

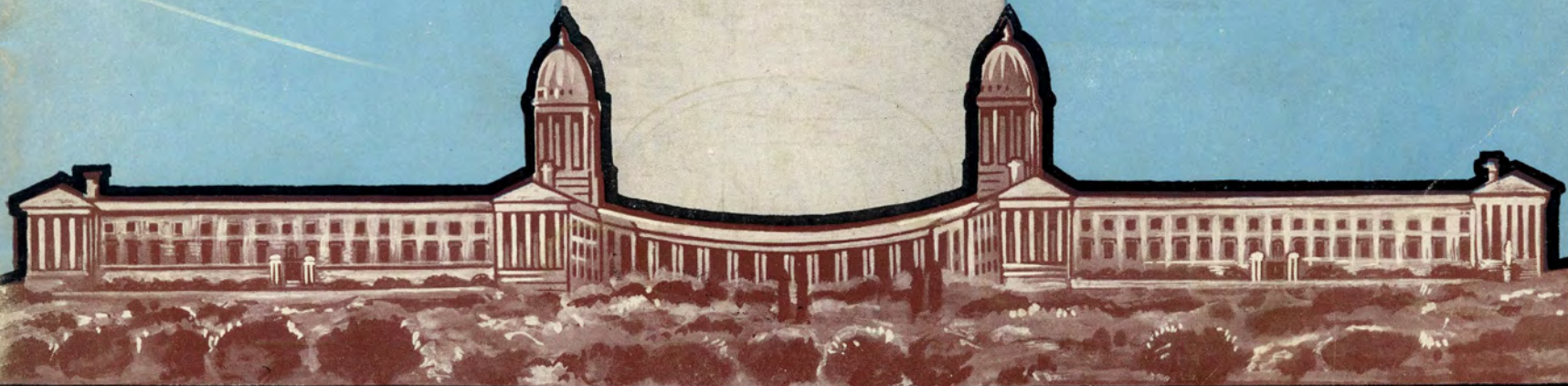
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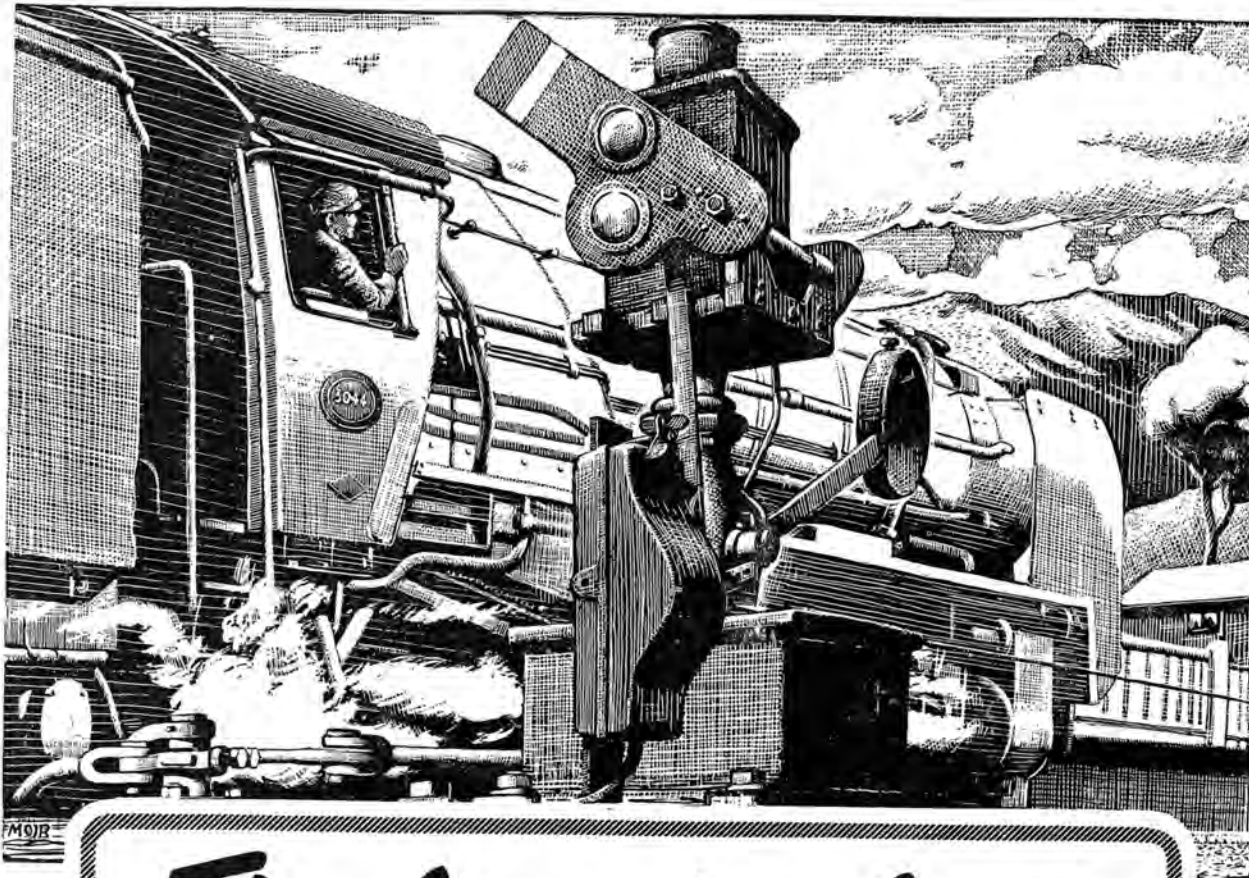


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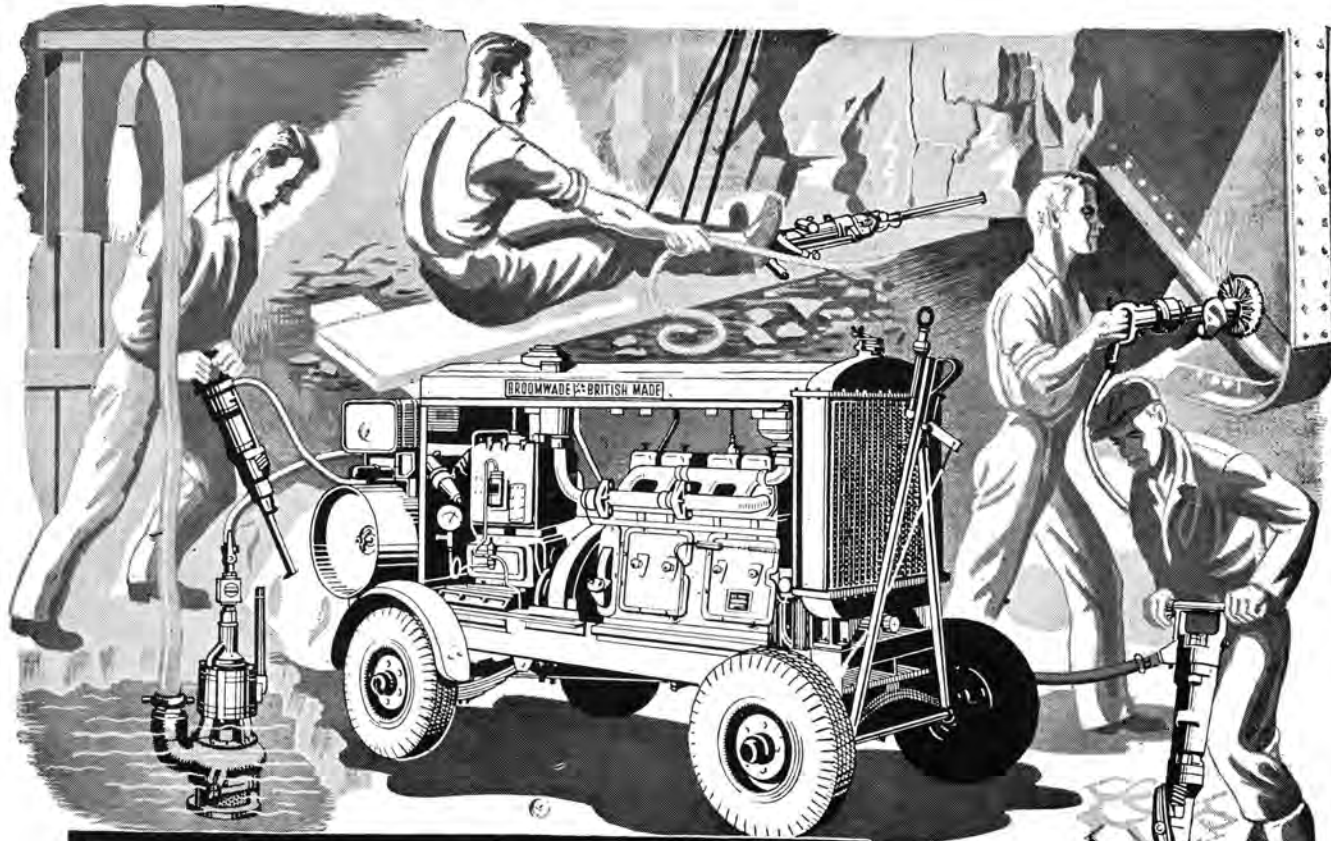
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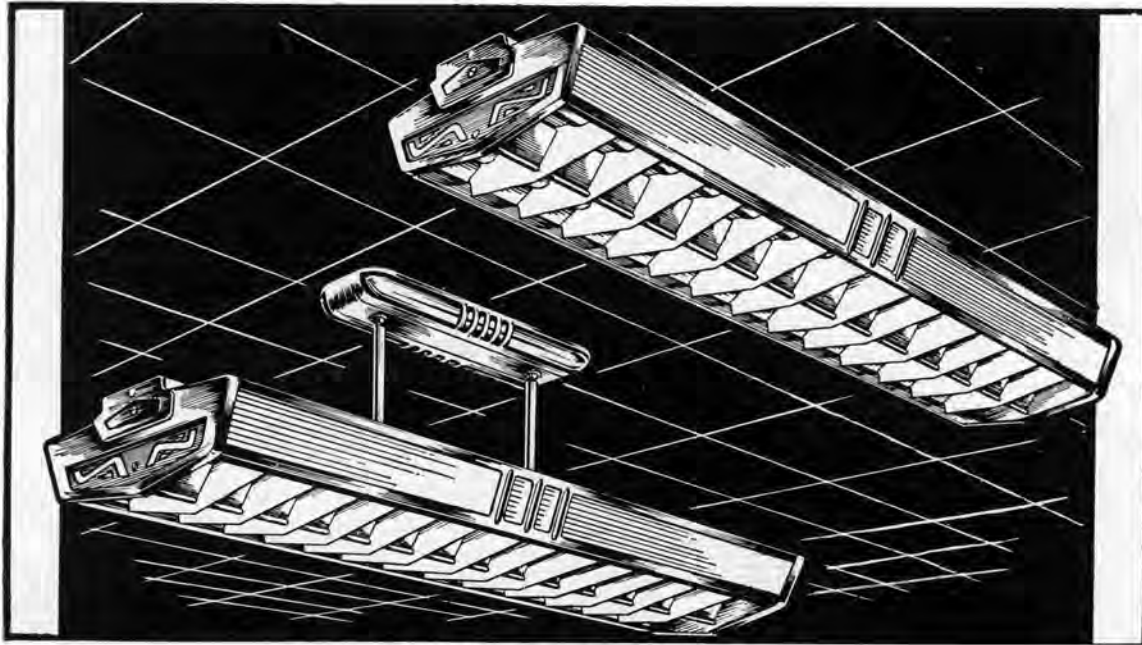
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PUBLIC WORKS OF SOUTH AFRICA, which is published monthly, is intended to keep the public up-to-date in regard to the engineering and building projects of the Central Government the Provincial and Municipal Governments of South Africa and activities overseas.

