

Australia's First Marble Quarry

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That there was a great interest in the use of marble in colonial Australia should come as no surprise when the aspirations of the expanding 'middling classes' in Britain during this period is taken into consideration. Growing affluence saw a process of emulation whereby those who aspired to social elevation attempted to follow the consumption trends of their upper class 'betters' – a process that not only saw attempts to follow fashion in both manners and clothing¹ but also in household decoration. Marble had long been utilised to highlight conspicuous luxury consumption, its use having been common throughout numerous civilisations going back to antiquity, when used for personal aggrandisement, for funerary purposes in the form of elaborate tombstones, and for grand public edifices. In the late 18th and early nineteenth century, Europe saw a renewed interest in Grecian ornamentation² and the attraction of marble as a versatile material in the areas of construction and ornamental artwork grew apace.

In New South Wales, while imports of marble products were no doubt eagerly consumed by the elite of the new society, there was also an interest in looking to local sources of material to augment or replace these imports and there is evidence, as discussed below, which shows that when the requisite skills in working marble became available, attempts were made to develop the industry, though on a relatively limited scale.

Discovery

On the 10 April 1828, the Governor of New South Wales, (Sir) Ralph Darling (1775-1858) sent Dispatch No. 66, on 'conditions in the colony', to the Right Honourable W. Huskisson (1770–1830), Secretary of State for the Colonies. The short section on 'Mines and Quarries' included a brief comment that 'Marble has been observed in Argyle and other places, which in the progress of time may become of Value for Building'.³

While this was the first reference to marble, limestones were noted in New South Wales from 1815. W. Mayer⁴ when discussing this early period viewed the major interest as being in its use as a source of lime for construction. However, while

concentrating on localities west of the Blue Mountains, he mentioned the relevant discovery of limestone in the vicinity of present-day Canberra in 1820 by Charles Throsby Smith (1798–1876), and in 1821 on the Queanbeyan River by Charles Throsby (1777–1828).⁵

Governor Darling's information was probably based largely on the then recent report of the overland expedition begun in 1824 by explorers Hamilton Hume (1797–1873) and William Hilton Hovell (1786–1875), although they might have learned about the Argyle site well before the expedition began from Appin.⁶ As Hume pointed out, he and others had travelled in Argyle from as early as 1814. They recorded that '15 miles NE of Breadalbane Plains ... a considerable quantity of very fine marble of various colours [occurs]'.⁷

Five years later it seemed that Darling's prophecy had quickly proven correct, as the Reverend John Dunmore Lang (1799–1878) wrote in 1833 that: 'Limestone is ... abundant, and in some parts of the territory, as in Argyle, it passes into marble, of which beautiful specimens have already been cut and polished by a skilful artisan from London, now established in Sydney'. This information was reinforced by Surveyor-General (Sir) Thomas Mitchell (1792–1855), whose observations, based on his examination of the Great South Road in the second half of 1829, and, possibly also in part on his third expedition to the interior (1835–1836) gave a little more geological information. Remarking briefly on a visit he made to an interesting site, not far from his Great Southern Road, he claimed: 'a crystalline variegated marble is found, in blocks near the Wollondilly'⁸ (See Fig. 1). Later in the same publication he expanded on this observation to say:

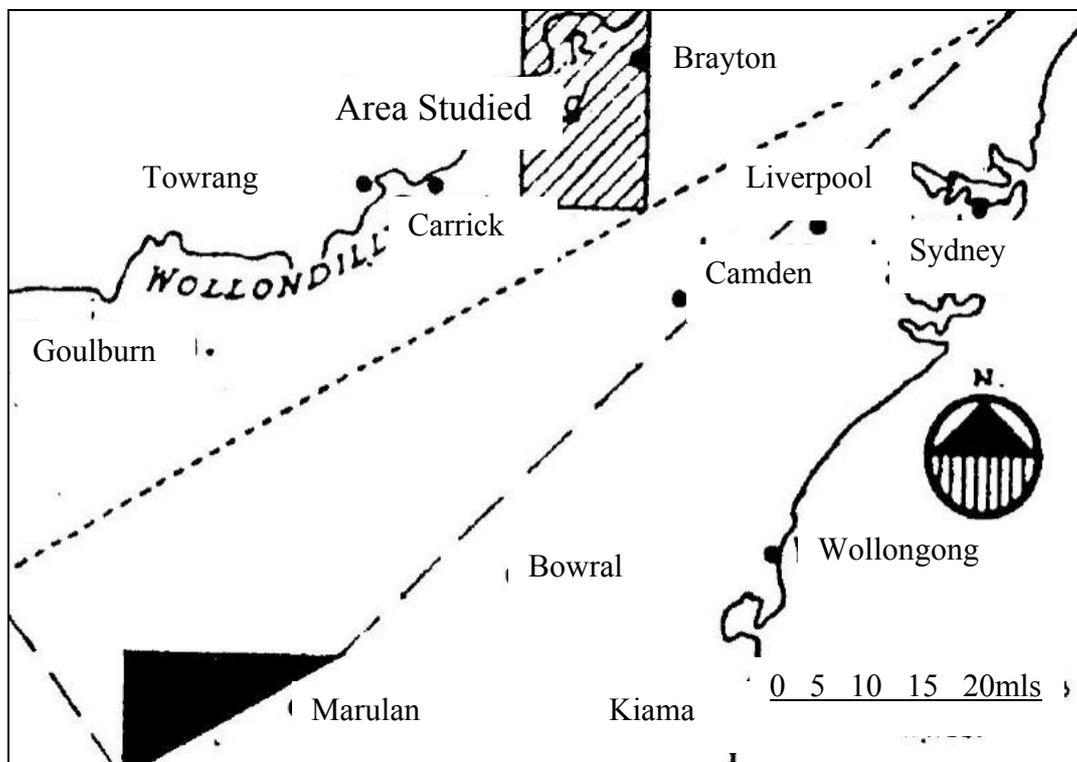
Near the Wollondilly and a few miles from Towrang, a quarry of crystalline variegated marble has been recently wrought to a considerable extent, and marble chimney-pieces, tables etc. now ornament most good houses at Sydney. This marble occurs in blocks over greenstones and has hitherto been found only on that spot.⁹

