

2.04 Slabs

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Slab construction comes in two main forms, depending upon whether the slabs are placed horizontally or vertically, and both types rely upon a timber frame to support them. Whilst split slabs were by far the commonest, sawn slabs were used on occasion, especially in horizontal slab construction, and there is some British precedent for this type. Slabs, generally of split totara timber, were widely used in New Zealand,¹ but at a date later than their appearance in Australia and without any distinctive characteristics. Other timbers used for the purpose in New Zealand were kauri, rimu and kahikatea, and the slabs were about 50 mm thick, 250-350 mm broad, and 2.1 metres or more long. The corner posts were sunk 900 mm into the ground, and the top and bottom plate were square, with the slabs nailed to them.²

a. appearance and distribution

Robert Irving has concluded that slab construction was not used in Australia before Macquarie's time,³ and William Thornley's description of a farmhouse in Van Diemen's Land dates from that period, though it may have been standing for some time before he saw it in 1817. It was about thirty feet [9 m] long and 'built of the logs of the stringy-bark tree, split in half, and set on end'.⁴ The earliest illustration of slab construction is of the miller's cottage at Marsden's mill near Parramatta in 1820,⁵ and the earliest local descriptions

¹ 'The Cuddy' at Waimate dates from 1854 and appears to be the oldest surviving example. It is described as being of 'totara slab and lath-and-daub', and is made of large split slabs set vertically within a frame: Martin Hill, *Restoring with Style* (Wellington 1985), p 7; John Wilson, *AA Book of New Zealand Historic Places* (Auckland 1984), p 194. For other examples, see pp 152-3, 189 of Wilson.

² CHECK SOURCE IN NZ NOTES.

³ Robert Irving, 'The First Australian Architecture' (MArch, University of New South Wales, 1975) p 191.

⁴ William Thornley [ed John Mills], *Adventures of an Emigrant in Van Diemen's Land* (Adelaide 1973 [London, no date (1840s)]), p 22. An even earlier reference, which I have not corroborated is to the slab hut of the Macarthur family at the Cow Pastures, where Elizabeth Macarthur stayed after John left for England in 1809. Patricia Clarke, *Sydney Morning Herald*, 16 March 1991, p 47, in a review of Leonard Bickel, *Australia's First Lady, the Story of Elizabeth Macarthur*.

⁵ Joseph Lycett, 'Mill, near Parramatta, New South Wales, the property of the Revd. St. Marsden', watercolour, 1820: Tim McCormick et al, *First Views of Australia 1788-1825*

after Thornley's date from later in that decade. By that time, to judge from Alexander Harris's reminiscences, slab buildings were becoming common.⁶ Peter Cunningham speaks of split timber and plaster as a standard type of construction,⁷ and plastered over slabs were used for the first military barracks and detached cottages at Moreton Bay (Brisbane) in 1825,⁸ then for a number of further buildings in 1826.⁹

Within two decades the construction had become standard throughout large areas of the eastern colonies. For example slab school buildings were put up at Warwick and Drayton, in what is now Queensland, in 1830 and 1831.¹⁰ Edward Beckham, Crown lands commissioner for the Lachlan District, in 1841 visited 52 squatting stations, the buildings on which were of slabs in 51 cases, and brick in one. In 1844 he visited 144 stations, all with slab or bark buildings, and in 1855 he visited 155, or which 150 were of slabs, in combination with weatherboard in four cases and bark in one.¹¹ In Brisbane John Petrie built a slab forge, carpenter's shop and dwelling in 1842, for which he cut both hardwood and pine.¹² It was said at Port Phillip in the 1840s that:

Slabs are the most common material for building. These are a kind of planking generally about two inches thick, and varying in width from eight inches to a foot: they are obtained by splitting with wedges the gum tree, the stringy bark and the iron bark.¹³

In South Australia Dr C G Everard, with his son and servant, built a hut at Glenelg with a 'framework ... of small trees' and 'the walls of slabs cut from gum-trees'.¹⁴ Father Benson, who arrived early in 1841, lived in a slab hut behind the temporary Catholic chapel,¹⁵ and Charles Newman, a shepherd employed by the South Australian Company, had a slab hut in the Charleston area in the early 1840s.¹⁶ In Western Australia slabs seem to have been less

(Chippendale, New South Wales, 1987), p 263. The original construction of the cottage cannot be made out, but the later skillions appear to be unequivocally of vertical slabs.

⁶ Alexander Harris, *Settlers and Convicts* (Melbourne 1953 [1847]), pp 23, 29, 41, 79, 144, 182.

⁷ Peter Cunningham, *Two Years in New South Wales* (2 vols, London 1827), II, p 162.

⁸ J G Steel, *Brisbane Town in Convict Days 1824-1842* (St Lucia [Queensland] 1975), p 47.

⁹ Steel, *Brisbane Town in Convict Days*, p 56.

¹⁰ Donald Watson, 'Outside Studding', *Historic Environment*, VI, 2 & 3 (1988), p 22.

¹¹ Peter Freeman, *The Homestead: a Riverina Anthology* (Melbourne 1982), p 23.

¹² Ian Evans et al, *The Queensland House: History and Conservation* (Flannel Flower Press, Mullumbimby [New South Wales] 2001), p 16, ref J Petrie to the Commandant, Moreton Bay, 1 February 1842, Colonial Secretary, letters received re Moreyton Bay, 4/2618.1, New South Wales State Archive Office.

¹³ Charles Griffith, *The Present State and Prospects of the Port Phillip District of New South Wales* (Dublin 1845), p 55.

¹⁴ *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)*, VII, p 62, quoted in Colin Kerr, 'An Exilent Coliney' (Adelaide 1978), p 68.