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DELAREY PRIMARY SCHOOL

PRIMARY SCHOOL HOSTEL AT PIETPOTGIETERSRUST

LINDEN JUNIOR HIGH SCHOOL

NON-EUROPEAN HOUSING AND AMENITIES

BOOK REVIEW

TENDERS INVITED



General View from the North.



Open corridors to the north of classrooms shown on right with Grades classrooms and connecting covered way.

DELAREY PRIMARY SCHOOL

FOR THE TRANSVAAL PROVINCIAL ADMINISTRATION

The Problem

A SITE for the School was secured in a densely populated area within the Roodepoort-Maraisburg Municipality, close to the Johannesburg Municipal boundary and bounded on three sides by minor suburban roads.

The usual minimum area required by the Provincial Authorities for a school site is two morgen, but as a site of this size was unobtainable in the area, the school had to be planned on a site of barely three acres, which in addition falls 25 feet from North to South over a length of some 380 feet. The rocky nature of the site precluded any extensive excavation.

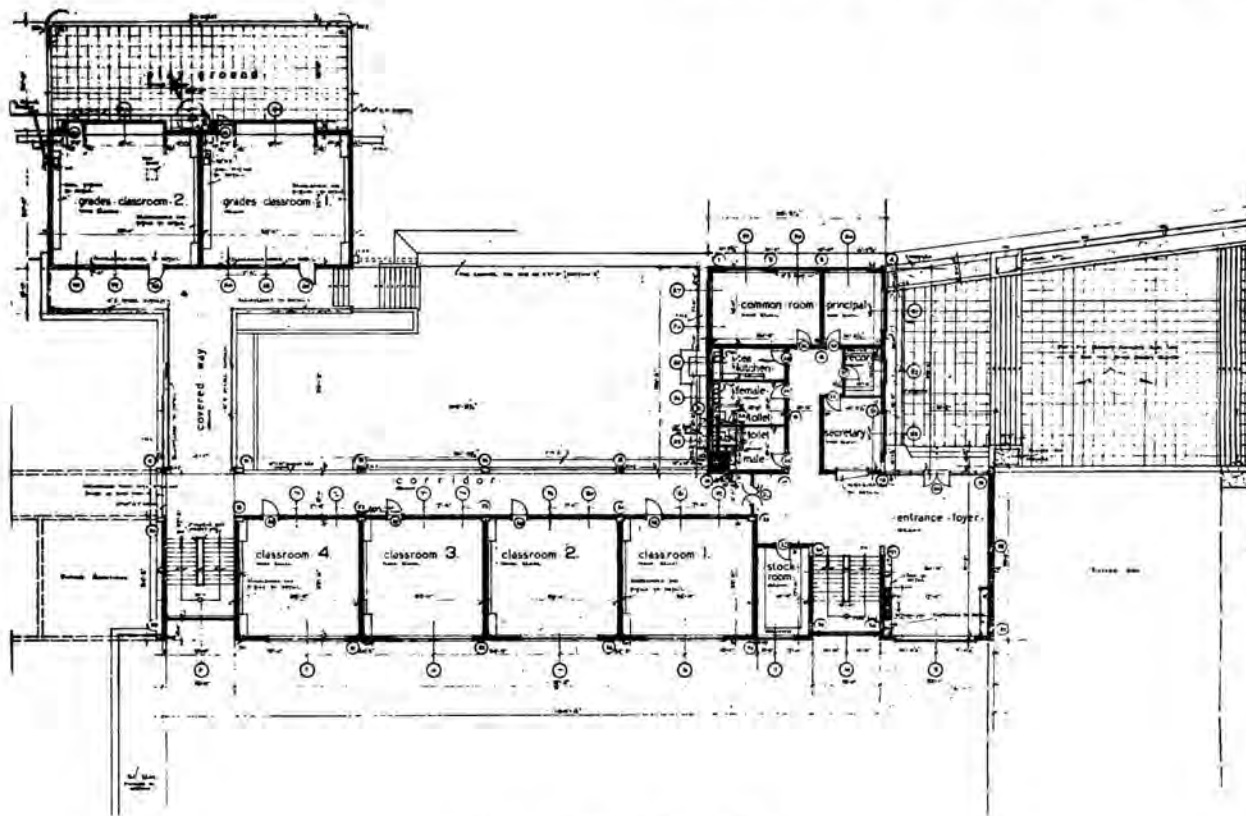
A primary school was required consisting of eight conventional classrooms with provision for four future classrooms together with the concomitant accommodation and provision for a future assembly hall.

The Solution

The restricted site and the necessity for the maximum playground area dictated that the school buildings should cover a minimum area and for this reason a three-storeyed building was erected.

Taking advantage of the considerable fall across the site, the children's cloakrooms and lavatories were placed on the lower ground floor together with the school kitchen and food stores. These units are thus placed in a close relationship to the main playgrounds to the South of the site, and at the same time are easily accessible via the two main staircases from the classrooms above.

The Grades classrooms, which demand a certain degree of segregation from the remainder of the school, are sited to the North of the main block where the natural ground level places them at a level equal to that of the upper ground floor of the main block. Access to the main block and the



Upper Ground Floor Plan.

cloakrooms and lavatories is via a covered way. A special walled play terrace has been provided on the North side of the Grades classrooms with direct access from the classrooms. The windows to these rooms overlook the terrace.

The Administrative core of the school, consisting of the Principal's and Secretary's Office, Staff Room and Cloaks, is at upper ground floor level in a wing projecting to the North of the main block, thus affording the necessary isolation from the noise of the playgrounds while at the same time permitting adequate control of the whole school by the Principal. The Administration core is also strategically placed in relation to the main public entrance, with its Foyer providing access to the future Assembly Hall. The two offices and the Staff Room thus have North and East light, and the Secretary's office has an enquiry hatch providing direct communication with the Main Public Entrance.

Above this unit, on the First Floor, is situated the Arts and Crafts Room and Store which are lit from the North, as is desirable.

The eight ordinary classrooms are arranged four on the Upper Ground Floor and four on the First Floor with a staircase on either side of them. Access corridors are on the North side of the classrooms and can be extended to the West to provide access to two future classrooms at each floor level.

The cycle shed is placed at Lower Ground Floor level on the South side of the building, adjacent to the main Children's Entrance, and combines a retaining wall to the upper terraced portion of the site. A similar retaining wall demarcates the Main Public Entrance to the building from the East.