The Rev. W.B. Clarke (1798–1878) visited the locality about 1844, describing the rocks as marble dykes. He commented that the site had previously been 'said to be unfossiliferous, but it contains fossils'.¹⁰ However there were no really diagnostic fossils to give a clear indication of the age of the original limestone. Clarke stated that the occurrence was 'associated with granitic traps and greenstone', and that the change from limestone to marble was 'due to igneous agency'¹¹; that is, he believed the

alteration was essentially caused by contact metamorphism. He made no comment about mining being active, so it seems possible that there was no quarrying then taking place. There is but little further mention of the Wollondilly occurrence in readily accessible 19th century literature but in 1908, R.T. Baker mentioned that at:

Marulan ... the colours of this marble are too numerous to particularise here. It has not been much used for building and ornamental purposes, although it is one of the oldest quarries of the State. The out-put has been mostly for lime-making.¹²

Figure 1: *Location Map*



Source: S.Y. O'Reilly, 'Petrology and Stratigraphy of the Brayton District, New South Wales', *Proceedings of the Linnean Society of New South Wales* 96 (4), 1971, p. 296.

Writing in the following year he was more specific: noting that 'close to the Wollondilly River, about 7 miles from Marulan, marble was worked here as early as 1830 and it was the first quarry opened in Australia'.¹³

In his enlarged volume, *Building and Ornamental Stones of Australia* (1915), the same author included the same message, but expanded on the subject, including a colour plate of a polished sample of the marble, taken of a mantel-piece 'from the house known as Barcom Glen, near Darlinghurst (now demolished) belonging to the late Mr O. West' [Obadiah West, 1807–1891, a business-man, and, *inter alia*, a 'stone

quarrier']¹⁴ and a black and white photograph of the fireplace and mantel-piece at Camden House, said to be from the same source.¹⁵

The classic volume *Limestone Deposits of New South Wales* by Carne and Jones (1919)¹⁶ indicated that marble quarrying was carried out at Windellama and Marulan by a John Young about 1874, some being used for the floor of the Great Hall of the University of Sydney, then under construction.¹⁷ The authors gave more details of the geology of the Argyle site, with some brief information about the history of the mining there:

In the early days of the colony a little marble was quarried at Longreach, about 5 & 1/2 miles north-west of Marulan, and the stone, as recorded by Mitchell' was used in Sydney 'for marble chimney-pieces, tables ...[quoting Mitchell as above]. The occurrence is of historical interest, being the first deposit of marble worked in the State. Operations, however, were soon abandoned. Of recent years the deposit has been worked for the production of lime. The limestone varies considerably in colour, cream, dove, white and variegated red varieties predominant. The texture changes from compact to finely crystalline.

Several pages later they expanded on the subject, stating that:

a limited exposure of limestone occurs in portion 9, about 20 chains south of the Wollondilly River. This occurrence is of historical interest, the first marble worked in the State being obtained here; it was recorded by Surveyor-General Mitchell in 1838 [followed by a repetition of the previous Mitchell information]. Owing to a heavy cloaking of soil there is but little stone showing at the surface; quarrying operations, however have revealed the existence of a fairly extensive limestone belt, approximately five chains long and four chains wide including intercalated sediments. The heavy overburden, the presence of intercalated shales and irregular pockets of clayey material makes the cost of quarrying high. Strike N5⁰W, dip E 5⁰ N @ 55⁰.

While a little marble was quarried here in the early days of the colony, the great bulk of the stone has been burnt for lime. Lime-burning was carried on for many years, but operations ceased about two years ago [i.e. c. 1917]¹⁸, The associated rocks are shales and quartzites intruded by porphyry, age Devonian.

