CHAPTER 6.0
SURVEY AND ASSESSMENT OF LANDSCAPES

6.0 SURVEY AND ASSESSMENT OF LANDSCAPES

6.1 Open Spaces

The open spaces and reserves within Kew that have been assessed for their potential heritage significance are listed below. The history of each has been researched, in the main from secondary sources, and additional observations have been made from historical maps and subdivision plans. In addition, each reserve has been viewed in the field with the primary objective of identifying whether the history of the reserve remains evident in the extant fabric and in a more cursory form, the general condition of that fabric. The reserves have been discussed under four main headings: Formal Parklands, Remnants of Former Users, Yarra Boulevard, and Natural Drainage System and Flood Prone Areas. They have been organized in this fashion to reinforce similarities in geography and history that may not be immediately recognizeable in the field.

Formal Parklands
- Victoria Park
- Alexandra Gardens

Remnants of Former Users
- Former Outer Circle Railway Reserve
- Foley Park

Yarra Boulevard
- Studley Park
- Yarra Bend Park
- The Boulevard

Natural Drainage System and Flood Prone Areas
- Eglington Reserve
- Hyde Park
- Willsmere Park
- Green Acres Golf Club
- Kew Golf Club
- Hay's Paddock
- Stradbroke Park

6.1.1 Formal Parklands

Kew has very few areas that could be defined as having received a formal landscape treatment, and it is a suburb where the remnant native vegetation prevails in most of its reserves. Victoria Park and Alexandra Gardens are the only two areas identified as having formal landscape treatment.

6.1.1.1 Victoria Park

Extent: Corner of High Street and Adeney Avenue

Historical Documentation

1851 - Section 78 set aside for reserve purposes [1], later described as 'a dense forest of gums and wattles'. [2]

1888 - Map shows 'Recreation Reserve' bisected by the creek (un-named) that flowed north to Hyde Park (q.v.). [3]

1896 - M.M.B.W. map shows the 'Recreation Reserve' bisected by the creek (un-named) that flowed south from Hyde Park (q.v.). [4]

October 1911 - Kew Council lopped the dead branches for the gum trees in the Park. [5]

1915 - Pavilion, surrounded by a picket fence, erected for a cost of £326. [6]

1922 - Caretaker's cottage erected and occupied by the City Curator. [7]

1922 - Kew Cricket Club established turf wickets on oval. [8]

1922 - Tennis courts and Club House erected. [9]

1923 - 'Victoria Park' gazetted as a permanent reservation. [10]

1939 - Erection of pavilion for the Kew Harriers' Club. [11]

1940 - The gates from Willsmere Hospital (q.v.) removed to Victoria Park. [12]

1942-45 - Patriotic carnivals held in the north-eastern corner of the park. [13]

1957 - Proposal to construct a new pavilion mooted. [14]

Undated - Photograph shows decorative rotunda in Victoria Park. [15]

Existing Condition

Victoria Park has a number of recreational facilities throughout it including playing fields, a tennis club, croquet club and children's playground equipment. In the main these enhance the park, however a number of structures associated with these facilities are most unsympathetic, including most of the masonry structures, the playground equipment and the treated pine shelter (of a design repeated through Kew's parks). There are however some structures that enhance the park, and these include the tennis kiosk, the Croquet Club clubhouse (built in the manner of Walter Burley Griffin's architecture) and the entrance gates onto High Street, that were relocated from Willsmere Hospital.

Of the vegetation, the park is quite densely planted with a great variety of species, and some of the planting appears to date from at least the turn of the century. Exotic vegetation prevails in the overall effect of the park, with it having a dark framework provided by a variety of conifers and palms set against the lighter effect of many mature deciduous trees. The effect of the reserve as it was when when first planted, appears to have been obscured.

Conclusion

The area occupied by Victoria Park was originally a part of the creek system that ran down to Hyde Park, however unlike the other remnants of Kew's creek systems, it was give a comprehensive landscape plan. The exact date/s of the planting of Victoria Park have not been established, however it appears to have first been planted in the mid-Victorian period, and planting from at least the late Victorian period appears to remain. This character has, however, been largely (but not irreversibly) eroded into by the later additions of masonry pavilions, shelters and facilities that do not relate in design to each other or to the park.

Significance

Victoria Park is of significance as the primary formal park in Kew and for the vegetation and planning that remains from the nineteenth century.

Recommendations

It is recommended that a detailed study be undertaken of the history of Victoria Park that encompasses its planting and structures, with the primary objective of establishing the chronology of its development and a master plan for its restoration.
Historic Listing: Recommended for inclusion on the Register of the National Estate
Planning: Recommended for inclusion in UCA1(C)

6.1.1.2 Alexandra Gardens - Cotham Road

Extent: Corner Cotham Road and Gellibrand Street

Historical Documentation

1851 - Section 80 purchased by Charles Whyte.[16]

1863 - Band rotunda erected as a memorial of the establishment of the Borough of Kew. [17]

1905 - The lower paddocks of the King property sold to Kew Council for £2,500 to form a part of Alexandra Gardens[18]

1908 - Alexandra Gardens officially opened to the public on 8 April by the Governor, Sir Reginald Talbot[19]

1910 - Bandstand erected in Alexandra Gardens on 14 December to mark the Jubilee of the Municipality of Kew and the establishment of the Town of Kew. [20]

circa 1910 - Illustration shows a formal path system of Alexandra Gardens and pagoda-type pavilion. [21]

1911 - The Kew City Band played in a series of moonlight concerts held in the Park from November to March. [22]

1921 - The Earl of Stradbroke planted a gum tree near the south-western entrance of the gardens and Lady Stradbroke planted an oak tree near the ornamental pool in commemoration of the proclamation of the City of Kew. [23]

1924 - The Queen Victoria Jubilee Fountain, formerly situated adjacent to the Kew Post Office on the corner of High Street and Cotham Road, removed to Alexandra Gardens. [24]

1960 - Centenary celebrations held in the Gardens. [25]

Existing Condition

Alexandra gardens are very densely planted, in the main with a variety of exotic trees, and they are the only public gardens in Kew to also have extensive shrubberies. The shrubberies and the density of the planting serve to give the gardens a sense of enclosure that is unique to Kew. This has been reinforced by the entrance ways with their large basalt piers that support rough timber pergolas shrouded by vines. Within, the park has a picturesque arrangement of paths that are enhanced by the pond at the lowest point, and the relocated jubilee fountain stands in the north-west corner. There is little in the garden that detracts, except the barbeque, rotunda base and the bridge across the pond.

Conclusion

Alexandra Gardens are one of the few areas of garden in Kew to have not been created as a result of the land being near the river or floodprone. They appear to remain substantially intact from the Edwardian period, including some of the trees and their overall form.

Significance

Alexandra Gardens are of significance as a substantially intact park of the Edwardian period and for being one of the few formally landscaped parks in Kew.

Recommendations

In a similar manner to the Victoria Gardens, it is recommended that a detailed study be undertaken of the history of the Alexandra Gardens that encompasses their planting and structures, with the primary objective of establishing the chronology of the development and a master plan for restoration.

Historic Listing: N/A

Planning: Recommended for inclusion as a UCA2

6.1.2 Remnants of Former Users

There are large tracts of land in Kew that have remained with no buildings on them because of a former use that made them unavailable for settlement. The former Outer Circle Railway had a dramatic effect on the street patterns and settlement generally, in the northern areas of the suburb. Kew retains large tracts today that are in a potentially similar situation, such as the land held by the Willsmere Hospital, Royal Talbot and the Guide Dog Training Centre, which remain largely unsettled and park-like.

6.1.2.1 Outer Circle Railway Reserve

Extent: Willsmere Road at Earl Street, to Burke Road at Heather Grove

Historical Documentation

1882 - Outer Circle Railway scheme mooted. [26]

1888-1891 - Outer Circle Railway built. [27]

April 1893 - Outer Circle Railway closed. [28]

1939 - The former Outer Circle Railway land between Princess Street and Park Crescent purchased by the Kew Council in October for £2,750 and work began on levelling the embankments to the original surface level. [29]

1943 - W.D. Birrell, Town Clerk of Kew, proposed that the former Outer Circle Railway line be converted to a reserve. [30]

1946 - The former Outer Circle Railway land between Campbell Street and Burke Road was purchased by the Council for £2,133. [31]

1954 - The sections of the former railway line extending from Princess Street to Park Crescent and from Campbell Street to Burke Road were designated as 'open space'. [32]

December 1956 - M.M.B.W. paid the Kew Council £25,000 in compensation for the Outer Circle Railway land for the purpose of an arterial road. [33]

Existing Condition
From the linear form of the reserve that remains the former use of this strip of land is clearly evident, however the levelling of the embankments have removed any direct evidence of the railway. The land remains as open grassland with very sparse planting right along its length.

Conclusion

The area occupied by the Outer Circle Railway has had a large impact on the street pattern in Kew and remains a major division in the housing stock. The lack of any landscape works serves to make this a no-mans-land, and as such the area does little to enhance Kew.

Significance

The land occupied by the former Outer Circle Railway is of significance as a very clear reminder of a bold development that, although in itself a dismal failure, had a very large impact on the settlement of Kew and is integral to the history of the area.

Recommendations

It is recommended that this swathe of open land be retained as a continuous unit and that it not be broken up into detatched pockets. While keeping to that objective, it would be appropriate to landscape sections of this land.

Historic Listing: N/A

Planning: Part recommended for inclusion as a UCA2

6.1.2.2 Foley Park

Extent: Behind the housing facing onto High, O'Shaughnessy and Foley Streets and Barkers Road

Historical Documentation

1851 - Section 74 purchased by Charles Payne. [34]

1880s- Purchased by O'Shaughnessy. [35]

1880s - Used as Smart's Brickyard. [36]

1911 - Council purchased the clay hole for £100 to serve as a rubbish dump. [37]

1954 - Designated as being built upon. [38]

1979 - Identified as 'Foley Park'. [39]

Existing Condition

Foley Park has recently been landscaped across its centre and has a series of artificial mounds, numerous native trees, a treated pine shelter and play equipment, and contemporary light standards. There are however remnants of far older planting around the perimeter of the reserve, with rows of *Cupressus* that are at least 50 years old, that may have been planted as a hedge, and a *Schinus molle* of similar age, while there are a small number of *Eucalyptus* , also around the perimeter, that may be remnant of the native vegetation on the site. These plantings are now very tall, and coupled with the park's contained form behind the encircling houses, they give the park a strong edge and sense of enclosure. There is a cobbled laneway extant at the eastern extent of the park.

Conclusion

Foley Park occupies the land that was used by Smart's Brickyard until the Edwardian period, that was subsequently filled by rubbish deposits. It is quite possible that the planting to the perimeter of the park dates from the time of Smart's occupation.

Significance

Foley Park is of significance as the evocative remnant of one of the very few industrial operations to have been allowed to operate in Kew (Refer history). The perimeter planting is integral to the significance in the manner in which it reflects the nature of the land's former use.

Recommendations
It is recommended that Foley Park be retained as open space and that the perimeter planting be retained, repeating the extant species.
Historic Listing: N/A
Planning: N/A

6.1.3 Yarra Boulevard

It has been discussed in the history (q.v.), the very great impact that the Yarra has had at all periods of Kew's development, particularly initially as a major barrier from the low land to the west, and in the 1930s when the boulevard was formed, allowing access to the river, and the commencement of residential development above it. The parkland next to the Yarra remains extant as a continous band along the full extent of Kew's boundary to the west and north, and only varies in its breadth and the degree of recreational facilities provided within the park.

6.1.3.1 Studley Park

Extent: North of Studley Park Road, to the Yarra River

Includes:

Pioneer's Memorial Cairn [40]

Studley Park Boathouse, Mc Caulay's Boathouse (q.v.) and Kane's footbridge (q.v.). [41]

Historical Documentation

circa 1850 - Section 79 was withdrawn from sale[42] and formed a part of the area which subsequently became 'Studley Park'.

1888 - Notated on a map as 'Studley Park', along with the area now called Yarra Bend Park. [43]

1896 - Notated on a map as 'Studley Park', along with the area now called Yarra Bend Park. [44]

1915 - Studley Park Board of Management formed. [45]

1954 - Kane's Foot Bridge identified. [46]

Existing Condition

Studley Park is a major tract of remnant vegetation that stands in stark contrast to the closely settled industrial areas to the west. The main intrusions into its native form have been the formation of the road and the building of the boatsheds and the footbridge (q.q.v.) with exotic trees near them, while there has also been a more subtle degradation in the area through the invasion by exotic plant species, by the impact of man in trampling the ground, and by the introduction of domestic animals. The most obviously detracting elements are the asphalt carpark near the boatsheds that has no trees planted across its expanse, the tiolet blocks and shelters near Kane's Footbridge, and the swathes of introduced weeds such as blackberries, that line the banks of the river.

Conclusion

While in its overall impact Studley Park remains as it was planned - a tract of native vegetation on the slopes down to the Yarra - the land has been effected in a number of quite apparent ways by its proximity to introduced activities and species (flora and fauna).

Significance

Studley Park is of significance as one of the few and one of the largest, tracts of native vegetation extant close to central Mebourne, while it is of significance to Kew as one of the suburb's most distinguishing elements that reinforces the boundary created by the Yarra River. The boatsheds and footbridge (q.q.v.) are of significance as early, picturesquely built structures, built to facilitate recreation on the river.

Recommendations

It is recommended that Studley Park be maintained as an area of native vegetation and that measures be taken to curb the degradation to that vegetation.

Historic Listing: Recommended for inclusion on the Register of the National Estate as a whole with Yarra Bend Park and the Boulevard.

Planning: Recommended for inclusion as a UCA2

6.1.3.2 Yarra Bend Park

Extent: Bounded by Studley Park Road, Walmer Street and the Yarra River

Includes:

F.A. Andrew Reserve
Dickinson Reserve
9 Hole Golf Course
Rylah Oval
Norris Reserve [47]

Historical Documentation

1888 - Notated on a map as part of 'Studley Park'. [48]

1896 - A reservoir was identified on the site of the present Rylah Oval and the area in general, included in 'Studley Park'. [49]

pre 1910 - The reservoir site supplied the Melbourne Botanical Gardens and the Albert Park Lake and surrounding it were numerous excavations from which gravel was used to make footpaths. [50]

1949 - Establishment of a children's playground later known as 'Dickinson Reserve'. [51]

1954 - 'Norris Reserve' identified. [52]

1969 - 'Dickinson Reserve' identified. [53]

Existing Condition

Yarra Bend Park contains a great number of recreational facilities, including a golf course, playing fields, and children's playgrounds, while it is only on the strip of land between the boulevard and the river that any remnant native vegetation is extant. Overall the area has mown grass and trees informally set across it in a great variety of species. Walmer Street is lined with *Ulmus*, *Populus* and *Pinus* sp., while through the park there is a mixture of mature exotic and native trees. Despite such a range of plant material, there is no evidence of a coherent landscaping plan having been adopted across the park.

Conclusion

Yarra Bend Park was initially part of Studley Park and has since been developed into a recreational area, with remnant vegetation being restricted to the areas in the immediate proximity of the river.

Significance

As a major tract of open land next to the river, the park is of significance as an integral part of the continuous parkland that lines the river along Kew's border. The fabric within the park, apart from the native vegetation next to the river appears to be of little consequence.

Recommendations

It is recommended that Yarra Bend Park be retained as an open tract of land and that the areas of native vegetation be retained and protected from degradation through the invasion of man, animals and exotic species of plants. It is also recommended that a thorough survey be undertaken of the park to identify any trees of significance for their age, form or species.
Historic Listing: Recommended for inclusion on the Register of the National Estate as a whole with Studley Park and the Boulevard.
Planning: Recommended for inclusion as a UCA2.

6.1.3.3 The Boulevard

Extent: From Studley Park to the Chandler Highway

Historical Documentation

1929 - Scheme proposed as part of the Report of the Metropolitian Town Planning Commission to develop the Boulevard54

1932 - Work for sustenance program introduced by government and proposed for the boulevard formation. [55]

1933 - Unemployed men commenced the formation of the road between the Johnson Bridge and the former Outer Circle Railway Bridge [56]

May 1936 - The Kew section of the Boulevard officially opened. [57]

Existing Condition
The nature of the vegetation and its state of intactness on the downward slope of the boulevard is substantially the same as in Studley Park, although several areas have been cleared for recreational use and carparking. The uphill slope of the boulevard has a low stone wall along its full length, with exotic vegetation planted along it that includes *Agapanthus, Cotoneaster, Agave,* and *Schinus molle.* A sunken garden, planted with a variety of exotic trees and shrubs, remains in an overgrown but intact state at the end of Yarravale Road.

Conclusion
For a very large extent of its area, the boulevard retains its natural character and native vegetation. The road, the stone walling, and its associated exotic planting, all appear to remain as formed in the 1930s.

Significance
The boulevard area is of significance as one of the few and largest tracts of native vegetation extant close to central Mebourne, while it is of significance to Kew as one of the suburb's most distinguishing elements that reinforces the boundary created by the Yarra River. The stone walling and its associated planting are integral to the significance of the boulevard.

Recommendations
It is recommended that the boulevard area be maintained as an area of native vegetation and that measures be taken to curb the degradation to that vegetation. It is also recommended that the introduced planting along the roadway be maintained.
Historic Listing: Recommended for inclusion on the Register of the National Estate as a whole with Studley Park and Yarra Bend Park.
Planning: Recommended for inclusion as a UCA2.

6.1.4. Natural Drainage System and Flood Prone Areas

Kew suffered severe invasion by flood waters from the Yarra during both 1923 and 1934,[58] and in both instances the water extended into areas now occupied by Hyde Park, Willsmere Park, Green Acres Golf Club, Kew Golf Club and Hay's Paddock. It has been discussed in the history (q.v.), the process that took place to avoid these tracts of land for residential use. Eglington and Stradbroke Parks were not inundated during those floods, however are both part of the natural drainage system that feeds the Yarra. The maps of 1888 and 1896 show creeks through Eglington and Stradbroke Parks, that led to Hyde Park and Hay's Paddock respectively, and as such these areas also appear to have been unsuitable for settlement.

6.1.4.1 Eglington Reserve

Extent: Eglington Street between Derby Street and Disraeli Street

Historical Documentation

1851 - Section 88 purchased by Catherine Cowell[59]

October 1885 - The portion of the Hyde Park Estate between Eglington, Childers and Disraeli Streets sold. [60]

1896 - Map depicts the area bisected by a creek flowing to the Yarra and through what was later known as Hyde Park (q.v.) [61]

1954 - Identified as 'Eglington Reserve'[62]

Existing Condition

Eglington Reserve is an open area of mown grass interspersed with a variety of trees, planted to no apparent plan except along Eglington Street where there is a sporadic row of *Cupressus* sp. There is a recent treated pine shelter of a design found elsewhere in Kew, and a barbeque facility.

Conclusion
The reserve does not appear to have been given a formal planting scheme, except for the trees lining Eglington Street, and remains substantially as a remnant of open land.

Significance
Eglington Reserve is of significance as an area of open land that remains from the creek system that once dominated northern Kew. The planting within the reserve is not of significance.

Recommendations

It is recommended that Eglington Reserve be retained as an open tract of land. It would be appropriate to apply a landscape master plan to the park.

Historic Listing: N/A

Planning: Recommended for inclusion as a UCA2.

6.1.4.2 Hyde Park

Extent: Willsmere Road to Asquith Street following Spruzen Avenue.

Historical Documentation

1846 - Section 57 was purchased by John William Cowell. [63]

1851 - Section 88 was purchased by Catherine Cowell. [64]

1882 - The Hyde Park Estate Company began subdividing some of its land, including Sections 57 and 88. [65]

1896 - Map depicts the area now known as Hyde Park bisected by a creek that flowed to the Yarra from near the corner of Normanby and Cotham Roads. [66]

1896 - Kew Golf Club's first links were in the northern portion (Section 88) of the Hyde Park Estate [67], known at that date as Ogborne's Paddocks and bisected by Connor's Creek. [68]

1918 - Purchased by the Kodak Company as a site for its factory. [69]

1925 - Kew Council began negotiations with Kodak with a view to establishing a reserve on the creek land. [70]

May 1926 - Kodak announced that they were not to pursue their plans. [71] First sales of the 'Old Golf Links Estate' as 80 home sites. [72]

1926 - The area now known as Hyde Park was indicated as a flood prone gully area emanating from the Yarra. [73]

1934 - Hyde Park inundated by flood waters. [74]

1934 - W.D. Birrell, Town Clerk of Kew, proposed that the creek gully ran through the former Golf Club Estate be filled and converted to a reserve[75]

1954 - Hyde Park indicated as a series of reserves following the course of the creek extending from Kilby Road to High Street[76]

Existing Condition

Hyde Park Reserve has been given a quite extensive planting of native plants, that are set across the mown grass. The effect is quite simple, with a gravel path extending down the length of the park. No remnant vegetation appears to be extant.

Conclusion
The park follows the line of one of the creeks that orignially fed the Yarra, however the creekscape and its associated planting has been totally destroyed.

Significance

Hyde Park Reserve is of significance as an area of open land that remains from the creek system that once dominated northern Kew. The planting within the reserve is not of significance.

Recommendations
It is recommended that Hyde Park Reserve be retained as an open tract of land.
Historic Listing: N/A
Planning: Recommended for inclusion as a UCA2.

6.1.4.3 Willsmere Park

Extent: Bounded by the Yarra River, Green Acres Golf Club, Willow Grove and the Eastern Freeway

Historical Documentation

1846 - Section 56 was purchased by Thomas Wills. [77]

1840s-1940s - Intensive farming use of the land. [78]

1918 - The Studley Park Estate Company sold the land to the Kodak Company for the site for their factory.[79]

1896 - 'Willsmere Dairy' indicated on map. [80]

1923 - Willsmere Park inundated by flood waters. [81]

1925 - Kew Council began negotiations with Kodak with a view to establishing a reserve. [82]

1926 - The undeveloped land of what is now known as Willsmere Park indicated as 'Council Reserve and Sports Ground'. [83]

1934 - Willsmere Park inundated by flood waters. [84]

1954 - Indicated as 'open space'. [85]

1970s - Sports ground in the south-east corner enlarged. [86]

1970s - Eastern Freeway aligned with the Willsmere billabong. [87]

Existing Condition
The park is dominated by very large playing fields, while planting to the southern boundary was undertaken when the eastern freeway was built. It is only along the banks of the Yarra that there is any remnant native vegetation.

Conclusion
The park has been largely regraded from the original and only retains its original form and vegetation near the Yarra.

Significance

Willsmere Park is of significance as an area of open land that remains from the flood plain that once dominated northern Kew. The planting within the reserve is not of significance, however the remnant vegetation along the river is of significance.

Recommendations

It is recommended that Willsmere Park be maintained as an open area, that the native vegetation along the river be preserved and that measures be taken to curb the degradation to that vegetation.

Historic Listing: N/A

Planning: Recommended for inclusion as a UCA2.

6.1.4.4 Green Acres Golf Club

Extent: Between Willsmere Park, Kew Golf Club and the Yarra River

Historical Documentation

1845 - Section 55 purchased by Horatio Spencer Wills. [88]

1896 - Map depicted area with a number of ox-bow lakes. [89]

1923 - Inundated by flood waters. [90]

1934 - Inundated by flood waters. [91]

1954 - Area indicated as 'private open space'[92]

1979 - Known as 'Green Acres Golf Club'[93]

Existing Condition
The golf club has mown grass largely free of any undergrowth, across which are planted a variety of trees both native and exotic. It is only along the banks of Yarra that there is any remnant native vegetation.

Conclusion
The area has been largely replanted and only retains its orignal form and vegetation near the Yarra.

Significance
Green Acres Golf Club is of significance as an area of open land that remains from the flood plain that once dominated northern Kew. The planting within the reserve is not of significance, however the remnant vegetation along the river is of significance.

Recommendations
It is recommended that Green Acres Golf Club be maintained as an open area, that the native vegetation along the river be preserved and that measures be taken to curb the degradation to that vegetation.
Historic Listing: N/A
Planning: Recommended for inclusion as a UCA2.

6.1.4.5 Kew Golf Club

Extent: Bounded by Belford Road, the Yarra River and the Eastern Freeway.

Historical Documentation

1849 - Section 54 purchased by George Annand [94]

1896 - Kew Golf Club founded and the Club's first laid out in the northern portion (Section 88) of the Hyde Park Estate[95]

1896 - Section 54 indicated with a number of ox-bow lakes[96]

1922 - The Club purchased its present site from the Gardiner family, farmers [97]

1923 - Inundated by flood waters[98]

1934 - Inundated by flood waters[99]

1954 - Indicated as 'private open space'[100]

Existing Condition
The golf club has mown grass largely free of any undergrowth, across which are planted a variety of trees both native and exotic. It is only along the banks of Yarra that there is any remnant native vegetation.

Conclusion
The area has been largely replanted and only retains its orignal form and vegetation near the Yarra.

Significance
Kew Golf Club is of significance as an area of open land that remains from the flood plain that once dominated northern Kew. The planting within the reserve is not of significance, however the remnant vegetation along the river is of significance.

Recommendations
It is recommended that Kew Golf Club be maintained as an open area, that the native vegetation along the river be preserved and that measures be taken to curb the degradation to that vegetation.
Historic Listing: N/A
Planning: Recommended for inclusion as a UCA2.

6.1.4.6 Hay's Paddock

Extent: Between the Eastern Freeway and Kilby Road at Lister Street

Historical Documentation

1845 - Sections 52 and 53 purchased by William Oswin [101]

1896 - The area now known as Hay's Paddock was bisected by a creek that flowed from the Yarra and extended through to Burke Road, via Stradbroke Park (q.v) [102]

1923 - North-eastern part of Section 52 inundated by flood waters[103]

1934 - Entire area inundated by flood waters[104]

1934 - W.D. Birrell, Town Clerk of Kew, urged Kew Council to purchase the site and to revert it to parkland[105]

1954 - The southern portion of the area, near to Kilby Road and bisected by the creek, was indicated as 'public open space', while the land to the north was designated for agricultural use[106]

1979 - The southern portion identified as 'Kilby Reserve'[107]

Existing Condition

Hay's Paddock has recently been planted with a great number of native plants. A row of *Pinus* sp. is one of the few remnants of earlier planting while several remnant *Eucalyptus* sp. appear to be extant. The area is distinguished by being the only area in Kew where the creek has not been diverted to an underground drain, however the planting associated with the creek has been removed.

Conclusion

The area has been largely replanted and retains little of its original character except for a few eucalypts.

Significance

Hay's Paddock is of significance as an area of open land that remains from the flood plain that once dominated northern Kew and for retaining a creek above ground. The recent planting within the reserve is not of significance.

Recommendations
It is recommended that Hay's Paddock be maintained as an open area and that the native vegetation be preserved.
Historic Listing: N/A
Planning: Recommended for inclusion as a UCA2.

6.1.4.7 Stradbroke Park

Extent: Kilby Road to Harp Road at Burke Road

Historical Documentation

1851 - Portion 91 purchased by Edward Glynn[108]

1888 - The Harp of Erin Estate (which included Section 91) offered for sale [109]

1896 - The area now known as Stradbroke Park was bisected by a creek that flowed from the Yarra via Hay's Paddock (q.v.) and extended through to Burke Road[110]

1943 - W.D. Birrell, Town Clerk of Kew, proposed that the creek be filled and a reserve created [111]

1954 - Entire area designated as 'open space' and named 'Stradbroke Park'. The line of the creek that ran through the Park created a further reserve on the north side of High Street, now known as 'Harrison Reserve' [112]

Existing Condition
The park is largely of mown grass that has mature trees set into it. It is possible that a number of these are remnant of the original vegetation, while there are also a number of exotic trees introduced, particularly at the northern end of the park. The southern end is dominated by playing fields.

Conclusion
The park does not appear to have been given a formal planting scheme, and instead has trees interspersed across it, some of which appear to be original.

Significance
Stradbroke Park is of significance as an area of open land that remains from the creek system that once dominated northern Kew. The mature stands of trees within the reserve are also of significance.

Recommendations
It is recommended that Stradbroke Park be retained as an open tract of land. It would be appropriate to apply a landscape master plan to the park.
Historic Listing: N/A
Planning: Recommended for inclusion as a UCA2.

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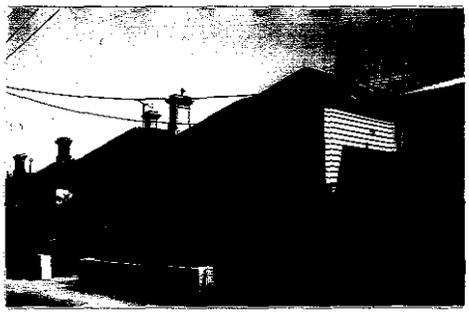
CHAPTER 7.0
BUILDING CONSERVATION GUIDELINES

NEW WORKS: ALTERATIONS AND ADDITIONS

Introduction

First settled in the mid-nineteenth century, and subsequently the subject of almost continual development, Kew has many buildings that date from the Victorian and Edwardian periods, large tracts of land developed between 1920 and 1940, and pockets developed over the last forty years. As a result, no one set of rules can apply to all every part of Kew when considering alterations or additions to existing buildings. In fact the only universal guide is the principle of carefully analysing the character of the area surrounding the building before commencing with design. Many areas of Kew present a lively variety of building periods within a short stretch of street while in other parts, the suburb has concentrations of buildings from the 1880s (Late Victorian), 1900s (Edwardian), 1920s and the 1930s. Streets of such a nature are the late Victorian houses in Edgevale Road, the Edwardian houses in part of Studley Avenue, and the 1920s developments around Clyde Street in Kew East



Irrespective of whether houses are in coherent groups or isolated amongst houses of other periods, very few stand today in exactly the form they took when first built. At some stage in their life nearly all have undergone some form of alteration and addition. Such alterations have been undertaken for a variety of reasons such as the need for more space, the modernisation of facilities, changes in living standards, and fashion trends. In many instances these have been undertaken without any specialist design input and have been carried out by a builder or tradesperson in conjunction with the building owner.

The extent of alteration works varies greatly; from the full modernisation including the removal of much of the detailing of the original design, to the current trend of restoration of the front of the building and addition of a living area, new bathroom, kitchen and laundry facilities at the rear. Because many of the works have been to the back of buildings there has tended to be less concern with appearance and compatability than would normally be applied to an alteration to the front facade. This is not only in terms of the relationship of the old work to the new, but also the impact of the new work on adjacent buildings.

A successful alteration to a building or addition of a new building into a streetscape, is one that on completion, appears to belong and relate to the original building and does not intrude unduly on neighbouring properties or the area as a

whole. This can be achieved in many ways, but normally the roof pitch, overall building height, the type and colours of wall and roofing materials, the configuration and sizes of windows, and the setback from the front boundary have all needed to be carefully considered with respect to the norm for that particular street, before a building appears to belongs. Not all these factors however, will carry the same importance for each situation.

This guideline is intended to apply to all buildings within the Urban Conservation Areas in the City of Kew (refer attached plan) and in particular to Grade A, B and C buildings (both within and outside the Urban Conservation Areas), as identified in the Kew Conservation Study.

The overall objective of this guideline is to give direction concerning:
- the preservation of what is of heritage value to Kew and in particular those buildings that have been identified within the Kew Conservation Study
- the restoration and reconstruction of missing and altered architectural elements on Grade A and B buildings (as designated in the conservation study), and
- the sympathetic alteration of Grade C buildings
- the carrying out of alterations and additions that complement but do not mimic the buildings in the area deemed of heritage significance.

Alternative Approaches

With any alteration and addition work there are two basic approaches that can be used. One is to attempt to reproduce the design used in the original building and the second is to carry out the works in accordance with contemporary, that is modern, design. In general, in the case of buildings designated Grade A or B in the Kew Conservation Study, where evidence exists of altered or missing fabric this fabric should be restored or reconstructed where the facade in question is an important part of a streetscape or lanescape. Where such alterations are not visible to the street an interpretative modern design approach could be used, however this should still have regard for the character of the existing building and its surroundings. Such designs use the principles of a relevant earlier period as their starting point, for example they may play on the Edwardian love of asymmetry, or the Victorian use of the tower form, or it may be a more superficial reference to another period through the use of similar colours, such as the terracotta of Edwardian roofing or the grey of Victorian slates. The difficulty here is the avoidance of tokenism to an earlier period at the expense of a good modern design, and designs that are strong in both spheres are rare.

Works to Facades Facing the Street

In general, works to the street facades of Grade A and B buildings or any building within an Urban Conservation Area in Kew, should be directed towards the repair and restoration of that facade. The features that are of critical importance in restorating a facade are the door and window openings, the front eave or parapet detail and the front verandah (where it exists). Where such elements have been altered or removed, and there is sound on-site or photographic evidence of their previous form, they should be reconstructed based on this evidence. If it is suspected that the building had a verandah or that the vrandah has been altered, the location and extent of a verandah in plan can almost always be obtained by reference to the Melbourne and Metropolitan Board of Works plans prepared for sewerage purposes. General plans of the Kew area from about 1900 to 1910 at a scale of 1:1920 (400feet to the inch) are available in many places (including the municipal library), plans of smaller areas at the larger scale of 1:480 (40 feet to the inch) are generally to be found at the MMBW itself or in the Map Collection of the State Library. Still more useful is the MMBW file on the individual house, or 'house service cover', on which all (legally undertaken) alterations to the plumbing are recorded. A copy of this material can be obtained from the MMBW. The Eastern Region Office, which covers Kew, is at Lucknow Street, Mitcham.

