbert's shipyard also converted H.M.S. *Galatea*'s steam launch into a steam yacht, 'under the direction of H.R.H...'. Named the *Polyphemus*, the yacht was to be a present to her Majesty, Queen Victoria. The figure head of the Polyphemus was cut on the premises by a workman in 'Mr Cuthbert's employ, named Sutherland...'. A shield bearing the Prince's coat of arms was also cut for the bridge of the *Galatea*. The shield bore the following inscription: "Presented to H.R.H. the Duke of Edinburgh, Captain of H.M.S. *Galatea*, by J. M. Banks, from John Cuthbert Esq., shipbuilder, Sydney, April 1868".²⁷⁸

Following his return from England, after the departure of H.M.S. *Galatea*, Cuthbert received a letter from the Commander of the *Galatea* thanking him for his uniform kindness and attention during the work, and contained the following passage: "The repairs have been so ably executed under the direction of Captain Banks and Mr Kendal, that they could not have been surpassed by any dockyard at home". The letter concluded by saying that H.R.H., the Duke of Edinburgh, regretted that he was unable to express in person his thanks to Mr Cuthbert.²⁷⁹

²⁷⁶ *Clarence and Richmond Examiner and New England Advertiser*, 30 April 1867, p. 4; *Sydney Morning Herald*, 22 June 1867, p. 7, 11 December 1867, p. 4, and 21 December 1867, p. 4.

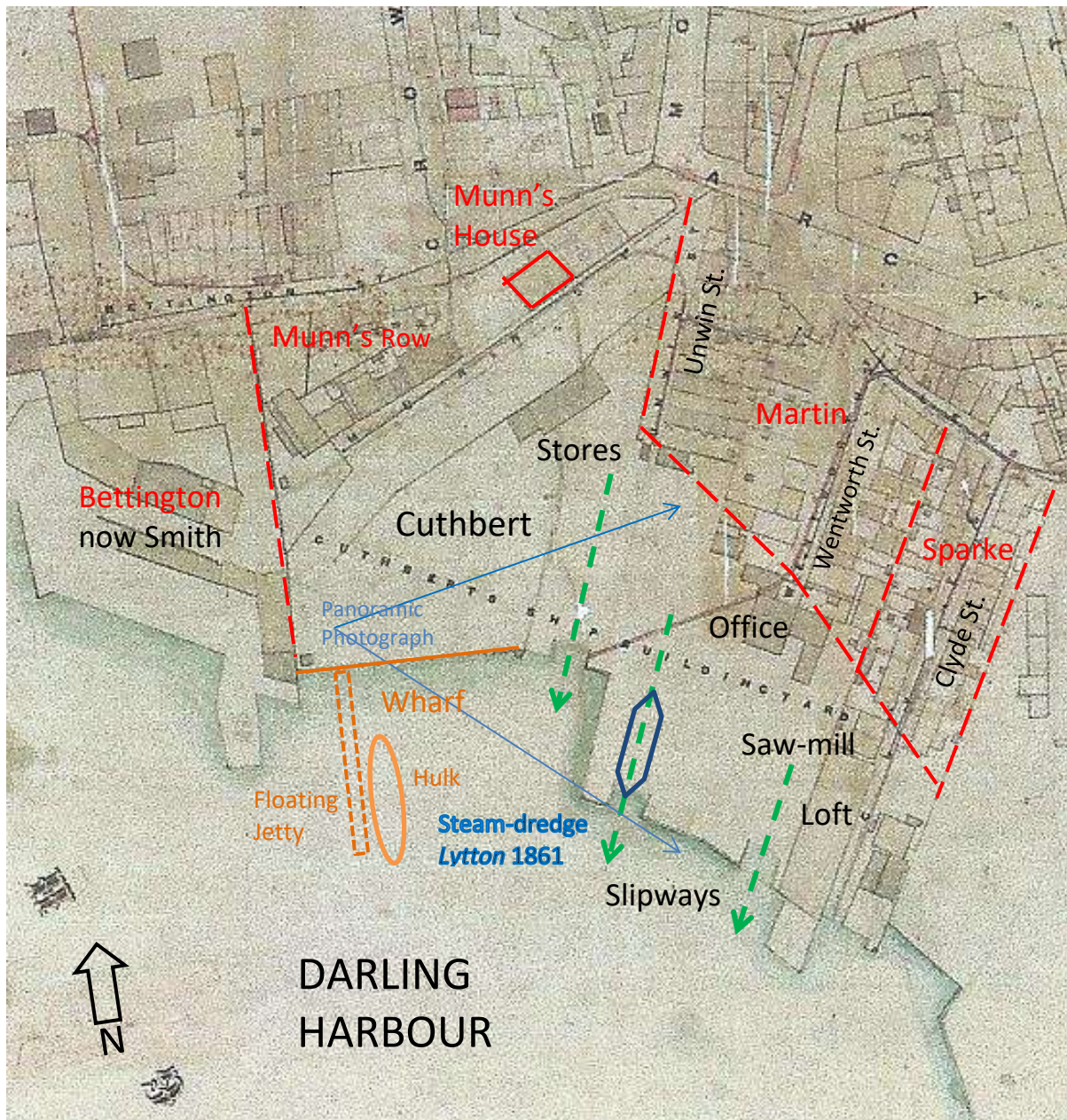
²⁷⁷ *Sydney Morning Herald*, 10 February 1868, p. 4, and 29 February 1868, p. 8; *Maitland Mercury and Hunter River General Advertiser*, 6 February 1868, p. 4; *Empire*, 22 January 1868, p. 2.

²⁷⁸ *Sydney Morning Herald*, 1 June 1868, p. 5.

²⁷⁹ *Sydney Morning Herald*, 1 June 1868, p. 5.



Advertisement c. 1865 by John Cuthbert, 'Ship Builder, Mast-maker and Shipsmith &c.', owner of Cuthbert's Wharf, Millers Point, and the Patent Slip in King Street, pictured above. Source: Museum Victoria, Image 7.3.



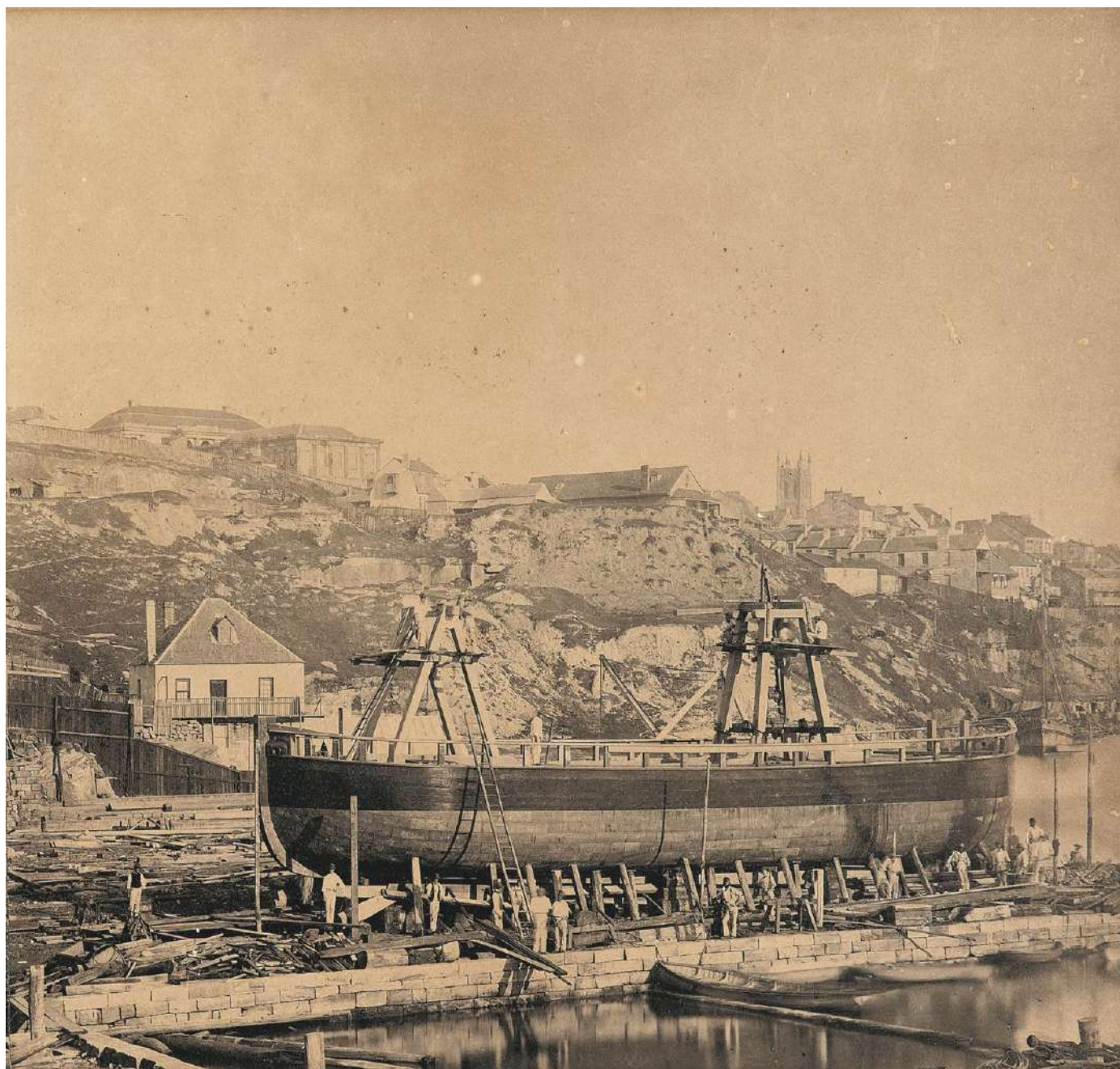
Detail planning and layout of John Cuthbert's shipyard at Millers Point in 1865 overlaid onto a contemporary survey with the 1834 boundaries of Bettington's, Martin's and Sparke's grants in red. Cuthbert's new wharf infilled the 2 slipways constructed by James Munn near the junction with Bettington's land to the west. Martin's and Sparke's land grants had both been extended into Darling Harbour before 1854, Cuthbert's major reclamation works to create a new wharf and shipyard being in the embayment between Unwin Street and Munn's slipways. The new commercial wharf was well above high water mark, although the 3 new slipways on the eastern half of the site extended to and beyond the low water mark. The acquisition of land by Cuthbert, beyond and including the extensions to Martin's and Sparke's grants into Darling Harbour, to create the area for the slipways and saw-mill, has not been documented.

Source: City of Sydney Archives, Image 6.



'Cuthbert's Ship Building Yard' at Millers Point was the subject of a photograph exhibited at the International Exhibition in London in 1862. The steam-dredge *Lytton* is in the final stages of construction before its launch in September 1861 for the engine and machinery to be fitted. The slipway on which the *Lytton* is under construction was 1 of 3 slipways on the site. The houses to the left of centre are on Wentworth Street, with Cuthbert's office and stores below. The photograph, consisting of 2 images, was exhibited in Sydney before shipping to London for the International Exhibition. The *Sydney Morning Herald* (21 November 1861, p. 8) noted, that this picture of Cuthbert's Shipbuilding Yard, by Messrs Freeman, Photographers by appointment to the Governor-General, exhibited 'extreme sharpness of outline and softness of tone'.

Source: State Library of New South Wales, Image 21, and Australian National Maritime Museum, Image 1.





H.M.S. *Galatea* in Fitzroy Dock, Cockatoo Island, 1868-1871, F. Garling. Source: Mitchell Library, State Library of New South Wales, Image 14 (Item 1).



A.S.N. Co.'s Patent Slip 1860s, F. Garling. Source: Mitchell Library, State Library of New South Wales, Image 15.



H.M.S. *Galatea* and H.M.S. *Basilisk*, Farm Cove, 1868-1871, F. Garling. Source: Mitchell Library, State Library of New South Wales, Image 16.



Schooner *Colonist* 1860s, F. Garling. Source: Mitchell Library, State Library of New South Wales, Image 14 (Item 6).

4

Design and Construction 1840s-1870s

Shipbuilding in NSW differed little from that in Britain or elsewhere in the English speaking world in the nineteenth century. Vessels were built around a central spine, the keel, to which transverse framing elements or ribs were attached, with a stem at the bow and a sternpost at the back extending upwards from the keel, stabilised by deadwoods. The ribs comprised timbers called 'floors', 'futtocks' and 'top timbers', depending on the size of the vessel. These timbers defined the shape of the ship's bottom (floor) and sides (futtocks and top timbers) and carried the transverse deck beams with their supporting shelf-pieces (beam shelves) attached to the ribs. In the best work, hardened copper bolts were used to fasten the frame members together.

Internally and externally, this framing carried fore-and-aft, carvel planking, treenailed (dowelled) to the frame, creating a skin for the hull, which provided much of its longitudinal strength. An internal keelson, on top of the keel, provided the base on which the mast or masts would be stepped (seated), and which were stabilised by cheek pieces passing through the deck. To complete the hull, and to stop marine organisms attacking, planking seams were caulked and the hull chunamered and sheathed with copper (Muntz metal by the 1840s) sheathing below the waterline.

By the 1840s, when Cuthbert arrived in Sydney, traditional British construction techniques, using oak, elm and pine, had already been adapted to native hardwoods and other native timbers. Although native cypress pine and *araucaria* species, such as hoop pine, from northern NSW and Queensland, were also used, 'cowrie [kauri pine]', imported from New Zealand from the 1820s, would become essential for planking, decking, masts and spars.²⁸⁰

An almost standard approach had emerged in NSW by the 1850s, one recognised by merchants and shipbuilders alike. In the Sydney region the early standard of an ironbark keel, floor and framing, with blue gum planking inside and out and blackbutt frames and beams, was employed for much of the nineteenth century. In the second half of the nineteenth century framing was usually of ironbark, blue gum and blackbutt, with blackbutt and blue gum preferred as planking timbers, although kauri pine was increasingly used for planking, as hardwood costs rose and availability diminished. However, kauri pine was used for planking, inside and out, from an early date in Sydney.²⁸¹

By the 1860s, shipbuilding was competing with urban development and railway construction, both at home and overseas, for limited timber resources. However, the

²⁸⁰ *Sydney Morning Herald*, 25 September 1854, p. 4; F. Broeze, *Mr Brooks and the Australian Trade*, Melbourne University Press, Carlton, Victoria, 1993, pp. 48-49.

²⁸¹ R. Hobbs, *Timbers Planks and Keels: A Type Profile*, Canberra, 2014, pp. 11-12.

cost of timber in Sydney was offset somewhat by the importation of kauri pine from New Zealand, at costs in 1862 averaging £4 per log containing 600 feet of sawn timber, with sawing costing £1 16s 0d. The same quantity of sawn ironbark, sourced within the County of Cumberland, would cost £12 by comparison. For shipbuilding purposes, the length of the imported, kauri-pine logs was usually of the order of 50-75 feet, ideal for planking as well as masts, while local logs were often only 20-25 feet in length and unsuitable for large vessels.²⁸²

Table 2: Sydney Region Newspaper Descriptions 1829-1872 (Hobbs 2014)

Built	Date	Name	Description
Brisbane Waters	1865	<i>Cleone</i>	Ketch, LOA 70 feet: keel, keelsons, timbers of iron bark, beams of blackbutt, planking of blue gum, decking colonial beech ²⁸³
Hawkesbury River	1829	<i>Australian</i>	Barque, Whaler, 270 tons, LOA 100 feet: blue gum planking, knees and timbers iron bark, top timbers apple tree, blackbutt masts and spars ²⁸⁴
Paterson River	1872	<i>J. S. Lane</i>	Schooner, 180 tons, LOA 91 feet: ironbark, spotted gum and flooded gum ²⁸⁵
Hunter River	1826	<i>Currency Lass</i>	Cutter: flooded gum ²⁸⁶
Sydney	1842	<i>Shepherdess</i>	Schooner, 46 tons: best materials, planked and lined with blue gum, decks cowrie pine ²⁸⁷
	1844	<i>James and Amelia</i>	Schooner 45 tons, LOA 46 feet: Floor timbers, keel and stern-post iron bark, planking [?] ²⁸⁸
	1853	<i>William and Mary</i>	Boat, 12 tons, LOA 26 feet: keel and stern iron bark, planking blue gum inside and out ²⁸⁹
	1872	<i>Eglantine</i>	Schooner, LOA 77 feet : keel of iron bark, framing of blackbutt and blue gum with kauri pine for the planking ²⁹⁰
Jervis Bay	1867	<i>Duke of Edinburgh</i>	Barque, 358 tons: framing iron bark, planking blue gum, keelsons iron bark, decks kauri pine ²⁹¹

²⁸² *Rockhampton Bulletin and Central Queensland Advertiser*, 5 November 1862, p. 1.

²⁸³ *Sydney Morning Herald*, 21 March 1865, p. 4.

²⁸⁴ *Sydney Gazette and NSW Advertiser*, 2 April 1829, p. 2.

²⁸⁵ *Newcastle Chronicle*, 6 February 1872, p. 2.

²⁸⁶ *Colonial Times and Tasmanian Advertiser*, 10 November, p. 3.

²⁸⁷ *Sydney Morning Herald*, 8 October 1842, p. 1.

²⁸⁸ *Sydney Morning Herald*, 20 January 1844, p. 4.

²⁸⁹ *Sydney Morning Herald*, 11 October 1853, p. 2.

²⁹⁰ *Newcastle Chronicle*, 10 December 1872, p. 4.

²⁹¹ *Sydney Morning Herald*, 5 October 1870, p. 4.

The timbers used in building vessels were often reported in the newspapers at the time of launching and when advertised for sale in an attempt to demonstrate the quality of a vessel (Table 2). Surveys of the period from the 1820s to the 1880s (Hobbs 2014) have identified the common names of the timbers favoured for framing and planking in NSW; these were flooded gum, blue gum (grey gum), blackbutt and ironbark.²⁹²

The establishment of a merchant trade with Britain coupled with shipments of Australian timbers to Government and private dockyards, and shipyards in Britain and India, would eventually result in recognition of the value of Australian timbers in shipbuilding.²⁹³ By 1851, Lloyd's of London had classed Tasmanian blue gum (*Eucalyptus [E.] globulus*) in the same category as teak and, by 1852, was considering placing the same timber in the 1st class (A1) with NSW Iron Bark, ranking it with English oak.²⁹⁴ By the 1860s it would seem that there was some degree of consensus in NSW and Britain on the use of colonial timbers in shipbuilding. The Australian Lloyd's Association (A.L.A.), formed in Melbourne in 1864, classified the timbers to be used in its *Rules and Regulations*, which, although based on long accepted colonial standards, could be seen as having created a new, Australian standard. In Table A of the publication the various timbers were placed in classes 1-12, the 1st class having a durability of 12 years without re-surveying for insurance purposes.²⁹⁵ (Refer to Tables A, 2 and 3 in Appendix 3)

A list of the indigenous timbers used in the colonies, for shipbuilding, was also posted in the press in October 1864 by the General Committee of the Association. For NSW the timbers were listed as: Flooded gum (*E. tereticornis*), grey gum (*E. sp.*); blackwood (*Acacia melanoxylon*); Iron bark (*E. persicifolia*); NSW cedar (*Cedrela toona*); and red-gum tree (*E. rostrata*). All these timbers were listed as used for framing and planking in tables No. 2 and No. 3 in the *Rules and Regulations*, although cedar and blackwood were generally used in fitting out and for small vessels such as boats.²⁹⁶

Although blackbutt (*E. pilularis*) was mistakenly described as the Iron Bark *E. persicifolia*, an early classification of blackbutt, ironbarks in general were covered in the classification tables as achieving A1 status. The seeming omission of blackbutt may have been due to lack of information, the *Rules and Regulations* having been developed in Melbourne at a time of botanical review and limited knowledge of Sydney construction standards. This was the case with Grey Gum, better known as the Sydney blue gum (*E. saligna*), which like many other species of eucalypt had more than one common name. Nevertheless, Lloyd's standard did place the four

²⁹² R. Hobbs, *Timbers, Planks and Keels: A Type Profile*, Canberra, 2014, pp. 11-12.

²⁹³ *Sydney Gazette and NSW Advertiser*, 19 March 1803, p. 4, 15 May 1803, pp. 1-2, 26 June 1803, p. 1, and 19 February 1804, p. 4; *Inquirer*, 7 February 1849, p. 3.

²⁹⁴ *Courier*, 17 September 1851, p. 3, and 8 May 1852, p. 2.

²⁹⁵ Australian Lloyd's Association, *Rules and Regulations*, with Registration Tables applicable to the varieties of colonial timbers used in ship-building etc., Melbourne, 1864.

²⁹⁶ *Launceston Examiner*, 10 November 1864, p. 2.

favoured timbers, flooded gum, blue gum (grey gum), blackbutt and ironbark, identified in newspaper reports of the time, in the 1st class.

The new Rules and Regulations also set out standards for every aspect of shipbuilding, including the use of materials and surveying for the purpose of insurance, as well as details of the standards expected in composition vessels i.e. those of timber on an iron frame. In its press release in October 1864, the General Committee of the Association made it abundantly clear that the 'tables contain the names of timbers, the most of which having been long and favourably known to colonial shipbuilders, [and] the characters assigned in their classification for use, your committee believe, may be confidently relied upon...'.²⁹⁷ John Cuthbert was among those shipbuilders in the eastern colonies whose standards of design and construction already embodied these high standards.