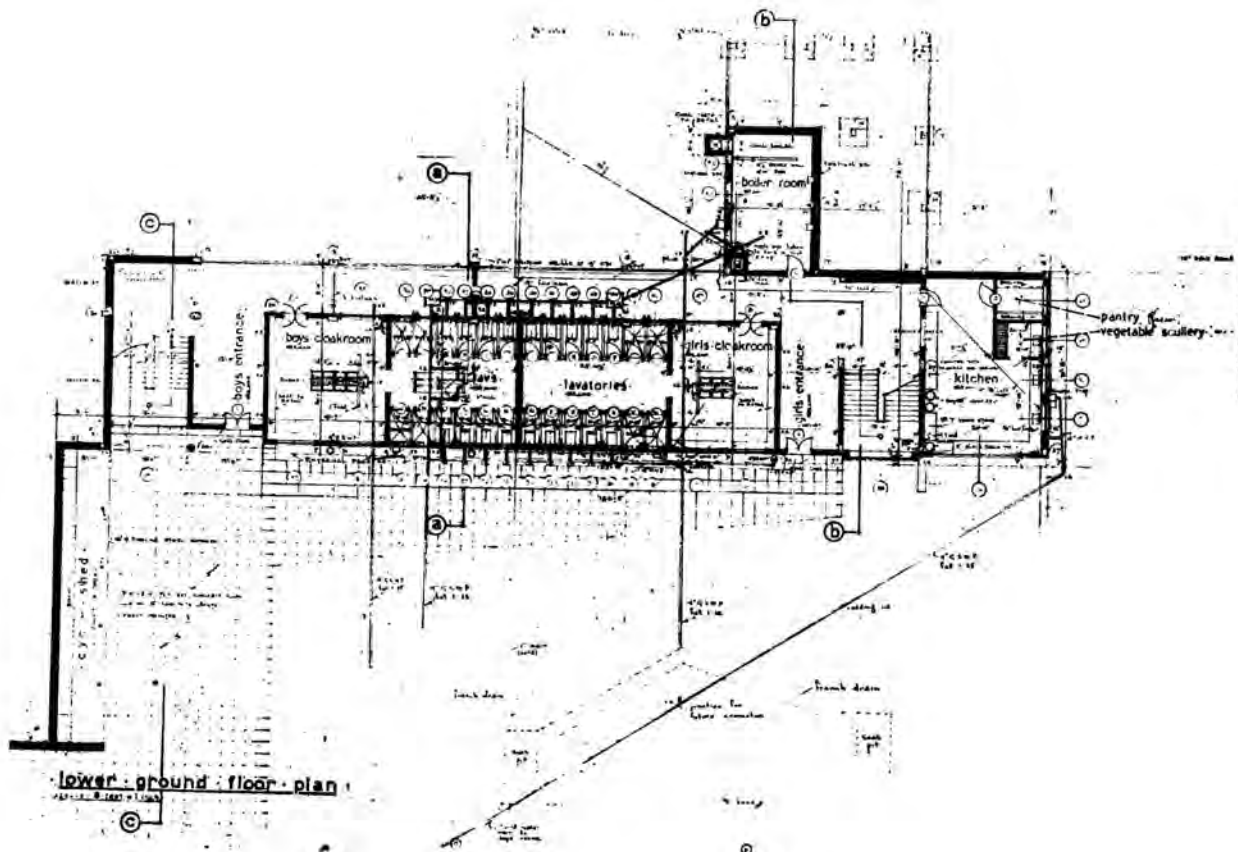
The outbuildings comprising a general school store and Native Living Quarters, are situated in the South-West corner of the site.

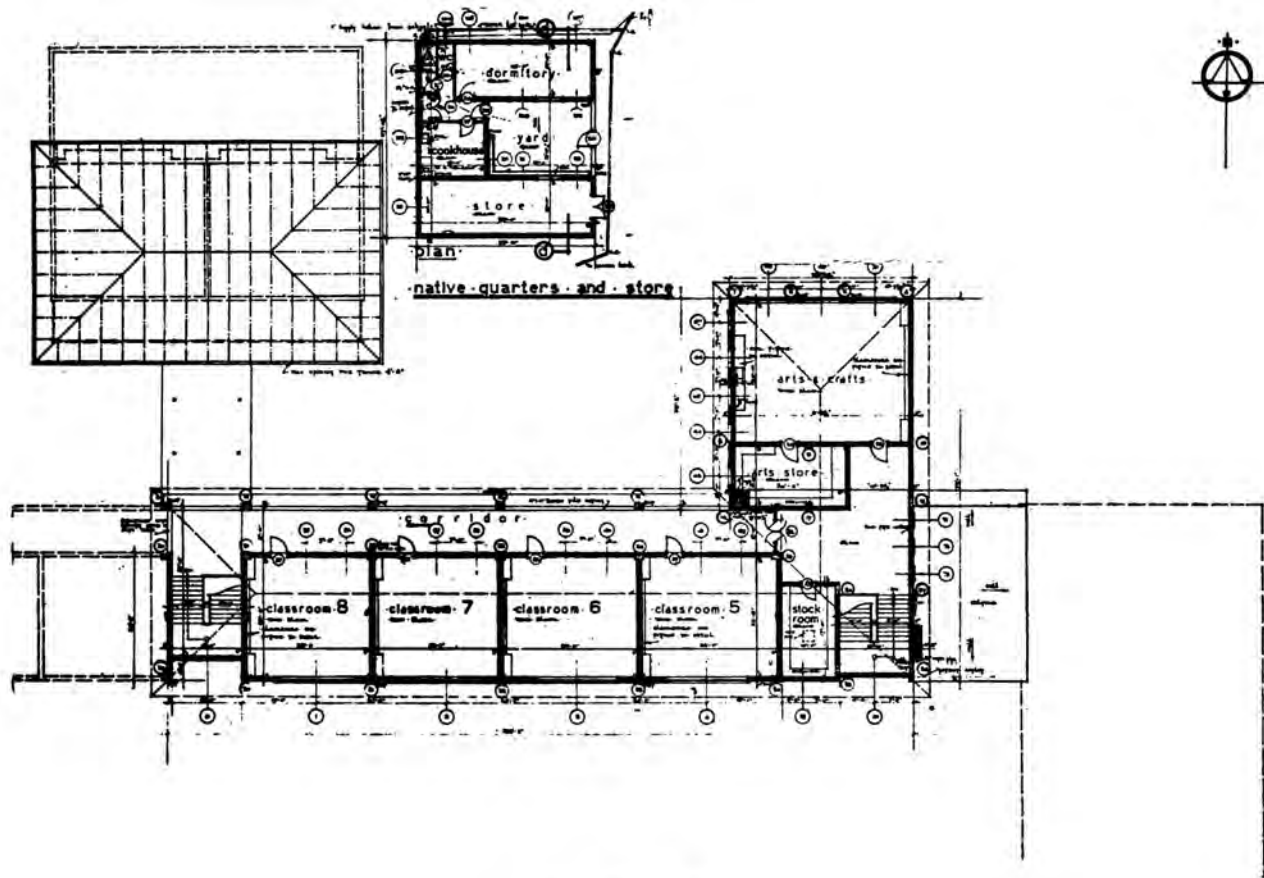
Construction and Finish

The multi-storey nature of the building called for a reinforced concrete framed structure which has been expressed in the elevations.

Dark blue faced brick, red faced brick and coloured plaster panels have been used to express the functions of the various parts of the building and faced brick dados have also been used extensively internally with a view to reducing maintenance costs. Corrugated iron was considered the most suitable roofing material for reasons of economy and function.

In the classrooms, the walls are distempered above the faced brick dados while the two end walls are fitted with slate blackboards, fibre pinning boards and some cupboards. All other rooms are also distempered with the exception of Cloakrooms, and the Kitchen and Food Stores which are oil-painted. The Staff lavatories are tiled.





First Floor Plan.

The walls of the Children's cloakrooms and lavatories have a faced brick dado up to door-head height and steel door jambs are used throughout the building.

All classrooms, the offices and the Staff Room are heated by radiators supplied with hot water from the Boiler Room on the Lower Ground Floor.

