

THE UNEXPECTED APPEARANCE OF DAWES' OBSERVATORY ON THE '1808 SYDNEY COVE MAP'

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Abstract: In commemoration of Australia's 1988 Bicentenary celebrations, a public artwork in the form of a large 'terrazzo' and brass map was realised on the site of Sydney's earliest British settlement. The 3.6 metre-diameter map was intended to show the topography of Sydney Cove as of 1808. Surprisingly, the map includes a cluster of buildings that are clearly identifiable as Dawes' Observatory, established by Lieutenant William Dawes in 1788. However, Dawes' Observatory became derelict shortly after the astronomer's departure from New South Wales in late 1791, with little evidence of its existence remaining by the mid-1790s. I contend that the '1808 Sydney Cove Map' is likely a representation of the topography of the growing settlement at Sydney Cove during an extended period up to 1808. Although the majority of topographical features were taken from the 1807 survey by the fledgling colony's Surveyor-General, James Meehan, the reliance by the Sydney Cove Map's designers on a range of historical sources that covered a time span of 20 years has inadvertently introduced an anachronism by also including Dawes' Observatory.

Keywords: William Dawes, First Fleet, Sydney, Sydney Cove Map, Dawes' Observatory

1 PREAMBLE: SYDNEY'S FIRST OBSERVATORY

In 1786, Second Lieutenant William Dawes (1762–1836) of the British Marine Corps was assigned to the 'First Fleet', in part as the expedition's dedicated astronomer. The First Fleet of 1787–1788 was a convoy of 11 ships that carried the first British convicts from England to Australia. As such, it marked the actual start of the British colonisation of Australia. As part of a comprehensive investigation into Dawes' life and achievements, we recently explored numerous contemporary maps, documents and paintings to identify the most likely location of Dawes' first astronomical observatory in Sydney (de Grijs and Jacob, 2021). We concluded that

The area coincident with the location of Dawes' observatory, today's Dawes Point (*Tar-ra*) Park, part of the Hickson Road/Dawes Point Reserve, is located northwest of a small inlet known as Campbells Cove, near the present-day Park Hyatt Hotel. (de Grijs and Jacob, 2021: 58).¹

At the end of his three-year term, in December 1791, Dawes left the fledgling colony, returning to England on H.M.S. *Gorgon*, a 44-gun fifth-rate² Royal Navy vessel in the 'Third Fleet' (1791). Meticulous to a fault, Dawes had carefully planned for his observatory's future. As early as 10 November 1788, he advised his patron, Dr Nevil Maskelyne, Britain's fifth Astronomer Royal, that he hoped to find a suitable successor before his term in the colony came to an end. He even planned for the eventuality that he would fall seriously ill or die, in which case his close friend and the colony's chronicler, Watkin Tench (1758–1833), was on

standby:

I have reason to believe that Captain Tench, of the Marines, will in a moderate time become sufficiently acquainted with the practice of astronomy to be capable of supplying my place. (Dawes, 1788).

However, Dawes' back-up plan was never activated. The observatory building fell into disrepair, and it eventually collapsed. Although detailed European maps and charts of Sydney Cove continued to include Dawes' Observatory until at least 1798 (de Grijs and Jacob, 2021), the last contemporary record of the observatory's physical appearance is found in the 28 August 1795 diary entry of John Crossley (1762–1817), astronomer on board H.M.S. *Providence*:

I went on shore and examined the place where Mr. Dawes' observatory was built but found nothing standing but the uprights which supported the roof and the pillar on which he placed his quadrants. (James, 2012).