Where evidence is incomplete it may be necessary to examine other intact examples of buildings of a similar age and form and to copy the detailing.

Previous Alterations to Front Facades

In some instances alterations have resulted in substantial change to the character of a building, imposing on it a new style or design. A common example of this is where a Victorian house has been modernised in the early twentieth century and provided with a new bay window, and the previously exposed brickwork covered in roughcast. Such alterations may have resulted in a total change in the appearance of the building and may in their own right, be of significance. In these cases it is usually preferable to retain the altered form of the building rather than to guess what the earlier facade looked like and thus risk an innacurate (and so often visually incongruous) recreation.

Where a facade has been altered in a manner that detracts from the appearance of the building, for example by substantially altering the form and materials involved, and it is not feasible to reconstruct the original facade because of lack of evidence or cost constraint, the alternative action is to design a new facade. If such an approach is to be used the critical factor is that the facade should relate to and complement the facades of the adjacent buildings in terms of scale, setback, and degree of embellishment.

Some of Kew's residential areas have very cohesive streetscapes, and the significance of several of the Urban Conservation Areas throughout the suburb is derived from this fact. Such areas are identified and explained in the Kew Conservation Study, and details can be obtained from the Kew City Council. New facades in such areas should be designed in a manner that relates to the scale, form, and materials of the adjacent buildings, so that when viewed en masse, the street retains its cohesive effect. This does not mean that design individuality cannot be maintained when a building is inspected at closer range, but that the new facade should not fragment or aggressively intrude into the streetscape as a whole. It is important however, that this approach does not result in the mimicry of the earlier building stock in the area, the wholesale copying of facades, or the superficial repetition of earlier detailing onto innapropriate buildings. Such approaches almost always result in inaccurate replicas that only serve to detract from the original buildings they are copying, and that contribute little to the quality of modern design. Where using such an approach, reference should be made to the *City of Kew Building Conservation Guideline No. 2, Residential Infill*, which details the design factors that should be taken into account in such circumstances.

Rear Facades

In terms of the overall appearance of the suburb, rear facades of buildings are generally of less prominence than the front of the building, and as a consequence new works can afford greater scope to add or alter without the constraint of the original design or detailing. This is however, not to imply that their appearance is of no concern to the heritage significance of the suburb. Where alterations and additions at the rear of buildings become visible above fence lines from rear lanes and narrow streets, such works need to be carried out in a manner that is conscious of the surrounding properties and lanescapes. In most instances the critical design considerations are the form and materials of the roof and the size and shape of window openings.

Roofs

In general, it is desirable to extend roofs in a manner that relates to the existing roof form or follows the traditional approaches to such additions. In areas with predominantly pre-1930s houses hip, gable and skillion (lean to) roofs should be used in preference to large expanses of flat roof: avoiding the box-on-the-back that has been common in recent years. Preferred materials for Edwardian and Victorian buildings are corrugated iron, tiles or slate and materials such as steel tray deck type roofing should be avoided for these earlier buildings. Ridge heights, parapet and eaves lines and verandah lines should be related to the original building. The pitch of the roof is also

important and should relate to the pitch of the existing roof. Typical hip and gable roofs of the nineteenth and early twentieth century have pitches between 25° and 35°.

Openings

Door and window openings should maintain the basic scale and spacing of the existing openings, and be faithful to the design ideas of the period in which a house was built. In buildings of the Victorian or Edwardian periods, this will result in the use of vertical, rectangular forms typical of those periods, in 1920s buildings, the smaller squatter rectangular form, with only steel framed windows of the 1930s and in post war buildings, the use of large expanse of glass being sympathetic to the original design. To design in sympathy in this way is of particular importance where the windows are at first floor level or above, which is the case on many Kew buildings.

Two storey additions

Where two storey additions are proposed there needs to be careful consideration of the visibility of the building and its impact on adjacent buildings and parklands. Sight lines should be used to assess the impact of the two storey section from various locations around the building. In general the top of the upper floor should fall within the viewing plane created by projecting a line at 18° to 20° from the height of the front parapet or gutter.

Outbuildings and Garages

As a rule, outbuildings and garages should only be located in rear gardens and should be carefully designed to fit in with the existing buildings. Smaller structures, such as sheds are best treated simply with a corrugated iron skillion roof set at a pitch of between 8° and 30°. Walls should be in brick, corrugated iron or weatherboards.

The design of larger structures needs to be considered in the context of the area, its characteristics, and with regard to the visibility of the building. Such buildings should generally have wall, roof and opening details that complement the surrounding building stock. Roof pitches of between 25° and 40° are generally preferred in areas dominated by pre1930s houses, and the use of materials to complement the main building on the site. Terracotta roof tiles would generally only be appropriate in areas with Edwardian or more recent buildings rather than on or associated with Victorian building stock . Flat roofs may be considered where they are situated behind a parapet wall or garden wall, or are amongst buildings of the post-war period.

In the older settled areas of the suburb, the preferred

materials for garage doors are vertical timber linings, particularly where the building faces a street or wide laneway (over about 4.0m). Roller doors and metal tilt-up doors set in freestanding masonry or timber in general should not be used, except for some areas dominated by buildings of the last three decades.

NEW WORKS: RESIDENTIAL INFILL

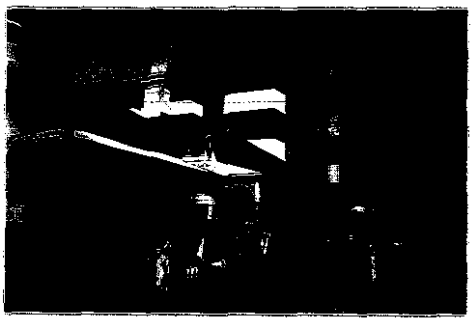
Introduction

One of the major factors in the designation of conservation areas is to identify those areas that have a particular character or quality that distinguishes them from the rest of Kew. Accordingly, in planning for such areas, the objective is to establish controls and guidelines that help to maintain this character or quality. There is however a major difficulty in achieving this in Kew because of the difference between areas of the suburb. To evaluate exactly what an area's character is, and what aspects of it are worth enhancing is not a straightforward task. There are however key points that can be looked for when making such an assessment.

In relation to new works this essentially involves setting guidelines for the design and development of new buildings and identifying the design considerations that should be addressed in determining the approach that is to be used. These guidelines are not intended to restrict well thought out contemporary design but rather, to provide guidance to the conservation factors that should be considered in developing that design. New infill design should have regard to these factors to achieve an integrated and harmonious solution that maintains the heritage quality and character of the conservation areas.

While the guidelines are intended to apply to typical urban residential sites the principles established equally apply to larger development sites.

Acceptable and Unacceptable Infill



The distinction between acceptable and unacceptable infill is whether the new development maintains the unity, cohesion and predominant character of the conservation area, as opposed to disrupting that unity and fragmenting the particular streetscape or precinct involved. The disruption may be as obvious as the construction of a three storey block of flats in a predominantly single storey area, or more subtle such as the construction of a facsimile terrace house in tumbled bricks and aluminium lace in a row of intact original terraces. The former example would be seen to be out of context with the scale of the adjacent buildings, while the latter would be considered to be inappropriate from the point of view of the materials used and the inaccurate attempt to copy the original terrace form. This is not to say that these structures might not be acceptable in another area, however they do not fit into the conservation areas.

In developing an infill design there are three important areas that require appraisal: the setting, the design

approach and detailed design considerations.

The Setting

Before commencing the design of a new building in a conservation area the most important matter to be considered is the setting in which the building is to be placed. This needs to be considered in relation to the buildings directly adjacent to the new building and then in relation to the streetscape and area as a whole. The objective should be to ascertain the predominant features of the buildings that contribute to the significance of the area and to determine how these features might be interpreted in a new building that would fit into the area in a manner that maintains the area's cohesive nature. This does not imply that infill buildings should copy the adjacent buildings or that they cannot be architecturally distinctive in their own right, but rather that they complement the areas as a whole.

For example, in a row of two storey terraces in which one is missing, the approach taken to infill might range from an exact copy of the original terrace to a modern interpretation of a terrace. The second approach might retain the basic shape, form and scale of the adjacent buildings but otherwise be distinctly modern.

Local Variations

Kew more than most older suburbs of Melbourne, varies greatly in the mix of its building stock, and different areas require different solutions to infill design. Six distinct areas have been designated as Urban Conservation Areas No.1, and are indicated on the attached plan (also refer Section 3.3.3, Kew Conservation Study). These range from Sackville Street with its concentration of large 1880s mansions, to the area around Oswin Street in Kew East, with its predominance of 1920s State Bank designed houses. Appropriate infill design for these areas would obviously vary considerably with the differing locations. The difference that might be found in the design of the infill from Sackville Street to Oswin Street would relate to the differences in the nature of the building stock from one area to the other. In other areas, such as that south of the Boroondara cemetery or along Walmer Street, where the buildings are less uniform, the approach might again change to fit in with the more random nature of the streetscape. Consequently it is necessary to examine the area surrounding a site to determine the critical features that distinguish the precinct. **Do not copy the design approach of an effective building in one area and expect it to necessarily successfully transplant to another area.**

Design Approaches

Several approaches have been used in the design of

infill buildings in the past with varying degrees of success. Some of those more commonly used in Kew are identified below with comments upon their appropriateness:

New design. Infill involving the use of contemporary design tends to produce the most interesting and successful results providing that it is developed in a manner that takes into account the local variations and context in which it is to be placed. It can result in the construction of buildings that are individually distinctive, that exhibit a high degree of design excellence and that contribute to the cohesiveness of the area as a whole. Such buildings can sensitively address the critical issues of setback, height, form, massing, facade details and materials.

The neutral facade. This approach to infill involves constructing a facade that recedes from, or is neutral within, the streetscape. Such facades might have little embellishment and simply maintain the basic front and side setbacks and the height of the adjacent buildings. It is an approach that can be successful, providing that it doesn't interrupt the rhythm or flow by leaving a gap in the street. The greatest failing of such an approach, particularly on larger frontages, is that the facade dominates the more intricate adjacent buildings and dominates rather than recedes.

The copy. This is a common approach to infill design, particularly for terrace housing, and it frequently results in a hybrid building that is neither an accurate copy of the original nor a good modern interpretation. If this approach is being used the copy should be as accurate as possible or an interpretation of an original design should be used. This latter approach is generally preferred to a reproduction. In either case mansard roofs, and faked old looking materials such as tumbled bricks and aluminium lace should be avoided.

Design Considerations

For all infill design there are a number of factors that should be taken into account in both selecting and developing the approach that is to be used. These are: scale, form, roof shape, openings, set-backs, materials , paint colours, fences, provision for cars, outbuildings and garages . These factors are considered below and the minimum acceptable requirements stated where relevant.

Scale

The scale of the infill building should generally relate to the predominant height of the buildings in the street, and in particular the height of adjacent buildings. Where such buildings are of uniform height the infill building should be of the same height. In streetscapes of buildings of mixed heights there is

scope for greater variation but in such streetscapes no infill building should be more than one storey above the lowest of the adjacent buildings.

In assessing the maximum permissible height of the building the visibility of the structure from a number of viewpoints should be taken into consideration, including its impact on adjacent parklands. The setting back of upper storeys may be necessary where taller structures are likely to dominate the streetscape.

Form

The building's form, that is its overall shape, should relate to adjacent buildings and the flow of the street. In general the objective should be to maintain the rhythm of the street and where buildings are narrow fronted, long facades should be broken by one or more of the following devices: stepping, balconies, verandahs, wing walls and other projections. Similarly where the original building stock is highly embellished and decorated, flat vertical surfaces should be broken with such devices as string course, mouldings or banding.

Roofs

Roof shape and materials are critical to the success of infill buildings and should be carefully related to the roofscapes of adjacent buildings. The predominant roof forms, apart from in areas dominated by post-WWII buildings, are either simple or complex hip roofs, and gable roofs, while buildings of the Edwardian period tended to have more complex arrangements of roofs than at any other period. Roof pitches pre 1930 were generally between 25° and 40° with limited overhangs. In areas of Kew dominated by pre 1930 building stock, flat roofs should not be used other than where they are concealed behind a parapet and their view from not only the front street, but also rear lanes, side streets, neighbouring properties and parklands should be a consideration. In such cases care should be taken to avoid the building appearing to have no roof in the context of the adjacent buildings. Skillion roofs are appropriate for the rear sections of buildings and outbuildings. The pitch of these roofs should be a minimum of 8°.

Preferred materials for roofing are corrugated iron, terracotta tiles, flat concrete shingles, and slate. Metal deck and metal tile roofing should in general be avoided.

Openings

If an area is overwhelmingly dominated by buildings of one period, the proportions and spacing of door and window openings should relate to the layout typical of that period. In areas dominated by pre-1930s houses, large areas of unbroken glazing should be avoided, particularly above ground level.

Setbacks

In some areas of Kew the built fabric of has a dense form, and front and side boundary setbacks are important design considerations. In general, the front setback should be similar to the adjacent buildings, and should not project forward from those buildings. Where the setbacks of adjacent buildings vary, the average setback for the street should be used. Large setbacks should be avoided, particularly where they create a gap in a streetscape with basically uniform setbacks. In such a streetscape a new building should generally not set back more than one metre behind the front wall of the adjoining building. Side setbacks are also of importance, particularly in streetscapes of detached and semi-detached buildings and should relate to adjacent buildings.

Where two storey infill is being considered in a predominantly single storey area, consideration should be given to setting back the two storey section of the building at least 4 metres from the ground floor facade alignment or to setting it within a roof space in the manner of an attic. Sight lines should be used to assess the impact of the two storey section from various locations around the building. In general the top of the upper floor should fall within a viewing plane created by projecting a line at 12° from the height of the front parapet or gutter.

Materials

Many modern materials are unsympathetic to the texture and character of traditional building materials and the materials used in infill development should be selected so that they are in harmony with surrounding materials on existing buildings. Materials that attempt to mimic old or aged materials are generally unsuccessful and should not be used.

Paint Colours

The intensity and design of the colour schemes used on infill buildings should be such that the building does not intrude aggressively into the streetscape. For large areas of wall that relate directly to the streetscape, the preferred colours are those that have similar tonal characteristics as the traditional colours that would have been, used on adjacent original buildings. In general large expanses of bright colours to wall surfaces should not be used and in particular in areas with predominantly pre1930s houses, trim (window and door joinery, gutters, fascias, and verandahs) colours should provide some contrast to the general wall colour. Again in areas with pre 1930s buildings, the preferred treatment to brick and rendered surfaces is for them to be left in their natural state, while weatherboards should preferably be painted.

Front Fencing

Front fencing to infill buildings should maintain the scale and approach used in traditional fencing within the area. In general fencing that allows some visual penetration should be used in preference to solid fencing. On properties of narrow or average frontage, the heights of their fences should not exceed 1200mm, while a height such as this is also preferable for larger properties.

Car Parking and Crossovers

The provision of off-street car parking in some of the more densely developed areas of Kew is often difficult, however where possible, cars should be parked at the rear of the property providing that access is available. New car spaces should not be placed in front of buildings and vehicle crossovers should not be created in front of properties with narrow frontages.

Outbuildings and Garages

In areas dominated by pre 1940s houses, garages and any outbuildings should only be located in rear yards. Smaller structures such as sheds, are best treated simply with a corrugated iron skillion roof set at a pitch of between 8° and 30°.

The design of larger structures should be considered in the context of the area's characteristics and with regard to the visibility of the building. Such buildings should generally have wall, roof and opening detailing that fits in with the original surrounding buildings. Roof pitches between about 25° and 40° in corrugated iron, slate or terracotta tiles generally complement most pre 1930s houses in Kew, however the individual context of a proposed structure is the far more important determinant of its form and materials. Terracotta would generally only be appropriate in areas with Edwardian or more recent buildings. Flat roofs may be considered where they are situated behind a parapet wall or garden wall, or if they are in an areas dominated by buildings of the last three decades. In the older settled areas of the suburb, the preferred materials for garage doors are vertical timber linings, particularly where the building fronts a street or wide laneway (over about 4.0m). Roller doors and metal tilt-up doors set in freestanding masonry or timber in general should not be used, except for some areas dominated by buildings of the last three decades.

TIMBER CONSTRUCTION VICTORIAN AND EDWARDIAN

Introduction

Kew has few timber buildings from the Victorian period, however most of the large number of Edwardian buildings in the area include at least some timber detailing and many are built totally in timber. Timber buildings are in many ways extremely versatile, and can be restored or adapted with considerably greater ease than brick buildings. Most important in carrying out such work is the retention and use of traditional design and detailing, to ensure that the integrity of the structure is maintained

VICTORIAN WEATHERBOARD HOUSE WITH RUSTICATED FRONT

Construction Details

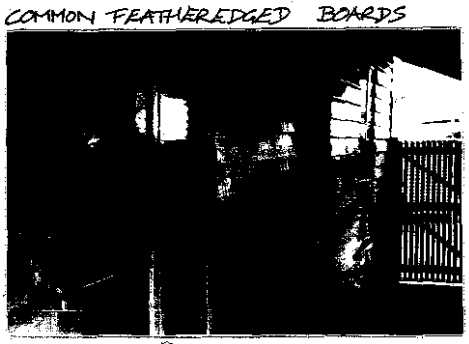
Victorian and Edwardian timber framed construction is similar to modern timber framed construction. The major difference is in the size of the framing members, which tend to be larger in older buildings, and the method used to join members. In modern construction the members are generally butt jointed, whereas in older buildings the members were mortised and tenoned, or halved together. The material used in the framing was usually rough sawn hardwood or oregon similar to that which is currently available.

EDWARDIAN WEATHERBOARD HOUSE

Timber Cladding

The most common form of cladding of external walls was timber boarding. The boarding, or weatherboards, were in a variety of sizes and shapes, the most common which was the feather edged board. This was cut square at the widest edge and tapered down to a thin edge at the top where the boards overlapped. When the boards were fixed they left about a 140mm section of board exposed. The weatherboards in Victorian buildings were invariably in baltic pine, and in Edwardian buildings in baltic pine or a local hardwood. Baltic pine boards are still readily available, although the dimensions of the boards are generally smaller than the old boarding. Western red cedar weatherboards are now also available, however these are best used unpainted which is usually not suitable on Victorian or Edwardian buildings. As an alternative to new boards, it is often possible to acquire second-hand boards from house wreckers. These should be carefully checked for borer damage and splits before being bought.

COMMON FEATHEREDGED BOARDS



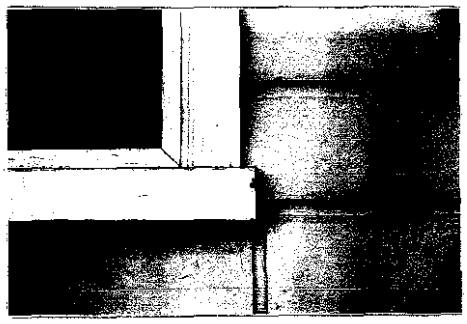
EARLY BEADED EDGE BOARDS.

Other boards used during the mid-Victorian period include boards in which a bead was cut in the lower edge. This type of board is often associated with prefabricated buildings brought into the colony in the

1840s and early 1850s, although it was also used in conventional early construction.

Rustication

The most common variation to the standard board was weatherboards that were cut to imitate courses or blocks of stone, (wrongly) called rustication. The boards varied in width and were more commonly 230mm (9") wide and 25mm (1") thick. The joint between the boards was defined by a U-shaped channel or a V which represented the horizontal mortar joint in masonry. In some cases this was taken further by the inclusion of regularly spaced vertical joints. The boards in this case were of uniform thickness and were lapped using a rebated jointing system called shiplapping. They were most commonly in redwood or kauri pine. In many buildings the imitation was taken further with the inclusion of sloping vertical joints cut in the boards above windows to represent arch blocks, and raised quoins around door and window openings and at the corners.



DETAIL - RUSTICATED WEATHERBOARDS

Eaves Decoration

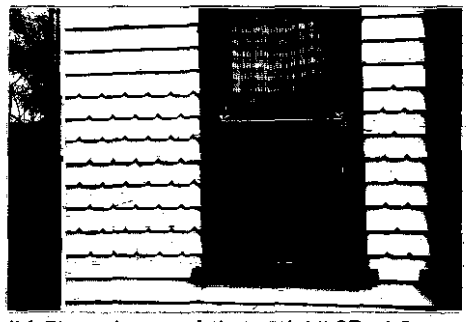
In the upper facade further decoration was included such as moulded panels and rosettes interspersed with single or paired brackets. Above this, the fascia was sometimes decorated with a scalloped fringe and a row of small timber blocks or teeth called dentils. This decoration has often been removed from buildings and shadow lines left in the paintwork can provide evidence of it having existed.

BRACKETTED AND PANELLED EAVES

SHADOW LINE FROM REMOVED MOULDINGS

Parapets

On some buildings rather than an eave being provided on the front facade, a timber parapet and pediment was constructed. Such parapets are particularly prone to deterioration and in many cases have badly decayed or have been replaced. Where this has occurred evidence of their previous existence is sometimes visible in the roof space where the framing has been modified to construct an eave.



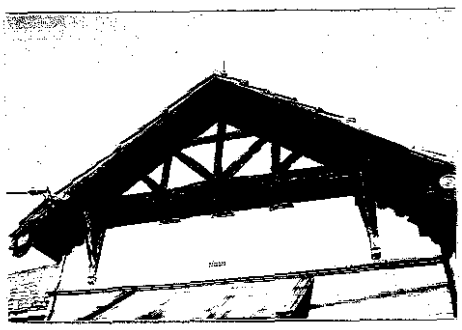
IMITATION SHINGLE WEATHERBOARDS.

Edwardian Linings

While the Edwardian period continued the use of many of the Victorian patterns of weatherboards, a number of new profiles and types of boards were developed. Variations to the feather edged board included the bullnose board, and the imitation shingle board. In addition, true shingling was also introduced. This involved the fixing of small timber tiles to the framing, usually as a highlight to a gable end or beneath a bay window. The shingling was either sawn or split and available in local hardwood or redwood.

IMITATION SHINGLES TO GABLE

The Edwardian period also saw the introduction of the roughcast finish. This was a plaster finish applied over fine strips of timber called laths, or on a wire reinforcing such as chicken wire. This most commonly fails where the laths or the wire reinforcing are affected by water penetration, and as a result they rot or rust out. Less frequently pressed metal imitations of such finishes, similar to the pressed metal used in Edwardian ceilings, were used. The sheets of metal were fixed over tongue and groove boarding, or to battens fixed to the framing.



HALF TIMBERING TO GABLE END

Repair and Replacement

Weatherboards frequently require repair or replacement and this work can often be easily carried out by the householder. Before undertaking such work it is important to establish why the boards need replacing, and to try and remove the cause of the failure to prevent it recurring. This is particularly important if there is evidence of attack by wood eating insects such as borer or white ant which may require specialist treatment.

Where replacing the external covering to a timber framed building, always attempt to replace it in a material similar to the original. Where this involves weatherboards with one of the standard profiles these can generally be obtained new, or second-hand from a wrecker. Where boards with more unusual profiles are required these may need to be purpose made by a joiner or by a timber yard, while in some cases standard boards can be modified to reproduce effects such as rustication.

The replacement of applied stucco finishes can be carried out by an experienced plasterer. The stucco is applied to timber or expanded galvanised metal laths. It is important that the laths are fully covered, as the failure of this type of finish frequently occurs where the laths have rotted out.

Modern Linings

In recent years a great many external wall lining materials have been placed on the market to be fixed over timber weatherboards or in place of them. These materials are generally promoted as providing maintenance free finishes, and they range from aluminium and fibre cement imitation weatherboards, to imitation brick and stone. While some of these materials do reduce maintenance painting many do not, and they in turn produce their own maintenance problems. These can result from inadequate protection to the building due to poor installation, or from the poor quality of the product itself. By retaining moisture behind them they can promote rotting in the original cladding or in the wall structure itself.

IMITATION BRICK CLADDING AND UNSYMPATHETIC ADDITION

Most importantly these materials destroy the integrity of the building and tend to devalue property. In many cases they also fail to realistically imitate the material that they are intended to replace or simulate.

Painting

The painting of timber buildings presents greater scope for the use of multiple colours than on brick or rendered structures. As a general rule on Victorian buildings the colours used on the broad expanse of weatherboards tended to be in the rich creams, to beige and buff range. Rustication and quoining were picked out against the solid wall colour, using creams and off-whites to imitate the pointing in the stonework, and dark browns and red browns to highlight the quoins.

Similar highlighting was employed on the eaves panels, rosettes and brackets. Window joinery, barge boards, cappings and doors always tended to be in darker colours set in contrast against the paler walls. On simple facades only two colours might be used whereas on more ornate buildings, three or four colours would not be unusual.

Edwardian colour schemes did not vary greatly from the more simple Victorian schemes in the number of colours used or the areas of highlighting. They did however vary in the colour range and to use paler wall colours, areas of stained timber and different trim colours. In general the overall composition of the scheme tended to maintain the darker trim colours over the paler wall colours. The exception is in the case of stucco finishes which always tended in both Victorian and Edwardian houses to be in off-white to cream colouring, and shingling which was usually either painted or stained in rich browns and purple browns.

Relevant Texts

Ian Evans, *Restoring Old Houses,* Macmillan, Melbourne 1979
Ian Evans, *The Federation House,* The Flannel Flower Press, Sydney 1986
Hugh Fraser & Ray Joyce, *The Federation House, Australia's Own Style,* Lansdowne Press, Sydney 1986
Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Period Building Restoration Trade & Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
City of Kew Building Conservation Guideline No. 19 Paintwork, Victorian
City of Kew Building Conservation Guideline No. 20 Paintwork, Edwardian

MASONRY CONSTRUCTION EARLY AND MID-VICTORIAN

Introduction

Brick and stone buildings are often thought of as being built to last and able to withstand the ravages of time. Unfortunately this is not always the case, and much damage has been done by the use of inappropriate techniques in their repair and restoration. Some of the methods used such as sandblasting to remove paint, or the removal of protective stucco coatings result in irreparable damage, while others such as painting, can severely distort the appearance of a building. Masonry materials are not indestructible, and need as much care in their restoration as any other element in a building.

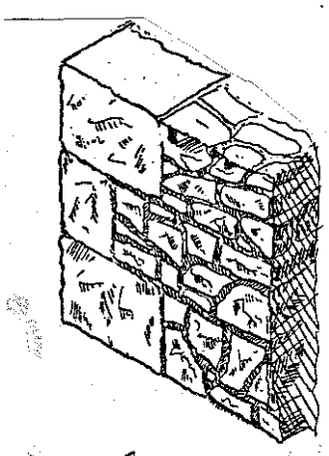
The Materials

Quite a number of early masonry buildings in Kew were constructed in soft hand pressed bricks, and a very small number in bluestone. These were usually laid in courses and bonded together with a weak lime mortar. Because of the softness of the bricks a protective coating of stucco was sometimes applied. In the case of the bluestone where this was laid in randomly shaped blocks, rather than blocks that had been cut square, stucco was also commonly applied to produce a uniform finish. Removal of the stucco from such masonry can result in problems arising from water penetration and loss of mortar, and should be avoided.

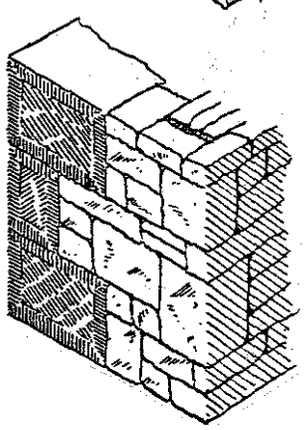
The mortar used to bond brick or stone was always weak and usually consisted of sand bound together with lime putty. Lime putty was made from slaking quicklime. A modern substitute is available in the form of bagged lime that has been soaked in water for at least 24 hours. The quantity of sand to lime putty was in the order of 4 or 6 to 1. From around the 1870s onwards cement was added to the mortar to provide additional strength, but this was in very small quantities and the modern cement mortars that are now used, were not common until well into the twentieth century. It is important but often very difficult to get a bricklayer to use weaker lime mortars that are not widely used in current building practice.

Stone Construction

In stone construction, the walls were either built of solid stone plastered internally and exposed or rendered externally, or they were built with a skin of brickwork internally which provided a more regular surface for plastering. Where the stone was exposed it was always unpainted. The thickness of the walls varied, although a typical width was 450mm (18").

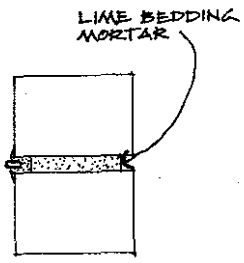


COURSED RANDOM STONEWORK - USUALLY COVERED WITH RENDER



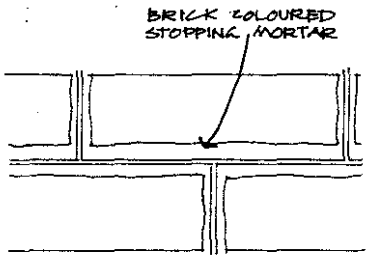
COURSED SQUARED STONEWORK WITH DRESSED QUOIN BLOCKS.

Where the stonework was exposed externally the joints were finished in a variety of ways. The most common mortar joint is called a struck joint where the stone mason simply strikes across the face of the joint with the trowel. A more distinctive joint was where tuckpointing was used, consisting of a raised bead of white lime putty impressed into the joint to form precise horizontal and vertical lines where the joint occurred.



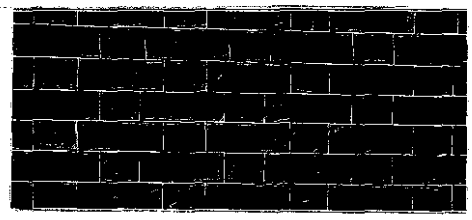
SIDE VIEW

This technique first involved finishing the joint with mortar the colour of the masonry and then applying a crisp white bead of lime putty, so that each block of stone was outlined as a bold white rectangle. Where the mortar joints have deteriorated badly or where repairs/extensions are being undertaken, if there is evidence of this treatment having been used, it would be most appropriate to recreate it. The technique requires considerable skill and is something best done by a skilled tradesperson. In new work it involves the laying of the blocks of stone on an uncoloured weak lime bedding mortar. The bedding mortar is struck below the finished face of the stonework and a stopping mortar, coloured to match the adjacent stone and of a hard strong mix sometimes containing cement, is applied flush with the face of the block. Because of the imperfections in the stone, particularly at their edges, the stopping mortar is smeared onto the surface of the area immediately adjacent to the joint, making the block appear continuous with the joint. The lime putty tuckpointing is then applied over the coloured stopping mortar, serving to redefine in a very precise manner, where the joint lies.

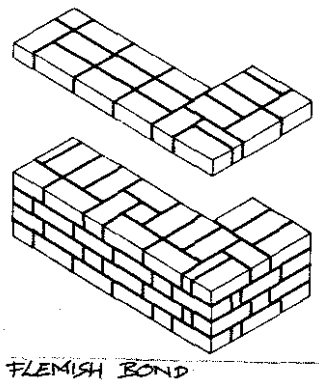


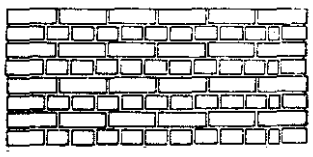
FRONT VIEW

TUCKPOINTING DETAIL


TUCKPOINTED BRICKWORK.

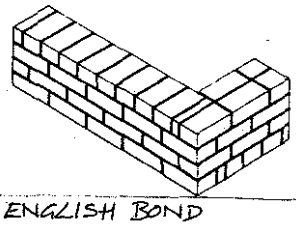
The most critical features of tuckpointing are that:
- the repointing to the bedding mortar be with a lime mortar, or mortar that is of similar strength to the existing mortar
- the pointing mortar is very accurately coloured to match the original, and that a stable colouring agent is used such as natural earth pigment. (In matching up to the original, the wall first needs to be cleaned down with water to reveal the colour clearly.)
- the application of the white bead be set true to the horizontal or vertical and with precise connections at the points where they intersect.
- the thickness of the bead be no greater than 4mm: currently available tuckpointers have difficulty in achieving this, and they should be asked to submit a sample before work proceeds.


FLEMISH BOND


COLONIAL BOND

Brick Construction

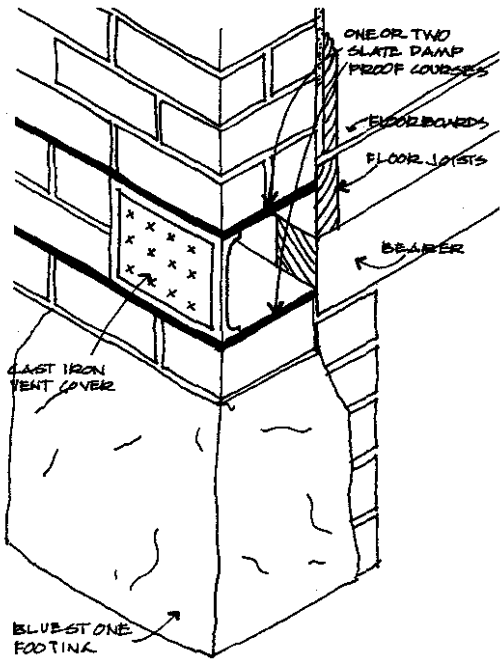
Early and mid-Victorian brickwork was usually constructed as solid 230mm (9") wide walls. The bricks were bonded in a variety of patterns the more common being the 'English' and 'Flemish' bonds. Thicker walls, 355mm (14") wide were also used but generally in larger buildings and particularly where the brickwork was to be exposed. The use of cavity


ENGLISH BOND

construction where two skins of brickwork are separated by an air gap of about 50mm was not introduced on any scale until the 1890s.

