



Wunderlich terra cotta and faience

AUTHOR(S)

Wunderlich Limited

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WUNDERLICH

TERRA COTTA AND FAIENCE

•
Bulletin T.C. 8

WUNDERLICH LIMITED, MANUFACTURERS

WUNDERLICH

ARCHITECTURAL TERRA COTTA

A BUILDING MATERIAL OF PERMANENCY AND COLOUR

The purpose of this brochure is firstly to portray in colour the chromatic and artistic effects imparted to buildings faced with Wunderlich Terra Cotta; secondly, to give a brief outline of its history and advantages, together with technical data as to its uses and employment with brick or in conjunction with concrete structures.

Every material has a character of its own, and the form which it takes depends on and expresses that character. Terra Cotta should not be treated as if it were stone. Stone is self-coloured, it requires mouldings to break up its surface; for colour variation is obtained principally by shadows.

Terra Cotta is entirely different. It is produced by firing prepared and sprayed clay to an intense heat over a period of days to obtain a preconceived colour. Minor irregularities of colour and form result, and these accidental and beautiful variations give Terra Cotta its special character.

Exposure to the weather does not affect Terra Cotta, and in order that the rain should keep it clean, overhanging mouldings, characteristic of stone, are entirely out of place. Light and shade effects are obtained by contrasting colours; deep reveals are not necessary for this purpose, and where mouldings are used they should be of restricted projection.

Architectural Terra Cotta's main attributes are permanency and colour, and the Architect should think of this material for these qualities more than for any other advantage.

NOTE.—IN THIS BROCHURE WE HAVE USED "ARCHITECTURAL TERRA COTTA," "TERRA COTTA" AND "FAIENCE" AS INTERCHANGEABLE TERMS.

Bulletin T. C. 8

Outstanding Facades

WUNDERLICH LIMITED

ADMINISTRATION BAPTIST STREET, REDFERN, SYDNEY
TERRA COTTA WORKS: ROSEHILL (N.S.W.) AND SUNSHINE (VIC.)

SHOWROOMS:

SYDNEY
Baptist Street, Redfern

BRISBANE
Amelia Street, Valley

STH. MELBOURNE
210 Hanna Street

NEWCASTLE
King Street (near Watt St.)

ADELAIDE
Grote & Morphett Streets

HOBART
T. & G. Building
Collins & Murray Streets

PERTH
Lord and Short Streets

LAUNCESTON
71 St. John Street

691.0994
Wunder
Ter/008

SHPM



WUNDERLICH TERRA COTTA
FACADE TO THE A.P.A.
BUILDING, SYDNEY

DAVID W. KING ARCHITECT
KELL AND RIGBY BUILDERS

WUNDERLICH
ARCHITECTURAL TERRA COTTA

[3]

33217013616470



WUNDERLICH TERRA COTTA FACADE TO
THE I.O.O.F. BUILDING, SYDNEY

R. S. HAMILTON ARCHITECT
WM. HUGHES & CO. BUILDERS

Note the graduation of colour of the Terra Cotta

WUNDERLICH TERRA COTTA
 FACADE TO COLES' BUILDING,
 M E L B O U R N E
 H. A. NORRIS ARCHITECT
 E. A. WATTS BUILDER



WUNDERLICH

ARCHITECTURAL TERRA COTTA



WUNDERLICH TERRA COTTA AND COLOREX
BRICK FACADE TO THE LANGHAM HOTEL, SYDNEY

RUDDER AND GROUT	....	....	....	....	....	....	ARCHITECTS
MAX COOPER	....	....	....	....	....	....	BUILDER

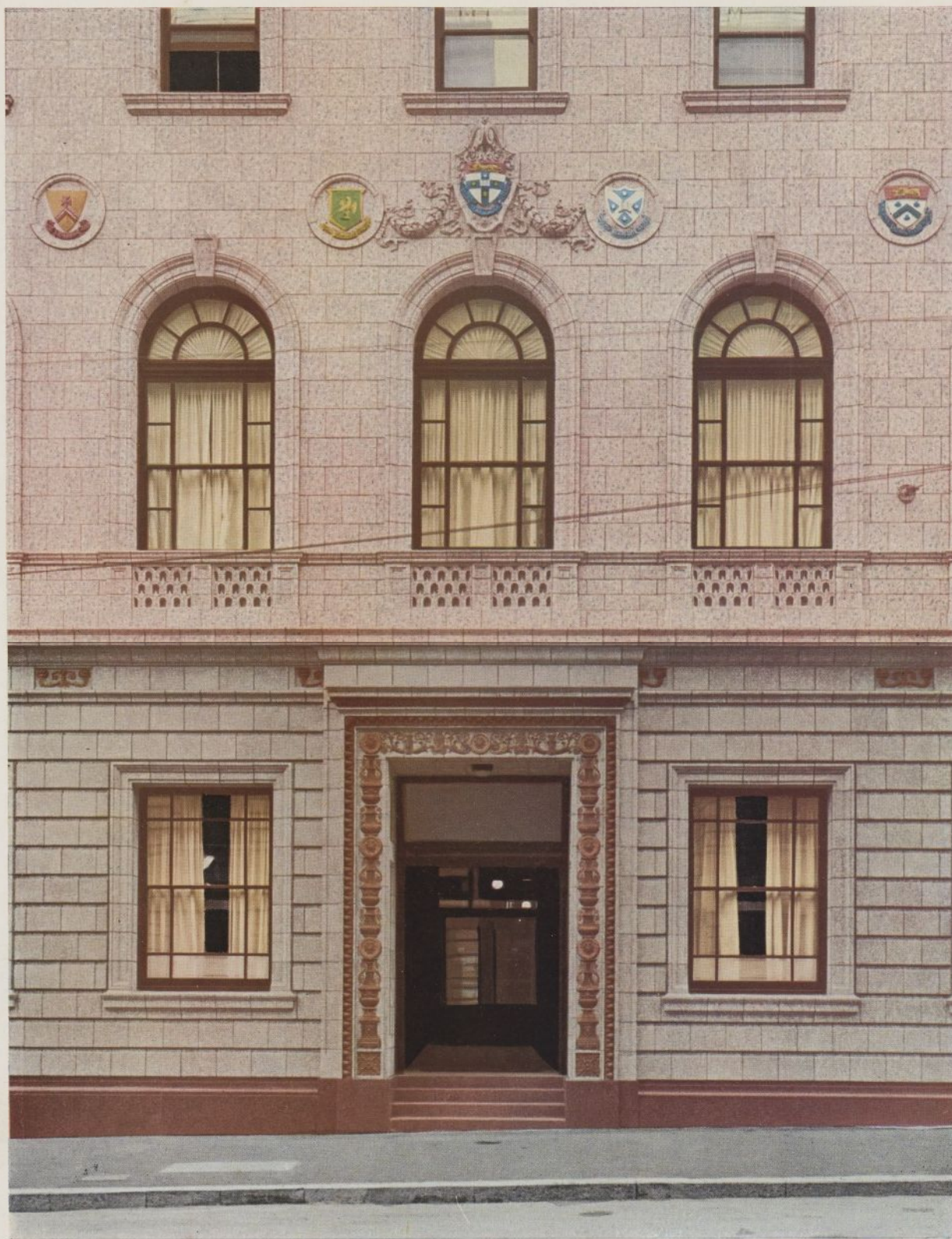


WUNDERLICH TERRA COTTA FACADE TO THE
N.S.W. RAILWAYS' ADMINISTRATIVE BUILDINGS
WYNYARD SQUARE SYDNEY

Awarded the Sir John Sulman medal
for 1936

H. E. BUDDEN AND MACKEY ARCHITECTS

WUNDERLICH
ARCHITECTURAL TERRA COTTA



WUNDERLICH TERRA COTTA FACADE TO THE UNIVERSITY CLUB, SYDNEY
 KENT AND MASSIE ARCHITECTS
 McLEOD BROS. BUILDERS



WUNDERLICH TERRA COTTA FACADE
TO THE SHELL BUILDING, SYDNEY
(from the Architects' coloured drawing)

