

## 5.07 *The Exposed Frame*

### **the picturesque frame**

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The exposed timber frame, clad in boarding on the inner face only, is particularly characteristic of the architecture of Queensland, especially in the north, though it is not entirely unknown elsewhere. It is some time since I made the somewhat bold suggestion that there is an ecclesiological source for this concept, and this has now been generally accepted.

### *the picturesque frame*

The Ecclesiologists themselves did not invent the idea. Barracks and other buildings for New Orleans designed by Leblond de la Tour in 1723 show panels with criss-cross and diagonal bracing.<sup>1</sup> In 1805 the Frenchman Charles Krafft published designs of two garden temples built in timber, one allegedly in the garden of the English king [presumably George III] at Westminster, and the other in the pleasure garden of a stadtholder in Holland. The frames were exposed and were largely divided into square panels, each containing either a single diagonal brace or a pair of crossed braces. This frame was filled rather than lined with timber pieces, but the members nevertheless stood proud of the surface and created the distinctive exposed frame effect.<sup>2</sup>

The notion of exposed framing as a picturesque device was well established in England by the early nineteenth century, and by no means confined to the ecclesiologists or to church architecture generally. It was particularly promoted by S H Brooks in his *Cottage and Villa Architecture* of about 1839, with designs in a variety of styles, and generally with brick or other solid nogging between the framing.<sup>3</sup> This domestic use of exposed framing

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1 Unidentified source reproduced as Appendix 9 of Ian Molyneux and Associates, *Leschenault Homestead' Conservation Plan* (2 vols, Fremantle [Western Australia] 1996).

2 Charles Krafft, *Plans, Coups et Élévations de Diverses Productions de l'Art de la Charpentier* (Paris 1805), part II, plate 3.

3 S H Brooks, *Designs for Cottage and Villa Architecture* [London, no date (c 1839)]. Brooks illustrates three houses using exposed timber framing, between which is brick nogging plastered in different ways. Plates I to III show a sort of Tudor house, and XLVI and XLVIII a rather vertiginous Swiss design, both with the framing in vertical panels, and with the brickwork roughcast. XXXI to XXXVI show a house purporting to combine the Elizabethan and Old English styles, with the brickwork plastered. Another house of a Tudorish character, LVIII to LX, is perhaps meant to have the brickwork exposed. There is one house, XLIX to LI, in what might be described as a Helvetio-Italianate manner, with broad panels in the frame intended to be filled with flint or ironstone. Another two houses are in the 'Old English' - a very pretty loopy bargeboarded Gothic style - XL to XLII and LV to LVII, and are meant to be lathed between the framing, plastered inside, finished in Roman cement or mastic outside, and to have the cavity

had an impact in New Zealand in the very same circle where the ecclesiological version was introduced, that of Bishop Selwyn. Selwyn's chaplain, William Cotton, had strong views on architecture, and in 1843 wrote to his sister Phoebe, asking her to visit cottages recently built at Rooknest in Surrey and to sketch the best of them, 'as I think it very likely we may be able to build in the same style which shows the timber, in all manner of odd shapes between the plaster panels'.<sup>4</sup> In the event the style was used in New Zealand with timber boarding as filling, for example in two hospitals designed for Governor Grey by Selwyn's architect, Thatcher, between 1846 and 1848. One of them, though relocated, survives as a house called 'The Gables' at New Plymouth.<sup>5</sup>

There will always be occasional examples of exposed frames in cases where the building process has been interrupted by reason of shortages of money, labour or material, and an example in Sydney in about 1800<sup>6</sup> probably falls into this category. Here we are concerned with exposure of a more deliberate and architectural kind. In Victoria exposed framing is found in Samuel Jackson's Gothic 'Wattle House', St Kilda, of 1845. Though I have not been able to probe the structure, it appears to have a solid filling within the panels in the manner preferred by S H Brooks.