The best material was shown by assay to be very pure: CaCO₃ 98.63, MgCO₃ 0.51, no MnCO₃, Fe₂O₃/Al₂O₃ 0.47, Phosphoric Anhydrite (P₂O₅) 0.04, Gangue 0.58, no Organic, no moisture: TOTAL 100.23.¹⁹

S. O'Reilly, the first to carry out detailed geological mapping of the locality (in 1971), referred to the occurrence as a 'limestone pod within the Longreach Volcanics' [essentially basaltic rocks now dipping very steeply] of probable Silurian age'. She gave the position of the 'limestone pod as 29637092 grid reference on the 1:250 000 Goulburn sheet SI 55 -12 (topographic map)'.²⁰

Lishmund *et al*, in a revised edition of Carne & Jones, described the site as:

Locality 235, one of a series of small limestone occurrences of the Tabberabberan Stage (Devonian) of Scheibner²¹ occurring in the Bungonia – Marulan region, deposited on the Capertee Rise²² in a shallow marine environment. It occurs 8 km northwest of Marulan in Portion 9, Parish Billyrambija, County Argyle, grid reference 296721 Goulburn 1: 250 000, [varying slightly from O'Reilly's reference].²³

They further described the site as a:

small exposure of recrystallised limestone, the site of the first recorded marble quarry in New South Wales, and has also been quarried for the production of agricultural lime'. [The marble is] 'intercalated with shale and occurs within an undifferentiated sequence of limestone, shale, chert, quartzite, and tuff of probable Late Silurian age'.²⁴ 'It is exposed over an area about 100m x 80 m [confirming the measurements given in Carne & Jones]. The strike is 355⁰, dipping 55⁰ westerly'.

The site

The site is still accessible on part of the property *Longreach* on the banks of the Wollondilly River. The original homestead, built in the 1820s–1830s, essentially from locally sourced Permian sandstones, is still extant, with only minor modifications (Fig. 2).²⁵

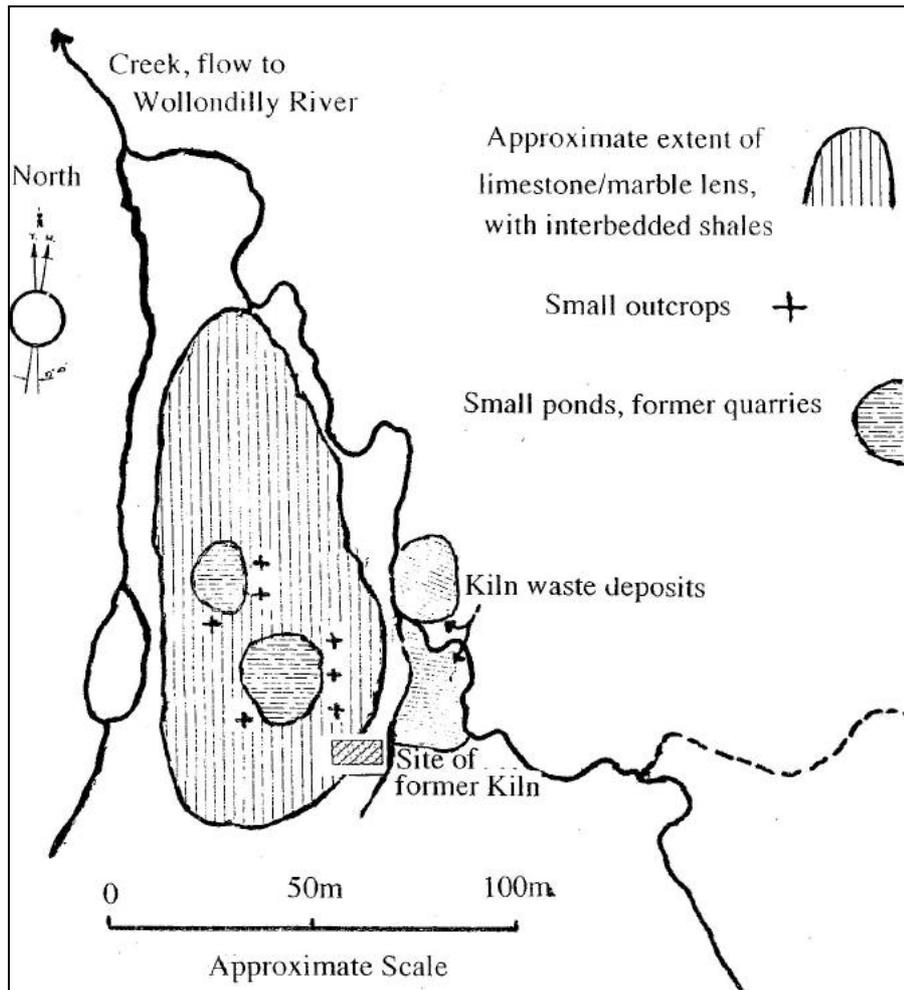
Figure 2: '*Longreach*', on banks of the *Wollondilly River*.



Source: Photograph by the author

The quarry site, as observed in May 2007, consists of a scattered series of shallow hollows, the larger two of which, when visited, were small ponds. A few pods of limestone/marble were exposed in places along the edges of the ponds and specimens of varieties of limestone/marble with varied colours could be examined, both in situ and in small dumps. The remains of a small brick kiln were also in evidence (Figs 3a & 4).