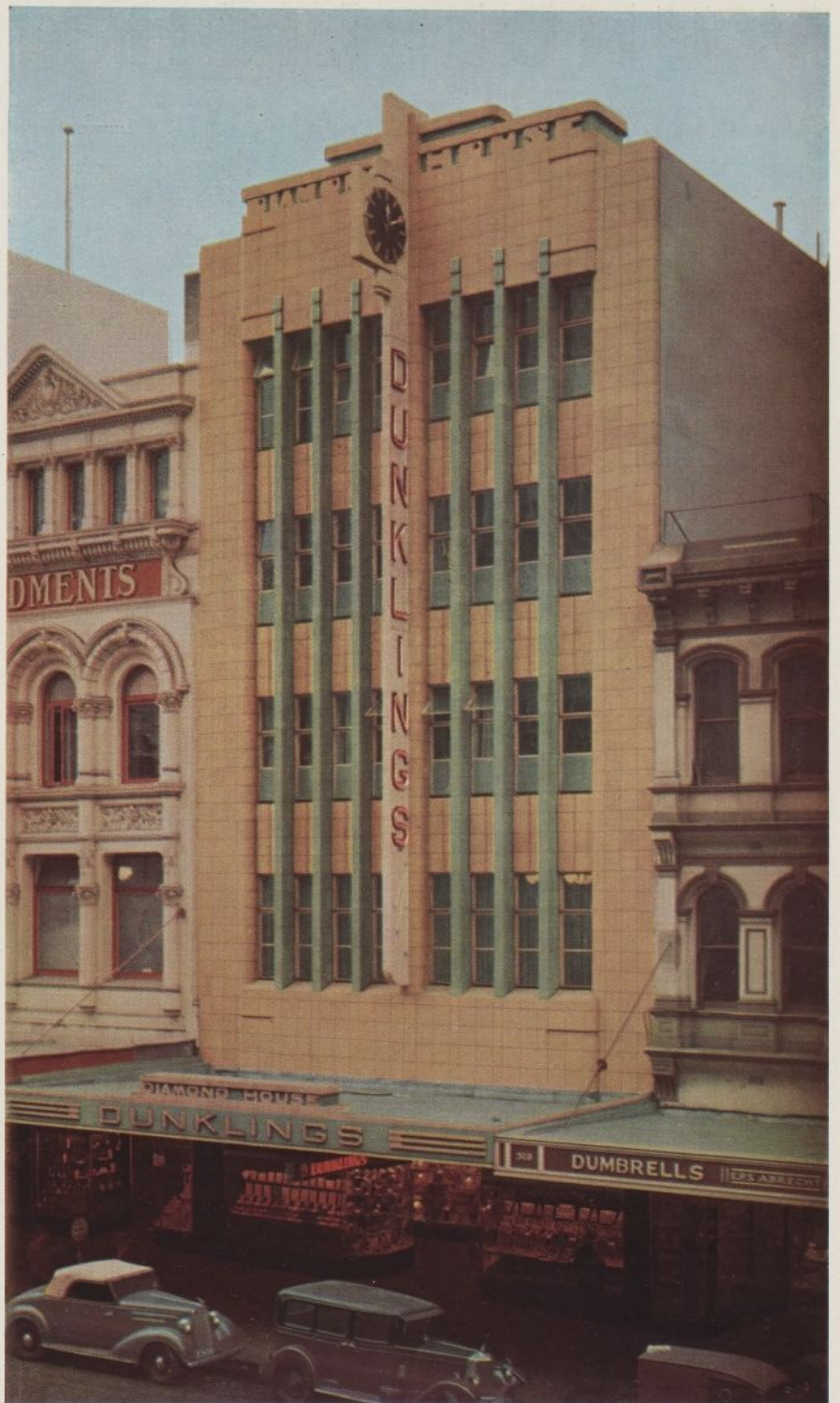
SPAIN AND COSH ARCHITECTS
HOWIE, MOFFAT & Co. Pty. Ltd. BUILDERS

WUNDERLICH
ARCHITECTURAL TERRA COTTA



WUNDERLICH TERRA COTTA COLUMNS AND ENRICHMENTS
TO THE CITY OF FOOTSCRAY TOWN HALL, VICTORIA

J. PLOTTEL	....	....	....	....	....	ARCHITECT
A. R. P. CROW	....	....	....	....	....	SUPERVISING BUILDER



WUNDERLICH TERRA COTTA FACADE
TO DUNKLINGS' BUILDING, MELBOURNE
H. W. & F. B. TOMPKINS ARCHITECTS
E. A. WATTS BUILDER

WUNDERLICH
ARCHITECTURAL TERRA COTTA

WUNDERLICH

ARCHITECTURAL TERRA COTTA

USES AND PRODUCTION:

The growing use of Architectural Terra Cotta as a medium for the facing of buildings, and for the treatment of main architectural features of facades and interior decoration, calls for the fullest co-operation between the architect and the manufacturer, as such co-operation is more essential with the employment of this ware than with most building materials.

Architectural Terra Cotta consists of a body composed entirely of clay, whilst the glaze, which is present only as a surface film, is a vitreous substance, having all the characteristics of glass. The clays are selected for definite qualities, blended in studied proportions, ground with a percentage of burnt clay termed "grog" to correct warping during burning, and finally mixed in a pug mill with water till plastic and then stored to mature or "sour."

This prepared clay is next pressed in plaster moulds to assume predetermined shapes, following which the pressed units are dried. The blocks are then sprayed with a clay slip or glaze medium and burnt in kilns to a temperature of 1,250 degrees C. When burnt, the ware is drawn from the kilns, dressed, fitted and prepared, and numbered ready for erection.

The work associated with the production of Terra Cotta is mostly manual, co-ordinating high technical skill in chemistry, drafting, modelling and burning. The setting or shop drawings, detailing the construction, steel work and the placement of the Terra Cotta units, are architecturally prepared, and copies are supplied to both the architect and the builder for their reference. Prior to commencing manufacture, full sized details and setting drawings showing jointing, etc., are submitted to the architect for approval. Models of all ornamental work are also made available to the architect for inspection, if desired.

PERMANENCE AND COLOUR:

The outstanding characteristics of Architectural Terra Cotta are PERMANENCE and COLOUR. These two attributes emanate from the same fact, namely: the employment of vitreous glazes that seal and weatherproof the surface of the ware and at the same time impart to it the desired colour.

Hard driving rains, common to Australian cities, drench the facades of buildings, and if the surface is of a porous nature, such as is common to many varieties of stone and to concrete, the dirt, grime and acid-laden atmosphere is absorbed into the walls.

Another aggravating factor to the defacement of building facades is the increasing use of motor transport. The exhaust oil and carbon emitted by motor conveyances is deposited on building fronts, quickly begriming them.

The glazed face of Architectural Terra Cotta is non-porous. It does not absorb or suck in the grime or acids of the city atmosphere, and is also invulnerable to salts or other



WUNDERLICH POLYCHROME TERRA COTTA PANEL

Showing some of the glazed colours available

L. P. BURNS

ARCHITECT

air impurities. Any deposited surface film is not of a permanent nature and ordinarily is removed by the action of rain. Under the worst conditions, Terra Cotta can be cheaply and quickly cleansed with soap and water for the pristine beauty of the original colours always remains.