The German architect Frederick Kawerau had by January 1853 built what Edward Snell (who lived there with him for a time) described as 'a beautiful little Swiss cottage' in Skene Street, Geelong.<sup>7</sup> Although partly weatherboarded, the main body of the house, as shown in watercolour by Snell himself and by Jane Cannan, has such Swiss characteristics including a deep roof overhang at the gable, supported by angled brackets at the bottom corners. The walling has an expressed decorative frame of closely spaced studwork, with a horizontal member at sill height and a band of criss-cross bracing below the eave.<sup>8</sup> Snell himself bought the block next door, and his house (which was 'put up in a rascally manner') was probably designed by Kawerau:<sup>9</sup> though of masonry, it had a projecting gabled centrepiece in ornamental half timbering, not unlike the 'Asolo' in Hawthorn, long demolished.<sup>10</sup> At later dates there are numerous Australian buildings in Swiss or cognate picturesque modes, especially in gardens and parks, built with the frames wholly or partly exposed. One is the charming caretaker's lodge designed by R R Jewell for Victoria Park,

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filled (rather unwisely) with sifted coal ashes, sawdust 'or any other substance which will absorb the moisture'.

4 John Stacpoole, *Colonial Architecture in New Zealand* (Wellington 1976), p 31.

5 Stacpoole, *Colonial Architecture in New Zealand*, p 30.

6 The building adjoining the vessel in the stocks in E Dayes, 'A View of Sydney Cove, New South Wales', hand-coloured aquatint, said to be from a picture painted in the colony, c 1800. Tim McCormick et al, *First Views of Australia 1788-1825* (Chippendale, NSW, 1987), p 89.

7 Edward Snell [ed Tom Griffiths], *The Life and Adventures of Edward Snell* (North Ryde [NSW] 1988), p 379.

8 Snell's illustration, in his *Life and Adventures*, pp xxviii-xxix. The watercolour is undated, but Cannan painted almost exactly the same view at what must be almost exactly the same date, for in each the foundations of Snell's house are visible in the foreground and have reached the same stage. They were probably painting together, as there is later evidence that Snell knew the her husband at a later date. Cannan's illustration, unlike Snell's, can be dated: it must have been done during her only overnight stay in Geelong, probably in October or November 1853. J D Cannan, 'Geelong', view no 18 in the Royal Historical Society of Victoria's set of Jane Dorothea Cannan illustrations; for the date see Jane Cannan to Jeanette, 27 November 1853, no 10 in the Cannan Family papers, National Library of Australia, MS 401.

9 Snell, in his *Life and Adventures*, p 346.

10 Snell, in his *Life and Adventures*, p 349.

Perth, in a quasi-Italianate style.<sup>11</sup> Such designs should be seen as part of the tradition represented by Krafft's illustrations rather than anything to do with the Ecclesiological movement.

### *ecclesiology*

The Ecclesiologists were principally concerned with liturgical reform and revival within the Anglican church, generally in the context of a masonry architecture which correctly reflected Gothic precedents. However, they were also interested in the idea of devising church designs which, while liturgically correct, were better adapted to the climates and materials of colonial outposts. A critical figure in this was G A Selwyn, the Anglican Archbishop of New Zealand, who was a member and later a patron of the Camden Society (the predecessor of the Ecclesiological Society). The first issue of the *Ecclesiologist* contained a request from him for plans of churches suitable to New Zealand, and he was also a designer of some skill in his own right.<sup>12</sup> He at first built in stone, until he was forced in about 1847, by structural failures and budgetary constraints, to use timber for his college chapel at Tamaki, though this was seen only as a temporary building. His architect was Frederick Thatcher, who now went on to design a number of other timber buildings, including eight churches which were prefabricated in the college workshops for use in outlying settlements around Auckland, and hospitals at Auckland and New Plymouth for the government. All of these buildings had a single skin of vertical boarding on the inside face of the timber frame, which was exposed externally, with highly decorative cross-bracing.<sup>13</sup> This became known in New Zealand as 'the Selwyn style'.