¹⁵ J W Bull, *Early Experiences of Life in South Australia, and an Extended Colonial History* (2nd ed, E S Wigg & Son, Adelaide 1884), p 44.

¹⁶ Gordon Young et al, *Lobethal, 'Valley of Praise'* (Adelaide 1983), p 120, quoted in Gordon Young [ed], *Onkaparinga Heritage* (?Adelaide 1988), p 273.

common, but the so-called 'Buffalo Hut', an outstation near Australind, is of vertical slabs, and believed to date from the 1840s.¹⁷ In the same area slabs were used for 'Alverstoke', seemingly of the mid-1840s;¹⁸ 'Hampden', of about 1849;¹⁹ and 'Myalup' of about 1853.²⁰ 'Cook's Park' homestead was built of split slabs in about 1862.²¹

b. vertical slabs

'Vertical slab' is not only a sensible way to describe this form of construction, but one authorised by contemporary usage. In 1849 Mary McConnel described the original (1841) portion of 'Cressbrook' homestead, Queensland, as a 'vertical slab and shingle cottage'.²² Where vertical slabs were used their upper ends were tied or nailed to a horizontal member which spanned between the main upright posts, or alternatively there could be two horizontal members with the slab-ends sandwiched between them. The lower ends would commonly rest directly on or in the ground. The earliest descriptions of vertical slab construction, in the 1820s, include both this cruder type, with the ends of the slabs resting in the ground, and the more sophisticated type set into a complete frame.

James Tucker described the huts of the government camp at Emu Plains in 1826-7 as being of split slabs set into the earth at the bottom, and nailed at the top to 'a pole that formed a wall plate'. Because the materials had been used green, the slabs had shrunk so much that a hand could be thrust through the joints, and these had in part been stopped up with old rags.²³ The hut of a nearby settler was constructed in the same way, but that the chinks were stopped with a plaster made of cow dung and sand.²⁴ Andrew Lang's house at 'Dunmore' in the Hunter Valley, of 1826, was 'formed of rough slabs of split timber, the lower ends of which were sunk in the ground, the upper extremities being bound together by a wall-plate'. The interstices were plastered with mud and the walls were whitewashed inside and outside.²⁵ The Golden Fleece Inn at Werribee, Victoria, in 1840, was 'a mere hut between the split slabs which stuck in the ground compose the walls a hen with a brood of chickens might find her way out and in'.²⁶

¹⁷ Ian Molyneux, *Looking Around Perth* (East Fremantle [Western Australia] 1981), pp 94-5.

¹⁸ A C Staples, *They Made Their Destiny* (Harvey [Western Australia] 1979), pp 102-3, 15.

¹⁹ Staples, *They Made Their Destiny*, p 127, p 9.

²⁰ Staples, *They Made Their Destiny*, pp 122-3, p 10.

²¹ Molyneux, *Looking Around Perth*, p 97.

²² Clive Lucas, *Australian Country Houses: Homesteads, Farmsteads, and Rural Retreats* (Landsdowne Press, Sydney 1987), p 40.

²³ [James Tucker] 'Giacomo de Rosenberg' [ed Colin Roderick], *Ralph Rashleigh, or the Life of an Exile* (Sydney 1952 [c1845]), p 77.

²⁴ Tucker, *Ralph Rashleigh*, p 113.

²⁵ J D Lang, *An Historical and Statistical Account of New South Wales, &c* (1st ed, 2 vols, 1834), II, p 123.

²⁶ Margaret Kiddle, *Men of Yesterday* (Melbourne 1961), p 83, quoting Niel Black's Journal.

This was the simplest and crudest method of building with slabs, and was commonly used for outhouses, while more important buildings had the slabs set into a ground plate at the base, or at later dates were of horizontal slab construction. Vertical slabs set into a grooved frame were apparently used for a stable at 'Coolangatta', Shoalhaven, in 1822 (despite the reference to 'logs'):

The Foundation logs and Wallplates are mortised, into which the other logs will slide. Foundation logs, posts and wall-plates are Iron Bark ...²⁷

T V Blomfield's house in the Hunter Valley was built in 1825, with the exterior clad in weatherboards over the slabs. He wrote:

The foundations are large trees of very hard wood, called ironbark, and the walls are of the same wood. The logs are cut into lengths of ten feet [3 m] and are then split into slabs, which are formed into grooves in the foundations as also into the wall plates at the top. Over this is nailed weatherboards, and the roof is shingled ...²⁸

Another early description is that of Peter Cunningham,²⁹ who was a guest of Blomfield's for some months, but he is less concerned with the structural details.

Alexander Harris describes the main posts as being three metres high with about 600 mm set in the ground, and part above ground squared off with an axe. The wall plates, on the ground and at the top, were squared off only on the sides facing each other, and in these faces were cut grooves about 40 mm wide by 50 mm deep to take the ends of the slabs.³⁰ The specification for the national school at Drayton, of 1831,³¹ describes essentially the same system. H W Haygarth, writing some years later, gave a more complete account:

... four posts are sunk in the ground to a depth varying with the height and size of the building, and form the four corners: these support long beams, or wall-plates, grooved on the under side, and immediately

²⁷ Rachel Roxburgh & Douglass Baglin, *Colonial Farm Buildings of New South Wales* (Rigby, Adelaide 1978), p 32.

²⁸ T V Blomfield to his family in England, 2 June 1825, 'Memoirs of the Blomfield Family', Mitchell Library, quoted R M Deamer, 'Houses Erected on Original Land Grants in the Lower Hunter, Paterson and William River Valleys between 1800-1850' (MArch, University of Newcastle, 1971), p 43.