Terra Cotta, of all structural materials, most fully meets the present day demand for colour in architecture. An almost unlimited palette is ready to the designer's hand. No rules on the use of colour can be regarded as authoritative. The selection and responsibility must remain with the architect, but taking a lead from the lavish use of polychrome by the Greeks, the clear colour of Renaissance Italy, the Ceramics of Moorish Spain—timidity in colour and the preferment of anæmic tints should be avoided. Greys, Buffs and White are reliable colours, and with some class of buildings, allowing for Terra Cotta's happy irregularity of colour, give the desired effect, but stores and commercial buildings can and should be treated with entire confidence in colour. There are colours that offer a deal of difficulty to the Ceramist, viz., Vermilion, Carmine and Gold. These colours should be avoided. Mauves, Pinks, Brick Reds, etc., are, however, readily available. It is of necessity that manufacturers must always co-operate in the selection of an appropriate colour scheme, and this co-operation consists of supplying a set of sample colour blocks at the request of the architect. The Green Railway Administrative Building in Sydney, illustrated on the front page, is a successful example of the daring use of colour.

A recent development of outstanding merit now offered is termed "Pulsichrome," where as many as three colours are blended and fused to give beautiful effects.

COST:

So many factors enter into the cost of Terra Cotta that each and every contract must be estimated separately. An approximate figure can be readily given from the inspection of drawings and some rough dissection. But in making up a firm price, the minutest details must be considered. Every ashlar block is calculated as with stone work. Mouldings and ornament are separately taken, etc., and this detailed method of estimating is the only one satisfactory to all parties.

The question of REAL cost cannot be merely taken on the basis of the estimate, as corresponding savings in various directions must be set against the estimated cost. The time in which the material can be prepared is an important factor in the cost of Terra Cotta as applied to a city building. Within two months from the reception of complete drawings and the determination of colour, texture, etc., the delivery of Terra Cotta can be started.

Then again, the element of weight is a big factor from an economic point of view. Terra Cotta weighs approximately only 2,000 lbs. per 100 square feet super. This weight permits a lighter form of construction that reduces the problems in engineering which have to be faced. Expensive scaffolding, haulage equipment, cranes, etc., are unnecessary, as Terra Cotta can generally be man-handled in setting.

The subsequent maintenance cost is considerably lowered. Painting is unnecessary, and even if in later years it is desired

to clean down the facade of a Terra Cotta building, this is done quickly and cheaply with soap and water.

The high resistance against decay of Terra Cotta, in comparison with other materials, reduces the rate of maintenance and depreciation to such an extent as to make Terra Cotta one of the most economical building materials in the world.

Suppliers of Terra Cotta are at all times ready to place their staff at the disposal of the architectural profession, for the purpose of making designs and preparing estimates.

REPETITION OF ORNAMENT:

Architectural Terra Cotta bears favourable comparison with other facing materials, because of the economy with which repeat ornaments can be produced in manufacture. Enriched or ornamental caps to columns and pilasters, repeating architraves and archivolts, ornamental panels, continuous entablature ornament, cresting, etc., all of which call for repetition, can be economically manufactured in Terra Cotta, because out of the one mould thirty pieces or more can be pressed before the mould becomes impaired.

NIGHT ARCHITECTURE AND FLOOD LIGHTING:

NOT all constructional materials are suitable for flood lighting, but there is no doubt that Architectural Terra Cotta, with its high index of light reflection, offers the greatest possibilities for night display. The readiness and economy by which it can be kept clean is a deciding factor. The following table, arranged in groups, gives an indication of the flood-lighting efficiency of the more commonly used building materials.

INITIAL REFLECTION FACTORS:

White Terra Cotta, Cream Terra Cotta,	
Light Marbles	60 to 80 per cent.
Light Grey Limestone, Buff Limestone,	
Buff Building Bricks	40 to 60 per cent.
Sandstone, Grey Bricks, Medium Grey	
Limestone	30 to 40 per cent.

Calculations of the relative light reflection factors of various colours are as follow:—

Pure White	100
Ivory	80
Light Yellow	76
Cream	74
Dark Cream	64
Light Pink	60
Pale Green	57
Buff	53
Sky Blue	52
Silver Grey	47
Olive Green	43
Tan	31
Medium Brown	21
Apple Green	20
Dark Brown	16

Texture is also important, and from experiments carried out by the General Electric Co., rough textured Terra Cotta, as a reflector of light, requires less flood-lighting equipment and current than the smoother varieties.

WUNDERLICH ARCHITECTURAL TERRA COTTA

TECHNIQUE OF INSTALLATION— HAND-PRESSED TERRA-COTTA:

SIZE: For facing work Hand Pressed Terra Cotta is usually made 4in. thick. This thickness is necessary to give a size that will hold its form during drying and burning, as well as furnishing a bed suitable for setting and construction. Terra Cotta is made hollow with approximately 1in. surrounding walls, and webs or stiffeners so spaced and of such thickness as to perform their proper function with regard to form and structure. For Plain Ashlar work blocks should not exceed 18in. to 20in. in length and in height to suit courses between 13½in. to 15in.

STRUCTURAL REQUIREMENTS— REINFORCED CONCRETE OR STEEL FRAME:

Where reinforced concrete is used, or steel frames clad in concrete, Terra Cotta is applied as a veneer. Usually a one-inch (1in.) cavity is allowed between the Terra Cotta and the face of the concrete. This inch cavity allows for any irregularities in the face of the concrete and acts as a dead space for insulation against sound and heat. The face of Terra Cotta (Hand Pressed) Ashlar is, therefore, 5 inches **in front of the face** of the concrete. Hand Pressed Terra Cotta is attached to reinforced concrete by the following general methods (see Constructional Details on page 15):—

1. At every floor level a continuous mild steel angle shelf, usually 4in. x 3in. x ½in., is bolted to the concrete. This shelf allows of any separate floor being set independent of any lower floor. The Terra Cotta block is fashioned to sit on this shelf, and yet not expose any of the steel support. This shelf carries the load of each floor, and care should be taken that the Terra Cotta block immediately underneath the shelf is topped with some elastic mastic, which will allow of settlement, contraction and expansion. This expansion joint immediately under each floor shelf is an essential feature of Terra Cotta application to concrete structures.
2. At every 6in. in every course height No. 8 gauge galvanised (or copper) wire ties are built into the concrete as the work proceeds. These wires should incline downwards in the concrete 5in. and project on the face 2½ to 3in. The projecting portions of wire are later bent back on the wall to form an "O," through which an anchor of No. 6 gauge galvanised (or copper) wire, fashioned as a clamp, drops in and attaches the Terra Cotta block to the concrete.
3. It is important that all iron, steel and wire ties should be well covered with cement grout as a protection against rust. (Copper wires are preferable.)
4. A schedule of all anchors, ties, angles and steel work is prepared by us, with the submission of Terra Cotta estimates.

LARGE PROJECTIONS:

Large projections, which entail the building out of steel outlookers, cradling, etc., naturally increase the cost of the work; it is therefore recommended that wherever possible these features be eliminated.

STRUCTURAL REQUIREMENTS— BRICKWORK:

The combination of brick structural or curtain walls and Terra Cotta is standard construction; both materials being of burnt clay, contraction and expansion are identical. The brick walls are constructed simultaneously with the Terra Cotta setting, the brickwork bonding and engaging into the voids which are afforded by the skeleton construction of the Hand Pressed Terra Cotta blocks.