The shipyards operated by Cuthbert at Milne's Wharf and later Millers Point carried a good supply of seasoned hardwoods, those mainly used being noted in 1865 as: 'for beams [and planks], the ironbark, blackbutt, and the flooded, blue, red, and spotted gums; and for fittings, the teatree, ironbark, blackbutt, and bangally (bangalay)...'. The greater part of these timbers was obtained in the Sydney region.²⁹⁸

Timbers not discussed previously included: Bang Ally (Bangalay *E. botryoides*), used for the 'knees and crooked timbers of vessels', was an 'excellent timber for the shipbuilder...'.²⁹⁹ [White] Tea Tree (*Melaleuca leucadendron* now *M. leucandendra*) a hard, close-grained wood, was used for framing, knees and fittings.³⁰⁰ Spotted Gum (*Corymbia maculata* and/or *Corymbia henryi*), used for framing and planking, was used in particular in ship's bottoms due to its capacity to bend.³⁰¹

Shipbuilders in Sydney, like Cuthbert, had to continually source and import materials, including native timbers. The demand for blackbutt and blue gum planks and crooks, as well as ironbark and other timbers for shipbuilding in Sydney, had increased by the 1850s as the shipping industry grew in capacity. In 1852 alone, 2,953 shipments of timber, including timber suitable for shipbuilding, had arrived in Sydney, most from the northern coastal districts.³⁰² In 1864 Cuthbert had purchased the entire cargo of the ship *Young Australian*, from Jervis Bay, carrying 65,000 cubic feet of hardwood for shipbuilding, with arrangements made for further cargoes.³⁰³

The need to maintain a good stock of well-seasoned timber (2-3 years) and every commodity used in shipbuilding and repair work was essential to Cuthbert's

²⁹⁷ *Launceston Examiner*, 10 November 1864, p. 2.

²⁹⁸ *Sydney Morning Herald*, 21 March 1865, p. 5.

²⁹⁹ *Sydney Morning Herald*, 7 August 1879, p. 3; *Maitland Mercury & Hunter River General Advertiser*, 28 May 1885, p. 6.

³⁰⁰ *Clarence and Richmond Examiner and New England Advertiser*, 1 April 1873, p. 6; *Australian Town and Country Journal*, 19 June 1886, p. 25.

³⁰¹ *Sydney Morning Herald*, 9 November 1885, p. 4.

³⁰² *Sydney Morning Herald*, 20 November 1846, p. 1, and 3 November 1857, p. 8.

³⁰³ *Empire*, 2 April 1864, p. 5.

business. When Cuthbert attempted to dispose of the contents of his shipyard in 1872, the large quantities of consumable materials (summarised below) included:

- Hardwood knees and crooks (crucks);
- Quantity pine boards, planking slabs; Kauri pine, Beech and Cedar and colonial pine in log and planking; Cedar boards, ½ and 1 ½ inch; Kauri pine deck plank &c; Round pine spars, all sizes, from 90 [feet] x 28 [inches] down;
- Fancy woods, viz. cedar, rosewood, tulip, myall, Coromandel wood, maiden's blush, silky oak, bean-tree, beech, Huon pine, pear tree and teak &c;
- Best navy oakum, Europe rope, Sheathing felt;
- Boiled and raw oil in casks, 8 casks Stockholm tar, 20 casks pitch, 6 large casks resin, Black oil in-cask and a quantity of lime for chunam; and
- in the Copper Store: Muntz metal-7 cases 16 oz (per square foot), 9 cases 18 oz, 10 cases 20 oz, 6 cases 22 oz, 2 cases 24 oz, 5 cases 26 oz; punched sheets of Muntz metal-220 sheets 22 oz, 67 sheets 20 oz, 34 sheets 16 oz, 23 sheets 28 oz, and 20 keel plates; Metal [shear] clamps, spikes and stem nails; Cut and wire nails; and 18 cwt. Compo. nails, 1 inch and 1 ½ inch as well as Iron screws, bolts and nails.³⁰⁴

By the 1870s the enterprise was equipped with: treenail and dowelling machines; 2 punching machines for metal and copper sheathing; a new, large, punching and shearing machine by Morton Charleston; 2 steam kilns; California and other pumps for salvage; 6 large and 3 small pitch boilers; 6 chunam tubs; and 5 portable forges with anvils and bellows. In addition there were 8 caulking stages (from 20-60 feet long) and other staging horses and planking. The yard also had 8 small boats ranging from skiffs to a 5-ton boat and a sailing boat, as well as 2 work punts and a 5-ton, crane punt.³⁰⁵ The 'immense saw-mills, fitted with every appliance that enterprise could suggest or money supply...' were a major-part of the yard by the 1870s. The other buildings included the sail loft, rigging loft, boat-building shed, joiners and polishers' shed, the metal store and the pitch, tar and oil shed, as well as a warehouse for sundry ship's gear.³⁰⁶

The shipyards at Milne's Wharf and Millers Point had extensive provisions for every aspect of the shipbuilding trade, including a large mould loft. It was in such lofts, once the half-model design had been finalised, that the framing of a vessel was set out to full size on the floor by the master shipwright. No half-models have survived, although the practice was almost always used. In 1870 Cuthbert's enterprise displayed 6 models of various vessels in Sydney and earlier had produced waterline models of vessels as well as a complete model of the steam-dredge *Lytton*. One waterline model was that of a steamer of 150 tons for river use with a draft of 3 feet, probably the river-steamer *Ipswich*.³⁰⁷ These models, samples of timber and numerous half-models adorned Cuthbert's office at Millers Point.³⁰⁸

³⁰⁴ *Sydney Morning Herald*, 7 March 1872, p. 7.

³⁰⁵ *Sydney Morning Herald*, 7 March 1872, p. 7.

³⁰⁶ *Illustrated Sydney News and NSW Agriculturalist and Grazier*, 31 August 1872, p. 3.

³⁰⁷ *Sydney Morning Herald*, 4 March 1861, p. 5; *Evening News*, 10 September 1870, p. 3.

³⁰⁸ *Illustrated Sydney News and NSW Agriculturalist and Grazier*, 31 August 1872, p. 3.

For the construction of vessels, whether Government, naval or commercial, Cuthbert was required to build to the design and specifications set out in the contract. In most cases, inspection by marine surveyors was required to enable staged payments to be made in accordance with the contract and for insurance purposes, where the life of the vessel was critical. Such inspections were generally made during framing-up, on completion of the framing and then during planking etc., the hull being the most important part of any vessel. Government vessels, such as the steam-dredge *Lytton* and the gun-boat *Spitfire*, had a heavy work load and generally required the strongest and most durable of colonial hardwoods, such as ironbark and blackbutt.

The steam dredge *Lytton* was the last, large, timber steam-dredge completed for the Queensland Government in 1862, the next dredge being the iron steam-dredge *Bremer*, delivered by P. N. Russell and Co. in December 1864.³⁰⁹ Despite some degree of neglect initially, the *Lytton* performed well in difficult circumstances with repairs to the machinery mostly required due to mishandling. Although early reports suggested that the vessel was leaking there were no problems for 10 years, when repairs to the steam-engine and machinery were needed due to settlement of the timber frames. Although soon outdated, the steam dredge performed its tasks well for over 30 years, being moved from Moreton Bay to outlying areas including Maryborough, Cairns, Rockhampton and the Burnett River at Bundaberg.³¹⁰

However, in the design and construction of new vessels, whether commissioned or speculative, Cuthbert was able to promote new ideas, as well as the use of kauri pine, his standards and designs praised. Cuthbert limited his construction, for the most part, to coastal and inter-colonial vessels, which could be sold to shipowners and merchants in Sydney. Consequently, the vessels built by Cuthbert in the 1850s and 1860s met the needs of colonial merchants and city and coastal communities in terms of carrying capacity and standards of construction. Nevertheless, the mid-nineteenth century was a time of experimentation as colonial shipbuilders gained the confidence of merchants in Britain and the Australian colonies. The development of Cuthbert's shipbuilding abilities can be seen in the types of vessel designed and built before he went overseas in 1867, which are summarised below with details of their working lives, where available.

Sailing Vessels

Small working and coastal sailing vessels 1850s-1860s

An expanding economy required small, working vessels of all types. By September 1854, Cuthbert was reported as having built some 6 speculative vessels of 20-65 tons and from 34 feet [6 inches] to 64 feet in length, including ketches, cutters and ballast

³⁰⁹ *Rockhampton Bulletin and Central Queensland Advertiser*, 6 December 1864, p. 2.

³¹⁰ *Queensland Times, Ipswich Herald and General Advertiser*, 12 April 1864, p. 3; *Maryborough Chronicle, Wide Bay and Burnett Advertiser*, 12 February 1881, p. 2, 21 September 1886, p. 3, and 22 August 1887, p. 2; *Queenslander*, 25 March 1871, p. 3, and 4 October 1890, pp. 655-656.

and harbour boats, of similar materials. The ketch *Uncle Tom*, 65 tons, had an overall length of 65 feet, a beam of 16 feet and depth of hold of 4 feet, and was intended for the cedar trade. Like the *Uncle Tom*, these vessels, including the cutter *Cleveland*, had keels and frames of colonial hardwood, with planking of kauri pine, although other timbers were also used, the hulls copper-sheathed and copper-fastened.³¹¹

The cutter *Iron Bark*, 25 tons, launched in April 1854, was similar in construction, but employed Calcutta teak for the ceiling, below the deck beams.³¹² The smallest vessel, reported as built of 'cowrie and Baltic pine...' measured, in frame, 34 feet 6 inches in length, with a beam of 10 feet 2 inches and a hold depth of 4 feet 1 inch. The depth and beam were noted as 'moulded' dimensions, indicating that Cuthbert used half-models for even the smallest vessels.³¹³ By the end of 1854, Cuthbert had already demonstrated his design and construction skills with traditional small vessels.

The ketch *Teal*, advertised for sale in February 1865 featured 'a centreboard and all the newest improvements...'.³¹⁴ In most respects, the new ketch followed established precedents in its shallow draft, the centre-board also followed existing, colonial precedents and overseas precedents, with centre-boarded ketches, schooners and yachts already in use by the 1850s. In 1865, Sydney saw-miller Mr Booth built 4, centre-boarded, flat-bottomed ketches for the Northern Rivers timber trade.³¹⁵

Colonial and inter-colonial schooners and brigs 1850s-1860s

The colonial gunboat *Spitfire*, a small, ketch-rigged schooner, launched in 1855, was purchased in 1859 by the Queensland Government as the colony's first vessel in the 'Brisbane navy'. Initially employed as a Buoy Boat and Pilot Cutter, based at Moreton Island, the vessel also transported government officials and helped in police actions. In 1860 the *Spitfire* was used in the exploration of the Burdekin River and the area of Port Denison. With the discovery of gold on the Palmer River (1872), the pilot vessel was transferred to Cooktown and later used for surveying reefs and laying buoys in Torres Strait. However, in 1885 the *Spitfire* was purchased for use in beche-de-mere fishing, an activity which continued until December 1899 when the vessel was lost off the Piper Island Light. The vessel had been almost entirely rebuilt in the 1890s, after years of coastal operations and storm damage in 1896.³¹⁶ Despite the change in use, the *Spitfire* achieved an excellent performance in the shallow waters of Queensland's northern coastline.

³¹¹ *Freeman's Journal*, 22 October 1853, pp. 10,11.

³¹² *Empire*, 27 April 1854, p. 4.

³¹³ *Sydney Morning Herald*, 11 February 1854, p. 7.

³¹⁴ *Sydney Morning Herald*, 28 February 1865, p. 1, and 3 April 1865, p. 7.

³¹⁵ *Sydney Morning Herald*, 1 March 1865, p. 5.

³¹⁶ *Sydney Morning Herald*, 30 May 1859, p. 5; *Moreton Bay Courier*, 20 October 1860, p. 2; J. W. Smith and G. Elphinstone, *Spitfire in search of the mouth of the River Burdekin* 1860, Pugh's Printing Office, Brisbane, 1860; *Courier*, 5 September 1861, p. 2, 21 May 1861, p. 2, and 27 February 1862, p. 2; *Queenslander*, 7 February 1874, p. 3; *Morning Bulletin*, 11 November 1881, p. 3; *Gympie Times and Mary River Mining Gazette*, 10 December 1881, p. 2; *Cairns Post*, 28 February 1931, p. 4; *Townsville Daily Bulletin*, 21 October 1953, p. 7.

The brig *Lady Denison*, 170 tons builder's measurement (129 tons register) and 103 feet overall, was built using hardwood framing and kauri planking in excess of Lloyd's instructions for A1 vessels. Launched in 1859, the *Lady Denison* was particularly noted as designed by Cuthbert and as having large 'and splendid cabin accommodation...' on a raised quarter-deck at the stern.³¹⁷ However, despite their speed, brigs such as the *Lady Denison*, with 2 square-rigged masts, were already becoming obsolete with the arrival of steamships. Brigs required a relatively large crew for their small size and were also difficult to sail into the wind. After trading from Launceston, Tasmania, for some years, often in extremely difficult seas, the *Lady Denison* traded with New Zealand and New Caledonia. The vessel was reported as working in the Labor Trade (blackbirding) in the Western Pacific from 1879-1881, including beche-de-mere fishing in Torres Strait. However, the brig, noted as once a fine vessel, had broken-up in Cossack harbour by December 1887, after a severe hurricane, whilst with the pearling fleet in Western Australia.³¹⁸

The brigantine-rigged, clipper schooner, *Zephyr*, launched in December 1866, was a superior, handsome vessel according to contemporary reports. At 118 feet overall, the vessel was of colonial hardwoods throughout with hardwood planking to the bilge and kauri pine planking on the topsides and copper sheathed and fastened. Built under Captain Norrie, surveyor for French Veritas, the schooner was awarded the highest classes i.e. '3-3, L 1-1 for 9 years, which was equal to A1 for 14 years in English Lloyds'. The *Zephyr* appears to have been built to better than contemporary standards for inter-colonial models in terms of size and tonnage and was the fastest vessel in its class in Sydney. Little is known of the *Zephyr's* working life, although the vessel traded between Sydney and Hokitika and Auckland in New Zealand, carrying timber and general cargo until at least the 1890s.³¹⁹

In these larger sailing vessels, both personal statements, Cuthbert appears to have returned to his preferred standards - in effect good timber shipbuilding paying little attention to the increasing shift to steam and iron. In addition, firms, such as that of Mr Allen of Balmain, and designers such as Mr Skinner, were producing new, larger vessels for local merchants. The *Waimea*, a schooner-rigged, 3-masted, auxiliary steam vessel of 300 tons was built for Mr Manning of Neutral Bay in 1867 and launched in February 1868. Of composite construction, with wooden planking on iron frames, the vessel represented the best in composite construction used in the best clippers and in colonial terms was considered 'unquestionably the most suitable plan...' for bar harbours.³²⁰

³¹⁷ *Sydney Morning Herald*, 9 January 1858, p. 8; *Kiama Examiner*, 15 January 1859, p. 3.

³¹⁸ *Goulburn Herald*, 21 May 1862, p. 4; *Sydney Morning Herald*, 3 November 1880, p. 5, and 13 May 1887, p. 7; *Evening News*, 11 November 1881, p. 2; *Australian Town & Country Journal*, 7 May 1887, p. 45; *Daily News*, 9 December 1887, p. 3; 'Labor Trade in the Western Pacific', Despatch by Commodore Wilson R N from the Secretary of State for the Colonies, Colonial Office Great Britain, to Houses of Parliament, Melbourne, Victoria, 1882 (GP V 1882/83 no. 31).

³¹⁹ *Sydney Morning Herald*, 12 December 1866, p. 4, 11 October 1882, p. 8, and 7 June 1888, p. 8.

³²⁰ *Sydney Morning Herald*, 7 February 1868, p. 4.

Auxiliary and Steam-powered Vessels

All mercantile marine steamers or steamships (105) connected with the port of Sydney were listed in July 1864 in the *Sydney Morning Herald*. Of these, 22 were owned by the A.S.N. Co., 34 were owned by individual proprietors with the remainder owned by local and overseas companies. Some 80% were of iron construction with only 21 vessels built of timber, which ranged in tonnage from 6-225. Only 2 of the timber-hulled vessels featured screws (propellers) the remainder using paddle-wheels. Until screw-driven vessels were perfected, paddle-wheels provided some security in that the engines could be placed in reverse to slow the vessel, something essential in busy harbours. Four (4) of the listed timber vessels were built by Cuthbert:

<i>Nowra</i>	52 tons	20 hp	paddle-wheels
<i>Ipswich</i>	89 tons	60 hp	paddle-wheels
<i>Kirribilli</i>	8 tons	6 hp	paddle-wheels
<i>Susannah Cuthbert</i>	178 tons	56 hp	screw ³²¹

The first 3 are discussed under *River and harbour paddle-steamers 1850s-1860s*, the last under *Screw steam-colliers 1860s*.

River and harbour paddle-steamers 1850s-1860s

This group of shallow-draft vessels included: the *Nowra* (1855) 85 feet overall; the *Ipswich* (1860) 151 feet overall; the *Kirribilli* (1862); the *Comerang* (1865) 145 feet overall; and the *Coolangatta* (1865) 109 feet at the keel. All except the *Coolangatta*, a stern-wheel vessel, were fitted with side paddle-wheels, the colonial standard for this type of vessel. Two wooden stern-wheel vessels were also built in Sydney by Captain Rountree by July 1861, as was a paddle-steamer, in 1862, by Messrs Chowne, for the I.S.N. Co.³²² However, these vessels were outnumbered by the A.S.N. Co.'s fleet of iron steamers, which, in July 1864, included 8 screw-steamers, 12 paddle-wheel steamers and 2 stern-wheel steamers, of which 4 had been built at their works at Pyrmont.³²³ The timber vessels answered short-term needs, but were replaced by iron vessels as trade and traffic increased.

The dimensions of the steam ferry *Kirribilli* as first built are unknown, although of copper-fastened, carvel construction. The description of the *Kirribilli* in May 1862 as a 'remarkably pretty model...', '[which would] prove very fast for her size...' given a reported, registered tonnage of 8 tons and with 6 hp 'engines', at the bottom of the range for steam-powered vessels in Sydney in 1864, suggests a boat which relied on good lines.³²⁴ The vessel was sold to the residents of Hunter's Hill in April 1871 to

³²¹ *Sydney Morning Herald*, 28 July 1864, p. 4.

³²² *Sydney Mail*, 6 July 1861, p. 4; *Sydney Morning Herald*, 21 October 1862, p. 9.

³²³ *Maitland Mercury and Hunter River General Advertiser*, 5 July 1864, p. 2.

³²⁴ *Sydney Morning Herald*, 28 July 1864, p. 4.

enable them to trial the use and the demand for a ferry boat. One of the Balmain Steam Ferry Co.'s vessels by 1874, the *Kirribilli* was again for sale by 1876. Rebuilt and modified by 1879, the ferry was described as 46 feet in length with a 7-foot beam and a registered tonnage of 12 tons, and was able to carry 20 tons with accommodation for 30 passengers. Sold in February 1879 for the Clarence River trade, the steamer ran aground at Nelson's Bay, seawater flooding the vessel as she lay 'bilged'. No further information has been found as to the fate of the *Kirribilli*.³²⁵

The *Nowra* and *Ipswich* were built on the diagonal principle, although the *Coolangatta* was probably of composite construction, using iron and timber, like the *Comerang*. The *Comerang* was diagonally trussed with iron 'strapping and knees' and iron and hardwood frames, but with hardwood beams and kauri and hardwood planking. The *Ipswich*, *Nowra*, *Comerang* and *Coolangatta* were suited to shallow rivers, with drafts of between 2-3 feet, their bottoms being almost flat. Importantly, the *Comerang* was expressly built for local conditions where an overseas builder would not have been aware of the issues. The *Coolangatta*, stranded by flooding for 2 months in the Shoalhaven district in 1870, was re-floated without any damage, the strength and quality of the construction evident.³²⁶ The *Ipswich* was the longest vessel built by Cuthbert; in this respect, steam-driven vessels needed to accommodate engines as well as cargo and were longer than equivalent sailing vessels.

Although the history of these river craft is unclear, the *Ipswich* was reportedly the fastest paddle-steamer sailing up-river from Brisbane, approaching 15 miles per hour on her first trip, although there was little room for cargo.³²⁷ The vessel appears to have survived as a ferry/cargo boat on the Brisbane River until the 1880s, when the hull was shortened and the machinery removed.³²⁸ The *Nowra* was sold to the Queensland Government in 1858 and used as a tug boat and tender on the Brisbane River for some years, operating well into the 1870s under various owners.³²⁹ Sold in 1869, the *Comerang* spent some years in New Zealand, although the vessel had returned to NSW by 1882.³³⁰ Having outlived its usefulness, the *Coolangatta* is thought to have been dismantled by 1891.

Screw steam-colliers 1860s

It has already been noted that the *Commodore Burnett/Pluto* (1863) was lost soon after its completion. However, the second vessel, the *Susannah Cuthbert* (1863) traded on the northern rivers, as a coastal vessel, from 1866 to 1874, when the vessel was sold

³²⁵ *Sydney Morning Herald*, 3 April 1871, p. 1, 27 July 1871, p. 1, 15 December 1876, p.1, 16 May 1878, p. 6, and 20 December 1878, p. 1; *Evening News*, 4 April 1879, p. 1; *Empire*, 3 June 1874, p. 4; *Clarence and Richmond Examiner and New England Advertiser*, 24 February 1879, p. 2, and 19 August 1879, p. 2

³²⁶ *Empire*, 30 April 1870, p. 2; *Kiama Independent and Shoalhaven Advertiser*, 2 June 1870, p. 2.

³²⁷ *Moreton Bay Courier*, 8 November 1860, p. 2.

³²⁸ *Brisbane Courier*, 14 July 1888, p. 7.

³²⁹ *Sydney Morning Herald*, 21 April 1858, p. 5; *Australian News for Home Readers*, 25 August 1864, p. 16; *Brisbane Courier*, 26 October 1876, pp. 2-3.