²⁹ Peter Cunningham, *Two Years in New South Wales* (2 vols, London 1827), II, p 162: 'In the split-timber houses, a frame is first put up with a groove in the upper and lower wall-plates, to slide the split timber into, after being trimmed by the axe, the width of a plank being chipped out at the corner of the outer portion of the groove of the lower wall-plate, to admit the introduction of the last timber, which is then securely nailed in; and by this means a wooden house may be put up without having more than a dozen nails in its composition. The split timbers are put in quite rough, and chipped all over with the axe to insure adhesion of the coat of plaster.'

³⁰ Alexander Harris, *Settlers and Convicts* (Melbourne 1953 [1847]), p 41.

³¹ Donald Watson, 'Outside Studding', *Historic Environment*, VI, 2 & 3 (1988), p 22, quoting an unidentified specification from the Mitchell Library, Sydney, in the Drayton School file, History Unit, Queensland Department of Education.

beneath these again wooden sleepers are laid in the ground, a little below the surface, which are grooved similarly to the wall-plates, and are, in fact, the main foundations of the building: the sides, or wooden walls, are formed of slabs, the ends of which are respectively fitted into these grooved plates, and the sides are smoothed off with the adze to make them fit close together.³²

James Atkinson gave a much more analytical account, perhaps because he was writing in 1826 before practices had become absolutely standardised and beyond question. He said that some people laid wooden sleepers on the ground, but the best plan was to build a rough stone wall, using loam mortar, to a height of six inches [150 mm]. While this would keep the wall timbers from rotting, he saw no practical alternative to putting the corner posts into the ground, for the sake of stability, and accepted that they would decay in due course. It would be too difficult to construct a self-contained frame (in accordance with common British practice) when using green timber which was only roughly squared, especially when common labourers rather than carpenters were to do the work. The bottom plate or rail, which he called a 'rising', was tenoned into the corner posts, and a groove two inches [50 mm] deep and 1 1/2 inches [38 mm] wide to take the ends of the slabs. A wall plate with a similar groove was placed at the top, but only finally 'pegged down and secured' after the slabs were in place. The interior should be lathed and plastered, and so should the exterior under the verandah, whilst the exposed walls should be weatherboarded.³³ Once this system becomes standardised, writers who describe it enter into none of the theoretical debate of Atkinson's account.³⁴

Tasmanian practices were much the same as those in New South Wales. Round timbers were set vertically in the ground at the corners, and lighter ones at intermediate points to frame doors and windows. Split 'gum or stringy bark' slabs might be set into the ground a depth of 150-200 mm, and nailed at the top to a horizontal plate. But in better construction a heavy grooved log was set partly in the ground, the top plate was also grooved, and the slabs ran between the two. The tie beams running across between the top plates were frequently adzed and boarded over to provide sleeping accommodation for children.³⁵

There are three surviving slab buildings in Australia with claims to date from the 1840s. Of the first, 'Dunundullimal' homestead, on the Oxley Road near Dubbo, New South Wales, the evidence for the dating is not known to me,³⁶

³² H W Haygarth, *Recollections of Bush Life in Australia* (London 1848), pp 15-16.

³³ James Atkinson, *An Account of the State of Agriculture and Grazing in New South Wales* (London 1826), pp 96-7.

³⁴ For example 'Rolf Boldrewood' [T H Browne] in *Old Melbourne Memories* (Melbourne 1884), p 37; Alfred Joyce in *A Homestead History* p 80; James Griffith in *The Present State and Prospects of the Port Phillip District*, p 55; and William Russell in P L Brown [ed], *Clyde Company Papers, II* (London 1952), p 44.

³⁵ David Burn *A Picture of Van Diemen's Land* (Hobart 1973 [1840-1]), pp 112-113.

³⁶ I rely upon a leaflet, National Trust of Australia (NSW), *Dundullimal, Oxley Road, Dubbo* (National Trust, Sydney, no date).

but it appears to consist of vertical flitches set in a frame.³⁷ The slab hut at Delegate, southern New South Wales, is one of the oldest surviving slab buildings in the country, and is built on this basic system of fitting slabs into grooved top and bottom plates. The marks of close set auger holes used to start the groove are still visible. The hut is believed to have been an outstation or manager's hut for the 'Delegate' station, which was a subsidiary of Robert Campbell's 'Duntroon', and was built in the 1840s (though later extended).³⁸ Essentially the same system of vertical slabs set in grooved plates appears to have been used in another building thought to date from the 1840s, 'Gum View' off Brookman Road near Kuitpo, South Australia.³⁹

The Picton Inn, Western Australia, of about 1850, has vertical slabs measuring 50-75 x 100-200 mm set in a frame of squared timber. They are recessed somewhat into the frame to allow for a lath and daub surface, which will be discussed below.⁴⁰ In 1853 the buildings of the temporary barrack outside York were of 'Slabs of mahogany [Jarrah] plastered with clay'.⁴¹ In Victoria tenders were called in 1859 for

Hut of Twenty foot-long divided into two rooms Slabbed with grooved plates top + bottom, the grooved plates to be of Nine inch diameter timber, the Slabs to be Eight-foot long, also two rooms at back 6 feet wide the slabs to 5 foot high grooved plates top + Bottom to be covered with broad paling or shingles. Nails found, the Tender to state if the party would [?lay] his own stuff or not.⁴²

The system was still being advocated in 1871 by a writer in the *Town and Country Journal*, who recommended sinking the corner posts about 750 mm into the ground, and using grooved top and bottom plates between them.⁴³

There is a small difficulty in this system in that, with the frame rigid and the upper and lower plates grooved, there is no means of fitting in the last slab, but this was a problem which had already been met in New south Wales by cutting away the side of the groove for a short distance, the width of a plank, and relying on nails to hold the last slab in place.⁴⁴ Precisely this device is to be seen in the old Lake Corrong homestead in Evelyn Crescent, Hopetoun, which was built probably in the 1860s and certainly between 1844 and 1877, of vertical cypress pine slabs chamfered off at top and bottom to fit into the

³⁷ *Reflections* [magazine of the National Trust of Australia (NSW), May-July 2004, p 17, reproduced in Rowe, 'Moranghurk', p 316.