SETTING:

The setting of Terra Cotta is not carried out by the manufacturer. This is recognised as the contractor's work; but the manufacturer co-operates with the setting by authorised inspection and checking, and by recommending tradesmen who have had both Overseas and Australian experience. The setting of the ware is usually done by leading hand bricklayers, but it is an advantage to engage one experienced man to organise and supervise the work as well as to work with them.

CONCRETE FILLING:

Soffits of balconies, pediments, wide beams, etc., are filled with concrete, but of a weak mix; say, 1 of cement, 3 of sand, and 5 of screenings, brick or gravel.

Breeze concrete should not, on any account, be used for filling the voids of Terra Cotta, as the corrosive action of such concrete is most destructive to the metal supports used to hang the Terra Cotta.

WORKING STRESS:

Terra Cotta will stand a compression test of over 5,000 lbs. per sq. in., amply more than any load it is likely to be called upon to bear.

PLINTH COURSE:

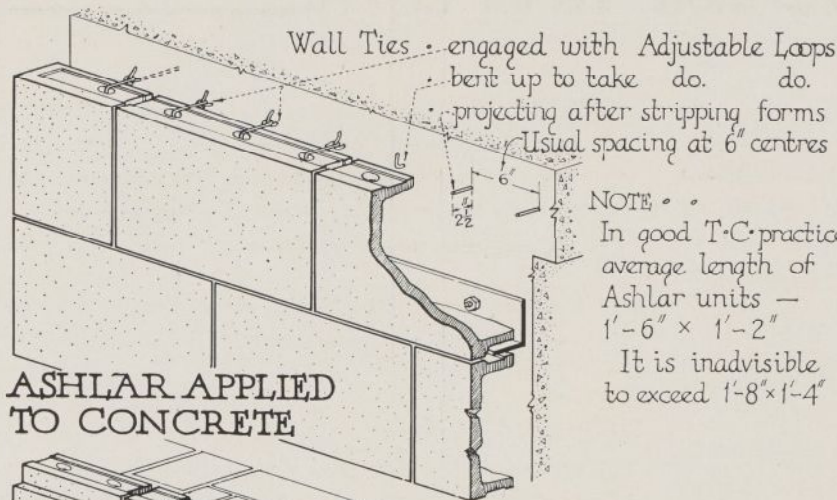
The use of Terra Cotta for the plinth course at ground or street level is not recommended; for this course use granite or other stone.

JOINTING:

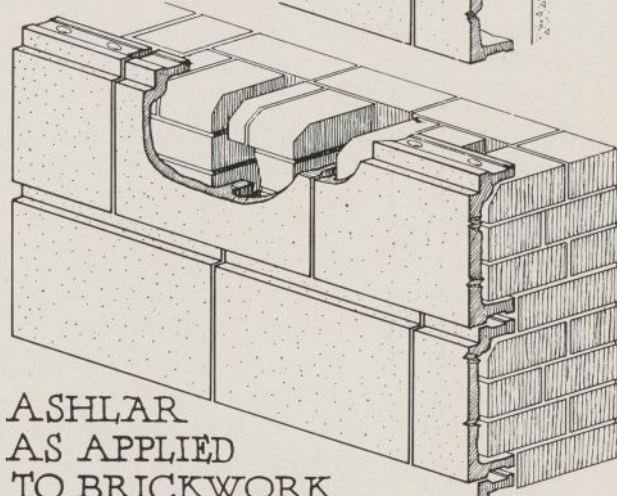
The rebate, or in brick parlance "frog," which surrounds Terra Cotta is pronounced, and allows for filling with cement grout, leaving no voids at the sides and also materially assisting the weathering of joints. Usually the finished joint of Terra Cotta is ¼in. The pointing should be preferably made with mastic, of which several well-known brands are available. Joints should be raked out ¾in. deep and filled, and struck with this mastic pointing, particular care being taken on sills, copings, parapets and all weatherings. Hand holes and anchor holes are all provided in the Terra Cotta.

The jointing of Terra Cotta should be decided by conference with the manufacturers, as the jointing is an important feature of the weatherproofing, and can make or mar the appearance of the building.

Jointing of ornamental features, such as keystones, statuary, and fluted columns of large diameter can often be concealed in the detail of the modelling.



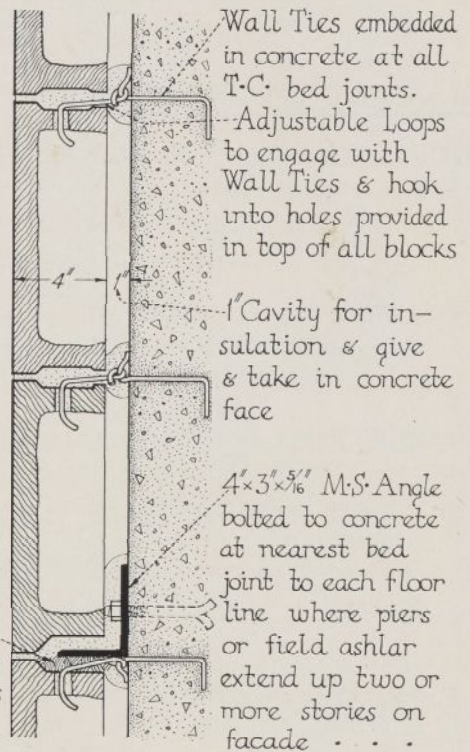
ASHLAR APPLIED TO CONCRETE



ASHLAR AS APPLIED TO BRICKWORK

(WHEN BUILT SIMULTANEOUSLY)

NOTE - -
 In good T.C. practice
 average length of
 Ashlar units -
 1'-6" x 1'-2"
 It is inadvisable
 to exceed 1'-8" x 1'-4"



Elastic jointing compound below Angle Shelf ensures safety to T.C. Facing in the expansion & contraction process encountered in concrete & steel superstructures

SECTION SHOWING FIXING TO CONCRETE

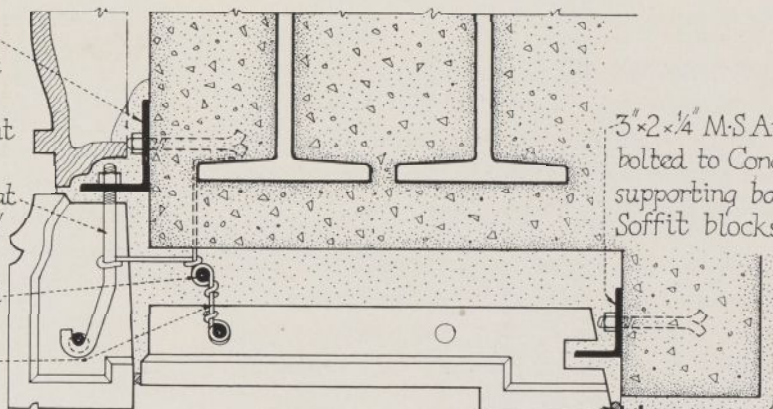
All Wire Ties must be galvanized
 All Steel & Ironwork should be rust resisting

4" x 3" x 5/8" M.S. Angle bolted to Concrete & 5/8" dia. Hangers are suspended from projecting flange of angle - Holes for hangers in angle to be slotted for adjustment to left or right.

Hangers pass between T.C. blocks at vertical joints & hook around 1/2" Pins holding thru' sides of blocks

1/2" dia. Continuous Rod suspended from Concrete Lintel by 1/4" Wire

3/16" Wires hung from Rod & passing down in vertical joints hook around 1/2" Pins passed thru' holes in sides of Soffit blocks



TYPICAL SOFFIT WORK APPLIED TO CONCRETE

WUNDERLICH TERRA COTTA CONSTRUCTION DETAILS - PLATE 1

SCALE

1 1/2" = 1'-0"

WUNDERLICH ARCHITECTURAL TERRA COTTA

STANDARD SPECIFICATION.