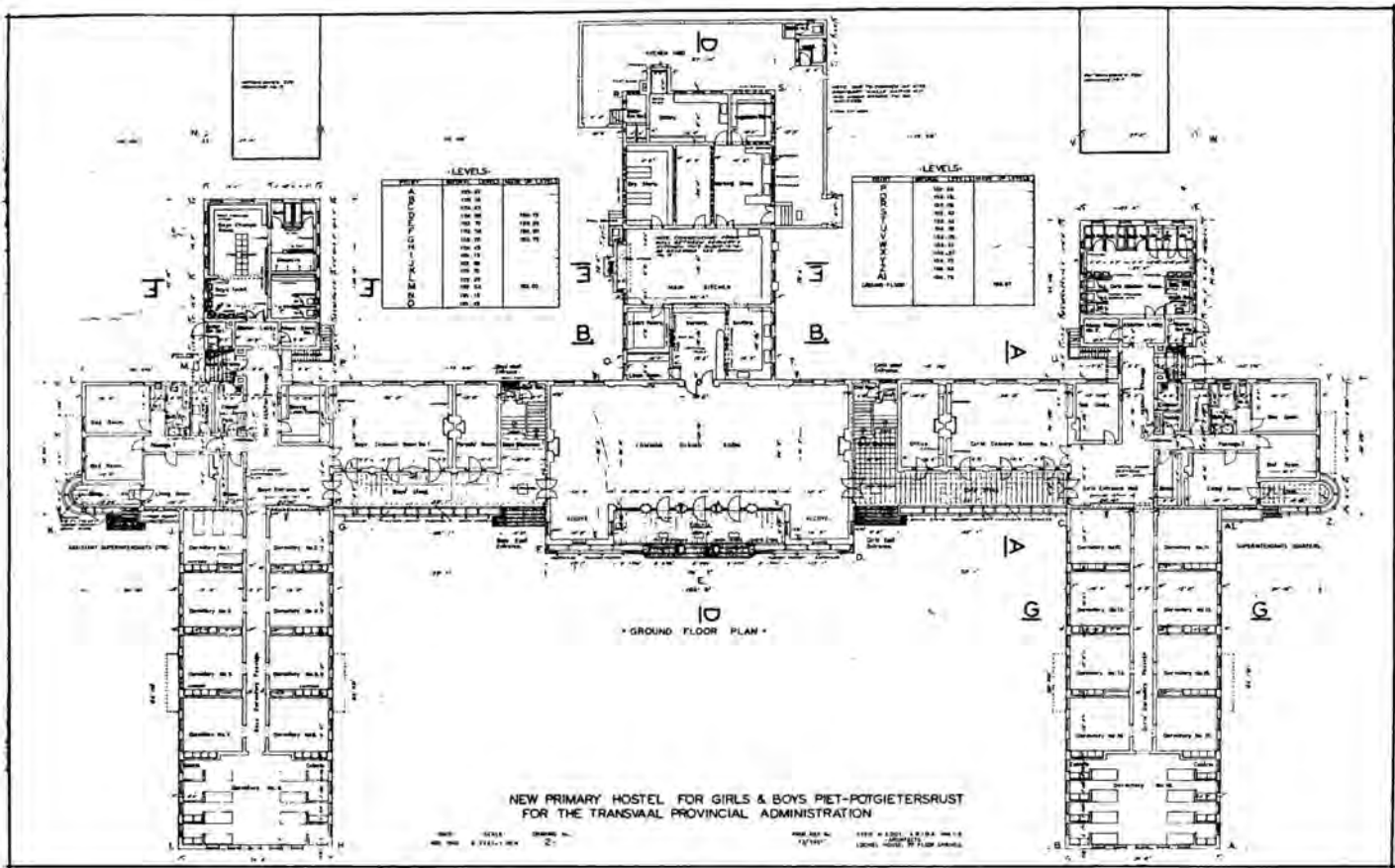
In the absence of a sewerage scheme in this area, it has been necessary to build a conservancy tank and soakage pits so that a water-borne system of waste removal may be employed.

The associate Architects responsible for the design are Messrs. Rogers Cooke and Partners and Messrs. Harold Porter and Partners; Quantity Surveyors, Messrs. Quail and Quail, and the Contractor Mr. C. T. Oschger.

The school was completed in August, 1948.



View of Public Entrance shewing enquiry counter set in a wall faced with 6 inch x 6 inch quarry tiles.



PRIMARY SCHOOL HOSTEL AT PIETPOTGIETERSRUST

THIS hostel, which has recently been completed for the Transvaal Provincial Administration, stands on a 22-acre site bounded by the Great North Road leading from Johannesburg, and at the entrance to the town. The main front faces north, with the east front parallel to the main road. The lay-out of the immediate surroundings to the building is a pleasing feature, the indigenous trees on the site being retained and attractive gardens provided. Sports fields are located behind the Hostel and the remainder of the site area has been utilised for vegetable gardens.

Accommodation

This hostel provides accommodation for 160 pupils, viz., 80 girls and 80 boys.

Ground Floor

In the centre of the main front is the common dining-hall with the kitchen block immediately behind it, and on each side of the dining-hall are the common and parents' rooms. Each wing has eight dormitories which will each accommodate four pupils, and there is a large dormitory at the end to contain eight pupils. This dormitory is laid out to enable each pupil to have his or her own small private recess or cubicle at the head of the bed. The inclusion of this latter feature, which is an innovation, is regarded as an experiment and it remains to be seen whether it is suitable in a Primary Hostel. The subsidiary wings on the south side contains the ablutions for either sex, the music rooms and boiler room. A subsidiary wing on the east side of the building incorporates a self-contained flat for the Superintendent, together with a study for his use, conveniently located for easy access by the pupils or parents. A corresponding wing on the west side includes a similar self-contained flat for the Assistant-Superintendent.

First Floor

This floor is almost identical with the lay-out for the ground floor, with the exception that, in the centre and over the dining-hall, is placed the accommodation for the Matron and her assistants and the quarters for sick pupils. Over the flats on the east and west ends, accommodation is placed for members of the school staff of both sexes.

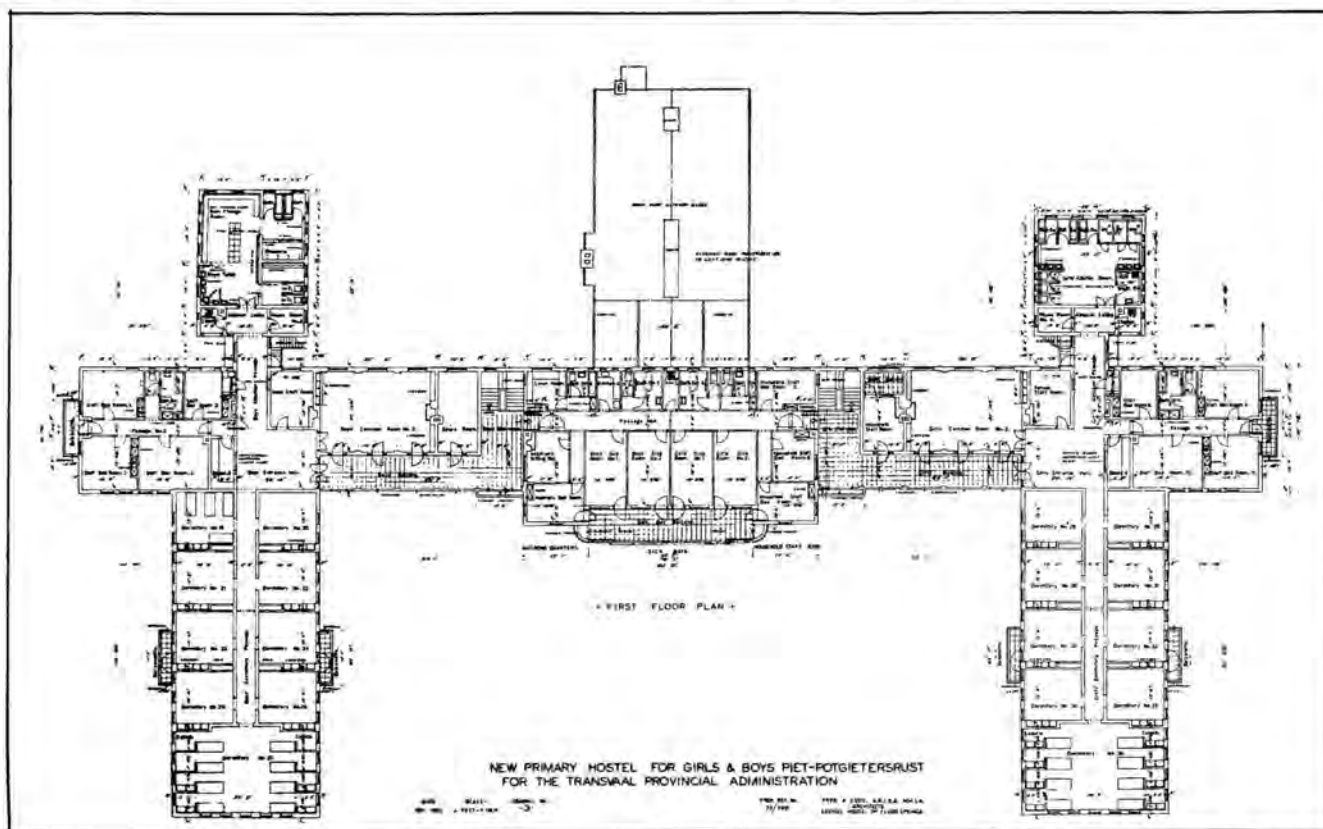
Construction and Finish

Externally the building is finished in red facing bricks with corrugated iron roof. Internally the pupils' rooms have, in general, face brick dados, with the remainder of the walls above dado level finished with plaster and painted. The ablution blocks have tiled walls seven feet high. The floors to the major portion of the building have been laid in hard wood blocks, while quarry tiles have been used on the landings, stoep and balconies. Careful consideration has been given to the factors in maintenance, particularly in deciding the type of furnishings and fittings, and every effort has been made to reduce maintenance upkeep to a minimum.

Auxiliary Buildings

These adjoin the kitchen yard and comprise two blocks, containing pupils' cycles, four garages for staff cars and the usual general store and fuel rooms. It should be noted that these buildings are not shown on the illustrations. The laundry and native servants' quarters form a quadrangle surrounding the enclosed laundry yard and are placed at the rear of the Hostel.

The architects responsible for the design are Messrs. Fyvie and Eddy, and the quantity surveyor, A. E. Gaisford. All buildings were erected by the Building Department of the Provincial Administration.





Linden Junior High School. Quadrangle facing classrooms.



*Linden Junior High School :
Front Elevation shewing Main Entrance.*

LINDEN JUNIOR HIGH SCHOOL

The Site.

THIS school is situated in the centre of Linden Township, on a site formerly used as a market-ground, between Fifth Street and Sixth Street. It is rectangular in shape, approximately 870 feet long and 500 feet wide, enclosed in the length by the above-mentioned streets, running north-east, south-west, and in the width by private stands. The highest portion of the site, which is at the north-east boundary, slopes gradually towards the south-west and towards the street levels.

