

## 6.07 *The Marseilles Tile*

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### *the Marseilles canon*

The story of how Marseilles established its phenomenal export trade in roof tiles, and how the typical Marseilles design came to be adopted, remains a little mysterious, partly because the export trade preceded the ultimate design. We have seen that the Gilardoni tile had developed in France from the 1840s, and that by 1860 a few French tiles of this character had reached Australia. A similar, if crude pattern, appears as one of three types shown in Joseph Curet's Victorian patent of 1859, and in 1860-1 Charles Mayes refers to Curet's tiles as 'similar to the Marseilles tile', showing that the expression was in use long before the ultimate pattern is known to have reached Australia. Mayes seems to think his readers will understand this term, whereas an average British reader certainly would not, so we must assume that these 'Marseilles' tiles were on the market locally. It seems likely that Lange's tiles were made in Marseilles, and were therefore known by that name, and indeed Marseilles tiles are said to have been exported throughout the world by the 1860s.<sup>1</sup> But they were not Marseilles tiles in the evolved form we know today, and it will be simpler to think of them as a proto-Marseilles type or types.

The pioneering investigation of the Marseilles tile in Australia was that of Robert Varman of Sydney,<sup>2</sup> but since his initial report the Wunderlich company has been researched by Susan Bures and others,<sup>3</sup> and much else has been learnt, especially about the prehistory of the Gilardoni tile, and about the use and distribution of the Marseilles tile overseas. What follows has benefited from the help not only of those who are acknowledged seriatim, but from the assistance of my colleague George Tibbits, who initiated the small reference collection of tiles at Melbourne University. The greater part of this material was published in 1986 in a journal which will be unfamiliar to most present readers.<sup>4</sup>

As a cultural phenomenon the Marseilles tile is quite remarkable, for it originates in France, as its name suggests, but is little known there today, and is still less known in Britain and the United States. It has made its home in Turkey, India, South America, Singapore and

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- 1 Pedro Guedes, *The Macmillan Encyclopedia of Architecture and Technological Change* (London 1979), p 248.
  - 2 R J Varman, *The Marseilles or French Pattern Tile in Australia* (Sydney, no date).
  - 3 Susan Bures & Barry Groom, 'The Wunderlich Project - an exercise in industrial archaeology', in Judy Birmingham & Damaris Bairstow, *Papers in Australian Historical Archaeology* (Sydney 1987), p 118; Susan Bures, *The House of Wunderlich* (Kenthurst [New South Wales] 1987).
  - 4 Miles Lewis, 'The Marseilles Tile in Australia', *Australian Institute of Building Papers*, I (1986), pp 67-89.

Australia because of an active export trade out of Marseilles and because of its relative lightness and effectiveness in keeping out even heavy downpours and wind-driven rain. Its good strength to weight ratio is due to the fact that it is moulded into a relatively complex ribbed shape, and its watertightness is due to the fact that the shape includes overlocking ribs and grooves which seal one tile against the next.

Varman has previously summarised, on the basis of Lefèvre and Bourry's treatises, what is known of the evolution of the tile at Marseilles. The Gilardoni diamond pattern tile was being made there in two sizes, 390 x 230 mm and 420 x 250 mm, and from this larger size the Martin brothers later developed the canonical Marseilles pattern, which came to be manufactured by what Lefèvre refers to as the United Tileries of Marseille.<sup>5</sup> When this development occurred is not reported, and it could have been at any time after the Gilardoni patent of 1851 and before the arrival of true French Marseilles tiles in Australia and elsewhere. According to Susan Bures the Marseilles manufacturers formed the Société Générale des Tuileries et Céramiques, which became, after about 1900, the Société Générale des Tuileries de Marseilles [*sic?*] et Cie (which is doubtless the same as the 'United Tileries'). She claims that it marketed the tiles in two colours, grey for Europe and red for tropical areas like South America and Australia.<sup>6</sup>

### *the imported Marseilles tile*

In 1888 the Marseilles tile proper was shown at the Centennial International Exhibition in Melbourne by the Société Anonyme des Tuileries et Produits Céramiques of Marseille - obviously the company referred to by Bures, though the name is somewhat different - and was awarded a First Order of merit and a silver medal.<sup>7</sup> Immediately the tiles began to appear on some substantial local buildings, though some unsubstantiated accounts have suggested that it first appeared a year or two earlier.<sup>8</sup> Contemporary with the exhibition the tiles were used on Alexander McCracken's house, 'North Park' (later 'Woodlands') at Essendon, Melbourne, and described as being 'the Marseilles patent roofing tiles, lately introduced into this colony, and here used largely for the first time'.<sup>9</sup> In October-November 1889 a consignment of 213,000 tiles (presumably of the Marseilles type) arrived to the order of Ostermeyer, Dewez & Co of Melbourne, and was entirely bought up by Barnett Brothers of Collins Street.<sup>10</sup>

So far it had not been apparent that there was any exclusive agency for Marseilles tiles, but in March of 1890 it was reported that Rocke & Co, of Melbourne, after hard fighting to

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5 Leon Lefèvre, *Architectural Pottery* (London 1900), p 324; R J Varman, *The Marseilles or French Pattern Tile in Australia* (Sydney, no date), \*\*\*.