2 THE 1808 'SYDNEY COVE MAP'

In this context, one would expect that by 1808—thirteen years after Crossley's diary entry cited above—nothing of any note would have been left to remind one of Dawes' Observatory. Yet, the '1808 Sydney Cove Map' includes a cluster of buildings that are clearly identifiable as Dawes' Observatory. The map, spanning a diameter of 3.6 metres, is located in present-day First Fleet Park to the west of Circular Quay (see Figure 1), the bustling ferry terminal adjacent to Sydney's central business district on the shore of Sydney Cove. The Sydney Cove Map is explicitly meant to represent the



Figure 1: Location of the Sydney Cove Map (inset top right; viewed from the South) in First Fleet Park (2) to the West of the ferry wharfs of Circular Quay (1), adjacent to Sydney's central business district. (3) Previously the Maritime Services Building (presently the Museum of Contemporary Art). (4) Cadman's Cottage. The red highway at the bottom of the map segment is the Cahill Expressway, which is located one level above the railway line passing through Circular Quay railway station. North is at the top of the map (Map © OpenStreetMaps, CC BY-SA 2.0. Photo: Richard de Grijjs).

topography of the growing settlement at the time of Governor William Bligh's (1754–1817) administration in 1808. Governor Bligh was the fourth governor of New South Wales (1806–1808).

This apparent anachronism piqued my interest, and so I decided to explore the map's provenance and the reasons why Dawes' Observatory might have been included. The design and construction of the Sydney Cove Map were commissioned by the New South Wales Department of Public Works, as part of its West Circular Quay special project (Atkinson, 1994), and by Caltex Oil (Australia) Pty. Ltd. (presently trading as Ampol Ltd.). It was meant as a gift from Caltex to the people of Sydney in commemoration of Australia's Bicentenary of 1988. The artwork was meant to mark the original entry, at high tide, of the Tank Stream into Sydney Cove (Atkinson, 2004). The Tank Stream, Sydney Cove's fresh water supply, occupies a highly symbolic place in the context of the growing town (for an accessible history and context of the Tank Stream, see Sydney Water, 1994). It witnessed the construction of

the first British buildings and, as the settlement grew, it gradually turned from a source of drinking water into an open sewer. It has long been buried deep underground, in a brick tunnel, although the water continues to flow below the city's foundations.

At the time of the Sydney Cove Map's construction, the Tank Stream's outlet into Sydney Cove was deemed a most appropriate location, given that First Fleet Park connects Circular Quay with the former Maritime Services Board building (the present-day Museum of Contemporary Art) and Cadman's Cottage, the site of Sydney's oldest house (see Figure 1). At the time of the Bicentenary commemorations, a bust of Governor Arthur Phillip (1738–1814), the colony's first Governor (1788–1792), overlooked the park. That statue was relocated in 2014 to First Government House Place, outside the Museum of Sydney, and unveiled on 28 August 2014 to commemorate the bicentenary of Phillip's death. In addition, in 1988 a life-sized statue of Governor Bligh had also just gone on display near Cadman's Cottage (Irving, 1988b). Bligh's statue remains on