³³⁰ *Sydney Morning Herald*, 22 June 1869, p. 4.

for its original purpose, as a collier, to the New Wallsend Coal Company. The schooner-rigged vessel was registered at 194 tons gross, 161 tons net, in 1866 (61/1866), the vessel was lost on Jenkin's Point, Long Reef, outside Sydney in 1875.³³¹

The diagonally laid kauri pine planking of the timber-framed vessel, with an outer skin of kauri pine laid longitudinally, employed iron knees between the deck beams and keelsons for extra strength, a composite system of construction which appears to have proved more than adequate for its original purpose. Although not a new concept, iron ballast tanks were fitted forwards of the engine, to be filled with water when necessary, so avoiding the problems with ballast loading.³³²

The *Pluto* and *Susannah Cuthbert* were of similar design and construction, the *Pluto* being the first screw-driven, timber collier constructed in the colonies. Both vessels were built to exploit the coal deposits north of Sydney, at Lake Macquarie and Newcastle. Cuthbert and his fellow investors in these vessels were not alone. In December 1863, Captain Rountree of Waterview Bay, Balmain, launched a similar, but smaller, timber vessel, the *West Hartley No.3* for the West Hartley Co.; 2 similar vessels, numbers 1 and 2, were under construction in Britain. A 3-masted, schooner-rigged, auxiliary screw-steamer 105 feet overall, beam 17 feet with a 3-foot deep hold, the *West Hartley No.3*, was able to carry 100 tons of coal with a draft of 3 feet 6 inches, and was designed especially for the shallow waters of Lake Macquarie. Nearly flat-bottomed, the vessel was equipped with centre-boards to make handling easier.³³³

Design and Workmanship

Design and workmanship in Cuthbert's shipyard were second to none, with the best materials always used, including colonial timbers, state of the art sheathing of the hull and contemporary construction techniques. The use of kauri pine was based on availability as much as cost and weight when compared with colonial hardwoods. Softwoods like kauri pine were also much easier to work than colonial hardwoods and lighter, an advantage when used for masts, decking and the topsides of vessels. The Lloyd's Association's classification of kauri pine in 1864 was A10; 6 years for the floors and timbering generally, with 5 years allowed for exposed framing and with 10 years for protected areas of planking below the waterline and 8 years above.³³⁴

The use of the diagonal technique by Cuthbert in his commercial vessels promoted new standards for the colony, although the idea appears to have been transferred from England to NSW much earlier. A steamer, launched from Mr Chowne's shipyard at Pyrmont in 1847, had been built on the diagonal principle. The vessel

³³¹ *Maitland Mercury and Hunter River General Advertiser*, 7 July 1875, p. 2; wreck site in Australian National Shipwrecks database at environment.gov.au.

³³² *Sydney Morning Herald*, 20 September 1862, pp. 8-9.

³³³ *Empire*, 5 October 1863, p. 5.

³³⁴ Australian Lloyd's Association, *Rules and Regulations, with Registration Tables applicable to the varieties of Colonial Timbers used in Ship-Building, scale of fees etc.*, Melbourne, 1864, Tables 2, 3 and A after p. 40.

featured 3 layers of planking; 2 x ¾ inch inner layers with a single outer layer 1 ½ inches thick, all of kauri pine with tarred felt between the layers, the hull coppered overall.³³⁵

The diagonal principle referred to above was suggested as early as the 1830s, in America, and used in 1843 in the Royal Steam Yacht *Victoria*, launched at Pembroke, Wales, in 1843. The benefits of diagonal planking included less substantial framing, the strength coming from the planking over the 205 foot-long hull. It was stated at the time, that:

Some idea may be formed of the novel style her construction, as well as her great strength, when it is stated that she is built only of plank; the first two layers being of oak, one inch and three-quarters thick, placed across each other diagonally at an angle of 45 degrees, the outside plank being of larch, 3 inches thick, lying horizontally, or with the sheer of the ship, and the whole being bound up with vertical and diagonal iron bands. Between each layer of plank, the surface is covered with thick tarred felt; the vessel, therefore, cannot leak...being divided into five compartments by four water-tight bulkheads extending as high as the state deck...³³⁶

In 1854, Cuthbert had built the yacht *Enchantress*, 14 tons builders' measurement (10 tons register) and 30 feet overall, on an entirely new model, having decided that he could improve on other designs in the colony. Built using the diagonal method of planking, the vessel set standards of performance and design repeated in 1861 in the yacht *Peri*.³³⁷ This construction technique was later used in his auxiliary steam-vessels, the yacht probably acting as a promotional vessel to demonstrate the standards which could be achieved in hull construction using this technique.

However, Cuthbert's use of composite and diagonal construction suggests that he was also endeavouring to come to terms with new ideas and the transition to iron construction. Given the high standards he achieved, and without being able to look into every shipbuilder's business and vessels, it is difficult to escape the notion that he was considered to be among the best, if not the best shipbuilder in Sydney.

As the most respected shipbuilder in Sydney in the 1860s, Cuthbert was asked to produce displays of timbers used in ship and boat building in NSW. This appears to have begun with the 1861 NSW Exhibition in Sydney, followed in 1862 by some 20 specimens of 'the different kinds of woods suitable for the use of the shipwright...' which received a silver medal at the Great International Exhibition in London in that year. Due to the misplacement of some samples in 1862, Cuthbert was described as '[feeling] sore...' that he did not receive a better prize. Exhibits would also be presented at the Sydney Metropolitan Intercolonial Exhibition in 1870 (6 models)

³³⁵ *Sydney Morning Herald*, 4 May 1847, p. 2, and 16 November 1850, p. 8.

³³⁶ *Sydney Herald*, 25 September 1834, p. 2; *Sydney Morning Herald*, 9 September 1843, p. 3.

³³⁷ *Empire*, 13 January 1855, p. 4; *Bell's Life in Sydney and Sporting Review*, 17 November 1855, p. 2; *Sydney Morning Herald*, 20 January 1855, p. 4.

and the London Exhibition of 1871, when a case of colonial timbers used in ship and boat building was sent to London.³³⁸

A case of timber samples, used in ship and boat building in NSW in the 1860s, has survived in the collections of the Victoria Museum, Melbourne. Assembled by John Cuthbert, for the Inter-colonial Exhibition in Melbourne in 1866, the representative samples were listed as:

1 Blue Gum; 2 Red Gum North; 3 Red Gum South; 4 Water Gum; 5 Spotted Gum North; 6 Spotted Gum South; 7 Iron Bark; 8 Black Butt; 9 Blood Wood; 10 Bang Ally; 11 Iron Bark (40 years in use); 12 Stringy Bark; 13 Mangrove; 14 Colonial Beech; 15 Colonial Pine; 16 Mahogany (27 years in water); 17 Swamp Mahogany; 18 Swamp Oak; 19 Kauri Pine; 20 Cedar; 21 Forest Mahogany; 22 Myall; 23 White Honeysuckle; 24 Red Honeysuckle; (25-26 labels missing); 27 Bean Tree; 28 White Tea-tree; 29 Tulip; and 30 Native Pear Tree.³³⁹

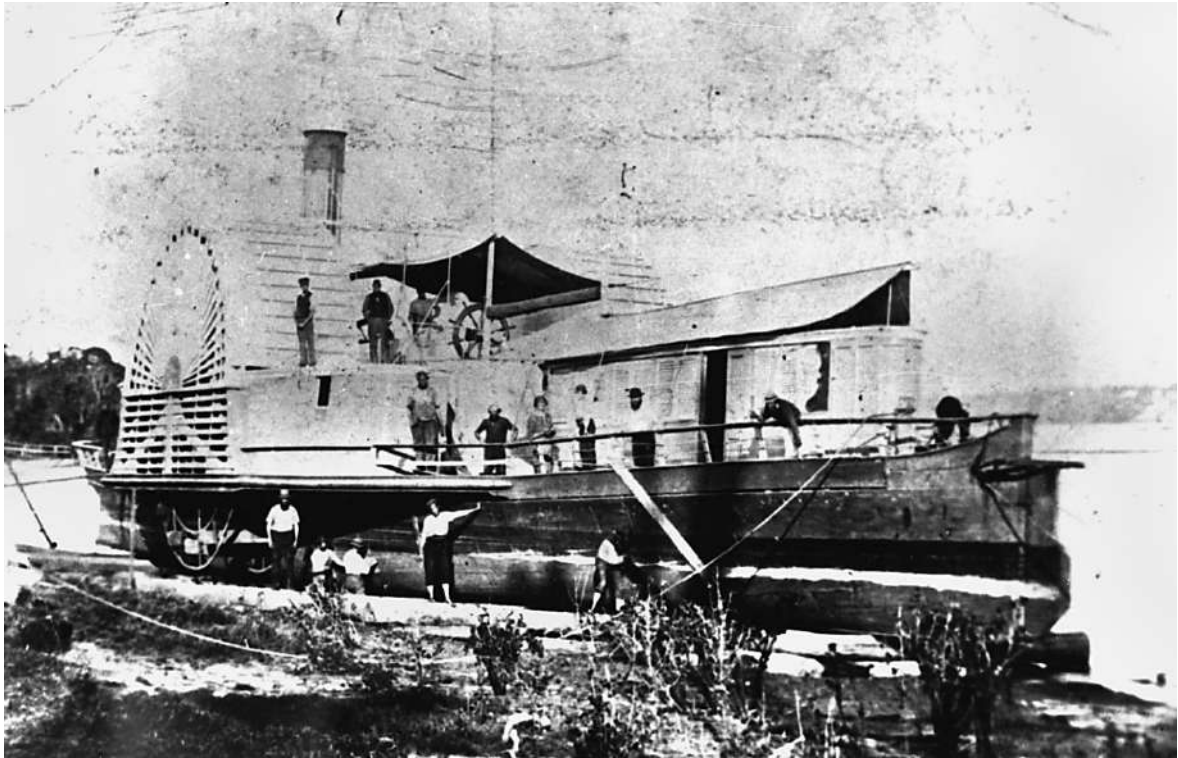
Only 3 of the 4 primary framing and planking timbers used in NSW were identified by name, flooded gum not seeming to have been included. Samples 25 and 26 appear to have included Mountain Oak, based on newspaper reports of the day.³⁴⁰ More than half of these timbers were stocked by Cuthbert in his yard in 1865 and again in 1872, when he disposed of the contents of his shipyard. The more exotic, decorative timbers in the samples were used in boats and yachts and for fitting out generally, reflecting changing social standards.

Before his return to England in July 1867, Cuthbert's shipyard had repaired many overseas vessels of large tonnage and he would have understood the difficulties in trying to compete with cheaply-built, overseas ships and the increasing inroad of iron vessels. In addition, the heavy workload of repairs had begun to shift the emphasis of the enterprise from building to servicing ever larger vessels demanding an ever larger workforce, potentially split between 'new' and 'old' work. Needless to say, the standards employed by Cuthbert in the 1850s and 1860s would continue to be central to his enterprise in the years leading up to his retirement in 1873.

³³⁸ *Sydney Morning Herald*, 2 November 1861, p. 8, 13 February 1863, p. 5, 21 March 1865, p. 5, 30 October 1866, p. 3, and 24 February 1871, p. 7; *Evening News*, 10 September 1870, p. 3.

³³⁹ *Sydney Morning Herald*, 18 February 1863, p. 5, and 30 October 1866, p. 3; Museum Victoria website: Economic Botany/Timbers/Timber Samples-Australian, John Cuthbert, pre 1866, item HT 25402.

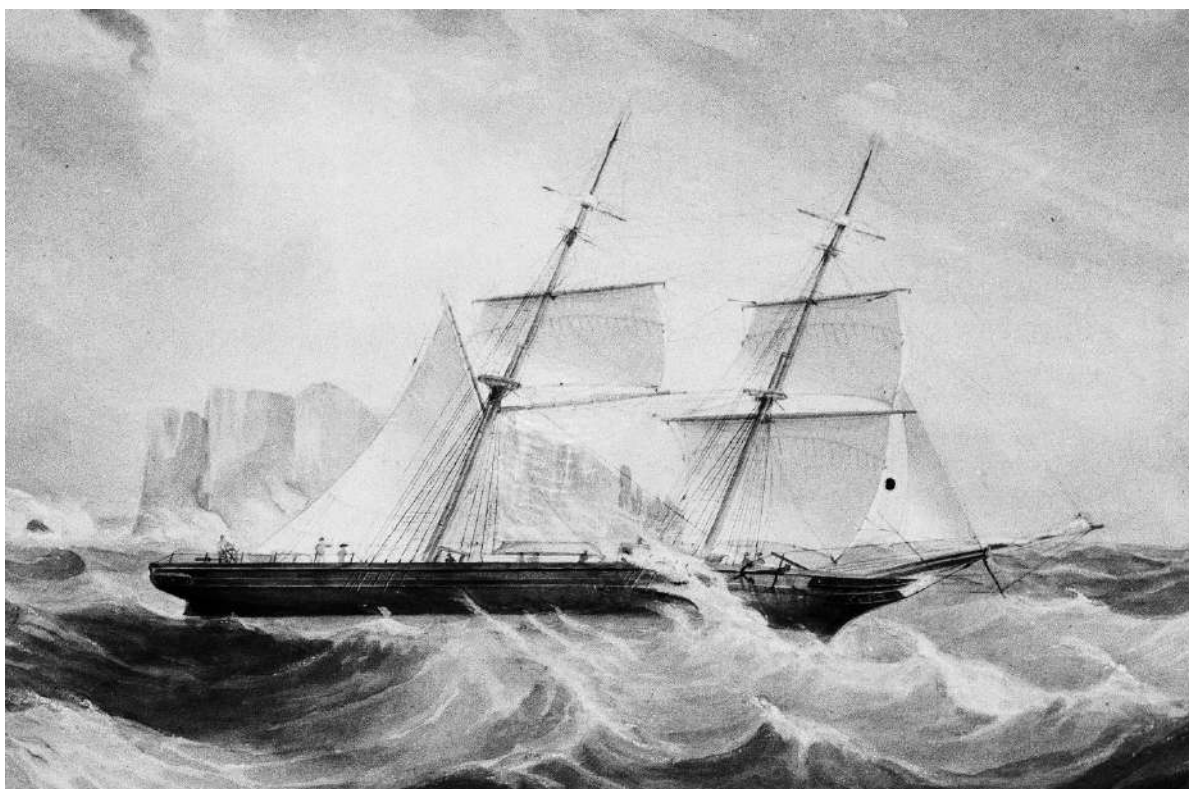
³⁴⁰ *Sydney Morning Herald*, 30 October 1866, p. 3.



Paddle-steamer, thought to be the *Ipswich* on the Ipswich/Bremer River towards Ipswich (undated). Source: John Oxley Library, State Library of Queensland, Image 24.



The *Spitfire* at Cooktown, Queensland, c. 1880. Source: Reproduced courtesy of RAN, Image 12.



An apocryphal, watercolour painting titled '*Lady Denison*' dated 1954. The rigging details are correct for Cuthbert's brig launched in 1859, although an earlier vessel of that name, a barque, was wrecked on the west coast of Tasmania in 1850. Both vessels were named after the wife of the 11th Governor of NSW Sir William Denison KCB; Denison was Lt-Governor of Tasmania from January 1847-January 1855, and Governor of NSW from January 1855 to January 1861.

The *Lady Denison* was purchased by Captain McKinlay from John Cuthbert in July 1859, McKinlay intending to revive the shipping trade with Launceston, Tasmania. On 12 May 1862 the vessel left Launceston bound for Sydney via Bass Strait, but encountered what was called a 'meteorological phenomenon'. For several days the vessel was 'baffled by head winds...' and encountered gigantic seas, waterspouts and heavy squalls. The waterspouts, of which 9 passed close to the vessel in the space of 20 minutes, formed from whirlwinds travelling at 60 miles an hour and whirling 'cauldrons of water...', which came from every point of the compass. The majesty of the scene left him without fear, according to passenger V. Carr Boyd L.L.D. of Wynyard Square, Sydney (*Goulburn Herald*, 21 May 1862, p. 4.).

Trade with Tasmania continued under various captains until 1864, after which the vessel was employed further afield in trading with New Zealand and New Caledonia. Later, as part of the pearling fleet on the coast of Western Australia, the *Lady Denison* survived a disastrous hurricane in mid-1887, only to break-up in Cossack harbour some months later.

Source: State Library of New South Wales, Image 20.



Timber Samples 1866, New South Wales Court, Intercolonial Exhibition, Melbourne. Source: Museum Victoria, Image 7.1.



Timber Samples 1866, New South Wales Court, Intercolonial Exhibition, Melbourne, with the engraved plate from the hinged top. Source: Museum Victoria, Image 7.2.

5

Invoice Book 1868-1873

The one, surviving, primary record of Cuthbert's enterprise, a 1,000 page Invoice Book, covers the period 25 December 1868 to 29 January 1873, almost the entire business period which followed his return from England in April 1868. The Invoice Book deals almost entirely with repair, overhaul and fitting-out, the few vessels built during this period appearing as lump sum invoices for contracted work. The Invoice Book has survived in the records of the Bank of Australia as part of the mortgage drawn up between John Cuthbert and Daniel Macquarie in December 1873, following the sale of the business, and now held by the State Library of NSW.³⁴¹

Each vessel, business or entity was entered by name in the alphabetical index as it was invoiced for the first time, followed by the page number e.g. *Edith* 92, with subsequent invoices added to the existing entry. A few were noted under the owner's or a business name e.g. Brown and Co., Mort & Co., the I.S.N. Co., and some under government entities such as Fitzroy Dock (20 invoices), Commissariat (Navy) or Harbours and Rivers. Naval vessels were listed alphabetically by name, e.g. *Scylla*, HMS, with occasional entries under the captain's name. Shipping companies such as the A.S.N. Co., the I.S.N. Co. and the C.R.N.E.S.N. Co. were included by name, although there was little interaction with other shipbuilding enterprises at this time.

Although most vessels were only noted once or twice, some vessels were worked on as many as 6-7 times, with groups of invoices covering each repair or repair period. Specific invoices are referred to by page number, although the last 15 pages appear to be missing. An outline of the Invoice Book 1868-1873 is set out below.

Date of Invoice	Page	Date of Invoice	Page
25 December 1868	1	24 December 1868	23
2 January 1869	24	21 December 1869	324
8 January 1870	325	27 December 1870	548
2 January 1871	549	29 December 1871	765
4 January 1872	766	21 December 1872	968
7 January 1873	969	29 January 1873	985

More than 350 named vessels were docked, surveyed, overhauled, repaired or re-fitted during this period. Repairs were made to individual vessels at varying intervals, often 1-3 years apart, or less, with more than 650 separately invoiced repairs. Of the estimated 650 total repairs, some 70 were to naval vessels, the

³⁴¹ State Library of NSW, Bank of Australia Records 1826-1894, ML MSS. 1591, Vol. 111 Records of John Cuthbert, 1868-1873; being an invoice book re-shipbuilding business (Vol. ML MSS. 1591/14).

remainder to commercial vessels. Naval vessels handled for repairs during this period amounted to 28 warships, comprising 11 British (H.M.S.), 12 French (H.I.M.), 2 Russian (H.I.M.) and 3 American (U.S.) vessels. In addition, Colonial Government vessels, such as the steam-tugs *Thetis* and *Cyclops* and the steam-dredge *Hercules* were docked, surveyed and repaired. (Refer to Appendix 4)

The Invoice Book tells us something about his business, the costs involved and how shipbuilding matters were described and invoiced. Key aspects of each invoice were the type of vessel and cross-referencing, by number, to the journal used during the work (none of the journals have survived). Each invoice for repairs was in 2 sections; a general description of the work, followed by a breakdown of the labour and materials, often over several pages. The layout of each invoice followed the general procedure required to rebuild the vessel after stripping down and investigation.

The invoices can be broken down into a number of categories: Sales, including timber and other materials; New Work, including lump sum and interim payments for new vessels; Docking and Undocking; and Old Work, including docking and undocking, lump sum tenders for repairs and repair work and labour at cost, including materials. Sales were minimal and limited to timber, tar, pitch and other consumable items and have not been discussed.

New Work

On his return from Britain in April 1868, Cuthbert undertook comparatively little in the way of new work, although he built cutters, gigs and his own steam launch as well as a number of naval schooners under lump sum contracts. The cost of building Cuthbert's own steam launch, including the 'engines', was itemised on 12 December 1872 (Page 961) as £446 12s 5d. At Page 971 of the Invoice Book, Messrs Montefiore & Montefiore were invoiced on 10 January 1873 for the sum of £350 for completing 2 large cutters, coppered and copper fastened.

Invoices for the building of schooners for the French and British governments were also included. In November 1872, the Lords Commissioners of the Admiralty were asked to make the second advance payment on 1 of 4 armed schooners, the sum of £630 (invoiced at Page 934) being for completion of the 'framing', with approval from the Captain of HMS *Basilisk*.

Docking and Undocking

Of particular importance to any Captain or owner, was the possibility of taking a vessel out of the water following damage at sea or to clean and inspect the hull. Prior to 1868, Fitzroy Dock had been used by Cuthbert since at least June 1858 for commercial vessels, this use continuing until 1873. However, his lease over the A.S.N. Co.'s Patent Slip had come to an end in 1864, followed in 1866 by his lease over Mort's Dock, which had begun in 1860. In 1865 Cuthbert had leased the old

Patent Slip in Sussex Street, purchasing the facility in 1868, to compensate for these losses, although the structure and content of the Invoices would not have changed.