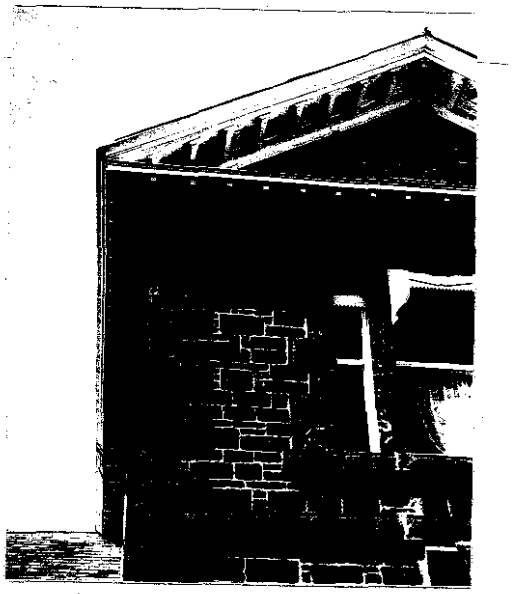
Damp Proof Courses

To prevent the rising of ground moisture in the structure both brick and stone walls were provided with a damp proof course. This is a band of material that is impervious to water. It is set in one or more of the horizontal courses near to the ground and it stops the material above, absorbing ground water. The most common damp proof courses in early buildings are slate. One of the more frequent problems occurs where the damp proof course has been broken or has been bridged in some way, allowing moisture to rise up the wall. This requires careful inspection to determine the exact cause of the problem. The means of dealing with it and information on such matters can be obtained from a number of the books mentioned in the 'Relevant Texts' below. As a general rule always try to remove or redirect the source of the moisture away from the building through drainage, and improve subfloor ventilation before undertaking any treatments to the masonry itself.



Dressings

It was common for masonry buildings to be embellished with decorative dressings around their corners, openings and parapets. Corners, and door and window openings were sometimes provided with quoins which consisted of raised sections of brickwork projecting out from the facade. A similar effect was achieved by using different coloured bricks set flush with the facade. The tops of openings were supported with curved iron bars, called arch bars, or by flat gauged brick arches which were sometimes formed from specially shaped bricks. Near the top of the facade a projecting string course was often included to break the line of upper facade. This consisted of one or more projecting courses of masonry either left exposed or rendered.



HEAVY QUOINING TO AN EARLY BLUESTONE FACADE

Repairs and Repointing

The repair of masonry structures usually involves the patching or partial replacement of existing work. The need for such repairs may arise because of cracking, erosion, weathering, loss of pointing, or inappropriate previous repairs. In all repair and restoration work the critical factors are that the right materials are used, and that competent tradespeople are engaged. Where structural problems are involved a structural engineer should be consulted.

Bricks and Stone

Where bricks or stonework require replacement the materials used should match as closely as possible, the existing. With early brickwork this can be difficult because the brick sizes are usually smaller than modern bricks. In this case second-hand bricks should be sought, or appropriately coloured modern bricks cut down to size. With bluestone, it is usually possible to obtain second-hand stone from a secondhand materials yard, or alternatively to use new stone. Bluestone pitches (the blocks used in street paving) should never be used in walls, as the effect is quite unlike traditional stonework, and is extremely intrusive. Where bricks have fretted badly but are otherwise sound, rather than replacement, they can be carefully removed and turned around so that the sound face faces outwards.

Repointing

One of the most common failures in brickwork repair is the use of unsuitable mortars. Mortars used in repair work should, as a general rule, be of a similar strength, colour, and composition to the rest of the mortar in the wall other than where the original mortar has failed structurally . Very strong mortars that contain only cement and sand should not be used. In general a composition mortar containing no more than one part of cement, and two parts of lime to nine parts of sand should be used. Where the wall has been laid in a lime mortar, one part of lime to four or six parts of sand could be used. Remember that the colour of the mortar is to a large extent determined by the colour of the sand and this should be carefully selected to suit the job.

Almost as important as the mix of the mortar is the manner in which it is finished on the outer face: the pointing. The most common form of pointing in early brick buildings is the struck joint where the bricklayer's trowel is simply struck smoothly along the joint to remove the excess mortar. On stonework it is more common to find the joints finished with tuckpointing as described above.

Paint and Its Removal

Where brick or stone buildings have been painted this has often been done for reasons of fashion in the twentieth century. On occasions it was also done to waterproof the facade. This has been ill-advised, because the application of a paint membrane is often detrimental, having a suffocating effect on the masonry, and inhibiting its ability to breathe and causing dampness to rise higher up the wall or pass to its interior face to escape. It is also important to remember that another reason for previous owners to have overpainted a wall is where alterations have been made to the building, such as bricking-in a door or window, or adding a room in ill-matching brickwork.

THE CHARACTER OF AN EARLY TERRACE LOST UNDER LAYERS OF PAINT.

- the application of the white bead be set true to the horizontal or vertical and with precise junctions at the points where they intersect.
- the thickness of the bead should be no greater than 4mm: currently available tuckpointers have difficulty in achieving this, and they should be asked to submit a sample before work proceeds.

Relevant Texts

Ian Evans, *Restoring Old Houses*, Macmillan, Melbourne 1979
Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Clive Lucas, *Conservation and Restoration of Buildings, Preservation of Masonry Walls*, Australian Council of National Trusts, Canberra 1982
Period Building Restoration Trade & Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
Howard Tanner and Philip Cox, *Restoring Old Australian Houses and Buildings*, Macmillan, Melbourne 1975
City of Kew Building Conservation Guideline No. 4 Masonry Construction, Early and Mid-Victorian
City of Kew Building Conservation Guideline No. 7 Brick and Cement Construction, Late Victorian and Edwardian

POLYCHROMATIC BRICKWORK

Introduction

During the late 1870s and particularly by the 1880s, it became very popular for houses to be built in exposed brickwork in a combination of differently coloured bricks ranging from creams to terracotta red to dark brown Hawthorn bricks and blacks. This brickwork, loosely known as 'polychromatic' brickwork, was usually in two (bichromatic), or three or more (polychromatic) colours and the differently coloured bricks were combined to create bold designs often in bands across the walls, parapets and wing walls, or in units (like medallions) set into the wall plane. Polychromatic brickwork was designed to be exposed, often with a most vibrant effect, and in the instances where it has subsequently been painted over one of the major design elements of the original building has been obscured.

A TYPICAL BICHROMATIC BRICK FACADE

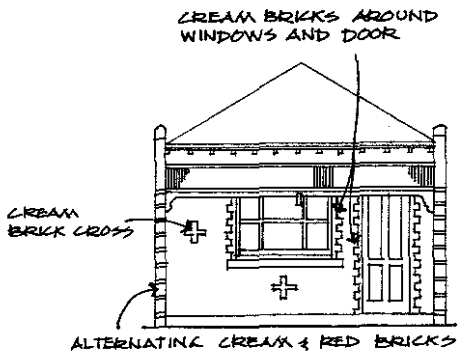
Use on houses

These decorative bricks were more expensive than stock reds or browns, and polychrome walling was therefore normally restricted to the public facades of houses. It was common for the multicoloured bricks to barely wrap around the corner of a house or around the side of a wing wall to a verandah, while the rest of the house was built in plain, usually red, bricks. This is an important point to remember when trying to determine if a building that has subsequently been painted over, was in fact built in polychrome brickwork.

A POLYCHROMTIC BRICK HOUSE WITH COMMON RED BRICK SIDE WALL

Detection where brickwork has been painted

Where brickwork has been painted, it is usually possible to determine by simple means whether there is polychromatic brickwork underneath the paint. Initially this can done by simply looking for evidence of differently coloured bricks where paint is peeling. Sometimes the side of the house has been left unpainted and by examining the very front edge of the side wall, closest to the street, it is usually evident if more than one colour of brick has been used in the front facade. If neither of these approaches is successful, clear indication can be sought by removing a small area of paint with a methylene chloride-based paint stripper and a wet sponge. While a time consuming method for effectively removing large areas of paint without the right equipment, for this purpose, it is efficient.



TYPICAL LOCATIONS OF COLOURED BRICKS IN A POLYCHROME BRICK FACADE

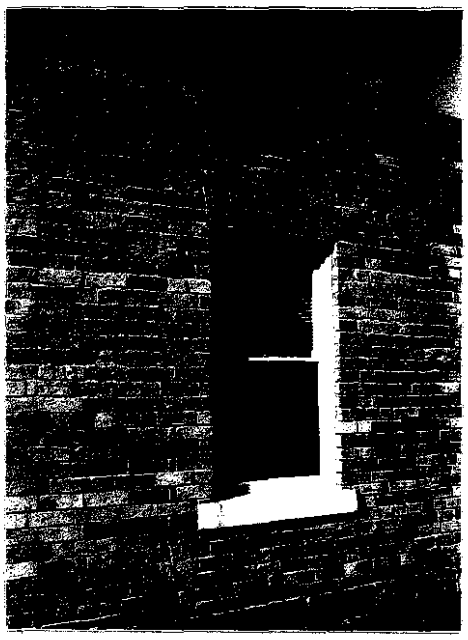
In instances where none of the above are successful, simple observation of the configuration of the mortar joints, and the shape of the bricks may provide a clue, and it is sometimes possible to make an educated

guess that the walls are polychromatic brickwork. A wall may have an even bonding pattern of its mortar joints except (for example) midway between the two front windows where the bonding may have been interrupted to form a distinct pattern. Where such an interruption occurs, it is most probable that a group of differently coloured bricks have been set into the wall. Similarly, the texture of the brick surface, even under the paint, may vary from rough to smooth where the brick colour changes.

It was also very common when using polychromatic bricks, to combine them with moulded bricks. These were often used at the edges of door and window openings so that rather than having a squared-off opening, the bricks were set in a rounded or a bevelled chamfer. A variety of different brick profiles were available by the end of the 1880s and they were also combined to create projecting parapets and string courses, commonly in a combination of different colours.

Paint and its removal

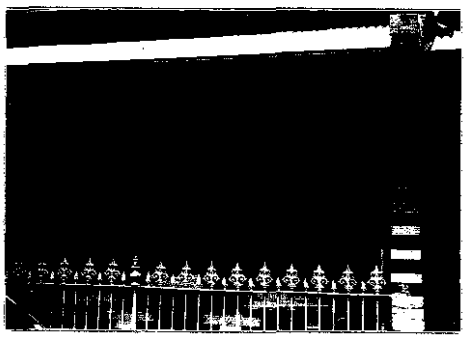
Where polychromatic buildings have been painted this has often been done for reasons of fashion in the twentieth century. On occasions it was also done to waterproof the facade. This has been ill-advised, because the application of a paint membrane is often detrimental, having a suffocating effect on the brickwork, inhibiting its ability to breathe and causing dampness to rise higher up the wall or pass to its interior face to escape. It is also important to remember that another reason for previous owners to have overpainted a wall is where alterations have been made to the building, such as bricking-in a door or window, or adding a room in ill-matching brickwork. Careful observation of the brickwork should be made to determine whether subsequent patching of the brickwork has been undertaken on the building in question. If the brickwork does appear intact, the overpainting can in many cases be easily removed without damaging the brickwork or the mortar joints. The most effective method of paint removal is through the application of an appropriate solvent that is then removed by steam or hot water. The more effective solvents are usually methylene chloride based but at higher strengths than are generally available commercially. Other chemicals such as caustic soda or acids may dissolve the paint but they leave harmful salts in the brickwork and should not be used. Steam cleaning is a process performed by several contractors in Melbourne, and it is fast and very effective. It is important to note that sandblasting and other abrasive techniques of paint removal are very destructive to both the hard outer surface of bricks and the mortar joints and such techniques are in general TOTALLY UNSUITABLE for use on brick buildings.



SEVERE EROSION CAUSED BY SANDBLASTING

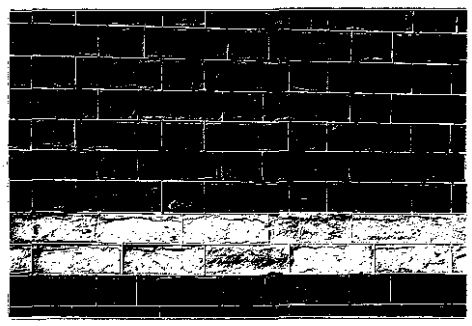
Repointing

One of the more common failures on polychromatic brickwork is the loss and deterioration of the pointing. This may result from the long term effects of weathering or from material failure. Before describing repointing techniques it is important to make the following cautionary notes:
1. Don't repoint unless it is necessary for the protection of the building. Weathered pointing is far preferable to poorly executed new pointing
2. Don't paint over bricks to imitate tuckpointing as it will appear as a pale imitation. The building is better left with no tuckpointing if the means are not available to carry it out.
3. Don't use inexperienced tradespeople. Tuckpointing is a specialist trade and is not practiced by most bricklayers. An unqualified tradesperson will not be able to achieve the standard of work required.



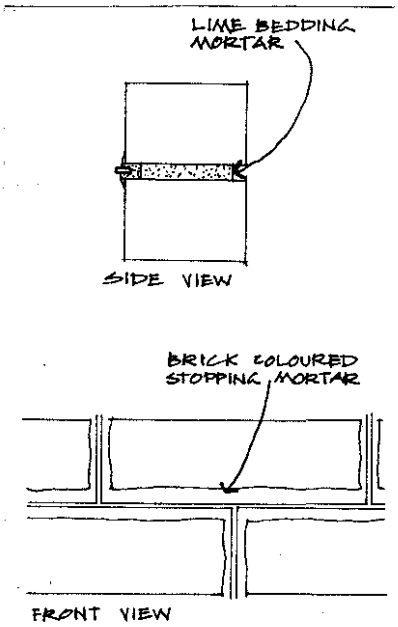
A BICHROMATIC BRICK FACADE IN WHICH THE CREAM BRICKS HAVE BEEN LATER PAINTED, DISFIGURING THE TEXTURE & CHARACTER OF THE FACADE.

The mortar joints, or pointing, between polychromatic brickwork were sometimes merely what is referred to as 'struck' joints, that is with each joint slightly cut in at its lower edge. However, particularly during the 1880s and later, it became the norm to finish the joints first with a mortar to match the colour of the bricks and then with a crisp white bead of lime putty, so that each brick was outlined as a bold white rectangle. This technique was known as 'tuckpointing'. Where the mortar joints have deteriorated badly or where repairs/extensions are being undertaken, if there is evidence of this treatment having been used, it would be most appropriate to recreate it. The technique requires considerable skill and is something best done by a skilled tradesperson. In new work it involves the laying of the bricks on an uncoloured weak lime bedding mortar. Where tuckpointing is the intention, the bedding mortar is struck below the finished face of the brickwork and a stopping mortar, coloured to match the adjacent bricks and of a hard strong mix sometimes containing cement, is applied flush with the brick face. Because of the frequent imperfections in Victorian bricks, particularly at their edges, the stopping mortar is smeared onto the surface of the brick in the area immediately adjacent to the joint, making the brick appear contiguous with the joint. The lime putty tuckpointing is then applied over the coloured stopping mortar, serving to redefine in a very precise manner, where the joint lies.



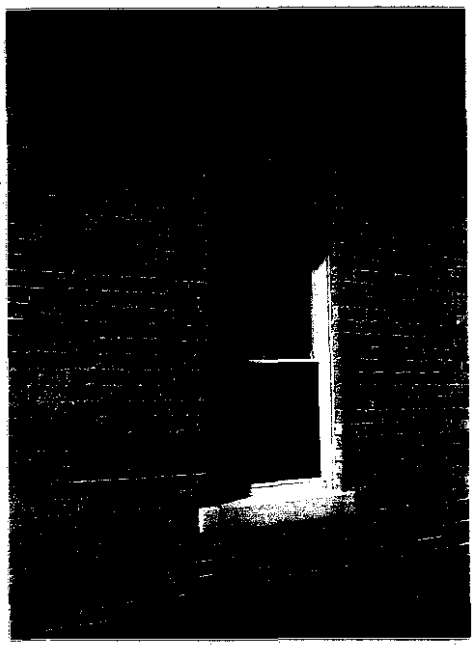
TUCKPOINTED BICHROMATIC BRICKWORK.

The most critical features of tuckpointing are that:
- the repointing to the bedding mortar be with a lime mortar, or mortar that is of similar strength to the existing mortar
- the pointing mortar be accurately coloured to match the original, and that a stable colouring agent be used such as natural earth pigment. (In matching up to the original, the wall first needs to be cleaned down with water to reveal the colour clearly.)



TUCKPOINTING DETAIL

Careful observation of the brickwork or stonework should be made to determine whether subsequent patching has been undertaken on the building in question. If the masonry does appear intact, the overpainting can in many cases be easily removed without damaging the bricks/blocks of stone, or their mortar joints. The most effective method of paint removal is through the application of an appropriate solvent that is then removed by steam or hot water. The more effective solvents are usually methylene chloride based but at higher strengths than are generally available commercially. Other chemicals such as caustic soda, or acids may dissolve the paint but they leave harmful salts in the masonry and should not be used. Steam cleaning is a process performed by several contractors in Melbourne, and it is fast and very effective. It is important to note that sandblasting and other abrasive techniques of paint removal are very destructive to both the hard outer surface of bricks or stone and the mortar joints and such techniques are in general TOTALLY UNSUITABLE for use on brick or stone buildings.



SEVERE EROSION CAUSED BY SANDBLASTING

Relevant texts and contacts

Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983

Clive Lucas, *Conservation and Restoration of Buildings, Preservation of Masonry Walls*, Australian Council of National Trusts, Canberra 1982

Period Building Restoration Trade & Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986

Ian Evans, *Restoring Old Houses*, Macmillan, Melbourne 1979

Howard Tanner and Philip Cox, *Restoring Old Australian Houses and Buildings*, Macmillan, Melbourne 1975

City of Kew Building Conservation Guideline No. 5 Polychromatic Brickwork

City of Kew Building Conservation Guideline No. 7 Brick and Cement Construction Late Victorian and Edwardian

STUCCOED CONSTRUCTION VICTORIAN

Introduction

The change in appearance of stuccoed masonry buildings between the mid and late Victorian periods is dramatic. The simple smooth rendered facades, with simple parapets and cornices, gave way to highly elaborate and ornamented facades. In their design and construction every moulding, urn, pilaster and capping was of importance and essential to the total composition. Sadly such decoration is extremely vulnerable and much has been removed. Where the decoration has gone, it can often be easily reconstructed, based on the on-site evidence or from other intact examples.

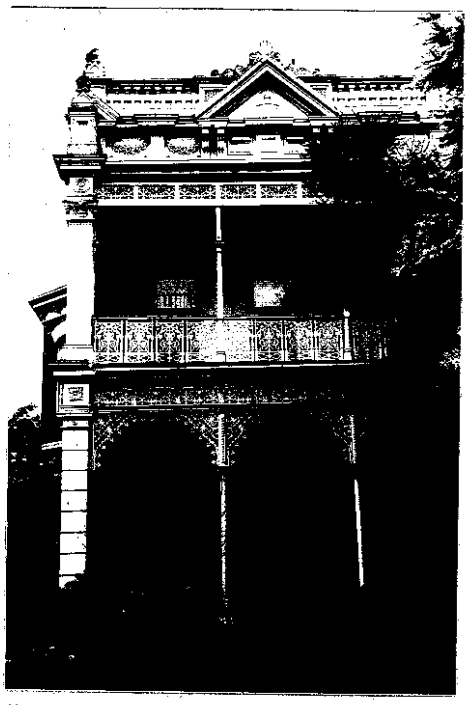
STUCCOED MASONRY WITH DECORATIVE MOULDINGS

The dramatic change in design approach from the mid to the late Victorian period, generally corresponds to the introduction of cements in place of common or hydraulic limes, though there was little change in basic trade techniques and application.

Rendering Practice

Early external stuccoes, like mortars, originally consisted of sand and lime putty applied to a masonry surface with a trowel and were invariably ruled with horizontal and vertical lines to imitate the joints in stonework. The earliest pure lime stuccoes appear to have given way to a cement-lime-sand composition render at a relatively early stage, and by the 1870s these harder, grey renders appear to have been in use.

More often than not stucco was applied to earlier buildings to protect soft brickwork from the effects of the weather, or to imitate stonework: more highly regarded than brickwork. In late Victorian buildings the stucco was applied largely as a vehicle for the application of elaborate decoration, and as part of the accepted architectural style of the time.



LATE VICTORIAN STUCCOED TERRACE

Application

The render to flat wall surfaces is generally applied in a number of coats, each coat being progressively weaker towards the surface. This is done so that the render provides a blotting paper effect on the outermost coat and readily dries out after wetting. It is very important to ensure that when render is being repaired, that the outermost coat is at least no stronger than the undercoat.

The decorative mouldings that were applied were either run in situ, or precast and fixed to the building. Continuous mouldings such as cornices, hood mouldings over doors and windows, cappings and the like, were run with metal templates cut to the

desired profile of the moulding. Their weight was supported on projecting sills of brickwork and stonework. More elaborate mouldings such as column capitals and urns were usually precast on a plasterer's bench and then fixed to the building with mortar and iron reinforcing. The inclusion of the reinforcing is frequently the cause of their failure as the iron rusts and splits the render around it.

ORNATE PRECAST PRESSED CEMENT DECORATION

Finishes

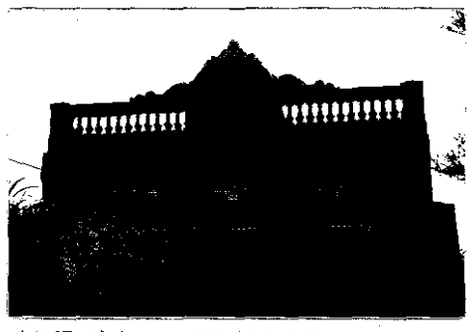
The finished surface of the render was generally smooth trowelled leaving a fine sandy finish on the surface. On more decorative work, techniques such as vermiculation and rustication were used. These were generally limited to quoins, to corners and door and window openings.

Parapets

A major feature of many rendered Victorian buildings is the parapet to the front facade. This usually consists of a cornice that projects out from the facade at the eave line with a low section of walling or balustrading above. The parapet wall conceals a box gutter which is frequently the cause of problems where it has rusted out. The centre of the parapet was often finished with a triangular, semicircular or rectangular raised section. This often contained the name of the building, or the date of construction in raised rendered lettering

Early and mid-Victorian parapets were generally simple in their design, consisting of a moulded cornice finished at the ends with scrolled brackets, and surmounted by an undecorated parapet wall. The cornice was sometimes supported on small brackets which themselves rest on a moulded string course. The top of the parapet wall was generally square set without a capping, and sometimes finished with simple urns at each end.

Late Victorian parapets tended to be far more elaborate and used a great range of precast and run in-situ moulding. The cornice is generally heavily moulded and supported on ornate brackets, sometimes with applied wreath or panel mouldings between. Above, the parapet wall is usually in the form of a balustrade with a heavily moulded capping and decorative urns.

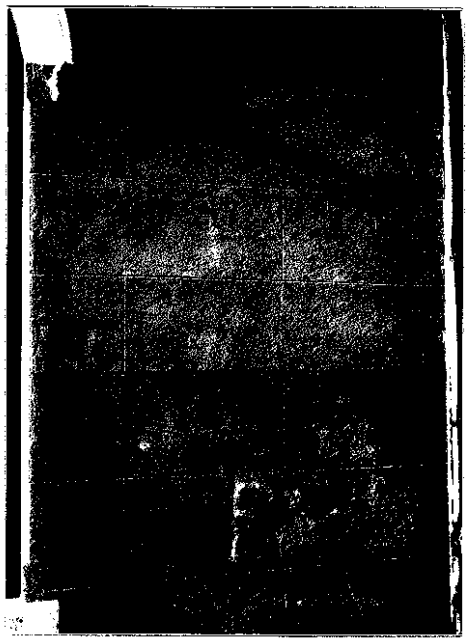


A TYPICAL LATE VICTORIAN PARAPET.

The severe exposure of parapets, and the techniques used in their construction makes them very vulnerable to deterioration. Frequently they have been emasculated by the removal of decoration such as urns and cappings, and sometimes the parapet has been totally removed.

Repair and Restoration

The repair and restoration of render is generally something that should be carried out by a skilled tradesperson. In flat render work, the important points to remember are:
- use a render mix that is similar to the existing render in strength and make sure that it is not too strong.
- remove unsound render and don't try to cover it up with a thin top coat. This will inevitably fail within a relatively short time.
- mark in the ruled lines in new work to match up with the old.
- select a grade and colour in the sand that will achieve a good colour match and texture to blend in with existing work, particularly where the render is unpainted.



SMOOTH RENDER RULED TO IMITATE STONEWORK.

With missing mouldings and ornamental work, this can be quite readily replaced or repaired. Existing mouldings can be re-run on site, and most ornamental work can be precast by any of the firms that either specialise in that work, or produce pressed cement garden ornaments. Many of the elements such as urns, balustrades, brackets and the like are available as stock items and are relatively inexpensive. Be careful to ensure that they are not reinforced with untreated or galvanised steel as this will rust in the long term and may result in their failure. The reinforcing should always be in a metal such as phosphor bronze, stainless steel, or copper depending upon the structural requirements.

Relevant Texts

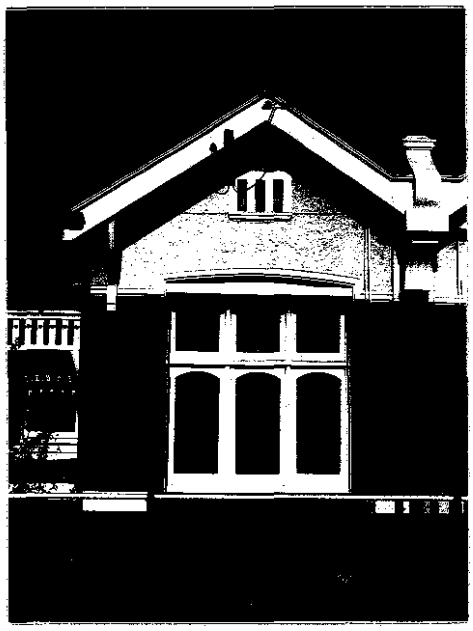
Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Ian Evans, *Restoring Old Houses,* Macmillan, Melbourne 1979
Clive Lucas, *Conservation and Restoration of Buildings, Preservation of Masonry Walls,* Australian Council of National Trusts, Canberra 1982
City of Kew Building Conservation Guideline No. 7 Brick and Cement Construction, Late Victorian and Edwardian
City of Kew Building Conservation Guideline No. 9 Chimneys, Victorian

BRICK AND CEMENT CONSTRUCTION LATE VICTORIAN AND EDWARDIAN

Introduction

The combination of exposed brick and cement is common to late Victorian buildings (c1890s) and Edwardian buildings. The approach to the use of these materials within each period was however, quite distinctive. The late Victorian examples tended to employ dark brown Hawthorn or red bricks, or alternatively be in polychromatic brickwork. On these, the render was usually smooth finished or vermiculated and was used for decorative work to parapets in particular, and in banding across the facade.

The Edwardian examples varied from this, both in their design and the placement of the materials. The more typical forms usually combined hard pressed red bricks with a lumpy cement finish called roughcast. The roughcast was commonly applied to gable ends, and the upper areas of the facade, and like the late Victorian buildings, in horizontal banding. This form of construction and the use of roughcast typifies house construction of the Edwardian period.

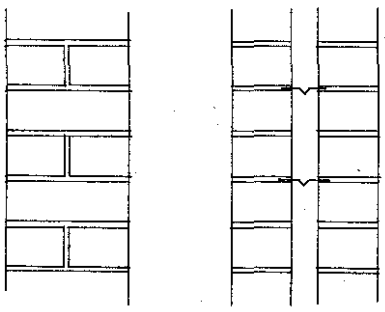


AN EDWARDIAN RED BRICK AND ROUGHCAST FACADE.

Materials

The bricks used during both periods were generally of a uniform size and machine made. They were of substantially superior quality to the soft hand pressed bricks of the early and mid-Victorian periods. A feature of much of the Edwardian work was the use of specially shaped bricks particularly around openings, and for cappings and horizontal string courses.

Late Victorian brickwork was usually constructed as solid 230mm (9") wide walls. The bricks were bonded in a variety of patterns the more common being English bond and Flemish bond. The use of cavity construction where two skins of brickwork are separated by an air gap of 50 to 65mm was introduced in the 1870s and was common by the Edwardian period. The objective with this type of construction was to enable the inner skin of brickwork to always remain dry by being physically seperated from the outer skin. Where dampness occurs in such walls it is often because the cavity within the wall has been bridged in some way.

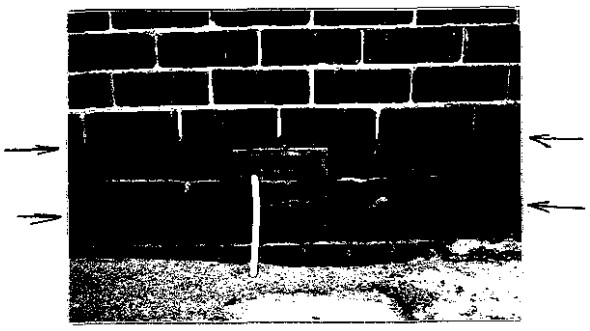


SOLID 230mm. THICK BRICKWORK

270mm WIDE CAVITY BRICKWORK

To prevent ground moisture rising up the structure, walls were provided with a damp proof course. This is a band of material that is impervious to water, set in one or more of the horizontal courses near to the ground. Its purpose is to stop the brickwork above absorbing ground water. The most common damp proof courses in nineteenth century buildings are

slate, whereas Edwardian buildings tend to have damp proof courses made by mixing a waterproofing material such as bitumen with the mortar. This can be seen externally as a black mortar joint usually placed somewhere around floor level.



BITUMEN AND SAND DAMP PROOF COURSES VISIBLE ABOVE AND BELOW AN AIR VENT.

One of the more common problems in masonry is where this damp proof course has been broken or has been bridged, allowing moisture to rise up the wall. This requires careful inspection to determine the exact cause of the problem and the means of dealing with it, and information on such matters can be obtained from a number of the books listed in the 'relevant texts' below. As a general rule, always try to remove or redirect the source of the moisture away from the building through drainage and increase subfloor ventilation, before undertaking any treatments to the brickwork itself.

The mortar used to bond the bricks was always weak and usually consisted of sand bound together with lime putty. Lime putty was made from soaking quicklime in water and a modern substitute is available in the form of bagged lime that has been soaked in water for at least 24 hours. The quantity of sand to lime putty was in the order of 4 or 6 to 1.

Although cement was available at this time it was not widely used in mortar during this period, and the modern cement mortars were not in common use until the twentieth century.

Cement

The cement on flat wall surfaces was generally applied in a number coats, each coat being progressively weaker towards the surface. This was done so that the cement render provides a blotting paper effect on the outermost coat and readily dries out after wetting. It is very important to ensure that when cement is being repaired that the outermost coat is no stronger than the undercoat.

The decorative mouldings that were applied were either run in situ, or precast and fixed to the building. Continuous mouldings such as cornices, hood mouldings over doors and windows, cappings and the like were run with metal templates cut to the desired profile of the moulding. Their weight was supported on projecting sills of brickwork and stonework. More elaborate mouldings such as column capitals and urns were usually precast on a plasterer's bench and then fixed to the building with mortar and iron reinforcing. The inclusion of the reinforcing is frequently the cause of their failure as the iron rusts and splits the cement around it.

Finishes

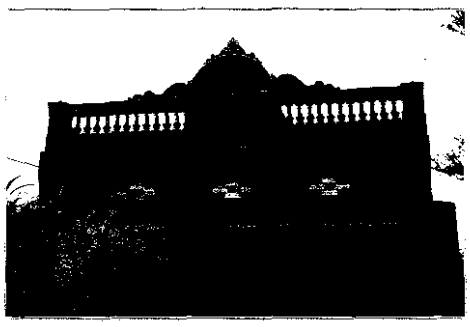
On late Victorian work the finished surface of the cement render was generally smooth trowelled, leaving a sandy finish on the surface. By contrast, on Edwardian work it was generally given a roughcast or pebble dash finish. This was formed by applying one or two base coats and over this applying a pebble or crushed rock aggregate. In rough cast work the aggregate is applied in a wet mix of cement, lime and sand and thrown against the base coat. In pebble dash work while the second base coat is still soft, the selected pebbles or rock are thrown against the coating and lightly pressed in with a wooden float.

In gable ends in particular, the roughcast work is often broken up into panels by timber members. These members are intended to represent Tudor-like half timbering and are an important part of the design. In some Edwardian buildings the gable ends to the roof were timber framed rather than being in brickwork and the roughcast is applied to metal or timber lathing. This can be a problem where the lathing has rotted out, leaving nothing to support the renderwork.