6 Bures, *House of Wunderlich*, p 32.

7 *Official Record of the Centennial International Exhibition, Melbourne, 1889* (Melbourne 1890), pp 396, 851, 935.

8 The claims are that Rocke & Co of Melbourne imported some of the tiles in 1886, and these were used on a house in St Kilda Road, and that Walter Lamb of Sydney imported a small shipment in the same year. Robin Boyd, *Victorian Modern* (Melbourne 1947), p 10; Robin Boyd, *Australia's Home* (Melbourne 1952), p 137; J M Freeland, *Architecture in Australia* (Melbourne 1968), p 193.

9 *Australasian Builder and Contractor's News*, 20 April 1889, p 379.

10 *Australasian Builder and Contractor's News*, 9 March 1889, p 445.

overcome strong colonial prejudices, had now been successful in introducing 'French terra cotta roofing tiles'. They were 'already coming under particular favour of Sydney architects', and they were being used on the T W Walker Convalescent Hospital, the Railway Institute, A M Allan's house at Summer Hill, and numerous private dwellings.<sup>11</sup> Varman discusses various examples of their use in Sydney,<sup>12</sup> all of which post-date the surviving tiles at North Park. In 1890 they were used on 'Urrbrae House' at Netherby, South Australia, designed by C H Marryat and E J Woods.<sup>13</sup> In 1890 Marseilles tiles seem to have been used on the stables at 'Tallegeira', St Kilda, by the architects Sydney Smith & Ogg,<sup>14</sup> and a prominent use in the following year was at the house 'Edzell' in Toorak.

What followed can be traced in fair detail. The Melbourne merchants W H Rocke & Co became major importers, and arranged for regular shipments to colonial ports, including Sydney.<sup>15</sup> However by 1892 the financial recession had left the company in financial difficulties. According to one account the Wunderlich Patent Ceiling and Roofing Co Ltd, which had begun operations in Sydney that year, was contacted by the Belgian consul and persuaded to accept a cargo of tiles intended for another firm which was unwilling or unable to accept the consignment.<sup>16</sup> As Rockes must have been the defaulting consignees, it is unclear why the Belgian consul should have been involved as an intermediary, given that they the two companies were already associated in the metal ceiling business.

It is unclear whether Wunderlich's continued at this stage to receive consignments from Marseilles, but in January 1893 it was reported that they had acquired Rockes' business in stamped metal ceilings and terra cotta, but that the latter department would continue as before under the charge of Alex Knox, who would continue to supervise the fixing of Marseilles tiles.<sup>17</sup> Wunderlich's advertised during the 1890s as the sole agents for the importation of Marseilles tiles,<sup>18</sup> but it seems that this must have been an agency only for New South Wales. By 1901 Rocke & Co were listed as the Melbourne agents for Wunderlich,<sup>19</sup> and in 1906 Rocke & Co were again advertising, from Sydney and Melbourne addresses, as the sole agents for the Marseilles roofing tiles.<sup>20</sup> In 1908 Wunderlich and Rocke amalgamated to form the new public company of Wunderlich Limited.<sup>21</sup>

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11 *Australasian Builder and Contractor's News*, 15 March 1890, p 849.

12 Varman, *The Marseilles Tile in Australia* \*\*\*

13 Information from Caroline Wigg, 1991. The house is illustrated in Malcolm Fraser et al, *The Heritage of Australia* (South Melbourne 1981), p 5/38.

14 Sydney Smith & Ogg called tenders for the stables in the *Building, Engineering and Mining Journal*, 12 April 1890, supplement p 3. The house was advertised for sale in the *Argus*, 14 April 1923, p 2, together with a 'massive brick building' on the adjoining site, which appears to have been the stables, and was said to have an 'imported tile roof'. Imported tiles would almost certainly date no later than 1914, and it is most unlikely that the roof was replaced within the first twenty-four years, so it was probably the original.

15 *Australasian Builder and Contractor's News*, 15 March 1890, p 849.

16 Wunderlich Ltd, *Forty Years of Wunderlich Industry* (Sydney 1927), p 15.

17 *Building and Engineering Journal*, 7 January 1893, p 10.

18 Wunderlich, *Wunderlich's Patent Embossed Metal Ceilings* (?Redfern [New South Wales] 1897) [Wunderlich Collection, Powerhouse Museum, A7437-9/1], p 16. Also in 1894 and 1899: Bures, *House of Wunderlich*, pp 32, 48.

19 Bures, *House of Wunderlich*, p 71.

20 *Sands & McDougall's Melbourne, Suburban and Country Directory for 1906* (Melbourne 1906), p 1838.

21 Bures, *House of Wunderlich*, p 70.

In August 1896 imported French Marseilles tiles were advertised in Perth, as being<sup>22</sup>

... largely used in other colonies, in South America and southern parts of Europe and are eminently suitable for hot climates and adopted by the Government of N.S.W., for hospitals, public buildings, railway sheds. Cool, light, everlasting and almost as cheap as galvanized iron. Guaranteed waterproof and fireproof.

