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THE OFFICIAL JOURNAL OF THE INSTITUTE OF SOUTH AFRICAN ARCHITECTS, INCLUDING THE CAPE, NATAL, ORANGE FREE STATE AND TRANSVAAL PROVINCIAL INSTITUTES AND THE CHAPTER OF SOUTH AFRICAN QUANTITY SURVEYORS

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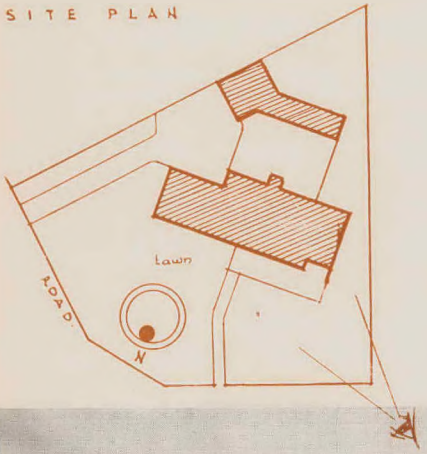
RESIDENCE HOFFMANN - JOHANNESBURG



L. LASERSOHN

A.R.I.B.A., M.I.A., ARCHITECT

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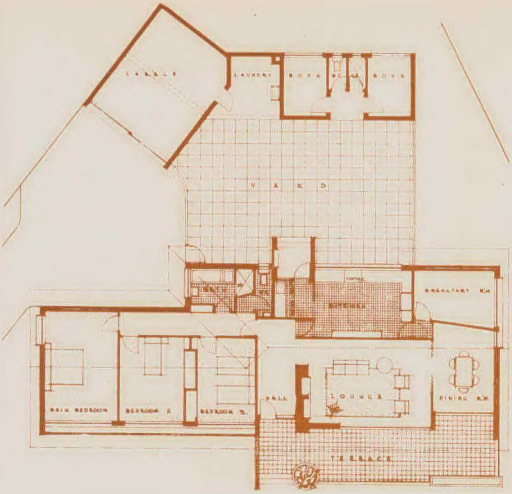
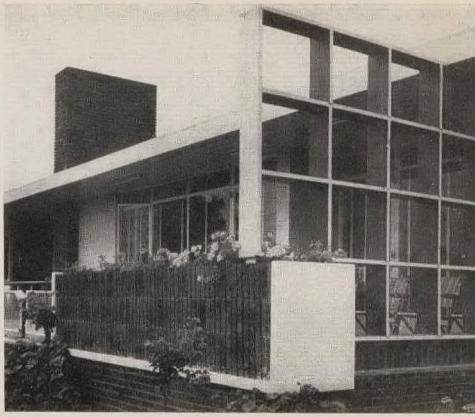




Detail of trellis to terrace.

Living room, showing fireplace.



This house was designed during the period of building control, which imposed a limit of 2,000 sq. ft. of floor area. Although building operations were commenced after the removal of control, the area of the house was only slightly increased as finance was a limiting factor.

This house, in the contemporary style, has been planned for a family with two children; accommodation includes a fairly large living room and main bedroom, and as many rooms as possible have a northern aspect. The architect has aimed at simplicity of design throughout.

The site, which is about one-third of an acre, fronts on to streets to the north-east and north-west. The placing of the house on a confined, almost triangular site, which is also very exposed, proved difficult, for as much garden as possible was required in front of the house and, an enclosed yard, linking house and outbuildings, was also desired.

Access to the house is from Letaba Road on the north-west boundary. The drive, giving access to the double garage and to the enclosed kitchen yard, is from Hill Road on the north-east boundary. There is also a parking bay off the drive.

All the main rooms are orientated north, and an attempt has been made in the arrangement of the eaves to utilise solar heat in winter and at the same time to keep the house cool in summer. This has proved quite successful. The bedroom section is so arranged that a complete cut-off is possible from the living and service zone, thus giving it privacy and protection.

The focal point of the living room is the east wall built in two-inch reddish-brown rustic bricks with wide deep-recessed joints in white and containing the fire-place and display shelves. Built-in above the fireplace is a decorative mural depicting a bushman painting scene.

The colour scheme in the living room is treated fairly boldly. The wall adjoining the fireplace, together with the window frames and pelmet, are painted in pastel blue which contrasts sharply with the reddish-brown rough texture of the fireplace. At the opposite end of the room peach-coloured "Modernfold" doors, carried up to ceiling height, separate the living room from the dining room, and the adjoining wall is a dark chocolate-brown colour. Pastel blue is repeated on the splayed wall at the end of the dining room. The remaining walls are generally ivory-coloured.

An attempt has also been made to give various lighting effects to the entrance hall and the living room. The entrance hall has two built-in spotlights finished flush with the ceiling, while the end portion of the ceiling is at a lower level with concealed lighting between the two levels.

Concealed lighting in two tones is also carried across the length of the living room behind the curtain pelmet, which forms an inverted light trough. A centre fitting with direct and indirect light and a fluorescent bracket over the mural enables a variety of lighting effects to be obtained.

The kitchen and scullery are equipped well with built-in cupboards and fittings as are the two children's bedrooms. At the owner's request cupboards were omitted from the main bedroom.

The construction and finishes are fairly conventional. Two-inch blue and reddish-brown rustic bricks are repeated externally to the plinth, chimney, flower boxes, garden wall and to the east and west walls of the house. The roof is covered with Canadian shingles laid on tongued and grooved reject flooring boards—a precaution taken owing to the rather low pitch of the roof.

The house was completed at an approximate cost of £4.000.

Living room showing dining alcove divided by Modernfold doors.



CHARACTERISTICS OF DUTCH URBAN ARCHITECTURE AFTER THE WAR

By DR. H. v. d. WEYDE

Secretary-Director of the Netherlands Institute for Housing Conditions and Urban Architecture

The foreigner paying a visit to Holland to see the characteristics of Dutch contemporary urban architectural development cannot expect, not even after five war years of drastic interference with lasting after-effects, that everything is different now. Natural circumstances, out of which our urban architecture grew for centuries, have remained the same.

A large part of our country—and the densest populated part at that—is flat polderland with a rectilinear structure, which one sees repeated in the planning of the old and new suburbs, sometimes even in the aspect of a whole town. The parklike planning of an English residential quarter is foreign to this landscape, though it is present in those towns and villages which have been built in a rolling landscape.

The flatness of the country around our big cities demands special provisions before the town can be expanded: breaking up the polders, heightening the level, roadbuilding, and sewerage. This is the reason why unauthorised building occurs here less than elsewhere. Authority easily played an important role and remained very powerful. This was rather an advantage for an orderly development.

The great density of the population in the western part of the Netherlands, which is still growing through the natural increase of the population and migration, demands extreme carefulness with the land. A strong concentration of the built-up suburbs with little green and few city lungs is the result of this, at least according to foreign standards. But the careful planning, orderliness and cleanliness in planning, execution and maintenance, the municipal tree planting and gardening compensated for much.

Urban planning developed more and more in the years after 1918. Regional planning became the rule and planning for a whole city which enveloped the detail projects and unified them in the years between 1930 and 1940, following the example of Amsterdam became generally accepted.

The "garden city" idea met with response in the Netherlands, but was executed in a weakened form in Amsterdam and Rotterdam. After apartment building (one apartment per floor) which was usual in Amsterdam since 1870, the one-family house, gained support again.