Thatcher's churches were paralleled or followed elsewhere by other 'Hyperborean Gothic' timber churches (as G L Hersey calls them), designed with the framework on the face so as to make a pleasing pattern whilst evoking the effect of traditional European half timbered construction. A simple timber church in this tradition was designed by William White for Capetown in 1849, though only the main vertical members were expressed in the wall elevation (together with angled struts which served as buttresses).<sup>14</sup> A better example is that which R C Carpenter designed in about 1850 for Tristan da Cunha, though it was probably never built. This was now a full blown exposed frame building, though with vertical strip panelling unlike that of most later Australian examples.

Australian churches with exposed framing are all more or less Gothic in style, the first was probably that at Picton, near Bunbury, built by the Rev J R Wollaston in 1841. Whether it was really in the same self-consciously ornamental tradition as the later New Zealand buildings is debatable, however, for it was a genuinely traditional building with wattle and daub in the panels, and a thatched roof.<sup>15</sup> There is no such doubt about the church at Kiama, New South Wales, probably designed by Bishop Broughton. This, Kerr and

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11 Howard Tanner, Richard Roach Jewell 1810-1891', in Howard Tanner [ed], *Architects of Australia* [South Melbourne 1981], pp 38, 42.

12 Stacpoole, *Colonial Architecture in New Zealand*, pp 78 ff; R M Ross, 'Bishop's Auckland', in Frances Porter [ed], *Historic Buildings of New Zealand: North Island* [Auckland 1979], p 80.

13 Ross, 'Bishop's Auckland', p 83.

14 G L Hersey, *High Victorian Gothic* (Baltimore [Maryland] 1972), pp 83-5.

15 M P Morrison & John White [eds], *Western Towns and Buildings* (Nedlands [Western Australia] 1979), p 88.

Broadbent have suggested, may have been due to the direct influence of Bishop Selwyn, who was in Sydney in 1842 when the church was first being planned.<sup>16</sup> The tradition continues sporadically with other examples like Holy Trinity Church of England at Merriwa, New South Wales, of 1850-55. This is a fairly crude but consciously Gothic design by the clergyman R G Boodle, who said he was making it 'as much like Early English as I could in wood', despite the constraints of the materials available locally. It was made of split slabs set vertically within the framing, and roofed in shingles.<sup>17</sup> The charming Christ Church at Tarraville, Victoria, designed in 1856 by the local architects Petitt & Hastings, is more sophisticated, with ornamental chamfer-stopped framing members and horizontal sawn plank infill..

### *Queensland*

In due course such churches with decorative exposed frames appear in Queensland. Ray Sumner cites the Methodist church at Bundamba, said, but not reliably so, to date from 1865, which has decorative cross-bracing.<sup>18</sup> Meanwhile the first school with exposed framing was built at Nanango in 1865-6, almost certainly to Suter's design, in Donald Watson's opinion, and probably while he was working in the office of Benjamin Backhouse.<sup>19</sup> It is perhaps relevant that Backhouse had previously practised in Geelong, and would have known Kawerau's work. St Andrew's Church of England at Lutwyche, Brisbane, was built in 1866 to the design of Richard Suter, and has braces only above sill height, all running in the same direction, in panels between the windows. St David's Church at Lutwyche, also by Suter in 1866, is described as having fairly solid and widely-spaced exposed stud framing, braced only by the diagonally laid lining boards.<sup>20</sup>

Whether or not Suter was the first to introduce the exposed frame to Queensland, Watson has shown clearly that he was its most prominent exponent and, equally clearly, that his work was rooted in the ecclesiological tradition in general and the Selwyn school in particular. He was at Cambridge in the 1840s, and is said to have obtained a master of arts degree from the university. He claimed to have been 'all his life connected with church matters', and in Watson's view was undoubtedly a member of the Cambridge Camden Society. His brother was ordained a deacon in 1855, whilst Bishop Selwyn was visiting Britain, and later became Bishop of Nelson, New Zealand. The Suters maintained contact with Sampson Kempthorne, who had worked in Suter's father's office before migrating to New Zealand in 1841-2.<sup>21</sup>

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16 Joan Kerr & James Broadbent, *Gothick Taste in the Colony of New South Wales* (Sydney 1980), pp 64, 74.