It seems that this was an advance announcement, for it was only in January 1897 that the arrival of Marseilles tiles in Perth was announced in an advertisement in the *West Australian* over the name of Charles Dunkley, local agent for the Wunderlich Patent Ceiling and Roofing Company Ltd of Sydney. It stated that the *Antares* was anchored in Gage Roads with a cargo of half a million roofing tiles direct from Marseilles, which were to be sold from the ship, and collected or delivered by barge.<sup>23</sup> It seems probable that Marseilles tiles were used on the Perth Mint, built in 1896-7, and certainly French-made Marseilles tiles are still to be seen on a rotunda in King's Park, above the Swan Brewery site,<sup>24</sup> believed to date from about 1897.<sup>25</sup> They are also found in the nearby pavilion on Fraser Avenue, which dates from 1898, but this was moved only in 1919 from the foot of Mount Eliza to the present location.<sup>26</sup> In 1899 Dunkley established a tile yard for Wunderlichs in St George's Terrace, and by 1903 it was reported that tiles were to be seen in 'the better class of house' in Claremont, Perth, West Perth and Mount Lawley.<sup>27</sup> In 1908 Wunderlich's dispensed with the agency and opened their own office and factory - though not, apparently a tile factory - in Lord Street.<sup>28</sup>

In Queensland also the first Marseilles tiles appear in 1897, at Robin Dods's house for John Reid, Clayfield,<sup>29</sup> and his nurses' home for the Brisbane Hospital.<sup>30</sup> After 'Urrbrae House' they do not seem to have been used in South Australia until 1898.<sup>31</sup> In 1901 Wunderlichs had agencies in all states but Tasmania, including separate ones for North and South Queensland, plus three agencies in New Zealand (for Dunedin and Wellington, Christchurch, and Auckland).<sup>32</sup> In 1895 the house and gate lodge at 'Mona Vale',

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22 Ingrid van Bremen, 'The New Architecture of the Gold Boom' (PhD, University of Western Australia, 1990), p 137: the source is not identified.

23 *West Australian*, 30 January 1897, p 5, quoted by Bryce Moore, *From the Ground Up* (Nedlands [Western Australia] 1987), p 55. Ian Kelly, 'The Development of Housing in Perth (1890-1912)' (MArch, University of Western Australia, 1991), p 208, cites this as p 7. He also cites an advance notice in the *Western Mail*, 11 December 1896, p 24.

24 Information from Ingrid van Bremen.

25 Ian Molyneux, *Looking Around Perth* (East Fremantle [Western Australia] 1981), p 27.

26 Molyneux, op cit, p 29.

27 R M Hamilton, 'The City of Perth, Western Australia', *Journal of the Royal Institute of British Architects*, XI, 7 (November 1903), p 18, cited by Kelly, 'Housing in Perth', p 208.

28 Bryce Moore, *From the Ground Up* (Nedlands [Western Australia] 1987), p 56.

29 S U Smith & Bertam Stevens [eds], *Domestic Architecture in Australia* (Sydney 1919), pl XLVI.

30 Robert Riddel, 'Sheeted in Iron', in Trevor Howells [ed], *Towards the Dawn* (Sydney 1989), p 111.

31 'Attunga', in Kensington Road, Toorak Gardens, of about 1898, has shingle tiles on the spire, which look to be original, and Marseilles tiles on the roof. See Katrina McDougall, 'A Preference for Stone' in Trevor Howells [ed], *Towards the Dawn* (Sydney 1989), p 130.

32 J F Cattell, 'Domestic Architecture in Christchurch and Districts, 1850-1938' (MArch, University of Auckland, 1981), pp 74-5.

Christchurch, were roofed in Marseilles tiles, which were said to have been only recently introduced.<sup>33</sup>

### *the Marseilles manufacturers*

The tiles used at North Park are branded on the underside 'GUICHARD CARVIN & Cie / MARSEILLE St ANDRE' with the sign of a bee, and a bee also appears on the upper face, right on the nose of the tile. This seems to be one of the more prominent brands, and continues to be found, for example at the Newtown Tram Depot, Sydney, of 1900,<sup>34</sup> and, at about the same time, at the Anglican church at Kapunda, South Australia, designed by F J Naish.<sup>35</sup> The earliest rival type known to the present writer is that found at 835 Hampton Street, Brighton, by Philip Treeby in 1889,<sup>36</sup> and two houses of the early 1890s.<sup>37</sup> This is branded

ANTOINE [anchor placed sideways] SACOMAN  
USINE LA PLATA. MARSEILLE. S<sup>T</sup>. HENRY

with no brand on the upper face. Thus Sacoman seems to be only a licensee, whereas Guichard Carvin were perhaps the owners of the patent. There are a number of other French brands, mostly rarer, such as the turtle (Tuileries de la Méditerranée), found at Koroit Railway Station, Victoria,<sup>38</sup> and a now-demolished house in Jordan Terrace, Bowen Hills, Brisbane, of 1911.<sup>39</sup>