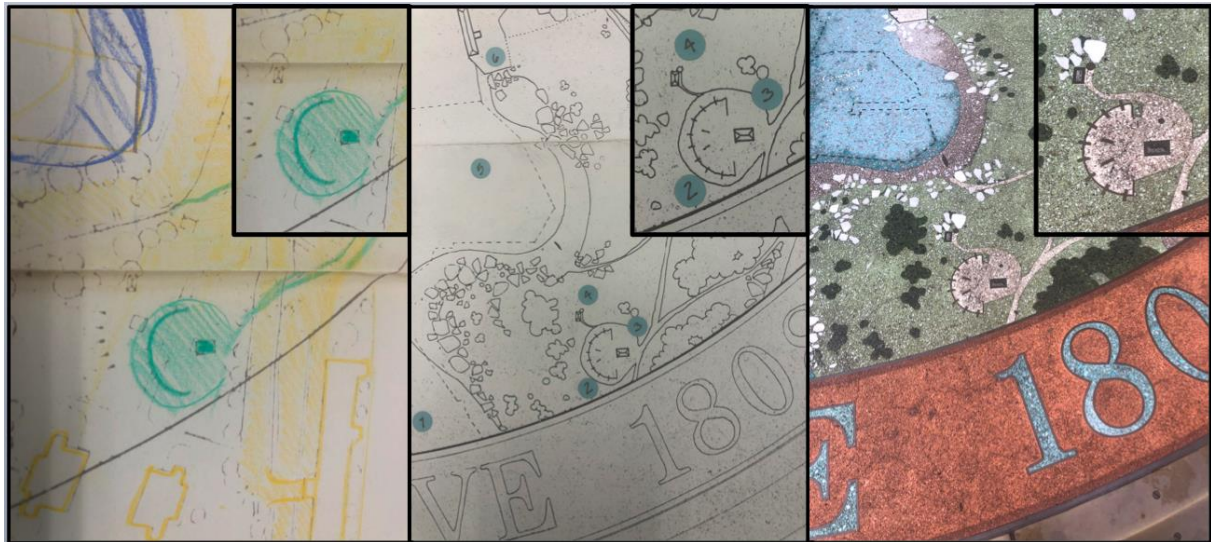


Figure 2: Pencil sketch (left), detailed architectural drawing (middle, including building labels; see the text) and final rendition (right) of a section of the Sydney Cove Map showing the locations of Dawes' Battery and Dawes' Observatory (see the insets for zoomed-in regions) (photographs: Richard de Grijjs. Left and middle panels © Conybeare Morrison International Pty. Ltd.; reproduced with permission).

the same site today.

Historical research (see Section 3) was done by architecture students at the University of New South Wales under the supervision of the architect and historian Robert (Bob) C.L. Irving (b. 1926; for his background, see [Whitaker, 2001](#); updated by the [Royal Australian Historical Society, 2017](#)). In 1987, while undertaking research for the map's design, Irving—an authority on Sydney's development prior to 1810 ([City of Sydney, 1988](#); [Southern Courier, 1988](#))—was President of the Royal Australian Historical Society, which acted as consultant for the project ([Irving, 1988b](#)) and whose name appears at the base of the map.

Conversion from the initial pencil sketch provided by Irving's team to the realisation of the actual map (for a detailed view of the area around Dawes' Observatory, see [Figure 2](#)) was coordinated by project architect and construction manager Beverley Atkinson of Conybeare Morrison & Partners ([Conybeare Morrison & Partners, 1988](#)). Construction of the round 'terrazzo'³ and brass map, surrounded by Kent Street sandstone seating, took approximately three months ([Atkinson, 1994; 2004](#)). The terrazzo surface was prepared by craftsmen at Terazzo⁴ and Co. Pty. Ltd. under the direction of Remo Raffin ([Southern Courier, 1988](#)).

The Sydney Cove Map was officially unveiled by His Excellency Air Marshal Sir James Rowland, Governor of New South Wales and Patron of the Royal Australian Historical Society, on Sunday 15 May 1988 at 11:15 a.m. ([Caltex, 1989](#); [Sydney Morning Herald, 1988](#)). Its management passed from the City of Sydney to the Sydney Harbour Foreshore Author-

ity. In 2015, the Authority's role was consolidated with other State Government property and precinct management tasks into Property NSW, presently the NSW Department of Planning, Industry and Environment.

Following its public unveiling, the map quickly became a favourite destination among tourists, educators and the general population of Sydney alike ([Atkinson, 1994; 2004](#); [Irving, 1988b](#); [Sydney Morning Herald, 1988](#)). It was voted as 'Best Building of the Year' in 1990, along with other structures ([Atkinson, 1996](#)), published in the *Sydney Morning Herald* ([Atkinson, 1994](#)). However, not everyone appeared impressed by the A\$140,000 price tag (although sponsored in full by Caltex):

For that sort of money, I'd expect a bit more. I suppose it's reasonable, but the colours don't really catch the eye. (Mr. Colin Griffin, quoted by the *Sydney Morning Herald, 1988*).

Although plans were afoot more than a decade ago to relocate the map ([Sydney Harbour Foreshore Authority, 2011: 5](#)), the Sydney Cove Map remains a centrepiece in First Fleet Park. Given its location almost directly under a railway line and the Cahill Expressway, noise and air pollution, as well as skateboard antics, have affected the map's appearance and longevity ([Atkinson, 1994](#)). An appraisal of the map's condition in early 1993 (see, e.g., [City of Sydney Archives and History Resources, 1996](#); [International Conservation Services, 1993](#)) prompted the urgent planning of major maintenance and repairs ([Artlab Australia, 1994; Atkinson, 1994; 1996](#)).