TERRA COTTA FACING: The whole of the facings to above granite plinth are to be Terra Cotta supplied by Wunderlich Limited and the contractor is to allow for fixing same in accordance with the following particulars.

DRAWINGS: The manufacturer will furnish the contractor with complete setting out drawings showing the position of every Terra Cotta block.

DAMAGE: If any pieces of Terra Cotta are damaged in transit, the manufacturer shall be immediately notified in writing by the contractor who is to state the setting numbers of the damaged blocks. (NOTE: The setting number is the letters and number painted in black on the block.)

CARTAGE TO SITE: The contractor is to take delivery of the Terra Cotta at the site and/or ship's side and unload same without damage.

HANDLING: On receipt of the Terra Cotta at the site the contractor shall transfer it without damage on to the building and store under cover, stacking same (without inflammable packing) on wood laths to protect arrises from injury.

CUTTING AND FITTING: All Terra Cotta blocks will be cut and fitted as far as practicable before they leave the manufacturers' works.

STEEL AND IRONWORK: The contractor is to provide and fix any necessary anchors required for securing the Terra Cotta. All metalwork shall be protected against corrosion by encasing in cement mortar all round, and shall be dipped in hot bitumen before fixing.

BONDING WIRES: $\frac{1}{4}$ in. copper (or galvanised iron) wire anchors are to be built across the corners of all angle blocks and in all concrete beams and stanchions and turned down into holes provided for the purpose in the top beds of the blocks.

BRICK BACKING: Where Terra Cotta is backed with brickwork the backing shall proceed simultaneously with the setting of the Terra Cotta. Each piece of Terra Cotta shall be backed up solid with brick and mortar so as to make a perfect bond and homogeneous mass. In no cases are Terra Cotta blocks to be filled with concrete, except on the specified instructions of the architects.

MORTAR: The mortar for bedding and setting to be composed of one part of Portland cement to three parts of clean, sharp, well-graded sand. The sand and cement are to be thoroughly mixed dry before any water is added (retempered mortar is in no case to be used).

JOINTS: Blocks are to be spaced evenly apart in accordance with the overall dimensions, the joints being kept of an even width.

POINTING: The joints are to be pointed as the work proceeds with a flat joint with 1 to 3 Portland cement mortar, coloured with colouring matter to a tint as directed by the architect.

The tops of all weatherings to be raked out for a depth of at least $\frac{3}{4}$ in. and pointed with "Vulcatex" or other approved mastic putty.

SETTING: All Terra Cotta is to be set to a true line and carefully laid in a solid bed of mortar. All rebates and sinkings in beds and vertical joints, from front to back and from top to bottom, are to be filled solid with mortar, leaving no voids. Each piece of Terra Cotta shall be tamped into place. All wall copings and other capping courses shall be set in a thick bed of mortar and well pounded down so that the mortar fills all spaces around bottom of webs of Terra Cotta.

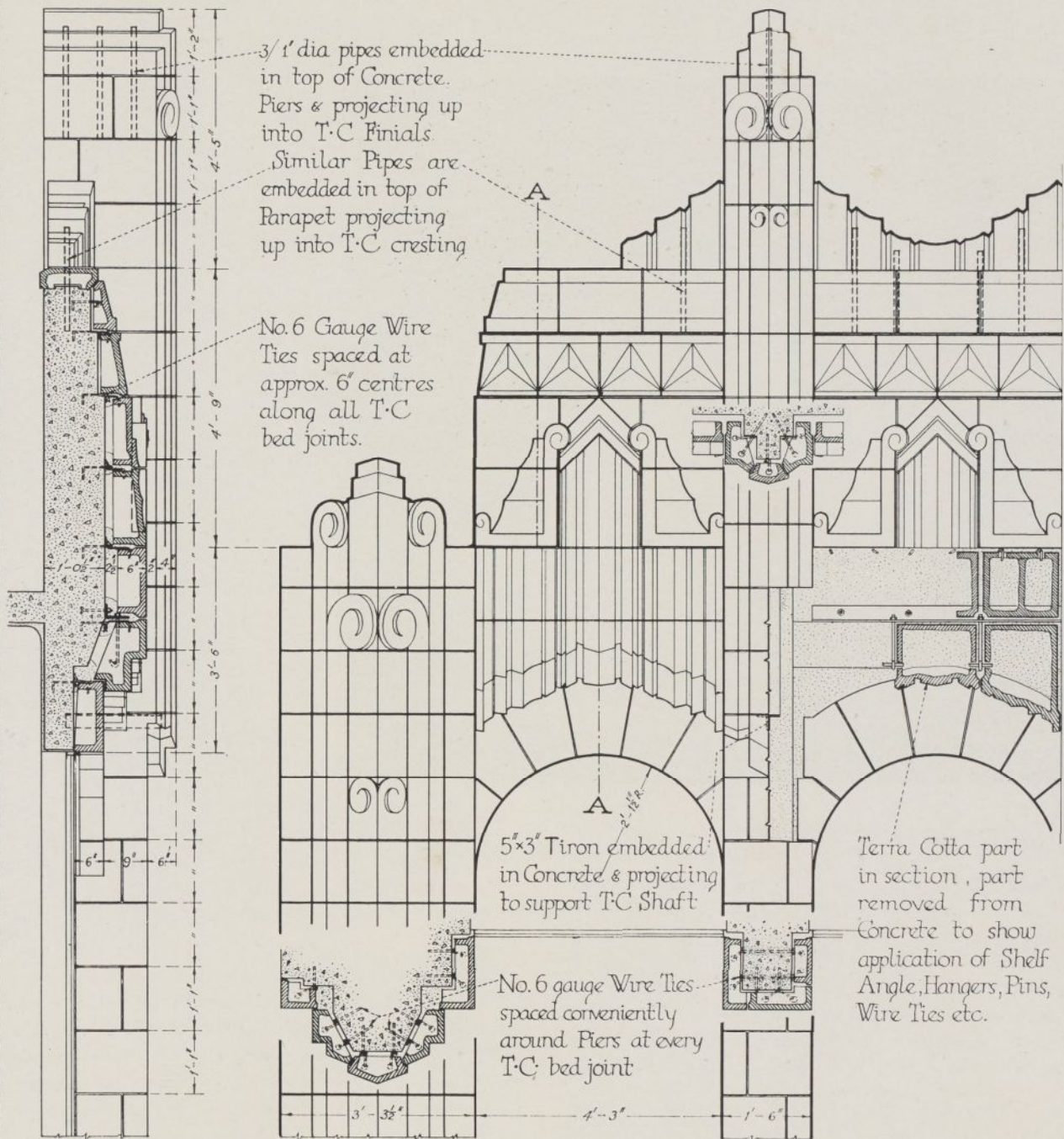
PROTECTION: All uncompleted Terra Cotta work and backings shall be protected by waterproof coverings at night and at any time when liable to injury by bad weather.

CLEANING DOWN: Upon completion of the work all shoring, scaffolding supports, centring, and other false work and protections shall be removed and the Terra Cotta cleaned down. If satisfactory results cannot be obtained by the use of abrasive soap or washing powder, a solution of $1\frac{1}{2}$ pints of Muriatic Acid to 1 gallon of water may be used, followed with a final washing down with clean water to remove any remaining acid solution. If the acid solution be used, only wooden pails and fibre brushes shall be employed.