Two firms descended from or related to these early ones appear amongst the many later makers. One is Guichard Frères, whose tiles are unmarked on the upper side, but branded underneath 'GUICHARD FRERES / SEON St. HENRI MARSEILLE', with a lion. A house with this type is 'Nocklofty', Parkville, Victoria, of 1907-8. The other relevant type is that of Pierre Sacoman, examples of which are widespread, with a star on the nose and a brand underneath 'PIERRE SACOMAN / St. HENRY MARSEILLE'. 'Henry' is spelled in the English fashion, as with Antoine Sacoman. A minor difference in design is that in these tiles the lettering falls within two bands of an elongated U-shape, whereas the Guichard Carvin, Antoine Sacoman and Guichard Frères tiles all have a narrower ogee-pointed band with the lettering falling outside it on either side.

Six French types were advertised in 1899, the bee, lion, star, spade, cock and horse brands,<sup>40</sup> with the somewhat surprising omission of the anchor of Antoine Sacoman. Susan

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33 Bures, *House of Wunderlich*, p 71.

34 Drawn to my attention by Martin Carney.

35 Information from Peter Bell and Paul Stark, 1991.

36 Located by Simon Reeves, 1997.

37 'Boisdale' homestead near Maffra, Victoria, of 1892, and 'Tay Creggan', Melbourne, of 1893, both by the architect R G Purchas

38 Information from Timothy Hubbard, Melbourne, 1991.

39 Information from Robert Riddell, 1991.

40 Bures, p 48, *House of Wunderlich*, citing the *Sands Directory*, 1899. The star, spade, bee and lion types were all advertised in Melbourne by W H Rocke & Co as sole agents and importers of Marseilles roofing tiles for Victoria and Tasmania: *The Melbourne and Metropolitan Board of Works Sewerage Scheme* (Melbourne 1900), advertisement, no page.

Bures and her colleagues have noted all seven plus three further types of imported tiles amongst those used to roof areas of the Wunderlich factory between 1892 and 1914.<sup>41</sup>

Cock	SAUMATI FRERES, Marseilles, St Henri*
Horse	LES FILS DE JULES BONNET, La Viste, Marseille
Bee	GUICHARD CARVIN ET CIE, Marseille, St. André
Lion	GUICHARD FRERES*, Seon, St. Henri, Marseille
Star	PIERRE SACOMAN, St. Henri, Marseille
Spade	PIERRE AMEDEE, St Henri,* Marseille
Anchor	ANTOINE SACOMAN, Usine la Plata, *St. Henri,* Marseille
Maltese Cross	ARNAUD ETIENNE ET CIE, St. Henri, Marseille
Turtle	TUILERIES DE LA MEDITERRANNEE*, Siège Social, Marseille
Horned Head	) GUSTAVO GAVOTTI, Lungavilla, Voghera
Entwined Anchor	

The actual incidence of these brands varies enormously, but I personally have come across Guichard Carvin, Guichard Frères, Pierre Sacoman, Antoine Sacoman, and Tuileries de la Méditerranée.<sup>42</sup>

### *local manufacturers*

By 1891 the brick and tile works originally established by Judge Holroyd at Sherwood, New South Wales, were making amongst other things 'corrugated roof tiles which, it was said 'compare most favourably with the Marseilles goods'<sup>43</sup> - though whether they were of same pattern is not clear. In Sydney an abortive enterprise was begun by the Italian immigrant Giuseppe Andina to produce genuine Marseilles tiles, dies for which were made up by James Nangle, and he got as far as making a demonstration batch of Marseilles tiles and other products.<sup>44</sup> Goodlet & Smith began making roofing tiles in 1894, possibly of the Marseilles pattern, and are said to have been so successful that production had to be boosted in 1896,<sup>45</sup> but other evidence suggests that they made the Marseilles pattern only from about 1897.<sup>46</sup> They certainly appear in the firm's catalogue of 1902.<sup>47</sup> In Launceston

41 Bures & Groom, 'The Wunderlich Project', p 118. There are differences from the list in Bures, *House of Wunderlich*, p 156, but this list appears to be the more accurate.

42 'Warra', 3 Murdoch St, Wangaratta, 1908. Timothy Hubbard also reports turtle branded Tuileries de la Méditerranée tiles on the Koroit Railway Station, Victoria.

43 *Australasian Builder & Contractor's News*, 14 March 1891, quoted by Alfred Barbara, 'Terra Cotta in Sydney Architecture 1788-1914' [2 vols, BArch, University of New South Wales, no date (1978)], II, p 304.

44 *Australasian Builder & Contractor's News*, 12 September 1891, p 207, and, for Nangle *BEJBN* 8 August 1895, pp 4-5, quoted by Alfred Barbara, 'Terra Cotta in Sydney Architecture 1788-1914' [2 vols, BArch, University of New South Wales, no date (1978)], II, p 307.