³⁸ Physical data from inspection, 1992, historical data from the leaflet, *The Early Settler's Hut Delegate's Bicentennial Project* (Cooma [New South Wales], no date [c 1988]).

³⁹ R M Campbell, 'Building the Fremantle Convict Establishment' (PhD submission. University of Western Australia, 2010), p 8.17.

⁴⁰ Ingrid van Bremen, 'Slab and Dab; Wattle and Daub', *Architect* [Western Australia], Autumn 2004, p 22.

⁴¹ Paul Stark, *Meadows Heritage* (Meadows [South Australia] 1983), p 116.

⁴² MS tender notice, Mt Sturgeon, 14 March 1859, National Trust of Australia (Victoria) file no 2453.

⁴³ *Town and Country Journal*, 16 September 1871, p 364.

⁴⁴ Peter Cunningham, *Two Years in New South Wales* (2 vols, London 1827), II, p 162.

grooves of the framing.⁴⁵ Another solution was to make the top groove very deep, so that each slab could be lifted high up into it and then dropped back into the lower groove. The third solution, or group of solutions, depended upon the use of nails, and therefore became common as nails became cheaper, and especially after the 1870s. Now one or both grooves are formed by nailing cleats onto the plates rather than cutting into them, or better still the plate is rebated in an L-shape and only the front of the groove is formed by nailing on a cleat.

Once a bottom plate was used there was no reason, in theory, why the whole building could not be raised off the ground, with intermediate stumps below the floor. In fact this is rarely done, though exceptions are a cottage at 44 Barden Street, Tempe, Sydney, alleged on insufficient grounds to date from the 1840s,⁴⁶ and the rear block of 'Mugga Muga' cottage, Australian Capital Territory.⁴⁷

Slabs which are nailed to the rails, rather than fitted into grooves, are much rarer. This was undoubtedly because of the cost of nails, and it is therefore unlikely that any examples date before the 1870s. The same issue arises in relation to John Buick's cottage at Kangaroo Island, which survived until recently. Documentary records suggest a date between 1854 and 1871, but Peter Bell has made a case that it could well have been built about 1842-4. The two walls which survived of the original building appear to have been framed (the details of the principal members not being recorded) and clad in pine logs, hand sawn in half lengthwise. The rounded faces were chamfered off top and bottom and the pieces were placed on the wall sawn face inwards and nailed to the top and bottom plates.⁴⁸ It is difficult to know what weight to attach to this example, for it is not daubed, and not in any way typical of palisade and pug construction: indeed it is the only half log structure known in South Australia. The dating is only tentative, and it seems difficult to believe that a construction so prolific of nails would have been used in the 1840s. On the other hand the chamfering suggests that the members might have been designed originally to fit into a groove, in which case they might have been nailed at a later date, after the cleats forming the grooves had deteriorated.

⁴⁵ The history of this building was researched for the National Trust by Mrs H G Hilton of Hopetoun House, Hopetoun, and the dates 1846-77 are those when Peter McGinnis, for whom the house was built, was proprietor of the station.

⁴⁶ 'The Hidden Cottage', *Heritage NSW*, VII, 4 (Spring/Summer 2000), p 10.

⁴⁷ The cottage was a shepherd's dwelling on the 'Duntroon' estate', and is a rubble building thought to date possibly from the 1830s: the slab wing is presumably much later.

⁴⁸ Peter Bell, 'Cottage, American River', Register of State Heritage Items, 6426-10395 (not dated).

c. weatherproofing

Whilst slab construction could not be expected to produce a weathertight wall at the best of times, it was the shrinkage of the slabs after construction that was responsible for most of the apertures. William Adeney remarked that his hut had 'this particular convenience that when inside you can look anywhere + see what is passing outside', though it was unpleasant on windy nights.⁴⁹ According to R H Bunbury, the slabs might continue shrinking almost two years after they were first cut, and by as much as 1 1/2 inches [40 mm] each, 'so that it is necessary often to drive them up close together again & put in a fresh slab to fill up the space left vacant.'⁵⁰

It was possible to get smooth and windproof external walls (even without covering them in weatherboard like T V Blomfield), by covering the slabs with battens, by sealing up the joints with plaster or mud, or by plastering the wall surface completely, as discussed below. William Russell spoke in 1839 of mud being used to 'plaster' up the joints of buildings in the Port Phillip District, though by no means everyone took the trouble,⁵¹ and at 'Trawalla' the hut had about 25 mm gaps between the slabs until, within a year, it was plastered with mud and became weatherproof.⁵² In 1854 G C Fead stayed at a hut on a sheep station near Buchan in eastern Victoria, built of vertical slabs with the gaps filled with mud.⁵³ In the early 1840s the buildings of G C Hawker's 'Bungaree' station in South Australia were reportedly of slabs caulked with clay,⁵⁴ while at H B Hughes's 'Bundaleer', in 1843, the living hut was walled with pine slabs, 'filled with mud from the river, which soon hardens and keeps the wind out.'⁵⁵

Generally the use of battens seems to have been more common in Victoria, and plastering in New South Wales. 'Rusticus' (W N Chauncy) in 1855 advised the Victorian settler to nail strips of wood over the joints. Surviving examples of this in Victoria include 'Moranghurk' homestead near Lethbridge, believed to have been built by Dugald McPherson and William Taylor in the mid-1840s;⁵⁶ a house on the river flat at Blackwood; and the only surviving slab building of the Bulla district, where the slabs are 50 mm thick and up to 360 mm wide, and the joints between have been sealed with an 80 mm wide

⁴⁹ Undated extract of a letter from William Adeney to his sister [?1840s], quoted in W G Manifold, *The Wished-For-Land* (Camperdown [Victoria] 1986), p 57.