Figure 3a: Geological Map; Position 9, Parish Billyrambija, County Argyle, grid reference 296721 Goulburn 1: 250 000



Source: Based on aerial photographs field observation and photographs by the author, May 2007.

Total tonnages taken from the site for marble could not have exceeded 3,000 tonnes and very probably considerably less, and the later lime production must have been sporadic, as the waste dumped is not very thick or extensive. It is interesting that the site is still recognisable, which might be largely because of the apparently episodic lime burning, which, as indicated by Carne & Jones, ceased during World War 1, nearly 100 years ago.

Figure 3b: Aerial Photo of the site.



Source: Department of Lands, New South Wales

Figure 4: *Kiln*



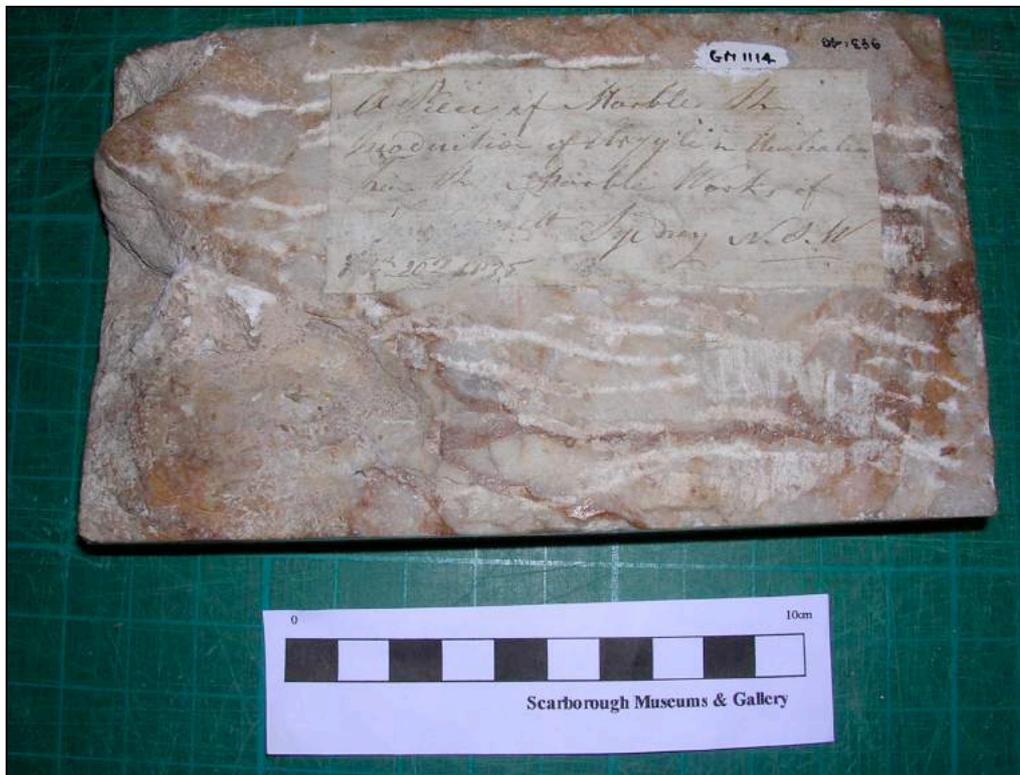
Source: Photograph by the author.

The marble product

Despite the comments of both Lang and Mitchell and also the Baker references quoted above, it is not easy to identify present Sydney buildings which contain examples of the 'Longreach Marble', apart, possibly, from *Lindesay* at Darling Point, bought by Mitchell in 1841. Building of this house commenced in 1834, when production of marble at Longreach was definitely occurring. The auction sale advertisement (30 June 1841) noted that 'there are £170 worth of marble chimney pieces'.²⁶ Whether Mitchell identified the material as from the 'Longreach' site is uncertain. The present owners of 'Longreach' say that their house formerly contained marble mantel-pieces, almost certainly from the local quarry, but they have since been replaced by cedar.²⁷

However, rather surprisingly, there are two specimens of 'Longreach' marble in the William Smith [Geological] Museum at Scarborough, in Northern England. These specimens carry labels, which, though faded, tell something more of the early quarrying venture (Figs 5Aa & B - originals in colour). The two original labels clearly indicate that the specimens came from Co. Argyle, New South Wales. They also identify them as coming from the marble works of one Mr. G. Clewitt, Sydney, and donated to the museum by 'Captain Baker'.