The majority of naval vessels were placed in Fitzroy Dock with re-fitting often continuing at Farm Cove or at Cuthbert's Millers Point shipyard after undocking. The costs of docking and undocking commercial and naval vessels in Fitzroy Dock were charged directly to the Fitzroy Dock Branch of the Department of Public Works, with repairs, including labour, materials and other costs, charged directly to the Captain of the ship, the shipowner, or to the relevant consul or naval authority. Vessels were normally towed, by steam tug, from their moorings to the dock and back again for completion of works and/or refitting.

The NSW Government's Fitzroy Dock on Cockatoo Island complemented Cuthbert's Patent-Slip in Sussex Street and his Millers Point shipyard. While vessels under 600 tons could be taken on Cuthbert's Patent Slip for cleaning and inspection, Fitzroy Dock was critical to the inspection and repair of naval vessels and the larger commercial and Colonial Government vessels. The invoices at pages 22/2, 65, 129, 213, 245, 292, 321, 372, 424, 436, 502, 563, 619, 669, 764, 798, 814, 856, 896 and 958 refer solely to 'Shipwrights' labour Docking the undermentioned [commercial and naval] vessels' in Fitzroy Dock. These invoices charged for the number of days in the dock, the date against each vessel signifying the date of undocking. In all cases, the cost of docking and undocking was charged at 14 shillings a day for shipwright's time.

Of the 79 vessels docked between 11 January 1869 and 18 October 1872, which are described in these pages, 32 were commercial, 37 naval and 10 NSW Government vessels. This confirms Cuthbert's ongoing use of Fitzroy Dock for commercial purposes after 1866, when he lost his sub-lease over Mort's Dock, almost as frequently for commercial vessels as for naval vessels. The scope of Cuthbert's supervisory role in Fitzroy Dock requires further research, since he also appears to have supervised the docking of commercial vessels, which do not appear separately in the Invoice Book. The use of Cuthbert's Patent Slip was invoiced directly to the customer, either in a separate invoice or as part of the overall invoice. This may have been the case with some commercial vessels, although only a limited sample of the invoices has been examined to date, due to the fragile nature of the invoice pages.

The need to maintain a shipwright at Fitzroy Dock and elsewhere during any repair work is clearly seen in the invoice for the French naval vessel, H.I.M. war-steamer *Caledonienne*, where the vessel was described as raised by 'hanging...to relieve [the] keel blocks...' after shoring up the ship in dock. This was to facilitate the removal of a portion of the main keel and all through fastenings before replacing with new keel sections and fastenings (Page 242). The invoice at Page 129 for Fitzroy Dock illustrates the use of that dock for repair work for both commercial and naval vessels. At Page 70 of the Invoice Book, the charge of £5 for taking the steam-tug *Vesta* on Cuthbert's Patent Slip, in February 1869, illustrates the cost of taking a

vessel of less than 600 tons on the Sussex Street Patent Slip for repairs³⁴². Other costs charged included the towing of vessels; the *Western Empire*, 1,245 tons, was towed to the A.S.N. Co.'s Patent Slip in December 1868 at a cost of 15 shillings (Page 21).

Page 70 *Vesta*, steamer

70

Sydney 20 February 1869

The Owners of 'Vesta', Steamer

*To John Cuthbert Draw
Taking on Slip and launching £5-0-0*

(Journal 50)

Page 129 Fitzroy Dock

129

Sydney 1 May 1869

*The Department of Public Works
Fitzroy Dock Branch*

Draw to John Cuthbert

For Shipwrights labour Docking the undermentioned vessels:-

<i>February</i>	<i>18</i>	<i>Miss Cameron</i>	<i>4 days</i>
	<i>25</i>	<i>General Lee</i>	<i>6 days</i>
<i>March</i>	<i>3</i>	<i>H.I.M. Guichène and Lady Franklin</i>	<i>8 days</i>
	<i>25</i>	<i>H.M.S. Challenger</i>	<i>4 ½ days</i>
<i>April</i>	<i>3</i>	<i>Pakeloy, steamer</i>	<i>2 days</i>
	<i>13</i>	<i>Centurion</i>	<i>8 days</i>
	<i>21</i>	<i>Thetis & Dredge Samson</i>	<i>4 days</i>

*Total 36 ½ days @ 14s per day
[£53 9s 6d]*

(Journal 71)

³⁴² *Empire*, 6 February 1869, p. 4.

Old Work

The scope and nature of 'old work' as set out in the Invoice Book for 1868-1873 is far too complex to discuss in great detail. Suffice it to say that the repairs included: replacing framing, keel sections, keelsons, planking, false keels and decking to varying degrees; stripping, cleaning, caulking, chunamering and re-coppering the hull; and repairs to rudders, masts, rigging and spars. Fitting-out was usually carried out after major repairs, to ensure that the vessels were seaworthy; this included water tanks, ships' boats, cabins and much of the running gear, including rigging and sails. The invoices also reveal that metal items, such as the old copper and Muntz metal sheathing, were sold as scrap, the profit being credited against the owners invoice.

Whilst Australian native timbers were used in general for repairs to the framing and planking in all timber and composite vessels, the Invoice Book reveals that Cuthbert appears to have stocked, and possibly imported, British, Baltic and Canadian timbers as well as teak, for the final stages of fitting-out in some British naval vessels. The timbers used in repairing and fitting-out the auxiliary, surveying vessel, H.M.S. *Virago* (PS) were invoiced on 22 June 1871 at Pages 670-671. The invoices itemised the timber sizes and types in a list of Naval Supplies provided by Cuthbert:

Boards: Elm 10 inches x 1 ¼ inches; Canadian 13 x 1; Oak 12 x 1 ¼; Mahogany 12 x 1; Yellow pine 14 x 1; Beech 12 x ¾; Cedar 12 x ½; and Fir 12 x 1.

Planks: Elm 14 x 4; Oak 14 x 4, 14 x 3, 12 x 3, 12 x 2, 12 x 1 ½; and [K]auri 13 x 4.

Deals: Deck 10 x 4; and ordinary 10 x 1 ½.

Fir: 12 x 1 ½.

Spar: 1 rough 47 feet x 12 x 12.

Based on length, Cuthbert charged for 1,769 cubic feet of timber supplied at 30s per 100 cubic feet, total price £26 10s 8d. No difference between the prices of different timbers was noticed in the invoice, which was based on Journal 233.

Cuthbert also worked on iron and composite vessels as required. Final fitting-out and modifications to the *New England*, a new auxiliary, iron steamer, register 350 tons, were invoiced on 21 February 1870 based on Journal 138 (Page 355). Built in Glasgow, the vessel had steamed to Australia without fully completing the fitting-out.³⁴³ The invoice included the agreed, contracted work, caulking of the timber deck, as well as extra work alongside Cuthbert's Wharf. The extra work included shortening and wedging the foremast, cutting new deck hatches, building cheek supports for boats and 'fitting life boats with lowering apparatus &c'.

Some invoices appear to indicate that work was often limited due to the cost, although in many cases costs associated with ongoing overhaul and repair seem to have been accepted as essential by shipowners and merchant. For example repairs to

³⁴³ *Clarence and Richmond River Examiner and New England Examiner*, 22 February 1870, p. 2.

the spars and rigging of the schooner *Wild Wave* in December 1868 cost £2 18s 9d (Page 20). However, only 2 weeks earlier, the schooner had been substantially repaired at a cost of £385 4s 4d (page 13). In the same month, the *Western Empire*, 1,245 tons, had been placed on the A.S.N. Co.'s Patent Slip and 'opened' for inspection at a cost of £41 1s 6d, including towing costs and shipwrights', apprentices' and labourers' time (Page 21). Opening a hull for such periodic inspection required the removal of a section of the sheathing and examining the planking, chunam and caulking. Other vessels, such as H.I.M. schooner *Caledonienne*, required considerably more work to make them fully seaworthy (Page 242).

Page 242 HIM Caledonienne, armed schooner

242

Sydney 7 October 1869

*To Captain Chamberant of
Schooner, HIM Caledonienne*

Draw to John Cuthbert

For the undermentioned repairs viz:-

Shoring up ship in dock. Stripping off all copper and cleaning down bottom. Hanging ship to relieve keel blocks, removing portion of Main Keel and all through fastenings, replacing Keel and fastenings with screw & bolting on double. False Keel entire fore and aft. Fitting on new screw Stem and Graving Piece. Knee bolts removed and replaced with copper. All butt and wood and fastenings thoroughly examined and defective bolts taken out and replaced with composition & ditto. Taking out and putting in graving pieces. Fitting new Main...?... Tiller and shackle onto Rudder.

Taking out all defective planking of topsides and replacing them with new; caulking topsides, removing and replacing Channel plates and waterway and Knee fastenings. Putting up a new platform in bottom of ship to carry ballast. Removing portions of bulwarks and fitting up light screw wash boards with strap hinges & Repairing Main Rail. Supplying new Socket Spikes and bolts for boat Davits. Making one screw side port and overhauling & refitting...

However, the items which occur most frequently in the Invoice Book are: stripping of the hull; cleaning down; repairing planking, keel and frames; and caulking, chunamering, felting and re-sheathing the hull with Muntz metal. Three invoices for vessels of varying tonnages have been used to quantify the consumable materials and labour involved at Table 3. These are: the *Lady Franklin*, barque 237 tons, invoice of 10 March 1869 (Page 86); the *Edith*, ketch 60 tons, invoice of 22 March 1869 (Page 92); and the *Alpha*, schooner 82 tons, invoice of 27 February 1871 (Page 581).

Table 3: Consumable Materials and Labour

Materials	<i>Lady Franklin</i>	<i>Edith</i>	<i>Alpha</i>
Hardwood per foot		3d	2d
Iron nails per lb			12d
Wire nails per lb			10d
Iron spikes each		6d	
Iron bolts each		5d	6d
Copper bolts each		1s 9d	
Compo sheathing nails per lb	11d	11d	11d
Muntz metal sheets no.'s	1,050	263	478
Muntz metal sheathing per lb	9½d	10d	9½d
Lead sheet per lb			6d
Oakum per lb			4d
Stockholm Tar [Pitch] per lb			estimated 9d
Tar per lb			estimated 2d
Resin per lb			estimated 5d
Lime for chunam bushels @		20 @ 1s 1d	9 @ 1s 1d
Oil for chunam and caulking gallons @		31 @ 5s 0d	58 @ 5s 0d
Double Felt sheets number @		138 @ 6d	225 @ 6d
Kuradra putty for topsides per lb			6d
Shipwright's time per day	14s	14s	14s
Labourer's time per day		8s	8s
Apprentice's time per day		5s	

In March 1867, the fully-rigged, clipper ship *Great Pacific*, 2,088 tons, was coppered using 3,300 sheets of copper after caulking and chunamering.³⁴⁴ The invoices for the ketch *Edith* and the schooner *Alpha* provide comparative information about: the quantities and weights of Muntz metal sheathing and felt required for smaller vessels; the proportions and quantities of lime and oil required for chunam; the cost and quantities of iron, Composition (Compo.) and copper fastenings; and the day rates for labour. The ketch *Edith* was of shallower draft than the schooner *Alpha* and was sheathed using only the lightest weight of Muntz metal, i.e. 16 oz, as opposed to the 16 oz and 18 oz sheets used on the larger hull of the *Alpha*. The heavier weight would have been used on the floor of the hull, with the lighter weight sheathing extending from the bilges to the topsides. Larger vessels such as the *Lady Franklin* and *Alpha* appear to have received a discounted price for the sheathing, based on the total weight of Muntz metal sheets.

³⁴⁴ *Mercury*, 28 March 1867, p. 2.

Importantly the invoices for the *Alpha* and *Edith* include 'chunamering' as part of the sheathing process. The *Alpha* used 39 bushels of lime and 58 gallons of oil for chunam, some of the oil also used for caulking, the *Edith*, with 20 bushels of lime and 31 gallons of oil, displaying a similar ratio. One bushel equals a dry measure of 8 gallons capacity, a constant supply of lime and oil being required for the almost constant repair work to hulls illustrated in the Invoice Book.

Although the invoices say nothing about the type of oil used with the lime for the 'chunam' the sale of Cuthbert's shipyard stock in 1872 included large quantities of both boiled and raw oil in casks. The 'raw' and 'boiled' together indicate that this would have been linseed oil, still obtainable today. A proprietary putty, 'Kuradra Putty', appears to have been used to finish the topsides of the schooner *Alpha*. Although no other reference has been found for this item, the topsides of the *Lady Franklin* were also caulked and puttied, suggesting that this was a standard product used in Cuthbert's enterprise.

Page 86 *Lady Franklin*, barque 237 tons

86

Sydney 10 March 1869

*Captain and Owner of
"Lady Franklin"*

Draw to John Cuthbert

<i>To placing Ship in the Fitzroy Dock, stripping down bottom and re-sheathing with Muntz Metal (allowing 1,000 sheets) ; Caulking and puttying topsides, & as per contract</i>	<i>£340</i>
---	-------------

*To Extra work: viz- Cutting out Sheathing and lifting pieces
of main plank and replacing same with new: taking out and
putting in graving pieces in topsides; leadline rudder trunk,
re-clinching bolts of rudder braces &*

<i>Timber 17s 6d Compo Sheathing Nails & Iron nails 7s 6d</i>	<i>£1 5s</i>
<i>51 Sheets Metal as per contract wg 204 lb @ 9½ d per lb</i>	<i>£8 1s 6d</i>
<i>50 lb Compo nails</i>	<i>£2 6s 8d</i>
<i>Sheet Lead</i>	<i>3s</i>
<i>Shipwright's time 4 days @ 14s per day</i>	<i><u>£2 16s</u></i>

£354 12s 2d

(Journal 59)

Sydney 22 March 1869

Captain & Owners of
"Edith", Ketch

Draw to John Cuthbert

For taking vessel on Slip, stripping off old Metal and
cleaning -down bottom. Taking out and replacing
portion of Main Keel and Keelson entire fore and aft;
removing and replacing Ceiling, fitting in new floors &.
Taking out and putting in garboard Streak, fitting new
Steps to mast; taking out and replacing planking
and treenails where required; Caulking, chunamering,
felting and re-sheathing with Muntz Metal &

1 Hardwood Keel piece	£7 10s
534 feet Hardwood & pine @ 3d per foot	£6 13s 6d
7 Hardwood Crooks for Floor Timbers @ 10s each	£3 10s
Treenails 10, wedges 16	£1 11s
35 lb Iron Spikes @ 6d each	17s 6d
14 lb Copper Bolts @ 1s 9d each	£1 4s 6d
181 lb Iron Bolts @ 5d each	£3 10s 5d
1 Compo Pintle and Brace wg 38 lb @ 1s 6d per lb	£2 17s
Drilling Holes in Pintle and Brace	2s 6d
263 sheets 16 oz: Metal wg 1330 lb @ 10d per lb	£55 8s 4d
Compo nails 180 lb 180 @ 11d per lb	£8 5s
20 Bushels Lime @ 1s 1d per bushel	£1 1s 8d
31 Gallons Oil @ 5s per gallon	£7 10s
Oakum 25s, [.....s] 3s	£1 8s
Pitch 25s, Tar 5s	£1 10s
138 Sheets felt @ 6d per sheet	£3 9s
Shipwright's Time, 110 days @ 14s per day	£77
Apprentices Time 6 days @ 5s per day	£1 10s
Labourer 12 days @ 8s per day	£4 16s
Getting onto Slip	£5
6 days use of Slip	<u>£15</u>
	<u>£310 4s 3d</u>

(Journal 59)

Sydney 27 February 1871

Captain & Owners of
Schooner, "Alpha"

Draw to John Cuthbert

For the undermentioned repairs: Viz:-

Taking Vessel on Slip stripping off old metal and cleaning down bottom;
putting in and fastening Sister Keelsons; repairing & servicing Caulking
felting and Sheathing centre board [trough] putting in new timber boards,
caulking, chunamering, felting & sheathing with Muntz metal. Fitting
two new pumps and making new pump-well; caulking topsides and deck
and sundry other work, Blacksmiths work &c.

1004 feet Hardwood and other Timber @ 2d per foot	£12 11s
24 lb Iron Nails @ 12d per lb 7 lb Wire Nails @ 10d per lb	17s 10d
210 Sheets 16 oz Muntz metal wg 1059 lb	
266 Sheets 18 oz Muntz metal wg 1474 lb	
2 Sheets 24 oz Muntz metal wg 14 lb - 2,547 lb @ 9½d per lb	£100 16s 4d
Compo Nails wg 315 lb @ 11d per lb	£14 8s 9d
3 ¾ cwt Cut fine Oakum @ 4d per lb	£8 8s 9d
Stockholm Pitch [@ 9d per lb], Tar [@ 2d per lb], Resin [@ 5d per lb]	£7 10s
39 Bushels Lime for Chunam @ 1s 1d per bushel	£2 2s 3d
58 gallons oil for chunam & caulking @ 5s per gallon	£14 10s
255 Double Sheets Felt @ 6d each	£6 7s 6d
70 lb Lead Sheet @ 6d per lb	£1 15s
146 lb Kuradra Putty @ 6d per lb	£3 13s
276 Iron Bolts @ 6d each	£ 6 18s
69 Wrought Iron Rings @ 3d each	17s 3d
6 dozen Wedges [??] 16 Keel Block [??] & Split out	£2 13s
6 Watermarks [????] for pitching	15s
Shipwrights Time 148 days @ 14s per day	£103 12s
Labourers time 17 days @ 8s per day	£6 16s
Taking on Slip and 5 days use of [at cost]	<u>£17 10s</u>
	<u>Total £312 1s 8d</u>

Reduction in price allowed due to credit for old Metal and nails

(Journal 209)

Captain & Owners of
Schooner, "Alpha"

D. S. Whitcomb

For the undermentioned repairs, viz—
Taking keel on Slip, shipping off the keel
and clearing down bottoms; putting in and
fastening Sister Keelson; repairing & securing
caulking, setting and sheathing center transoms;
putting in new lumber boards; caulking,
chumming, setting & sheathing with Muntz Metal.
Fitting two new pumps and making new pump
-well; caulking topsides and deck and
doing other work, & last Smiths work &c.

1004 feet Hardwood and c. Timbers	a 24	12 11
24 lb. Iron Nails 7/4 7/4 7/4 7/4		17 10
220 Sheet 16 oz. Muntz Metal 19059		
266 " 18 " " 1574		
2 " 24 " " 14-2504 lb. 7/4	100	16 4
Compo Nails	17 15 16	14 8 9
3 1/4 Cwt fine Oakum	47	8 8 9
Shut holes Pitch 7/4 Tar 7/4 Nails 7/4		7 10
39 1/2 Bushels Lime for Chumming	4	2 2 3
58 Gallons Oil " " Sheathing	7	14 10
200 Double Sheet Lead	2	6 7 6
70 lbs Sheet Lead	2	1 15
26 " American Putty	2	3 13
276 " Varnish	2	6 18
69 Naught Iron Nails	3	14 3
6 doz. Wages 24 16 Sheet Lead 16 1/2 1/2 1/2 1/2		2 13
6 Watermarks 24 1/2 1/2 1/2 1/2 1/2 1/2		10
Shipwrights time, 148 days	104	10 3 12
Labourers	17	6 16
Taking on Slip and 6 days use of it		17 10
4 1/2 lb. Muntz Metal & Nails 49 20 1 21-2229 lb. 7/4	35	10 4
+ 200	276	6 4
	256	15 12

Invoice for the schooner Alpha, page 581 in the Invoice Book for 1868-1873. Source: State Library of New South Wales, Image 19.

6

The Final Years April 1868-July 1875

In June 1868, the *Sydney Morning Herald* carried the first of a number of articles describing the shipbuilding industry of Port Jackson. The article stated that 'in so far as the construction of new vessels is concerned, there is but one firm in Sydney that can fairly lay claim to be ship builders, namely, that of Mr Cuthbert...' However, the article also alluded to the fact that for several reasons, 'but mainly...on account of the more easy procuring of suitable timber, the larger part of the [timber] vessels built in NSW [had] been constructed on the rivers north of Sydney, and some on those south...'.³⁴⁵

During the 10 years to 1862, upwards of 200 timber vessels had been constructed on the rivers of the colony; almost all were vessels for the coastal trade, of which the majority had been built north of Sydney.³⁴⁶ In 1868, shipyards were reported at Newcastle and Port Stephens, at Brisbane Water, and on the Tweed, Macleay and Manning rivers on the North Coast. At Cockle Creek, Brisbane Waters, there were 4 shipyards, which had produced some 60 vessels by 1868.³⁴⁷ On average, only 4 or 5 vessels per year had been completed on the South Coast, due to the lack of suitable sites. In addition to shipyards already operating on the north and south coasts of NSW, 2 shipyards were operating at Jervis Bay in the 1860s, with 15 to 20 vessels built by 1868.³⁴⁸ On the Clyde River, a shipyard was operating at Nelligen by 1864 and at Bateman's Bay by 1870.³⁴⁹

Shipbuilding took place in the context of land clearing and timber extraction for the domestic market and new settlements, as well as for export. Large contracts for railway sleepers for the Indian Government were said, in 1871, to have been taken by Melbourne firms. The growth of domestic and overseas demand for Iron Bark railway sleepers could not be met, with Red Gum, Blue Gum and Blackbutt from NSW in demand, the net effect being to influence the supply of timbers, as well those used by shipbuilders purchased in the domestic market.³⁵⁰ In order to protect the diminishing Iron Bark supply in NSW, timber reserves were set up by 1871 in the Clarence River district, amongst others, with rangers to report on the timbers for future use, in association with the Botanic Gardens in Sydney.³⁵¹

³⁴⁵ *Sydney Morning Herald*, 1 June 1868, p. 5.

³⁴⁶ *Argus*, 26 September 1862, p. 7.