During the years just before the last war one can perceive the idea of district building. The aim was a greater differentiation of the houses in one suburb according to size and type, and a methodical provision of each district with municipal services, schools, shops, playing fields, etc. Special housing, e.g., houses for the aged, the high building with a restaurant and service, occurred sometimes.

The blocks of buildings, which formerly were enclosed on all sides, became more and more open, sometimes at the short side, sometimes as a whole, at other times as house "strips", and so the aspect of the district changed through the green foliage which formerly stayed unnoticed.

In the town-planning as a whole in the years after 1930 a deciding factor was the expectation that the population would stay the same in the not far distant future. This expectation led to a sharp limitation of the plans for development. At the same time experiments were made to preserve the rural area for rural purposes.

Taking stock of the influence of war on this situation, we can see that at the beginning a very important part of town-planning had to be directed to reconstruction. Before this, work in the old built-up areas was an exception and nearly always incidental. Now town-planning on a big scale had to be projected, quite often under high pressure, to maintain the lead on actual building. The types of the destroyed district differed a lot.

Now—as in Rotterdam—the heart of the big city was wiped out and the town planner had to envisage completely the many demands which a city like that with its municipal buildings, offices, shops and entertainment centres makes. Then—as in The Hague—big, rather anti-

quated suburbs were swept away, providing opportunity to rebuild them on a modern scale and make them subservient to a certain decentralisation of the city.

Elsewhere—as in Middelburg—the historical nucleus of a small provincial town was hit and one had to give priority to considerations of respect for this city's monuments. A very few times—as in Empel and Petten—a small village which had been badly hit, could be rebuilt on a more favourable site. In many cases the damage was rather limited and could be remedied by equally limited improvements.

Often the work looked simple to the town planner because much had been cleaned up and the reconstruction laws made expropriation quick and easy. But nearly always he moved over virgin ground and he was hindered in his task by the capriciousness of the destruction, by the wishes of the people concerned, who aimed at recovery of what they had lost, and often too, by reminiscences of the old, of the authorities, and public opinion.

Typical of much of this reconstruction was, that through lack of time, the scientific research could not take the place which it took elsewhere. Quite often these plans show something of town-planning of an earlier period. They run into many details, which could be used because they were directed to execution in a very short period, though in fact the length of this period was many times very disappointing.

Meanwhile lack of housing urged to building houses pure and simple. In many instances pre-war plans could not be used without alterations. Ideas and demands of town-planning had to be revised after a few years.

Through circumstances these revisions after the war were inevitable and many. To begin with, there was the necessity of building only simple labourers' cottages. Plans only made provision for houses for the middle classes, for which there was no time then. To contend with the house famine system building on a large scale took place. Often this did not fit in with the town-planning. So there had to be revisions.

A very dominant factor was the motive to use ground sparingly. Agriculture and horticulture increasingly fought the purchase of costly soil for town expansion. Financial considerations also urged economy with the ground. In certain cases this led to a change in plans, in which the density of building was intensified, partly by using an apartment system where before only one-family houses were built.

This gradual shifting towards apartment building, which before was only used in the larger towns and a few ancient walled cities, is one of the most remarkable phenomena of peri-urban post-war building in the Netherlands. The industrialisation which alters much of the character of the average municipality provides a reasonable ground for this shifting. But in public opinion there appears to be a misunderstanding, because it exaggerates the gain by apartment building too much.

The danger, that under pressure of our contemporary poverty the density in building will be intensified too much, so that the new suburbs will lose in value, is recognised in the Netherlands. The question how the two ought to be balanced has caused much difference of opinion. In any case the apartment building is in itself a type of building which deserves a reasonable place alongside the one-family house in municipalities with a clear urban character.

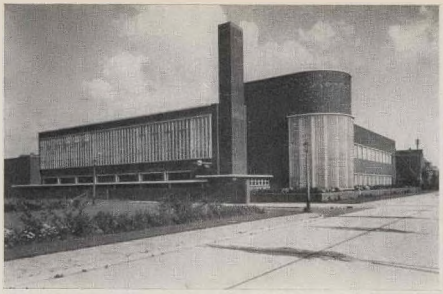
The aspiration for variety in building which could be noticed before the war, became stronger in another respect. It is now considered one of the expressions of the regional idea, which is followed in practically all our post war town planning, i.e., the idea that the residential district ought to be an organic unity, where the inhabitants may find everything which they need for daily life, and where they can form a conveniently-arranged community.

This idea was worked on in the Netherlands theoretically during and after the war, independently from the English regional idea. The planning of the Zuidwijk at Rotterdam shows this regional idea worked out in the most detail.

In some plans we see efforts nowadays to place buildings, which in the Netherlands traditionally lined the roads, freer in connection with them, e.g., around a court or in some other way free from the range with the street. Here too economy rears its head. One tries to economise on the road-building by laying out simple house paths. In another way this idea can help to beautify our town plans.

Perhaps the clearest of these varieties, which is so much more varied than formerly, is to be seen in the post-war expansion plans. Opposite the formerly nearly unbroken mass of unified building, either one-family houses or apartment buildings, one finds now in one suburb the variety of both, accentuated by high flat buildings with more than four floors, and very low buildings for the aged; as against the range with the street, here and there a loosely placed group of buildings on a well-planted site; as against the suburb with much brick and little green, now one which shows houses surrounded by gardens and parks; as against the effect of street walls with some room, now the quite different effect of room with here and there buildings.

The critic of our post-war urban building sees gain and loss, economy and enrichment, sometimes even enrichment by economy.



SCHOOL AT HILVERSUM



HOUSING AT GRAVENHAGE.

A garden city on the shores of a projected lake which is to have a bathing beach and is to be the centre of aquatic sports. The inhabitants of the twelve-storey apartment houses will enjoy a beautiful view over the lake and its surroundings.



Photographs : Photo-Section Netherlands Government Information Service.



QUEEN'S GATE

JOHN M. SHUNN, A.R.I.B.A., M.I.A., ARCHITECT

The site situated at the South-East corner of Empire Circle, Parktown, Johannesburg, has a frontage of 175ft. on Empire Road and 404ft. on Queen's Road.

The alternative solutions to the problems of the site plan are, firstly, to have a number of separate blocks parallel to Empire Road or, secondly, to have an "L" shaped building, the longer leg of which would face East into the site. The first alternative was rejected on the grounds that each block would require separate lift services and permission had been obtained to install two lifts only. The second alternative was rejected on the grounds that the view of the adjoining properties to the East was not suitable. The site plan illustrated was therefore adopted.

Under the Town Planning Regulations four floors above ground level are permitted. Advantage was taken, however, of the regulation which states that any floor which is a minimum of 6ft. below mean pavement level may be regarded as a free-floor. This free floor under the North Wing occurs wholly above ground level and was therefore used as an additional floor of flats. The North Wing therefore consists of five floors of flats and the South Wing consists of garage, four floors of flats and Native quarters on the roof.

As will be seen from the plan there was no advantage to be gained in providing a corridor from the entrance hall to the flats on the ground floor. The space normally occupied by the corridor was enveloped into these flats and they are entered directly from the garden. The superintendent's flat is placed adjacent to the entrance hall.