45 A W Johnson, 'Goodlet and Smith Ltd. Brickworks, Roofing Tile Manufacturers, Cement Works & "Benedict Stone" Manufacturers. Granville, N.S.W. (1886-1982)' (3 vols, major project for Historical Archaeology II [University of Sydney] 1982), p 5.

46 Alfred Barbara, 'Terra Cotta in Sydney Architecture 1788-1914' [2 vols, BArch, University of New South Wales, no date (1978)], II, p 24. Barbara, p 317, cites the Goodlet & Smith 1907 price book as stating that their tiles had been used for 'over ten years' and, after Varman, an article of 1915,

it was proposed in 1894 that locally manufactured Marseilles pattern tiles would be used in the improvements at Cataract Gorge, but it does not appear that anything came of this.<sup>48</sup>

Varman believes that there were a number of local manufacturers by 1895, but the only really promising evidence is that G Blackburn of Mitcham, Victoria, claimed to produce roofing tiles which 'cannot be beaten anywhere in the world.'<sup>49</sup> This would not in itself necessarily imply the Marseilles pattern, but there is a surviving (but undated) example branded simply 'Blackburn', which is a somewhat simplified version of the Marseilles design.<sup>50</sup> An advertisement by Wunderlichs in 1893 that they are 'Sole Agents for the *original* French terra cotta roofing tiles'<sup>51</sup> (my emphasis) is suggestive of competition, but might only reflect rivalry between French brands. In Perth there were experiments in the early 1890s in making roofing tiles, probably of traditional rather than the Marseilles pattern, and tiles were made sporadically during subsequent years at William Turton's pottery, East Guildford. It was a Guildford pottery, possibly Turton's, which supplied tiles in 1901 for Parliament House. These were too porous, and are said (rather surprisingly) to have warped and twisted after fixing. Thousands had to be discarded in favour of imported tiles.<sup>52</sup>

A few other local manufacturers began to imitate the Marseilles pattern after the turn of the century. Alfred Cornwell & Co of Brunswick was a well-known Melbourne firm which was making roofing tiles by 1906,<sup>53</sup> possibly of the Marseilles pattern, as there are surviving (but of course undated) examples bearing Cornwell's brand.<sup>54</sup> Robin Boyd gave 1908 as the year of local manufacture<sup>55</sup> and, though the basis of this is unclear, by 1910 the City Tile & Brick Co of Upper Hawthorn and Malvern was making roofing tiles. These would not necessarily be of the Marseilles pattern, but undated Marseilles tiles bearing the company's kangaroo brand have been found.<sup>56</sup> Porter and Galbraith of Sydney were advertising 'French Pattern Tiling' in 1909, but there is little to support Varman's idea that there were a number of local manufacturers, for he himself quotes a Legislative Assembly report which implies that Goodlet & Smith were the only local manufacturers at the time of the Great War.<sup>57</sup> Certainly they are the only local makers named in Jeffries's *Australian Building*

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referring to Marseilles tiles made in Sydney and exported to Melbourne for the last nineteen years.

47 Goodlet & Smith, *Catalogue* (Sydney 1902) [in private ownership] reproduced in Ian Evans, *The Australian House* (Sydney 1983), p 40.

48 *Building and Engineering Journal*, XII, 293 (10 February 1894), p 45, cited Robert & Miranda Morris-Nunn, 'Pure Air and a Lovely Aspect', in Trevor Howells [ed], *Towards the Dawn* (Sydney 1989), p 88.

49 Varman's reference for this is incorrect, but the date is apparently about 1890-1893.

50 Collected by George Tibbits.

51 *Building and Engineering Journal*, 7 January 1893, p 10.

52 Bryce Moore, *From the Ground Up* (Nedlands, WA, 1987), pp 56-7. On this topic Ian Kelly, 'The Development of Housing in Perth (1890-1912)' (MArch, University of Western Australia, 1991), cites H Bowley in the *Journal of the Royal Society of Western Australia*, XXVI (1940), pp 185 & 155.

53 *Sands & McDougall's Melbourne, Suburban and Country Directory for 1906* (Melbourne 1906), p 1838.

54 In the writer's collection, ultimate provenance unknown.

55 Robin Boyd, *Victorian Modern* (Melbourne 1947), p 10.

56 Information 1999 from Terry Sawyer, who has seen the tiles and has consulted a directory of 1910.

57 Varman \*\*\*

*Estimator* of 1907.<sup>58</sup> But there is evidence in the other direction, for Dana Mider has discovered Marseilles tiles at the site of the Blue Post Hotel, Hurstville, Sydney, which are believed to date from work done in 1907, and are branded

THE NEWMAN-UNDERWOOD CO.  
MERRYLANDS NSW

The dates of this manufacturer have not been established, and the date of the tiles themselves must be considered only tentative.<sup>59</sup>