³⁴⁷ *Maitland Mercury & Hunter River General Advertiser*, 27 June 1868, p. 2; *Sydney Morning Herald*, 18 March 1847, p. 2, and 24 June 1868, p. 5.

³⁴⁸ *Sydney Morning Herald*, 24 June 1868, p. 5, and 26 June 1868, p. 5.

³⁴⁹ *Australian Town and Country Journal*, 26 November 1870, pp. 10-11; *Sydney Morning Herald*, 26 October 1935, p. 13; *Goulburn Herald and Chronicle*, 12 November 1864, pp. 3-4.

³⁵⁰ *Sydney Morning Herald*, 3 November 1871, p. 3.

³⁵¹ *Sydney Morning Herald*, 3 November 1871, p. 3.

As a Sydney based shipbuilder, Cuthbert bought most of his materials on the open market, including hardwood timbers from the coastal districts of NSW and kauri pine from New Zealand, his costs influenced by supply and demand. In addition, Cuthbert would also face a number of other issues following his return to NSW in April 1868, as well as competition from shipyards outside Sydney. Cuthbert's business would be affected by: competition with other Sydney shipbuilders for construction and repair work; the increasing use of iron in new vessels; and potential labour problems.

The *Sydney Morning Herald* reviewed the other shipbuilding facilities of Sydney in June and July 1868 in order of importance after Cuthbert. The A.S.N. Co.'s works on McArthur Island offered the most extensive engineering workshops in the colony and employed some 400 people, a 200 foot long drafting loft being used to set out and test the lines of vessels up to 1500 tons. The hydraulic slipway, capable of drawing up vessels of 1,200 tons, complemented a shipyard focussing primarily on the construction and repair of steam-driven iron vessels.³⁵² At Waterview Bay the firm of McArthur and Mort had taken over the extensive engineering works and dry dock vacated by Cuthbert in 1866. The 'steam naval engineering...' firm dealt with the repair or construction of all the P & O Co. iron vessels, as well as those of the French Government and worked as necessary on all the engineering work of the British [Imperial] Government's steam fleet based in Sydney.³⁵³ By 1869, Thomas McArthur and Co., 'Shipbuilders, shipwrights, Engineers, Boilermakers, Iron and Brass founders...', was advertising both the Dry Dock and a new Patent Slip at Waterview Bay.³⁵⁴

Smaller shipyards and repair facilities, all important to the industry, were also located in the foreshore areas of Darling Harbour and Balmain. In Darling Harbour, Messrs Hely and Harper continued to operate their floating dock, a facility capable of docking vessels up to 250 tons burden in 2 hours for repair. Across the harbour, Mr Booth of the Johnson's Bay Sawmills had leased the shipyard adjoining his timber yard to a Mr Duke, although he himself also built small timber vessels for the timber trade with his sawmills on the Manning River.³⁵⁵ In Balmain T. S. Rowntree and Co. operated a small shipyard and wharf, producing timber vessels of 200-300 tons, but expanded their operations in April 1872 with the purchase of Hely and Harper's floating dock at Millers Point.³⁵⁶ Mr Allen, shipbuilder, also of Balmain, has already been discussed in Chapter 4 under *Colonial and inter-colonial schooners and brigs 1850s-1860s*, for the composite construction of the schooner Waimea in 1867.³⁵⁷

³⁵² *Sydney Morning Herald*, 5 June 1868, p. 5.

³⁵³ *Sydney Morning Herald*, 9 June 1868, p. 5.

³⁵⁴ *Sydney Morning Herald*, 18 January 1868, p. 1.

³⁵⁵ *Sydney Morning Herald*, 19 June 1868, p. 5.

³⁵⁶ *Evening News*, 29 April 1872, p. 4.

³⁵⁷ *Maitland Mercury and Hunter River General Advertiser*, 6 June 1874, p. 3; *Sydney Morning Herald*, 1 June 1864, p. 1.

In Britain, many vessels were now built of composite materials (iron and timber) or solely of iron. In Glasgow alone, 227 vessels were built in 1868, mostly steamers, with all but 4 of iron, but which were of composite construction.³⁵⁸ In NSW, Government' vessels previously built in timber, such as steam-dredges, were increasingly built of iron in the 1860s as were many commercial vessels.³⁵⁹ The screw-driven vessel *Governor Blackall*, built for the Queensland Government and launched in 1870 from the Waterview Bay shipyard of Thomas Mort, was seen as a turning point in construction by colonial society. Designed and built at Messrs Mort and Co.'s engineering works, the iron vessel was the largest steamship built in the colony and, with the exception of the raw materials, entirely of colonial manufacture. With a length on the load-line of 185 feet, a beam of 23 feet and hold 10 feet deep, the vessel had a registered tonnage of 331 and a gross tonnage of 480-82.³⁶⁰

In the 2 years prior to Cuthbert's departure in July 1867 the shipbuilding industry had been steady, with the rate of wages paid to shipwrights at 12 shillings per day, dependent on the weather. However, by June 1868 Cuthbert's shipyard was all but idle. Instead of 4-5 large vessels, only 1 small vessel was under repair.³⁶¹ Following Cuthbert's return from Britain in April 1868, misunderstandings had arisen between Cuthbert and the Shipwright's Association with the result that he had discharged all his hands. He had then been forced to take them on again, on their own terms, to complete his contracts. Since that time he had only employed men on contract and as required, no longer taking on the construction of speculative vessels at his expense. The wages and work of the men were, according to Cuthbert, now 'to an arbitrary scale laid down by the Association...', a scale which would continue to affect his enterprise.³⁶²

Such issues were not new, in either the Australian colonies or Britain. The issues revolved around the day rates for 'old' and 'new' work, that is repair work and new building work, as well as the length of the working day, in a fluctuating market. In Sydney, in August 1867, shipwrights had been 'paid 12 shillings a day, working from 6 o'clock till five in summer, and from half-past six to half-past five in winter'.³⁶³ Although timber was cheaper than in Britain, vessels built in Sydney could be twice the cost of similar vessels built in Britain.³⁶⁴ It would seem that shipwrights in London were usually paid 4 to 5 shillings a day in 1868. On the coastal rivers of NSW, 6 to 7 shillings a day was reported as normal, allowing new vessels to be built much more cheaply than in Sydney, but by non-union workers.³⁶⁵

³⁵⁸ *Sydney Morning Herald*, 24 March 1869, p. 4.

³⁵⁹ *Sydney Mail*, 4 January 1868, p. 5.

³⁶⁰ *Empire*, 27 January 1870, p. 2.

³⁶¹ *Sydney Morning Herald*, 1 June 1868, p. 5.

³⁶² *Sydney Morning Herald*, 1 June 1868, p. 5.

³⁶³ *Argus*, 7 August 1867, p. 2.

³⁶⁴ *Sydney Morning Herald*, 21 May 1868, p. 2.

³⁶⁵ *Sydney Morning Herald*, 21 May 1868, p. 2, and 30 May 1871, p. 5.

When Cuthbert had returned in April 1868, he found that members of the Shipwrights Provident Union felt that he was trying to take advantage of the fact that it was difficult to make any profit on new vessels at 12 shillings a day.³⁶⁶ At a public meeting on 15 May 1871, members of Sydney's unions and trade societies condemned the reduction of shipwrights' wages to 10 shillings a day, in particular when shipwrights could only expect to work for 6 months of each year. In this instance, it would seem that Cuthbert was seen by the unions and societies as not having previously tendered on naval work, a situation which, in 1871, had led, when asked to do so by Commodore Stirling, to a reduction of 2 shillings a day in their wages so that he could make a profit.³⁶⁷

Chief among Cuthbert's critics was John Gallagher, Secretary of the Shipwrights Provident Union, who argued that 'the masters in Sydney should not complain [about the unions], they [themselves] have risen from the condition of journeymen shipwrights, and have realised a handsome fortune...'. However, building new vessels in Sydney relied on investment by a few master shipwrights and merchants, which Gallagher conveniently overlooked in his sophistry.³⁶⁸ Shipwrights and shipyard owners wanted stability as much as anyone, but the shortage of 'new work' as opposed to 'old work', i.e. new vessels as opposed to unpredictable repair work, made it difficult to achieve in a supply-and-demand economy.

In his letter of 20 May 1871, to the *Sydney Morning Herald*, Cuthbert would respond to the facts surrounding the events of 1868. According to Cuthbert 'very few of the shipwrights were employed...' when he returned, and he had 'contemplated laying down a vessel...' and offered some of the shipwrights 10 shillings a day with guaranteed income 'for at least 6 months...' the advantages going to those who were employed in his establishment. The offer was declined on the basis that such 'new work' could only be done at 12 shillings a day under the rules of the Shipwright's Union.³⁶⁹ The matter had come to a head by March 1871, after Cuthbert was asked to repair H.M.S. *Clio* in Fitzroy Dock. The repairs were finished by non-union men at 10 shillings a day, after Cuthbert's workers went on strike for 12 shillings a day.³⁷⁰

A shipowners' complimentary dinner on 29 May 1871, for Mr Cuthbert, allowed both he and other ship-owners to air their grievances. In Cuthbert's response at the meeting, he said that 'he had paid out half-a-million pounds sterling for wages and he had spent a large fortune on making a shipbuilding establishment second to none in Australia...'. He also said that he had 'purchased numerous vessels on which he had spent thousands of pounds in repairs and he defied anyone to say he ever wronged a man of a shilling in all the time he had been in business...'. In particular,

³⁶⁶ *Sydney Morning Herald*, 25 April 1863, p. 1; *Sydney Mail*, 23 May 1868, p. 4; *Empire*, 2 December 1868, p. 2; *Argus*, 9 May 1871, p. 6.

³⁶⁷ *Sydney Morning Herald*, 16 May 1871, p. 4; *Empire*, 16 May 1871, p. 3.

³⁶⁸ *Sydney Morning Herald*, 23 May 1868, p. 5.

³⁶⁹ *Sydney Morning Herald*, 23 May 1871, p. 5, and 30 May 1871, p. 5.

³⁷⁰ *Sydney Morning Herald*, 16 March 1871, pp. 2-3; *Argus*, 9 May 1871, p. 6.

as a working-man himself, he would not reduce the wages of shipwrights 'for his own exclusive benefit...'.³⁷¹ Happily, the matter was resolved by June 1871, when the shipwrights who had left Cuthbert's employ accepted 10 shillings a day for 'all kinds of shipwright's work'.³⁷²

Despite these difficulties, Cuthbert's shipyard at Millers Point had been further improved by the end of 1868. At the northern end a floating jetty allowed large ships to tie up, the landward section of the site set out with blacksmiths' shops, carpenters' sheds, sail and mould lofts and other facilities for building and fitting out the largest vessels. Slipways for the construction of a floating dock had also been laid down, although this was on hold due to the illness of Mr Cuthbert, with construction still pending in June 1868.³⁷³

In February 1869, the Patent Slip at Sussex Street was advertised for sale by the I.S.N. Co., as a property held directly from the Crown by Cuthbert (since 1865), subject to an improving lease of 10 years, of which 6 years were left. The property was purchased by Cuthbert for £6,750 before the end of the month.³⁷⁴ By April 1869, Cuthbert was advertising for tenders for the construction of 4, 2-storey warehouses facing Sussex Street (Cuthbert's Buildings) at his Patent Slip, designed by architect Thomas Blacket.³⁷⁵ The new buildings would be leased out to agents and merchants at profitable rates. Further investment in infrastructure was considered by Cuthbert in November 1870, when he applied to the Government to erect new jetties in Darling Harbour, extending from the 225-foot long sea wall on the western edge of the Millers Point shipyard, although this was never completed.³⁷⁶

Following his purchase of the Patent Slip, Cuthbert advertised as 'Cuthbert's Patent Slip, Darling Harbour, Dry Dock, and Shipbuilding yard etc.' and was prepared to execute any orders he might receive.³⁷⁷ The reference to a dry dock indicates that, as the Invoice Book for 1868-1873 indicates, Fitzroy Dock was used for commercial vessels as well as naval vessels by Cuthbert, continuing the precedent set in 1860. However, in 1868 and subsequently, he also took merchant and naval vessels to Mort's Dock, Waterview Bay, and to the A.S.N. Co.'s Patent Slip at Pyrmont, for overhaul and repair.

By the 1870s, there would be wide discussion in the colonies of the transformation of British shipping, including the British Imperial Navy, from wood to iron, in particular for the purpose of commerce. However, despite the slowly increasing competition and labour problems, Cuthbert took every opportunity to build timber

³⁷¹ *Sydney Morning Herald*, 30 May 1871, p. 5.

³⁷² *Sydney Morning Herald*, 1 June 1871, pp. 4-5; *Maitland Mercury and Hunter River Advertiser*, 6 June 1871, p. 3; *Sydney Mail and NSW General Advertiser*, 10 June 1871, p. 464.

³⁷³ *Sydney Morning Herald*, 1 June 1868, p. 5.

³⁷⁴ *Sydney Morning Herald*, 3 February 1869, p. 6, and 26 February 1869, p. 9.

³⁷⁵ *Sydney Morning Herald*, 3 February 1869, p. 6, and 9 April 1869, p. 1.

³⁷⁶ *NSW Government Gazette*, 11 November 1870, p. 2511.

³⁷⁷ *Sydney Morning Herald*, 13 February 1869, p. 1.

vessels, in particular those types which as yet had not been replaced by iron or composite construction, and remained more than competitive in terms of price. Nevertheless, it would seem that by 1866, when Cuthbert had begun to suffer ill-health, he had begun to limit his involvement in speculative ventures. The speculative schooner *Zephyr*, built in 1866, represented perhaps the best he could achieve in timber construction.

There would be little in the way of major commercial shipbuilding at Millers Point, with no investment by Cuthbert in speculative, new vessels, although the repair side of the business and the purchase of vessels, for repair and re-sale, continued to grow. In 1865, the mercantile shipping of Britain had comprised some 21, 626 vessels according to the *Sydney Morning Herald*, many of the vessels arriving in Sydney for repair and overhaul being of timber construction, as were the majority of the colonial and inter-colonial commercial vessels.³⁷⁸ Consequently, Cuthbert's enterprise had more than enough timber vessels to repair and overhaul during these years, the traffic continuing into the 1870s and beyond

After more than two years of union action over wage rates, only 5 vessels of any size, all schooners, were built after 1868. Significantly, these vessels, built in 1871 and 1872, were under naval contracts, for which he would advertise for shipwrights. Due to his long-term illness, Cuthbert had been attempting to dispose of his enterprise for some time. His Millers Point shipyard and re-built Patent Slip were advertised for sale or lease frequently during the early 1870s, although, perhaps due to the size of the properties and the costs involved, there was little interest.³⁷⁹ The sale of the shipyard and his other assets would be delayed by events in the Pacific, when the British and French governments commissioned vessels to police 'blackbirding', i.e. kidnapping for slavery, in the Pacific islands.

On the 31 December 1871, Cuthbert launched the screw-driven, auxiliary steamer *Depeche*, commissioned by Mr Higginson on behalf of the Government of New Caledonia. The 100-ton vessel was 72 feet at the keel with a maximum beam of 13 feet and a hold 7 feet deep; the engines and 3-bladed screw were by P. N. Russell and Co. Rigged as a fore-and-aft schooner, the colonial hardwood vessel reached 9 knots under steam during trials on 10 February 1872.³⁸⁰ Seemingly desperate to sell his business, Cuthbert advertised his plant, machinery and stock for sale at auction in March 1872, with parts of the shipyard already leased to various shipbuilding tradesmen.³⁸¹ However, by August 1872 Cuthbert had taken a contract to supply 6, 12-ton surf-boats for the New Caledonian Government. The surf-boats were described as 'perfect models as to excellent workmanship and finish...' when completed.³⁸²

³⁷⁸ *Sydney Morning Herald*, 21 April 1871, p. 4.

³⁷⁹ *Sydney Morning Herald*, 27 January 1872, p. 16.

³⁸⁰ *Empire*, 4 January 1872, p. 2; *Sydney Morning Herald*, 1 January 1872, p. 4, and 26 February 1872, p. 8.

³⁸¹ *Sydney Morning Herald*, 9 March 1872, p. 10.

³⁸² *Illustrated Sydney News and NSW Agriculturalist and Grazier*, 31 August 1872, p. 3.

The Secretary of the British Admiralty had decided, after sending vessels from the Australian Squadron to suspected locations, that the best way to counter the kidnapping of South Sea Islanders was to send 5 sailing schooners. These would ideally be of 90-110 tons, equipped with either a 10-pounder or a 10-pounder Armstrong gun and 2 boats. Accommodation was to be provided for 3 officers and 25 men on each vessel: two were to be stationed in the Solomon Islands and along the coast of New Guinea; one off the Loyalty Islands; one in the Caroline Group; one in the Marshall and Gilbert Group; and one in the Ellice, Samoa and Friendly Islands. Authorisation was approved in July 1872, the cost not to exceed £25-£35 per ton when ready for sea, and with storage space for 6 months supplies in each.³⁸³

On 24 September 1872, Cuthbert contracted to build 4 topsail schooners of 120 tons each, builder's measurement, at a little less than £3,000 each, the first vessels to be built in Australia for the Imperial [British] Government. The *Ethel*, a schooner bought by the Australian Squadron, was overhauled and fitted out by Cuthbert as the fifth vessel and was commissioned in August 1872. Two of the new schooners were ready for launching by November 1872, with the third and fourth underway; the last vessel, the *Georgie*, was handed over in February 1873, shortly before the contract deadline on 1 March 1873. The *Nea*, *Eglantine*, *Barham* and *Georgie*, were to be Cuthbert's last, naval 'new work'. On commissioning, in May 1873, the schooners were re-named as H.M. schooners *Beagle*, *Conflict*, *Renard* and *Sandfly*.³⁸⁴

With an overall length of 80 feet, a hold 9 feet 6 inches deep and a beam of 18 feet 6 inches, the hulls of these naval schooners reflected the best in colonial construction and materials. Fastened entirely with copper, the vessels were built with ironbark keels, black butt and blue gum frames, kauri pine planking and sheathing of 18, 20 and 22 ounce Muntz's metal over chunam.³⁸⁵ The first two schooners were launched together in December 1872, the third vessel having already been framed and planked. The keel, stem and sternposts of the fourth schooner were fixed within half an hour to one of the 'beds that had just been vacated'.³⁸⁶ Not only was Cuthbert easily meeting the standards of the Admiralty, he was also capable of a production-line approach to shipbuilding using his sawmill and other equipment to full capacity.

In October 1872 Cuthbert had advertised for 40 shipwrights to build the 4 armed schooners for the Admiralty. Six months employment on 'new work' was offered with wages amounting to 12 shillings for a 9-hour day and 10 shillings for an 8-hour day. At the same time he advertised for tenders for the construction of 1 or more

³⁸³ *Empire*, 21 November 1872, p. 2.

³⁸⁴ *Sydney Morning Herald*, 22 August 1872, p. 4, and 6 December 1872, p. 5; *Freeman's Journal*, 7 September 1872, p. 7; *Empire*, 21 November 1872, p. 2, and 11 February 1873, p. 2; *Newcastle Chronicle*, 10 December 1872, p. 4, and 27 May 1873, p. 2.

³⁸⁵ *Sydney Morning Herald*, 22 August 1872, p. 4; *Freeman's Journal*, 7 September 1872, p. 7; *Empire*, 21 November 1872, p. 2, and 11 February 1873, p. 2; *Newcastle Chronicle*, 10 December 1872, p. 4.

³⁸⁶ *Newcastle Chronicle*, 10 December 1872, p. 4.

vessels, labour only. All the materials were to be provided, the plans and specifications being available at the office at Cuthbert's Wharf, Millers Point.³⁸⁷

The issues of labour relations and rates would appear again. At the customary luncheon, following the launch of the first 2 naval schooners, the Commodore of the Australian Squadron stated that his 'instructions from England were not to exceed £30 per ton, but Mr Cuthbert had contracted to do the work for £24 per ton'. The Commodore felt that had Cuthbert known that 'when the ships were in frame, his men would seize the opportunity to strike and that he would have to concede to them shorter working hours and pay...' he would have charged more.³⁸⁸

The last and only known commercial vessels built after 1868 were 2 large cutters for Messrs Montefiore & Montefiore, for which a final invoice was written on 10 January 1873. The invoice was for a payment of £350 for both vessels, coppered and copper fastened, on delivery, with no details given as to the cost of labour for what was 'new work', or possible preliminary payments, and hence it is difficult to quantify any impact on costs due to labour changes. Cuthbert had built his first vessel for the Montefiore family in 1853, the two new vessels completing over 20 years of quality shipbuilding.³⁸⁹

Throughout his final years in shipbuilding, Cuthbert continued to express his interest in timber and shipbuilding through the design and construction of small, fast vessels such as cutters, gigs and yachts. Among these were the 25-foot yacht *Foam*, modified in 1870, and his own, new steam-yacht, capable of carrying 50-60 people, finished in February 1873.³⁹⁰ For some of this work Cuthbert employed the assistance of boat builders whose reputations were well known in the colonies.

Somewhat earlier, in January 1872, 2 gigs, both for 5-man crews, were under construction for the Rowing Club and River crews to compete in the forthcoming Hobart Town regatta. One boat weighed only 123 lb (54 kilograms), several pounds (lb) lighter than other boats in the class; the 2 gigs were being built under the supervision and to the design of George Green.³⁹¹ The Sydney Representative Crew (Rowing Club) finished first on 24 January 1872, with the Parramatta River Crew (River Crew) second. The Sydney Representative Crew finished almost 1 minute ahead of the Parramatta River Crew, and almost 1 ½ minutes ahead of the Tasmanian and Victorian crews over 5 miles. The Sydney Representative crew made the fastest time ever in Australian waters, so fast, that the Victorian newspapers expressed doubts as to the reliability of the timekeeper.³⁹²

³⁸⁷ *Sydney Morning Herald*, 7 October 1872, pp. 10-12.