In the interests of providing as much space as possible in front of the building for garden development there is a 60ft. set-back from Empire Road and a 75ft. set-back from Queen's Road. For the same reason the driveway to the garage was placed along the South boundary of the site. These two considerations made possible the broad garden development which is a feature of this building and immediately contrasts it to much of the development in adjacent Hillbrow.

The garden consists of broad lawns with concentrated planting around the perimeter and rock gardens where changes of level occur. Care was taken to preserve existing trees and these were incorporated in the garden layout. A broad platform was provided at the main entrance as this is immediately adjacent to an existing bus stop.

The building was originally designed to contain 54 flats consisting of living room, dining room, kitchen, bathroom with shower, separate lavatory, 20 of which would contain three bedrooms each, 29 contain two bedrooms, and five contain one bedroom. Each flat would have a balcony approximately 14ft. 6in. x 6ft. 6in. In actual fact the building contains a great variety of accommodation as the design of flats was altered where possible to suit the particular requirements of tenants, and the building now contains no less than 15 different types of flat layout.

One of the larger types consists of a hall, living room, dining room, panelled study with recessed bar, kitchen with scullery, breakfast room and servery, card room, bedroom suite with dressing room and bathroom, cloakroom and lavatory, and two balconies. Another of the larger types consists of hall, bar, living room, dining room, kitchen, main bedroom suite with dressing room, bathroom and lavatory, second bedroom suite with bathroom and lavatory and two balconies.

Accommodation for male and female Native servants and for cleaner boys with the necessary restrooms, dining rooms, laundry, bathrooms and kitchen have been provided on the roof.

The part basement garage has parking bays arranged on opposite faces to accommodate approximately 60 cars with a 24ft. central aisle for easy ingress and egress. For this reason also a number of columns were picked up on a 5ft. deep reinforced concrete beam which occupies the space



Treatment of the enclosed corridors.

under the corridor window on the ground floor. The garage can be entered directly from the entrance hall.

The corridors throughout are enclosed and lighted with windows from column to column. As will be seen in section this treatment necessitated a dropped slab which in this case is approximately 5in. thick and spans 16ft. The ventilation to the back rooms of the flats is provided over the slab and natural lighting from above and below. Apart from the benefit of enclosure in bad weather the principal advantage derived from this treatment compared with the normal open access corridor are that a greater sense of privacy is given to the flats in that no windows open on to the corridor ; the nuisance of cooking smells is minimised for the same reason , more pleasant finishes can be used, in that the corridor walls and floor do not have to resist the weather ; windows above the slab may be left open at all times as they are protected from the weather and completely inaccessible to burglars ; the service stairs are separated from the corridor.

The common problem of nuisance caused by corridor lighting penetrating back bedrooms of the flats was solved by providing two systems of lighting, both operated on time switches. At a certain hour the ceiling lights go off and the footlights remain on. The footlights have lenses with a wide horizontal distribution of light and provide sufficient illumination on the floor of the corridor without disturbing sleepers in the back bedrooms.

There are generally two telephone points in each flat and between two and seven bell points depending on the size of the flat. Convection heaters, having the advantage of safety where children are concerned and warming the air in the room evenly, have been installed in all principal rooms. There is a separate kitchen entrance to each of the larger flats.

Each of the two 5ft. wide concrete service stairs has a refuse chute and sinks on each landing for washing bins. There are two 12-passenger lifts which are coupled in that they are controlled by a single button on each landing which summons the nearer car. The principal staircase has a 6in. riser and a 13½in. tread which has proved a very comfortable going. Water is supplied to the 8,000-gallon capacity storage tanks from a borehole on the site aided by the Municipal supply when necessary. Hot water is provided by at least one 30-gallon electric geyser in each flat.

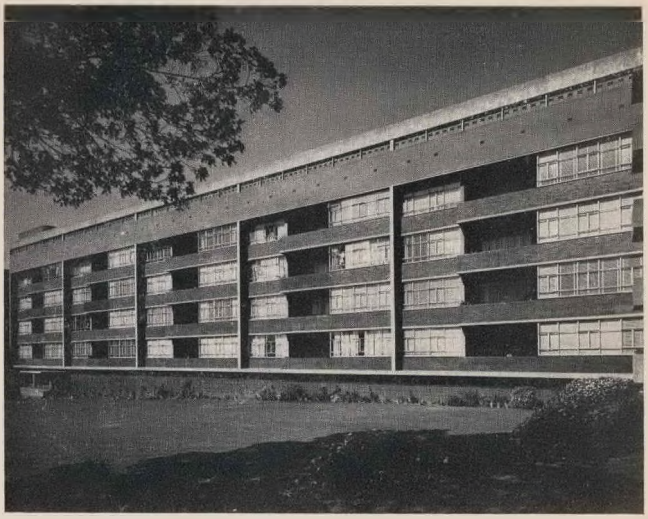
The hollow block system of reinforced concrete with supporting trestles of beams and columns at right angles to the facades has been used. This system obviates the necessity of having any beams whatever parallel to the facades with the result that all windows throughout extend up to ceiling level. A feeling of spaciousness is gained from this treatment, but the principal advantage which has proved eminently successful in practice is that as there are opening sections to the windows at ceiling level on opposite faces of each flat, no pocket of hot air is allowed to remain in the rooms. This, coupled with the largeness of the rooms, has proved effective in keeping the rooms at a comfortable temperature in summer.

The expansion of the two major wings which takes place at right angles is taken up by a deep flange on the windows of the link between the North and South wings. These windows extend the full height of the building. The flange slides in a 4½in. x 2in. recess pointed in mastic. All electrical services have expansion joints at this point.

The eggcrate appearance resulting from the expression of each column was avoided in favour of the expression of the 48ft. 6in. frontage of each flat. This expression gave a breadth to the facade that is in keeping with the intention of the design.

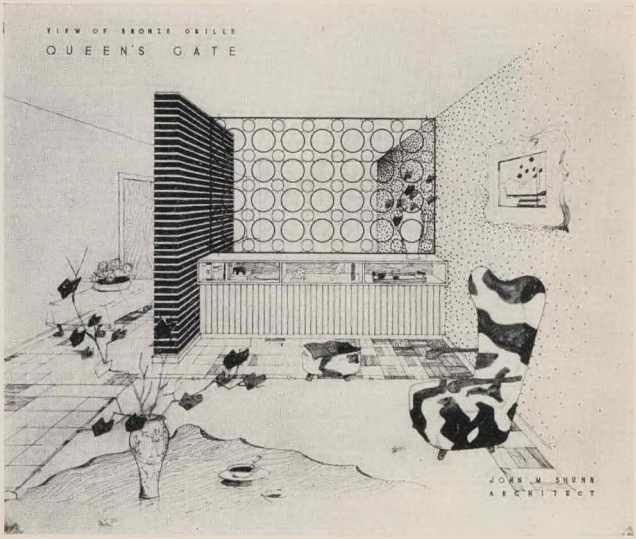
The construction time was approximately 12 months from commencement of building operations to the general occupation of the South block.