Before the war Wunderlichs had already bought suitable clay land and installed experimental plants outside Sydney and Melbourne. The latter was at Brunswick, where experiments in tile making seem to have been conducted from 1913,<sup>60</sup> and they began full scale manufacturing at Brunswick and at Rosehill (Sydney) in 1916.<sup>61</sup> By the time that the supply of imported tiles was cut off by the war, Wunderlichs were already manufacturing 1½ million tiles a year,<sup>62</sup> and by 1916 they were making three million tiles a year at Rosehill alone.<sup>63</sup> Wunderlichs developed into very large scale manufacturers during and after World War I at Cabramatta and Brunswick, outside Sydney and Melbourne respectively, at Perth, and by the 1920s at Edwardstown, South Australia.<sup>64</sup> This is slightly puzzling because Noris Ioannou records Wunderlichs as opening their Edwardstown works only in 1934, when they took over the original claim of the Eclipse Ochre Works, which had been worked by Trewenacks. Wunderlichs extracted clay here until 1947, and continued production until the 1970s, making terra cotta roof tiles and moulded chimney pots.<sup>65</sup>

In Perth the debacle of the Parliament House tiles had caused the government to take a hand, and in 1912 analytical chemists from the state's Geological Survey and Mines Department investigated clay deposits to find a suitable raw material, which had the desired effect of stimulating local manufacture. The Coulthard Brothers, brickmakers at Cardup produced some tiles, but it seems were not prepared to invest in the specialised equipment needed to go in for serious manufacture. William Atkins's Stoneware Pottery Company in Brown Street, East Perth, was one of the first in Western Australia to produce terra cotta tiles in commercial quantities,<sup>66</sup> and they were used on the Leederville Post Office,<sup>67</sup> but whether they were of the Marseilles pattern is not entirely clear. In 1918 Wunderlichs opened a tile plant next to their existing factory in Lord Street, Perth, and tiles are said to have become substantially cheaper than galvanized iron until that material began to be manufactured in Australia.<sup>68</sup> In 1929 H L Brisbane & Company Limited began to

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58 W Jeffries, *The Australian Building Estimator* (Sydney 1907), p 200.

59 Information from Dana Mider, 1991.

60 Bures, op cit, pp 33-4.

61 *Forty Years of Wunderlich Industry* (Melbourne 1927), pp 109-110.

62 Bures, *House of Wunderlich*, p 34.

63 Bures, *House of Wunderlich*, p 102.

64 *The South Australian Building and Allied Trades Directory and Handbook* (Adelaide 1926), p 70.

65 Noris Ioannou, *Ceramics in South Australia 1836-1986*, p 76.

66 Bryce Moore, *From the Ground Up* (Nedlands [Western Australia] 1987), pp 61-2.

67 Kelly, 'Housing in Perth', p 288.

68 Moore, *From the Ground Up*, p 63.

manufacture 'Bristile' Marseilles tiles, and claimed to be the first manufacturers of the Marseilles pattern in Western Australia.<sup>69</sup>

In Victoria the Terra Cotta Roofing Tile Co of Oakleigh were making 'Empire' brand Marseilles tiles in the 1920s.<sup>70</sup> Wunderlichs manufactured Marseilles tiles at Ferny Grove, Brisbane, by the mid-1930s, in reds, browns, buffs, blues, greens and pastel colours, and in fire-flashed and fully glazed effects.<sup>71</sup> James Hardie & Co, rivals of Wunderlichs, finally entered the Marseilles tile market in 1937 when they began production from a new factory at Bulimba, on the lower Brisbane River. This operation continued until 1959.<sup>72</sup> The Marseilles pattern had now become the standard in Australia. It was being made in glass by 1914 and in sheet metal at least by 1938, and the form was also copied, albeit more or less simplified, in many of the first cement roofing tiles.

In 1924 Marseilles tiles began to be manufactured in New Zealand,<sup>73</sup> apparently by Winstones, the building material suppliers.<sup>74</sup> Tiles of a Marseilles or similar character were made in other countries, as will appear, and there are considerable variations between these. However, these considerations are of little direct relevance to Australia, where from the 1880s all the Gilardoni or Marseilles tiles imported were in fact of the canonical Marseilles type. Moreover local manufacturers, when they began operations, were obliged to adhere closely to the design. It was desirable to conform in appearance to a product which had gained wide acceptance, was more expensive, and was of proven quality. It was also desirable to conform sufficiently in terms of dimensions and jointing to be interchangeable with the standard, though the thickness of the local tiles, and hence their weight, tended to be substantially greater. Therefore the differences amongst the Australian tiles, and between them and the French, are scarcely greater than those between the French tiles themselves. Varman is able to identify some minor differences, and it would seem that at later dates some simplification of the design was effected by Wunderlichs and others.

### *the Marseilles tile elsewhere*

It is much harder to get a picture of the use of the Marseilles tile overseas. Roofing tiles generally were not much used in Britain, according to Ewing Matheson in 1877, though they were popular in areas which had to import building materials, such as the East and West Indies, and South America. Matheson refers to the fact that they be laid on iron roofs without boarding, and illustrates 'a peculiar kind made in France', placed onto upstanding angles running longitudinally between the roof trusses. So far as one can infer from his fairly crude section the tiles are of the Gilardoni, and perhaps the Marseilles, type.<sup>75</sup>

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69 Ambrose Pratt [ed], *The National Handbook of Australian Industries* (Melbourne 1934), pp 370-1.