³⁸⁸ *Argus*, 18 December 1872, p. 1.

³⁸⁹ State Library of NSW, Bank of Australia Records 1826-1894, ML MSS. 1591, Item V111 Records of John Cuthbert, 1868-1873; being an invoice book re-shipbuilding business (Vol. ML MSS. 1591/14), p. 971.

³⁹⁰ *Sydney Morning Herald*, 17 January 1870, p. 2, 9 May 1874, p. 1; *Sydney Mail and NSW Advertiser*, 15 February 1873, p. 208.

³⁹¹ *Sydney Morning Herald*, 1 January 1872, p. 4.

³⁹² *Sydney Morning Herald*, 6 February 1872, p. 2, and 13 February 1872, p. 4.

In contrast to the absence of 'new work', Cuthbert purchased at least 7 known vessels after 1868, an average of 1 per year, the purchase and repair of large vessels being quicker and potentially more profitable than building ever-larger vessels in his Sydney yard. The demand for large trading and passenger vessels had not declined, with Cuthbert purchasing vessels such as: the *Felix Bernabo*, a French barque of 400 tons, in Sydney; the *Parisian*, a vessel of 710 tons classed as A1 by Veritas, in Melbourne; and the *Western Empire*, a British ship of 1,245 tons, also in Sydney.³⁹³ The *Felix Bernabo* was purchased in May 1869 for £1,690 and sold in July 1869 for £2,809, a reasonable profit.³⁹⁴ Most of these vessels were sold to merchants and shipowners, although Cuthbert often placed these vessels in his own trading ventures, while waiting for purchasers.

Declared too expensive to repair by its owners, the *Western Empire* had been purchased by Cuthbert for £2,170 in May 1869 and rebuilt and refitted with his usual, 'celebrated energy'. Strengthened and newly coppered, with new masts and rigging, the ship was described as first class by the surveyors, Captain Norie for French Lloyds (Veritas) and Captain Moodie for Lloyd's agents. Forty passengers could be accommodated in the state cabins, which included a ladies saloon and sleeping apartments. The polished cabin doors and outward divisions were of cypress pine and Richmond River pine, colonial cedar and mahogany. The ship was equipped with a condenser producing 100 gallons of fresh water daily, an extensive galley, steam-driven pumps and cargo hoists and large holds, and was quickly employed in the London trade by Cuthbert.³⁹⁵ On its arrival in London, the ship was immediately taken up by the Emigration Commissioners for the conveyance of Government and warrant passengers to NSW, bringing out 423 passengers in good health on the return voyage.³⁹⁶

In March 1871 Cuthbert would re-purchase the schooner *Colonist*, 105 tons, for £460, selling the vessel after 3 months to Mr J. G. Phillips, for the coasting trade. Declared as totally wrecked on Elizabeth Reef in June 1870, en-route to New Caledonia, once salvaged, the stranded vessel appeared to have received little damage. It would appear that the vessel had been purchased by its owner, Captain Geach, for £1,500, but that it was only insured for £1,000.³⁹⁷ Both the *Western Empire* and the *Colonist* had been repaired by Cuthbert in 1868 and 1869 respectively, and he would have been only too aware of the quality of these vessels.³⁹⁸

³⁹³ *Sydney Morning Herald*, 12 May 1869, p. 5; *Sydney Mail*, 21 August 1869, pp. 12-13.

³⁹⁴ *Sydney Morning Herald*, 19 May 1869, p. 10, and 1 July 1869, p. 4.

³⁹⁵ *Empire*, 26 October 1869, p. 2; *Sydney Morning Herald*, 19 May 1869, p. 10, and 14 July 1869, p. 8.

³⁹⁶ *Empire*, 5 September 1870, p. 2.

³⁹⁷ *Sydney Morning Herald*, 28 June 1870, p. 4; *Evening News*, 28 June 1870, p. 2; *Maitland Mercury and Hunter River General Advertiser*, 4 March 1871, p. 3, 9 March 1871, p. 4, and 16 May 1871, p. 4.

³⁹⁸ State Library of NSW, Bank of Australia Records 1826-1894, ML MSS. 1591, Item V111 Records of John Cuthbert, 1868-1873; being an invoice book re-shipbuilding business (Vol. ML MSS. 1591/14).

The number of commercial vessels reported in the newspapers as repaired during this period was 68, including the 7 known, speculative purchases for repair and re-sale, and 3 salvaged vessels. The real figure for commercial vessels under repair for this period was, however, of the order of 320 by name (naval vessels by name totalled 28), with more than 580 separate invoices in the Invoice Book for December 1868 to January 1873 (Appendix 4). The Invoice Book shows that Cuthbert was consistently charging for his shipwright's time at 14 shillings a day for 'old work' i.e. repair, giving a reasonable profit margin when compared to the 12 shillings paid in 1867 and the 10 shillings a day accepted by the shipwrights union in 1871.

The 3 sunken vessels salvaged were the schooner *Rebecca* in September 1869, the river steamer *Platypus* in May 1871 at Ryde and the collier *Lizzie and Rosa* in 1873. The *Rebecca* had gone onshore at North Head and afterwards, whilst being towed by the steamer *Breadalbane*, had sunk in 9 fathoms of water near Kirribilli, the figurehead being buried in the mud. Two large punts were used to raise the vessel, the diver, Mr Bayliss, being able to place cables, before using the tides to lift the sunken vessel. Temporary repairs allowed Californian pumps to be used to float the vessel fully before placing it on Cuthbert's Patent Slip at Sussex Street. It was estimated that the repairs would equal if not cost more than a new vessel, according to the Insurers.³⁹⁹

The Invoice Book for 1868-1873 shows that Cuthbert had continued to repair and overhaul large numbers of commercial and naval vessels despite the labour problems in 1868, with many commercial vessels placed in Fitzroy Dock. In contrast to the Invoice Book, newspaper reports tell us something of the relationship between shipbuilders, captains and owners and the issues which Cuthbert dealt with at some length. A small sample of the repair work undertaken illustrates the range and scale of the commercial work undertaken by Cuthbert's workforce:

- the *William Cole*, a first-class London ship of 1,200 tons, underwent a complete refit in Cuthbert's yard in mid-1868, including new shelf-pieces, 80 feet long by 14 inches square, of Australian hardwood;⁴⁰⁰
- the China clipper-barque, *Minnie*, received 40 feet of main keel, several planks and re-caulking in November 1869. The work was carried out to the 'entire satisfaction of her commander, Captain Hertel';⁴⁰¹
- the new schooner *Fanny Campbell*, built by Mr Peat at Cape Hawke, was taken on Cuthbert's Patent Slip in December 1870 for sheathing;⁴⁰²
- the whaling barque *Chance* was taken into Waterview Bay dry dock in February 1872 to double the hull thickness as a protection from ice;⁴⁰³ and

³⁹⁹ *Empire*, 28 September 1869, p. 2; *Maitland Mercury and Hunter River General Advertiser*, 2 October 1869, p. 2.

⁴⁰⁰ *Sydney Morning Herald*, 1 June 1868, p. 5.

⁴⁰¹ *Sydney Mail*, 27 November 1869, p. 12.

⁴⁰² *Sydney Morning Herald*, 10 December 1870, p. 4.

⁴⁰³ *Sydney Morning Herald*, 14 February 1872, p. 6.

- the Norwegian ship *Otto and Antonie* was repaired at Cuthbert's Wharf in May 1873. Extensively repaired, the ship was refastened throughout and was out of service for over 3 weeks.⁴⁰⁴

By June 1868 Cuthbert had already been recognised as having achieved a virtual monopoly in the repair of British and French naval vessels as well as those of other nations.⁴⁰⁵ Twenty-eight naval vessels alone have been identified by name in the Invoice Book for December 1868-January 1873. Although the smaller naval vessels and topside work to large vessels were still taken to his Millers Point shipyard, larger vessels continued to be taken to Fitzroy Dock on Cockatoo Island or to Mort's Dock and the Patent Slipway at Waterview Bay for overhaul and repairs to the hull.

There is ample evidence in the newspaper reports that Cuthbert undertook a considerable part of the repair work required by the British Navy and that his shipwrights supervised the docking and undocking of vessels in Fitzroy Dock. This fits well with the evidence provided by the Invoice Book for the period 1868-1873, although there is also evidence that work was tendered for as part of this process, after docking. Between April 1868 and his retirement in 1873 the following British naval vessels were reported as docked and repaired by Cuthbert at Fitzroy Dock, including the Royal frigate H.M.S. *Galatea* in 1869 and 1870.

Australian Squadron vessels repaired by Cuthbert in Fitzroy Dock 1868-1873

1868: H.M.S. *Falcon* (SS), clipper-sloop, 16 guns; H.M.S. *Charybdis* (SS), corvette, 17 guns; H.M.S. *Blanche* (SS), sloop, 6 guns; H.M.S. *Brisk* (SS) sloop, 14 guns;

1869: H.M.S. *Challenger* (SS), frigate, 18 guns, old flagship of the Australian Squadron; H.M.S. *Blanche* (SS), sloop, 6 guns; H.M.S. *Virago* (PS), surveying paddle-wheel sloop, 6 guns;

H.M.S. *Galatea* (SS), Royal steam-frigate;

1870: H.M.S. *Blanche* (SS), sloop, 6 guns; H.M.S. *Galatea* (SS), Royal steam-frigate;

1871: H.M.S. *Clio* (SS), frigate, 21 guns, new flagship of the Australian Squadron; H.M.S. *Rosario* (SS), sloop, 3 guns; H.M.S. *Basilisk* (PS), paddle-wheel sloop, 5 guns;

1872: H.M.S. *Cossack* (SS), corvette, 16 guns; and

1873: H.M.S. *Blanche* (SS), sloop, 6 guns.⁴⁰⁶

Although H.M.S. *Galatea* (SS) had visited Sydney during Cuthbert's absence in Britain, the Royal frigate had made a return visit in March 1869, resulting in a flurry

⁴⁰⁴ *Evening News*, 15 May 1873, p. 2.

⁴⁰⁵ *Sydney Morning Herald*, 1 June 1868, p. 5.

⁴⁰⁶ State Library of NSW, Bank of Australia Records 1826-1894, ML MSS. 1591, Item V111 Records of John Cuthbert, 1868-1873, being an invoice book re-shipbuilding business (Vol. ML MSS. 1591/14), p. 292; *Clarence River and New England Advertiser*, 6 July 1869, pp. 2-3; *Newcastle Chronicle*, 16 May 1868, p.2 and 19 November 1870, p. 2; *Australian Town and Country Journal*, 14 January 1871, pp. 28-29; *Argus*, 9 May 1871, p. 6; *Sydney Mail and NSW Advertiser*, 24 June 1871, pp. 532-533, and 23 December 1871, pp. 1364-1365; *Sydney Morning Herald*, 12 May 1868, p. 4, 1 August 1868, p.4, 17 August 1869, p. 4, 9 September 1869, p. 4, and 16 March 1871, p. 1, 25 March 1869, p. 10, 15 June 1870, p. 11 and 19 March 1872, p. 4; *Evening News*, 15 May 1873, p. 2.

of increased activity for Sydney and for Cuthbert. Arriving on 11 March 1869, the ship had been placed in Fitzroy Dock, Mr Cuthbert having been instructed to undertake the necessary repairs. The 'upper and main decks were partially renewed and caulked; the hanging knees under the counter refastened, and new topsail yards supplied...'. On 20 March 1869 the Duke of Edinburgh was reported as having visited Cuthbert's shipbuilding establishment, expressing particular interest in the types of colonial wood employed in colonial shipbuilding.⁴⁰⁷

Before the departure of the *Galatea* from Sydney, on 3 April 1869, Cuthbert's shipyard had been charged with refitting the ship's steam launch, together with other boats and small craft belonging to the *Galatea*.⁴⁰⁸ A cutter race between the crews of H.M.S. *Challenger* and H.M.S. *Galatea*, on 29 March 1869, would result in a cutter built in Cuthbert's yard for H.M.S. *Challenger* winning by 3 minutes (300 yards), over a course from Fort Macquarie to Neutral Bay and Bradleys Head, a distance of about 4 miles. The cutter from H.M.S. *Galatea* was acknowledged as the fastest in the naval service, the boat built in Cuthbert's yard, although of regulation size and pattern, was much improved, the secret of her speed reportedly lying in the lines of the craft.⁴⁰⁹

The arrival of the Flying Squadron in December 1869, comprising Her Majesty's screw-driven steam-vessels *Liverpool*, *Endymion*, *Liffey*, *Bristol*, *Scylla*, *Barossa* and *Phoebe*, would add to Cuthbert's work for a short time. Two service cutters were requested from Cuthbert's shipyard for the *Scylla* and *Phoebe*, 26 feet and 27 feet in length respectively, with repairs made to the 'head knees' of the *Scylla*.⁴¹⁰ The departing Flagship H.M.S. *Challenger* would take 2 of Cuthbert's 'crack cutters...' and a 'beautifully-finished gig...' with her in July 1870, after 4 years in the Australian Squadron.⁴¹¹

In September 1870 H.M.S. *Galatea* returned to Sydney after a cruise in the Pacific, requiring extensive repairs to the hull and engines. Placed in Fitzroy Dock on 25 September 1870 by the officers of the Department of Public Works, Fitzroy Dock Branch, repairs were effected by Cuthbert's men to the sternpost and hull, with the engines requiring further work, being 'greatly out of order...'. It would seem that Cuthbert and his workforce were in almost constant demand by the Navy for repairs at Fitzroy Dock, although the officers in charge of Fitzroy Dock had begun to resent the inference that Cuthbert and his men were in charge of docking procedures.⁴¹²

⁴⁰⁷ *Sydney Morning Herald*, 25 March 1869, p. 10.

⁴⁰⁸ *Newcastle Chronicle*, 6 April 1869, p. 3; *Maitland Mercury and Hunter River General Advertiser*, 25 March 1869, p. 2.

⁴⁰⁹ *Clarence and Richmond Examiner and New England Advertiser*, 6 April 1869, p. 4; *Empire*, 30 March 1869, p. 2.

⁴¹⁰ *Sydney Morning Herald*, 27 December 1869, p. 4, and 31 December 1869, p. 7; *Sydney Mail*, 25 December 1869, p. 3.

⁴¹¹ *Sydney Morning Herald*, 20 July 1870, p. 4.

⁴¹² *Bendigo Advertiser*, 27 September 1870, p. 2; *Maitland Mercury and Hunter River General Advertiser*, 20 September 1870, p. 3; *Sydney Morning Herald*, 27 October 1870, p. 6.

Early in 1870, H.M.S. *Blanche* had struck a coral reef in Torres Strait whilst searching for survivors from the wreck of the *Spurway*. Returning to Sydney with some difficulty, the vessel was found to require extensive repairs. Carried out by Cuthbert in Fitzroy Dock, the force of the impact had bent the iron stanchions (5 ½ inch diameter), in the lower hold, 9 inches out of place, lifting the decks, starting the scarf joint in the main keel and damaging the sheathing and false-keel. Placed on the blocks, the ship, fortunately, came down to its original shape, the hull requiring re-fastening in part with 'every seam and butt caulked and re-sheathed, the bottom of the ship with heavy Muntz metal, and the upper work with pure copper...'.⁴¹³

On being undocked on 13 June 1870, the *Blanche* was taken to Cuthbert's shipyard, where the extensive works could be brought into use for completion of the repairs and re-fitting the ship. Between 80 and 100 shipwrights were engaged on the vessel in caulking the decks and re-fitting over a 10-day period, the crew fully employed in repairing or making sails and rigging in the large lofts attached to Cuthbert's establishment.⁴¹⁴ Repairs to H.M.S. *Blanche* in 1873 were much less than before, requiring only changes to the bilges, to lessen rolling at sea.⁴¹⁵ However, other naval ships were placed in Fitzroy Dock for periodic repairs and overhauls; in May 1868, the topsides and decks of H.M.S. *Charybdis* had been caulked by a workforce of over 100 men from Cuthbert's yard.⁴¹⁶

Naval vessels continued to require extensive repairs following damage due to grounding on reefs and other obstacles in shallow, coastal waters. In January 1871 H.M.S. *Rosario* was placed in Fitzroy Dock, the damage less than expected, requiring minor repairs and replacement of the false keel by Cuthbert's men. The ship was then taken alongside Cuthbert's shipyard for other repairs, to ensure the vessel was seaworthy, before being taken to Farm Cove to await orders.⁴¹⁷ Placed in Fitzroy Dock in March 1871, H.M.S. *Clio* had suffered severe damage during a cruise in the coastal waters of New Zealand:

When taken into dock it was found that the vessel's hull was most seriously damaged in a portion of the frame, floor-heads, main planking, and ceiling, having been broken in by the concussion. The timbers and planking from the garboard fifteen feet upwards, and fifty feet long had all been removed. The repairs are now completed, and the wood used in the construction was some fine samples from Mr Cuthbert's building yard; the planking being of spotted gum varying from 6 to four inches in thickness, and the timbers of ironbark and black butt. Placed diagonally inside the new work are two twenty feet iron riders, six inches by eight inches in thickness, and bolted through every frame...Mr

⁴¹³ *Sydney Morning Herald*, 15 June 1870, p. 11.

⁴¹⁴ *Sydney Morning Herald*, 15 June 1870, p. 11.

⁴¹⁵ *Evening News*, 15 May 1873, p. 2.

⁴¹⁶ *Newcastle Chronicle*, 16 May 1868, p.2.

⁴¹⁷ *Australian Town and Country Journal*, 14 January 1871, pp. 28-29.

Cuthbert has taken every precaution to have it done in a manner which could not have been surpassed by any dockyard in England...⁴¹⁸

British naval vessels repaired at other locations by Cuthbert included H.M.S. *Virago*, a paddle-wheel sloop, repaired at Waterview Bay in 1868; Messrs McArthur and Co. undertook the mechanical repairs, with the shipwrights' work carried out by Cuthbert's men. Repairs were undertaken in 1872 at Cuthbert's Wharf to H.M.S. *Cossack*, a corvette of 16 guns, and H.M.S. *Dido*, a sloop of 8 guns, as well as to H.M.S. *Virago*. The repairs to H.M.S. *Cossack*, after 3 years 4 months in the Indian Ocean and China Sea, were extensive. Initial repairs were to the rudder in Fitzroy Dock in March 1872, followed in October and November 1872 by repairs in Fitzroy Dock and at Cuthbert's Wharf, Millers Point, when new waterways were fitted and the vessel caulked throughout prior to completing fitting-out.⁴¹⁹

Both Cuthbert's Patent Slip and the Millers Point shipyard were used in overhauling the survey vessel H.M.S. *Pearl* in April 1872, with new water tanks, masts and re-coppering of the hull after 4 years of survey work. A 39-foot, coppered, schooner-rigged, timber steam-launch, almost fully decked, costing £427, was also built by Cuthbert at Millers Point to accompany the *Pearl* on future, surveying trips in the shallow, coastal waters of Queensland.⁴²⁰

Repairs to other nation's naval vessels, including French warships, were carried out by Cuthbert at Fitzroy Dock and at other locations, although newspaper reports describing the work carried out to foreign naval vessels were less forthcoming than those about British naval vessels. However, the Invoice Book for 1868-1873, when conserved and digitised, will enable all naval repairs and overhauls at this time to be documented in detail. To date only partial details of the repairs to the French naval vessel H.I.M. armed, despatch-schooner *Caledonienne* (at page 242 of the Invoice Book) have been transcribed and are included in Chapter 6.

French Imperial vessels repaired by Cuthbert in Fitzroy Dock 1868-1873

1868: H.I.M. war-steamers *Dorada*, *Coetlogon*, *Guichène* and *Marceau*;

1869: H.I.M. armed-schooner *Caledonienne*;

1871: H.I.M. war-steamer *Rance*;

1872: H.I.M. war-steamer *Bruat*;

1873: H.I.M. war-schooner *Gazelle*; [H.I.M.] iron-clad war steamer *Atalante*; and

1873: H.I.M. war-steamer *Rance*.⁴²¹

⁴¹⁸ *Evening News*, 19 April 1871, p. 2.

⁴¹⁹ *Queenslander*, 13 July 1872, p. 6; *Sydney Morning Herald*, 1 August 1868, p. 4, 19 March 1872, p. 4, 2 August 1872, p. 3, and 4 November 1872, p. 4.

⁴²⁰ *Queenslander*, 13 July 1872, p. 6.

⁴²¹ Invoice Book 1868-1873, John Cuthbert, Vol ML MSS 1591/14, Bank of Australia Archives, 1826-1894, Call No ML MSS. 1591; *Evening News*, 11 March 1871, p. 2; *Sydney Mail and NSW General Advertiser*, 27 July 1872,

In September 1869, H.I.M. armed-schooner *Caledonienne* was taken to Fitzroy Dock where the hull was stripped of its sheathing and new false keel and part of the main keel replaced. Defective planking was also replaced before the hull was caulked throughout and re-coppered.⁴²² Other French naval vessels noted in the Invoice Book for 1868-1873 as repaired by Cuthbert included: H.I.M. transport *Cyclope*; H.I.M. despatch-schooner *Depeche*; H.I.M. war-steamer *Forfait*, 6 guns; H.I.M. corvette *La Somme*; and H.I.M. gunboat *Surcoeur*.⁴²³ Descriptions of these vessels varied, the latter also described as a despatch-schooner and war-steamer.