Under "CARPENTER" or whichever trade the centring is specified, a clause should be inserted as follows:—

"The contractor is to provide, fix and maintain all centring, falsework, cover boards, boxings and protections required for the Terra Cotta and remove same upon completion of the work."

DETAIL DRAWING TYPICAL OF WUNDERLICH SERVICE



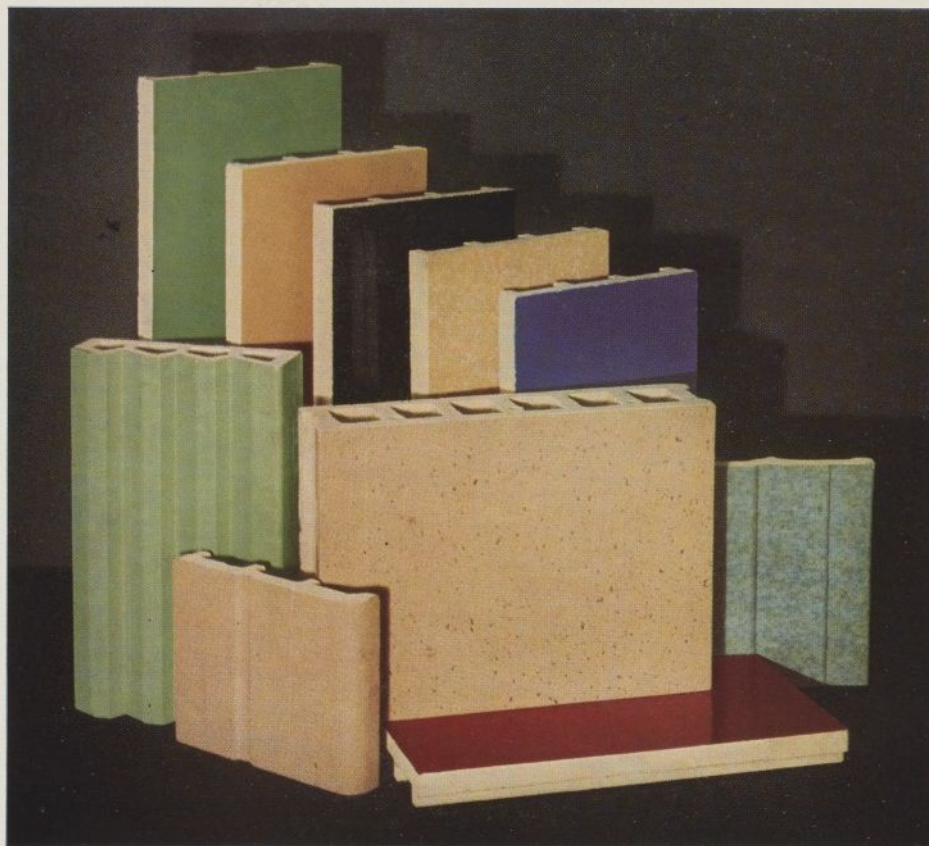
**WUNDERLICH TERRA COTTA
CONSTRUCTION DETAILS - PLATE 3**

SCALE

$\frac{3}{8}" = 1'-0"$

WUNDERLICH

MACHINE MADE TERRA COTTA



TYPICAL MACHINE-MADE
TERRA COTTA BLOCKS.

FOR INTERIOR AND EXTERIOR USE:

Wunderlich Machine-made Ware presents an entirely new and world-wide development in the production of Terra Cotta Facing Units. Its field of use is practically unlimited, for it is suitable for lining interior walls and partitions as well as the facades of buildings, also surrounds to shop-fronts, counter fronts, etc. The modern trend of design in architecture calling for plain and simple treatments lends itself admirably to the use of this facing medium.

As the name implies, this material is machine-made, as distinct from "Hand Pressed" Architectural Terra Cotta, for its preparation eliminates the use of plaster moulds. It is extruded through dies to standard sized ashlar units and special shapes on a quantity production basis. Whereas "Hand Pressed" Terra Cotta is specially modelled and made to suit the design of a building, the machine-made product is confined to a range of standard sizes and shapes and, consequently, controls, to some extent, certain dimensions of the building on which it is to be applied.

It is of utmost importance, therefore, that when considering the use of Machine-made Ware, the architect collaborated,

in the first instance, with the manufacturer in order that the design of the building may accommodate, to a maximum degree, stock ashlar units or special shapes that are capable of being produced by the method outlined.

MANUFACTURE:

In the manufacture of Machine-made Terra Cotta specially selected clays are thoroughly ground and mixed in a pug mill. Whilst in a plastic state, and before passing through the extrusion dies, the clay is subjected to an exclusive "de-airing" process. This process exhausts the trapped air in the cellular formation of the clay, resulting in a body that is dense and strong, thus correcting to a great degree faults and warping during burning. The units are extruded with a two-faced profile, partially cut through the centre—to permit of splitting apart after firing—then dried, sprayed with the glaze medium and fired in the usual manner, and finally squared and ground to size.

STANDARD ASHLAR SIZES:

Machine-made Terra Cotta is manufactured in a thickness of 2in. in various standard sized units, 9in. wide up to



WUNDERLICH MACHINE-MADE TERRA COTTA TREATMENT TO McILWRAITH'S BUILDING, MELBOURNE

J. V. T. WARD ARCHITECT
HANSEN AND YUNCKEN BUILDERS

18in. long, 10in. wide up to 18in. long, 17in. wide up to 24in. long. The width in each case is a fixed maximum dimension; if necessary, narrower widths could be produced. The backs of the units are keyed for fixing to concrete or brick ground. For partition work the units are also supplied double-faced, 4in. thick. See colour illustration of typical machine-made Terra Cotta Blocks on page 18.

SPECIAL SHAPES:

Special shapes in machine-made Terra Cotta are confined to blocks with running profiles such as Flutings, Beads, Filets, etc.

Where the quantity entailed warrants the preparation of an extrusion die, special shapes are machine-made; however, it is more economical to hand press small quantities. Decorative and modelled features are also made by the "Hand Pressed" method, and where such features repeat sufficiently, their cost is considerably cheapened.

COLOURS AND FINISHES:

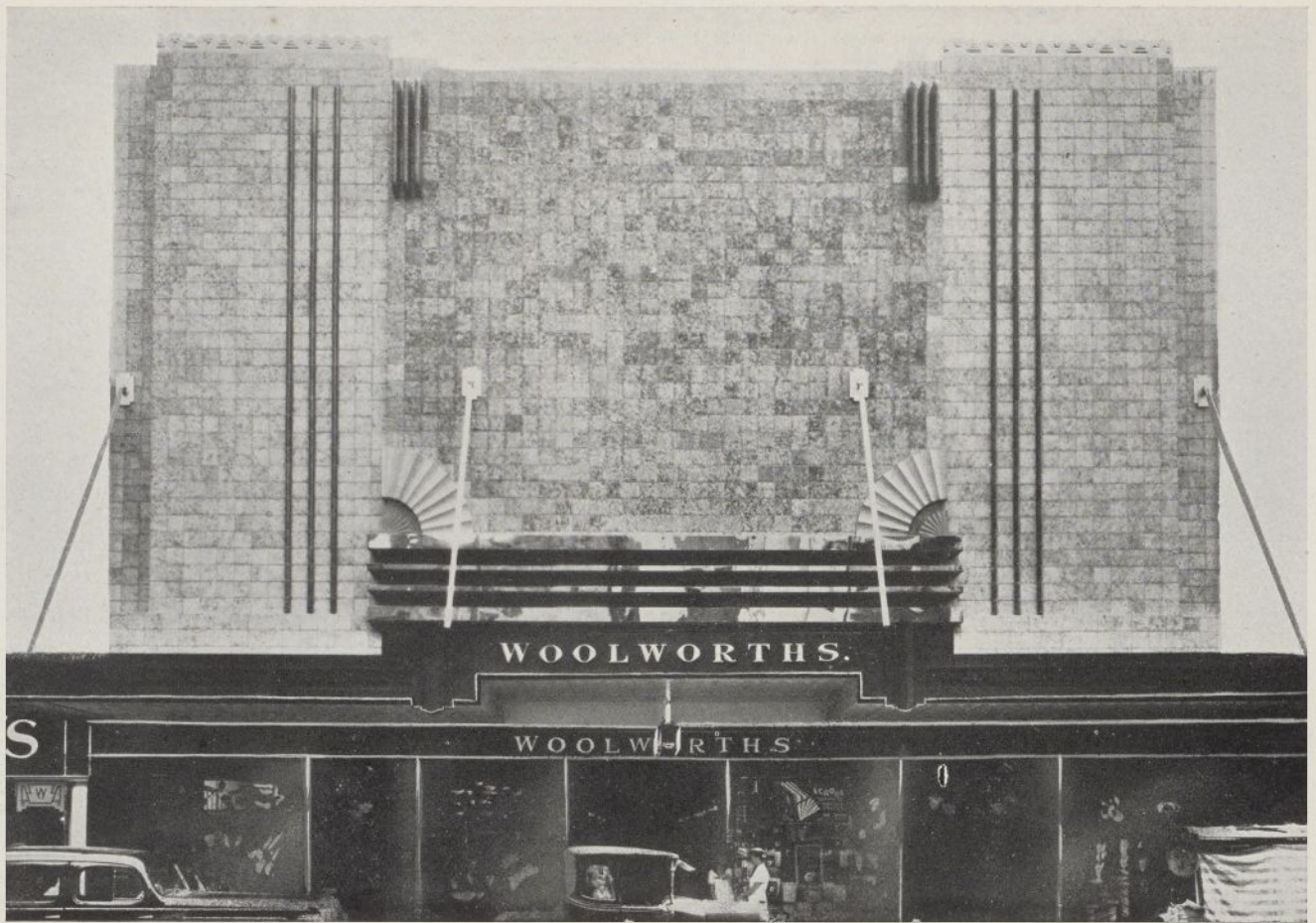
Machine-made Terra Cotta possesses all the characteristics of Hand Pressed Terra Cotta as regards colour, finish and permanence. The full range of Terra Cotta glazed colours are available to the architect in matt, lustrous, plain, mottled polychrome and pulsichrome finishes. The latter finish, which blends as many as three colours to give a mottled effect is a modern development in colour treatment.

FIXING:

Detailed instructions for fixing will be furnished on request to the manufacturers.

COST:

Machine-made Terra Cotta can be quoted at per square yard super for the standard Ashlar units, with an extra for Special Shapes.



WUNDERLICH MACHINE - MADE TERRA COTTA
FACADE TO WOOLWORTH'S BUILDING, ADELAIDE

F. KENNETH MILNE	ARCHITECT
WEBBER AND WILLIAMS	BUILDERS

WUNDERLICH
MACHINE MADE TERRA COTTA

WUNDERLICH ENAMELLED FACE BRICKS

Enamelled Face Bricks have found a ready place in modern Architectural Construction.

Primarily, they are made to bond with common bricks as a backing on buildings where weight is of secondary importance. As a structural unit they impart greater strength to the walls of a building.

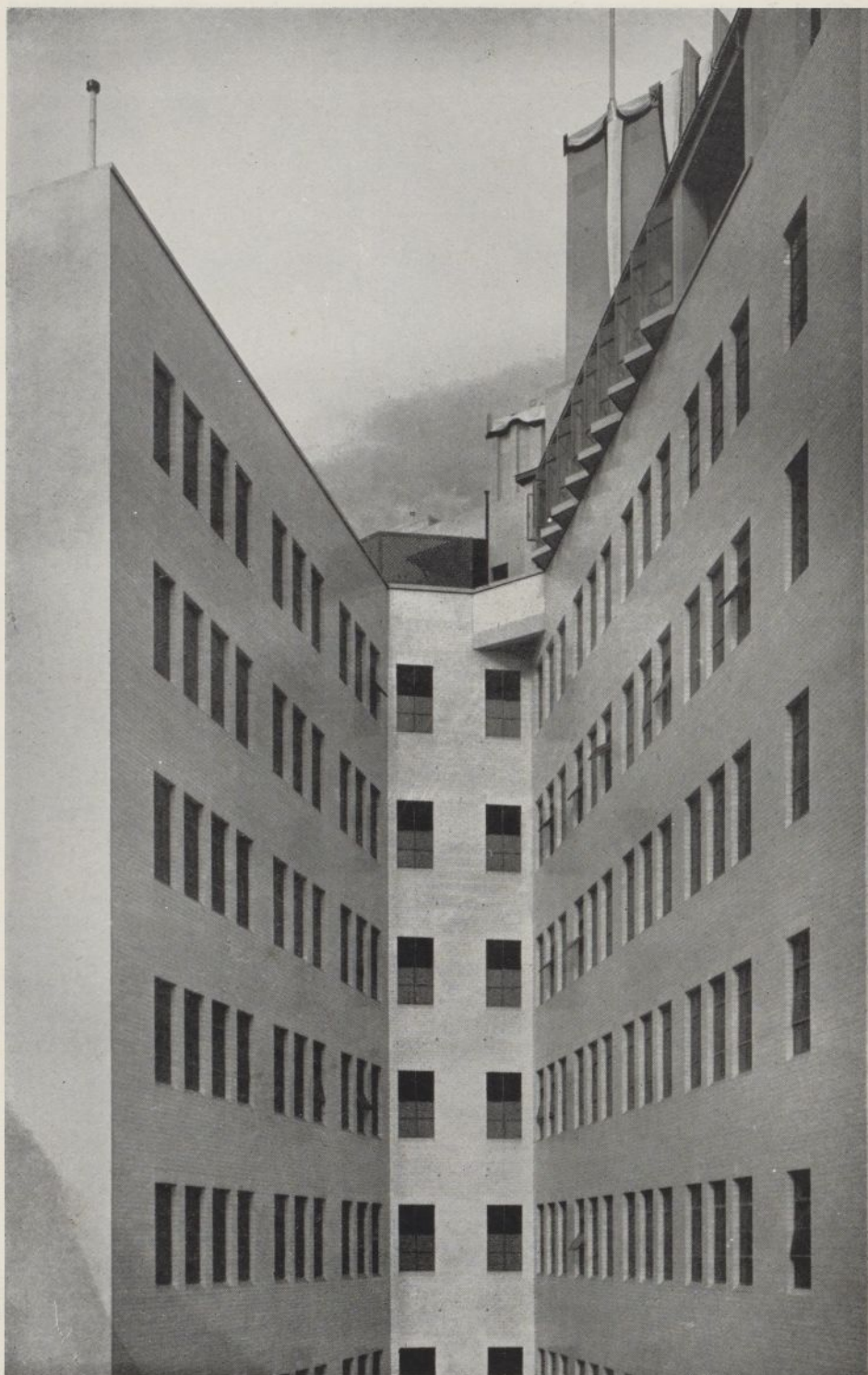
Enamelled face bricks are composed of a similar clay body and glaze as Architectural Terra Cotta. The standard brick is $9\frac{1}{8}'' \times 4\frac{1}{2}'' \times 3\frac{3}{4}''$; it is glazed on the stretcher or the header face. Standard specials in the form of Quoins and Bullnose are also available and other special shapes can be made to order.