Accommodation

This Junior High School provides for the accommodation of approximately 450 children, together with the necessary sports grounds.

The school building consists of fourteen class-rooms, Domestic Science and Manual Training Centres, Laboratory Unit, Art Room, Library, large Assembly Hall, Administration Block with Principal's and Staff Room, and the necessary secondary rooms, store rooms and lavatory accommodation.

Planning

The site has been divided into two portions by the Children's Entrance Road, which connects both streets on either side of the grounds and gives access immediately to the school square in front of the class-rooms. It was considered advisable to utilise the south-west portion of the site for the building, and the remainder as sports grounds.

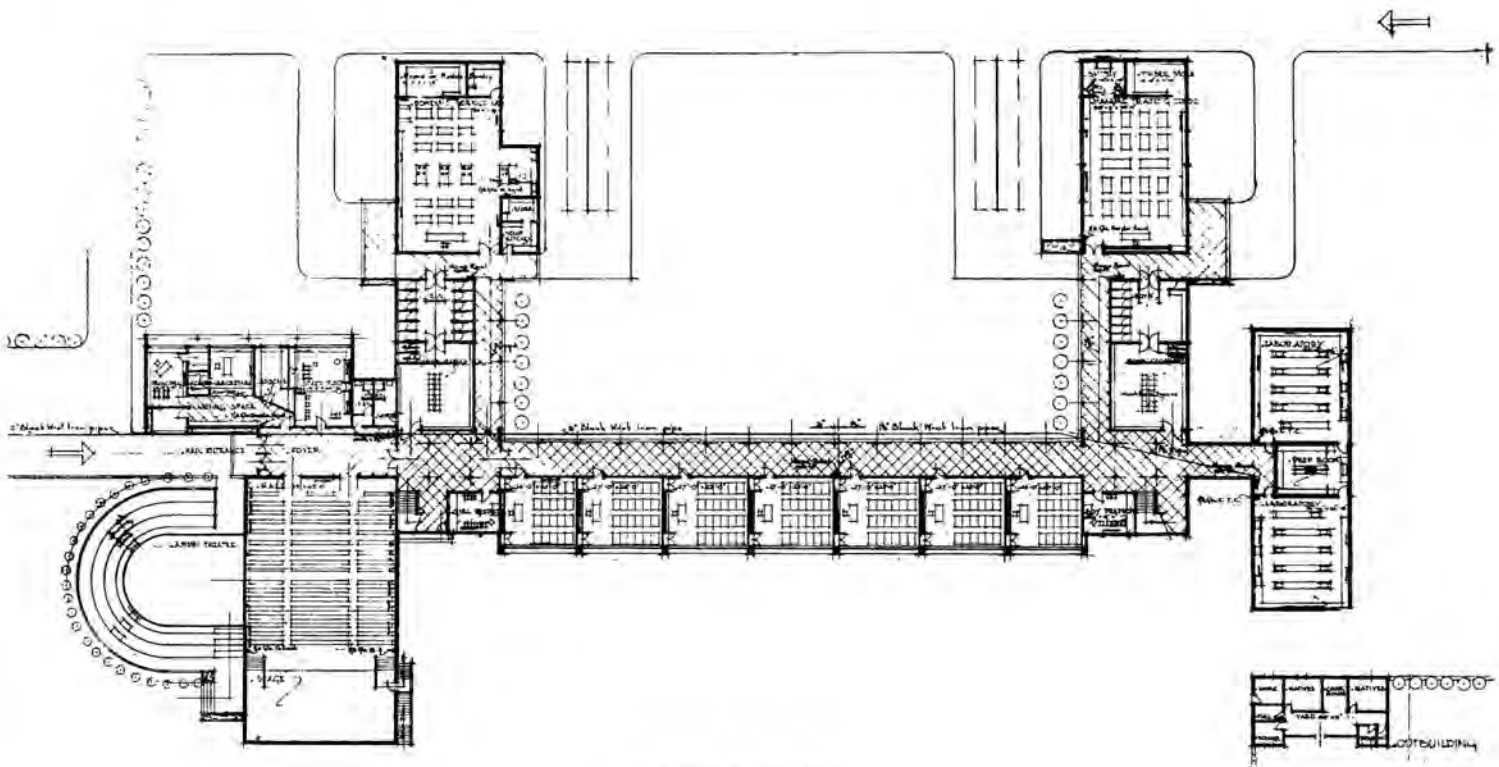
The school has been designed in part as a double-storey building, owing to the limited area of ground available and in order to obtain the shortest possible circulation between the class-rooms and Domestic Science and Manual Training Units, Laboratories and Lavatory Blocks. The class-rooms have been split up into two groups of seven rooms, which are placed in a single line on the ground floor and first floor, with verandahs 10 feet wide in front. These verandahs, which are facing the sports grounds, i.e. north-east, are immediately accessible from the school square.

Around this main portion of the building, there are other tuition rooms, which are grouped in such a manner that a quadrangle is formed with one open side facing the sports grounds, and connected, as mentioned previously, to both streets. The convenient location of this quadrangle facilitates the assembly of the children and the immediate access to their respective class-rooms.

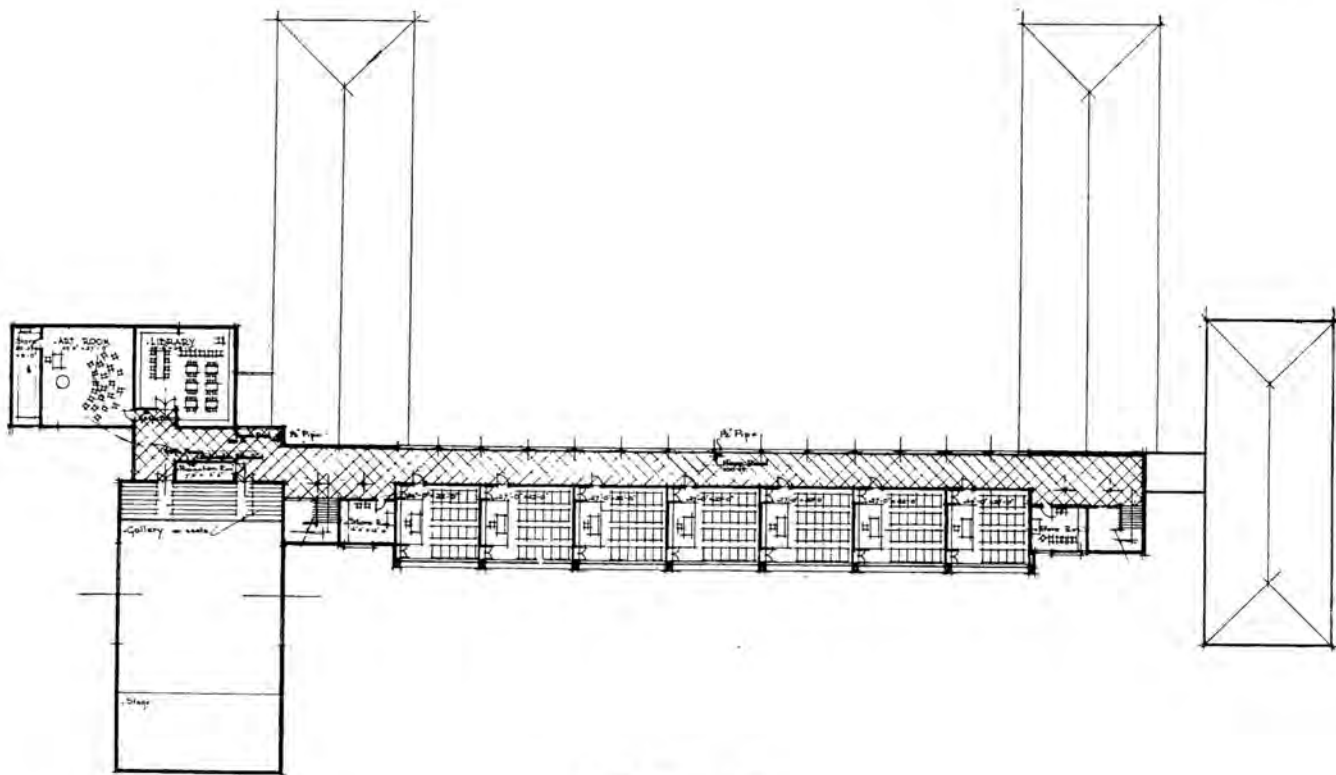
The Main Entrance Hall, together with the Administration Block and the Assembly Hall which are placed on either side of it, faces the main street and gives immediate access to the Assembly Hall and Principal's and Staff Rooms.

In short, the whole plan is kept open, with separate entrances for each function.

The Assembly Hall, which can also be used as a Gymnasium, can easily be reached from the class-rooms. Originally, an amphitheatre was planned in front of the Assembly Hall,



Ground Floor Plan.



First Floor Plan.

but has not been incorporated in the present building plan. This theatre is to be connected to the Hall by means of a huge glass wall complete with folding doors.

The design of the superstructures is depicted by the plans, which show the different departments and functions distinctly. This distinction is accentuated by the different levels and types of roof, and by different wall treatment in face brick and plaster work.

There is available adequate space to accommodate two Rugby fields, tennis courts, basketball fields, and a general playground of sufficient size.

Construction

The building is constructed in brick, with reinforced concrete slabs for the first floor and cantilever verandah, mainly covered with pitched roofs. A portion of the building incorporates a flat roof construction.