3 DETAILED MAP ANALYSIS

3.1 Map Inscriptions

The Sydney Cove Map contains two main inscriptions on its top surface: “SYDNEY COVE 1808” and “CIRCULAR QUAY 1988”. Along the upper ridge, two quotes from those who sailed on the First Fleet have been engraved:

Sydney Cove is one of the smallest in the Harbour but the most convenient as ships with the greatest burden can with ease go into it and heave out close to shore. John White, Surgeon.

We got into Port Jackson⁵ early in the afternoon, and had the satisfaction of finding the finest harbour in the world, in which a thousand sail of the line⁶ may ride in the most perfect security. Captain Arthur Phillip.

On the lower ridge, information about the provenance of the historical sources is engraved. Most importantly for the present narrative, under ‘1808’ we read,

Sydney Cove is shown here as it was seen by the artists Thomas Watling in 1799 and 1800 and [George] W[illiam] Evans in 1803, and the Surveyors Augustus Alt in 1788, Charles Grimes in 1800 and James Meehan in 1807.

This inscription suggests that the eye-catching label ‘1808’ should rather be interpreted such that the map’s topographical features encompass a time period of some 20 years up to 1808. The latter year was selected by the Sydney Cove Map’s designers as benchmark for Sydney’s early development, given that in 1807 Governor Bligh commissioned James Meehan (1774–1826) to undertake a major survey of the settlement—indeed, the survey referred to on the lower ridge of the Sydney Cove Map. In 1808, Bligh was deposed by the New South Wales Corps in a *coup d’état* now commonly referred to as the Rum Rebellion.

3.2 Source Material

Irving and his team relied on a variety of historical sources, including official surveys and plans (whose land grants and leases he called “... accurate but lifeless ...”; Irving, 1988a: 1), amateur maps and paintings. They verified all sources using contemporary documents, and they analysed the views represented by more than one hundred artists, which gave

... the most rewarding impression of daily life in the small settlement, ships and boats, tracks and paths, the stocks and pillory, backyards and washing on the line, people gathering firewood, soldiers parading, animals working and grazing in the town, aboriginal inhabitants and their activities.

(Irving, 1988b).

All of the amateur maps were also studied: because they are less formal than [sic] are often more ‘human’. For instance, some of them show not only sites and buildings but also streets, fences and gardens, and even outbuildings such as kitchens and, occasionally, privies. Later maps, for instance those compiled during [Governor Lachlan] Macquarie’s time [1810–1821], were also studied because they show things that had survived from earlier periods. Modern surveys were used to check the parts of the old town that were still there, though not much of the 1808 town can still be seen ... (Irving, 1988a).

“You look on that map and you’ll see a huge great fig tree that was left in the corner of Government Garden,” said Beverley Atkinson (quoted by the *Sydney Morning Herald*, 1988). Irving (1988b) explains that the map shows “... streets and allotments, buildings, trees and fences, all represented in symbolic colours.” The map’s design used three different colours for different varieties of trees, five for various types of gardens, as well as a range of light and shade tones (*Southern Courier*, 1988).

Early buildings, houses (including convict houses and Bennelong’s⁷ house), planted fields and ships being built at that time in the docks, are clearly marked out on this new map of Sydney Cove. The tanks cut into the sandstone after which the Tank Stream was named are also to be seen on the edge of the map.

In the map, the texture of the west is very different from the texture of the east: in the east the government and establishment built their substantial residences, whilst in the west the military and convicts existed in their wattle and daub houses. If you look closely you will see how the indigenous bushland at this time was being invaded by European species: this map shows the imposition of European settlement with its bright green exotic vegetation, into the grey green of the virgin eucalypt stands. A prominent feature of the map are the four windmills ... (Connybear Morrison & Partners, 1988).

3.3 A Confusing Timeline

Nevertheless, despite the extensive historical research undertaken, various sources assign different dates to the Sydney Cove Map’s representation. Even among the map’s designers, dates and date ranges differ between publications. As a case in point, Atkinson’s publications include the following phrases (my emphasis):

1. Sydney Cove Map: **1808**. (Connybear Morrison & Partners, 1988).
2. ... it collects features of Sydney evi-

dent **between 1788 and 1808** according to charts, paintings and engravings ... (Artlab Australia, 1994; Atkinson, 1994).