⁵⁰ R H Bunbury to R C Sconce, 16 April 1842, no 141 in Bunbury letters, State Library of Victoria.

⁵¹ William Russell to his relatives in Scotland, 28 August 1839, in Brown, *Clyde Company Papers, II*, p 244.

⁵² Katharine Kirkland, *Life in the Bush* (London 1845), quoted in Hugh Anderson, *The Flowers of the Field: a History of Ripon Shire* (Melbourne 1969), pp 183, 197.

⁵³ G C Fead, 'Notes of an Unsettled Life', *Gippsland Heritage Journal*, no 16 (June 1994), p 26.

⁵⁴ Colin Kerr, *'An Exilent Coliney'* (Adelaide 1978), p 125.

⁵⁵ Kerr, *'An Exilent Coliney'*, p 144.

⁵⁶ A R J Billman, 'The Timber Vernacular' (BArch, Deakin University 1992), diagram 22 & pp 60-61, citing D G Scott, 'The History of Moranghurk' (Department of Humanities, Gordon Institute of Technology 1973), p 6.

strip nailed over them on the outside.⁵⁷ The construction is also used in 'Don Bank', formerly 'St Leonard's Cottage', North Sydney, a building almost certainly dating from 1854 in its present position, though a date of 1823 has been claimed, and it may have been moved in whole or in part from a nearby site.⁵⁸

In all these cases it is uncertain whether the cover strips are original or were added, but they would certainly be unlikely in 1823, for the method was suitable only after the mid-century when nails became comparatively cheap. The second building at 'Glenmore', Rockhampton, is a vertical slab structure, apparently without battening, which had been an inn on the road to Canoona before it was bought and moved by James Birkbeck in about 1861.⁵⁹ For the school an teacher's residence at Clermont, Queensland, in 1867, the specification read:

Instead of stumps and sawn timber for bottom plates and sleepers, lay sleepers with rough timber adzed off to the requisite level and firmly secured at angles with iron spikes and halved into one another.

Instead of hardwood studding and one inch boarding for walls form walls with hardwood slabs laid in between two fillets secured to sleepers to form a groove so that when sufficiently shrunk they may be placed quite close and line the interior with pine or other available wood with a straight joint, covering the joints with plain chamfered fillet.⁶⁰

More commonly, according to Donald Watson, battens were a later addition to slab buildings which, even if fitted tightly when first built, soon gaped as a

⁵⁷ W Kiesling, M Loebert & M Shaw, 'Building Materials at Bulla' (BArch, University of Melbourne 1963), p 62.

⁵⁸ The building has been identified as a house which is referred to in Edward Wollstonecraft's papers as being built in the vicinity in 1823: Marjory Byrne, *'Don Bank', the Research and Restoration, &c* (North Sydney 1982), passim. However, it has been fairly clearly established that it appeared on the site between March and October 1854 (as a four room cottage): M B Reymond, "'Don Bank'" (typescript report, 1975). The problem is that there was already a 'St Leonard's Cottage' in the general vicinity in 1847, and Reymond has suggested that it could have been moved to the site. He was apparently unaware of the fact that there was a newspaper fragment under an architrave, from the *Australian*, 11 March 1835, which would support this contention. The four original rooms are readily identifiable, and an inspection at the invitation of Denis Gojak, has confirmed his view that the two at the front and the two at the rear are structurally distinct, though the materials are similar and this might be merely the common distinction between in quality between the principal and the inferior rooms. All four rooms appeared in 1854, and it seems probable either that two were moved to the site and two built there, or that all four were moved from elsewhere. It also seems probable that the moved structure was 'St Leonard's Cottage' and that it pre-dated 1835. If so, it is quite possible that it was Wollstonecraft's building of 1823. Wollstonecraft's building was of cedar from Shoalhaven, and it has been claimed that this is the material of the surviving cottage, but more recently this has been disputed and the wood has been identified as meranti. Thus it seems that a professional identification is required, and might resolve or at least advance the issue.

⁵⁹ *Sketches of Old Rockhampton* (extract only sighted, publication details unknown but c 1980), pp 16-17.

⁶⁰ Quoted in Donald Watson, *The Queensland House* [typescript report] (Brisbane 1981), p 4.4.

result of shrinkage. These battened slab buildings are especially common in the south-west, particularly Tambo.⁶¹

d. plastered slabs

Complete plastering of slab buildings was common in New South Wales, though there is only one specific reference to it being done in Victoria. In New South Wales Cunningham describes how the slabs were chipped all over with an axe to provide a key, and then plastered with a mixture of alluvial soil, cow dung, and chopped grass, which was put on with a light spade and then smoothed with a trowel.⁶² At Moreton Bay [Brisbane] the commandant reported in 1826:

Our present buildings are mainly temporary, being constructed of slabs and plastering, for want of proper mechanics to erect others. A Master Builder is very much required here.⁶³

The 'plaster' used on the slab buildings at Moreton Bay was presumably external, but Henry Monro's hut on the Coliban, Port Phillip District, was described in 1841 as being plastered internally.⁶⁴ Internal lath and plaster was similarly used at the cottage in Barden Street, Tempe, referred to above.⁶⁵ R H Bunbury mentions external lath and plastering as an occasional practice, and internal canvas or lining as more common, though 'far the greater number prefer the plain slabs and free ventilation'.⁶⁶

Haygarth, writing of New South Wales in the 1840s, speaks of using lath and plaster over the slabs, the face of it lined in imitation of stonework.⁶⁷ Precisely this was being done in the 1860s at Hill End, New South Wales.⁶⁸ It is occasionally found in Van Diemen's Land,⁶⁹ and Louisa Meredith spoke derisively of the house she was forced to occupy near Port Sorell as 'Lath Hall' because it was built of slabs internally lathed and plastered and externally lathed but not plastered - though doubtless intended to be.⁷⁰

⁶¹ Watson, *The Queensland House*, pp 12.1-12.2.