Two Russian naval vessels were also repaired by Cuthbert's enterprise; these were H.I.M. corvette *Boyarin* in 1870 and H.I.M. corvette *Izomroud* in 1872. The work to these steam vessels appears to have been mainly limited to sighting and inspection, although the *Izomroud* returned to Sydney for repairs soon after leaving the Heads. This was necessary due to 'the derangement of her machinery, which was discovered when she was about 57 miles from the Heads'.⁴²⁴

The first American naval vessel to visit Sydney appears to have been the U.S. war-steamer *Kearsarge* in August 1869, the vessel being repaired by Cuthbert (details unknown). Her arrival caused some excitement, since the ship had defeated the Confederate warship *Alabama* in 1864, during the American Civil War.⁴²⁵ In December 1871 the U.S. corvette *St Mary's* was repaired in Fitzroy Dock by Cuthbert, the hull being stripped, caulked and re-metalled (re-coppered). The Commander expressed himself so satisfied that he reported to the Admiral in command of United States ships in the Pacific Station that Sydney was an excellent port for repairing vessels.⁴²⁶ This was followed in October 1872 by the U.S. sloop-of-war *Narragansett*, placed in Fitzroy Dock for the purpose of being 'sighted and overhauled' by Cuthbert.⁴²⁷ Continuing reliance on Cuthbert's expertise was demonstrated, when, with Samuel Hayes, he was reported as placing the 4,000 ton, French iron-clad, H.I.M. war-steamer *Atalante* in Fitzroy Dock, the vessel docked on 8 August 1873.⁴²⁸ Samuel Hayes, formerly a foreman with Cuthbert, had been appointed as 'Shipwright carpenter and Foreman of the Fitzroy Dry Dock...' in June 1872.⁴²⁹

The *Atalante* was the largest vessel to be placed in Fitzroy Dock, with bets offered at 50:1 against entry into the dock, in view of the great draft of the vessel. However, the

p. 115; *Empire*, 29 August 1873, p. 4; *Sydney Morning Herald*, 30 May 1868, pp. 4-5, 12 October 1868, p. 4, 4 December 1868, p. 420 September 1869, p. 4, 28 February 1873, p. 4 and 4 June 1873, p. 4.

⁴²² *Sydney Morning Herald*, 20 September 1869, p. 4.

⁴²³ Invoice Book 1868-1873, John Cuthbert, Vol ML MSS 1591/14, Bank of Australia Archives, 1826-1894, Call No ML MSS. 1591; *Empire*, 17 September 1870, p. 2.

⁴²⁴ *Sydney Morning Herald*, 16 June 1870, p. 5, 1 February 1870, p. 4, and 12 April 1872, p. 5; Invoice Book 1868-1873, John Cuthbert, Vol ML MSS 1591/14, Bank of Australia Archives, 1826-1894, Call No ML MSS. 1591.

⁴²⁵ *Empire*, 13 August 1869, p. 3; Invoice Book 1868-1873, John Cuthbert, Vol ML MSS 1591/14, Bank of Australia Archives, 1826-1894, Call No ML MSS. 1591.

⁴²⁶ *Sydney Morning Herald*, 20 December 1871, p. 4, and 4 January 1872, p. 4.

⁴²⁷ *Newcastle Chronicle*, 1 October 1872, p. 2.

⁴²⁸ *Empire*, 29 August 1873, p. 4.

⁴²⁹ *Sydney Morning Herald*, 23 July 1867, p. 1, 15 June 1872, p. 3.

vessel was successfully docked, with only some 2 ½ inches of water to spare.⁴³⁰ The *Atalante* had been damaged in gales in the Atlantic Ocean, the sheathing and armour plating being of particular concern. Surveyed by Cuthbert and ship's officers, it was found necessary to 'remove and replace the whole of the copper sheathing, putting on the planking longitudinally, after the manner adopted for English, wood-bottom ironclads...' All of this was done under the personal direction of Mr Cuthbert, the process taking 6 weeks, even though most of the work was 'of a very difficult and tedious character...'.⁴³¹ By July 1874, Cuthbert had received a commendation from the commander of the *Atalante*, Admiral Baron Rousseau, following his arrival in San Francisco. The commendation read:

[TRANSLATION]

San Francisco, *Atalante*, 24 May 1874 - My dear Mr Cuthbert. When I left Sydney I promised to write and let you know how the lining of the armour plating of the *Atalante* stood wear. I am happy to be able to inform you that it is now in very good order, and I have every confidence in it for the future. To arrive here-at the other end of the Pacific Ocean-we went a long way out of our direct road, going up the coast of Chile and Peru. We have thus traversed about 4,000 marine leagues; and during the passage from Auckland to Valparaiso met with very heavy seas. Nothing, however, has been disturbed in the lining, and this trial makes me hope that everything will hold well till we return to France. The system of fixing the wooden lining on to the armour plating itself is the only good one; particularly when it is carried out with the care which you bestow on the work. We have not noticed the least traces of oxidation, the cheenam [chunam] appears to have worked wonders. I, therefore, congratulate myself very much for having entrusted you with the repairs of the *Atalante*. Everybody on board my vessel retains most excellent recollections of Australia, and comparison with Sydney will tend even to depreciate San Francisco, which, from its rapid progress, is also an interesting city. From this place we go to Tahiti, then to Valparaiso, and from there, in all probability, we shall leave for France towards the end of the year. We shall see our native country again with pleasure, but we shall regret leaving so many friends in distant lands. Our thoughts will, at all events, often take us back to them, and for me, I shall always, my dear Mr Cuthbert, recollect with pleasure the cordial relations I have had with you, and I beg you to accept the assurance of my sentiments of high esteem and regard.

A Rousseau, Ctre. Admiral.⁴³²

Cuthbert was only able to step down from the shipbuilding industry when his Shipyard, the Patent Slip, and the extensive stocks of timber and other materials, were disposed of in September 1873 to Mr Daniel Macquarie of Newcastle. Cuthbert had already attempted to dispose of the contents of his shipyard in 1872, when the enterprise was described as a 'most lucrative

⁴³⁰ *Empire*, 29 August 1873, p. 4.

⁴³¹ *Sydney Morning Herald*, 10 July 1874, p. 6.

⁴³² *Sydney Morning Herald*, 10 July 1874, p. 6.

business...', one which at times had employed as many as 300 or 400 men and on occasion 600.⁴³³ Although Cuthbert was now finally retired, the business was to be carried out by the same efficient staff of workmen.⁴³⁴ By November 1873 Macquarie was advertising his newly leased premises in Sydney, which included Cuthbert's Wharf, Millers Point, and the Patent Slip at the foot of King Street.⁴³⁵ An indenture between Macquarie and Cuthbert was signed in December 1873 regarding the lease of land and premises at Millers Point.⁴³⁶

Mr Daniel Macquarie, a well-known Government contractor, had taken over the shipyard and patent slip at Stockton near Newcastle in November 1869. A new patent slip had soon been completed by Macquarie at a cost of £5,000, one capable of taking up vessels of 1,200 tons burden.⁴³⁷ The new patent slip was soon in use for repairs and overhauls, with vessels re-metalled (coppered) and fitted-out. By February 1873 two timber schooners were under construction for the French Government in New Caledonia, followed by an 800 ton barque, one of several new vessels completed that year.⁴³⁸ It would seem that Macquarie was already taking over some of Cuthbert's business with the construction of vessels for New Caledonia.

On Christmas Eve 1873 the apprentices employed in Cuthbert's enterprise presented him with a 'handsome, richly-chased silver cigar case, as a mark of their esteem and gratitude for his urbane and generous treatment, uniformly received from him since they entered his employment...'. In the apprentices' address, there was a frank and 'respectful allusion to Mrs Cuthbert, the esteemed partner of their late employer'.⁴³⁹ In January 1874, Cuthbert recommended that customers could place all their confidence in his successor Daniel Macquarie and thanked the many friends who had patronised him during the last 20 years.⁴⁴⁰

By November 1874, Macquarie was undertaking major repairs in Cuthbert's former shipyard at Millers Point, including naval vessels, with a large composite vessel on the stocks, purported to be the first such built in the colonies.⁴⁴¹ However, this activity was brought to an abrupt end when the American vessel *Wildwood*, 1,200 tons, was dislodged from the cradle of his Patent Slip at Stockton, earlier that year.

⁴³³ *Sydney Morning Herald*, 7 March 1872, p. 7, *Illustrated Sydney News and NSW Agriculturalist and Grazier*, 31 August 1872, p. 3.

⁴³⁴ *Sydney Morning Herald*, 22 September 1873, p. 4.

⁴³⁵ *Illustrated Sydney News and NSW Agriculturalist and Grazier*, 22 November 1873, p. 6.

⁴³⁶ State Library of NSW, 'Indenture, between J. Cuthbert and D. Macquarie regarding the lease of premises and land in the city of Sydney', 31 December 1873, MLD0C 2536.

⁴³⁷ *Australian Town and Country Journal*, 16 April 1870, p. 16.

⁴³⁸ *Newcastle Chronicle*, 13 February 1873, p. 2; *Illustrated Sydney News and NSW Agriculturalist and Grazier*, 27 September 1873, p. 3.

⁴³⁹ *Sydney Morning Herald*, 1 January 1874, p. 4.

⁴⁴⁰ *Sydney Morning Herald*, 24 January 1874, p. 1.

⁴⁴¹ *Sydney Morning Herald*, 19 December 1873, p. 4; *Newcastle Chronicle*, 28 November 1874 p. 2.

Damages claimed for the loss of trade as well as repairs amounted to £5,000, in a case which Macquarie would lose.⁴⁴²

On 26 May 1875 Macquarie filed for bankruptcy with liabilities of £8,000. Assets were declared to equal this amount, the cause of the insolvency being pressure of the executors of the accounts of the late John Cuthbert, who advertised the sale of the insolvent's effects a day later.⁴⁴³ By June 1875 Cuthbert's Wharf and the Patent Slip were advertised for lease by the executors, although in July 1875 the two properties were advertised for final sale by auction, when the water frontage was described as 450 feet in length.⁴⁴⁴ The Patent Slip and Wharf and Produce Stores on Sussex Street sold for £8,400 in February 1876, the Shipyard and associated property being purchased by Mr G. R. Dibbs MLA for the sum of £11,000 after negotiation.⁴⁴⁵ Although leased in the short-term, the shipyard would not operate for long, Cuthbert's Wharf and the associated slips and yards being re-developed by 1877, with jetties and warehouses constructed for Dibbs' new enterprise. By 1879, Dibb's Wharf had become the base for a British company, the Netherlands-India Steam Navigation Co.

John Cuthbert Esq. JP, had not lived to see the demise of the enterprise he had created, having died of the long term effects of a lung disease, consumption (tuberculosis), on 8 December 1874 at his home at Millers Point, above his wharf and shipyard on Darling Harbour, with all vessels in the harbour lowering their flags to half-mast on 9 December.⁴⁴⁶ The funeral was one of the largest ever seen in the city. John Cuthbert was interred on 10th December 1874, the funeral cortege leaving from his late residence at Munn Street, Millers Point, before proceeding via St Patrick's Church, with over 60 carriages, to the Catholic cemetery, Petersham.⁴⁴⁷

Benevolent to a fault, his liberality was considered to have been un-ostentatious, Cuthbert making unsecured loans and financial arrangements with a number of people.⁴⁴⁸ In his substantial will he left generous bequests to Randwick Asylum, the Ragged School and the Kent Street soup kitchen, and gave £100 to St Vincent's Hospital.⁴⁴⁹ In 1868 Cuthbert had given £52 10s 0d to the Prince Alfred Hospital Fund, his wife £10 10s 0d.⁴⁵⁰ Cuthbert and his wife donated generously to various charities, including the Society for the Relief of Destitute Children, with

⁴⁴² *Empire*, 5 March 1874, p. 4.

⁴⁴³ *Newcastle Chronicle*, 27 May 1875, p. 2.

⁴⁴⁴ *Sydney Morning Herald*, 21 June 1875, p. 8, and 29 July 1875, p. 9.

⁴⁴⁵ *Maitland Mercury and Hunter River General Advertiser*, 10 February 1876, p. 5; *Australian Town and Country Journal*, 4 March 1876, p. 9.

⁴⁴⁶ *Empire*, 9 December 1874, p. 2; *Sydney Morning Herald*, 21 December 1874, pp. 6-7; *Sydney Mail and NSW Advertiser*, 12 December 1874, pp. 753-754, 19 December 1874, p. 776

⁴⁴⁷ *Sydney Morning Herald*, 9 December 1874, p. 12; *Freeman's Journal*, 12 December 1874, pp. 9-10.

⁴⁴⁸ *Freeman's Journal*, 12 December 1874, pp. 9.

⁴⁴⁹ *Sydney Morning Herald*, 27 February 1875, p. 2, Bede Nairn, 'Cuthbert, John (1815-1874)', *Australian Dictionary of Biography*, Volume 3, 1969, National Centre of Biography, ANU, Canberra, online version accessed 2 October 2013.

⁴⁵⁰ *Sydney Morning Herald*, 9 May 1868, p. 9.

contributions in kind and donations of money to the City Mission and to Saint Patrick's Christian Doctrine Confraternity.⁴⁵¹

Probate over Cuthbert's will was granted in January 1875 to his widow Susannah Cuthbert, James Mullins of the Labour Bazaar, and William Neill, Manager of the City Bank, all of Sydney.⁴⁵² There were no children from the marriage of John Cuthbert and Susannah Dawson; Cuthbert's major assets, conservatively valued at over £22,000 in 1875, excluding unsecured loans, included:

- the Shipyard at Millers Point and the Patent Slip, King Street, under mortgage to Daniel Macquarie, and the house at 1 Munn Street, Millers Point;
- 9 small houses in Unwin Street, and an allotment of land in Wentworth Street.⁴⁵³ The 9 small houses comprised two rows built before 1844 on Martin's grant and were acquired by 1860 or 1861, according to the Rates Assessment Books for Gipps Ward. However, there was little mention of the 9 cottages until 1871, when they were referred to as 'Cuthbert's Cottages';
- The hulk *Cameo* purchased by Messrs Stubbs and Co. for £225 in August 1875;⁴⁵⁴
- Feehan's Grant, 110 acres near Huskisson, Jervis Bay, advertised for sale in June 1875, but which brought in only 18 shillings an acre when sold;⁴⁵⁵
- City Bank Shares, 125 sold at £9 2s 6d per share in August 1875, having declined in value from 10 guineas (an 8% dividend was paid), but generally one of the more reliable banks;⁴⁵⁶
- Anvil Creek Coal Mining Company, 200 £1 shares (paid up), 500 £1 shares (17s 6d paid up).⁴⁵⁷ In November 1872 Cuthbert was listed as one of five directors in the infant Anvil Creek Coal Mining Company Ltd. The company had been formed to purchase and improve the mining of coal at the Anvil Creek Colliery near Maitland;⁴⁵⁸ and
- investments in the Johnson's Gold Mining Company Limited at Hawkin's Hill (Hill End) and in the Great Mogul Mining Company at Root Hogs Reef, Tambaroora, near Hill End, both in 1872. In 1873 Cuthbert had also invested in the Cope Hardinge Tin Mining Company Limited in northern NSW. The speculative capital invested amounted to more than £400, with £250 alone invested in the Tin Mining Company.⁴⁵⁹

⁴⁵¹ *Sydney Mail*, 10 March 1866, p.3; *Sydney Morning Herald*, 26 November 1866, p. 8 and 30 October 1868, p. 5.

⁴⁵² *Sydney Morning Herald*, 18 December 1874, p. 8.

⁴⁵³ *Sydney Morning Herald*, 7 February 1876, p. 7.

⁴⁵⁴ *Evening News*, 5 August 1875, p. 5.

⁴⁵⁵ *Sydney Morning Herald*, 26 June 1875, p. 15; *Illawarra Mercury*, 9 July 1875, p.2.

⁴⁵⁶ *Sydney Morning Herald*, 2 February 1875, p. 9; *Maitland Mercury and Hunter River General Advertiser*, 17 August 1875, p. 4.

⁴⁵⁷ *Sydney Morning Herald*, 2 February 1875, p. 9.

⁴⁵⁸ *Newcastle Chronicle*, 16 November 1872, p. 5.

⁴⁵⁹ *New South Wales Government Gazette*, Sydney, 19 March 1872, [Issue No 84], p. 734, 22 March 1872 [Issue No 89], p. 809, and 10 June 1873 [Issue No 152], p. 1649.



Cuthbert's shipyard from the south in January 1871. Source: State Library of New South Wales, Image 25.

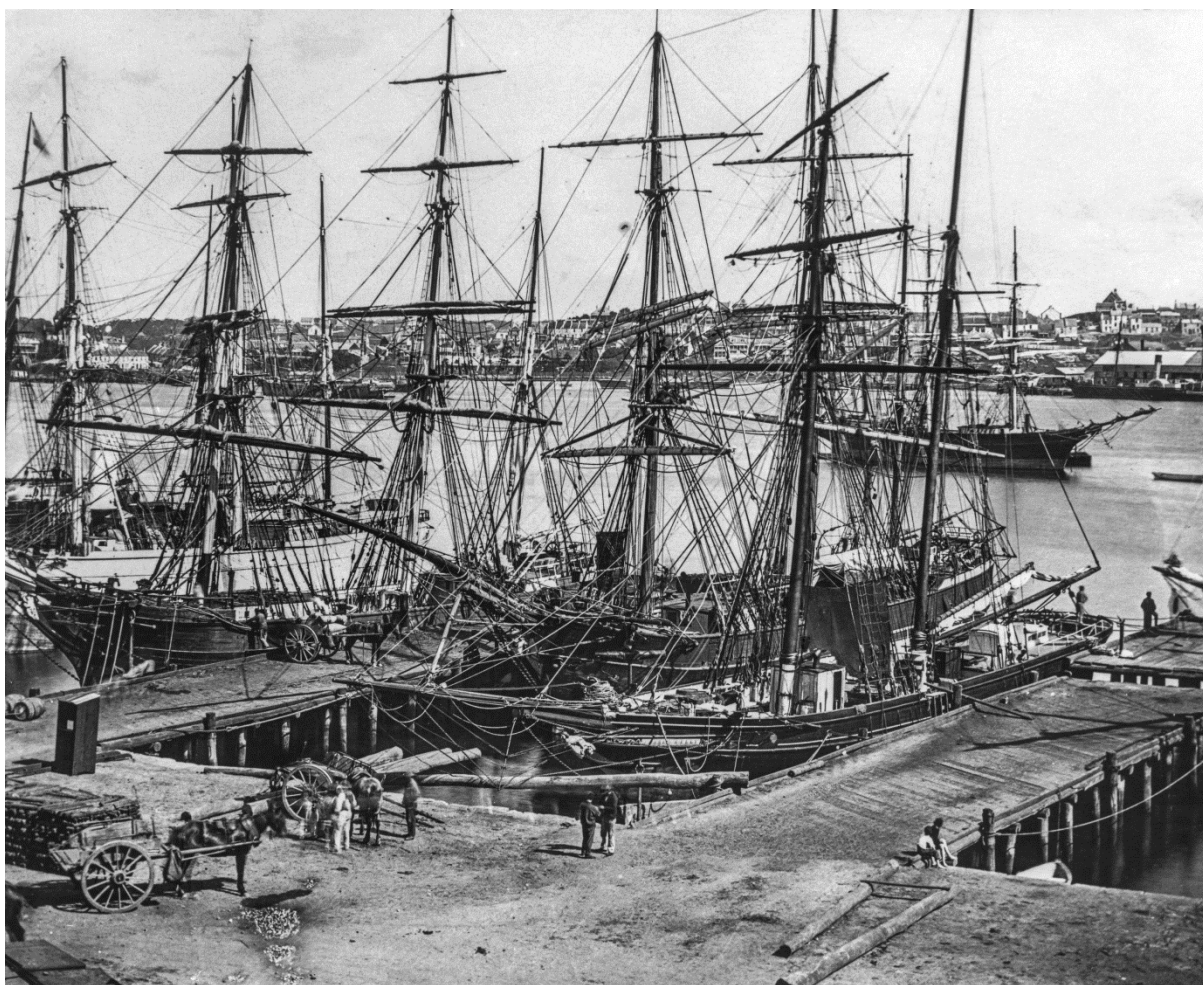


Cuthbert's shipyard from the north in February 1871. Source: State Library of New South Wales, Image 22.



The French iron-clad *Atalante* in Fitzroy Dock, Cockatoo Island, in August 1873, with Cuthbert's men at work on the hull and armour plating.

Source: Holtermann Collection, State Library of New South Wales, Image 13.



Brigantines in Darling Harbour, c. 1870, including the *Jessie Kelly* (right), maintained by John Cuthbert. The jetties are thought to have been part of the new Grafton Wharves erected by Challis and Smith after 1854 on the site of Bass's former shipyard, with Pyrmont beyond.

Source: City of Sydney Archives, Image 3.

7

Conclusions and Legacy

Shipbuilder John Cuthbert was a successful businessman, one whose life reflected, in many ways, the opportunities to be found in Victorian Britain and its colonies. He had started his career in Ireland, with little or no capital, events subsequently leading to his involvement in the timber trade with Canada and eventual arrival in the colony of NSW in 1843. In July 1867 John Cuthbert was lauded for his rise from the position of ship's carpenter to be the proprietor of the largest shipbuilding establishment in the Australian colonies. Significantly, as a leader in the development of timber shipbuilding in the colonies in the mid-nineteenth century, Cuthbert had made the transition from tradesman to businessman, merchant and entrepreneur at a time when iron construction and steam power had begun to impact on traditional shipbuilding. An honest man, his tenders were almost always the lowest, the materials and workmanship employed always of the highest quality.