3. The aim was to reconstruct the ground plan of the Sydney Cove convict settlement as it was in **1800**, using paintings and surveys of the time. (Atkinson, 2004).

Irving invariably refers to the map's date or date range as follows (my emphasis):

1. The map is a type of topographical portrait of Sydney **at the time of the Rum Rebellion**. It shows the Sydney that was familiar to Governor Bligh. (Irving, 1988a).
2. The map shows Sydney Cove as it was in **1808** ... the map is like a bird's-eye view of the town **at the time of the Rum Rebellion** ... (Irving, 1988b).

Other publications, both official leaflets and newspapers, also differ in their interpretation of the map's temporal representation (my emphasis):

1. ... shows the settlement at Sydney Cove exactly as it was **between 1799 and 1808** – every tree, every roof-top, every pathway and pub. (City of Sydney, 1988).
2. ... and shows the settlement of Sydney Cove **between 1799 and 1808**. (Sydney Morning Herald, 1988).
3. The main information came from an official survey of the colony, commissioned by Governor Bligh in **1807**. (Southern Courier, 1988).
4. In intricate detail, it depicts Sydney Cove as it was in **1808** (the year our first Government House was built),⁸... (Caltex, 1989).
5. ... the Map ... illustrates the settlement at Sydney Cove precisely as it developed **between 1799 and 1808** – every tree, every rooftop, every pathway and pub as drawn by foremost historical authorities. (Terazzo and Co. Pty. Ltd., n.d.).

Perhaps Jackson (2018: 25) summarised the map's convoluted representation best: "This map seems to reinterpret several pre-1810 maps of Sydney Cove." However, since her conclusion is hidden in a figure caption at the end of a lengthy document, it has not seen much attention nor wide adoption.

3.4 Dawes' Observatory

Interestingly, the same figure caption (Jackson, 2018: 25) also refers to the inclusion of Dawes' Observatory on the Sydney Cove Map: "The first observatory site is marked (perhaps inaccurately) just west of what is now the Park

Hyatt Hotel." As we will see below, the location indicated is actually as accurate as possible based on extant historical sources. Irving himself spares few words about Dawes' Observatory. The only reference to the building is found in his informal notes (Irving, 1988a: 2; his emphasis): "Sydney's first **observatory** was built by Lieutenant William Dawes on the point which now bears his name." Meanwhile, however, the relevant suburbs have been renamed. At the present time, the headland to the west of Sydney Cove includes the Sydney suburbs of The Rocks on the eastern side and Dawes Point on the western side of the promontory's ridge. The area of historical interest is no longer contained by the current boundary of the Dawes Point suburb, which was formally established in 1993 (Jackson, 2018).

Yet, despite this cursory reference to Dawes' Observatory, Irving and his team appear to have been aware of the fact that the location of Dawes' Observatory pertained to 1788. The cache of documents deposited by Beverley Atkinson at the State Library of New South Wales includes large-scale architectural maps and drawings, including a coloured sketch map of Sydney Cove (see Figure 3) and a final blueprint of the eventual map that was to be realised (see Figure 4). The latter also includes a version with features of interest labelled, which is accompanied by a "LIST OF LABELS on the segments of the SYDNEY COVE MAP". This latter list includes, for the "NW – N" segment under label No. 4, "Dawes' Observatory, 1788"—indeed, a specific reference to the year in which the observatory was established.

I note that while the coloured sketch map does include a building on the approximate site of Dawes' Observatory, it does not include road access. However, on the final blueprint, a curved road or track has appeared from Dawes' Battery to the observatory. Yet, none of the contemporary maps we investigated to identify the most likely location of Dawes' Observatory (de Grijjs and Jacob, 2021) traced a road or pathway between Dawes' Battery and Dawes' Observatory; on those maps where roads or tracks were indicated, they led directly to Dawes' Observatory from elsewhere along the length the headland. As such, I can only conclude that some artistic license has been applied in this context.