70 *Australian Homes* (Melbourne 1927), p 114.

71 These are advertised in a brochure which the Powerhouse Museum dates to 1934, but which appears to be no earlier than 1936 (as discussed under Asbestos Cement, below): Wunderlich Limited, *Seaside Cottages* (no place or date [c1936]) [Wunderlich Collection, Powerhouse Museum, A7437-9/136], p 15.

72 *The Story of James Hardie & Coy. Pty. Ltd. 1888 to 1966* (Sydney, no date [1966]), pp 18, 41.

73 C F Cameron, 'State Housing and State Sponsored Housing in New Zealand' (MArch, University of Auckland, 1970), p 91.

74 Verbal advice from Jeremy Ashford of Auckland, 1993.

75 Ewing Matheson, *Works in Iron* (2nd ed, London 1877 [1873]), p 211.

In Europe the term 'Marseilles tile' has no meaning, but triple-ribbed Gilardoni types have been reported to or seen by the writer fairly extensively in Switzerland and Austria, where they tend to be called simply 'French tile', perhaps less commonly in France itself, and very rarely in England. Diamond pattern Gilardoni tiles, apparently of quite modern date, have also been seen in Switzerland. In European and many other countries these tiles are too modern or too mundane to have attracted any scholarly interest. Even in places outside Europe where they might be recognised as significant, the lack of obvious source material has deterred potential investigators, and such research as there is can be hard to locate.

Turkey is potentially a country of very great interest in this context, for the Marseilles tile is fairly widely used in Thrace and Central Anatolia, but so far is hardly documented at all. It is believed that, rather as in Australia, the tiles were imported from France in the later nineteenth century and until the time of the Great War, after which local manufacture began.<sup>76</sup> However there are also examples with Greek brands held by Sureyya Saruhan of Mimar Sinan University, Istanbul. A now demolished house of about 1900-1910 in Buca, a suburb of Izmir, had Marseilles tiles of both French and Greek manufacture.<sup>77</sup> The former appeared, from an incomplete tile, to be branded 'AK[?N][?A].../ MARSEILLE [figure of Maltese Cross] St HE...'. The location is obviously St Henri (or St Henry), and the Maltese cross equally clearly establishes that the brand is that also found in Australia, ARNAUD ETIENNE ET CIE, St. HENRI, MARSEILLE (an R having been read as a K). The other tiles were made in Salonika but branded in Italian 'FRATELLI ALLATINI / SALONICCO'. As Salonika was still under Ottoman rule they would have been local products rather than imports.

The Marseilles tile is also found in southern Turkey in the region of Adana, but there it is suggested that local use post-dates the construction of the railway by the Germans in 1895, and that the first local factory was at Eskisehir in the north-west. The older and better type were known as 'gift kurt' and the inferior type, with only one lateral rib and groove joint rather than two, were known as 'kara cigan'.<sup>78</sup> Tiles inspected by the writer at Haruniye, possibly no earlier than the 1950s in date, had a local brand 'NESIP M. TUGLAMAN / ANTAKYA'. It was reported in 1890 that several million tons of Marseilles tiles had already been exported to South America,<sup>79</sup> and by all accounts they are indeed widespread there. Only two more or less documented example is known to the present writer, both of them in Argentina. The Estancia San Martin, Cañuelas, has tiles reported as 'Pierre Saccoman', presumably Sacoman, thought to date from about 1880,<sup>80</sup> and the Estancia Los Ombúes has tiles reported as being branded 'Richard Carvu', but almost certainly Guichard Carvin, probably put on after the railway line came through in 1885.<sup>81</sup> This is exactly the brand which first appeared in Australia. In the United States a much more broadly ribbed pattern, referred to as 'French tiles', seems to be sufficiently familiar not to be remarked upon.<sup>82</sup>

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76 Verbal information from Dr Umit Serdaroglu, 1986.

77 F Erpi, *Buca'da Konut Mimarisi* (Ankara 1985); also verbal information from Professor Erpi, 1986.

78 Verbal information from Messrs O N Aksay and A H Aksay of Haruniye, 1986.

79 *Australasian Builder and Contractor's News*, 15 March 1890, p 849.

80 *Boletín* [of ICOMOS Argentina], 5 (October 1986), pp 21, 25.

81 Carlos Moreno, *Estancia Los Ombúes* (Buenos Aires 1990), pp 13, 15.

82 See, for example, three of the illustrations in R S Koziol & J G Stockbridge, 'Detecting Water Leaks in Slate and Clay-Tile Roofs', *APT Bulletin*, XIX, 2 [1987], pp 6-9.

It appears that in India local manufacture was established as early as in Australia. At 'Nocklofty' in Melbourne, while the house itself was roofed in Guichard Frères tiles, the writer in 1962 saw tiles from an outbuilding which were of a smaller than standard size and were alleged to be of Indian manufacture. In Singapore, where the Marseilles tile is conspicuous, it first appears in the late 1920s on public and other prominent buildings, where it was preferred to the traditional local tile. Some tiles were imported from France, but the great majority were from India, and subsequently tiles were manufactured closer to hand by the Malaysian Collieries Company.<sup>83</sup> Tiles inspected by the writer on roofs dating apparently from the 1950s were branded 'Standard Tile and Brickworks', but with no indication of the place of origin. came through in 1885.