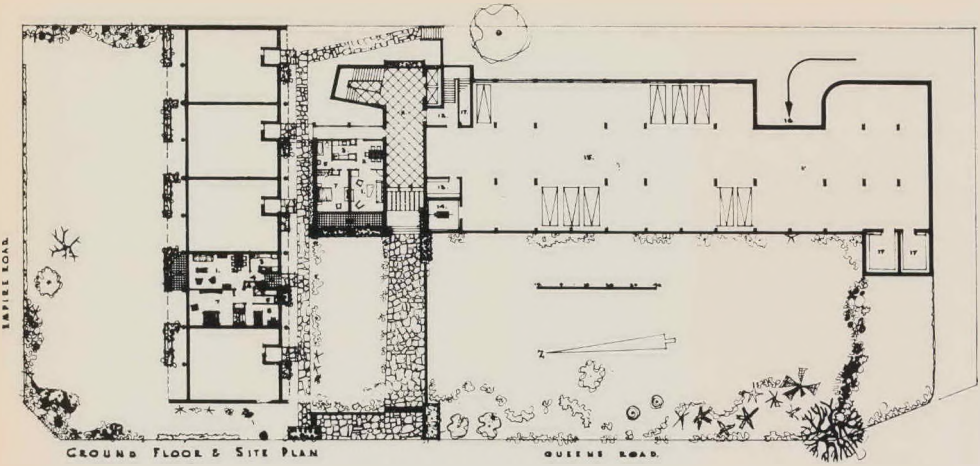
QUEEN'S ROAD FACADE



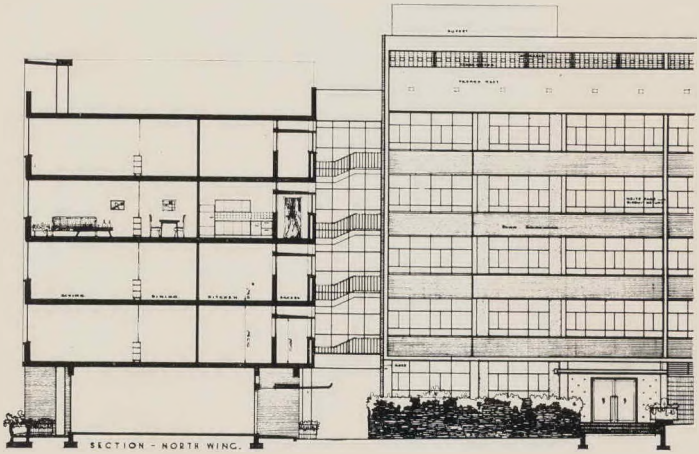
The expression of the flat unit rather than each column of the structure results in the breadth of treatment. Colours used are : brickwork, plum ; panel at top, French grey ; ventilation panel to native quarters, terra-cotta ; surrounds, white, grey ; ribs supporting brickwork, cream.

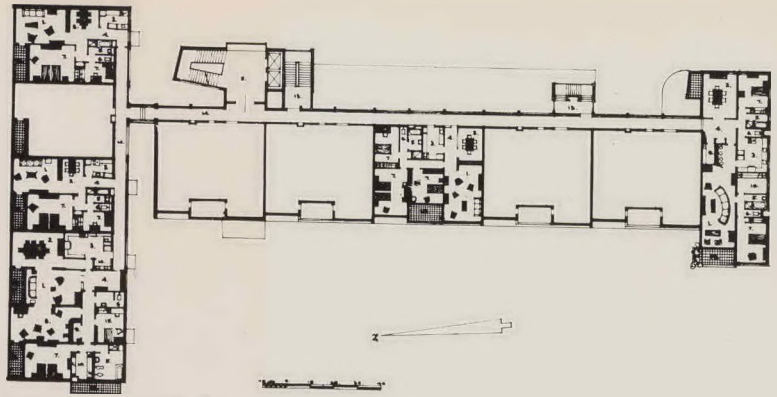
BRONZE GRILLE DETAIL





1—LIVING ROOM; 2—DINING ROOM; 3—KITCHEN; 4—ENTRANCE; 5—BATHROOM; 6—LAVATORY; 7—BEDROOM 1; 8—BEDROOM 2; 9—ENTRANCE PORCH; 10—PORCH; 11—ENTRANCE HALL; 12—LOBBY; 13—METER ROOM; 14—TRANSFORMER ROOM; 15—GARAGE; 16—DRIVE-IN; 17—BOX ROOM.





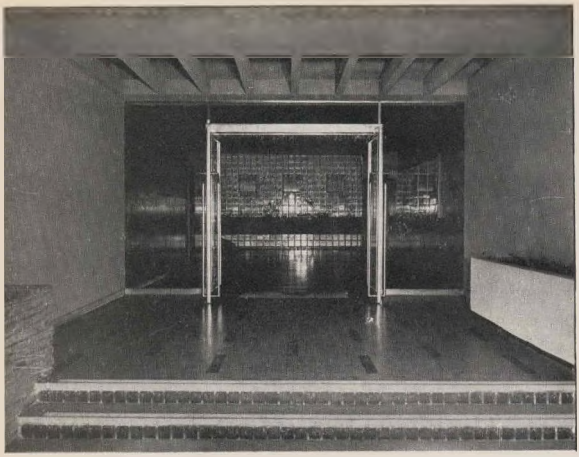
PLAN OF UPPER FLOOR

1—LIVING ROOM; 2—DINING ROOM; 3—KITCHEN; 4—ENTRANCE HALL; 5—BATHROOM; 6—LAVATORY; 7—BEDROOM; 8—STUDY; 9—BAR; 10—DRESSING ROOM; 11—LIFT AND STAIR FOYER; 12—BALCONY; 13—SERVICE STAIR; 14—ACCESS CORRIDOR; 15—CARDROOM; 16—SCULLERY; 17—BREAKFAST NOOK.

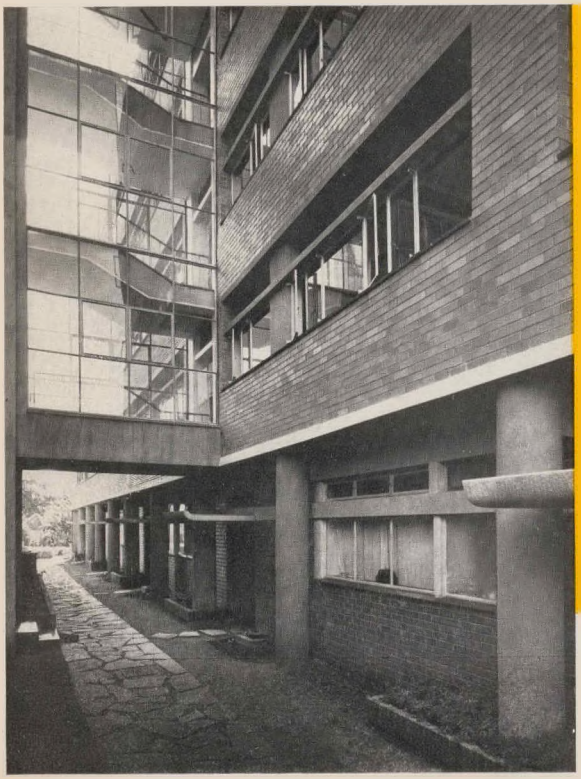
EMPIRE ROAD FACADE



QUEEN'S



Views of the Main Entrance. Door frame, bronze; plate glass sidelights with sand-blasted device; floor of porch, white terrazzo with olive-green mosaic tile inset; French walnut flush-jointed panelling internally with deep recessed skirting and concealed light trough behind; glass brick panel beyond with reeded glass in Kiaat frames; buff linoleum flooring on underfelt with two-inch diagonal inset line internally.



View of South elevation of North wing showing glass link and individual entrances to the flats on the ground floor.