The inscription on the lower ridge of the Sydney Cove Map implies that the design team based part of their map design on a survey undertaken in 1788 by Augustus Theodore Alt (1731–1815), the fledgling colony's official Surveyor-General. However, as we implied in

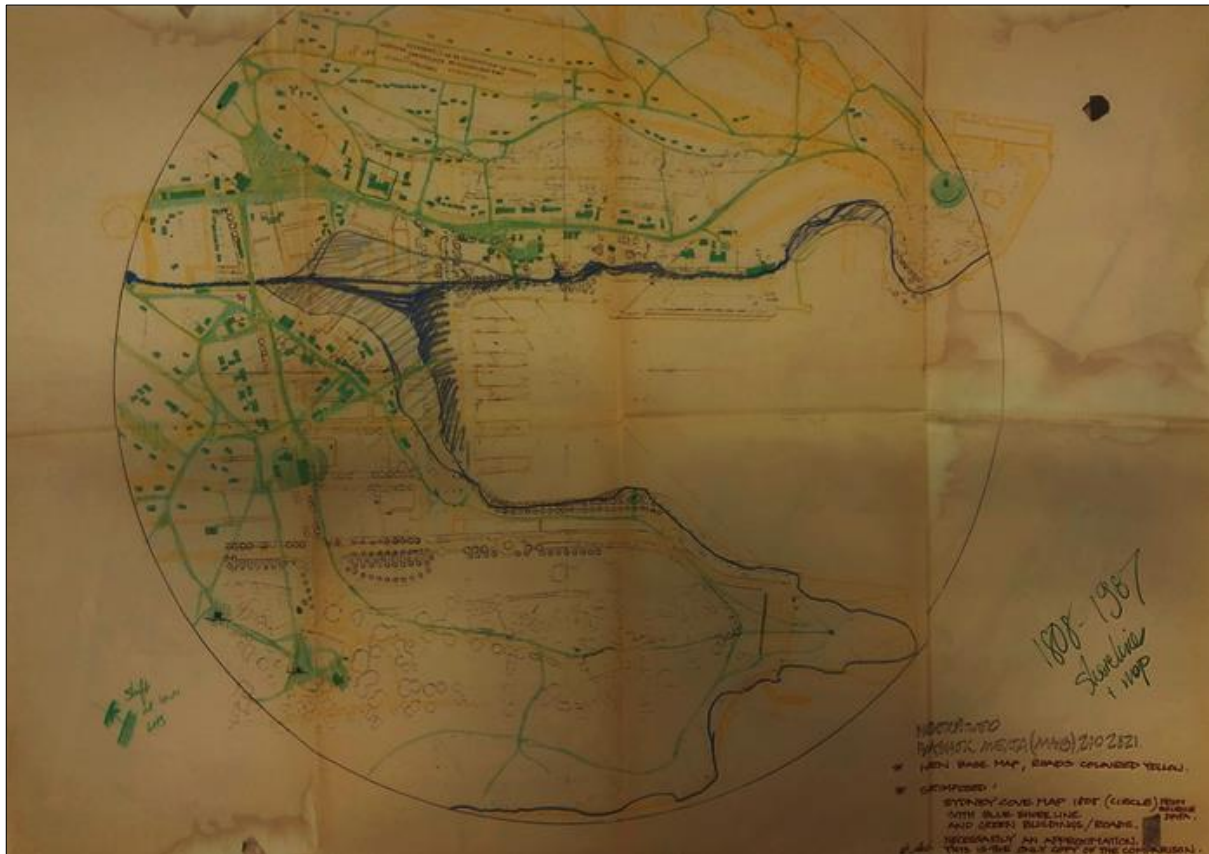


Figure 3: Pencil sketch map providing the main historical context for the eventual realisation of the Sydney Cove Map of 1808 (photograph: Richard de Grijjs. © Conybeare Morrison International Pty. Ltd.; reproduced with permission).

de Grijjs and Jacob (2021: 50–51), while that survey may have carried Alt's name, it is possible that Dawes undertook the actual work:

... the alleged ineffectiveness of the settlement's Surveyor-General, August(us) Alt ... significantly added to Dawes' workload since he was expected to come through as the settlement's *de facto* surveyor.