No overseas source clearly illustrating or mentioning the canonical Marseilles tile before 1899 has been identified. In that year a volume in the American series of the International Correspondence Schools illustrates one.<sup>84</sup> It is identified only as 'French', and is designed for continuous vertical jointing, but it is clearly of the Marseilles type. By 1920 the Ludowici-Celadon Company of Chicago was making a 'French pattern' tile in their 'Imperial' range, which was in fact a true Marseilles tile designed to be laid staggered.<sup>85</sup> Although the tiles exported from Marseille itself had now become highly standardised, and were all designed for discontinuous vertical jointing, the term 'Marseilles tile' seems to have been used by Lefèvre in 1900 for more varied types manufactured outside France. Within France the distinction is quite clear, because all the Gilardoni tiles manufactured in Marseille had reduced to an identical Marseilles pattern. The pattern is finally recognised in England in Bennett & Pinion's *Roof Slating and Tiling* of 1935 and 1948, where its precise dimensions are specified as 16<sup>1</sup>/<sub>4</sub> x 19<sup>1</sup>/<sub>2</sub> inches [416 x 243 mm].<sup>86</sup>

Lefèvre identifies the Gilardoni diamond tile, as well as a 'perfected model' of it, in which the diamond and triangle are replaced by a central rib, and thus come to resemble the first American illustration. The Gilardoni tile No.2, Muller, or ribbed tile, is similar but that it is designed for continuous jointing, and it is in fact the same tile as that shown by Muller at the 1855 Exposition. The Marseilles tile proper is shown in the canonical form except that the central rib is narrower and the upper surface of the overlocking side joint seems to carry either a broad recess or central rib, in lieu of two grooves. In discussing foreign tiles Lefèvre states that modern French roofing tiles of the 'lozange', Boulet or Marseilles type are much used abroad, and proceeds to discuss four, of which none are of the 'lozange' or diamond type, and none are of the Boulet type, which is characterised by a central rib with a large round knob on the toe. It would therefore seem that the four he discusses are all to be seen as varieties of the Marseilles type, notwithstanding that they differ from the standard in superficial details, and include examples of both continuous and discontinuous vertical jointing, and both single and double grooved side joints.

In Britain a version of the old diamond and triangle type was being marketed after World War II as a 'Beauvais' tile, in a size 12<sup>1</sup>/<sub>4</sub> by 8 inches [310 x 200 mm], but there were few other British types, if any, that might be described as belonging to the Gilardoni family.

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83 Verbal information from Professor E J Seow, then of Singapore, 1986.

84 *A Treatise on Architecture and Building. Vol. III* (Scranton [Pennsylvania] 1899), p 95.

85 Drawing dated June 1920, *Sweet's Architectural Catalogue* (17th ed, New York 1922), p 889.

86 Frank Bennett & Alfred Pinion, *Roof Slating and Tiling* (London 1948 [1935]), p 81.

However, one can conclude that the term 'Marseilles tile' is applicable not only to a spectrum of tiles made at Marseilles in accordance with the standards of the Société Anonyme, but also to a similar spectrum of tiles which continued to be made in other countries.

### *the Australian picture*

We have seen that the Marseilles tile is a sub-type of the Gilardoni tile, invented in France in 1851. Something approaching the character of a Gilardoni tile was patented in Victoria in 1859 and probably in New South Wales in 1860, but probably was not manufactured at this stage. Two types of French-made Gilardoni tiles were imported to Melbourne in 1860, and are probably to be identified with the term 'Marseilles tile' as used locally at the time. The Marseilles tile as now understood, imported from France, was shown at the Melbourne Exhibition of 1888-9, and was used from that time. Marseilles tiles were manufactured in Sydney from 1897 or earlier. The Wunderlich company transformed itself during the later years of World War I from the major importer of Marseilles tiles to the major local manufacturer. The true Marseilles tile was also used overseas, especially in South America prior to its arrival in Australia, and subsequently in a number of tropical areas. Australia appears to be the only country in which a range of tiles by French makers has been identified, or in which any serious attention has been given to the history of the Marseilles tile.

The story is obviously a cultural one: the technicalities of pressing a Marseilles tile can be mastered by machines in every part of the world, but the tile has come into use in only a few, and in only one has it become a prominent national characteristic. Its peculiar distribution has been achieved through factors such as a major exhibition, existing trading networks, one importer's insolvency, another's enterprise, and the disruption of the First World War: and after all of this it has become embedded in the Australian mind as the absolutely fundamental form of good quality roof covering. As an architect, Dennis Ayre, said of his first impression of Melbourne suburbs 'Wotta lotta terra-cotta'.<sup>87</sup>

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87 Quoted by Robin Boyd, 'A Lesson from Perth's Homes' (undated cutting from the *Age*, with Small Homes house no T285).