The many standard colours that are available—a few of which are illustrated—offer to the architect an unlimited scope for variety of treatment. Finished either smooth or matt textured in any of the plain, mottled or pulsichrome colour effects, the glazed surface of the brick cannot collect or absorb the dirt or grime of the atmosphere.

Enamelled Face Bricks are unexcelled in quality and durability; they cannot scale or discolour even under the severest climatic conditions. Tests of the lighter colours have established that when used on the exterior of buildings, they increase the light at street level by as much as 200 per cent. over darker materials, and that for flood lighting or night architecture they offer amazing possibilities. White glazed enamelled bricks were successfully used for the walls of the light area of the City Mutual Life Assurance Society's Building, Sydney.

In addition to their use as a complete facing unit, these bricks afford unlimited scope as a trim or decoration to spandrels, piers and band-courses, etc. Other applications embrace linings to corridors, shopfronts, counters, light areas, bakeries and power stations; and indoor and outdoor swimming pools; for the latter purpose in conjunction with Architectural Terra Cotta life rails and scum trough.

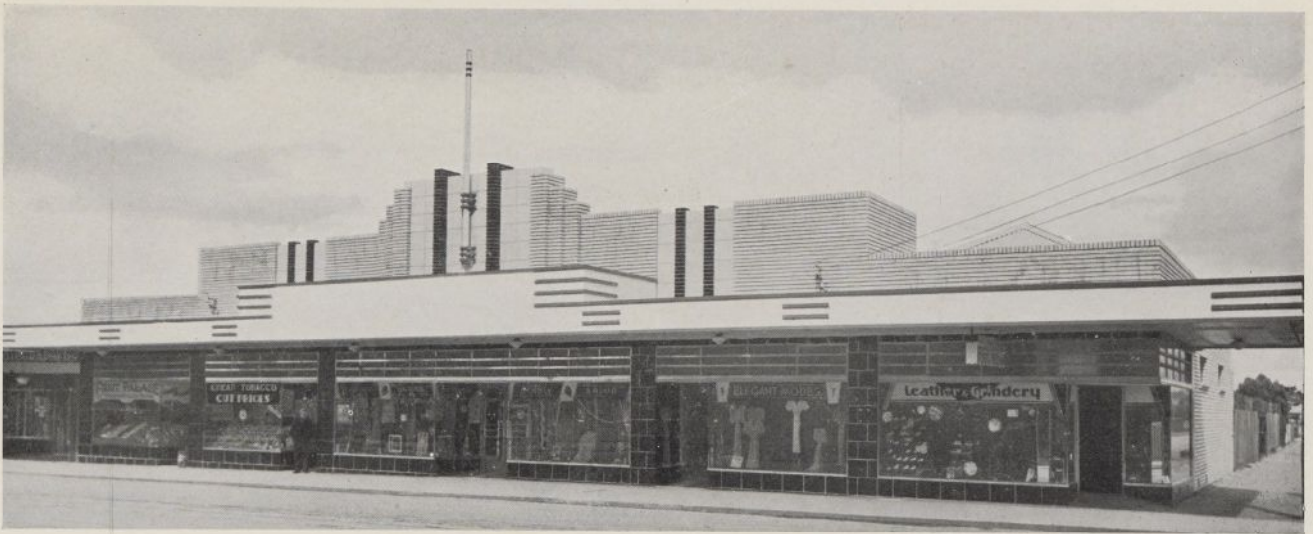




WUNDERLICH WHITE
ENAMELLED FACE BRICKS TO
THE LIGHT AREA OF THE CITY
MUTUAL BUILDING, SYDNEY.

EMIL SODERSTEEN ARCHITECT
CONCRETE CONSTRUCTIONS LTD. BUILDERS

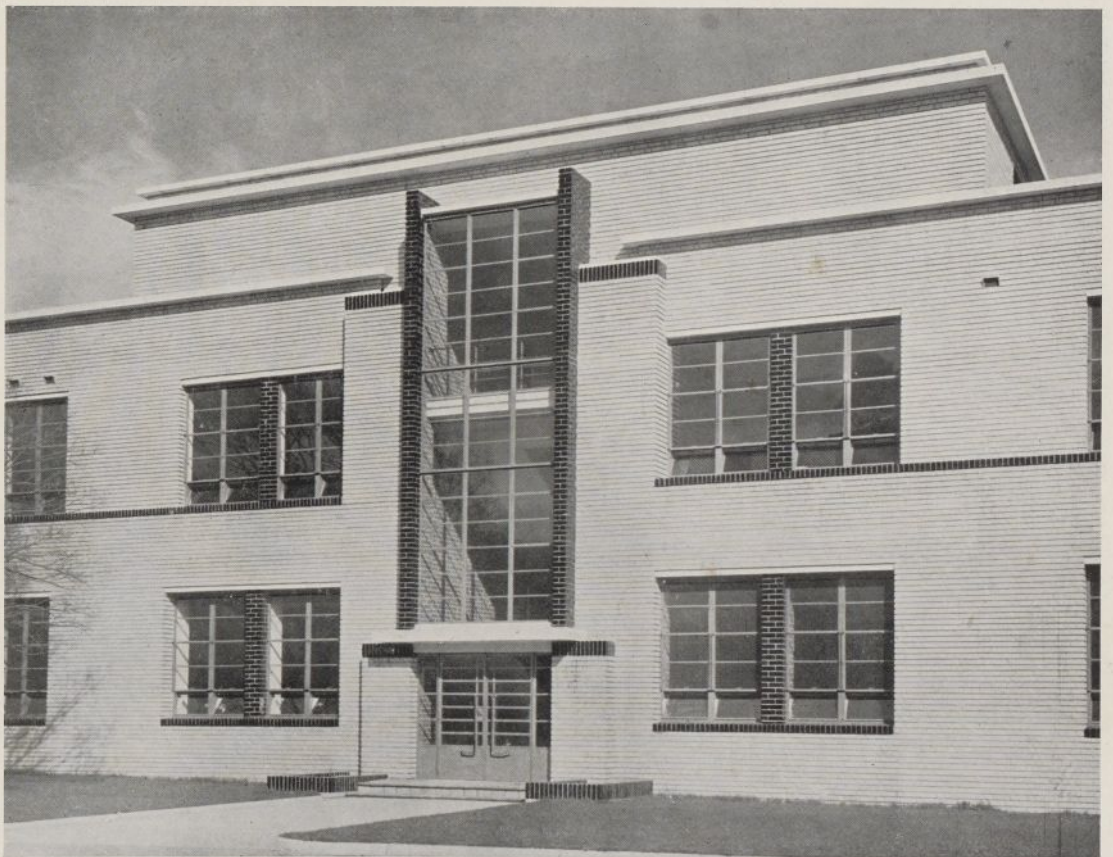
WUNDERLICH
ENAMELLED FACE BRICKS



SHOP BUILDING, HIGH STREET, NORTHCOTE, VIC.

A. C. LEITH AND ASSOCIATES ARCHITECTS
 OWEN AND HAMS BUILDERS

The pediment feature is of Wunderlich Black Enamelled Face Bricks and Buff Terra Cotta, the plinth and pilasters of the Shopfront being of Black Terra Cotta



THE MacROBERTSON GIRLS' HIGH SCHOOL, MELBOURNE, VIC.

NORMAN SEABROOK AND STATE PUBLIC WORKS ARCHITECTS
 SWANSON BROS. BUILDERS

Wunderlich Blue Enamelled Face Bricks were used as a trim on this building



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