⁶² Peter Cunningham, *Two Years in New South Wales* (2 vols, London 1827), II, p 162.

⁶³ Ian Evans et al, *The Queensland House: History and Conservation* (Flannel Flower Press, Mullumbimby [New South Wales] 2001), p 9, ref P Bishop, Commandant, Moreton Bay, to A McLeay, Colonial Secretary, Sydney, 14 March 1826, New South Wales Archive Office, Colonial Secretary, Letters received re Moreton Bay, 4/1917.

⁶⁴ J O Randell, *Pastoral Settlement in Northern Victoria. Volume II* (Burwood [Victoria] 1982), p 149.

⁶⁵ 'The Hidden Cottage', p 10.

⁶⁶ R H Bunbury to R C Sconce, 16 April 1842.

⁶⁷ H W Haygarth, *Recollections of Bush Life in Australia* (London 1848), p 14.

⁶⁸ At Beyers Cottage, c 1865, and English Cottage (before 1869): in the latter (from inspection) the laths are diagonal across the face of the slabs and are covered first with mud and then with a finish coat of lime plaster. These dates are those given in Geoff Ashley, 'Two Centuries of the Western NSW Dwelling', *The Australian Dwelling: A Conference* (Hay, NSW, 1990), p 4. Another example, not necessarily as finely finished, is 'Mutton's Falls', Tarana.

⁶⁹ As in the original settler's house at Grantham, Bothwell, illustrated in Frank Bolt, *Vanishing Tasmania* (Kingston [Tasmania] 1992), p 15.

⁷⁰ Vivienne Rae-Ellis, *A Tigress in Exile* (Hobart 1990 [1979]), p 137.

According to David Burn it was uncommon to plaster the interior of a slab house: some were plastered outside, some were caulked with wool, and some left with the gaps entirely open. Because of the use of log fires, and 'the geniality of the climate without', this was no hardship⁷¹ - though it would be difficult today to contemplate enduring the Tasmanian climate under such conditions. In Western Australia a surviving example of slab faced in lath and plaster is Lawrence's Wayside Inn [or Morgan's Inn], Picton, built in about 1850. The slabs are set back within the squared framing so that the plastered surface finishes flush with the corner posts and plates.⁷² 'Cook's Park' homestead on the Leschenault Estuary, of about 1862, had wattles nailed over both the internal and external faces of the slabs, which were then plastered.⁷³ In New Zealand it appears that the horizontal wattles were known as 'rickers' and a similar construction, known as 'slab and ricker', was used in Canterbury and elsewhere.⁷⁴

e. *sawn slabs*

In horizontal, just as in vertical slab construction, the slabs might on occasion be sawn rather than split, and really would be better termed *planks*, or even *boards*. There is a traditional English precedent for horizontal plank construction in a type of timber partition described in *Notes and Queries*, which was

... of oak, very roughly made; nearly alike on both sides, formed of boards 10 in. wide, fixed in vertical grooves in stout uprights, which are 6 in. [150 mm] wide, with chamfered edges, having triangular, or sometimes leaf-shaped chamfer stops about 7 in. [175 mm] from the bottom, the whole fixed by means of mortices in a horizontal beam resting on the floor, and above in a horizontal beam chamfered over the spaces between the uprights, with short returns to meet the chamfered edges of the uprights.⁷⁵

Similar construction was used at the Hudson's Bay Company's buildings at Fort Vancouver, Canada, in 1839, where it was said '... posts are raised at convenient intervals, with grooves in the facing sides. In these grooves planks are inserted horizontally, and the walls are complete.'⁷⁶

Whilst the Hudson's Bay buildings may be taken to be of British derivation, similar forms were used by French Canadians. In Québec squared logs with tenoned ends were laid horizontally between grooved posts spaced 2 to 2.5 metres apart. The terms *poteaux en coulisse* and *poteaux aux sole* are used,

⁷¹ Burn, *A Picture of Van Diemen's Land*, p 113.

⁷² Ingrid van Bremen, 'Slab and Dab; Wattle and Daub', *Architect* [Western Australia], Autumn 2004, pp 22.

⁷³ Molyneux, *Looking Around Perth*, p 97.

⁷⁴ M L D Allen, 'A Renaissance of Earth as a Building Material in New Zealand' (MArch, University of Auckland, 1991), p 57.

⁷⁵ *Notes and Queries*, 9th series, III, p 268, quoted Innocent, *Development of English Building Construction*, p 116.

⁷⁶ *Builder*, II, no 60 (30 March 1844), p 169.

though Kalman rejects the latter as ambiguous. Kalman suggests that this squared log construction is the early form from which sawn planks derived, but he is able to cite only a mid-nineteenth century example. When planks of 75 to 100 mm thickness are used, again between grooved posts, Kalman calls it *madriers en coulisse*,⁷⁷ though the more general name seems to be *bois en coulisse*. A photograph survives of at least one example which still stood in Québec in the 1920s.⁷⁸ As these names indicate, this is essentially the same as the framed log construction of Canada discussed above.