HALF TIMBERED EDWARDIAN GABLE

Parapets

A major feature of many rendered late Victorian buildings was the parapet to the front facade. This usually consists of a cornice that projects out from the facade at the eave line with a low section of walling or balustrading above. The parapet wall conceals a box gutter which is frequently the cause of problems where it rusts out. The centre of the parapet was often finished with a triangular, semicircular or rectangular pediment.



TYPICAL LATE-VICTORIAN PARAPET.

Late Victorian parapets tend to be far more elaborate than those of the 1860s and 1870s and use a great range of precast mouldings and mouldings run in situ. The cornice is generally heavily moulded and supported on ornate brackets, sometimes with applied wreath or panel mouldings between. Above, the parapet wall is usually in the form of a balustrade with a heavily moulded capping and decorative urns.

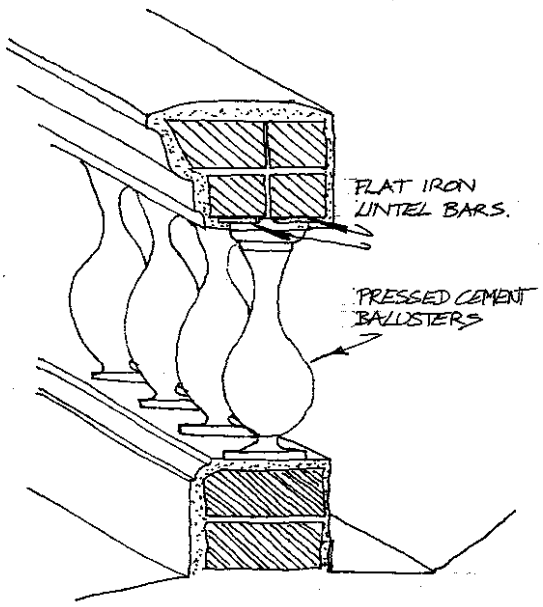
The severe exposure of parapets and the techniques used in their construction makes them very vulnerable to deterioration and frequently they have been emasculated by the removal of decoration such as urns and cappings. Alternatively they have been totally removed.

Repair and Restoration

The repair and restoration of smooth cement or roughcast work is generally something that should be carried out by a skilled tradesperson. In all work the important points to remember are:
- use a render mix that is similar to the existing render in strength and make sure that it is not too strong.
- remove unsound render and don't try to cover it up with a thin top coat. This will inevitably fail within a relatively short time.
- select a grade and colour of sand that will achieve a good colour match and texture to blend in with existing work, particularly where this is unpainted.

Missing mouldings and ornamental work can be quite readily replaced or repaired. Existing mouldings can be re-run on site, and most ornamental work can be precast by many of the firms that either specialise in that work, or produce pressed cement garden ornaments. Many of the elements such as urns, balustrades, brackets are available as stock items and are relatively inexpensive. Be careful to ensure that they are not reinforced with untreated or galvanised steel as this will rust over the long term and may result in their failure. The reinforcing should always be in a metal such as phosphor bronze, or stainless steel.

Where roughcast work has been applied to timber, or metal laths and these have failed, they should be replaced with new lathing before replacement of the render. If metal lathing is used it should always be fully galvanised and wire netting, such as chicken wire should not be used.



BALUSTRADED PARAPET.

Repointing

One of the most common failures in brickwork repair is the use of unsuitable mortars. Mortars used in repair work, as a general rule, should be of a strength, colour, and composition similar to the rest of the mortar in the wall other than where failure of the original mortar has resulted in structural failure. Mortars that contain only cement and sand should not be used. In general a composition mortar containing no more than one part of cement to two parts of lime and nine parts sand should be used. Where the wall has been laid in a lime mortar, one part of lime to four or six parts of sand could be used. Remember that the colour of the mortar is to a large extent determined by the colour of the sand and this should be carefully selected to suit the job.

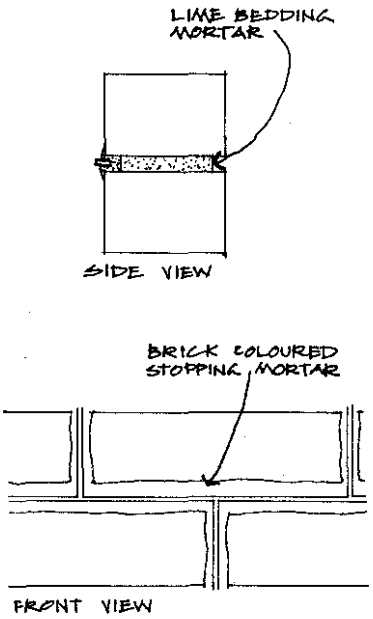
Almost as important as the mix of the mortar is the manner in which it is finished on the outer face, or the pointing. The most common form of pointing in brick buildings is the struck joint where the bricklayer's trowel is simply struck smoothly along the joint to remove the excess mortar.

Tuckpointing

This technique involves finishing the joint with mortar the colour of the bricks and then applying a crisp white bead of lime putty, so that each brick is outlined by a bold white line. The technique requires considerable skill and is something best done by a skilled tradesperson. In new work it involves the laying of the bricks on an uncoloured weak lime bedding mortar. The bedding mortar is struck below the finished face of the brickwork and a stopping mortar, coloured to match the adjacent bricks and of a hard strong mix sometimes containing cement, is applied flush with the brick face. Because of the imperfections in the bricks, particularly at their edges, the stopping mortar is smeared onto the surface of the area immediately adjacent to the joint, making the brick blend in with the joint. The lime putty tuckpointing is then applied over the coloured stopping mortar, serving to redefine in a very precise manner, where the joint lies.

WHITE TUCKPOINTING ON A RED BRICK WALL WITH SMOOTH STUCCO BAND.

The critical features of tuckpointing are that:
- the repointing to the bedding mortar be with a lime mortar, or mortar that is of similar strength to the existing mortar
- the pointing mortar is very accurately coloured to match the original, and that a stable colouring agent is used such as natural earth pigment. (In matching up to the original, the wall first needs to be cleaned down with water to reveal the colour clearly.)
- the application of the white bead be set true to the horizontal or vertical and with precise junctions at the points where they intersect.
- the thickness of the bead should be no greater than 4mm: currently available tuckpointers have difficulty in achieving this, and they should be asked to submit a sample before work proceeds.



TUCKPOINTING DETAIL

Paint and its removal

Where brickwork has been painted this has often been done so for reasons of fashion in the twentieth century. On occasions also it was done to waterproof the facade. This has been ill-advised, because the application of a paint membrane is often detrimental, having a suffocating effect on the masonry, inhibiting its ability to breathe and causing dampness to rise higher up the wall or pass to its interior face to escape. It is also important to remember that another reason for previous owners to have overpainted a wall is where alterations have been made to the building, such as bricking-in a door or window, or adding a room in ill-matching brickwork. Careful observation of the brickwork should be made to determine whether subsequent patching has been undertaken on the building in question. If the masonry does appear intact, the overpainting can in many cases be quite easily removed without damaging the bricks or the mortar joints. The most effective method of paint removal is through the

application of an appropriate solvent that is then removed by steam or hot water. The more effective solvents for oil and some acrylic paints are usually methylene chloride based but at higher strengths than are generally available commercially. Other chemicals such as caustic soda, or acids may dissolve the paint but they leave harmful salts in the masonry and should not be used. Steam cleaning is a process performed by several contractors in Melbourne, and it is fast and very effective. One of the problems with the process is that it will not remove putty and plaster fillers that are sometimes applied to brickwork before painting. Where this is the case it may be preferable to repaint rather than to clean off the paint. To determine the potential effectiveness of the approach always carry out a small trial area of cleaning before proceeding. It is important to note that sandblasting and other abrasive techniques of paint removal are very destructive to both the hard outer surface of bricks and the mortar joints and such techniques are TOTALLY UNSUITABLE for use on brick buildings.

SEVERE EROSION CAUSED BY SANDBLASTING.

Relevant Texts

Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Ian Evans, *Restoring Old Houses,* Macmillan, Melbourne 1979
Clive Lucas, *Conservation and Restoration of Buildings, Preservation of Masonry Walls,* Australian Council of National Trusts, Canberra 1982
City of Kew Building Conservation Guideline No. 5 Polychromatic Brickwork
City of Kew Building Conservation Guideline No. 6 Stuccoed Construction, Victorian

ROOFING
VICTORIAN AND EDWARDIAN

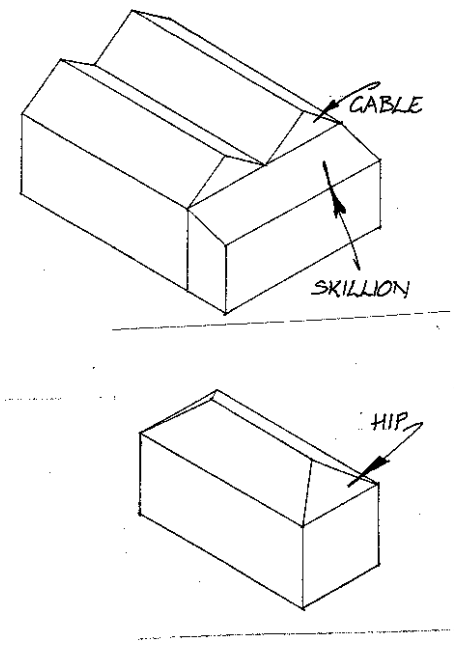
Introduction

The roof on a building is one of the most important indications of its age, and in housing one of the most prominent features of built up streetscapes. Colour, texture, shape and form all contribute to the building's design and if insensitively repaired or restored, can destroy the integrity of the building.

As with all restoration and repair work, where evidence of original detailing is not available on site, look elsewhere at similar examples to gain information on how the work might be approached.

Roof Form

The form of a roof is one of the most important parts of a building's design and where repairs or alterations are being undertaken every effort should be made not to alter or move away from that basic form. This does not only apply to the front of the building where the form of the roof may be of a complex nature, but also to the rear where a simpler roof shape may have sufficed. The critical factors are the slope, and the manner in which different roof slopes interconnect.



THE THREE BASIC ROOF FORMS.

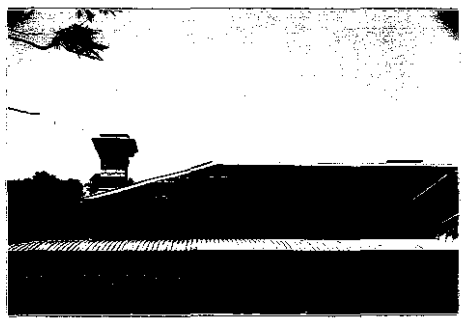
Roofing Materials

The earliest roof covering materials likely to be found in Kew are timber shingles, metal sheeting and tiles, and the ubiquitous slate. Timber shingling was a relatively common form of roofing up to the 1870s but appears to have gone largely out of favour and was generally prohibited after this period. Occasionally it is possible to find a shingled roof under a later roof covering such as corrugated iron, and where this is the case, the shingles should, if possible, be retained.

Metal sheeting such as corrugated iron was in widespread use from the 1850s onwards, although it is rare to find original sheeting still intact. Early corrugated iron came in two sizes of corrugations, 90mm (3.5") and 125mm (5"), and in standard 1.8m lengths. It was generally fixed to 50 x 25mm rough sawn hardwood battens. The 125mm iron in particular was used on portable buildings brought to Australia in the 1850s. Its use for roofing after the 1850s was limited and the narrower iron took over from this time.

In addition to corrugated iron, flat iron sheet, patented iron tiles and zinc sheet were also used in the early Victorian period, however few examples survive.

The alternative to metal coverings was slate, which was in widespread use throughout the nineteenth and early twentieth centuries. The slate in use in the area was predominantly imported from England and Wales, although later in the nineteenth century American slate was also used. The slates were nailed to oregon battens with flat headed nails called clouts. In high quality work these were in copper but in domestic work they were in galvanised iron or zinc. It is the rusting and bending of these nails that causes the slates to slip on old roofs. In later Victorian work interest was added to the roof by the formation of patterns using different colours and sizes of slate. These patterns are particularly distinctive and should be retained when repairing such roofs.



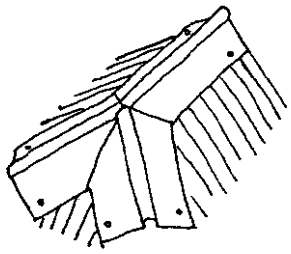
SLATE ROOF WITH LIGHT COLOURED OCTAGONAL SLATES IN A DECORATIVE BAND.

The major alternative to slate was the terracotta tile that became popular in the Edwardian period. These tiles were originally imported and later made locally. They were fixed by wiring or hooking over battens, and designed so that minimal overlapping was required.

A variety of patterns were available, but during the Edwardian period the Marseilles pattern (both imported and locally made) predominated.

Cappings, Gutters and Downpipes

Associated with each of the roof coverings are a range of accessories such as ridge and hip cappings, and gutters and downpipes. These items varied in size and shape, and it is desirable where possible to establish the nature of the original detailing before repair or restoration is carried out. This is often difficult with cappings, but with eaves gutters it is sometimes possible to make out the outline of the shape of the gutter where it has abutted a wing wall leaving an outline of its profile in the render, or on the brickwork.



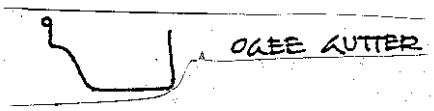
STANDARD 150 OR 230 GALVANISED ROLLED STEEL RIDGE CAPPING SUITABLE FOR CORRUGATED IRON AND SLATE ROOFS.

Early ridge and hip cappings were generally in lead, or flat galvanised iron folded to the correct shape with a roll at the apex of the fold. Where lead was used the timber ridge or hip was usually capped with a timber roll over which the lead was folded. These rolls are sometimes found under later iron cappings, and may indicate the use of lead as the original capping material. On early Victorian buildings lead was more common than in the mid and late Victorian periods when iron cappings were more widely used.

With the terracotta tiles a range of cappings also became available, and from the 1890s onwards such cappings were in common use. They were not however limited to tile roofs, and slate roofs were often capped in this manner, particularly around the turn of the century. A number of specialist potteries and tile manufacturers still produce these cappings.

MOULDED TERRACOTTA RIDGE CAPPING USED ON BOTH SLATE & TERRACOTTA TILE ROOFS FROM THE 1890s.

The predominant gutter type and shape of the nineteenth and early twentieth century is the ogee profile galvanised or cast iron gutter. This type of gutter was fixed with shaped brackets, and towards the end of the nineteenth century with large spikes and spacing rings. Corners of the gutters were sometimes decorated with shaped pieces of flat sheet iron each called an acroterion, and where these survive they should be retained and reused. The use of cast iron ogee guttering was less common than galvanised iron, and generally restricted to larger buildings.



OGEE GUTTER

Ogee guttering has now been largely replaced by the quadrant gutter which was introduced around the early 1900s and became common between the wars. It is generally reasonable to assume that quadrant guttering would not have been used on nineteenth century houses, and should not be used unless the standard ogee gutter is not large enough to remove the water from the roof without overflowing.

QUAD GUTTER

The downpipes used for both types of gutters were generally round, other than where they were recessed into the wall of the building. The use of surface mounted rectangular downpipes on houses is in general totally inappropriate unless there is clear evidence that this was the original detail.

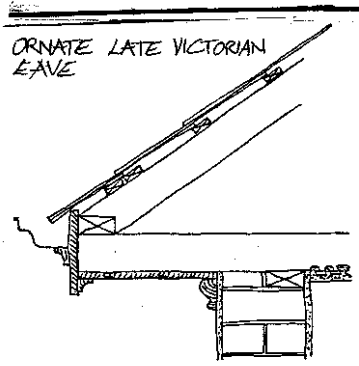
Eaves Details

Mid to late Victorian eaves were generally constructed with a horizontal soffit lined with 150mm wide beaded tongue and groove lining boards. Where the boarding abutted the back of the fascia and the wall of the building, a scotia or ovolo moulding was usually fixed. The gutter was set on an oregon fascia board which had a square or beaded edge. The gutter itself sat on a scotia or ovolo moulding.

ORNATE LATE VICTORIAN EAVE

In both Victorian and early Edwardian buildings the eave was sometimes supported on decorative brackets, often set in pairs and interspersed by moulded panels and rosettes. On some buildings these have later been removed and evidence of their existence can be seen in the build up of paint around where the edge of the moulding was fixed.

The eaves to Edwardian buildings were more varied and used both the basic Victorian approach with a horizontal soffit, as well as introducing the raking soffit. This is where (usually V jointed) tongue and groove lining boards are fixed over the rafters.

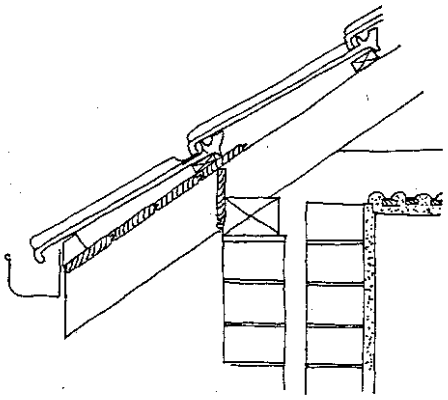


TYPICAL VICTORIAN SIDE EAVE DETAIL.

Repair and Replacement

The repair and replacement of roofing is work that should generally be carried out by a skilled tradesperson. In selecting a person to do the work it is important to remember that all roof plumbers do not always have the range of skills that may be required to cover the whole job, and that specialists may be required for work such as slating, leadwork and tiling.

Before undertaking such work it is also important to be aware of the materials that are used and their suitability or otherwise for the repair and restoration of old buildings.



TYPICAL EDWARDIAN SIDE EAVE

Colorbond

When replacing corrugated iron roofing it is frequently recommended that it should be replaced in colorbond material with a prefinished paint coating rather than plain corrugated iron. While the paint coating may add to the life of the roofing, most corrugated iron roofing used in the nineteenth and early twentieth centuries was unpainted, and where it was painted it was in colours of the period. The colours and the finish used on colorbond roofing bear no relation to the original treatments that were available and colourbond roofing or accessories should not be used in restoration work other than where they are to subsequently be painted in appropriate colours.

Zincalume

Most steel roofing material currently in use is provided with a zincalume finish rather than a galvanised finish. The zincalume material cannot be soldered and must be fixed with mastic and pop rivets. It should not be used in direct contact with lead. Because many old roofs have lead flashings that are still sound, when the sheeting requires replacement it is important to make sure that all lead work is isolated from contact with the zincalume, or that a galvanised material is used.

Decramastic Tiles

As with the use of artificial brick cladding on weatherboards, the use of metal tiles over corrugated iron roofs should be avoided. Not only do the tiles look totally out of place with the age and appearance of such buildings, they are also likely to reduce the value of the building and give no greater life than conventional corrugated steel roofing.

DECRAMASTIC TILE ROOF

PVC Gutters and Downpipes

PVC is widely used for general plumbing and is sometimes used in gutters and downpipes in roof plumbing. This type of roof plumbing is quite distinctive and as with metal tiles, is likely to greatly detract from the character of the building. It is far preferable to use traditional galvanised steel for roof plumbing.

Relevant Texts

Ian Evans, *Restoring Old Houses,* Macmillan, Melbourne 1979
Clive Lucas, *Conservation and Restoration of Buildings, Preservation of Roofs,* Australian Council of National Trusts, Sydney 1979
Ian Evans, *The Federation House,* The Flannel Flower Press, Sydney 19861986
Hugh Fraser & Ray Joyce, *The Federation House, Australia's Own Style,* Lansdowne Press, Sydney 1986
Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Period Building Restoration Trade Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
City of Kew Building Conservation Guideline No. 15 Verandahs, Late Victorian
City of Kew Building Conservation Guideline No. 16 Verandahs, Edwardian

CHIMNEYS
VICTORIAN

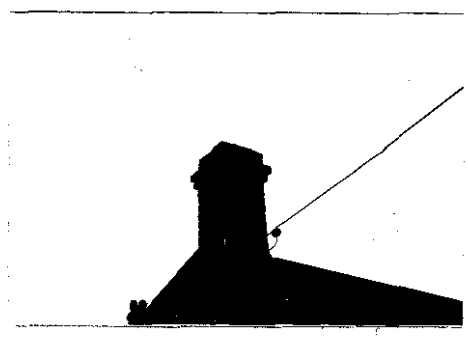
Introduction

The chimney is a part of a building that immediately indicates its style. It is an element that decorates the skyline and like roof shapes, contributes to the cohesion of streetscapes. Whether in use or closed off, they are one of the most important elements to consider when restoring a building.

Styles

Like so many elements in a Victorian building chimneys were graded according to their status, and those near the front of the house tend to be more embellished than those to the rear that serve the lesser rooms such as the kitchen or laundry.

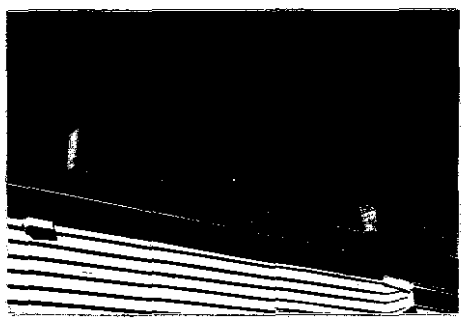
Early Victorian chimneys tend to be relatively simple. Where in plain brick the typical form is with one or two projecting courses of brickwork about three courses from the top of the chimney. This form of chimney was used for both brick and weatherboard houses and continued to be used throughout the century. In the mid to late Victorian period these chimneys were often embellished with the introduction of a course of angled bricks on top of the corbel.



A SIMPLE EARLY BRICK CHIMNEY

In the mid-Victorian period there was more widespread use of rendered chimneys which incorporated classically detailed cornices. A simple moulded bead was used as a string course and above this a cornice with drip moulding and sloping cap was constructed.

The late Victorian period saw a continuation of this trend and as with the facades, the chimneys were greatly embellished. Moulded brackets were used to support the cornice and the chimney shaft was decorated with raised panels. During this period polychrome brick chimneys were also common, particularly on polychrome brick buildings, but also on weatherboard buildings. These chimneys followed the same lines as the plain brick chimneys, but also incorporated specially moulded bricks for string courses and cappings.



MID-VICTORIAN RENDERED CHIMNEYS.

Repair

Chimneys are usually the most exposed element of an old building and frequently suffer from quite severe deterioration. This is caused by wind and rain, and also by the effects of the flue gases produced by fires. In brick chimneys the most frequent cause of concern is where the mortar crumbles and the brickwork becomes loose. This generally requires partial dismantling and rebuilding, and should be carried out by a skilled bricklayer. Before starting the job it is always worth taking a photo so that you can ensure that the projecting courses of brickwork are put back in the right places. If the chimney has been partially demolished or has collapsed, look at chimneys on other buildings of similar age and style to help resolve the detail that should be used.

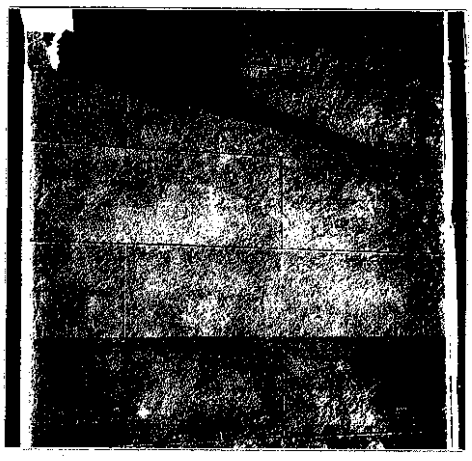
Where specially moulded bricks are required these will generally have to be obtained second-hand, although there are some brick factories that still produce a limited range.

With cement rendered chimneys the more common failure is for the cement to crack and become drummy. This will usually require the removal of all the unsound cement and re-rendering of the top of the chimney. The cementwork should be reconstructed to match the original work or copied from a similar chimney. The mixture should not be excessively strong, as it will tend to crack when it dries and allow water penetration. A mix such as 1 : 2 : 9 cement-lime-sand mix would be suitable for most Victorian chimneys. Mouldings can be re-formed in situ, or precast and fixed to the surface of the chimney (Refer Guideline No. 6).

Reconstruction

Where chimneys have been removed, they should if at all possible be reconstructed, particularly where they are an important element in the front facade of a building. Sometimes only the exposed stack has been removed, leaving the stump of the chimney within the roof space. This stump can be used for the reconstruction. Where the complete chimney has been removed it will be necessary to determine a suitable size from a similar building that has its chimneys. Sometimes the size of the flue can be worked out from the framing in the roof space if this has been left in place after the chimney has been removed.

The reconstruction should include all the decorative work to the shaft and with rendered chimneys make sure that the lines are ruled in to imitate stone joints.



SMOOTH RENDER RULED TO REPRESENT STONEWORK.

Chimney Pots

If the chimney is in an excessively exposed position it may well require chimney pots. These help to reduce down drafts and should be selected to suit the style of the house. Old chimney pots can be bought second-hand and a limited range of reproduction pots are available. A common alternative was to set semicircular dividers into the top of the chimney, that projected above the line of its top mouldings. There are a number of examples of these extant on Victorian chimneys in the Kew area.

Relevant Texts

Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Ian Evans, *Restoring Old Houses,* Macmillan, Melbourne 1979
Period Building Restoration Trade Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
City of Kew Building Conservation Guideline No. 6 Stuccoed Construction, Victorian
City of Kew Building Conservation Guideline No. 7 Brick and Cement Construction Late Victorian and Edwardian

CHIMNEYS
EDWARDIAN

Introduction

The chimney is a part of a building that immediately indicates its style and period. It is an element that decorates the skyline and like roof shapes, contributes to the cohesion of streetscapes. Whether in use or closed off, they are one of the most important elements to consider when restoring a building.

TALL BRICK CHIMNEYS WITH CORBELLED TOPS.

Edwardian chimneys were generally quite distinct from their Victorian predecessors and introduced a far more varied approach in design. In many cases they were more severe in their design but no less complex. The dominant characteristic of most chimneys was the use of red brick, often in conjunction with smooth and roughcast finished render. Less common are the slightly tapered fully roughcast finished chimneys which were introduced in the 1910s.

SIMPLE EDWARDIAN CHIMNEY

The simplest of these chimneys were in plain brickwork which at the top corbelled out and stepped back in over about the seven top courses. Variations to this included the introduction of strapwork, that is where a vertical line of bricks projected out of the face of the chimney on each side. The more elaborate chimneys incorporated rendered and roughcast caps and string courses. Most chimneys were finished with terracotta chimney pots that were obtainable in a great variety of shapes and sizes.

Repair

Chimneys are usually the most exposed element of an old building and frequently suffer from quite severe deterioration. This is caused by wind and rain, and also by the effects of the flue gases produced by fires. In brick chimneys the most frequent cause of concern is where the mortar crumbles and the brickwork becomes loose. This generally requires partial dismantling and rebuilding, and should be carried out by a skilled bricklayer. Before starting the job it is always worth taking a photo so that you can ensure that the projecting courses of brickwork are put back in the same places. If the chimney has been partially demolished or has collapsed, look at chimneys on other buildings of a similar age and style to help resolve the detail that should be used.

CHIMNEYS WITH CORBELLED BRICK TOPS AND STRAPWORK OVER ROUGHCAST RENDER SHAFTS.

Where specially moulded bricks are required these will generally have to be obtained second-hand, although there are some brick factories that still produce a limited range.

With rendered chimneys the more common failure is for the render to crack and become drummy. This will usually require the removal of all the unsound

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Chimney Pots

If the chimney is in an excessively exposed position it may well require chimney pots. These help to reduce down drafts and should be selected to suit the style of the house. Old chimney pots can be bought second-hand and a limited range of reproduction pots are available.

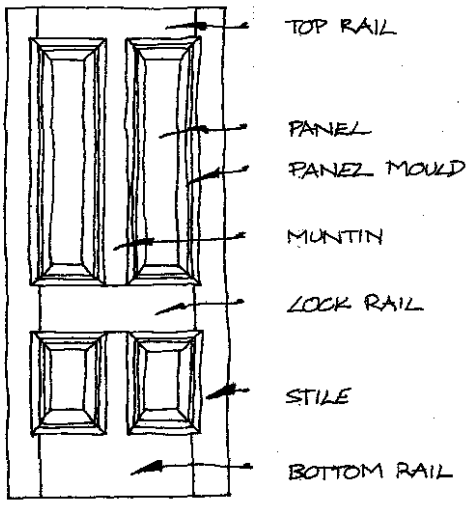
Relevant Texts

Ian Evans, *The Federation House*, The Flannel Flower Press, Sydney 1986
Hugh Fraser & Ray Joyce, *The Federation House, Australia's Own Style*, Lansdowne Press, Sydney 1986
Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Ian Evans, *Restoring Old Houses*, Macmillan, Melbourne 1979
City of Kew Building Conservation Guideline No. 7 Brick and Render Construction Late Victorian and Edwardian

DOORS
VICTORIAN

Introduction

Doors, and particularly front doors,were a feature of Victorian buildings that added greatly to their distinction of detailing and decoration. They stand in stark contrast to the lightly constructed and often superficially decorated doors, common today. They also acted as one of the indications of the status of the building, and varied noticeably from large mansions to small cottages, and from the front entrance to the rear.

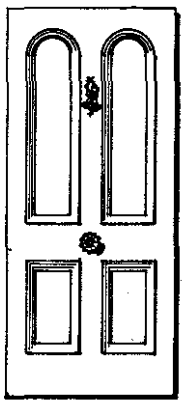


TYPICAL FOUR PANEL DOOR.

General Appearance and Construction

Three basic forms of door construction were used in the nineteenth century: the ledged and braced door, the framed ledged and braced door and the panelled door. The first two of these door types were generally used only at lesser entry points to building, or as entry doors to external laundries, bathrooms and the like. The panelled door was, throughout the century, by far the more common door for both front and rear entrances.

The detailing and appearance of such panelled doors, from the 1850s through to the 1890s, varied only in minor (although important) details. Throughout the period, all doors were constructed with an exposed framing of solid timber, within which were recessed panels of timber housed into grooves in the framing members. The timber used was most commonly a softwood and usually yellow pine, baltic pine or oregon.


MID-VICTORIAN DOOR.

The main differences in the appearance of panelled Victorian doors occurred in:
- the number, size, profile and shape of their panels and
- the profile of the mouldings that ran around each panel

These differences arose because of:
- the distinction between the mouldings to the external face of a door, and the internal face
- the distinction in decoration and size of members between the front door and doors to the front of a building, and the other less important external doors
- the door being in a humble dwelling that was not given anything like the embellishment lavished on mansions of the period
- variations in style with different periods of construction

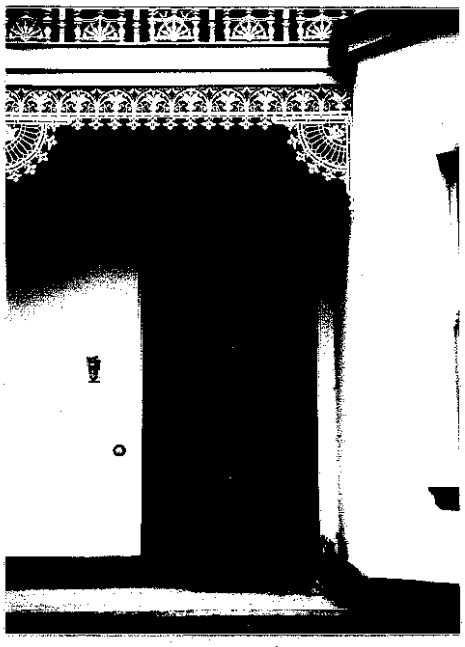
Framing of the door

The members that framed panelled Victorian doors, that is the stiles, rails and muntin were always constructed with mortice and tenon joints, and were typically of the proportions illustrated. In almost all bar the most elaborate doors, these members were normally left with no embellishment, and it is only on some wide front doors that the central muntin was typically given a vertical beading set flush with the face of the door to give the effect of a pair of doors.

Panels

The most common arrangement by far was a door with four rectangular recessed panels and only occasionally on grander houses was the door given six panels. In four panel doors, the lower panels were the smaller and the upper two elongated rectangles, while in six panel doors the proportions were similar but with a small, almost square, panel set above the long central panels.

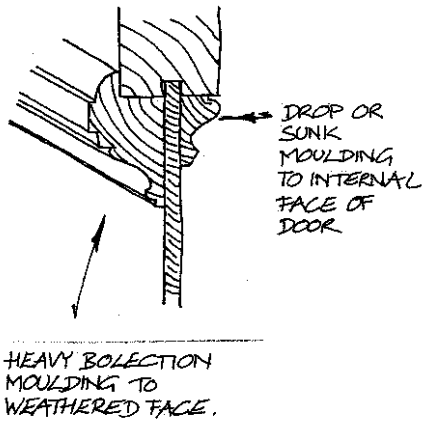
The main difference between doors of the late Victorian period compared with the early and mid-Victorian was that the front door on houses of the earlier period often had rounded heads to the two upper panels, rather than all four being rectangular, however the overall proportions were generally similar to the later doors. Another variation was in the profile of the panels, with some late Victorian doors and particularly the external face of front doors, having their panels with a raised pyramidal section.



SIX PANEL DOOR WITH GLAZED FANLIGHT AND SIDELIGHTS.