Figure 5A:



Source: Scarborough Museums & Gallery. Photo by William, Watts

Figure 5B: Marble sample presented by Captain Baker



Source: Scarborough Museums & Gallery. Photo by William Watts

George Clewitt and his wife arrived in the colony on 2 April 1832 on the *Sovereign*.²⁸ The *Sydney Gazette* in a brief paragraph two years later, confirmed what Lang had written a year earlier:

Colonial marble at Goulburn Plains: We, months ago, noticed the elegant specimens of colonial marble, which had been manufactured into mantel pieces, etc., by some tradesmen of Sydney. The finest vein yet discovered, is, we believe at Goulburn Plains, from whence large blocks have, from time to time, been conveyed to Sydney. Mr Clewitt of Pitt-street, has devoted much valuable labour to the polish and preparation for various ornamental uses of this beautiful article.²⁹

Just a few months later Clewitt apparently went into partnership with William Patten, as in October 1834, The *Australian* referred to 'Clewitt and Patten, Statuarists', who were 'to prepare a monument for the late John Atkinson of Bong Bong'. Atkinson's attributes 'both as a Magistrate and an Agriculturist' were such that the local settlers had 'set on foot a subscription' for the monument, which was to be 'of Colonial Marble'.³⁰ The Clewitt – Patten partnership lasted only a few years, being terminated by the death (apparently by natural causes) of Clewitt on 14 April 1837.³¹ In 1838 Patten of Pitt

Street was continuing the business, having a (convict) ‘marble polisher’ assigned to him from Convict ranks. This might have been the convict ‘marble cutter’ assigned to Clewitt before September 1833.³²

The writer has so far learned little of Captain Richard Baker. The 1828 census gave his occupation as mariner, his age as 38, and tells us he arrived in New South Wales in 1819 on board the *Grenada* with a seven year sentence, and that he was then (1828) ‘free by servitude’, and living in Cumberland Street, The Rocks. His donation of the marble specimens to the Scarborough Museum in 1835 suggests that he came from that part of England.

The quarrying

But what of the quarrying exercise itself? Although at first glance it seemed almost certain that the original landholder of ‘Longreach’ began the project, some evidence places this in doubt. The first landholder was Peter Stuckey (c.1796-1859),³³ who arrived in New South Wales on 9 October 1813, on board the *Earl Spencer*, the ship that also brought Hovell to New South Wales³⁴. Stuckey was accompanying John Dickson (1774–1843), as an apprentice. Dickson was an engineer, manufacturer and (later) grazier who set up business at Darling Harbour, Sydney and was a generally successful entrepreneur.³⁵ By 1828 Stuckey was established at ‘Billy Rampety Goulburn Plains’ (i.e., Longreach) holding a total of 560 acres, 70 of which were cleared and 30 cultivated. He had 20 horses and 350 cattle. In his clearing he would no doubt have come across the limestone/marble. However Stuckey’s original holding was a relatively narrow north-south block, then within the parish of Nettery (which was later subdivided into several parishes) and did not include the limestone, although it was immediately adjacent to the east.³⁶

On Sunday, 19 January 1834, or the following day, the site was visited by the eccentric Polish geologist/traveller, Dr. John Lhotsky (1800–1866). He wrote:

In the vicinity of Stuckey’s farm is a Government Limestone reserve, from which the first marble in this Colony was worked. This refinement has been introduced into New South Wales by Mr. Clewett [sic]. According to information obtained from Mr.C., he at present works six different sorts of marbles: a reddish spotted one, and a yellow one from this place, a sort of dove marble (a most beautiful one) from a place belonging to Mr. Francis M’Arthur, a black one, a black and white one, and a black jack one, from the land of Mr. Ryrie.³⁷

Mr. Clewett applied some time since to our local government, for a Grant of Land upon which marble is found, but under the present ingenious regulations, the introduction of sculpture into Australia, does not entitle a man even to so poor a favor as this.

Lhotsky's comment that the site was a Government Limestone reserve is important. The reservation was in force prior to 1832, as the *New South Wales Calendar & Post Office Directory*, p. 102, describing the roads south from Sydney noted that at the 108 mile point is a 'Limestone reserve. The rock projecting here consists of marble, of a very compact character, and of beautifully variegated form'³⁸ (see Fig. 6). Pinpointing the date when the site was reserved has, so far, not been successful, but it seems possible that Governor Darling took it on himself to make the reservation not long after his comment about the possibility of mining occurring relatively and possibly prior to 1830. This might account for Baker's comment that mining occurred about that time.

Figure 6: *Variegated marble*



Source: Photograph by the author.

Possibly Stuckey's apprenticeship with Dickson had taught him to keep his eyes open for commercial possibilities and led him to sense the possibilities of marble production. Although one can only conjecture, the likely link between Stuckey, Dickson

and Clewitt probably saw the beginning of an ambitious project, sometime late in 1833. However, by that time Dickson was packing up, and he moved back to England the following year.³⁹ The present owners of 'Longreach' suggest that the quarry was first worked by convict labour. While the author has not been able to confirm this directly, or under whom, there is clear evidence of contact between Clewitt and Stuckey. Prior to July 1833 Clewitt was assigned a 'farm servant'. In February the following year this servant was transferred from Clewitt to Stuckey. In August and September 1833 Clewitt had assigned to him a 'stonemason's boy' and a 'marble cutter'.⁴⁰

The 'patchiness' and variability of the marble probably led to the demise of the operation not much later than 1840, although if Clewitt was the 'leading light' his death in 1837 might have seen the end of a very short-lived operation. There is, perhaps, some support for this in correspondence between Mitchell and the Surveyor-Draftsman, W.R. Davidson, then working in the Bathurst region. In August 1843, Davidson sent several pieces of white marble to Mitchell to be used for sculpting a bust. Mitchell was apparently keen to encourage sculpture in the Colony, as also apparently had been Lhotsky (see above). 'Mitchell told Davidson he thought the bust would be "the first from Australian marble"', and would demonstrate the potential for a marble quarrying industry'.⁴¹ Mitchell, as already noted, was, of course, familiar with the 'Longreach' work, so presumably knew that work had ceased there. It seems he hoped for better things for marble production, possibly from the Bathurst region, where there was later such development. However, he made no comment on the earlier operation at Longreach in his letter to Davidson.