Although no special materials are used, the treatment of the superstructure has resulted in a pleasant and interesting building, which is perfectly suited to serve its purpose efficiently.

Finishes

The internal finishes are plain, but have been chosen to withstand heavy wear and tear. All class-rooms, passages and the Assembly Hall have a face brick dado built as tile work in different patterns, with plastered walls above.

The Architects responsible for this structure are Messrs. L. M. Geers and G. M. J. Geers of Johannesburg; Quantity Surveyors, Messrs. Roos & Roos; and the General Contractor, Mr. G. de Winter.



Linden Junior High School : Domestic Science Room.

NON-EUROPEAN HOUSING AND AMENITIES

By

L. J. PURVIS.

(Chief Assistant Architect : City Engineer's Department,
Pietermaritzburg).

*This paper, which makes special reference to Pietermaritzburg,
was presented to the 27th Annual Conference of the
Institution of Municipal Engineers (South
African District).*

THE Non-European population of Pietermaritzburg comprise three contrasting communities: the Coloured, the Indian and Native. The latter form by far the larger proportion of this population, and it is, generally speaking, the most impecunious. It was only fitting then, that the City Council should have first considered this seriously under-privileged class, in the provision of housing and amenities.

To adequately provide for the Natives under the Urban Areas Act, a village, since named Sobantu Village, was established some three-and-a-half miles from the centre of the city. Sobantu stands on the Eastern slopes of the Town Lands, commanding a fine view of the foot-hills towards the West. The first tenants entered in 1928 and since then the village has made steady progress. To-day it comprises some six hundred well constructed brick houses, served by macadamised roads and turfed side-walks, with many public buildings and a generously-scheduled subsidised Municipal Bus Service, linking it with the city. In 1943 additional land was incorporated into the village reserve and a layout on modern lines was prepared which is, at present, in process of development.

Up to 1944 all work in this area was undertaken by European contract. To combat rising building costs brought about by the war, however, it was decided at this juncture to carry out future work departmentally, employing skilled Native labour under European supervision.

This Organisation and the Housing formed the subject of a Paper presented to the 1946 Conference by Mr. D. H. Darvill, City Engineer of Pietermaritzburg. It is perhaps of interest to note here, however, that the scheme has fully justified the action taken by the City Council. Not only has it considerably reduced the cost of present-day housing, but has given the Natives a more personal interest in the erection of their homes and amenities.

A recent check-up of costs proved the following figures :

One Brick Walling : (including facings, setting of frames, and rough-cutting to gable walls, etc.), 15/- per superficial foot.

Floors : of 12" x 12" x 13" terra-cotta hollow blocks fully ventilated and surfaced with $\frac{3}{4}$ " untinted granolithic, 5/9 per superficial yard.

Roofs : of pre-cast reinforced concrete rafters covered with pre-cast concrete slabs and Marseilles pattern roofing tiles, cast and fabricated, £8 10s. per superficial square.

The average inclusive rate per house, including outbuildings, fencing, electric light and over-head charges, is 11/6 per superficial foot of main house floor area. In this connection, it is interesting to note that the first hundred cottages, com-

pleted in 1946, cost £33,127 18s. 2d. including all incidental charges and 2½% administration charges. The total area of these houses is 61,200 superficial feet which represents a rate of 11/-. Since this date certain increases in basic wages and cost of living allowances, and the granting of two weeks per annum leave on full pay to both artisans and labourers, have accounted for the additional 6d. per superficial foot.

Work undertaken by Native labour, has, so far, been confined to the Village reserve, although it has by no means been limited to simple National Cottages. An Institution for the housing of aged indigent and detribalised Natives has been erected at a cost of £6,300, which represents the remarkably low rate of 12/6 per superficial foot. Work has just commenced on extensive additions to the existing shopping-centre estimated to cost £7,000, while it is hoped in the near future to construct a combined children's Creche and African Women's Hostel. The building will comprise two storeys with a reinforced concrete first floor slab, all of which will be carried out entirely with Native labour. Although this building would, to-day, cost something like £18,000 by normal contract, it is confidently expected to complete it for £11,000.

The psychological aspects of the supervision of skilled Native labour is a factor which deserves attention. Experience has shewn that, unlike the orthodox Foreman-of-Works, the officer entrusted with this duty must be prepared to be not only works director, but friend, philosopher and general guide to those under him. He will, at some time, be called upon to arbitrate in the case of some article of apparel borrowed by one member of his staff from another, and never returned. His advice will, assuredly, be sought on the problems facing an employee's family resident many miles from the city; he might, perchance, be invited to become patron of the Works football team. And upon the wisdom and forbearance he displays in dealing with these extraneous matters, will depend the confidence of his staff and, in fact, the whole structure of the Organisation. He must be slow to anger, tolerant of many unconscious faults; and yet, with all, a strict disciplinarian.

Native artisans are capable of the most surprising errors in the simple routine construction they have performed correctly for months. They might, for instance, suddenly reverse the bond of a brick wall, or, in setting a lintel over an opening, find that owing to a faulty line, the courses on either side of the opening have become irregular, throwing the wall above out of level. It is essential under such circumstances that the men be encouraged, without fear of retribution, to draw the Supervisor's attention to these errors immediately they become conscious of them. In this way,



Pietermaritzburg : Sobantu Native Village — General Layout.

mistakes can often be rectified by the Supervisor before rectification becomes a costly matter. Unless the men are assured of a sympathetic reception, they will make every endeavour to hide their mistakes, with disastrous consequences.

School of Weaving

Among the most interesting of the institutions established in Sobantu Village, is the School of Weaving, founded by the City Council in 1939, as a result of gifts of looms and other equipment in memory of the late Miss Marjory Pope-Ellis. At this school, controlled by the Municipal Native Administration Department, African women students are given a thorough grounding in the preparation of raw wool, dyeing, carding and the spinning of yarn, before passing on to the weaving of woollen and cotton fabrics on hand-manipulated looms. The work produced comprises a wide range of travelling rugs, curtains, table mats and floor rugs. The designs used in these articles, full of bright and lively colours, exemplify original Native art. The finished products are sold by the Department to defray expenses, one feature of the school being that all students, after serving one month gratis, are paid a progressive wage, besides being supplied, free, with milk and bread at the mid-morning break.

The School is under European instruction.

The Community Hall, erected in 1939 by European contract, cost £3,800. Approached through a large foyer, the hall seats about seven hundred persons and is equipped with a stage, furnished with footlights, and dressing rooms. Many African Concert and Vaudeville Parties play to well-filled houses. Located above the Foyer, a cinematograph projection box makes possible the showing of good films, which takes place each week. The floor is built up of soft board and hard board for the purpose of dancing.

Last year a fully equipped kitchen was added to the Hall to meet the requirements of social events and of the many African conferences held there. The hall stands at the entrance to the village, in a well laid out garden, as do the Administration Offices and Medical Clinic, sited opposite the hall. Built in 1944 at a cost of £3,784, this building is designed in two wings to enable the dual functions to be kept entirely separate. The Clinic contains a large waiting room; two

medical dressing rooms, an office for the health visitor; a doctor's consulting room with a curtained-off examination bay, and a dispensary. It is staffed by fully qualified African Nurses and is visited daily by the Medical Officer of Health or his Assistant.

The Ekuphumuleni Homes (a Zulu word meaning the Home of Rest), standing in the new portion of the village, are the African counter-part of the European Aged Couples' Homes. Here, indigent and detribalised Natives find sanctuary in their declining years. The building is designed on an open plan with separate wings providing accommodation for single men and single women, each inmate enjoying a private cubicle, with Common Rooms for each sex.

A third wing contains flats for married couples each comprising a bed recess and sitting room leading onto a private stoep. The inmates are fed in a community dining hall which is also used for Church services and light entertainment. The kitchen is equipped for electric cooking, while hot water, from a central system, is laid onto the bathrooms and laundry.

With wood floors and tiled roofs, and standing in large lawns and terraced grounds, no efforts were spared to make the Ekuphumuleni Homes both comfortable and of pleasing appearance. They were erected entirely by Native labour at a cost of £6,300 as previously stated, and are conclusive proof that first-class work can be done through this medium, at reasonable cost. The Institution was opened in July, 1947, by Field Marshal, the Rt. Hon. J. C. Smuts.

Up to now, the Village shopping centre has comprised one large hall, wherein various African traders have carried on business in wire-meshed cubicles. Work has commenced, however, on additions to this centre, to provide eight shops, a butcher shop and milk depot, both equipped with proper cold-storage and a restaurant for both higher and lower class Natives. These additions, estimated to cost £7,000 are being undertaken by the Native Building Staff.

Educational facilities are provided at Sobantu by the Native section of the Provincial Education Department, the buildings being erected by the Corporation and leased to the Department at economic rentals. A Primary School has existed at the village since its inception in 1928, although it has been considerably added to in recent years.

To-day it comprises eleven class-rooms, a fully equipped Domestic Science Kitchen for the girls and a carpenter's shop for the boys. Owing to the overcrowding in this school, an Infants' School was built on an adjoining site. This has ten full-size classrooms with the usual office, staff rooms, store rooms and cloak rooms. The building cost £14,000 by European contract, and forms a fine addition to the the Village amenities.

Through a request from the Education Department, the City Council recently authorised the erection of a High School, at an estimated cost of £12,000. This building has been designed on modern scholastic lines to include a library for the use of the students. Working drawings have already been prepared and when the Institution is opened, the Village will enjoy a full range of kindergarten, primary and higher education. The Schools are staffed mainly by fully qualified male and female African teachers.