Panel Mouldings

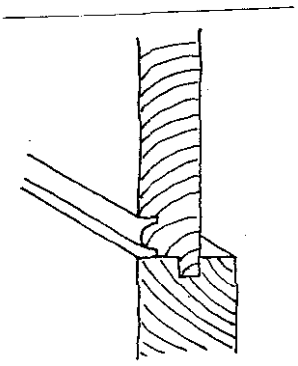
The simplest treatment of the junction between the recessed panel and the door frame was to leave it as an exposed angle. This more commonly occurred in early Victorian cottages, and to a lesser extent on the less important doors of the grander houses. However by far the most common treatment of this junction was to apply a panel mould which effectively disguised the joint. The exact profile of these mouldings varied according to the door type, whether on the internal or external face, the location of the door within the building, and with changes in style over the Victorian period.



To replicate panel mouldings, the best way of settling on a detail is by close observation of intact doors on buildings of similar status and date. Once found, a profile can be traced by using a profile comb, that is, a carpenter's metal comb with moving teeth that take on the profile of the moulding. A tracing taken of the moulding can then be used as a model for a joiner to replicate. Replication of details either from books or from standard joinery ranges, even where they make claim to 'heritage' detailing, very often leads to an inaccurate restoration because such texts and suppliers cannot give individual attention to the date,

style, function or status of a building, nor to the position of the door within the building.

With external doors the panel moulding to their external face was usually a raised (bolection) moulding of the type illustrated. This was used to prevent water penetration on the weathered side. On the internal face the panels were finished with drop mouldings similar to those that would have been found on the internal doors of the house. An earlier variation of this type of detailing can be found on four panel doors where the panels have been set flush with the frame on the outside, and are finished with a bead where they abut the frame. Internally on such doors, the panels are still recessed and finished without any moulding.



BEADED FLUSH PANEL - DETAIL

Architraves

Externally mounted door architraves were generally limited to use on weatherboard buildings, and were matched to the window architraves. They were always given some degree of moulding to their profile and tended to be larger and more complex on larger houses. In a similar manner to panel mouldings, the detail appropriate for an architrave can be sought from elsewhere in the building or on another building.

Finishes

Whether internal or external, Victorian doors were never built to have their natural timber fully exposed, and the closest they came to such a treatment was if a door was to be french polished. Although built in timbers that are today often regarded as attractive in their natural finish, these were commonplace at the time and the aim was to cover the timber and embellish the door, accentuating the three dimensionality and on internal work in particular, using it as a tool for decoration.

In painting external doors, one colour was the most typical and it was the same for all external joinery details. Multiple colourwork was less common, although on grander buildings of the late Victorian period highlighting with a second or third colour did occur.

Another common treatment was to finish the door in a paint finish to imitate woodgraining. Externally this was limited to door and window joinery that was protected by a verandah, as such finishes did not stand up well where exposed to the weather. The technique involved painting the timber in a cream base coat, then again with at least one brown graining coat and often with a second over-graining coat. The graining coat was, while still wet, stroked with a comb, brushes and/or cloth to figure it in imitation of the grain of different timbers; the whole then being varnished for protection. The aim of woodgraining was to imitate timbers of quality, commonly English

oak, or less commonly mahogany and maple. The norm when applying woodgraining was to give a different effect to the stile, mouldings and panels, either by imitating different timbers, or different grains of the same timber, on each.

The replication of this treatment is a craft that a number of tradespeople in Australia perform with great proficiency. It is however not a technique familiar to most general painters and should not be performed by an inexpert hand.

Door furniture

The door furniture, that is the hinges, handle and lock, were all set on Victorian doors in a most predictable fashion. The most common hinges were iron or steel butt hinges, set about 200mm from the top and bottom of the door, with a third in the centre on larger doors. Handles depended on the position of the door. Externally on the front door there was often a brass, iron or cut glass knob set centrally to the door in the lockrail. This handle did not operate a lock as such but simply acted as a means of pulling the door shut The most commonly used locks were surface mounted rimlocks placed on the inner face of the lockrail. Those on the front door were sometimes very large boxes (up to about 200mm by 150mm), while those to internal doors were smaller and about 150mm by100mm. Rebated mortise locks housed into the mid-rail were also used for external doors, but their use was generally restricted to grander houses.

Front Doors

In addition to the above, there are a number of features usually exclusive to front doors. The most prominent is the use of glazed sidelights and transom lights. Many examples of these are intact in Kew, the most common arrangement being with narrow, glazed sidelights set above very narrow panels similar in detailing to those on the front door. Above the door there is very often a fixed or openable glazed transom light, irrespective of whether sidelights have been employed, and if there are sidelights these have small panes set above them to flank the transom light. The most common transom lights are rectangular but in grander houses they are quite often semicircular. The glazing of sidelights and transom lights alike has very often been removed or replaced, for reasons of fashion or because of breakage. The original glass was usually one of three types
- acid etched glass either with a fine regular pattern or with a design to fill the module of the pane
- stained and painted glass set in lead
- flashed glass, in which a ruby or an intense blue layer of glass is applied onto the surface of clear glass and then partially etched out to reveal a pattern free of colouring

FOUR PANEL DOOR WITH GLAZED FANLIGHT AND SIDELIGHTS.

The replacement of sympathetic glazing to Victorian houses is now very popular in Melbourne and as a result there are a large number of competent suppliers and tradespeople available. For the moderate cost involved, the reinstatement of glazing around a front door can transform the character of the front hall of a building.

It is of concern that there are a number of pseudo-antique patterns of doors available on the market, most of which bear little resemblance to Victorian doors. Some of these doors are also not made from timber. Such doors detract from Victorian houses and should not be used in restoration works.

Relevant Texts

Suzanne Forge, *Victorian Splendor, Australian Interior Decoration 1837-1901* , Oxford University Press, Melbourne 1981
Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing Sydney 1983
Ian Evans et. al. *Colour Schemes for Old Australian Houses,* Flannel Flower Press, Sydney 1984
Ian Evans, *Restoring Old Houses* , Macmillan, Melbourne 1979
Period Building Restoration Trade Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
City of Kew Building Conservation Guideline No. 19 Paintwork, Victorian
City of Kew Building Conservation Guideline No. 13 Windows, Victorian

DOORS
LATE VICTORIAN AND EDWARDIAN

Introduction

Doors, and particularly front doors,were a feature of both Victorian and Edwardian buildings that added greatly to their distinction of detailing and decoration. They stand in stark contrast to the lightly constructed and often superficially decorated doors, common today.

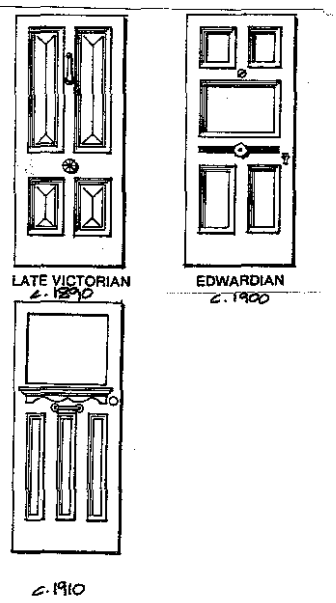
VICTORIAN (LATE) DOOR WITH GLAZED FANLIGHT & SIDELIGHTS.

General Appearance and Construction

The late Victorian (c1890s) and Edwardian (1900s) periods saw the introduction of greater variation in external door design along with the continued use of the earlier designs. The most common form of external door, particularly at the front of a house remained the solid framed panelled door. All such doors were basically constructed with an exposed framing of solid timber, within which one or more recessed panels of timber or glass were housed into grooves in the framing members. The timber used was most commonly a softwood and usually yellow pine, baltic pine or oregon.

The main differences in the appearance of such doors occurred in:
- the number, size, profile and shape of their panels and
- the profile of the mouldings that ran around each panel

These differences arose because of:
- the distinction between the mouldings to the external face of a door, and the internal face
- the distinction in decoration and size of members between the front door and doors to the front of a building, and the other less important internal doors
- the door being in a humble dwelling that was not given anything like the embellishment lavished on mansions of the period
- variations in style with different periods of construction



TYPICAL LATE VICTORIAN AND EDWARDIAN DOORS.

Framing of the door

The members that framed such panelled doors, that is the stiles, rails and muntin were always constructed with mortice and tenon joints, and were typically of the dimensions illlustrated. In almost all bar the most elaborate doors, these members were normally left with no embellishment, and it is only on some wide front doors, that the central muntin was typically given a vertical beading set flush with the face of the door to give the effect of a pair of doors.

Panels

The arrangement of panels within these doors was far more varied than in earlier doors, the most noticeable change being the use of glazed leadlight panels to the upper section of the door. In simpler cottages it was still common to find the standard solid four panel door, although even here more elaborate detailing was sometimes used. One of the more typical variations was the use of a glazed panel to the upper third of the door with two rectangular panels below. Numerous other panel combinations were used and it is not possible to identify any one in particular as being the more common. If replacing such a door, the best approach is to look at original doors on a building of a similar age and to copy the detailing.

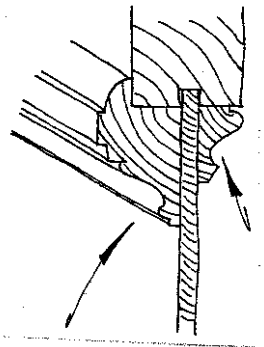
TYPICAL EDWARDIAN HALF GLAZED DOOR WITH GLAZED FANLIGHT AND SIDELIGHTS

A dominant feature of both the late Victorian and the Edwardian periods was the use of heavily moulded door panels with raised pyramidal sections, particularly on the external face of front doors.

Panel Mouldings

The simplest treatment of the junction between the recessed panel and the door frame was to leave it as an exposed angle. This more commonly occurred in early Victorian cottages, although it is also found on the less important doors in Edwardian houses. By far the more common treatment of this junction, was to apply a panel mould which effectively disguised the joint. The exact profile of these mouldings varied according to the door type, whether internal or external, the location of the door within the building, and with changes in style over time.

To replicate panel mouldings, the best way of choosing a detail is by close observation of intact doors on buildings of similar status and date. Once found, a profile can be traced by using a profile comb, that is, a carpenter's metal comb with moving teeth that take on the profile of the moulding. A tracing taken of the moulding can then be used as a model for a joiner to replicate. Replication of details either from books or from standard joinery ranges, even where they make claim to 'heritage' detailing, very often leads to an inaccurate restoration because such texts and suppliers cannot give individual attention to the date, style, function or status of a building nor to the position of the door within the building.



With external doors the panel mould on their external face was usually a raised bolection mould. This was used to prevent water penetration on the weathered side. On the internal face the panels were finished with drop mouldings similar to those that would have been found on the internal doors of the house.

Architraves

Externally mounted door architraves were generally limited to use on weatherboard buildings, and were matched to the window architraves. They were always given some degree of moulding to their profile and tended to be larger and more complex on larger houses. In a similar manner to panel mouldings, the detail appropriate for an architrave can be sought from elsewhere in the building or on another building.

Finishes

Late Victorian and Edwardian doors were rarely built to have their natural timber fully exposed, and the closest they came to such a treatment was if a door was stained and polished. Although built in timbers that are today often regarded as attractive in their natural finish, these were commonplace at the time.

In painting external doors, one colour was the most typical, and it was the same for all external joinery. Multiple colourwork was less common, although on grander buildings of the late Victorian period, highlighting with a second or third colour did occur.

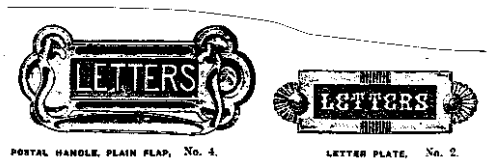
Another common treatment was to finish the door in a paint finish to imitate woodgraining. Externally this was limited to door and window joinery that was protected by a verandah, as such finishes did not stand up well where exposed to the weather. The technique involved painting the timber in a cream base coat, then again with at least one brown graining coat and often with a second over-graining coat. The graining coat was while still wet, stroked with a comb, brushes and/or cloth to figure it in a manner to imitate the grain of different timbers; the whole then being varnished for protection. The aim of woodgraining was to imitate timbers of quality, commonly English oak and less commonly mahogany and maple. The norm when applying woodgraining was to give a different effect to the stile, mouldings and panels, either by imitating different timbers, or different grains of the same timber, on each.

The replication of this treatment is a craft that a number of tradespeople in Australia perform with great proficiency. It is however not a technique familiar to most general painters and should not be performed by an inexpert hand.

Door furniture

The door furniture, that is the hinges, handle and lock, were all set on Victorian and Edwardian doors in a most predictable fashion. The most common hinges were iron or steel butt hinges, set about 200mm from the top and bottom of the door, with a third in the centre on larger doors. Handles depended on the position of the door. Internally they ranged from timber (often ebonized) and cut crystal knobs, to

brass, and decorated pressed metal. Porcelain knobs were less common. The most commonly used locks were surface mounted rimlocks and rebated mortise locks. Rimlocks were set on the midrail of the door and the key hole was set between the handle and the edge of the door. Covering the keyhole on internal doors was an escutcheon plate, often to match the door handle in material and design, while an additional piece of decoration to the door, albeit very practical was the timber or metal fingerplate set on the stile, above the door handle. In the early 1900s in addition to the traditional designs, Art Nouveau designs also began to be used in a range of hardware associated with door and window joinery. Much of this hardware is now being reproduced and is available from specialist suppliers.



Front Doors

In addition to the above, there are a number of features usually exclusive to front doors. The most prominent is the use of glazed sidelights and fanlights. Many examples of these are intact in Kew: the more common arrangement being with a single narrow, glazed sidelight to one side set above very narrow panels similar in detailing to those on the front door. Above the door there is very often a fixed or openable glazed fanlight, irrespective of whether sidelights have been employed, and if there are sidelights these have small panes set above them to flank the fanlight. The more common fanlights in late Victorian houses are rectanguar, and in Edwardian houses rectangular or with a flat arched head.

The glazing to sidelights and fanlights alike was usually matched to the window glazing and has very often been removed or replaced, for reasons of fashion or because of breakage. The original glass was usually one of three types
- acid etched glass either with a fine regular pattern or with a design to fill the module of the pane (more typically late Victorian)
- stained and painted glass set in lead (late Victorian and Edwardian)
- flashed glass, in which a ruby or an intense blue layer of glass is applied onto the surface of clear glass and then partially etched out to reveal a pattern free of colouring
- clear or coloured textured, obscured glass (more typically Edwardian)

The replacement of such glazing where removed or broken, is now very popular in Melbourne and as a result there are a large number of competent suppliers and tradespeople available. For the moderate cost involved, the reinstatement of glazing around a front door can transform the character of the front hall of a building. Care should however be taken to select a glazing design and type that is appropriate to the age of the building and it is best to look at some intact examples before making a decision.

It is of concern that there are a number of pseudo-antique patterns of doors available on the market, most of which bear little resemblance to Victorian or Edwardian doors. Some of these doors are also not made from timber. Such doors detract from Victorian and Edwardian houses and should not be used in restoration works.

Fly Screen Doors

Flywire doors were relatively common in the late Victorian and Edwardian periods. Built in timber, they ranged in design from simple frames that reflected the arrangement of the panels on the front door, through to decorative designs with inset pieces of turned and carved timbers. These decorative designs are again available from several specialist restoration outlets. As with the main door, pseudo-antique screen doors and alternative materials such as metal pickets should be avoided in restoration works.

Relevant Texts

Suzanne Forge, *Victorian Splendor, Australian Interior Decoration 1837-1901* , Oxford University Press, Melbourne 1981
Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing Sydney 1983
Ian Evans et. al. *Colour Schemes for Old Australian Houses,* Flannel Flower Press, Sydney 1984
Ian Evans, *Restoring Old Houses* , Macmillan, Melbourne 1979
Hugh Fraser and Ray Joyce, *The Federation House Australia's Own Style,* Lansdowne Press, Sydney 1986
Ian Evans, *The Federation House,* The Flannel Flower Press, Sydney 1986
Period Building Restoration Trade Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
City of Kew Building Conservation Guideline No. 14 Windows, Late Victorian and Edwardian

WINDOWS VICTORIAN

Introduction

Windows in Victorian buildings are one of the few elements that change little from the front of the building to the rear. By far the most common type of window unit was the double hung sash window, and while different sizes and configurations were to be found, their method of construction remained the same for many years. The vertical form of these window openings is one of the most distinctive features of Victorian buildings.

TYPICAL VICTORIAN DOUBLE HUNG SASH WINDOW

Appearance and Construction

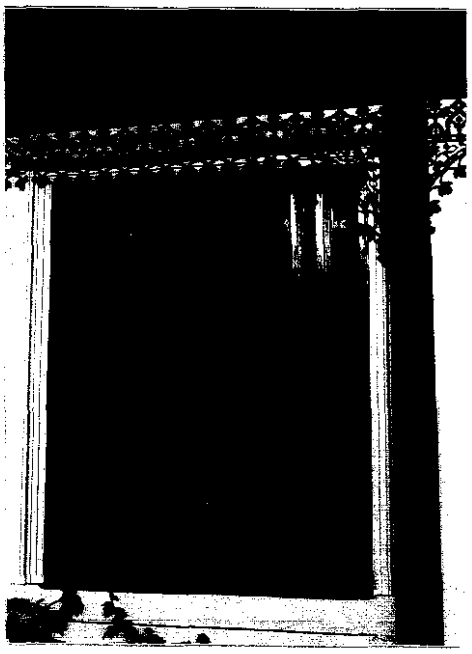
Double hung sash windows comprise two sashes that each slide vertically within a timber frame. The movement and balance of the sashes is controlled by iron weights that are concealed in the boxed window frame, and each sash is connected to the weights by cords in the nature of a pulley system. The overall appearance of a double hung sash window is of two sashes divided by horizontal framing members at mid-height, housed in a timber frame.

The sashes themselves were almost exactly the same in every case. They were constructed in a softwood such as yellow pine, baltic pine or oregon, and the joints mortice and tenoned. The framing members were usually 32mm thick, and the glazing bead in a lambs tongue profile. The top sash usually had the stiles or side members continued a little below the meeting rail in the form known as a 'horn', of a distinctive profile, that was to change with windows in the early twentieth century.

Architraves and Sills

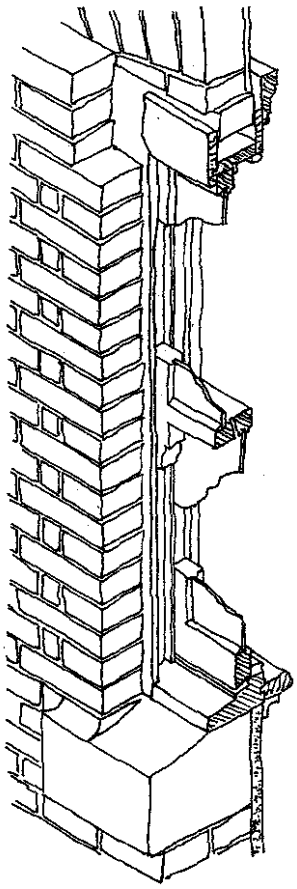
The complex boxing around double hung windows was concealed behind decorative architraves set onto the plane of the wall plaster internally, and behind the external cladding on the outer face.

The internal architraves were given some degree of moulding to their profile and were broader and more complex on larger houses and in the front rooms of many house. In almost all cases, the architraves were matched in their profile to those around the doors into the room and in instances where one or other has been removed, this principle is useful for their replacement. A number of joinery shops now stock such profiles, although many available profiles are not accurate, as they either make the profile too shallow or accentuate it in one or more proportion. To preserve the Victorian aesthetic, care should be taken to find an accurate replacement.



DOUBLE HUNG SASH WINDOW WITH SIDE SASHES.

Internally, the window architraves were terminated by a timber sill that usually had a bullnose profile and under the sill, was a timber moulding usually with a scotia profile. On the external face the window had a timber sill raking down to shed the water and this sat on a larger, box-like, sill projecting out from the wall plane. The larger sill was made from either cement rendered brickwork or bluestone.



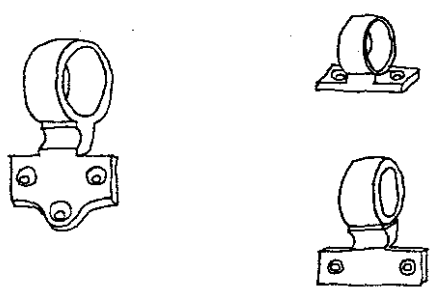
SECTION THROUGH A DOUBLE HUNG WINDOW.

Glazing

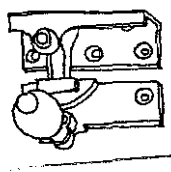
Modern glass is not only far more perfect than any glass available in the nineteenth century, but is also available in far larger sheets. Until about the 1870s, panes of sheet glass large enough to glaze a whole sash were both difficult and expensive to obtain, and the norm for general housing was the use of smaller panes of glass. In the 1850s and 1860s if larger panes were used, they were of some note and were usually restricted to the front, more public face, of the building. The use of small panes of glass resulted in what is known as multipaned sashes, and each pane was separated from the next with a timber glazing bar. The profile of the glazing bars was the same as the lambs tongue profile around the outer framing of the sash, and it was common to have either six panes of glass per sash, or towards the late Victorian period, two panes per sash. Glazing bar sections available today are usually broader and cruder than genuine Victorian ones, and these should be avoided.

When large panes of glass became more readily available they were welcomed and very few builders perpetuated the use of small panes; in fact it was more commonly a matter of the extant multipaned sashes being reglazed. Careful examination of early sash windows will often reveal where such glazing bars have been removed.

In terms of the quality of the glass, most glass available in the nineteenth century was imperfect and it gives a slightly distorted view when viewing through it. Old glass is sometimes available today from wreckers and antique hardware suppliers, and is obviously preferable for use in Victorian buildings over the perfect modern glass. It should be noted however, that glass that has been contrivedly distorted to imitate Victorian glass is almost always inappropriate, as the imperfections are usually accentuated.



TYPICAL BRASS SASH LIFTS



BRASS SASH LOCK WITH PORCELAIN KNOB.

Window furniture

The window furniture, that is the sash lifts and locks, was generally chosen from a relatively limited number of types and varied in quality with the scale of the building. The sash lifts were applied to the bottom rail of the lower sash, and were usually either brass rings or inverted hooks. The lock was applied to the meeting rail of the lower sash and the most common types used a lever action to slide in under the keeper

that was set onto the meeting rail of the upper sash. The knob on the lever unit was often quite finely detailed in timber or ceramic, and has often now been broken or removed. It is fortunate that accurate replicas of all Victorian window furniture can now be acquired from a number of specialist stockists.

Finishes

In a similar manner to doors, Victorian windows were never built to have their timber fully exposed and the closest they came was if the internal face of a window was to be French polished. Athough built in timbers that are today generally regarded as attractive in their natural form, these were commonplace at the time and the aim was to cover the timber and embellish the window and its architrave.

Externally windows were usually painted in the same colour as the doors, most commonly in dark red browns and bronze greens. The use of more than one colour was unusual although it did occur where external architraves were used on weatherboard houses, and on some late Victorian houses.

As with doors, a simulated woodgrained finish was also sometimes employed where the windows were protected from the weather under a verandah. This was a technique that involved painting the timber in a cream base coat, then again with at least one brown graining coat and often with a second over-graining coat. The graining coat was while still wet, stroked with a comb, brushes and/or cloth to figure it in a manner to imitate the grain of different timbers; the whole then being varnished with a clear coat of varnish for protection. The aim of woodgraining was to imitate timbers of quality, commonly English oak, and less commonly mahogany and maple. The replication of this treatment is a craft that a number of tradespeople in Australia perform with great proficiency. It is however not a technique familiar to most general painters and should not be performed by an inexpert hand.

Replacing or reinstating windows

The appearance of a double hung sash window is very distinctive. The high rectangular form of such windows combined with its architraves and sills makes it a complex piece of joinery. Where double hung sash windows have been replaced with windows in different materials and with different mechanisms, the aesthetic of the new window is always totally alien to the Victorian model. Such replacement windows are often cheaper to buy and to maintain, however the visual impact on the building is so out of keeping and detrimental to the effect of the whole building, that they should be avoided. Where opportunity exists to reinstate a double hung window, they can either be custom made by a joiner's shop or a second-hand window is often available in one of the

many second-hand yards in Melbourne.

Standardised timber windows with period detailing are manufactured today, but they often have crude glazing bars as discussed above. The visual effect of these minor differences is much greater than one would expect, and such products should not be used.

Relevant Texts

Ian Evans et. al, *Colour Schemes for Old Australian Houses* , Flannel Flower Press, Sydney 1984
Ian Evans, *Restoring Old Houses* , Macmillan, Melbourne 1979
Suzanne Forge, *Victorian Splendor, Australian Interior Decoration 1837-1901*, Oxford University Press, Melbourne 1981
Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Period Building Restoration Trade Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
City of Kew Building Conservation Guideline No. 11 Doors, Victorian
City of Kew Building Conservation Guideline No. 19 Paintwork, Victorian

WINDOWS
LATE VICTORIAN AND EDWARDIAN

Introduction

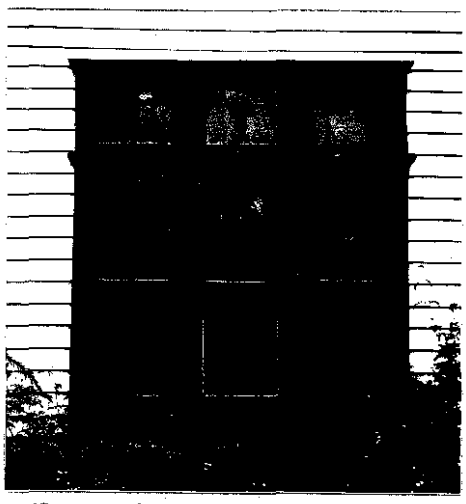
At the end of the late Victorian period and into the Edwardian period (architecturally encompassing the years from about 1895 to 1914), the design and configuration of windows changed markedly from those that had been in vogue in the early and mid-Victorian periods. The double hung sash windows that were so commonplace in the Victorian period, continued to be used, however at the front of buildings they usually had very different proportions compared with the earlier windows. At the same time a new form of window was introduced incorporating side hung casement sashes rather than double hung sashes. The two types overlapped in their usage, the first giving way to the second. It is however normally evident which type of window a building of around the turn of the century originally had: the proportions of the windows being so different.

NARROW DOUBLE HUNG SASH WINDOWS

Double Hung Sash Windows

Double hung sash windows comprise two sashes that each slide vertically within a timber frame. The movement and balance of the sashes is controlled by iron counterweights that are hidden in the boxed jambs on either side of the window unit, and each sash is connected to the weights by cords in the nature of a pulley system. The overall appearance of a double hung sash window is therefore, one of the two sashes divided by horizontal framing members at mid-height, housed in a timber frame.

In double hung sash windows, the sashes themselves were almost always exactly the same in every case. They were constructed in a softwood such as yellow pine, baltic pine or oregon; and the joints mortice and tenoned. The framing members were usually 32mm thick, and the glazing bead set against the glass in a fine lamb's tongue profile. The top sash usually had the stiles or side members continued a little below the meeting rail in the form known as a 'horn'. The profile of the horns changed quite significantly in the late Victorian/early Edwardian period becoming far more simple in shape. The main factors that set double hung sash windows of this period apart, were their overall proportions and the fact that they were often clustered together into groups. Particularly onto the front facade of houses, it became the norm to use far narrower and higher units than had previously been used, and for the windows to be in groups. The result was a totally different aesthetic.



TYPICAL CLUSTER OF WINDOWS WITH LEADLIGHTED PANES ABOVE.

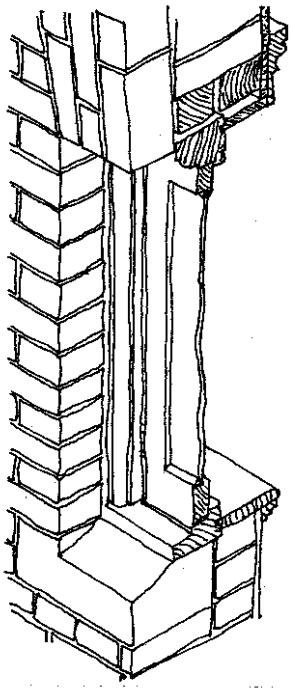
Casement Sashes

One of the most dominant differences between Victorian and Edwardian achitecture was the introduction of the casement sash windows in the latter period. Casement windows are where the sash is hung from hinges attached to one side of the window frame, so that it can swing out from the plane of the building. Such windows became the norm, particularly at the front of buildings (double hung sashes often being retained at the side and rear), and rather than the windows being placed individually, they were almost always clustered together with three or more sashes separated by mullions. This grouping of sashes produced a most effective device for wrapping around projecting bay units and such constructions became very common in the Edwardian period. In addition to casement windows, the norm during the Edwardian period was to have either fixed or hinged lights above each of the casements. These were usually square or almost square, and on the exterior of the building, were sometimes reflected by a comparably sized cement rendered panel under the casement unit.

TYPICAL USE OF CASEMENT SASHES WITH LEADLIGHT PANES ABOVE

Architraves and Sills

Internal architraves and sills were to change from those common in the mid-Victorian period, and in general, were of a far simpler profile. To determine the appropriate detail to apply, observation of all the windows in a building and in intact buildings of the same period and status, is usually sufficient to arrive at a detail. It is also important to remember that in almost all cases, the window architraves were matched in their profile to those around the doors into the room.

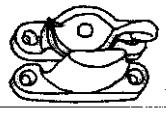


SECTION THROUGH A TYPICAL CASEMENT

Window furniture

The window furniture, that is the sash lifts, locks, hinges and catches were generally chosen from a very limited number of types. On double hung sash windows, the sash lifts were applied to the bottom rail of the lower sash, and were usually either brass rings, inverted hooks or hinged hooks. The lock was applied to the meeting rail of the lower sash and the most common types used a lever action to slide in under the keeper set onto the meeting rail of the upper sash. The knob on the swivelling unit was often quite finely detailed in timber or ceramic, and has often now been broken or removed. It is fortunate that accurate replicas of all such window furniture can now be acquired from a number of specialist stockists.

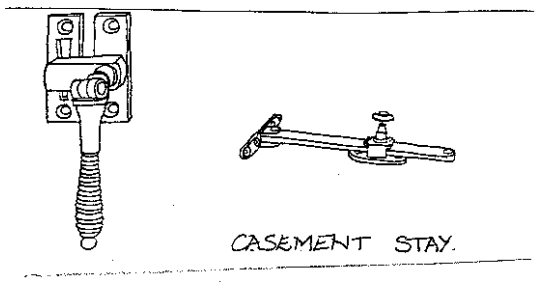
SASH LIFTS



EDWARDIAN DOUBLE HUNG SASH LOCK

The furniture on most casement sashes consisted of a brass or iron stay to hold the window open, and a security catch. Casement stays either extended from the bottom rail of the casement and hooked onto a needle set onto the inner sill, or were fixed midway

up the stile. These allowed the window to be fixed open at a variety of angles, and in some instances acted as a locking device as well. As with the earlier window furniture, replicas of such fittings are generally available.



CASEMENT FASTENER

Glazing

The glazing on late Victorian windows was to change little until casement sashes started to be used. In both the casements and in the lights set above them, on the front facade and key side windows, decorative leadlight became very popular. This used glass that ranged from being pastel in colour, right through to vivid tones, while the surface of the coloured glass was often textured, with a number of different textures being commonly combined within one design. Leadlight work of this period also stands in marked contrast from the earlier Victorian, in the combination of coloured patterns into a clear glazed window.

The most common stylistic influence on Edwardian leadlight windows was by far, the Art Nouveau. This was typified by asymmetrical, sinuous designs using foliated motifs as the basis of the pattern. Such patterns were often made to wrap aroung the perimeter of the casement's glazing and in more sophisticated work, the design embraced all the units within a cluster of casements, developing rather than repeating the design across each casement. It is fortunate that leadlight work has again become popular in the last decade, and as a result there are quite a number of craftspeople proficient in such work in Australia.

Finishes

The colours in which windows were painted changed quite radically between the Victorian and Edwardian periods, particularly where casement sashes were being used. On double hung sash windows, only one colour was used externally, and on late Victorian windows, the painted technique to imitate woodgraining was also still popular. Woodgraining can only be successfully reinstated by painters trained in restoration techniques. By the Edwardian period it became very common for two colours to be used on casements, one light the other dark, such as a combination of light cream with dark green or brown. The light colour was generally used for the casements and the lights above, while the framing and sills were painted in a dark colour. While some joinery was painted in a monochrome scheme the stark contrast of light against dark is a hallmark of the period and was integral to the effect of the architecture.

Internally, the paintwork was to become very simple, and monochromatic light cream paint or dark brown stain were by far the most common treatments: the idea of defining timber mouldings with several paint

colours was alien to the Edwardian aesthetic.

In general, the finish that was originally applied to a window can be determined by scraping back the paint on the door with a blade or sandpaper. This will give a general idea of the original colour/s unless the window has been burnt or sanded back at some stage. The texts referred to below also give information on appropriate finishes.