It seems likely to remain a moot point whether the Australian version of the method was independently developed, but even if this is not so it remains one of the nearest things we have to a distinctively local constructional system. John Cotton built a house of sawn timber slabs at his property 'Doogalook' on the Goulburn in 1843.⁷⁹ At 'Don Bank', Sydney, the slabs are sawn, as also in Victoria at the Henty's Merino Downs homestead,⁸⁰ at John Cotton's home on the Goulburn,⁸¹ McCrae's homestead at McCrae, of 1845, where the partitions were of sawn blackwood,⁸² and at Sage's house 'Euratta', at Baxter, built in 1853.⁸³ In a shed at 'Salisbury', Murtoa, owned originally by Gustav Degenhardt, are circular sawn slabs, probably of local box, running horizontally between posts with attached cleats. The unusual feature of this is that the slab edges are not horizontal but slope outwards, apparently to shed water.⁸⁴

At 'Coonanga' homestead, on the Murray, circular-sawn redgum slabs were used in 1866, some of them with beaded edges.⁸⁵ This refinement seems to have been something of a Riverine speciality, for it is found also on the cypress pine planks at 'Bygoo' homestead, north of the Murrumbidgee, dating from about 1870, notwithstanding the fact that they are only pit-sawn.⁸⁶ In the Northern Territory the Daly Waters telegraph station was built in the 1870s of sawn slabs of bloodwood and ironbark.⁸⁷

There is at least one example of sawn slabs being laid horizontally as a load-bearing system, without vertical supports. This is 'Old Woodbourne' homestead near Meredith, Victoria, reputed to date from before 1853. The principle is the same as that of the log cabin, but the components are sawn

⁷⁷ Harold Kalman, *A History of Canadian Architecture* (2 vols, Toronto 1994), I, p 49.

⁷⁸ A J H Richardson, 'A further note on French-Canadian roof-cover and timber walls', *APT Bulletin*, VIII, no 1 (1976), p 66.

⁷⁹ John Cotton to William Cotton, October 1843, in George Mackaness [ed], *The Correspondence of John Cotton* (2nd ed, 3 vols, Dubbo [New South Wales] 1978), p 29.

⁸⁰ Marnie Bassett, *The Hentys* (Melbourne 1955 [on opp 429, 433).

⁸¹ R V Billis and A S Kenyon, *Pastures New*, (Melbourne 1930), p 230.

⁸² W G McCrae to Georgiana McCrae, March 1845, in G G McCrae [ed], *Letters to Georgiana from her Four Sons* (author, Arthur's Seat [Victoria] 1962), no page; also Hugh McCrae [ed], *Georgiana's Journal* (Sydney 1934), p 142.

⁸³ National Trust records.

⁸⁴ Inspected 1997.

⁸⁵ Peter Freeman, *The Homestead: a Riverina Anthology* (Melbourne 1982), pp 282-5.

⁸⁶ Freeman, *The Homestead*, pp 120-121.

⁸⁷ J G Knight, *The Northern Territory of South Australia* (Adelaide 1880), p 32, quoting Ernest Giles, in the *South Australian Register*.

slabs or planks, about 4 x 1 in proportion, though the measurements are not recorded, each with a quirked arris.⁸⁸

f. horizontal slabs

The most exotic surviving slab building has the slabs running neither vertically nor horizontally, for it is a cottage at Dromana which was owned by Dr Hearn, believed to have been built before 1864 and consisting of diagonally fitted wood slabs in a frame of split hardwood logs, with a shingle roof.⁸⁹ But the majority of squatters' houses were of horizontal slabs, a form going back to neolithic times, and used especially in Norwegian stave churches of the twelfth and thirteenth centuries.

Charles Norton, 'Mr Birch's Old Hut, "Seven Hills" 1844', pencil drawing, showing an outbuilding of horizontal slabs: State Library of Victoria, H88.21/73.

This form, in which the slabs were fitted into slots in the sides of the vertical posts, was fairly common in Australia, as at 'Wambiana' hut, Queensland,⁹⁰ and at 'Seven Hills', Victoria, by 1844.⁹¹ Often such a groove was formed by drilling wide auger holes at fairly close intervals, and then cutting out the wood between them, and the circular traces of the auger at the bottom of the groove can often be seen today. Later it became more common to form the groove by nailing a pair of vertical cleats onto the posts, once again a practice that grew as nails became cheaper. This is so at 'Bygoo',⁹² referred to above, and in one of the north barns at 'Moray' homestead, Research, near Melbourne. It was also the case in a barn at Porcupine Flat, near Maldon,⁹³ destroyed by fire in relatively recent years. An exceptional case is the 'Binya' homestead, now at Griffith, where the posts are squared and have a single cleat nailed to either side. The slab ends are grooved to fit over the cleat.⁹⁴

What remains beyond doubt is that the term 'drop slab' is inappropriate. It has no nineteenth century basis, for those few writers who mention the construction use sensible terms like Georgiana McCrae's 'gum tree slabs supported horizontally',⁹⁵ Dugald Ferguson's 'sawn slabs laid horizontally',⁹⁶ and the 'horizontal slabbing' of a writer in the *Town and Country Journal*.⁹⁷ This was sensibly encapsulated in the term 'horizontal slab' used by Cox and

⁸⁸ Photograph kindly supplied by the late Mollie Turner Shaw.

⁸⁹ David Saunders [ed, *Historic Buildings of Victoria* (Melbourne 1966), p 64.

⁹⁰ Ray Sumner, *Settlers and Habitat in Northern Queensland* (Townsville, Queensland, 1974), fig 10.

⁹¹ Charles Norton, 'Mr Birch's Old Hut, "Seven Hills" 1844', pencil drawing, State Library of Victoria, H88.21/73. The house is of vertical slabs, but an outbuilding behind has horizontal slabs set in a frame.

⁹² Peter Freeman, *The Homestead: a Riverina Anthology* (Melbourne 1982), pp 120-121.