17 Joan Kerr, 'Authentically Australian Gothic', *Transition*, 26 (Spring 1988), pp 5-6.

18 Ray Sumner, 'The Queensland Style', in Robert Irving [ed], *The History and Design of the Australian House* (Melbourne 1985), pp 300-301, based on illustrations in P Hyndman & M Baker, *An Approach to Queensland Vernacular Architecture* (Brisbane 1975).

19 Donald Watson, 'Models of Neat Architecture for Imitation' (undated typescript draft paper to the Australian Victorian Association, pp 3-4. This is Watson's opinion as revised from that expressed in his 'Outside Studding', *Historic Environment*, VI, 2 & 3 (1988), pp 27-8.

20 Sumner, 'The Queensland Style', pp 300-301.

21 Watson, 'Outside Studding', pp 28-9.

The Nanango school was described as being 'somewhat in the Chalet or Swiss style',<sup>22</sup> which certainly suggests that it belonged to the tradition of Kawerau's house rather than to that of ecclesiology. It all depends upon whether the description was that issued by the architect himself or was that of a reporter, who could not be expected to understand an ecclesiological connection. The building is unusual in that the lining boards were placed vertically, but they were diagonal in the church at Lutwyche, and also in the school at Oxley Creek of 1866, the first which can be definitely attributed to Suter.<sup>23</sup> Others of his schools, like that at Beenleigh, had the horizontal boarding which was to become the Queensland norm. In 1874 the Board was pleased to note that in buildings designed that year as school houses and teachers' residences, it had been possible to add a verandah at front and back for no extra cost, because this eliminated the need for an outer layer of boarding: 'The studding tastefully disposed and painted being placed on the outside, the exterior of the building has gained rather than lost in appearance, while the interior is smooth and not disfigured.'<sup>24</sup>

### *the exposed frame vernacular*

Variations in the pattern of exposed framing were apparent very early, and soon developed into something like regional characteristics. It seems that all the early examples were all self-consciously decorative - either the bracing was all criss-crossed, or if it was not then it was very artfully arranged, or it might be dispensed with entirely in favour of diagonal boarding. The idea of exposing a common stud frame, with only lightweight bracing let into the studs as convenient, is a later one. St Andrew's, Lutwyche, had bracing running in only one direction, as has been described, but it was confined within single panels, and was placed so as to create a sort of continuous pattern. Suter's school at Oxley Creek had bracing which was decorative and well in excess of structural requirements, but it was continuous through more than one panel, and probably for the full wall height. At the Beenleigh school it was discontinuous, forming decorative criss-crosses within the larger panels. St David's Church at Allora, of 1870, had many small cross-braced panels, which have since been covered with weatherboards, and the nearby St Augustine's at Leyburn, of 1871, has a similar pattern.<sup>25</sup> Another well-known example is the former St George's Presbyterian church at Beenleigh of 1876.<sup>26</sup>

It is difficult to know what weight to attach to Peter Bell's claim that the studs were exposed on the rear wall only of J M Black's house at Townsville of 1864.<sup>27</sup> This would make it the earliest reported example in Queensland, if it were not for the obvious questions to be asked about it - whether this was really the finished and intended treatment, or merely some temporary expedient which was tolerable in an obscure location. Some light is shed on this by the report that the house of Andrew Ball, the first white man in the area, had the walls

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22 *Burnett Argus*, 19 May 1866, p 2, quoted in Watson, 'Models of Neat Architecture', p 4.