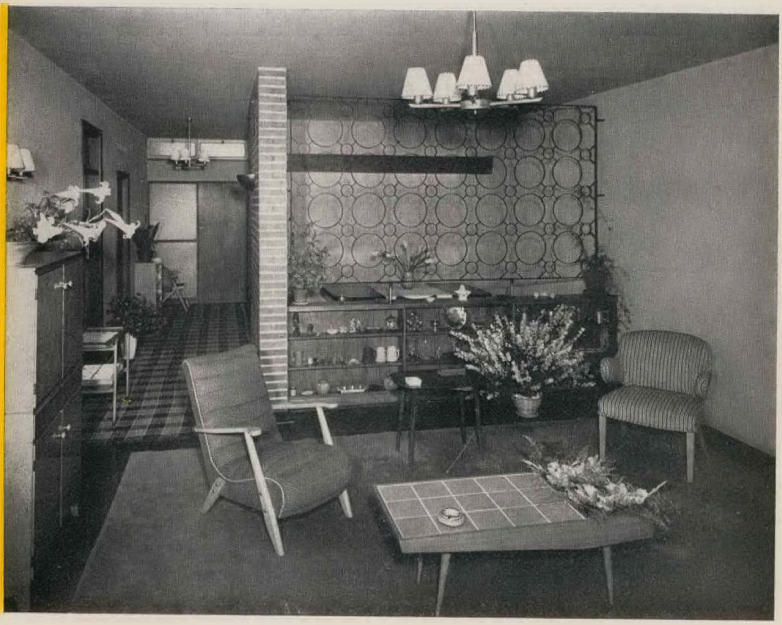
Photography by B. R. S. Photographers

GATE



Interior of living room showing spaciousness achieved by concealment of all beams, especially over windows.

Below: Interior view showing grille, and fitting dividing living and dining room and ventilators over dropped slab at entrance.





THE PRINCESS CHRISTIAN HOME, PRETORIA

ERIK TODD & HORRELL, AA.R.I.B.A., MM.I.A., ARCHITECTS

To the older residents of Pretoria, the name "Princess Christian of Denmark" is synonymous with the care of the aged, for it was in the year 1904 that she founded the first Old People's Home in the then sparsely populated West End.

Princess Christian came to this country to visit the grave of her son, Prince Christian Victor of Schleswig-Holstein, a grandson of Queen Victoria, who, as a member of the British Yeomanry, was killed during the Boer War and buried in the Old Pretoria Cemetery which adjoined the site of the Home. His grave still remains today and the Municipal Park opposite the cemetery was named Prince's Park in his memory.

In 1952, 48 years after the founding of the Home, a new era commenced when it moved to its new premises in Nieuw Muckleneuk in the South-Eastern suburbs.

The new buildings were initially made possible by a gift from the Pretoria Municipality of four erven of ground, and the fact that the Council also purchased the old buildings, now used as the Traffic Department offices, so providing the funds necessary for the purchase of new furnishings.

Thereafter began the somewhat complicated procedure of completing forms for making application for a National Housing Loan of £45,000 from one shilling per cent. funds. This loan was finally approved and it was then possible to commence planning.

It was considered that certain aspects should be the keynotes of the design : rigid economy in cost, durability of materials with particular regard to finishes, privacy for the individual to avoid the atmosphere of an institution (to be assisted if possible by the integration of the buildings with large and carefully planned gardens) and provision for the maximum number of residents for the money available. In addition the design should be such that stairs be avoided as far as possible as these form hazards to all except the youngest and most sprightly of residents.

The solution therefore resolved itself into a series of blocks—five in all, set one behind the other down the slope of the site and linked with a gently sloping passage which is provided with handrails to assist the frail.

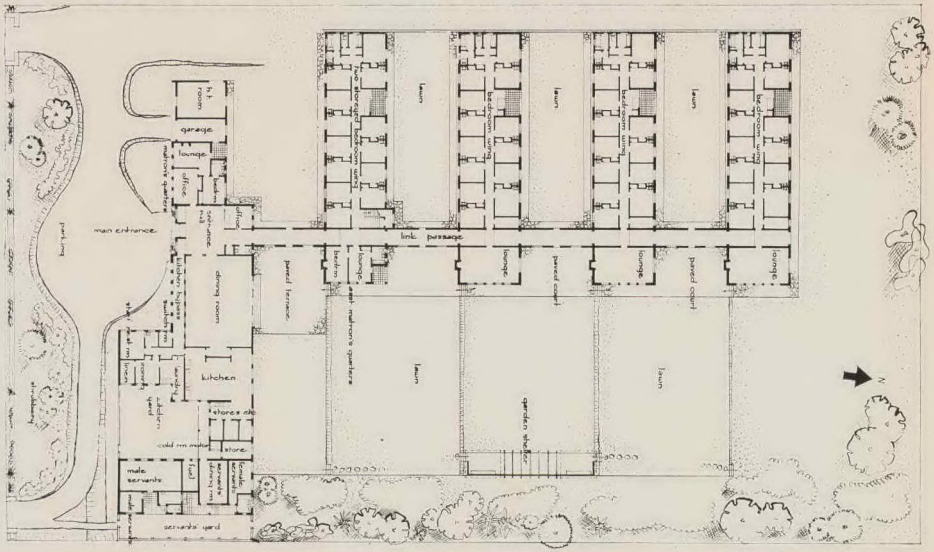
The top block contains a spacious Entrance Hall complete with Enquiry Office, Telephone Cubicle and Visitors' Cloakroom, and gives access to the main link passage, the Matron's Quarters, the Dining Room and to a Kitchen bypass. It therefore serves as a meeting place for residents and their visitors, an assembly point before meals and is the focal point of the Home's activities.

The Matron's Quarters have been placed adjacent to the Main Entrance in order that she should be in a position to control both residents and staff and at the same time be accessible to visitors. She is provided with an office, a pleasant sitting room, bedroom, bathroom, verandah and garage. The Assistant Matron has much the same accommodation but situated at the end of one of the Bedroom Wings in order that she should be close to the residents for easy access in case of illness.

The Dining Room has been planned with steel glazed doors and sidelights running almost the full length of the North wall and overlooking a paved terrace on which it is proposed morning teas be served. Behind the Dining Room are the Kitchen, Coldroom, Pantries and Stores. The Servants' Quarters are linked to the Kitchen Wing and in addition to bedrooms have a communal dining-sitting room, verandah, courtyard, showers and bathrooms.

Ample laundry, ironing, drying and linen storage areas are provided, linked to which are a European Staff Room and Cloaks.

The remaining four blocks are devoted to Bedrooms, Bathrooms and Lounges, accommodation





The Main Entrance—South Elevation.

PHOTOGRAPHY BY ALAN YATES

being provided for 79 persons. One of these blocks is double-storeyed, the upper floor being used by those to whom stairs still prove no difficulty or those who for security reasons prefer not to be on the ground floor. It should be mentioned, however, that all ground floor bedrooms are adequately burglar-proofed. Generally single bedrooms are provided, but provision is made for a few double rooms to accommodate married couples. Each bedroom is complete with wash-hand basin, built-in cupboard, bedlight and radiator. At one end of each bedroom wing are situated the bathrooms and W.C.s, while at the other, on the opposite side of the passage is a large, airy lounge with fireplace and bookcases. In the centre of each block is a Porch and Lobby, the latter being fitted with facilities for tea-making and ironing.