⁹³ Hatton, 'Maldon', II, p 68.

⁹⁴ Information from Peter Freeman, c 1990.

⁹⁵ McCrae, *Georgiana's Journal*, p 196.

⁹⁶ Dugald Ferguson, *Bush Life in Australia and New Zealand* (4th ed, Edinburgh 1908 [originally *Vicissitudes of ...* (London 1891)]), pp 32, 37-8.

⁹⁷ *Town and Country Journal*, 16 September 1871, p 364.

Freeland in their pioneering *Rude Timber Buildings* of 1969.⁹⁸ The alternative and less acceptable terminology probably has its roots in Mrs Æneas Gunn's reference of 1908 to the 'drop-slab-panel' system (which in fact used fitches, not slabs).

In the average hardwood slab building, assembled when the timber was green, the slabs shrank apart from each other to leave wide gaps,⁹⁹ and Richard Grice complained in 1839 that he lived in such a hut, 'made of slabs between every one of which a person may put their fingers, and would not be considered good enough for a cowhouse in England'.¹⁰⁰ Again, Georgiana McCrae wrote in 1846 of her house as being:¹⁰¹

... built of gum tree slabs supported, horizontally, by grooved corner posts and the same artifice (used again) for windows and doors. The biggest room has been furnished with a table and chairs, but no pictures - long lines of actual landscape appearing at interstices between the planks, instead! In addition to the house proper, we have recently erected a suite of wattle-and-dab rooms, which only need plastering before we begin to flatter ourselves on the possession of as comfortable an establishment as one could reasonably wish.

The slabs were of stringybark, and the building still stands. It is only rarely that a slab building is raised on stumps, but this is true of the Bowen River Hotel, built in about 1886-90 about 140 km from the coast in northern Queensland.¹⁰²

g. horizontal fitches

Sometimes split logs, or fitches with one curved face, were used in panels, so there is a complete spectrum between log panel and horizontal slab construction. Of the outbuildings at 'Albacutya' homestead at Rainbow, in the Wimmera region of Victoria, there survive two out of the original seven built between 1849 and 1857, and these have been removed to a folk museum. They are of half logs placed in the same way as horizontal slabs. The posts are squared, and have battens nailed up them to form a groove for the logs; the half round side of each log faces outward, and it is chamfered off at the end to fit into the groove, each panel being about 1 metre wide.¹⁰³

Horizontal fitches are also found at the homestead of 'Old Drumbanaghar' in the same region, dating from the 1860s.¹⁰⁴ One of the most dramatic

⁹⁸ Philip Cox & J M Freeland, *Rude Timber Buildings in Australia* (London 1969), p 48.

⁹⁹ James Armour, *The Diggings, the Bush, and Melbourne* (Glasgow 1864), p 13.

¹⁰⁰ Frank Strahan, 'Building a State - Victoria 1801-1900', in David Saunders [ed], *Historic Buildings of Victoria* (Melbourne 1960), p 16.

¹⁰¹ Hugh McCrae [ed], *Georgiana's Journal* (Sydney 1934), p 196.

¹⁰² Janet Hogan, *Building Queensland's Heritage* (Richmond [Victoria] 1978), p 121.

¹⁰³ Information supplied to the National Trust by Cr G A C Perkins of Rainbow, ref George Everard, *Old Pioneering Days*.

¹⁰⁴ Photographs supplied to the National Trust by Robert Kewley, 1985.

structures of this sort was a polygonal (possibly dodecagonal) hop kiln built by A W Howitt near Bairnsdale, Gippsland, in 1871-2. The horizontal slabs and fitches were held by pairs of timber cleats on the posts, the steep conical roof was shingled, and there was an adjoining store building with a bark roof tied with greenhide and weighted with pegged riders and ledgers.¹⁰⁵ Split logs were used for two successive homesteads at 'Big Willandra' station in Western New South Wales, the first of the 1860s and the second of 1884,¹⁰⁶ in the stables at 'Buckburruga' in the vicinity of Bathurst,¹⁰⁷ and in a very much smaller stable which survives in Bowen Street, Sofala.¹⁰⁸ The homestead at 'Newcastle Waters' near Darwin similarly appears to have been of horizontal fitch construction.¹⁰⁹ As also the surviving buildings at 'Old Andado' homestead near Darwin, apparently of the early twentieth century.¹¹⁰

¹⁰⁵ Howitt sketched the proposed buildings in a letter to his mother in November 1871: Marion Le Cheminant, 'A W Howitt's Hop Kiln', *Gippsland Historical Journal*, 15 (December 1993) pp 54-5. They are shown in a famous photograph: Lady Loch Album, State Library of Victoria, H 87.16, reproduced and discussed in Miles Lewis, 'Building Technology in Gippsland', *Gippsland Historical Journal*, 14 (June 1993), pp 2-3, 9.

¹⁰⁶ Geoff Ashley, 'Two Centuries of the Western NSW Dwelling', in Peter Freeman & Judy Vulker [eds], *The Australian Dwelling* (Red Hill [ACT] 1992), p 79.

¹⁰⁷ Photograph no 1304, Geological & Mining Museum, Bathurst, reproduced by R I Jack, 'History' illustration 18, in Hughes Trueman Ludlow, *Evans Shire Council Heritage Study* (2 vols, no place 1987), I, no page,

¹⁰⁸ Hughes Trueman Ludlow, *Evans Heritage Study*, (2 vols, no place, 1987), II, item 154.

¹⁰⁹ Unsourced photograph in the set *Punkahs and Pith Helmets* [Northern Territory Department of Education] (Winnellie [Northern Territory] 1983 [1982]), no 6.

¹¹⁰ Photographs provided by Dr Angela Hass, 1998.