Conclusions

From the information gathered there seems little doubt that the Longreach quarrying was the first marble quarry to be worked in Australia. The remarks of Lang indicate that the quarry was operating in 1833, finished samples made their way to England in 1835, and Mitchell's remarks suggest it was still operating about 1836. This is supported by the information on the proposed monument to be erected at Bong Bong. There is no doubt that beginning in 1833 George Clewitt played an important role in producing finished work using the marble. However, the roles of both Clewitt and Stuckey in opening up the quarry site are not clear, but no evidence of the involvement of other persons has emerged. It is also evident from Lhotsky's remarks that other sites were being opened up not long after the Longreach operation.

Based on these data some doubt must be cast on Baker's remark that quarrying had begun as early as 1830. There is also little evidence at present that the quarrying continued into the 1840s. Lack of comment about quarrying by Clarke about 1844 and also Mitchell's remarks in 1843 support the idea that the Longreach quarrying had ceased some time before, and, if Clewitt was the main operator, it probably only continued to 1837.

The move to the production of lime from the 'Longreach' site is another matter. Perhaps of greater historical significance is what appears to be the more complex story of unravelling the development of mining law in New South Wales, encapsulated on the one hand in the establishment of the 'Government Mining Reserve' about 1830 and, on the other, consequent backtracking in 1840 when Lord John Russell (1792–1878) wrote to Governor Gipps on the questions of 'whether to Reserve a right to minerals or to reserve lands known, or on good grounds supposed to contain valuable minerals. In general terms I may say that I decide both questions in the negative'.

Furthermore, through examination of copies of the *New South Wales Government Gazette* for the years 1832 to 1842, and records of the Legislative Council of New South Wales over much the same period, it appears to the author that the matter of quarrying and mining in this period received little attention, and decisions about such matters were apparently dealt with on an *ad hoc* basis. Such is apparent in the reply from Mitchell to Colonial Secretary Alexander M'Leay concerning the request of Mr. D. Conninghame to take stone from Clarke Island for ballast. Apart from pointing out that Clarke Island was 'highly ornamental' Mitchell felt that if the stone was to be used it would be 'better used for the fortification of George's Head or construction of a battery on the Sow and Pigs which may in time be thought expedient'.⁴²

Reinforcing the idea that mining or quarrying received scant interest is that from 1828 there were several approaches from Britain that either asked for justification of the position or that suggested the sacking of Mineral Surveyor, John Busby. He appears apparently never to have been ordered or asked to visit and report on the Argyle limestone. He retained his position not because of interest in the subject suggested by his title but because he was involved in building the Sydney Water Supply Tunnel.⁴³

In correspondence with Colonial Secretary Alexander M'Leay in 1834, Mitchell did discuss Reserves, but made no mention of any relating to mining or quarrying;⁴⁴ this despite that from at least 1832 there were convicts arriving in the colony with

experience in fields relative to quarrying. They include at least three ‘stonecutters, two quarrymen and several miners’.⁴⁵

The Government quarried stone near Pennant Hills (Dundas) as early as 1837, and (sand) stone quarries were being operated in Argyle Street (The Rocks) before 1840, but access to such materials seems to have been without much regulation. As late as 1840, a document shows there was little if any interest by public officials in legislating for mining and quarrying activities,⁴⁶ and only in the mid 1840s was any serious attention devoted to the problems of mining law.⁴⁷ Indeed, only with the coming of the gold rush in the 1850s would the subject receive serious consideration in New South Wales, although some of the aspects of mining legislation established in South Australia during the late 1840s were being discussed in the ‘Mother Colony’.

Endnotes

¹ See for example, Oskar Fischel and Max Van Boehn, *Modes and Manners of the Nineteenth Century as Represented in the Pictures and Engravings of the Time*, 3 vol, J.M. Dent, London, E.R.P. Dutton, New York, 1909; Gordon Wills and David Midgley, eds, *Fashion Marketing: An Anthology of Viewpoints and Perspectives*, George Allen & Unwin, London, 1973.

² See for example, the Grecian motifs on Wedgewood’s ceramics at the end of the eighteenth century.

³ J.D. Lang, *An historical and statistical account of New South Wales*, Cochrane and M’Crone, London, 1834, 2 vols, vol. 2, ch. IV, p. 179. Lang wrote this work en-route to England in 1833.

⁴ W. Mayer, ‘The quest for limestone in colonial New South Wales, 1788–1825’, in P.N. Wyse Jackson (ed.), *Four Centuries of Geological Travel: The Search for Knowledge on Foot, Bicycle, Sledge and Camel*, Geological Society, London, Special Publications 287, 2007, pp. 325-342, particularly p. 335.