Replacing or reinstating windows

The appearance of both double hung sash windows and casement windows are very distinctive. The high rectangular shape of the former and the multiple sashes of the latter are integral to the architecture of the period. When combined with their architraves and sills, they are complex pieces of joinery. Where replaced with windows in materials other than timber and with different mechanisms and forms, the aesthetic of the new window is almost always totally alien to the original design of the facade. Ill-matching replacement windows are often cheaper to buy and to maintain, however the visual impact on the building is usually so out of keeping and detrimental to the effect of the whole, that they should be avoided. Where opportunity exists to reinstate a double hung sash window or a casement sash, they can either be custom made by a joiner's shop or a second hand window unit is often available in one of the many second hand yards in Melbourne. Where a new window is to be made it is critical that timber of the appropriate dimensions is used, and that the sizes of individual members are not altered to suit metric equivalents to imperial dimensions.

Relevant Texts

Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Ian Evans et. al, *Colour Schemes for Old Australian Houses* , Flannel Flower Press, Sydney 1984
Ian Evans, *Restoring Old Houses* , Macmillan, Melbourne 1979
Ian Evans, *The Federation House* , The Flannel Flower Press, Sydney 1986
Hugh Fraser, *The Federation House* , Lansdowne Press, Sydney 1986
Period Building Restoration Trade Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
City of Kew Building Conservation Guideline No. 12 Doors, Late Victorian and Edwardian
City of Kew Building Conservation Guideline No. 20 Paintwork, Edwardian

VERANDAHS
LATE VICTORIAN

Introduction

Of the houses built in Kew in the late Victorian period, that is (architecturally) from about 1875 to 1895, few would have been built without some form of verandah or loggia. It is this structure that immediately denotes the character of a building, but sadly it is also a part of the building that often suffers from more severe decay and the whims of fashion, and is frequently removed or modified.

Late Victorian verandahs generally followed standard designs and whether partially removed or just altered, it is usually possible to resolve the original detailing. This may be done by looking at intact verandahs on similar buildings, or by looking at the evidence on the building itself for the nature of the original verandah.

VERANDAH WITH CAST IRON COLUMNS & FRIEZES

Evidence

The location and extent of a verandah in plan can almost always be obtained by reference to the Melbourne and Metropolitan Board of Works plans prepared for sewerage purposes. General plans of the area from about 1900 to 1910 at a scale of 1:1920 (400feet to the inch) are available in many places (including the municipal library), plans of smaller areas at the larger scale of 1:480 (40fett to the inch) are generally to be found at the MMBW itself or in the Map Collection of the State Library. Still more useful is the MMBW file on the individual house, or 'house service cover', on which all (legally undertaken) alterations to the plumbing are recorded. A copy of this material can be obtained from the MMBW. The Eastern Region Office, which covers Kew, is at Lucknow Street, Mitcham.

TWO STOREYED LOGGIA SUPPORTED ON CAST IRON COLONETTES

Verandahs, when removed or altered often leave a number of telltale signs.
The first place to look is on the wall of the house to which the verandah was fixed. The sort of evidence that may indicate where a verandah has been includes:
- a line in the mortar joints where a metal flashing has been inserted, that extended over the verandah roof.
- a horizontal mark on the wall or patching where a timber plate has been fixed to the wall to hold the ends of the verandah rafters.
- a mark of the verandah roof line which may show as a thin line of paint that has spread onto the wall when the verandah roof has been painted.
- a mark on the wall, almost like a shadow and usually at the far ends of the front facade, that shows where a half column has been fixed.
- marks and filled holes in the walls where handrails and fascia beams have been fixed to the wall.

OUTLINE ON A FACADE WHERE VERANDAH HAS BEEN REMOVED.

On the ground the old verandah floor may survive and it is worth looking for evidence of where columns have sat, and in particular noting whether the bases were round or hexagonal in shape. Where the verandah floor has been covered over with concrete it is always worth investigating beneath the concrete to see if it has been laid over the original floor. One sign that this has occurred is where the step from the verandah to the door step is only 50 or 75mm rather than the more traditional 100 to 150mm. Similarly where the sub-floor vents are partially covered, this may indicate that an original floor exists under the new floor. On solid verandah floors that have been tiled, evidence of the type of tiling may be found in the garden beds where broken tiles have been thrown when removed.

Flooring

At ground level the floors to late Victorian verandahs were generally either timber, or in a masonry material such as tiles, marble or slate. Timber verandahs were more commonly found on simple timber cottages and were less common on brick buildings. Where used on more substantial buildings they were constructed with stumps, bearers and joists but for simpler buildings often consisted of little more than a three or more beams laid directly on the ground and the boards nailed over them. The flooring timber was usually either tongue and groove baltic pine or a local hardwood laid either parallel to the front of the house or at right angles to it. On the grander houses more durable timbers such as Kauri pine were used.

The lack of durability of the timber in these floors, and their rather unwise proximity to the ground, meant that they frequently rotted out and were replaced with solid brick or tile and later concrete, floors. This sometimes resulted in blocking off of sub-floor ventilation to the front of the building causing internal floors to rot. In many cases the failure of the verandahs has been aggravated by the build up of ground, road and paving levels.

When replacing the timber floor of a verandah always ensure that there is good airspace under the floor and that the framing members are not touching the ground. Preferably use 150mm wide, tongue and groove boards in kiln dried hardwood, or baltic, cypress or treated radiata, pine. Avoid using 90mm wide jarrah flooring as this timber was not used during the late Victorian period.

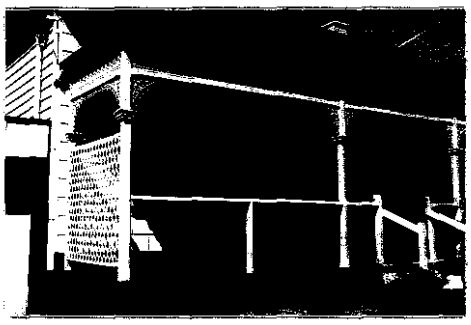
Solid floors during this period were finished in a variety of materials. The more common treatment on the simpler cottages was tiling with 150 x 150mm terracotta and cream unglazed tiles laid on the diagonal. A more expensive treatment was the use of coloured clay tiles laid in patterns, and known as tessellated tiles some of them 'encaustic' - that is, with a pattern in two colours of clay within the face of

a single tile. By the late 1880s these were widely used and were available in a range of complex patterns and designs. Marble tiles and slate were also used but this was less common.

At the edge of the verandah the floor was finished with a sill of slate or smooth dressed blocks of bluestone. Where a slate edging was used it was usually 75mm thick and laid on a bluestone plinth, or onto rendered brickwork. Terracotta, cream and encaustic tiles are all still available from second-hand and specialist reproduction outlets and these floors can be readily reconstructed where missing. Some encaustic tiles are still manufactured in Britain by one of the original makers, Maw and Co. Where the old tiles have a number stamped on the back this will assist in ordering new ones to match.

Columns and Friezes

The most noticeable difference between mid-Victorian and late Victorian verandahs is the use of cast iron. During the 1870s locally made cast iron became readily available, and for the following two decades enjoyed widespread popularity. Few verandahs escaped without some form of cast iron decoration being included. Many groaned under the weight of it, and earlier verandahs that had been decorated in timber were altered to take cast iron. While the effect was similar, the cast iron was not all the same, and the most important aspect of the replacement of such iron where missing, is to select a pattern that is of the right date for the building to which it is being applied.

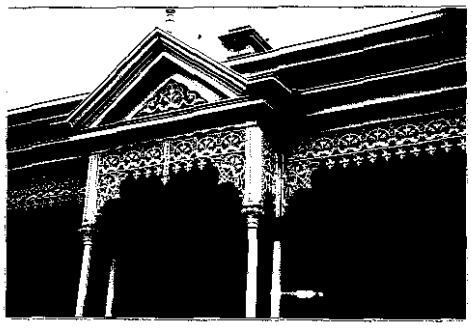


STOP CHAMFERED TIMBER COLUMNS WITH CAST IRON DECORATION.

The best way of doing this is to examine the iron on buildings of the same period, but even here be careful to ensure that the iron is original and has not been replaced. As a general rule the cast iron used in the early and mid-Victorian period is less ornate than the iron used in the late Victorian period. Similarly the iron used in the Edwardian period is also simpler than the late Victorian iron and tends to be rather two dimensional with only the outer side (if that) of the friezes and brackets being moulded.

Verandah configurations of this period varied and included the following combinations:

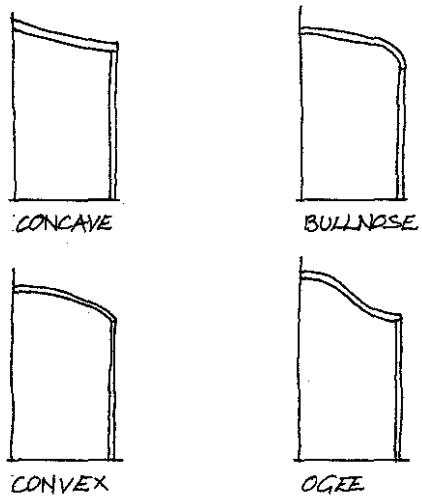
- cast iron columns complete with capital, and cast iron brackets and frieze, the frieze sometimes set on a timber frieze rail
- round timber posts with cast zinc capitals, and integral cast iron brackets and frieze or with a frieze rail, and
- square posts with cut away (stop chamfered) corners, moulded timber capitals and integral cast iron brackets and frieze.
- Angus McLean patent columns, being a metal tube filled with cement, and commonly with a cast zinc capital. These were introduced in 1874 and look like cast iron columns except they are always unfluted.



CAST IRON DECORATION

Roofs

The profile of the verandah roof is particularly important and where the roof has been removed, it is often possible to determine the profile from the mark made where it was fixed to the walls originally. The roofs of verandahs of this period always sloped down away from the building in corrugated iron that was either concave, straight, convex, ogee (double curved) or later in the period, bullnosed in profile. On narrow verandahs this was fixed to a timber wall plate attached to the wall of the house and to the fascia board at the outer end, and had no intermediate fixing to rafters or purlins. Where the sheets overlapped they were sometimes joined with small round headed bolts. Where the verandah was without wing walls it was usually provided with return hips at either end. The hips were covered with lead or a galvanised iron capping.



TYPICAL VERANDAH ROOF PROFILES.

At the outer edge the verandah roof drained into an ogee shaped gutter fixed to the fascia beam. The gutter generally had a simple scotia or ovolo shaped timber mould beneath. The downpipes were always round galvanised iron, fixed at one end of the verandah or against the wall of the house.

BRICK WING WALL TO A CONVEX ROOF.

Two Storey Verandahs

On two storey verandahs, the form of construction was similar to single storey verandahs but required larger column, beam and framing members. The floor to the upper storey was commonly lined on the underside with 150mm wide beaded tongue and groove baltic pine boards. In the 1890s narrower 112mm wide V jointed boards also came into more common usage.

One of the most important details of these verandahs was the treatment of the edge of the upper floor. This was usually provided with a combination of mouldings and rows of timber blocks, called dentils, which were a vital component of the verandah design. These mouldings have often been removed from verandahs and leave the structure in a sadly unfinished state. Evidence of the type of mouldings that were used can sometimes be found on existing verandahs where paint has built up around where the mouldings were fixed.

The balustrading to these verandahs was generally cast iron panels fixed directly to the floor through fixing lugs in the iron, and to the underside of the timber handrail. Occasionally the top fixing was to an iron rail with a handrail fixed over although this tends to be an earlier detail.

Alterations

Verandahs, like some other parts of a building, were

sometimes subject to alterations with changes in fashion: not only recent changes but changes in the nineteenth century. In repairing a verandah it is not uncommon to find that the verandah is in fact not original or that it has at some stage been substantially re-designed.

Often it is desirable to retain the altered form of the verandah, other than where it significantly detracts from the appearance of the house. This is because the authentic verandah even in its altered form, is preferred over a perhaps incorrectly detailed, replacement. Even where the existing structure detracts from the building, replacement should only be considered where there is good evidence on the building of the type of verandah that existed previously, or if it is possible to use a similar building with its verandah intact, as a model.

Typical Member Sizes

The following member sizes are given as typical sizes used in the construction of Victorian verandahs. They are intended as a guide and should be checked for the specific building by a suitably qualified person before being used.

Single Storey Verandah
Posts 100 x 100mm or 125 x 125mm
Wall plate 100 x 50mm
Fascia beam 225 x 75mm
Frieze rail 50 x 100mm on edge
Rafters 125 x 32mm

Double Storey Verandah
Posts 150 x 150mm or 175 x 175mm
Fascia beam (lower) 250 x 75mm
Fascia beam (upper) 200 x 75mm
Frieze rail 50 x 100mm on edge
Joists 125 x 50mm
Wall plates 150 x 50mm
Rafters 125 x 32mm

Painting

The painting of late Victorian verandahs ranged from simple to ornate and provided considerable scope for the Victorian painter. The more commonly used colours for the columns, frieze, and brackets were the deep bronze greens and to a lesser extent Indian red. Highlight colours used to pick out elements within cast iron decoration included rich ochre and buff, sometimes gold leaf, and less commonly blues. In any scheme the colours used were the same as those found elsewhere on the exterior of the building.

The simplest approach employed only two colours, one for the posts, frieze and framing, and a second colour for the underside of the roof. The verandah framing might be in a dark colour such as a bronze green or an Indian red, and the underside of the roof in a pale blue green or grey green to reflect the light.

The upper surface of the roof was frequently painted either in a single colour such as a dark red or a dark green or painted in broad stripes often of sheet width (that is about 6-7 corrugations) to imitate coloured canvas awnings. The striping was usually in a pale cream to off-white, combined with a dark red or green.

Where more than one colour was used on the framing it sometimes involved painting the shaft of the column up to the capital in a dark colour, and using a paler colour for the upper column and the frieze and brackets. Further variation occurred where elements within the frieze and brackets were picked out in a third colour.

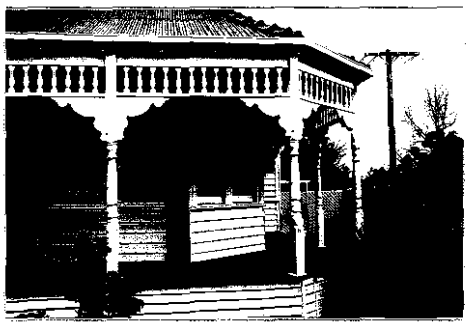
Relevant Texts

Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing Sydney 1983
Ian Evans, *Restoring Old Houses* , Macmillan, Melbourne 1979
Clive Lucas, *Conservation and Restoration of Buildings Preservation of Roofs*, Australian Council of National Trusts Sydney 1979
Period Building Restoration Trade Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
City of Kew Building Conservation Guideline No. 19 Paintwork, Victorian

VERANDAHS EDWARDIAN

Introduction

Edwardian verandahs are not structures that can be easily generalised about, as they encompass a range of designs some of which are directly related to their Victorian predecessors and others that were based on a new design approach. During the period 1890 to 1914, the verandah underwent considerable change. The basic posted verandah with corrugated iron roof continued to be constructed on the simpler houses and weatherboard cottages but at the same time a new form of verandah evolved, associated with the Edwardian tradition of red brick and stucco. Such verandahs, unlike the Victorian verandah, were not structures appended to the front of a building but were rather an integral part of the building's composition. Rather than having been removed, these verandahs have more commonly been emasculated by the stripping of their decorative timber work, leaving a denuded roof projection.

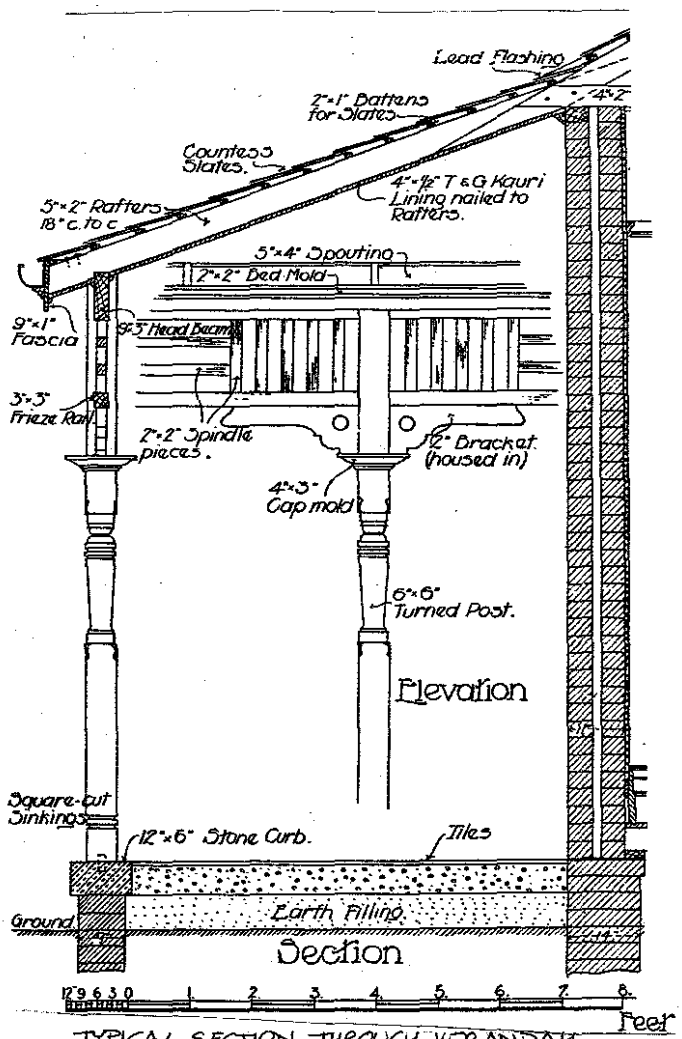


TYPICAL EDWARDIAN VERANDAH
NB: VERANDAH ROOF IS A CONTINUATION OF THE MAIN ROOF BUT HAS A MORE GENTLE PITCH.

While there was a considerable variety of verandah types, within each type the components were very similar, and it is possible to use an intact example as the basis for repair or reinstatement. In addition, in the case of attached verandahs one should always look for evidence on site, as when removed or altered, these verandahs often leave a number of telltale signs of their previous form.

Evidence of Attached Verandahs

The location and extent of a verandah in plan can almost always be obtained by reference to the Melbourne and Metropolitan Board of Works plans prepared for sewerage purposes. General plans of the area from about 1900 to 1910 at a scale of 1:1920 (400feet to the inch) are available in many places (including the municipal library), plans of smaller areas at the larger scale of 1:480 (40fett to the inch) are generally to be found at the MMBW itself or in the Map Collection of the State Library. Still more useful is the MMBW file on the individual house, or 'house service cover', on which all (legally undertaken) alterations to the plumbing are recorded. A copy of this material can be obtained from the MMBW. The Eastern Region Office, which covers Kew, is at Lucknow Street, Mitcham.



TYPICAL SECTION THROUGH VERANDAH
(R. HADDON AUSTRALIAN ARCHITECTURE 1908)

Verandahs, when removed or altered, often leave a number of telltale signs.
The first place to look is on the wall of the house to which the verandah was fixed. The sort of evidence that may indicate where a verandah has been includes:
- a line in the mortar joints where a metal flashing has

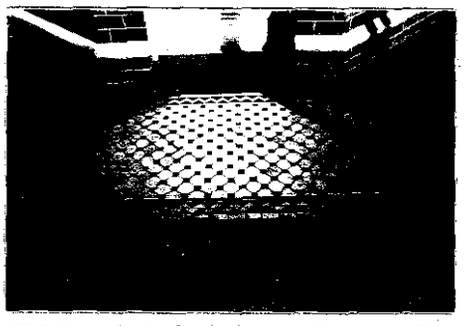
been inserted that extended over the verandah roof.
- a horizontal mark on the wall, or patching, where a timber plate has been fixed to the wall to hold the ends of the verandah rafters.
- a mark of the verandah roof line which may show as a thin line of paint that has spread onto the wall when the verandah roof has been painted.
- a mark on the wall, almost like a shadow and usually at the far ends of the front facade, that shows where a half column has been fixed.
- marks and filled holes in the walls where handrails and fascia beams have been fixed to the wall.

On the ground the old verandah floor may survive and it is worth looking for evidence of where columns have sat, and in particular noting the shape of the bases. Where the verandah floor has been covered over with concrete it is always worth looking beneath the concrete to see if it has been laid over the original floor. One sign that this has occurred is where the step from the verandah to the door step is only 50 or 75mm rather than the more traditional 100 to 150mm. Similarly where the sub-floor vents are partially covered, this may indicate that an original floor exists under the new floor. On solid verandah floors that have been tiled evidence of the type of tiling may be found in the garden beds where broken tiles have been thrown when they were removed.

Flooring

At ground level the floors to Edwardian verandahs on brick buildings were generally tiled, and on weatherboard buildings, tiled or constructed in timber.

The tiled verandahs were predominantly in two colours of tiles, cream with either terracotta or dark brown, although in the late Victorian and early Edwardian buildings multiple coloured tessellated tiles were still in common use. At the edge of the verandah the floor was finished with a sill of slate or smooth dressed blocks of bluestone. Where a slate edging was used, it was usually 75mm thick and laid on a bluestone plinth, or onto rendered brickwork. Terracotta, cream and encaustic tiles are all still available and these floors can be reconstructed where missing or damaged.



CREAM AND BLACK TESSELLATED TILE VERANDAH FLOOR.

Timber verandahs were generally constructed with stumps, bearers and joists. The flooring timber was usually either tongue and groove baltic pine or a local hardwood laid either parallel to the front of the house or at right angles.

The lack of durability of the timber in these floors and their proximity to the ground, meant that they frequently rotted out and were replaced with solid brick, tile and later concrete floors. This sometimes resulted in blocking-off of sub-floor ventilation to the front of the building causing internal floors to rot.

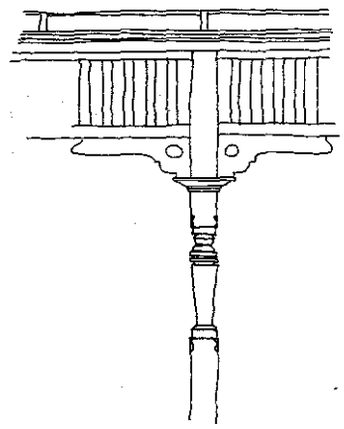
When replacing a timber floor to a verandah always ensure that there is good airspace under the floor and that the framing members are not touching the ground. Preferably use 150mm wide, tongue and groove boards in kiln dried hardwood, or baltic, cypress or treated, radiata pine.

Columns and Friezes

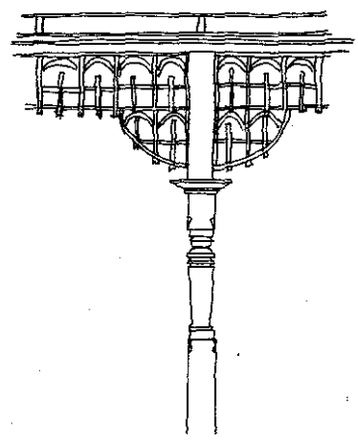
One of the most obvious changes from the late Victorian to the Edwardian verandah was in the detailing of the columns and friezes.

On the simpler weatherboard cottages the Victorian cast iron and square timber columns were replaced by turned timber columns with heavily moulded timber capitals. These supported rather flat, two dimensional cast iron brackets and friezes.

On the typical red brick and roughcast Edwardian houses, particularly where the verandah sat in under the line of the roof, the detailing and decoration of the verandah and the columns and frieze again varied. Columns were of a number of types including turned timber, tapered timber, and later brick pedestals with timber above. Cast iron columns were virtually never used. The frieze was in slatted, solid or fretted timber and occasionally in cast iron as described above. Timber or cast iron brackets were sometimes included as a continuation of the freize or as separate elements.



TIMBER COLUMN AND FRIEZE



TIMBER COLUMN AND CAST IRON FRIEZE

Roofs

Where the verandah was constructed as a separate structure appended to the front of the building, particularly common on smaller cottages and terraces, the roof to the verandah was usually a corrugated iron bullnose or straight sloped roof. On narrow verandahs this was fixed to a timber wall plate attached to the wall of the house and to the fascia beam at the outer end, and had no intermediate fixing to rafters or purlins. Where the sheets overlapped they were sometimes joined with small round headed bolts. Such verandahs were usually provided with return hips at either end. At the outer edge the roof drained into an ogee or quadrant shaped gutter fixed to the fascia beam. This generally had a simple scotia or ovolo shaped timber moulding beneath. The downpipes were always round galvanised iron, fixed at one end of the verandah or against the wall of the house. On brick and roughcast houses the verandah roof was usually treated as a continuation of the main roof, and was clad in the same materials as the roof; commonly either slate with terracotta ridging, or terracotta tiles. The underside of these verandah roofs were generally lined with beaded, or more commonly V-jointed, tongue and groove lining boards fixed to the underside of the rafters.

Alterations

Verandahs, like some other parts of a building were sometimes subject to alterations with changes in fashion. This has not only been recent changes but changes made in the early twentieth century. In repairing a verandah it is not uncommon to find that the verandah is in fact not original or has at some stage been sustantially redesigned. Often it is desirable to retain the altered form of the verandah, other than where it significantly detracts from the appearance of the house. Even in this instance replacement should only be considered where there is good evidence on the building of the type of verandah that existed previously, or if it is possible to use a similar building with its verandah intact, as a model.

Paintwork

The painting of Edwardian verandahs tended to be less complex than on Victorian verandahs, and generally used a more limited range of colours. On freestanding attached verandahs, the more commonly used colours for the columns, frieze, and brackets were the browns, buffs, blue greens and creams. On the integrated verandahs similar colours were used on the woodwork, the more frequent treatment being a monochromatic cream or off-white scheme. Highlighting of elements on such verandahs was less common than in the late Victorian period, although this was occassionally applied, particularly on the larger houses. As with the Victorian schemes, the colours used usually related to those found elsewhere on the exterior of the building.

Relevant Texts

Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Ian Evans, *Restoring Old Houses,* Macmillan, Melbourne 1979
Clive Lucas, *Conservation and Restoration of Buildings, Preservation of Roofs,* Australian Council of National Trusts, Sydney 1979
Ian Evans, *The Federation House,* The Flannel Flower Press, Sydney 1986
Hugh Fraser & Ray Joyce, *The Federation House, Australia's Own Style,* Lansdowne Press, Sydney 1986
Period Building Restoration Trade Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
City of Kew Building Conservation Guideline No. 20 Paintwork, Edwardian

FENCES
VICTORIAN

Introduction

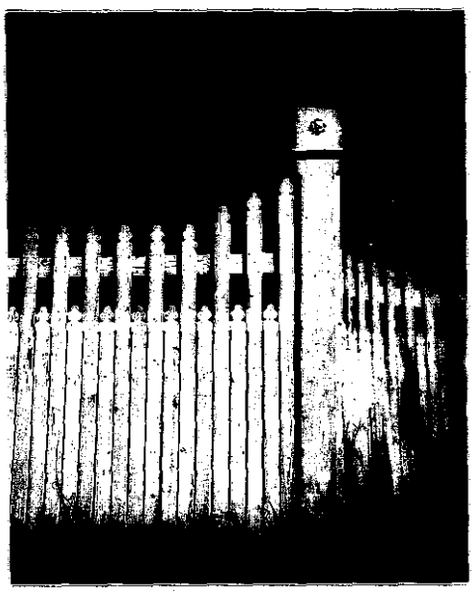
In a suburb such as Kew with so many of its buildings set well back from the street, fencing is possibly the single most important factor in determining how a property relates to the street and to adjacent buildings. There are few generalities that can be stated about Victorian fencing. In any one street one might have found that every house had a different front fence. Even to suggest that simple cottages tended to have simpler fences than the grand mansions is not necessarily true as, particularly in the late Victorian period around the 1880s and 1890s, on occasion the plainest of cottages had the most ornate of fences. Fences were however, usually lower to the front of buildings than at the sides, while timber, or cast or corrugated iron were the predominant materials. These were not the only fence types in use, but were by far the more common.

SIMPLE VICTORIAN PICKET FENCE
NB: TIMBER MOULDINGS TO POSTS
ACORN PATTERN PICKET HEADS
GENTLE SWAG IN PICKET HEIGHTS.

Timber Picket Fences

The most common form of fencing during the early and mid-Victorian periods was the timber picket fence. Extremely few original fences of this type survive in Kew but good examples can be found around Melbourne and in some of the older country towns.Standard member sizes for such fences were:
Pickets 65 to 70mm wide x 21 to 23mm thick hardwood or pine spaced at 40 to 65mm apart.
Rectangular rails 70 x 45mm hardwood
Triangular rails ex 125 x125mm hardwood
Posts 100 x 100, 150 x 150, or 125 x 75mm red gum

This type of fence might be found on the simplest of weatherboard cottages, or around a substantial brick house. In the late Victorian period, few fences adhered to this basic form and many varied quite substantially. Variations included the use of different picket heads, the use of different treatments to the tops of the posts, the scalloping or mounding of the tops of the pickets rather than running the heads all at the one level, and the capping of the pickets. From the 1890s onwards a new range of designs began to be used including the use of pickets of varying widths.

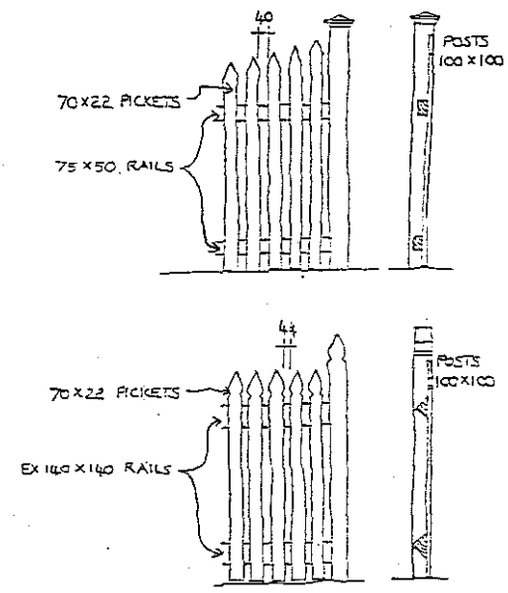


ORNATE VICTORIAN PICKET FENCE
NB: STOP CHAMFERED POST
CAST METAL ROSETTE AND
POST CAPPING.

Timber Picket Fence Reconstruction

The reconstruction of such fences is relatively straightforward and a number of firms specialize in making the components and/or erection. The citations and survey sheets of the Grade A and Grade B buildings of the Kew Conservation Study, held by the City of Kew are illustrated, and they note where a fence appears to be original to a building, although

sadly these are few in number. The pitfalls to be careful of are making the pickets too high, and avoiding stock components cut from metric timber sizes; smaller than the original timber sizes. These can produce a hybrid type of fence that is neither an accurate reconstruction nor a satisfactory contemporary fence. In general if at all possible, find an original example of the fence that you wish to reconstruct and have the components accurately matched. On rows of terraces the fence type was virtually always uniform across the row, so preferably get agreement from your neighbours to a suitable fence design, even if they do not intend to replace their fence at the same time. To a lesser extent the same is true for rows of detached cottages as the use of identical fences from one cottage to the next was not uncommon. The opposite is however the case for larger houses and it would be relatively unusual to find exactly the same fence on adjacent properties.



TYPICAL PICKET FENCE DETAILS.

Given that in an urban situation these fences were virtually always painted, the type of timber used does not necessarily need to match the original timber and timbers such as meranti and treated pine for pickets, and red gum or cypress pine for the posts are durable and totally acceptable. On some fences a board 100 to 150mm high, called a plinth, was fixed at the base of the fence. This helped prevent soil falling through the fence and stopped the pickets rotting out at the base.

Corrugated Iron

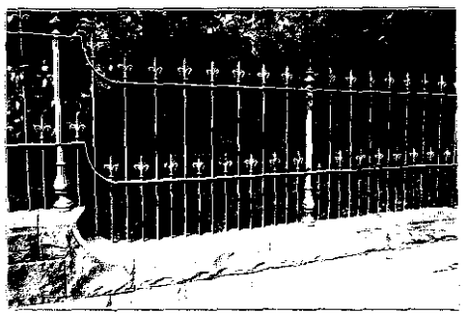
The simplest type of fence and sadly the type that is least often reconstructed was the corrugated iron, and to a lesser extent the ripple iron, fence. Corrugated iron was used throughout the Victorian and into the Edwardian period, and is one of the cheapest and easiest of traditional fence types to reconstruct. As a front fence it was always capped with a timber rail, and consisted of short sheets of corrugated iron between 1000mm and 1400mm high, fixed to 50 x 75mm top and bottom rails. The rails were mortised into timber posts that were usually turned, carved or capped at the top. The fence capping consisted of a piece of timber on which the upper corners were cut off to produce a splay. On more elaborate fences this capping sometimes had a moulding running beneath the outer edge. At the base of the fence the corrugated iron rested on a red gum or similar timber plinth usually 100 to 150mm high by 38mm wide. In many cases the intermediate fence posts were not decorated or exposed and only the end posts and gate posts were visible. The gates in such fences were many and varied and ranged from a continuation of the capped corrugated iron fixed to a diagonally or cast iron gates. Ripple iron, with its finer corrugations, was also used in the same manner but was less common.


CORRUGATED IRON FENCE WITH TIMBER CAPPING.

Reconstruction of this type of fencing is reasonably straightforward, and while there are not many original examples left that can be copied, there are extant examples around Melbourne and early photographs that can be used as a guide.