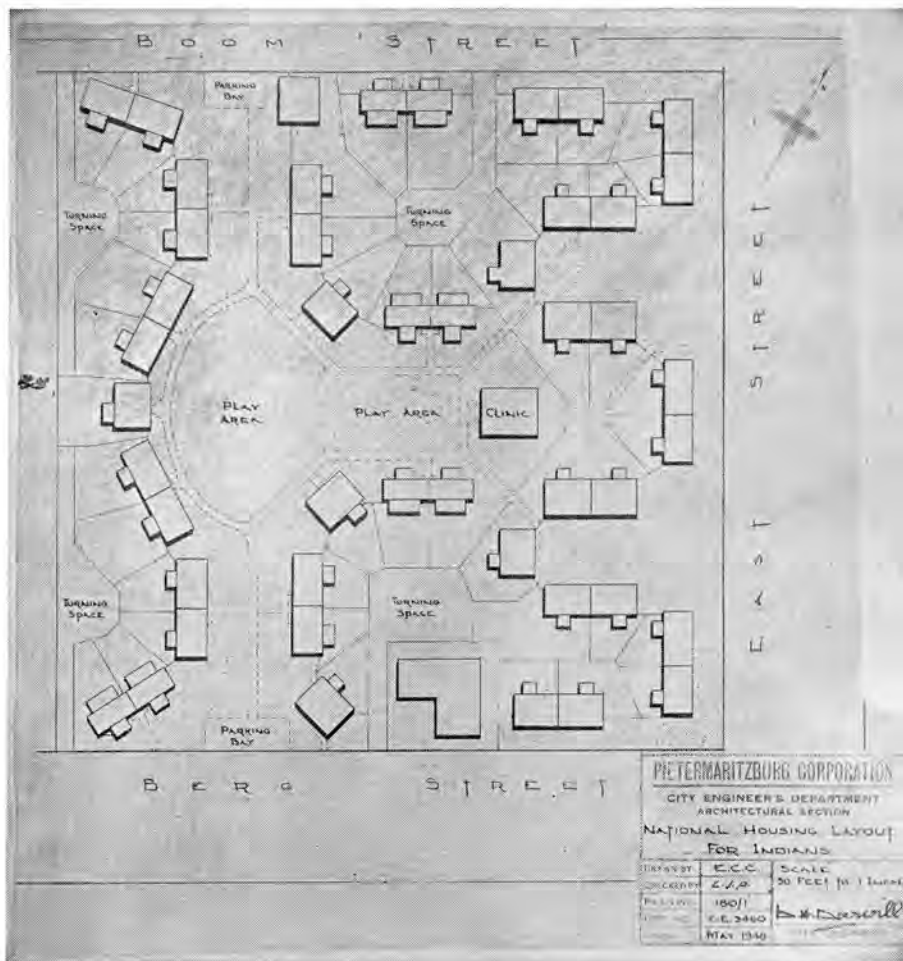
Four separate churches exist in the Village, ministered by the African sections of the Church of England, Dutch Reformed, Congregational and Baptist Societies, while the Methodist Society has availed itself of one of the remaining Church sites and building operations commenced in April of this year. Although the City Council makes sites available in the Village for religious purposes, each Denomination is expected to erect and maintain its own buildings. Exception is made in the case of cottages for the resident Native Clergy. These cottages will, upon application, be erected by the

Corporation and leased to the Church Societies at economic rentals.

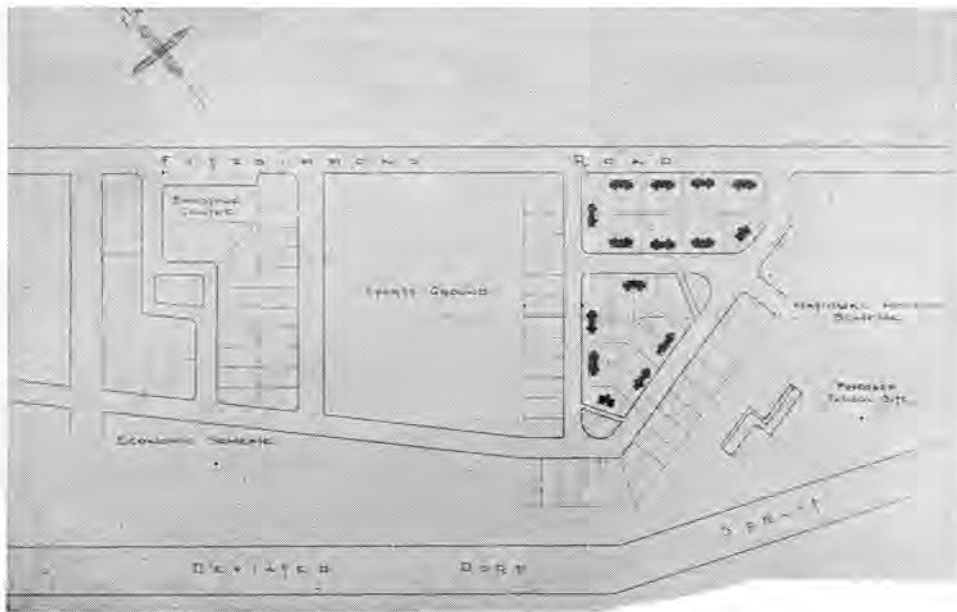
To complete the amenities available to the residents of Sobantu Village, the City Council has authorised funds for the construction of a public swimming bath and for the provision of football fields, tennis courts, equipped children's playgrounds and a sports pavilion, which will also be used as a club house for juvenile activities. Work on these additional features will be commenced in the near future.

The Retief Street Beer Hall and Market, sited within the city area, is the hub of the Social and Commercial activities of those Natives, domestic servants and others, resident outside Sobantu Village. Standing on nearly one and a half acres, this institution was built in 1934 at a cost of £10,000. There is a main building comprising a large eating house, with kitchens and pantries, run by private Native enterprise, and the hall in which Native beer is retailed by the Municipality. There is an adjacent room for visiting Chiefs and their Headmen. After business hours, the two main Halls can be opened into one and a properly equipped stage gives facilities to African Concert Parties. Sound films are also shewn in this Hall on certain nights during the week, by the Municipal Native Administration Department.

Round the enclosed and macadamised court yard are grouped trading stalls where every branch of commercial enterprise is carried on by Africans. And they range from the primitive medicine men, squatting amid their mystic



Pietermaritzburg : National Housing Layout for Indians.



Pietermaritzburg: Layout schemes for Coloured Community.

display of roots, herbs, horns, coloured crystals and the wings of birds, to the modern Co-operative Store, housed in a double storeyed building and controlled by a properly constituted Board of African Directors.

Adjacent to the Market is an equipped children's playground with tennis courts for the adults. In another part of the City is the Fitzsimmons Road Native Sports Grounds with its football fields and cycle racing track. Here, is a pavilion and club room given to the African people by Mrs. F. S. Tatham in memory of her late husband.

In the centre of the City, now nearing completion, the Council is erecting an African restaurant. Located on the first floor of the building, this restaurant will be equipped with electric cooking, and will be furnished as any ordinary European restaurant. It will accommodate between three and four hundred people. The catering rights have already been taken up by a member of the African Community at a monthly rental, and upon completion, a Native amenity will come into being which must be amongst the first of its kind.

The Coloured community of Pietermaritzburg is comparatively small, and comprises, for the most part, factory workers, building artisans and other tradesmen, all of an economic class. Among themselves they have brought into being a Coloured Welfare League with elected honorary officials, which as the name of the Society indicates, nurtures the social and economic well-being of the community.

To provide for the under-privileged, the City Council has set aside ground in Fitzsimmons Road where twenty-eight cottages served by macadamised roads and water-borne sewerage, have been erected.

Design of Houses

In designing these houses, the higher evolutionary status of the class was taken into account, although many of the better features of the Native Housing were adopted; especially the roof construction. From a point of view of hygiene, cheapness and appearance, this pre-cast concrete construction, covered with Marseilles tiles, could not be bettered. The floors of all except the service rooms, are formed of deal strip-flooring set in a cold bitumastic emulsion and nailed

direct to a 4" bed of ash concrete. This construction has been employed in the class-rooms of the Native Village schools for many years, with complete success. For domestic buildings, where cost is of primary importance, it can be laid 45 per cent. cheaper than normal suspended flooring and yet retain all the characteristic warmth and comfort.

This scheme has three types of houses; four-bedroom, three-bedroom and two-bedroom with living room, kitchen (with a large cupboard built in), combined bathroom and water closet and a fuel room attached to the main building. Each bedroom is 12' x 10' while the living rooms vary from 13' 6" x 11' 4" to 15' 4" x 11' 6". The cottages were erected in 1946 by European contract at a rate of £1 0s. 6d. per superficial foot, which included domestic sewerage and electric light.

Adjacent to the National Housing Scheme, lots are now being laid out for sale to members of the Coloured community, upon which they will erect their own homes under an assisted scheme. A school site and shopping centre will serve both layouts. Owing to the scattered areas in which Coloureds already own properties in the older parts of the City, it was not feasible, or wise, to group amenities in one centre.