The Dining Room with Entrance Hall beyond.



As the contract figure was well within the loan amount, it was decided to use the remaining monies as far as possible to lay out the grounds attractively. This was done by a series of terraces contained within sloping slate-paved ramps, pathways and a garden shelter, all built of the local slate which was obtained from the site excavations. In addition, due to the poor quality of the soil, all terraces were covered with a 6" layer of imported topsoil. Lawns, trees, etc., are being planted by the City Council and should do much to enhance the general appearance of the buildings and grounds. The whole garden effect was intended to provide large open lawns and flower beds on the North-East and small, secluded gardens between blocks on the West where the residents could assist in gardening operations or pass the day quietly in the open air.

The buildings generally are faced with Kirkness Forest Blend bricks, and the corrugated iron roofs are painted a dark green, the whole producing a rich effect which blends with the surrounding landscape.

The completed cost for this project, including fees, was £44,992 15s. 2d. The Architects were Messrs. Erik Todd and Horrell, the Quantity Surveyors Messrs. T. Moore and Bell, and the Contractors, Messrs. Stocks and Stocks (Pty.) Ltd.

TRADE NOTES AND NEWS

BRISTOL ALUMINIUM BUILDINGS

A CONTINENT-WIDE market investigation by The Bristol Aeroplane Company (Weston) Ltd., makers of " Bristol " permanent aluminium buildings, began on October 1st, 1952, when Mr. H. J. Rush, Sales Manager of the Company, arrived in Johannesburg for a 10,000 miles tour of the continent by air.

Mr. Rush's tour lasted eight weeks and took him from Johannesburg to Freetown via Durban, Cape Town, Salisbury, Lusaka, Zomba, Nairobi, Lagos and Accra. At each point he visited architects, builders and officials of local authorities to discuss application of the " Bristol " aluminium unit construction system to their accommodation problems.

The " Bristol " Company—a subsidiary of the famous aircraft firm which is producing the new Britannia prop-jet airliner for B.O.A.C.—believes that there may be great demand for their aluminium buildings throughout Africa. Buildings of this type, assembled from a wide variety of factory-built components which are delivered ready for immediate use on site, are in widespread use throughout the United Kingdom and are being exported in large quantities, particularly to Australia, which has placed orders totalling some £3 million.

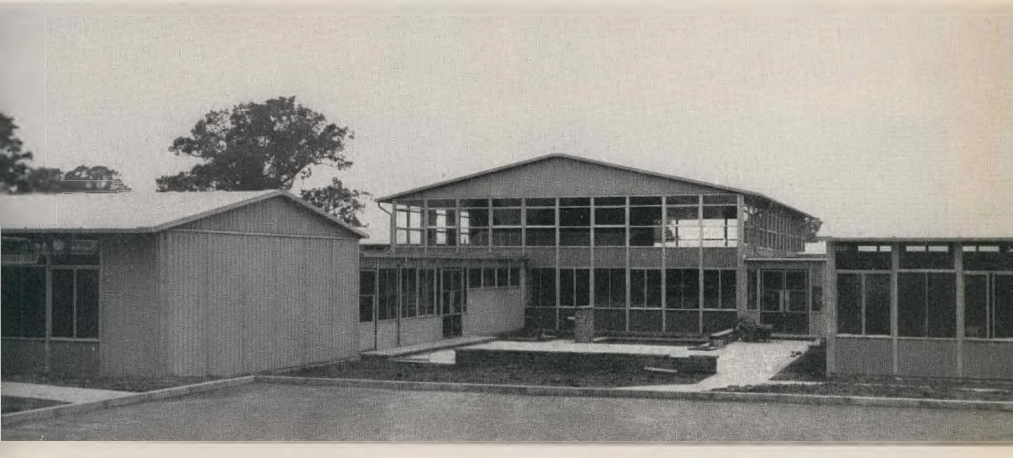
Although used principally for schools and technical colleges, " Bristol " buildings are also suitable for all types of permanent institutional buildings such as hospitals, halls, offices and studios, canteens and dining rooms.

Their main appeal to authorities with urgent accommodation problems held up by lack of manpower and suitable materials lies in their ease and rapidity of erection. Unskilled men can very quickly be trained in the rudiments of the simple erection process.

A feature which makes them particularly suitable for use in Africa is the fact that they give satisfactory service in all climates, the wall units being filled with a highly efficient form of insulation which is proof against extremes of heat or cold.

An important feature of " Bristol " aluminium buildings is their extreme flexibility of layout, which enables architects to plan layouts in relation to individual sites, and to suit their own individual requirements and preferences. They may be used

Limbrick Wood County Primary School, Coventry.



either as complete and independent buildings or as extensions to buildings of orthodox construction.

The " Bristol " Company's claim that buildings of this type can, if necessary, be dismantled and removed from their original sites and re-erected at other points was convincingly substantiated in England recently. In just over four weeks a building used as a pit-head bath at a Welsh colliery was dismantled and re-erected at another colliery some 30 miles away.

Workmen numbered and lettered all wall panels and roof units as they were taken down, before loading them on to lorries which carried them to their new site. There they were re-erected in the same order on a prepared concrete raft, the entire operation being completed in just a month.

Since the " Bristol " company first began production of aluminium buildings in 1945 to utilise " shadow " production space becoming vacant through the lapse of war-time contracts for aircraft, the system of unit construction has undergone continuous development and has now been perfected in the light of experience in actual use.

The present system which Mr. Rush has introduced to authorities in Africa, is known as the Mark 1A system, which provides a wide range of roof spans and wall units. Wall panels are supplied with solid units, or with windows which can be top-hung or bottom-hung, or of the casement type. This variety enables the architect to vary both the type and extent of fenestration as necessary.

Flat roofing incorporating louvred top lighting is supplied for circulation areas and linkage structures. Internal appearance is rendered neat and attractive by the use of suspended ceilings, timber skirtings, timber internal doors and aluminium cover strips which are a standard fitment to ceilings and internal panelling. Adequate ventilation is maintained by glazed, adjustable louvres and thermal and acoustic insulation of the highest standard is provided by the use of fibre glass in ceilings and wall panels.

Roof units are available in spans ranging from 16ft. to 40ft., while wall panels, which have a standard width of 4ft., are available in four different heights from 7½ft. to 14½ft. Beams supporting the flat roofs for circulation areas are supplied in nominal 8ft. or 12ft. lengths to form spans of these dimensions, or are connected to form 16ft. or 20ft. spans. Internal partitions are similar to the external wall units, except that both surfaces are faced with ⅛" thick hardboard.

The erection sequence is in six stages. First, an extruded aluminium perimeter channel is bolted to a concrete slab already prepared. Two wall panels are then erected opposite each other at one end of of the site and the gable-end panels and roof gable are then bolted in position. In the next stage panels and roof units are erected along the length of the building. When the outer shell is complete, the internal partitions are bolted in position and, finally, the ceiling is fixed.

This is the procedure for a single span building, but a similar method is used for more complicated layouts. Components are light and easily handled ; even roof units can be manipulated without the use of cranes and with light lifting tackle only. In this way, a " Bristol " building can be erected in one-third of the time taken by any other form of construction. This speed of erection, combined with ready availability of components and quick delivery, ensures the completion of the largest building schemes in a remarkably short time.