23 Watson, 'Outside Studding', p 30.

24 Watson, 'Outside Studding', p 30.

25 Sumner, 'The Queensland Style', pp 300-301.

26 Philip Cox & John Freeland, *Rude Timber Buildings in Australia* [London 1969], plate 109 & p 206; Malcolm Fraser et al, *The Heritage of Australia* (Melbourne 1981), p 4/25.

27 Peter Bell, 'Square Wooden Boxes', *Historic Environment*, VI, 2 & 3 (1988), p 35.

lined only on the inside, but it is not clear when this was built.<sup>28</sup> Bell has also cited a photograph of the Nulla Nulla homestead in 1867 as the earliest extant image of an exposed frame building in northern Queensland, but it is a primitive building, and as seen in the photograph - as Bell himself says - it seems unfinished. Whether the frame was meant to remain exposed is therefore questionable. However, in 1868 exposed studding was used beneath the verandah of the Burdekin and Flinders Hospital at Townsville, and if the earlier claims were discounted then its designer, E R Roberts, would have to be regarded as the person who brought the technique to northern Queensland.<sup>29</sup>

In the south, exposed criss-cross bracing was used in Thomas Hanlon's hotel at Yatala by 1871,<sup>30</sup> and the Lands Office at Stanthorpe was built with an exposed frame by 1872.<sup>31</sup> It was during the 1870s, according to Sumner, that the 'exposed, diamond-patterned stud frame appeared in houses.'<sup>32</sup> In 1877 John Maryer built his small house at Kingston, south of Brisbane, with an exposed frame and a surrounding verandah,<sup>33</sup> and at about the same time (or between 1874 and 1883) Chris Blanc used exposed framing at 'Arrawa' (later called 'High Barbaree') on the Cabbage Tree Creek.<sup>34</sup> In 1884 the reception house for the Rockhampton Gaol was designed with exposed framing consisting of little more than vertical studs, with one diagonal brace at either end of the long elevation.<sup>35</sup> By 1885, according to Peter Bell, the Colonial Architect's office had not only accepted exposed framing for government buildings, but was even specifying appropriate regional variations which reflected local practice. The X-braced frame with heavier and more widely-spaced studs was common in the south, and especially the south-east, and might be boarded either horizontally or vertically. The distinctive frame of the north is the plain stud frame, braced only by a few light diagonals near the corners.<sup>36</sup> As early as 1874, Watson has pointed out, some of the problems of the exposed frame were becoming apparent. Water was retained in the joints and on door and window heads and this gave rise to decay in the timber, as a result of which some walls were subsequently sheeted or had verandahs added. In northern Queensland, where the problem was more acute, diagonal bracing was rarely used. Walls were sheeted above window and door heads to protect them, and the bottom plate was often protected with a weathered timber capping.<sup>37</sup>

In looking for explanations for the exposed frame Ray Sumner rather surprisingly dismisses the relevance of climate, and first raises the question of economy, but does not explain why this was a particularly pressing consideration. She then postulates a resemblance to half timbered houses in the West Indies and the southern United States, but is unable to explain why this half timbering is more relevant than half-timbering in any other part of the world, and especially that of New South Wales. She then considers the influence of British prefabricated buildings, but as she discusses mainly examples which do not have exposed

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28 A J Wallwork, 'Four Early Timber Homes in Townsville', *Architecture in Australia*, LVII, 1 (February 1968), p 97.