Iron Fences

Wrought and cast iron fences had widespread use throughout the nineteenth century, although they died out almost totally for domestic fencing in the early 1900s and unlike timber picket fences, their durability has ensured that a considerable number of these fences survive. The simplest and earliest form of these fences is the single palisade, consisting of rods of wrought iron with simple spearheads on top, set in a bluestone base. The ends of the rods were set in molten lead to reduce the possible impact on the stone from the corroding iron. The tops of the rods were held by a flat wrought iron bar. Where not supported between the projecting wing walls of a terrace, the posts for this type of fence were generally either rendered brick piers or simple square cast iron posts. Care should be taken to avoid inaccurate reproductions of this type of fence, particularly those made in aluminium. On more elaborate fences the rods alternated in length, producing two rows of spear heads in what was called a double palisade fence. The fence was frequently supported between substantial boxed cast iron posts with elaborate moulded panels and capitals.



FLEUR-DE-LYS SPEAR HEADS
NB: BLUESTONE PLINTH.

Reconstruction of Cast Iron Fences

Occasionally it is possible to acquire sections of such fencing second-hand, however if doing this make sure that the fence is of the right style for the date of the house. If constructing a new iron fence, the best starting point is to find an example of one on a house that is of a similar age and size. While expensive, bluestone plinths can be made by a number of the stonemasonry firms in Melbourne. The rods and the top fixing rail can be made from mild steel and to avoid corrosion, this should ideally be hot dip galvanised after all cutting and assembling has been carried out. The spearheads can be cast to match the selected pattern or one of the patterns held by the foundry. The posts, whether solid, moulded or boxed, would need to be made from an existing pattern or by casting from an existing post. The construction of such fences is a major undertaking and it is worth seeking some professional advice on the design and the method of construction before proceeding.

Relevant Texts

Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Ian Evans, *Restoring Old Houses,* Macmillan, Melbourne 1979
Period Building Restoration Trade Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
City of Kew Building Conservation Guideline No.19 Paintwork, Victorian

FENCES
EDWARDIAN

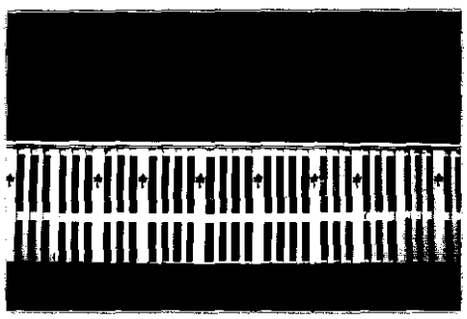
Introduction

The Edwardian period saw the introduction of a number of new forms of fences, particularly where associated with the red brick and cement houses. Fence designs, whether in timber, iron or masonry were many and varied, and it is regrettable that Kew has few intact examples from this period. What is important when thinking about constructing a new fence for a building of this period, is to design one that relates to the building and that does not form an intrusive visual barrier to the view of the house from the street.

Possibly the most important consideration is the height of the fence, and to avoid the temptation to make it as high as possible, as a barrier to the street. Such an approach fragments the streetscape and in most cases where the houses are close to the front boundary, destroys any visual comprehension of the facade. Even if a traditional fence design is being used, high fences should be avoided in narrow streets or where houses are close to the boundary.

Timber Pickets

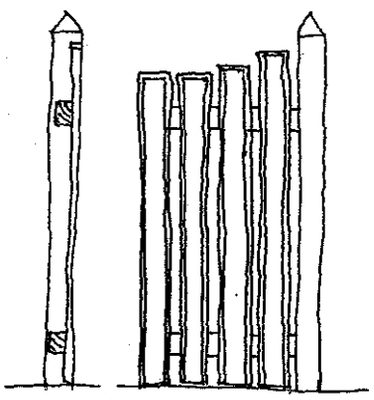
The more common designs of timber picket fences were to change quite considerably between the Victorian and Edwardian periods. The use of decorated picket heads was to become far less common, and instead, square headed pickets and fences capped with a timber rail, became the norm. Whether with or without a top capping, pickets of alternating widths were often used, and it was very common for the wider pickets within a fence to have patterns, often with Art Nouveau styling, cut into them. On fences without a top rail, the pickets were usually staggered in height, either stepping up at the posts, or alternating, often in groups of two or three, along the full length of the fence.



PICKET FENCE WITH TIMBER CAPPING AND FRETWORK DECORATION.

Timber Picket Fence Reconstruction

The reconstruction of such fences is relatively straightforward and a number of firms specialize in making the components and/or erection. The citations and survey sheets of the Grade A and Grade B buildings of the Kew Conservation Study, held by the City of Kew are illustrated, and they note where a fence appears to be original to a building, although sadly from the Edwardian period these are few in number. The pitfalls to be careful of are making the pickets too high, and avoiding stock components cut from metric timber sizes; smaller than the original timber sizes. These can produce a hybrid type of fence that is neither an accurate reconstruction nor a



SQUARE HEAD PICKETS.

satisfactory contemporary fence. In general if at all possible, find an original example of the fence that you wish to reconstruct and have the components accurately matched.

Given that in an urban situation these fences were virtually always painted, the type of timber used does not necessarily need to match the original timber and timbers such as meranti and treated pine for pickets, and red gum or cypress pine for the posts are durable and totally acceptable. On some fences a board 100 to 150mm high, called a plinth, was fixed at the base of the fence. This helped prevent soil falling through the fence and stopped the pickets rotting out at the base.

Brick Fences

Exposed red brick fencing was popular in the Edwardian period, and in particular used with the red brick and cement houses typically constructed at the turn of the century. One important aspect of such fences is that they were often designed in with the house, and in this sense it is important if you are considering reconstructing such a fence that it relates to the overall house design.

EDWARDIAN MASONRY FENCE

These fences displayed individuality in design, and to generalise about them is difficult. The basic forms of the fence usually incorporated recessed panels set between brick piers, and in addition were added various projecting cappings and mouldings of brick, or in render. Those constructed as a composite of brick and other materials were also common and sometimes displayed a high degree of workmanship. One form of this latter type is where a low panelled brick wall is surmounted by cast or wrought iron panels, or by timber pickets. Whether solely of brick or combined with cement detailing, such designs often incorporated moulded bricks particularly those with a bullnose end.

RED BRICK FENCE WITH CEMENT CAPPINGS TO POSTS AND CAST IRON FRIEZE.

The approach to reconstruction of such fences is one that should be based either on copying an existing example or on using a photograph. Apart from the design, the most critical aspect of any reconstruction will be the colour of the bricks used. It is well worth spending some time matching different types of red bricks to the house, to get the best colour match. Similarly, it is important that the mortar used in the brickwork should not be a straight grey cement mortar but rather one that contains lime and is also colour matched to the mortar used on the house.

Relevant Texts

Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Ian Evans, *Restoring Old Houses,* Macmillan, Melbourne 1979
Clive Lucas, *Conservation and Restoration of Buildings, Preservation of Masonry Walls,* Australian Council of National Trusts, Canberra 1982
Ian Evans, *The Federation House,* The Flannel Flower Press, Sydney 19861986
Hugh Fraser & Ray Joyce, *The Federation House, Australia's Own Style,* Lansdowne Press, Sydney 1986
Period Building Restoration Trade Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
City of Kew Building Conservation Guideline No. 7 Brick and Render Construction, Late Victorian and Edwardian
City of Kew Building Conservation Guideline No. 21 Paintwork, Edwardian

EXTERNAL PAINTWORK VICTORIAN

Introduction

The impact of any building is greatly affected by the colours in which it is painted, and in restoration work the correct colours make the difference between the final product looking convincing, or it looking unfinished. The critical factors in any Victorian scheme are the colours themselves and the manner in which they are used on the building. The following guideline provides an overall indication of the approach that should be used on a Victorian scheme, while for more detailed information, it is suggested that one or more of the texts listed under 'Relevant Texts' should be consulted, or the Kew Conservation Guideline for that particular element of the building.

In very broad terms, the colours used in the Victorian period did not vary greatly from the early to the late period. What did vary was the number of colours that were used on any one structure and the preference for particular colours. Generally it can be stated that colour schemes up to the mid-1870s were less complex than the later schemes, and that there was a preference for bronze and deep olive greens in the earlier period as opposed to the Indian reds and the deep purple browns common in the 1880s and 1890s.

Investigation

One starting point when painting your house is to try to establish the colours that have been used on the house when it has been painted previously, and (if you are lucky) originally. The simplest way of undertaking this investigation is to carefully cut back the surface of the built up paint until you expose a series of different paint layers. If you look at these under a powerful magnifying glass you should see a series of layers of different coloured paints. If there are few layers, say four to eight, it is likely that some of the earlier paint layers have been removed prior to previous repainting and it will be unlikely that you will be able to see the original paint layers. If there are many of layers, say 12 to 20, it is possible that the original finished paint layer may be visible and it should be possible to establish the colour. When carrying out such an investigation it is always worth looking at the paint in an area that has been sheltered from the weather to get the best result. When looking at the cut back area it is important to remember that before the finish coat there is likely to be an undercoat and possibly a primer, so the first finish coat will usually not be the first layer. If using this technique always check in a few places and on different areas of the house to check your conclusion and to see if the colour varied from one element to the next. Original

paint is more likely to survive under attachments like lamp brackets which have been added after the original decoration was completed, and not removed during subsequent stripping and repainting.

Deciding on a Scheme

The number of colours that the Victorians used externally were very much more limited than the colours they used internally, and certainly fewer than the colours that are currently available. This related not only to the fashion and taste of the time, but also to the cost of the paint and in particular the pigments and the durability of certain colours over others. What did occur however is that within the limited colour range the shades of colours varied greatly because until the late nineteenth century, all the paints were hand mixed by the painter and every painter had a particular recipe. So, for example, rather than having one uniform Indian red there were any number of shades of Indian red. Unfortunately with ready mixed paints, such variations do not occur other than between different manufacturers and some of the subtle variations that would have occurred from one building to the next are not as apparent.

To design a scheme it is first worth getting a range of the various heritage colour cards that are available from a number of paint manufacturers such as Haymes, Pascol and Solver. These generally contain a reasonable range of the colours that were applied in the nineteenth century. The second step is to look at the building and determine whether there are any elements on it that can guide you in your colour selection. These are usually limited, but the more obvious where they exist, are the verandah floor tiles. These may be plain terracotta and cream, or alternatively multiple coloured encaustic tiles. The colours in the tiles can often act as a good guide to the type of colours that might be used.

The next step is to determine which parts of the building require painting and to establish whether they should basically be light or dark colours, and which elements should be painted in the same colour. As a guide the following basic principles can be applied to most nineteenth century houses where single colours are being used on any one element.

Walls
Unpainted brick, render or stone: these surfaces should be left unpainted.
Painted brick or stone: these surfaces should ideally have the paint removed (but only by a technique that will not damage the surface) or if this is not possible they should be repainted in a brick or stony colour.
Painted cement: this should be repainted in colours that imitate natural stone such as sandstone, or in a grey to imitate the colour of natural cement.
Plain weatherboards: these should be painted in colours ranging from pale browns and buffs to mid-

browns and rich ochres. Pale to mid-grey greens were less common but were also used.
Rusticated weatherboards: these should be painted as for plain weatherboards, but with the joints picked out in a lighter colour such as cream or pale brown to imitate the joints in stonework.

Door and Window Joinery
Door and window joinery was generally always painted the same colour and usually in a dark rich colour. Purple brown, dark chocolate brown, Indian red, deep olive green and to a lesser extent dark Brunswick green were very common.

Verandahs
Generally the framing and the decorative work is the same colour as the door and window joinery. The underside of the roof pale grey green to pale blue green. The top of the verandah roof was unpainted or slate grey, dark red, or stone colour and commonly striped in combinations such as red and cream or green and stone.

Fascias and Gutters
Generally dark and the same colour as the door and window joinery.

Multiple Colour Schemes and Special Finishes

While the Victorian palette was limited externally, many houses were painted in colour schemes that involved highlighting certain elements of the building. In the early and mid-Victorian periods the use of such multiple coloured schemes was less common and it was in the 1880s and 1890s in particular that such schemes came to the fore. The element to which more than one colour was most commonly applied was the verandah, although particularly on weatherboard houses, there was great scope to pick out window and door architraves, and vertical corner stops to the weatherboards, barge boards and gables.

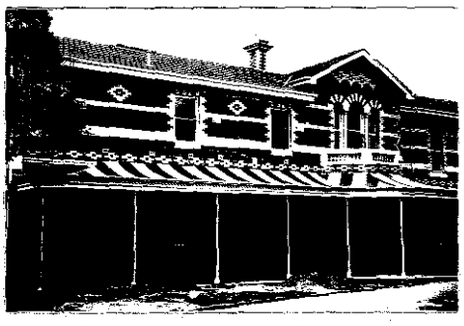
As a guide the following approach could be used where multiple colour work is proposed.

Walls
Painted render: projecting cornices and raised quoins and architraves to openings highlighted against the wall colour in slightly darker buff and brown tones. Two colour banding using buffs and rich terracottas sometimes used on moulded work.
Weatherboards: corner stops picked out in dark rich colours contrasting against the paler boards

Door and Window Joinery
Doors and door framing picked out in multiple colours but generally only on large residences. Door and window architraves to weatherboard houses picked out in two colours, often creams, buffs, pale browns and Indian reds. Doors and windows beneath verandahs given an imitation woodgrained

finish.

Verandahs
Capitals and upper column shaft picked out in pale contrasting colour to the lower shaft. Cast iron or timber frieze and brackets picked out in either colour. Verandah roof striped to look like a canvas awning usually in a colour related to the door and window joinery colour and a pale cream to off white.



STRIPED VERANDAH ROOF

Fascias and Gutters
Gutter in dark joinery colour and fascia in pale buff, or ochre, contrasting colour.

Paint and Its Removal

Where brickwork and stonework has been painted it has often been done so for reasons of fashion in the twentieth century. On occasions it was also done to waterproof the facade. This has been ill-advised, because the application of a paint membrane is usually detrimental, having a suffocating effect on the brickwork, and inhibiting its ability to breathe and causing dampness to rise higher up the wall or pass to its interior face to escape. It is also important to remember that another reason for previous owners to have overpainted a wall is where alterations have been made to the building, such as bricking-in a door or window, or adding a room in ill-matching brickwork. Careful observation of the brickwork should be made to determine whether subsequent patching of the brickwork has been undertaken on the building in question.

If the brickwork does appear intact, the overpainting can quite easily be removed without damaging the brickwork or the mortar joints. The most effective method of paint removal is through the application of an appropriate solvent that is then removed by steam or hot water. The more effective solvents are usually methylene chloride based but at higher strengths than are generally available commercially. Other chemicals such as caustic soda or acids may dissolve the paint but they leave harmful salts in the brickwork and should not be used. Steam cleaning is a process performed by several contractors in Melbourne, and it is fast and very effective. It is important to note that sandblasting and other abrasive techniques of paint removal are very destructive to both the hard outer surface of bricks and the mortar joints and such techniques are generally TOTALLY UNSUITABLE for use on such buildings. If the cleaning method outlined above is not successful consideration could be given to the use of abrasive blasting but before proceeding specialist advice should be sought on the type of abrasive that could be used and a test area prepared to determine the effects on the bricks and the mortar joints.

SEVERE EROSION CAUSED BY SANDBLASTING.

Relevant Texts

Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Ian Evans, *Restoring Old Houses,* Macmillan, Melbourne 1979
Period Building Restoration Trade Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
Suzanne Forge, *Victorian Splendor, Australian Interior Decoration 1837-1901* , Oxford University Press, Melbourne 1981
Ian Evans et. al. *Colour Schemes for Old Australian Houses,* Flannel Flower Press, Sydney 1984

EXTERNAL PAINTWORK EDWARDIAN

Introduction

The impact of any building is greatly affected by the colours in which it is painted, and in restoration work the correct colours make the difference between the final product looking convincing, or it looking unfinished. The critical factors in any Edwardian scheme are the colours themselves and the manner in which they are used on the building. The following guideline provides an overall indication of the approach that should be used on an Edwardian scheme, while for more detailed information it is suggested that one or more of the texts listed at the end should be consulted.

While the colours of the Edwardian period still included many of the traditional Victorian colours, the manner in which these colours were used changed and a number of new colours were introduced. The most distinctive change was the introduction of a range of cream and off-white colours that were used on both roughcast work and joinery, in a manner not found on Victorian buildings. Similarly a greater range of browns and greens were used, possibly as a result of the greater availability of ready mixed paints and synthetic pigments.

Investigation

One starting point when painting your house is to try to establish the colours that have been used on the house when it has been painted previously and (if you are lucky), originally. The simplest way of undertaking this investigation is to carefully cut back the surface of the built up paint with a sharp blade until you expose a series of different paint layers. If you look at these under a powerful magnifying glass you should see a sequence of layers of different coloured paints. If there are few layers, say four to six, it is likely that some of the earlier paint layers have been removed prior to previous repainting, and it will be unlikely that you will be able to see the original paint layers. If there are many layers, say 8 to 16 or more, it is possible that the original finished paint layer may be visible and it should be possible to establish the colour and match it. Original paint is more likely to survive under attachments like lamp brackets which have been added after the original decoration was completed, and not removed during subsequent stripping and repainting.

When carrying out such an investigation it is always worth looking at the paint in an area that has been sheltered from the weather to get the best result. When looking at the cut back area it is important to remember that before the finish coat there is likely to

be an undercoat and possibly a primer, so the first finish coat will usually not be the first layer. If using this technique always check in a few places on different areas of the house to check your conclusion and to see if the colour varied between elements.

Deciding on a Scheme

Edwardian colour schemes were as varied as Victorian schemes and to suggest that all red brick and roughcast houses had green joinery and cream stucco is not correct. While some Edwardian schemes were very simple and used only one or two colours, others were highly elaborate with the decorative woodwork picked out in a range of colours. While the range of colours was certainly more limited than is currently available, there tended to be a great range of shades of colours, and particularly the browns, the greens and the cream and ochre colours. To design a scheme it is first worth getting a range of the various heritage colour cards that are available from a number of paint manufacturers such as Haymes, Pascol and Solver. These generally contain a reasonable range of the colours that were applied in the late nineteenth and early twentieth century. The next step is to determine which parts of the building require painting and to establish whether they should basically be light or dark colours, and which elements should be painted in the same colour. The following suggestions can be used as a guide.

AN EDWARDIAN HOUSE WITH A TYPICAL USE OF MULTIPLE COLOURS.

Walls

Unpainted brick, cement or stone: these surfaces should be left unpainted. The use of red brick in particular was one of the most important factors in Edwardian architecture.

Painted brick or stone: these surfaces, unless originally intended to be painted (which was rare) should ideally have the paint removed (but only by a technique that will not damage the surface) or if this is not possible they should be repainted in a brick or stone colour.

Painted cement and roughcast: this should be painted in pale cream to ochre and off-white colours.

Plain weatherboards: these should be painted in colours ranging from pale browns and buffs to mid-browns and rich ochres. Pale to mid-grey greens are less common but were also used.

Rusticated weatherboards: these should be painted as for plain weatherboards, but with the joints picked out in a lighter colour such as cream or pale brown to imitate the joints in stonework.

Timber shingling: this should be dark stained or painted in rich browns, mid-browns or terracotta.

Imitation shingle weatherboards: these boards were often used as a highlight feature in a wall and were picked out in similar colours to shingles to contrast against a paler wall colour.

Half timbering: this was usually picked out against the roughcast colour. It could be either paler,

towards white and offwhite, or darker, brown, greys or greens. It was generally matched to one of the joinery colours.

Door and Window Joinery
Door and window joinery was generally painted the same colour, the more common dark colours being the browns, greens and to a lesser extent the Indian reds, and the lighter colours the creams and off whites. Two toned systems with the frames picked out in a dark colour and the window sashes in a pale colour were also common.

Verandahs
Generally the framing and the decorative work is the same colour as the door and window joinery. The underside of the roof cream or off-white. The top of the verandah roof unpainted or slate grey, dark red, or stone colour.

Fascias and Gutters
Generally dark and the same colour as the door and window joinery.

Multiple Coloured Schemes

The Edwardians, like the Victorians continued the use of multiple coloured schemes although highlighting of joinery elements was relatively uncommon. The element to which more than one colour was most commonly applied was the verandah, while particularly on weatherboard houses in particular there was great scope to pick out window and door architraves, and corner stops to the weatherboards, barge boards and gables.

As a guide, the following approach could be used where multiple colour work is proposed.

Walls:
Painted render and roughcast - smooth rendered banding was sometimes picked out in a rich stone colour with roughcast to gables in a paler off-white or cream.
Weatherboards - corner stops picked out in dark rich colours contrasting against the paler boards.
Door and Window Joinery:
Window framing contrasted in a dark colour against a pale sash colour. Door and window architraves to weatherboard houses picked out in two colours, often creams, buffs, pale browns and Indian reds. Doors and windows beneath verandahs given stained and varnished finish but generally only on larger houses.
Verandahs:
Capitals and upper column shaft picked out in pale contrasting colour to the lower shaft. Cast iron or timber frieze and brackets picked out in either colour. Verandah roof striped to look like a canvas awning usually in a colour related to the door and window joinery colour and a pale cream to off white.
Fascias, Gutters, Barge Boards and Cappings:

Gutter in dark joinery colour and fascia in pale buff, or ochre, contrasting colour. Barge boards in same colour as fascia with barge moulding and capping in darker trim colour.

Paint and Its Removal

Where brickwork and stonework has been painted this has often been done so for reasons of fashion in the twentieth century. On occasions it was also done to waterproof the facade. This has been ill-advised, because the application of a paint membrane is usually detrimental, having a suffocating effect on the brickwork, and inhibiting ability to breathe and causing dampness to rise higher up the wall or pass to its interior face to escape. It is also important to remember that another reason for previous owners to have overpainted a wall is where alterations have been made to the building, such as bricking-in a door or window, or adding a room in ill-matching brickwork. Careful observation of the brickwork should be made to determine whether subsequent patching of the brickwork has been undertaken on the building in question.

If the brickwork does appear intact, the overpainting can quite easily be removed without damaging the brickwork or the mortar joints. The most effective method of paint removal is through the application of an appropriate solvent that is then removed by steam or hot water. The more effective solvents are usually methylene chloride based but at higher strengths than are generally available commercially. Other chemicals such as caustic soda or acids may dissolve the paint but they leave harmful salts in the brickwork and should not be used. Steam cleaning is a process performed by several contractors in Melbourne, and it is fast and very effective. It is important to note that sandblasting and other abrasive techniques of paint removal are very destructive to both the hard outer surface of bricks and the mortar joints and such techniques are generally TOTALLY UNSUITABLE for use on such buildings. If the cleaning method outlined above is not successful consideration could be given to the use of abrasive blasting but before proceeding specialist advice should be sought on the type of abrasive that could be used and a test area prepared to determine the effects on the bricks and the mortar joints.

Relevant Texts

Ian Stapleton, *How to Restore The Old Aussie House* , J.Fairfax Marketing, Sydney 1983
Ian Evans, *Restoring Old Houses,* Macmillan, Melbourne 1979
Ian Evans, *The Federation House,* The Flannel Flower Press, Sydney 1986
Hugh Fraser & Ray Joyce, *The Federation House, Australia's Own Style,* Lansdowne Press, Sydney 1986
Period Building Restoration Trade Suppliers Directory, Mount Eagle Publications Pty Ltd, Melbourne 1986
Suzanne Forge, *Victorian Splendor, Australian Interior Decoration 1837-1901* , Oxford University Press, Melbourne 1981
Ian Evans et. al. *Colour Schemes for Old Australian Houses,* Flannel Flower , Sydney 1984

1920s AND STATE BANK HOUSES

Introduction

The houses built in Kew in the 1920s were in the main in the Kew East area with smaller developments taking place on subdivisions over some of the Victorian and Edwardian estates in the south and west of the suburb. Many of the houses built during this decade were relatively small compared with the houses of the Victorian and Edwardian periods and many were built under the State Bank housing scheme. That scheme was started in March 1921, as a direct result of the *Housing and Reclamation Act 1920*. The State Bank was charged with the responsibility to make available, houses for people on lower incomes and over the decade that followed, it was responsible for some 7000 houses being built in Melbourne. Most of these were built to designs provided by the bank itself, and are readily recognizeable as a result. Kew East has a concentration of these houses, and the Urban Conservation Zone around Irymple Street is a recognition of this important housing initiative. State Bank houses were available in either timber or brick, the timber houses proving the more popular. They were simple in design, usually with a small front porch under a gabled unit.

STUCCOED MASONRY HOUSE

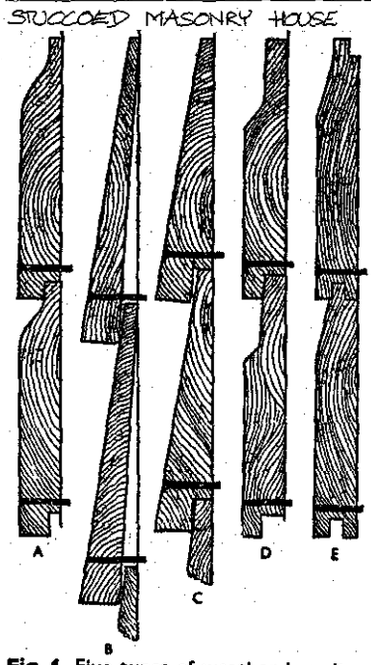


Fig. 1. Five types of weather boarding. B, the most commonly used and suitable for all general work, permits some adjustment of overlap. A, C and D, being rebated, and E, tongued and grooved, have a fixed overlap; but these possess a somewhat better appearance and superior weather-proof qualities.

Timber Construction

Timber Construction during the 1920s generally kept to the same principles that had been adopted in the Edwardian period. Stud framing was the norm, with weatherboard cladding over it, or on less prestigious buildings, asbestos cement sheets with timber cover straps (c.1.5x1.75" or 38x22 mm) at their joints. Weatherboards were either feather edged (that is, tapered at the overlapping edge) or in the newly popular shiplap boards. Hardwoods became far more widely used than had been the case previously. Framing members of a stud wall were generally 4"x2" (100x50mm) in size, while weatherboard cladding was commonly either in baltic pine or a local hardwood.

WEATHERBOARD HOUSE.

Masonry Construction

Masonry construction in general continued the traditions of the Edwardian period, normally using red pressed bricks, sometimes clad with cement or roughcast. Masonry walls were almost always built in two skins of brickwork with a cavity of about 50-65mm, as brick veneer construction was still virtually unknown.

While the same building materials continued in use from the previous two decades, the manner in which they were combined was so different as to create a totally different effect. Where Edwardian buildings usually had tuckpointed mortar joints, the general practice in the 1920s was to have simple 'struck' pointing to the mortar joints. Many buildings had walls totally of red brick, while it was also common for the bricks to terminate in a projecting string course about one third of the way up the wall, and often at this point there was a row of bricks set on end, called a 'soldier course'. Above this, the wall either reverted to timber construction, or was brickwork, clad with roughcast render (that is cement render with an admixture of rounded pebbles). Walls were also clad totally in smooth render. This normally did not have the markings to represent blocks of stone that can usually be found on Victorian buildings, however on larger buildings the walls were sometimes given extra embellishment through the application of moulded cement decoration, usually in classically derived motifs.

RED BRICK WALLS WITH ROUGHCAST RENDER TO UPPER WALLS.

Roofing

Roofs on 1920s houses in Kew are almost universally hipped, at a low pitch, and clad with tiles; either terracotta or cement, while some of the less prestigious structures and outbuildings were clad with corrugated asbestos cement sheeting. Terracotta tiles were usually in the Marseilles pattern, while those of the Spanish Mission style houses that became popular at this time, were usually in a Cordova pattern. Unlike Edwardian tiled roofs, the 1920s roofs did not use ornate terracotta ridge tiles and finials, but instead were finished in plain ridge tiles and only occasionally with a simple terracotta finial. The use of wide eaves was common by this date and these were clad on their underside, usually with v-jointed tongue and groove lining boards. It was also common practice for the eaves lines to have exposed rafter ends extending out to the line of the gutter.

WIDE EAVE LINED WITH BOARDS.

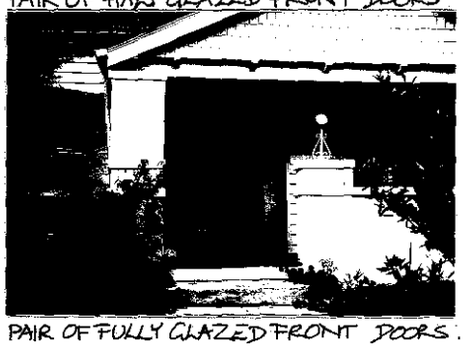
Chimneys

In antithesis to the often elaborate chimneys of the Edwardian period, by the 1920s chimneys tended to be simple red brick, render or roughcast shafts, sometimes with brick and render or roughcast combined. The heights of chimneys varied enormously, some being very low, not much greater in height than the top of the roof ridge, while others extended up in elegantly tapering shafts to quite some height. Chimneys were terminated in a number of ways. Red brick chimneys often had a brick soldier course around the top, and cement rendered chimneys often a horizontal, cap-like projection around their rim, while if a terracotta chimney pot was used, it was usually simple in design.

Doors

Glazed front doors were the norm during this period, both half glazed and fully glazed doors being used. Houses were generally quite simple in their decoration, and the front door was one of the more decorative elements of the front facade. The use of clear glass with bevelled edges, of figured glass, or of simple leadlight work, were all common. The overwhelming departure from the preceding period was that the glass was very often totally uncoloured, and if it was coloured, only slightly milked or in pastel tonings. It was usually the texture, cutting and sometimes quite complex configuration of the panes, that gave the glazing interest. The use of the fluid Art Nouveau forms was also rejected and in their place the glass was fashioned into usually quite simple, but strict, geometries. The use of sidelights next to the door, that is panes of glass in panels either side of the door, did on occasions continue, however it also became common for the entrance to have no sidelights and instead two french doors.

PAIR OF HALF GLAZED FRONT DOORS



PAIR OF FULLY GLAZED FRONT DOORS.

Windows

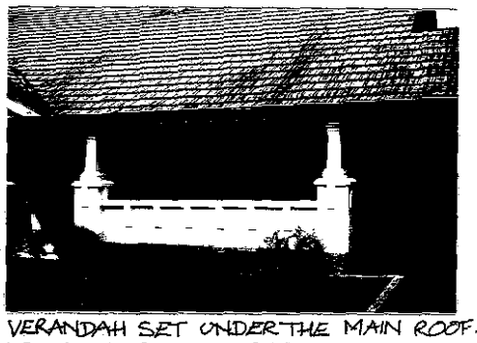
Vertically sliding double hung sash windows were by far the most common windows on both the front facades and elsewhere on buildings of the 1920s. They were usually not placed in the wall individually, but instead were clustered together in groups of two or three units. Clusters of windows were also often set in bays, the more common configuration being a square box projecting out from the wall, or a shallow projecting arc. They were commonly built in a local hardwood, and while they operated similarly to Victorian double hung windows, they were styled quite differently. Their proportions were different, being quite low in height and considerably narrower than Victorian windows. The upper sash was often multiglazed, with four or six panes of glass, or was embellished with simple leadlight work, while the lower sash was normally left clear. The upper sash also had horns to its side rails, extending below the line of the meeting rails of the two sashes. Again these differed from the Victorian, usually being in a simple bullnose shape.

CLUSTER OF WINDOWS SET IN A BAY

PAIR OF WINDOWS. NB: MULTIGLAZED TOP SASHES.

Verandahs

Verandahs on the more simple houses of this period tended to follow the Edwardian idea of being set under the main roof line, rather than being separate, appended structures such as those common in the Victorian period. They were supported on posts made of brick, sometimes clad in cement or roughcast, or in timber, and were usually quite simple in detail. The posts were often set on a squat brick or cement rendered pedestal base from which rose timber or cement piers. These were commonly given a simplified classical form. Where verandahs were separate from the main roof, they took the form of a



VERANDAH SET UNDER THE MAIN ROOF. NB: CEMENT RENDERED POSTS AND BALUSTRADE.

porch, usually spanning one third to one half of the front facade and either set under a projecting (often shingled) gable unit or under a near-flat roof. The use of projecting rafter ends was common with both configurations.

PORCH WITH A NEAR FLAT ROOF.

Paintwork

Paint colour schemes given to buildings of this period were very simple, usually employing no more than two contrasting colours. Timber buildings usually had pale walls in the off-white to buff range, that was repeated on the sash portion of the window units. Dark brown or mid-dark green were the most common finishes to details such as the window frames, barge boards, and often the lower few boards of a weatherboard building. Where a building was rendered, this was often left unpainted or was painted in cream or earthen tonings. Front doors were sometimes finished differently from the rest of the external joinery, with a french polished or varnished finish rather than being painted.

Fences

Timber picket fences continued to be popular in this period, however by this time, the use of decorated picket heads was almost totally rejected, and the pickets were only sometimes carved with patterns in a similar manner to those of the Edwardian period. In addition to the use of simple timber pickets, the most common forms of fencing at this date became the wire fabric fence or brick fences finished in roughcast. Wire fabric fences were produced by a number of manufacturers, in a number of designs. Many of these fences remain intact in Kew and in Melbourne generally, however it is common for their gates to have been altered. These were typically metal framed with decorative woven wire or wrought iron inserts and it was also common for a timber beam or pergola to be set above the gate. This was sometimes covered with rambling plants or merely stood to signify the point of entrance. Where roughcast fences were used they were usually very low in height (only about 500mm) and were punctuated along their length with taller piers, also clad in roughcast.