Classroom : Limbrick Wood County Primary School.



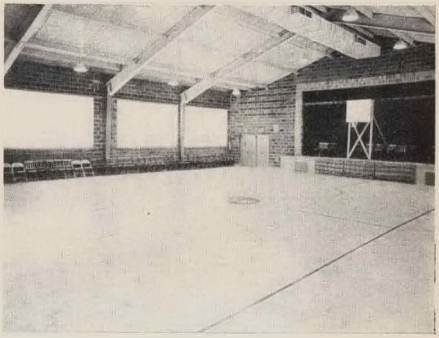
Restaurant at the Festival at Belfast, Northern Ireland.











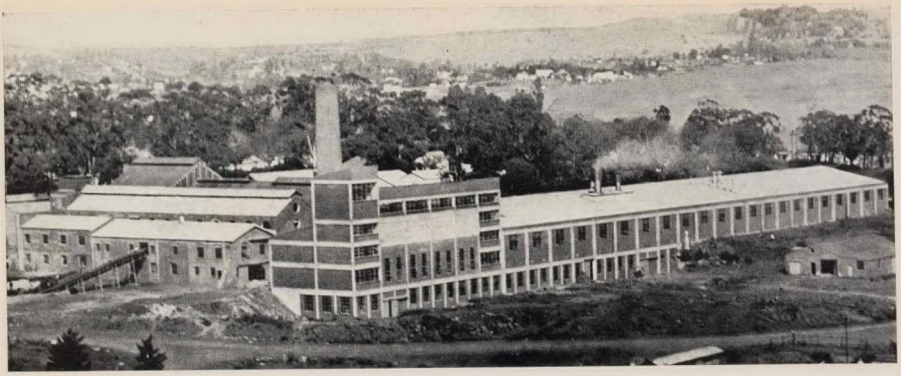
VINYLITE

Heavy duty floor tile moulded of tough but pliable Vinylite plastic has retained its attractive appearance through long periods of hard wear. Easy to wash clean and resistant to moisture, acids and alkalies, oils and greases, Vinylite plastic is durable and stable. The resilence and shape-memory of Vinylite plastic floor tiles enabled them to survive four seasons of exposure to shoe spikes at the Riverdale Country Club, Sheboygan, Wis., without looking marred (top left photo). The nine-inch-square tiles, available in 11 different mottled colours, provide sturdy, long-wearing floors in office buildings (top right photo), schoolrooms (bottom left photo) and gymnasiums (bottom right photo). This floor tile may be waxed but need not be since the Vinylite plastic base has its own natural lustre.

SLASTO

The Slasto Quarries which are situated about 2 miles off the main Johannesburg-Vereeniging road a little beyond Jackson's Drift have opened up a new section which is yielding very colourful stone of an excellent quality.

As the word " SLASTO " is frequently used in a descriptive manner it would appear that it is not generally known that this is a registered trade name belonging solely to the Slasto Company of Africa (Pty.) Ltd., and that Slasto Stone is only obtainable from this company or its recognised agents and stockists.



This aerial view of the woodfibre board manufacturing plant at Canelands, near Verulam, shows the walls on the right, which can easily be removed when the second mill is built alongside. The site, which stretches for 230 acres, was previously occupied by Armstrong's Sugar Mill.

NEW BUILDING BOARD FACTORY IN NATAL

THE £1 million factory erected for the African Building Board Corporation at Canelands, on the Natal North Coast, promises to be the most successful project of its kind in Southern Africa.

Incorporated in July, 1950, the flotation of the company was made possible by the keen interest of the members of the Kwambonambi Timber Growers' Association and by the support of leading industrialists in Natal.

FACTORY

The factory stands on the site previously occupied by Armstrong's sugar mill, within easy reach of the necessary raw materials and is ideally situated for transport.

The alteration to the sugar mill and the erection of the new factory building was undertaken by Roberts Construction Ltd., while the design and supply of the main items of equipment were entrusted to Aktiebolages Defibrator of Stockholm, Sweden, who are recognized at the foremost engineers in the world in this field.

In addition to the equipment imported from Sweden, considerable heavy machinery was purchased in Britain, Germany and the United States. Moreover, £150,000 worth of locally-built machinery is used in this completely automatic and interlocked plant. The factory is planned to permit extension over the site to include three mills in all, the second of which is now in the course of construction.

Work on the new mill was commenced in January, 1951, and progressed concurrently with the erection of the heavy plant supplied from overseas. Despite the difficult conditions prevailing at the time, the work was completed within the scheduled time of 18 months, and the first board was produced on the 28th June, 1952, two days ahead of the target date.

The first trial runs in a plant of this kind usually occupy six months. The engineers, however, experienced no technical hitches, and the mill commenced continuous three-shift production at half the rated speed on the 14th July, the second anniversary of the incorporation of the company.

In the initial stages it was thought that black wattle, which is abundant in Natal, might prove the most suitable timber for the purpose. Early evidence, however, demonstrated the superior qualities of the timber finally chosen, Saligna gum, the supply of which has been secured for a period of 30 years. Large tonnages of pulpwood are already on the site submerged in water in order to ensure the retention of the physical properties of the fibre.

PLANT

The plant itself is economically arranged on four floors and consists chiefly of a series of steel-cutters and vibrating cylinders. These perform the task of reducing the

9-foot logs into woodchips. After passing under magnets which extract foreign metals such as nails, the chips are treated with steam, and the resulting pulp is processed and pressed into decreasingly thinner layers, spongy in texture, which are cut and trimmed to the required size. These "boards" are then carried by a system of conveyor-racks into a huge hydraulic press where simultaneously under enormous pressure and heat the boards are formed. Except for the addition of certain emulsions, the process depends for its success on the proper treatment and retention of the physical properties of the fibre, such as elasticity and tensile strength. The whole plant gives a deceptive impression of simplicity which in no way describes the efficiency achieved as a result of the interlocked automatic mechanised units.

One of the most interesting features of the process lies in the fact that the main plant is operated by no more than eight men, and that the total number of Europeans employed in the mill and workshop is as low as 36. All the technical men were recruited from the Scandinavian countries and Finland. With their families, they are housed on the 230-acre estate in pleasingly disposed cottages.

ESTATE

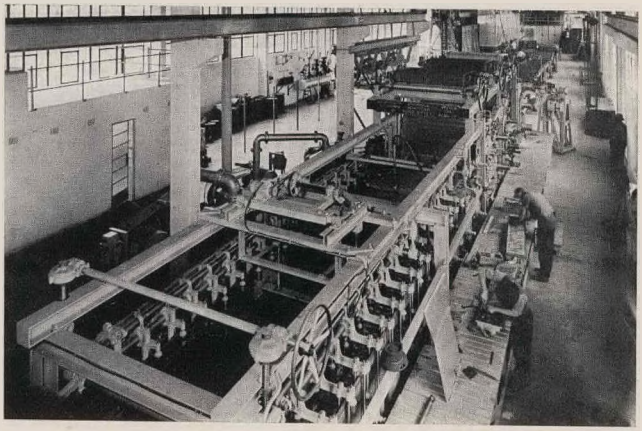
The estate is large enough to allow for considerable expansion and the separation of the administrative block from the mill, its construction being dictated by the buildings of the previous occupants. Distinct from both mill and administrative block, well-appointed and well-lighted kitchens and canteen maintain a 24-hour service for men on shift.