29 Donald Watson & Judith McKay, *Queensland Architects of the 19th Century* (Brisbane 1994), p 153.

30 Photograph, Oxley Library negative 166752, no 803.

31 Photograph, Oxley Library negative 1203, no 20206.

32 Sumner, 'The Queensland Style', p 301.

33 Ray Sumner, *More Historic Houses of Brisbane* (Brisbane 1982), pp 28-9.

34 Sumner, *More Historic Houses of Brisbane*, pp 26-7.

35 J S Kerr, *Out of Sight, Out of Mind* (Sydney 1988), p 128.

36 Bell, *Timber and Tin*, pp 122-3; Bell, 'Square Wooden Boxes', p 35.

37 Watson, *The Queensland House*, p 5.10.

frames, it is unclear why they are relevant. After finally considering my own explanation, the Ecclesiological one, she concludes that all of them may be relevant.<sup>38</sup>

In fact most attempts which have been made to explain the Queensland exposed frame have to a greater or lesser extent skirted around the obvious. A large number of timber churches is to be expected in a pioneering situation, and especially in a climate like Queensland's. A form of church had already been devised which was suitable for the climate, which had the Ecclesiological imprimatur, and which had been used in the Australian colonies. It would have been remarkable if it were not adopted in Queensland. Given that Suter was the designer of the first such churches, it is not especially surprising that he used the system in his schools as well. In Queensland these exposed frame churches and schools generally seem to precede the use of exposed frames in houses and other structures, and therefore seem likely to be the source of the idea so far as that colony is concerned. Donald Watson has in fact demonstrated the fact that schools were seen as precedents for other buildings by quoting the Board of General Education:<sup>39</sup>

In country districts and in some of the towns, the schools and residences occupy well chosen sites and often afford to the inhabitants of the remote interior, models of architecture for their imitation.

Exposed frame churches were built elsewhere in Australia, such as the Presbyterian Church at Tenterfield, New South Wales - where what was exposed was simply a utilitarian stud frame without ornamental development.<sup>40</sup> Exposed frame houses are hardly found outside Queensland, but some appeared in the Northern Territory, as at Lake Nash homestead, which shows in a photograph of 1889 as a substantial two storey house with a verandah and balcony across the front. The ground floor level appears to be of rubble, but the upper is a simple exposed frame with no visible diagonals.<sup>41</sup>

### *the later picturesque*

The tradition of Swiss and picturesque half-timbered designs continues in structures of a specifically decorative function, such as garden pavilions. One of the grandest is a portable ballroom built in about 1889 at 'Hathrop', near Bathurst, New South Wales, moved to St Mary's Convent in William St, Bathurst, and moved again in 1984 to 'Glanmire Hall' on the Great Western Highway, Glanmire.<sup>42</sup> Another is a ornamental pavilion in the gardens of Parliament House, Melbourne.<sup>43</sup> These must be referred to the secular British tradition of exposed framing, which had continued after the ecclesiological one was forgotten. R S

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38 Sumner, 'The Queensland Style', pp 298-301.

39 Quoted in Watson, *The Queensland House*, p 5.9.

40 J Cameron, *Centenary History of the Presbyterian Church in New South Wales* (2 vols, Sydney 1905), pl 94, reproduced in Nicholas Back, 'The Elphinstone Family' (BArch, University of New South Wales, 1978), pl 28.

41 Illustrated in Vern O'Brien, 'The Nation Builders', in Val Dixon [ed], *Looking Back: the Northern Territory in 1888* (Casuarina [Northern Territory] 1988), p 61.

42 Malcolm Fraser et al, *The Heritage of Australia* (South Melbourne 1981), pp 2/252-3; Hughes Trueman Ludlow, *Evans Shire Heritage Study* (2 vols, no place, 1987), II, no 171.

43 E W Ellem, *Australia Felix* (Melbourne 1985), p 19.

Burn's *Building Construction*, a widely read British text of 1877, illustrates, in the context of his discussion of American balloon framing, decorative framing in 'what is called the half-timbered style'.<sup>44</sup> The pattern resembles the 'x-braced' framing of the other colonies and of south Queensland, rather than the more austere forms of the north, and it is not absolutely clear whether one is seeing the structural frame itself, or a purely decorative overlay on a conventional timber wall.

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44 R S Burn, *Building Construction* (London 1877), p 97.