⁵ W. Mayer, ‘In search of a “considerable river”: retracing the paths of the early explorers to Lake George, the Limestone Plains and the Murrumbidgee’, *Canberra Historical Journal* 45, 2000, pp. 15-24 (particularly pp. 20-23). See also J.E. Carne & L.J. Jones, ‘The Limestone Deposits of New South Wales’, *Mineral Resources* no 25, New South Wales Geological Survey, Department of Mines, Government Printer, Sydney, 1919, p. 8, where reference is made to finds mentioned by J. Oxley in 1820 and C. Sturt in 1834.

⁶ W. Bland (ed.) *Journey of Discovery to Port Phillip, New South Wales, by Messrs. W.H. Hovell and Hamilton Hume in 1824 and 1825*, published 1831. Despite the date of publication, there was clearly considerable earlier ‘word-of-mouth’ information about their discoveries.

⁷ H. Hume, *Sydney Monitor*, 15 December 1826.

⁸ T.L. Mitchell, *Three Expeditions into the Interior of Eastern Australia*. Longman, London, 1838, 2 vols, vol. 2, p. 318.

⁹ *Ibid.*, pp. 348–9.

¹⁰ W.B. Clarke, ‘On Dykes of Marble and Quartz in connection with Plutonic Rocks on the Upper Wollondilly, Argyle County, New South Wales’, *Proceedings of the Geological Society of London*, iv, 1845, p. 524. This work appeared slightly expanded in: W.B. Clarke, *Quarterly Journal of the Geological Society of London*, I, 1845, pp. 342-4; and was repeated in: W.B. Clarke, ‘On Dykes of Marble and Quartz in connection with Plutonic Rocks, on the Upper Wollondilly, Argyle County, New South Wales’, *Edinburgh New Philosophical Journal* XL, 1846, pp. 201-04, and in W.B. Clarke, ‘On Dykes of Marble and Quartz in connection with Plutonic Rocks, on the Upper Wollondilly, Argyle County, New South Wales’, *Tasmanian Journal of Natural Science* III (1), 1849, pp. 51-54.

¹¹ *Ibid.*

¹² Baker, *Building and Ornamental Stones*, 1908, p. 38; *ibid.*, 1909; *ibid.*, 1915.

¹⁴ For brief details of West see H.J. Gibbney & Ann G. Smith, *A Biographical Register 1788-1939: Notes from the Name index of the Australian Dictionary of Biography*, Australian Dictionary of Biography, Canberra, vol. 2, p. 337.

¹⁵ However this photograph indicates a rock texture somewhat at odds with the material presently exposed at the site. But it equates with comments by John Lhotsky (see later) that a black and white marble occurred in another Argyle quarry operated by a Mr. Ryrie, (possibly William Ryrie) already opened in 1834, possibly near Braidwood.

¹⁶ Carne & Jones, 'The Limestone Deposits of New South Wales'.

¹⁷ *Ibid.*, p 13, based on C.S. Wilkinson, *Mines and Mineral Statistics* (of New South Wales), NSW Government Printer, 1875, pp. 146 – 147. However the Marulan site mentioned here probably refers to larger deposits further east.

¹⁸ The two quotations are from Carne & Jones, 'The Limestone Deposits of New South Wales', pp. 125, 132. The List of Miscellaneous Locations in *ibid.*, p. 57, indicate that lime production being undertaken at Longreach by Sieler and Hogg ceased in 1915.

¹⁹ Assay No. 4 'Longreach' is shown in Carne & Jones, 'The Limestone Deposits of New South Wales', p. 353.

²⁰ S.Y. O'Reilly, 'Petrology and Stratigraphy of the Brayton District, New South Wales', *Proceedings of the Linnean Society of New South Wales* 96 (4), 1971, pp. 282-96, plate XVI; particularly pp. 283, 287 and plate (map). For the locality see also the Goulburn equivalent Geological Sheet, and the larger scale Towrang 1: 25, 000 topographic sheet (8828-1-S).

²¹ E. Scheibner, *Explanatory Notes on the Tectonic Map of New South Wales, Scale 1: 1,000,000*, New South Wales Geological Survey, St. Leonards, 1976, 283 pp.

²² G.H. Packham, The Geology of New South Wales. *Journal of the Geological Society of Australia*, 16 (1), 1969, 654 pp.

²³ S.R. Lishmund, A.D. Dawood, & W.V. Langley, Limestone Deposits of New South Wales, *Mineral Resources* 25, 2nd edtn, 1986, p. 143.

²⁴ Thus contradicting the Devonian age indicated just a few lines above, and in their Table p. 341. The age possibly ranges from Late Silurian to Early Devonian.

²⁵ The west verandah pillars, single turned long pieces of sandstone, might possibly have come from a Triassic Sydney (Hawkesbure Sandstone source), as there is some Tooth family history suggesting they were transported by dray from Sydney.

²⁶ W.C. Foster, *Sir Thomas Livingston Mitchell and his world 1792-1855*. The Institution of Surveyors N.S.W. Incorporated, 1985, p. 362.