In any case, none of Alt's survey maps are known to have included Dawes' Observatory. The only accurate contemporary maps featuring the observatory were produced by Dawes, Captain John Hunter (1737–1821) of H.M.S. *Sirius*, or both (de Grijjs and Jacob, 2021).

In de Grijjs and Jacob (2021: 61; their Figure 17) we compared the locations of Dawes' Observatory implied by the contemporary maps of the Sydney Cove area we had uncovered. A comparison with the architectural blueprint of the 1808 Sydney Cove Map strongly suggests that the location adopted here was taken from the map labelled "Sydney Cove, Port Jackson, surveyed by Captain Hunter, 1 March 1788." (shown in de Grijjs and Jacob, 2021: 46; their Figure 5). That map does not include any roads, but it clearly indicates the location and appearance of the planned observatory buildings. All other contemporary maps suggest locations that are slightly further east with re-

spect to the location implied by the 1808 Sydney Cove Map.

4 CONCLUDING THOUGHTS

I thus conclude that the '1808 Sydney Cove Map' is likely a representation of the topography of the early settlement at Sydney Cove spanning an extended period up to 1808. Although most of the topographical features were taken from the 1807 survey by James Meehan, the reliance of the Map's designers on a range of historical sources spanning a period of 20 years has inadvertently introduced an anachronism by including Dawes' Observatory. The latter building had been established in mid-1788 (de Grijjs and Jacob, 2021), but it fell into disrepair in the mid-1790s, as we know from contemporary documents (de Grijjs and Jacob, 2021; James, 2012).

It is possible that Irving and his team were unaware of the eventual fate of Dawes' Observatory, given that detailed European maps and charts of Sydney Cove continued to include Dawes' observatory until at least 1798, whereas easy access to contemporary resources has only become possible thanks to the widespread digitisation efforts undertaken in recent years. Meanwhile, attempts to contact the historian



Figure 4: Detailed architectural drawing (left) and final rendition of the Sydney Cove Map (right) (photographs: Richard de Grijs. Left panel © Conybeare Morrison International Pty. Ltd.; reproduced with permission).

have remained unanswered, which is probably not a surprise given his advanced age.

5 NOTES

1. Although we uncovered tentative evidence that Dawes had planned the construction of a second observatory (de Grijs and Jacob, 2021), made of stone, there is no evidence that such a structure was actually built. The observatory location referred to in this paper therefore relates to the original wooden structure.
2. In the British Royal Navy's rating system in the late-eighteenth century, a fifth-rate warship carried 40 or (later) 44 guns on two decks, with usually 26 or 28 large '18-pounder' guns, as well as a complement of 6- or 9-pounders on the quarterdeck or fore-castle.
3. Terrazzo is a special form of fine concrete made with marble aggregate.
4. Note that the company's name only includes a single -r- (it was misspelt by Artlab Australia, 1994; Southern Courier, 1988), whereas the special surface is referred to using -rr- (see, e.g., Terazzo and Co. Pty. Ltd., n.d.).
5. Port Jackson encompasses Sydney Harbour, Middle Harbour, North Harbour and the Lane Cove and Parramatta Rivers. Captain James Cook (1728–1779) named the harbour system after Sir George Jackson (1725–1822), Lord Commissioner of

the British Admiralty and Judge Advocate of the Fleet.

6. A sail (or ship) of the line was a type of naval warship during the Age of Sail, designed for the naval tactic known as the 'line of battle'.
7. Woollarawarre Bennelong (ca. 1764–1813) was an Aboriginal elder of the Wangal people in the Port Jackson area at the time of the arrival of the First Fleet. He served as interlocutor between the newly arrived colonists and the Indigenous population, including during a visit to the UK (1792–1795).
8. This is an odd statement, given that Governor Arthur Phillip already laid the foundations of the first Government House in 1788; for an official account, see <https://www.governor.nsw.gov.au/governm-ent-house/>.

6 ACKNOWLEDGEMENTS

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