WIRE FABRIC FENCE AND GATE.
NB: DECORATIVE BEAM OVER GATE.

Relevant Texts
City of Kew Building Conservation Guideline No.18, Fences Edwardian

1930s - 1940s HOUSES

Introduction

The 1930s was the last major phase of construction in Kew, and during that period large tracts of land, particularly in Kew East, were developed. Building works also took place elsewhere in the suburb during this period, however these were restricted to subdivisions over Victorian and Edwardian estates. The stylistic variations in the 1930s and into the 1940s were quite extreme, ranging from the simple lines of modernism, to the streamlined curves of Art Deco buildings to the Tudor-revival style of architecture, with its steep roofs, half timbering to the gables and diamond shaped leadlighting on the windows.

ART DECO HOUSE IN CREAM AND BROWN BRICKS

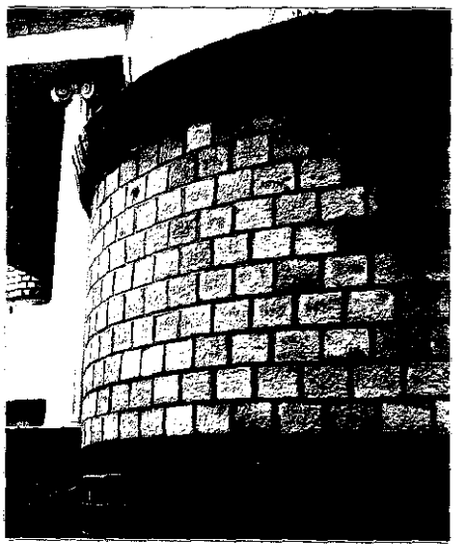
TUDOR REVIVAL HOUSE IN CLINKER BRICKS.

Timber Construction

Of the houses built in Kew in the 1930s-40s, few were constructed in timber, however of the timber construction that did take place, the construction techniques were very similar to the buildings of the 1920s. Stud framing was the norm, with weatherboard cladding over it, or on less prestigious buildings, asbestos cement sheets with timber cover straps (c.1.5x1.75" or 38x22 mm) at their joints. Weatherboards were either feather edged (that is, tapered at the overlapping edge) or in shiplap boards. Hardwoods were widely used, with framing members of stud walls generally 4"x2" (100x50mm) in size, while weaherboard cladding was commonly either in baltic pine or a local hardwood.

Brick Construction

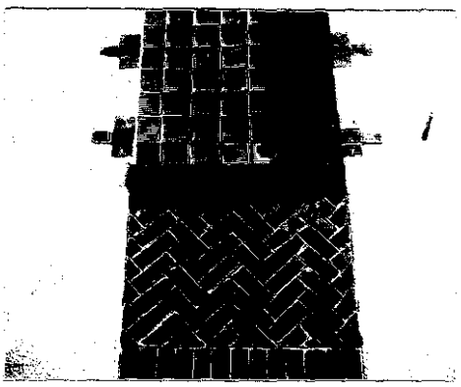
Over the 1930s-1940s, brick construction underwent a great departure from the practices of the Edwardian period and the 1920s. Not only were the designs of the buildings sometimes radically different, but the actual bricks used were also new. Instead of a predominance of pressed red bricks, a variety of sizes, shapes, textures and finishes of bricks started to be used. Cream bricks, raised clinker and small glazed brown bricks were the most common introductions. Cream and glazed bricks were often laid in creative patternings and were sometimes formed into curved walls in the newly popular Art Deco style. Bricks were also used in combination with cement rendered walls, with patterned clusters of dark bricks set into the cementwork to form decorative medallions of 'tapestry' brickwork. Another distinctive new material was glass bricks, and these became particularly associated with the Art Deco style. Clinker bricks were used to a totally different decorative effect. They were usually on Tudor style buildings, and were often combined with decoratively set bricks at their gables and eaves, while



CREAM AND GLAZED BROWN BRICKS

RAISED CLINKER BRICKS

the combination of clinker bricks and wall hung shingles (timber or terracotta), was also common.



CLINKER BRICKS SET IN PATTERNS INTO ROUGHCAST RENDER. NB: GLASS BLOCKS

Roofing

Both the shape and materials of roofing were to change in this period. Flat roofs started to be used, usually on buildings of Art Deco styling, and these were usually clad with a malthoid sheeting. On pitched roofs glazed terracotta or cement Marseilles tiles, flat terracotta shingles and corrugated asbestos cement were popular materials. On buildings in the Tudor revival style, terracotta shingles were commonly used for roofing, a distinctive feature of such roofs being the use of mitred tiles, giving the roof a very neat appearance.

Chimneys

The design and materials of chimneys generally followed the materials of the walls of the house and they were generally very plain rectangular shafts of medium height. It was however common on Tudor revival houses to have very tall chimneys, often with the individual flues clustered into a series of connected octagonal shafts, and with decorative brickwork being a feature.

STEEP ROOF AND GABLE END CLAD WITH TERRACOTTA SHINGLES

Doors

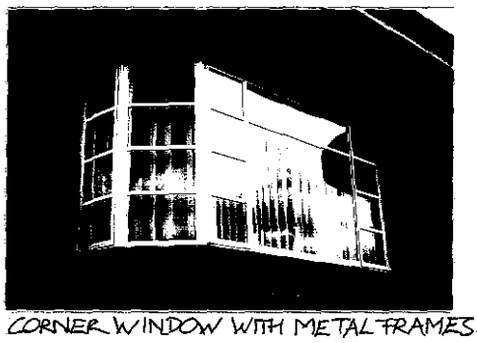
By the 1930s, doors were being increasingly factory made. Front doors in Art Deco houses were usually glazed and were often set as a pair of French doors, and the glazing was acid etched in a pattern or multiglazed into an Art Deco design. On Art Deco and Tudor revival houses alike, the use of ornate wire screen doors, in either a florid design or an Art Deco design and either on to the door or enclosing an entrance porch, became very common.

GLAZED ART DECO DOORS, SIMPLE PORCH AND CURVED GLASS TO WINDOWS

Windows

Windows also underwent radical changes in the 1930s. The most modern, usually Art Deco influenced, designs of the time had their windows set into the corner of the building, and wrapped around the corner, lightening the effect of the walls. A common material in use at this time was the newly introduced steel frame and it too, added to the light weight, minimalist effect of the windows.

In addition to steel framed windows, double hung timber sash windows continued to be employed. These were similar to those of the 1920s, however it became increasing popular to have windows with three sections, the central section being a large fixed pane and with double hung sash windows flanking it. While double hung windows also often had their meeting rail in the centre in a shallow upward curve. Tudor revival buildings again had different detailing,



CORNER WINDOW WITH METAL FRAMES.

with their windows usually being quite small, and with leadlight panes of clear, diamond shaped glass.

Verandahs

The verandah as such was at a low ebb in the 1930s, having been almost totally superseded by the use of the entrance porch. On Art Deco-styled houses, this was usually a very simple concrete slab either cantilevering or supported on only one very slender steel pole. On Tudor revival houses, the porch was usually far more enclosed, sometimes being within the main envelope of the building and nearly always behind a wrought iron screen that in some instances displayed a high degree of workmanship and decoration.

CONCRETE CANTILEVERED PORCH
NB: ART DECO WALL LIGHT.

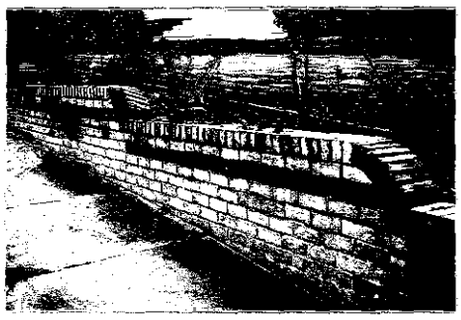
Paintwork

The colour of paintwork was, during the 1930s, far more secondary to the effect of the building than at any preceding period. The common use of exposed bricks and finely framed steel windows meant that even with a vivid colour, paintwork could not have had much effect. The cement rendered sections of walling were usually painted in an off-white or light cream tone, however any bricks set into the render were always left unpainted. In instances where the brickwork of 1930s buildings has been painted over, the effect is generally very detrimental to the design of the building.

On timber buildings the colours were generally quite pale and the exterior usually only had two colours across it. The application of a darker colour to the lower wall continued to be a popular device, as was the definition of the timbers within the ends of gables. The range of colours commonly encompassed pale cream, light brown, to pale green. The door and window joinery was usually defined from the wall colour, however only in a muted fashion.

Fences

The wire fabric fences that had been popular in the preceding decades continued to be used during this period. Brick fences also became very popular and, as in the 1920s, bricks finished with cement or roughcast. The most common rule applied to the designs of brick fences was however, that they often matched the design of the walls of the house. This meant that Art Deco fences were often in the same combination of bricks as the house and had similar free flowing forms, and that where bricks were combined with render, or on Tudor revival houses built in clinker bricks, these were repeated.

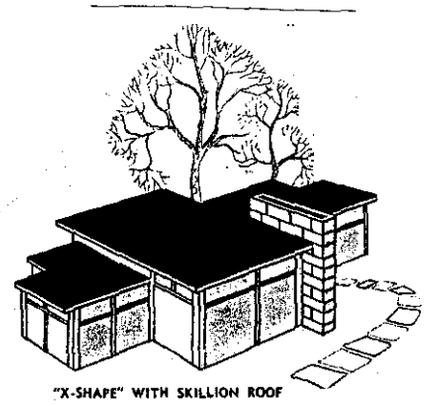


ART DECO FENCE IN CREAM AND SLENDER GLAZED BROWN BRICKS.

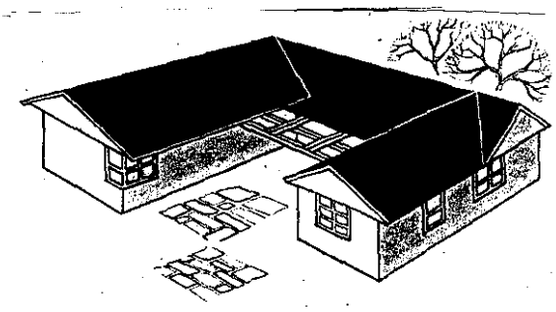
1950s - 1960s HOUSES

Introduction

By the time of the second World War, Kew was almost completely built up, with only limited areas of Kew East remaining free of buildings. In the two decades after the war, these last areas were developed and pockets of building activity took place where larger estates were subdivided, such as in the Studley Park area. Most of the houses built after the war were quite substantial buildings, usually of brick, while many in the more scenic areas of the suburb were architect designed. The designs varied a good deal, ranging from asymmetrical houses with hipped tiled roofs, through to architect designed houses that tended to be more angular with flat sloped roofs, wide eaves and large sheets of glass. It was also in this period that the car became a determinant in the appearance of the front of the house, and houses started to have a carport at the front, integral to the design of the house, rather than a garage at the rear.



"X-SHAPE" WITH SKILLION ROOF

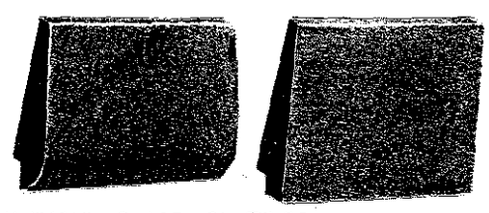


"U-SHAPE" DESIGN
ENCLOSING TERRACE OR LAWN

TYPICAL HOUSE FORMS.

Timber Construction

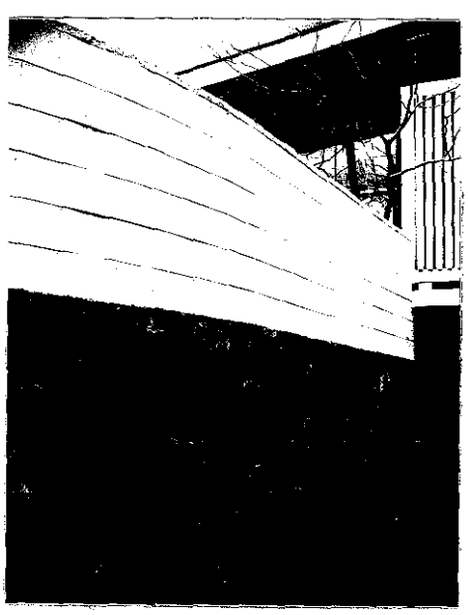
Timber construction did not change radically from the pre war period, with framing members 100 x 50mm remaining the norm, although the framing timbers available were more limited and the variety of claddings and their profiles were to change. Imported pine was again a common weatherboarding timber in use in Victoria when for a time local hardwoods were in short supply. Weatherboards were most commonly in a splayed board similar to the previously used feather edged boards, or were in boards with a bullnosed edge. Weatherboards were either simply overlapped, or were rebated to nestle into each other. Non-rebated boards were usually either 125, 150, or 175mm wide, and the rebated boards, 200, 225, or 300mm. In addition to weatherboards, flat asbestos cement sheet, asbestos cement sidings, and Masonite sheets or weatherboards were also common. Asbestos cement sheets were made of asbestos fibre and Portland cement, and the sheets were connected with timber cover straps, mouldings, angles, or weatherstrips purpose-built by the manufacturers, while sidings in the material were embossed with a simulated cedar grained finish. Masonite ' Tempered Presdwood', was a material often used internally, but was recommended for external use when in thicknesses of 1/4" (6mm) or 5/16" (7mm).



WEATHERBOARD PROFILES

Masonry Construction

Masonry construction of the 1950s and 1960s tended towards being far less complex than the preceding decades and by this time the use of brick veneer construction was very widespread. The use of



RANDOMLY SET STONEWORK IN A FEATURE WALL.

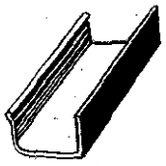
tapestry and multicoloured brickwork set in patterns in cement render ceased almost totally, and the main form of decoration was commonly a feature panel or a chimney, in randomly set stonework. The variety in the types of bricks available was however still wide, and the more common were red, oatmeal, cream, silica (grey, pink, yellow, blue, green and red) or concrete bricks. The mortar used to bind the bricks was commonly a cement mortar, of 1 part cement to 4 parts sand.

TYPICAL TILED-ROOFED ASYMMETRICAL HOUSE

Roofing

Terracotta tiles, concrete tiles (in natural grey, plain colours, or mottled colours), metal tiles (in the Marseilles pattern), corrugated cement tiles, corrugated galvanised iron and corrugated aluminium were the most common roofing materials of this period. Throughout these decades, roof pitches were set progressively lower, until by the end of the 1960s the near flat roof was very popular. Tiled roofs, most commonly in the Marseilles pattern, continued to be used, usually in terracotta but sometimes in brightly coloured glazes. In general, the lower the pitch of the roof the wider the eave, and on some of the low pitched roofs, this was quite consderable. Flat and skillion (lean to) roofs were waterproofed with mastic asphalt, 3- or 5-ply bituminous felt, or flat iron laid on decking of timber, while guttering was usually in galvanised iron, copper, aluminium or asbestos cement, and the most common profile of gutter was the quadrant gutter. Alternatively, gutters were hidden behind large fascia boards on near flat roofs.

HOUSE WITH A FLAT SLOPED ROOF AND LARGE PICTURE WINDOWS.



QUADRANT ('QUAD') GUTTER

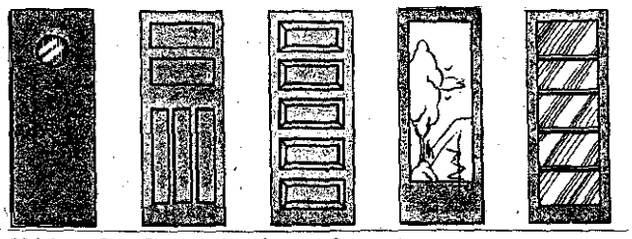
Chimneys

The chimney became a major device in the composition of the front facade and was usually a simple rectanglar box, sometimes stepped in at the sides near the top. It became common for the chimney to stand proud of the main wall surface rather than it being set within the outer wall line, while it was also quite common for it to be placed on the front facade of the house, making the chimney a major feature of the front of the building. Chimneys were usually constructed in a light coloured brick, however the use of random stonework was also a common device.

TYPICAL ASYMMETRICAL CHIMNEY AT THE FRONT OF A HOUSE.

Doors

Glazed or partially glazed front doors were very common, often with several panes set into the door in bold geometries, and with the glass figured or etched with a pictorial scene to obscure (or partially obscure) the view through. The doors elsewhere to the exterior were far more plain, and very often were simple, undecorated and flush panelled.



GLAZED, ETCHED AND PANELLED DOORS

Windows

The use of large sheets of glass to in the living areas of the house became inreasingly popular and more affordable over this period. Timber framed double hung sash windows, very often set at the outer corners of walls, also continued in use.

LARGE AREAS OF GLAZING, WIDE EAVED NEAR-FLAT ROOF, AND THE CARPORT AS AN INTEGRAL DESIGN ELEMENT OF THE FRONT FACADE.

Verandahs

The verandah as such was not used on houses of this period, however the front door, that was usually nestled in a return of the building, almost always had a diminutive porch or projection of the main roof, protecting it. It was common for the porch to require no support at all if it was integral to the main roof structure, while if it had a larger projection, wrought iron supports were commonly employed. In addition to these entrance porches, other appendages to the house proper became common. In particular there were timber pergolas, used both on the front and rear of buildings, while it was also common at the rear of buildings, for there to be a paved patio extending out from the living area. Both of these were integral to the design and lifestyle provided by the house.

Paintwork

While not the rule, the use of multiple colours to the exteriors of buildings became far more common in this period. Colours such as pink, yellow, light green and light blue were used and on elements such as garage doors were commonly set in a bold patchwork of colour. The colours used on houses proper also often employed adventurous colour schemes, with the walls, joinery gables and brickwork elements all having a different colour. The alternative approach appears to have been a more conservative combination of pale neutral colours, while this period also saw the use of white on the exterior come to the fore.

APPENDICES

APPENDIX D

Kew Conservation Study
Glossary of architectural terms

A

Acid etched - Decoration on glass achieved by applying acid to create opaque areas. Often used for side lights and fan lights around front entrance doors in Victorian buildings.

Adaptation - Adaptation means modifying a place to suit proposed compatible uses.

Architrave - The ornamental mouldings around window or door openings. Usually in timber, in Victorian buildings with moulded profiles, and externally sometimes applied in render.

Ashlar - Stone that has been hewn and squared and laid in regular courses with fine joints. Render on the external walls of Victorian buildings was often ruled to imitate this treatment while Victorian weatherboards were sometimes similarly imitative.

Asymmetrical - Not reflective about an axis; opposite to symmetrical.

Art Nouveau - A decorative style in architecture prevalent around the years 1900-1910 that was distinguished by asymmetrical, sinuous and organic forms. On the exterior of buildings, it was typically depicted in render, leadlight, and wrought iron.

B

Balustrade - A railing, usually found along the edge verandah.

Glossary of architectural terms.

Banded rustication - Horizontal courses of masonry, alternat smooth and fashioned (usually vermicul An effect often imitated in render.

Barge board - Projecting boards placed against the incline of the gable of a building; sometimes quite ornately decorated with carved out sections.

Basalt - It is commonly called 'bluestone'. A dark, fine-grained igneous rock, usually quaried from Western Victoria and often used for window and door sills and occasionally for walls.

Beaded -	A small convex moulding of semicircular or greater profile, usually flush with the main face into which its set.
Bevelled	45 degree cut dressing back the square edge of a timber.
Bichromatic brickwork -	Exposed brickwork in a combination of two colours ranging from cream to dark brown. The bricks were often combined to create bold designs.
Bolection -	A moulding projecting beyond the surface of the work which it decorates,and covering the joint between a panel and the surrounding stiles and rails. It is often used to conceal a joint where the joining surfaces are at different levels as in panelled doors.
Boxed gutters -	A roof gutter; usually rectangular in profile and set behind a parapet or between roof pitches.
Brackets-	A projecting piece of stone, timber or other material, often formed of scrolls or volutes to carry, or appear to carry, a projecting weight such as a cornice or eave. In Victorian Italianate architecture often applied along the eaves line.
Bullnose -	A profile curved through 90 degrees. Often used for verandah roofs and formed in corrugated iron.

C

Capital -	The topmost member, usually decorated, of a column or pilaster and commonly in the Classical orders such as Doric or Corinthian. It may support an entablature.
Casement sashes -	A window sash hinged at one side and to swing open usually outwards sometimes inwards.
Catches -	A device for fastening a door or window , usually opened manually from one side only.
Cast Iron -	An iron alloy used to make a large range of building elements such as pickets for fences or decoration to verandahs. It was commonly used to decorate Victorian buildings and was formed by pouring the molten metal into sand moulds.
Centre drops -	A solid cast iron member often applied in conjunction with cast iron decoration to the verandahs of Victorian buildings. Used in combination with the verandah fringe, usually at its centre. Generally of differing pattern to the remainder of the decorative iron work and fixed to project below the edge of the fringe.-

Chamfer -	45 degree cut dressing back the square edge of a timber.
Clinker bricks -	A hard-burnt red/brown brick with speckled glazed imperfections.
Concave -	An inward facing curve.
Convex -	An outward facing curve.
Corbelled -	A series of projections, each stepped progressively farther forward with height. A common device on the brickwork of Edwardian chimneys.
Corinthian -	The most ornate of the three Greek orders, characterized by a bell-shaped capital with volutes and rows of acanthus leaves.

D

Dentils -	A band of small, square, tooth-like blocks. Usually part of a cornice line.
Door frame -	An assembly built into a wall consisting of two upright members (jambs) and a head (lintel) over the doorway which provides support on which to hang the door.
Door furniture -	Any functional or decorative fitting for a door, including the hinges, handle, lock and fingerplate.
Double hung sash window -	Used to describe a window with two sashes sliding vertically within the frame and counter-hung with concealed weights. Common to Victorian architecture.

E

Earthenware -	A glazed or non-glazed non-vitreous ceramic, used for paving tiles. Usually coloured either cream or terracotta.
Eaves -	The part of a roof which overhangs beyond the line of the wall; commonly decorated.
Edwardian -	A period in architecture named after King Edward VII, who reigned between 1901 and 1910. The term is relevant to architecture between c1895 and World War one. In its application to domestic architecture, some of the distinguishing features include the use of terracotta roofing tiles, ridge cappings, chimneypots and finials, timber fretwork around verandahs and gable ends and red brick walls and chimneys.

Edwardian leadlight - Leadlight glazing that commonly uses a combination of diffusing coloured glasses and often with Art Nouveau reference in its styling. Foliated designs are common and the colouring usually less vibrant than Victorian leadlighting.

Encaustic - A term to describe flooring tiles most commonly used in the late Victorian period. The tiles are patterned and made by baking colours to form the surface of the tile. The tiles are usually square or triangular or of shapes that will combine to fit a module.

F

Fanlight - Originally a fan-shaped window over a door, but now applied to any window occupying that position, and is often rectangular in shape.

Fascia - A dressed timber member fixed to the end of a roof rafter that usually supports a gutter. In Victorian architecture, particularly terraces, the fascia often has applied decoration in timber or metal.

Figuring - Patterning either integral or applied to, a member.

Finial - The ornament applied to the apex of a roof, pediment or gable. In Victorian architecture usually of turned timber and in Edwardian architecture, of terracotta.

Frieze - Any horizontal band of decoration but very often used in reference to the decoration found on verandahs in cast iron or timber.

Fringe - Any applied decoration that projects beyond the edge of a member and most commonly that in cast iron applied below the body of a cast iron frieze.

French doors - A pair of doors, each of which often occupys little more than half the width of a normal door and are commonly either half or fully glazed.

French polished - A high-quality polish applied to timber containing shellac mixed with alcohol or oil. Commonly applied to furniture and sometimes applied to interior joinery.

G

Gable - The triangular upper portion of a wall at the end of a pitched roof. The gable is sometimes finished with a decorated barge board or rough cast render.

Glazing bar - Vertical or horizontal bars within the window sash which hold the panes of glass where there is more than one pane per sash.

Glazing bead - A moulding which runs around the edge of a pane of glass. It is removable and has the function of holding the panes of glass.in place.

H

Half glazed Edwardian door - A door with glazing to its upper half and commonly with a panel and an applied timber embellishment beneath it.

Half timbering - A method of construction in which walls are built of interlocking and exposed vertical and horizontal timbers and the spaces are filled with non-structural walling of stucco. In Edwardian architecture this structural system is often imitated in non-structural members usually within gables.

Hawthorn bricks - Dark brown/black bricks with speckled darker imperfections, surface irregularities and rough in texture.

Hinges - A movable joint used to attach support and turn a door or window.

Horns - The term commonly applied to the members which extend below the meeting rail of the top sash of a double hung window. In Victorian architecture these have a turned form and in Edwardian architecture are generally plain bullnosed.

I

Italianate - An architectural style that is derived from Italian architecture both rural and urban that became common in England in the nineteenth century and subsequently in Australia. The style commonly uses picturesque forms, the tower form, bracketted eaves and arcading.

J

Jamb - The vertical member lining a door frame.

K

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L

Lambs tongue -	A cut moulding of sinuous profile, usually two semicircular or quarter ellipse mouldings (ovolos) separated by a narrow flat band. The profile usually used for glazing bars in Victorian windows.
Leadlight -	A window having small panes of clear, coloured and painted glass connected with strips of lead.
Lift pulls -	A handle or projection applied to the lower sash of a double hung sash window, used as a grip in raising the sash. These were usually brass rings or inverted hooks.
Locks -	A device for securing a door, gate or window in position when closed. A rim lock is applied to a surface of a door and is common in Victorian architecture, a mortice lock is housed within the timbers of a door.

M

Maintenance -	Maintenance means the continuous protective care of the fabric, contents and setting of a place, and is to be distinguished from repair. Repair involves restoration or reconstruction and it should be treated accordingly.
Marseilles tiles -	Terracotta tiles which were originally imported from Marseilles in France, around the 1880s and were soon fabricated in Australia. They were very common in the Edwardian period.
Medallions -	An ornamental plaque (usually oval or square, but maybe of any other form) on which is represented an object in relief, such as a figure, head, flower etc.,applied to a wall frieze, or other architectural
Meeting rail -	In a double-hung window,the horizontal member at the top of the lower sash or the horizontal member at the bottom of the upper sash.The catch was often applied to the lower sash.
Moulded -	A member of construction or decoration, treated to introduce varieties of outline or contour in edges or surfaces, whether on projections or cavities,as on cornices, capitals, bases, door and window jambs and heads.
Mortice and Tenon -	A joint between two timber members, formed by a projecting piece (tenon) on one member, fitting into a socket (mortice) on the other member.
Muntin -	The central vertical member of a panelled door.

N

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O

Octagonal bay - A projecting window unit that forms part of an octagon. Common to Victorian architecture, particularly terraces, and with window units set into three faces.

Oculus window - A small circular panel or window, common in Edwardian architecture and often with leadlight glazing.

Ogee - A double curve, formed by the union of a convex and concave line, resembling an S-shape. A form sometimes used for the corrugated iron roofing of Victorian verandahs.

P

Panels - A portion of a flat surface raised or recessed above or below the surrounding area and unusually set off by a moulding or some other decorative device. These are commonly found on Victorian doors in groups of four or six.

Parapet - The extension of a wall above what would otherwise be the eaves line. Common in Victorian architecture, usually between 500 and 1500 mm in height and decorated with ornamentation such as moulded cornices, Italianate balustrading, pediments and nameplates.

Party wall - A wall common to two buildings of a terrace row

Patterning - Embellishment with no structural purpose.

Pediment - Derived from Greek architecture. An element used in Victorian architecture ornamentally over doors or windows, or surmounting a parapet, usually triangular or curved in shape.

Picket - A flat strip or stake, usually of timber, or cast iron set in a series to form a fence.

Polychromatic brickwork - Exposed brickwork in at least three colours ranging from creams to terracotta to dark brown and combined to form bold patterns, usually on the public facade of the building.

Preservation - Preservation means maintaining the fabric of a place in its existing state and retarding deterioration.

Pressed bricks - A sharp-edged, smooth surfaced machine made brick, moulded under pressure and is especially used for exposed brickwork.

Profile comb - A metal comb with moving prongs that take on the profile of the moulding when set against it.

Q

Quad - A decorative quarter round timber member used to cover surface junctions.

Quoin - A stone or brick used to reinforce or decoratively distinguish an external corner or edge of a wall from adjacent masonry. In Victorian architecture often non-structurally represented in polychromatic brickwork or raised render.

R

Rafters - A series of inclined timber members to which a roof covering is fixed.

Rails - A horizontal member in the frame of a door, window or element such as a balustrade.

Reconstruction - Reconstruction means returning a place as nearly as possible to a known earlier state and is distinguished by the introduction of materials (old or New) into the fabric. This is not to be confused with either re-creation or conjectural reconstruction which are outside the scope of this charter.

Render - A cement or lime based trowelled coating applied to external walls and often fashioned into decorative mouldings.

Restoration - Restoration means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.

Ridging - The upper most point at which two intersecting planes of a roof meet. In the Edwardian period, decorative terracotta ridging was often used and integral to the architectural effect.

Rosettes - A circular boss usually in timber or metal and with a stylized floral motif

Rough cast - An external rendering, the top coat of which contains gravel, crushed stone or pebbles.

Rustication -	The strong emphasis of the joints between squared stone blocks. In Victorian architecture often imitated in render.
S	
Sash window -	The common name for a double hung sash window.
Scotia -	A deep concave moulding.
Shingles -	A flat thin tile of timber, slate or terracotta, rectangular in shape used as roof cladding or over portions of walls. They are laid so that each tile overlaps the one below. Timber shingling was common for roofs in the mid Victorian period and in the Edwardian period, shingled panels to gables and balustrading became common.
Sidelights -	A framed area of fixed glass flanking a door or window opening. In Victorian and Edwardian buildings, the glazing was often coloured or leadlight .
Sill -	A horizontal timber member at the bottom of the frame of a window or door, designed on the external face to shed water. The common detailing was to have a masonry sill projecting beyond the plane of the wall, below the timber sill.
Spanish Mission -	A style of architecture quite commonly used during the 1920s, particularly for domestic architecture, that had a vocabulary derived from Spanish architecture that included hand tooled render walls, loggias, pantile roofs, and wrought iron decoration.
Stop-Chamfering -	A chamfer that finishes before the end of a beam, leaving the end with square set edges. This was common on the framing members on Victorian verandahs and door and window openings.
Stiles -	The outer vertical members to which the rails of a door or window are joined.
String course -	A horizontal band of masonry or render, extending across the facade of a structure usually between floor levels or at the springing point of the windows in a wall. The string course is usually projecting out from the wall plane and may be plain or richly ornamented.

T

Tapestry brickwork - Method of laying bricks to achieve patterns such as herringbone or projections such as corbelling. Usullly used with narrow glazed bricks and common in the 1930s.

Terracotta - Unglazed, slow-fired pottery produced from a fine clay,usually of a reddish colour,and used to make wall decorations, chimney pots and roofing tiles. A common material of the Edwardian period.

Tessellated - Used to describe tiles of different shapes, sizes and colours laid on a path,verandah or floor to form a mosaic pattern.

Transitional - A term coined within this report to refer to the period of change around the 1890s that marked the transition from Victorian to Edwardian architecture.

Tripartite - A unit comprised of three parts, a common arrangement for double hung sash windows in the Victorian period.

Tuckpointed - A method of finishing the joints between face brickwork in which mortar coloured to match the bricks is used and onto which a lime putty bead is run to form a crisp white delineation of the bonding of the brickwork. A common finishing of polychromatic brickwork and also the red brick walls of Edwardian architecture.

Turned timber - Wood that has been shaped by the application of a blade while revolving in a lathe to produce a decorated circular pattern. Commonly used for Edwardian columns and balusters.

Tympanum - The triangular or segmental space enclosed by the mouldings of a pediment.

U

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V

Valence- A fringe and used in reference to the timber decorative panel that sometimes covers the exterior top of Victorian windows.

Vermiculation- Decorative treatment on stone or render of regular shallow channels creating worm-like tracks.

Victorian - The period of architecture that strictly relates to the reign of Queen Victoria (1837-1901). In Melbourne it generally relates to the period up until the economic depression between c.1892-95. Throughout this report the term early-Victorian has been used to describe the

period 1837-c.1850, mid-Victorian c.1850-1875 and late Victorian, c.1875-1895.

Victorian coloured glass - Glass coloured on one surface usually in rich red (ruby), blue or yellow and often inscribed with pattern to expose the clear glass behind.

W

Window furniture - Devices, fittings or mechanisms for opening, closing,supporting, holding open or locking window sashes, including such items as catches, chains, cords, fasteners, hinges, lifts, locks, pivots, pulls, pulleys, sash balances, weights and stays.

Wing walls. Subordinate walls which usually extend out from the line of the front wall of a house. These walls often divide individual houses in terrace rows and are sometimes decorated

Woodgraining - A decorative technique applied with paints to imitate the graining of timber. The technique totally covered the surface onto which it was painted and nearly always imitated a timber different and of better quality from the base timber. While used in the twentieth century, it was most common during the Victorian period and was used both internally and externally.

X

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Y

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Z