The Union's anomalous position of depending on importing structural timber while possessing vast quantities of the very best raw material for the production of fibre building board offers prospects for this new and important venture in the unlimited scope of the country's expansion. The present main use is confined to the building and furniture industries, but there is a steadily growing demand for other uses where the advantages of greater strength and less weight, proportionate to thickness, prove an economy in handling and cost.

PRODUCTS

The products are marketed under the trade name of "Timberit", and are currently supplied in three qualities : Hard (of density 60-70 lb. per cubic foot), Medium (of density 40-50 lb. per cubit foot), and De Luxe surface coated. The hardboard qualities are available in factory standard width of 4 ft., length up to 18 ft., and thickness $\frac{1}{8}$ inch, $\frac{7}{16}$ inch, $\frac{1}{4}$ inch and $\frac{5}{16}$ inch, while the Medium is available in $\frac{3}{16}$ inch, $\frac{1}{4}$ inch and $\frac{1}{8}$ inch. It is understood that at a later date Hard and Medium densities will be available with various surface coatings and special treatments.

Present production, after only a few months of operation, is in the region of three to four S.A.R. trucks a day and "Timberit" is now freely available throughout the Union and the Rhodesias.



One of the intricate machines installed in the new mill for manufacturing Timberit building boards.

NOTES AND NEWS

TRANSVAAL PROVINCIAL INSTITUTE PROVINCIAL WORK

LIST OF ACCEPTED TENDERS FOR MAJOR PROVINCIAL BUILDING SERVICES FOR QUARTER ENDING 30th SEPTEMBER, 1952

SERVICE	ARCHITECTS	QUANTITY SURVEYORS	CONTRACTORS	AMOUNT
Brits Agricultural High School : Additions	Mr. D. E. Barry	Mr. A. W. Springthorpe	Messrs. Van Heerden & Johnson	£20,884.0.0
Far East Rand Hospital : Erection of Mortuary	Departmental	Departmental	Messrs. Burgers Bros.	£2,564.6.6
South Hills Senior School : Erection	1. Messrs. Bowie & Barnett 2. Messrs. Shaw & Philpot	Messrs. Lane & Dove	Messrs. M. J. Lourens (Pty.) Ltd.	£35,425.0.0
Pretoria Normal College : New Library and Additions to Tuition Block	Messrs. Erik Todd & Horrell	Messrs. Mann & Culligan	Messrs. A. Slingerland (Pty. .) Ltd	£23,989.2.0
Vanderbijl Park High School : Erection	Departmental	Departmental	Messrs. Jordaan & Rokebrand (Pty.) Ltd.	£103,795.0.0
White River High School : Erection	Departmental	Departmental	Messrs. A. P. Havenaar (Pry.) Ltd.	£63,429.0.0
Martinus Wessels School Wakkerstroom : New Hostel	Messrs. Logan & Firth	Messrs. Hodge & Beveridge	Messs. Goosen Bros.	£64,923.0.0
Boksburg-Benoni Hospital : New Stores Block	Mr. G. Candiotes	Departmental	Messrs. MacKenzie & Draddy	£8,709 4.5
Wonderboom South 2nd Primary School, Pretoria : Erection	Departmental	Departmental	Messrs. Bevilacqua & Romani	£20,788.0.0
New Casualty Theatre at Coronation Hospital, Johannesburg	Departmental	Departmental	Mr. J. M. van Raaij	£7,633.0.0
Waverley E. M. Girls High School, Johannesburg : Erection	Departmental	Departmental	Mr. L. Westly	£92,200.0.0
Alterations and Additions to Jeppe Boys High Preparatory School	Mr. J. J. van Niftrik	Mr. P. B. Lee	Mr. M. van Duyn	£10,570.0.0

ERRATA.—Your attention is drawn to errors in the December issue. On Page 293, N. Dowrie to read N. Downie. Partnerships : The partnership known as Stucke, Harrison and Smail was dissolved on 31st December, 1917, to read 31st December, 1951 ; Mr. K. W. J. Anderson joined Mr. Brendan Cluich, to read Mr. Brendan Clinch on this and subsequent line ; Messrs. Henner and Eliasor to read Messrs. Heiman and Eliasov. Deceased : Mr. B. H. Sauk to read Mr. B. H. South.

SUBCONTRACTORS FOR BUILDINGS FEATURED IN THIS ISSUE:—

QUEEN'S GATE :

Contractors : A. Aronovsky.
Painting : Herbert Evans and Co. Ltd.
Lifts : Waygood-Otis (S.A.) Ltd.
Plastering : J. G. Gotz.
Linoleum, Rubber Flooring : Cork Flooring Co. (Pty.) Ltd.
Tiling : Henderson Bros.
Metal Grilles and Handrails : Sher and Co.
Flush Panel Doors : Bruynzeel.
Shopfitting : Pan-African Shopfitters (Pty.) Ltd.
Terrazzo : Bromley Terrazzo Works.
Electrical Installation : Electro-Import Co.
Electrical Fittings : Dominec (Pty.) Ltd.
R. C. Steel Supply : F. Moller.
Waterproofing : Ashphalte Manufacturing Co. (Pty.) Ltd.
Garden : Lantana Nurseries.
Plumbing : S. Shavell and Co.
Joinery : French Joinery Co.
Kitchen Fittings : Kitchen Comforts (Pty.) Ltd.
Steel Windows : Springbok Steel Windows & Engineering Works (Pty.) Ltd.
Glazing : Furman Glass Co. Ltd.
Fire Equipment : S.A. Fire Services (Pty.) Ltd.
Glasscrete : A. S. Joffe (Pty.) Ltd.
Woodblocks : Rhodesian Timbers Ltd.
Pump : Scottish Tube Co. (S.A.) Ltd.

PRINCESS CHRISTIAN HOME :

Consulting Electrical Engineer : L. L. Horrell, Esq.
Structural Engineers : The Reinforcing Steel Co. Ltd.
Contractors : Stocks and Stocks (Pty.) Ltd.
Electrical Installation : Stocks and Stocks (Pty. Ltd.
Plumbing, Drainlaying : Dawson and Fraser (Pty.) Ltd.
Painting : Stocks and Stocks (Pty.) Ltd.
Paint supplied by Herbert Evans and Co. Ltd.
Glass supplied by Herbert Evans and Co. Ltd.
Electric Cylinders : Barlows Ltd.
Moffat Electric Stoves : Barlows Ltd.
Electric Heaters : British General Electric Ct. Ltd.
Light Fittings : Progress Electric Fitting Co. (Pty.) Ltd.
Bricks : Kirkness—Forest Blend.
Cork Flooring supplied by North British Rubber Co. (S.A.) Ltd.
Mostipave Flooring : Herbert Evans and Co. Ltd.
Steel Windows : Pretoria Metal Industries Ltd.
Steel Door Linings : Pretoria Metal Industries Ltd.
Wrought Iron Work : A. Wolff (Pty.) Ltd.
Esse Stove : Henwoods Ltd.
Cork Insulation and Refrigeration Plant : Barlows Ltd.
Ceilings : Herbert Evans and Co. Ltd.
Wall Tiles : C. Goosen.
Doors : Hunt Leuchars and Hepburn Ltd.
Burglar Proofing, Fencing and Gates : T. R. Lewis Ltd.

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