During his active years from 1853 to 1873, John Cuthbert became Sydney's foremost shipbuilder, one who experimented with construction techniques and design, but one who had become a point of contention for other shipbuilders, a consequence of what some considered his monopoly in the repair and overhaul of vessels. Over a period of more than 20 years, Cuthbert's shipbuilding yards produced, for the most-part, speculative and commissioned timber vessels, all demonstrating the high standards which could be achieved, and which came to be expected of him. In this respect, Cuthbert was well known for his promotion of mercantile interests and colonial shipbuilding, as well as those native timbers which were best suited for building timber vessels in the eastern colonies.

By 4 March 1865 (Table 4) Cuthbert had built 'twenty-six [timber] vessels, in length from 26 to 151 feet, and in tonnage from 50 to 500 tons. Of these, seven were steam vessels, and among the names were those of: the *Ipswich*, steamer...; the *Nowra*, steamer; the *Spitfire*, gunship; the *Lady Denison*, brig; the *Lytton*, steam dredge...; the *Cyclops*, paddle steamer; [and] the *Pluto* and *Susannah Cuthbert*, screw-steamers'.⁴⁶⁰ At least 25 craft were built after 4 March 1865 (Table 5), including schooners, steam launches and cutters as well as gigs and yachts. These 50 or so vessels included the first colonial gunboat, the *Spitfire*, completed in 1855, and the first naval vessels, 4 armed-schooners, built in Australia for the British (Imperial) Government in 1872.

This summary description of vessels built by Cuthbert before 4 March 1865 fits well with the number of individual vessels identified in the newspaper reports of the day between 1 January 1853 and 4 March 1865, and which are listed in Table 4.

Cuthbert's business was severely impacted in 1868 by the actions of unions and

⁴⁶⁰ *Sydney Mail*, 4 March 1865, p. 3; *Sydney Morning Herald*, 21 March 1865, p. 3.

Table 4: Vessels built or modified* 1 January 1853-4 March 1865

Milne's Wharf	Commercial	Government/Naval	Other
June 1853-Sept. 1854 Launches, on the stocks and in frame	6 x cutters, ketches, ballast boats and 1 x 70-foot schooner		
November 1853 built in sections		<i>Emu Ferry</i> , Nepean River	
January 1855 launch			<i>Enchantress</i> , yacht, for John Cuthbert
April 1855 launch		<i>Spitfire</i> , gunboat	
December 1855 launch	<i>Nowra</i> , paddle- steamer		
October 1857 trial trip reported	<i>William IV</i> , paddle- steamer modified*		
September 1858 first 2 launched		4 x punts for Hunter River steam-dredge	
January 1859 launch	<i>Lady Denison</i> , brig		
April 1860 launch	<i>Ipswich</i> , paddle- steamer		
Millers Point	Commercial	Government/Naval	Other
September 1861 launch		<i>Lytton</i> , steam-dredge for Moreton Bay	
December 1861 launch			<i>Peri</i> , yacht
May 1862 nearing completion	North Shore steam ferry, (<i>Kirribilli</i>)		
September 1862 contracted awarded		2 x punts for Shoalhaven dredge	
October 1862 under construction	<i>Commodore Burnett</i> / <i>Pluto</i> , screw steam- collier		
October 1862 ready for launching	North Shore steam ferry, (<i>Kirribilli</i> ?)		
December 1862 under construction		3 x punts for the steam-dredge <i>Lytton</i>	
December 1863 launch	<i>Susannah Cuthbert</i> , screw steam-collier		
December 1863 tender awarded		<i>Cyclops</i> , paddle- steamer tug	
June 1864 under construction	Cargo-punt, 70 tons		
January 1865 launch	<i>Comerang</i> , paddle- steamer		
February 1865, new advertised for sale	<i>Teal</i> , centre-board ketch		

Table 5: Vessels built or modified* 5 March 1865-10 January 1873

Millers Point	Commercial	Government/Naval	Other
June 1865 launch	<i>Coolangatta</i> , paddle-steamer		
December 1866 launch	<i>Zephyr</i> , brigantine-rigged schooner		
April 1868 reported		H.M. frigate <i>Galatea</i> 's launch converted to yacht <i>Polyphemus</i> *	
March 1869 reported		Steam launch and other boats refitted for H.M.S. <i>Galatea</i>	
March 1869 reported		Oared cutter for H.M.S. <i>Challenger</i> plus steam launch	
December 1869 reported		2 x cutters for H.M. ships <i>Scylla</i> , <i>Phoebe</i>	
January 1870 reported			<i>Foam</i> , yacht modified*
July 1870 reported		2 x cutters, 1 x gig for H.M..S <i>Challenger</i>	
January 1872 under construction			2 x gigs for Sydney crews for Hobart
February 1872 under construction		Steam launch for H.M. survey ship <i>Pearl</i>	
February 1872 trial trip under power		H.I.M. screw steam-schooner <i>Depeche</i> for New Caledonia	
August 1872 under construction		6 x 12-ton surf boats for New Caledonia	
September 1872 contract - completed February 1873		4 x armed-schooners British Government	
Aug.-Sept. 1872 under construction			Steam launch/yacht for John Cuthbert
10 January 1873 invoice	2 x large cutters for Messrs Montefiore		

trade societies, at a time when shipbuilders wanted some wage flexibility, and after 1868 Cuthbert began to use contract labour. At a time of increasing competition with iron shipbuilders, the consequence of this was that the enterprise would concentrate almost solely on repair and overhaul after 1868, with few new commercial vessels built, as illustrated in Table 5 above. Perhaps the most successful side of Cuthbert's business was the surveying, overhauling, repairing and refitting (generally referred

to as repairing) of well over 550 known (named), commercial vessels on more than 800 occasions, including purchased and salvaged vessels, during a period of some 20 years. The purchase and repair of large, timber vessels was potentially more profitable than building ever-larger vessels in his shipyard, with the potential financial risks involved. Such vessels enabled Cuthbert to extend his business model through merchant trading, as a ship-owner, in particular the purchase and repair of vessels with known, performance standards.

At various locations around the harbour, Cuthbert also made extensive repairs to colonial Government vessels, to vessels of the Australian Squadron and to foreign naval vessels more than 120 times. This effective dominance was achieved through improved techniques and the leasing of patent slips and dry docks as well as in his de-facto role as superintendent of shipwright's repairs at Fitzroy Dock on Cockatoo Island and as a Shipwright Surveyor, appointed by the NSW Government to the Steam Navigation Board.

The repair figures listed below, compiled from newspaper reports, are indicative only, although they have allowed some degree of analysis based on the types of commercial and naval vessels and the repairs carried out, with some vessels repaired more than once. The second line for 1868-1873 is the most accurate, having been taken from the only surviving Invoice Book, and suggests that only major repairs were reported in the newspapers of the day by the 1860s. (Estimates of vessels purchased for repair and sale or trade have been included in the number of commercial vessels repaired)

<u>Repair Period</u>	<u>Commercial</u>	<u>Naval</u>	<u>(Purchased)</u>
<i>Repairs in Newspapers and Reports</i>			
1853-1860	165	16	(6)
1861-1867	62	31	(13)
1867-1868 (Banks)	5	4	
1868-1873	68	27	(7)
<i>Repair Numbers calculated from the Invoice Book 1868-1873</i>			
1868-1873	580	70	(7)

The number of vessels repaired during the first period of commercial repairs, 1853-1860, at Milne's Wharf, reflected the smaller types of vessels then in use as well as the opening of private graving docks and slipways in 1855. In 1856, the *Sydney Morning Herald* reported that from the month of May 1855, till the same month in 1856, Cuthbert repaired 30 schooners, 17 brigs, 11 barques and 3 ships at his yard.⁴⁶¹ However, these figures were not reflected in other newspaper reports of the time, with a much lower figure of 9 vessels identified as repaired during the same 12-month period.

⁴⁶¹ *Sydney Morning Herald*, 20 May 1856, p. 4.

The Millers Point shipyard had opened for business in January 1861, Cuthbert managing the enterprise until July 1867 when he went overseas for 7 months. The progress of shipbuilding in Sydney in 1861 and 1862 was described at the time as limited in extent and scope.⁴⁶² The reduction in the numbers of commercial vessels repaired during the period 1861-1867 may also have been affected by the need to organise his new shipbuilding yard at Millers Point, a larger site purchased in 1858. However, competition from other shipbuilding yards, coupled with an increasing number of iron and steam-driven vessels would have also impacted on the business. The vessels being repaired were also increasing in size, with little mention in the newspaper reports of repairs to smaller, colonial, timber vessels.

The period 1867-1868 (Banks) was the short period during which the enterprise was managed by Captain Banks, whilst Cuthbert was overseas in Britain. The large number of vessels listed in Cuthbert's Invoice Book for 1868-1873, when compared to the low numbers reported in the newspapers for the same period, gives a clear indication of the real workload carried by his enterprise. Although there appears to be some consistency in the figures for both commercial and naval vessels based on newspaper reports, these are misleading when the Invoice Book is taken into account. Vessels identified in newspaper reports in any of the periods before 1868, should therefore only be used to gain information about the type of repairs, rather than the scale of operations in Cuthbert's enterprise.

Cuthbert's leasing and ownership of dry docks and patent slips gave him access to what were the most important tools in the shipwright's trade. These were the Australasian Steam Navigation Company's (A.S.N. Co.'s) Patent Slip (leased 1858-1864), Mort's Dock, Waterview Bay, (leased 1860-1866) and the Old Patent Slip in Sussex Street acquired by Cuthbert in 1865, under an improvement-lease, and then purchased in 1869. The opening of the Government dock, Fitzroy Dock, on Cockatoo Island, in 1857, and Cuthbert's subsequent use of that dock, led to the perception that he held a monopoly over the repairs, materials and workforce required to run the new dock, a dock which played a major role in his financial success after 1860. This perception was reinforced by the activity of his workforce at the A.S.N. Co.'s Patent Slip and at his shipyards.

At the A.S.N. Co.'s Patent Slip, for a 6 month period to the end of June 1858, Cuthbert's workforce had hoisted 26 vessels onto the Patent Slip for inspection before stripping, repairing, caulking and re-coppering, the aggregate tonnage being 7,614 tons. Also during this period 21 iron steamers, for the most-part not worked on by Cuthbert, were placed on the slipway, making a total of 47 vessels. In addition, Cuthbert had also repaired 38 vessels at his Millers Point shipyard over the 6 months, yet again demonstrating the scale of his operation.⁴⁶³

⁴⁶² *Argus*, 26 September 1862, p. 7; *Sydney Morning Herald*, 21 May 1861, p. 5.

⁴⁶³ *Sydney Morning Herald*, 30 January 1858, p. 4, and 10 July 1858, p. 10.

Although newspaper and other reports have allowed a reasonable understanding of the types of vessels repaired by Cuthbert's enterprise, in particular naval vessels, the reporting of repairs to smaller vessels was often non-existent or at best erratic. The speculative purchase of damaged vessels or vessels requiring overhaul, on average 1 per year, reflected Cuthbert's need to keep his workforce employed and to generate revenue and appears to have been reasonably well reported. In this respect, it was the repair, re-fitting and overhauling side of his business which dominated the shipbuilding industry in Sydney for some 20 years. This dominant aspect of his business, which has been reconstructed from the many newspaper-reports praising his achievements, despite the undoubted quality of his new vessels, clearly tells us much about his character and standing in colonial Sydney as well as in the naval and merchant communities of Britain, America and France.

The success of Cuthbert's enterprise provided continuity of employment for an average of 150 shipwrights, apprentices and other tradesmen, often as many as 300-400, and by the 1870s, in his own estimation, he had paid almost £500,000 in wages. Cuthbert also operated as agent, shipowner and merchant and was recognised as one of Sydney's most generous philanthropists. His appointment as a Justice of the Peace in July 1864 was just recognition of his integrity as well as his success in business.

Glossary

NOTE: This glossary applies to merchant vessels of the mid nineteenth century and covers vessel types and shipbuilding terminology. Some of the terms have somewhat different meanings both prior to and since that period. Naval vessels are not specifically addressed.

auxiliary steam-power, auxiliary vessel

Auxiliary steam-power was used to augment the performance of sailing vessels when wind was inadequate and boiler fuel was available. Such vessels were often slower under steam-power than when under full sail.

barque

A vessel with 3 masts (foremast, mainmast and mizzenmast), where the 2 foremost masts are square-rigged, as in a ship, and the after or mizzenmast is fore-and-aft rigged with a gaff sail and gaff topsail.

barquentine

A vessel with 3 masts (foremast, mainmast and mizzenmast), the foremast only is square-rigged and the main and mizzen masts (with topmasts) and fore-and-aft rigged with gaff sails and gaff topsails.

brig

A sailing vessel with 2 masts (foremast and mainmast), the foremast and mainmast, both square-rigged, like the foremast and mainmast of a fully rigged ship. The mainmast also carries a gaff-rigged, fore-and-aft sail.

brigantine

A sailing vessel with 2 masts (foremast and mainmast) the foremast being square-rigged and the mainmast fore-and-aft rigged, with a gaff sail (mainsail) and a gaff topsail.

carvel (construction or built)

Where side planks in a wooden vessel are all flush and the edges (and end joints where necessary) are fastened close together with the side seams then caulked to obtain a seal. Small boats are frequently clinker built, the planks overlapping horizontally..

caulked/caulking/puttying

The hull of a vessel built using carvel construction requires the joints to be sealed to prevent leaking. This was done using caulking mallets to force oakum, twisted and pitched or tarred, into the joints between planks. The caulking mallets were dipped in linseed oil to prevent the mallets sticking to the tarred oakum. The topsides of vessels were often puttied to seal the external surface of joints. In particular the deck seams were 'payed' with pitch poured from a ladle, one with a long spout to control

the flow. Good caulking was an important part of shipbuilding in the nineteenth century.⁴⁶⁴

chunam/chunamed/chunamered

‘Chunam’, a mixture of oil and lime, was one of the earliest protective coatings developed against attack by marine organisms, in particular the teredo worm. The term ‘chunamed’ referred to a process whereby, after the hull was caulked, the surface was ‘chunamed/chunamered’ (covered with chunam) below the waterline, to fill holes and irregularities. The ‘chunam’ could be a mixture of several coats including a lime putty, pitch, tallow, resin or tar, although the first coat was generally an oil and lime putty.⁴⁶⁵ The exposed, coated surfaces of the hull were made much more resistant to marine attack by sheathing with [bituminous] felt and copper or Muntz metal sheets. Borrodale’s Patent Felt was used beneath the metal sheathing in vessels built in Sydney in the 1840s. See *sheathing* below.

A good example of best practice is the ketch *Brothers*, advertised for sale in August 1854. The vessel had been caulked with oakum, ‘chunamered’, the bottom then ‘flushed’ (high spots removed), ‘chunamered’ again and pitch or tar applied under felt sheets before the outer, metal sheathing was fixed, starting at the stern.⁴⁶⁶

coaster

A vessel employed in the coastal shipping trade.

collier

A vessel used to transport coal.

compo/composition

See *sheathing* below.

coppering/re-coppering

See *sheathing* below.

cutter

A sailing vessel with a single mast and fore-and-aft sails, with gaff mainsail and topsail aft of the mast and 2 or more triangular sails forward of the mast, often with a running bowsprit (which can be moved inboard).

diagonal principle

A planking technique for wooden vessels in which 2 layers are fastened diagonally, rather than longitudinally, in opposite directions on the timbers, the 2 layers sloping in opposite directions. Often a third, outer layer is then fastened longitudinally in the normal manner. The construction results in a very strong hull.

⁴⁶⁴ C.A. Franklin, *Caulking Techniques in Northern and Central European Ships and Boats*, a thesis, Graduate College of Texas, 1985, pp. 43-48.

⁴⁶⁵ *Sydney Morning Herald*, 2 August 1854, p. 7; M. Nash, *The Sydney Cove*, Navarine Publishing, Hobart, 2nd edition, 2009, p. 131.

⁴⁶⁶ *Sydney Morning Herald*, 2 August 1854, p. 7; M. Staniforth, *The Introduction and Use of Copper Sheathing - A History*, pp. 25-28, at <http://academia.edu/358814/> site visited 16 November 2015.

dry dock/graving dock

A dry dock or graving dock allows larger vessels to be floated into an excavated enclosure, the dock. In the 19th century the water in the dock was generally pumped out by steam driven machinery. A caisson (floating gate or moveable structure) at the entrance sealed the dock, the hull of the vessel being shored up as the water was pumped out. The stepped sides of the dock subsequently allowed workmen to erect scaffolding against the hull for repair, inspection and in particular sheathing.

fore-and-aft sail or rig

A fore-and-aft sail is one where the leading edge (the luff) abuts the mast (as for a gaff sail or gaff topsail) or is attached to a stay before the mast (as for a jib or staysail). Such sails are set in a fore and aft direction. A vessel with such a set of sails has a fore-and-aft rig.

half-model

See *mould*, *mould loft* below.

ketch

A sailing vessel with 2 masts (mainmast and a shorter mizzenmast), both fore-and-aft rigged. The mizzenmast is stepped forward of the rudder post, whereas in a yawl it is stepped aft. Ketches often have a shallow draft.

mould, mould loft

Lofting was the business of drawing or laying-down the lines of the vessel to full size in a mould loft, often a large roofed area above workshops. Patterns were made from the drawings to guide the shaping of timbers used in framing. Full-size moulds (formers) to guide the shaping of the hull and timbers were then completed. Half-models were the basis on which the lofting was based, once the design had been finalised between shipbuilder and client. The half-model, representing one half of the vessel from stem to stern, was composed of layers of wood, carved to achieve the form that would achieve the required performance standards.

paddle-steamer: side and stern wheel

Side paddles were a standard layout with the engines and other machinery located amidships. Stern-wheel vessels had the engine located at the stern. Both types were referred to as paddle-wheel steamers.

patent slip

A patent slip allows small and medium size vessels to be secured for inspection and repair on a cradle or carriage, drawn out of the water on rails. In the 19th century the carriage was usually operated by steam power, the rails extending into deep enough water (as today) to enable vessels to be retrieved and re-launched. The use of a patent slip was also a form of dry-docking.

schooner/schooner-rigged

Most frequently a sailing vessel with 2 masts (foremast, sometimes the shorter and mainmast) with fore-and-aft sails, although on larger vessels up to 3 masts were

used. A topsail schooner is similar but has one or more square sails set high on the foremast, above the gaff rigged foresail. A 3-masted schooner has a third mizzenmast fore-and-aft rigged.

screw-steamer

A propeller-driven vessel powered by one or more steam engines. Most nineteenth century screw-driven vessels featured a single propeller located ahead of the rudder.

sheathing

The advantages of copper sheathing to protect wooden vessels against attack from marine organisms were well recognised, but in 1832 G. F. Muntz patented a new copper alloy with better working characteristics and a lower cost than copper. Copper, leaching out of the copper or Muntz metal (60% copper/40% zinc) sheets used as the outer sheathing, deterred marine growths and teredo worms. Muntz metal was cheaper than copper and easier to work, although the 'Compo' nails used (and Compo bolts when used), also of copper and zinc, were 3-4 times more expensive than iron nails due to the copper used in their manufacture.⁴⁶⁷

Although shipwrights and owners in Britain were quick to realise the benefits of 'Muntz metal', it was not until 1847 that the Admiralty agreed to a trial at Muntz's expense.⁴⁶⁸ Vessels featuring Muntz metal sheathing had arrived in Sydney by 1840, with merchants such as John Macnamara stocking sheets of Muntz metal and nails by 1845, although continuing to stock copper sheathing with the requisite nails at the same time. The new Muntz metal sheets appear to have reached a price of 1 shilling per lb (pound weight) in Sydney before retailing.⁴⁶⁹

Sheets of copper or Muntz metal for Royal Navy vessels were generally 14 inches x 48 inches, allowing overlaps and nailing to be made in the middle of ship's planks, which were nominally 14 inches wide. Sheets were generally of 22, 28 or 32 ounces per square foot, although lighter weights were available.

ship, fully-rigged ship

A sailing vessel with 3 masts (foremast, mainmast and mizzenmast) each fitted with a topmast, top-gallant mast and royal mast, all square-rigged, with a gaff fore-and-aft sail aloft on the mizzenmast.

ship-smithing

Blacksmith's work in a shipyard.

⁴⁶⁷ M. Staniforth, *The Introduction and Use of Copper Sheathing - A History*, pp. 25-28, at <http://academia.edu/358814/> site visited 16 November 2015.

⁴⁶⁸ *Sydney Chronicle*, 25 August 1847, p. 4; M. Staniforth, *The Introduction and Use of Copper Sheathing - A History*, pp. 25-28, at <http://academia.edu/358814/> site visited 16 November 2015.

⁴⁶⁹ *Sydney Morning Herald*, 14 September 1842, p. 2, 23 March 1847, p. 1, and 12 July 1847, p. 1; *Australian*, 13 September 1845, p. 2; *Shipping Gazette and Sydney General Trade List*, 22 April 1848, p. 100, and 14 October 1848, p. 250.

slipway

A slipway was the ramp on which vessels were constructed and repaired and from which a vessel could be launched. A vessel 'on the stocks' was under construction, supported by timber blocks and shores, while small vessels could be hauled up the ramp to expose the bottom of the hull for inspection and repair. The slipway was sometimes referred to simply as the slip.

square sail or rig

A square sail is one where the upper side is laced to a yard which lies square to the mast or across the vessel. A vessel with a complete set of such sails on at least one mast is said to be square rigged.

steamer

A vessel with 1 or more steam engines. See *paddle-steamer* and *screw-steamer* above.

treenail

A heavy, wooden dowel used to fix planks to the frame timbers of wooden vessels. In the Australian colonies this was usually of ironbark.

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Images

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Appendices

The Appendices have been placed in a separate file: see **Cuthbert Appendices**