²⁷ As stated by Helen C. Long, *The Edwardian House*, 1993, pp. 101-03, 'Perhaps more than any other aspect of fixed decoration, the open fireplace lent character and style to an interior and symbolised traditional notions of hearth and home. And as pointed out by W. Shaw Sparrow in *The British Home of Today*, 1904, "the fireplace, perhaps comes first in importance ... Always a centre of attention in our climate." Its design was therefore of the utmost importance to contemporaries and probably evoked more passionate comment than any other detail of fixed decoration. ... [made from marble] Its style, deriving from the Greek and Roman classical tradition, was plain, often arch-shaped around the grate opening, with severe, monumental trusses, often acanthus leaves or volutes, supporting a shelf which was frequently surmounted by a large mirror... this style had been fashionable in the period 1800-1850'.

²⁸ *Australian* (newspaper) index, 6 April 1832 [Mitchell Library copy].

²⁹ *Sydney Gazette*, 31 July 1834, p. 2, col. 3.

³⁰ *Australian*, 17 October 1834, p. 2, col. 4. The fund-raising proposal possibly did not succeed, as no such monument has been located in the Bong Bong region.

³¹ Clewitt's death, noted in the *Sydney Gazette* on Tuesday 18th April 1837, p. 4. He left a wife and three children. His name is given as Clewett, while the *Sydney Gazette* Index gives the name as Clevett.

³² *Australian*, 10 July 1838, p. 4. Patten apparently continued as a stonemason and statuarist for many years, two of his polished marble specimens being exhibited at the International Exhibition in London in 1862, see Baker, *Building and Ornamental Stones*, 1915, p. 14.

³³ C.J. Smee. & J.S. Provis, *The Pioneer Register*, The Pioneer Register, Spit Junction, N.S.W., 2nd edtn, vol. 2, 1983, unpaginated, but the entries are in alphabetical order of surnames.

³⁴ T.M. Perry, 'Hovell, William Hamilton (1786-1875)', in D. Pike (General ed.) *Australian Dictionary of Biography*, vol. 1, 1788-1850, A – H, Melbourne University Press, 1966, pp. 556-57.

³⁵ G.P. Walsh, 'Dickson, John (1774-1843)', in D. Pike (General Ed.) *Australian Dictionary of Biography*, vol. 1, 1788-1850, A-H, Melbourne University Press, 1966, p. 306.

³⁶ The shape of Stuckey's land grant is stated in a statement in Lands Department Old Records 1825-1848, book 3, no. 562 on a mortgage taken by Stuckey with David Peden, as nearby Wollondilly River

Co., Argyle Parish, Nattery [also shown in the document as Nathery], on 28 February 1843: ‘containing by admeasurement 500 acres be the same more or less ... at the North West corner on the Wollondilly river and bounded on the West by a line bearing south one hundred and forty eight chains on the East by a line bearing East 40 chains on the south by a line bearing North one hundred and three chains to the limestone reserve hence by part of the South boundary of that reserve being a line bearing West and by the West boundary there being a line bearing North forty two chains to the Wollondilly river and on the North to the Wollondilly river upwards to the Northwest corner aforesaid ...’.

³⁷ Underlining by Lhotsky. He footnoted here, ‘An altogether insignificant notice on “Australian marble”, appeared a few days ago in some of the Sydney papers’. [These sources have not been located to date]. A property of F. M’Arthur was some 12 miles further south (west), possibly across the Wollondilly River but it is not clear if this was the limestone occurrence mentioned by Lhotsky. The Ryrie locality has not been identified to date.

³⁸ The same information is given in the Calenders for 1833 and 1834, with no mention of quarrying.

³⁹ Walsh, ‘Dickson, John’, p. 306.

⁴⁰ Assignment information from *New South Wales Government Gazette* 1833, pp. 367, 425, 460; *ibid.*, 1834, p. 392, but the assigned convicts are not named.

⁴¹ From Sir T.L Mitchell, letters to W.R. Davidson, 1837-1855, Mitchell Library Archive 296, pp. 3-4, also quoted by Terry Kass, *Sails to Satellites: The Surveyors-General of New South Wales*. Lands Department, Bathurst, 2007, p. 91, col. 2.

⁴² See, Mitchell to Colonial-Secretary, 2 December 1833, Schedule 308/33, Colonial Secretary’s Letters Received, Microfilm Reel 2196, Archives of New South Wales [hereafter ANSW].

⁴³ See *ibid.*, Huskisson to Governor Darling, 31 March 1828, vol. XIV, p. 626; *ibid.*, Viscount Goderich to Governor Bourke 12 December 1832, p. 816.

⁴⁴ *Loc. Cit.*, *Historical Records of Australia*, Series 1, vol. XVII, p. 423,

⁴⁵ See *Government Gazette* for 1832 & 1833, Microfilm Reel 3737, p. 131, ANSW.

⁴⁶ *Ibid.*, Lord John Russell to Governor Gipps, 31 May 1840, pp. 641-48.

⁴⁷ As discussed by Lord Stanley to Governor George Gipps, 5 October 1845, *Historical Records of Australia*, Series 1, vol. 24, pp. 577-79.