In Boom Street a Social Centre has been established, which comprises a hall of fair dimensions, two tennis courts and a children's playground. These premises are also the headquarters of the Coloured Welfare League, which administers them. At the lower end of the town, on the banks of the Dorp Spruit, in a pastoral setting which leaves little to be desired, the Corporation laid out two full size soccer fields and erected a spacious club house with verandahs, kitchen and caretaker's quarters. In another part of the City there is a hall, erected and maintained by a private Friendly Society, where dances and other functions are held regularly.

Normal Government schools for both sexes, provide adequate educational facilities.

Indian National Housing was commenced in 1939, when fifty cottages were erected within the City confines, on a site in a recognised Non-European area. To make full use of the land available, an internal square was created, since named

Sastri Square, about which the houses were grouped, on lots having forty foot frontages to a macadamised road, round the open space. Not only does this square now serve as a children's playground, having been turfed and suitably equipped, but it has created a lung in an otherwise somewhat crowded locality. Existing services in the two main streets flanking the site, considerably reduced the usual high cost of development.

A second National Housing Scheme in the same locality has, this year, been authorised by the City Council. The full scheme provided for forty-six cottages, but unfortunately some of the ground is, at present, privately owned, although vacant. To ensure that the scheme is not unduly delayed, however, it has been decided to proceed with twenty-six houses immediately, the balance to form a separate contract when the necessary land has been acquired.

These Cottages will be designed on similar lines to those erected for the Coloured Community, with such alterations as may be necessary to meet the peculiar demands of Indian custom. To ensure that no tenets of religion are offended in the designs, close co-operation will be maintained with Health Visitors on the staff of the Medical Officer of Health, and with Indian bodies themselves.

In this proposed layout, a radical departure will be made from the orthodox allocation of separate lots to each cottage. In an endeavour to overcome the difficulty of persuading this type of tenant to prepare and maintain a presentable garden to the main street frontage, practically the whole area will be laid out in lawns and shrubs, the houses being suitably sited as though in a park. This common garden will be under the control of the Municipal Parks Department. So that the

tenants shall not be robbed of all privacy, however, each cottage will have a small allocation of land at the back, well screened from public view, but having access to cul-de-sacs along which motorised deliveries can be made.

A portion of this small park will be equipped as a children's playground, while a medical clinic will also be sited within the lay-out. This will be administered by the Medical Officer of Health.

Perhaps the most immediate Indian need is for suitable lots, offered for public sale, upon which individuals can erect their own homes. Recognising the need, the City Council has now set aside for this purpose land at Mountain Rise, a suburb overlooking the City towards the East and some two and a half miles from the City Hall.

About two hundred lots, each covering one-third of an acre, will be laid-off, the scheme including a school site, shopping centre and about ten acres to be used for recreational purposes.

A second economic scheme is now being considered in the Hathorn Hill area, where some six hundred lots will be provided, with suitable provision for shops, schools, parks and other amenities. In this area, too, a number of National Houses will be erected by the Council, but they will be so arranged as in no way to detract from the economic layout.

Educationally, the Indian Community is well provided for. Not only are there normal Government Schools within the City, but many denominational institutions and two schools erected and maintained under the provision of a charitable bequest.

Recreational facilities, in the way of sports fields, have been provided and are maintained by the Community itself.

BOOK REVIEW

"SANITATION IN SOUTH AFRICA"

By

JOHN H. MOORE,

Member of the Royal Sanitary Institute.

Publishers: Juta & Co., Cape Town and Johannesburg.

Price: 35s.

THIS book has been written to present some aspects of sanitation applicable to South African conditions. While acknowledging the high standard of sanitation in this country, the author considers that there is still room for improvement and suggests the provision of a standard code of regulations for the Union of South Africa and Rhodesia. Furthermore, it is suggested that a system of State registration of plumbers examined on a modern basis in South African practice would improve the existing standard of sanitation and obviate some of the difficulties which arise through faulty practices. In compiling this book, the author has no doubt had these considerations in mind, and has combined theory

and practice in a commendable manner. Although the majority of people have acquired a fair knowledge of public hygiene, and the promotion of public health is assisted by the facilities of medical research, it is the ability of the skilled artisan to apply correct methods that is of paramount importance in the matter of sanitation. The main aspects of the subject are dealt with in a comprehensive manner, emphasis being laid on local conditions, but including appropriate reference to the best of modern appliances available. This book, which contains a large number of illustrations, should prove valuable to the student and as a work of reference for all who are engaged in the trade or interested in the subject in its relation to public hygiene.

PUBLICATIONS RECEIVED :

"THE PERMANENT WAY TO GOODWILL"

The South African Railways has started a campaign to promote courtesy in the rank and file of the organisation. In support of this effort, a booklet entitled "The Permanent Way to Goodwill" has now been published and is to be issued to all employees. A foreword by the General Manager, Mr. W. M. Clark, explains that the booklet is not intended to be critical or reproachful, and expresses the hope that it will assist the staff to discover new ways of making friends for the railway service. The booklet, which is timely in its conception, contains a range of cartoons which are both humorous and direct.

TENDERS INVITED

THE following are particulars of the more important tenders which have been invited up to the time of going to press for public works by Government Departments, Provincial Administrations and Municipalities. In each case the date by which the tender must be submitted is given. While every endeavour will be made to maintain accuracy in these columns it is pointed out that readers using this information do so entirely at their own risk.

NOTE: S.A.R. & H. Tender Board address is: 715, P.F.A.C. Building, 15, de Villiers Street, Johannesburg.

BUILDING, ETC.:

Cape Provincial Tender Board, Cape Town: The erection of two additional classrooms in connection with the Grahamstown Secondary School in the Albany Division. Architects: Roberts and Tanton, 508 Southern Life Building, Port Elizabeth. Due, 8/2/49.

Cape Provincial Tender Board, Cape Town: The erection of agricultural buildings in connection with the Vaalharts High School in the Vaalharts Division. Architects: Greatbatch & Timlin, Kimberley. Due, 8/2/49.

Cape Provincial Tender Board, Cape Town: The erection of a new hospital, Nurses' Home and outbuilding blocks, Vryburg. Architects: P. S. Dykstra, 7 Myrtle Street, Pretoria. Due, 28/1/49.

Cape Provincial Tender Board, Cape Town: The conversion to a maternity hospital of the former City Infectious Diseases Hospital (also known as the Military Annexe), Provincial Hospital, Port Elizabeth, for the Port Elizabeth Hospital Board. Architects: Siemerink & Brinkman, Main Street, Port Elizabeth. Due, 28/1/49.

Electricity Supply Commission: Supply and completion at the Commission's Umtali power station, Industrial Site, Umtali, of the following: Steel frame buildings, control block, building requirements of the coal handling plant, etc., together with all necessary ancillary works. Contract 62/1948. Secretary, P.O. Box 377, Salisbury. (Deposit of £5-0-0 — extra copies of documents at 5/- each). Due, 18/1/49.

Johannesburg Municipality: Orlando power station extensions: The execution of civil engineering and building work, generally above ground level. Contract K.J.O. 27. (Deposit of £3-3-0 — extra copies of documents at £1-1-0 each). Electricity Department, Johannesburg. Note: Arrangements to view the site of the above-stated work may be made through the Construction Engineer, telephone 33-3333. Corrected to 11/1/49.

Public Works Department, Pretoria: Welkom, O.F.S. — second new primary school. P.W.D. 139. Due, 18/1/49. Kroonstad, O.F.S. — Voortrekker Hospital — quarters for engineers in charge. P.W.D. 140. Due, 18/1/49. Zastron, O.F.S. — police station and quarters. P.W.D. 138. Due, 20/1/49.

South African Railways Tender Board: The erection and completion of Native Hostel at Prospect, Johannesburg.

(Deposit of £5-0-0). No. C.C.E. 142. Resident Engineer, Raema Court, Leijds Street, Johannesburg. Due, 20/1/49.

South African Railways Tender Board: Erection and completion of six houses at Retreat, Cape Town. (Deposit of £2-2-0). No. C.C.E. 140. Chief Civil Engineer, Room 500, Headquarters, De Villiers Street, Johannesburg. Due, 13/1/49.

Stutterheim School Board: The effecting of general repairs to the Stutterheim High School Building. Tender form, B.L.G. 3. Secretary, Divisional Council Office, Dragon Street, Stutterheim. Due, 12/1/49.

Venterspost Municipality: Supply of all material and the construction of a Communal Hall in the Venterspost Location. Town Engineer, Venterspost. Due, 10/1/49.

ELECTRICAL EQUIPMENT, ETC.:

Barberton Municipality: Switch cubicles (equipped), Contract 8; Ironclad switch gear, Contract 9; k.v.a. transformer, Contract 10; 150 k.v.a. transformer, Contract 11. Town Engineer, Barberton. Due, 18/1/49.

Boksburg Municipality: Electricity meters, Contract 87/48; High tension cable, Contract 88/48; Hard drawn stranded copper wire, Contract 89/48. Electrical Engineer, Boksburg. Due, 2/2/49.

Cape Town Municipality: Work to be carried out at Newlands Step-down Sub-station, Keurboom Road, Newlands. Specification 1532/1948. City Electrical Engineer, Cape Town. Due, 4/2/49.

Cape Town Municipality: Electrically-operated pedestrian cross walk traffic sign controllers. Specification 1528/1948. Electrically-operated vehicle actuated traffic control equipment. Specification 1529/1948. City Elec. Engineer, Cape Town. Due, 23/2/49.

Cape Town Municipality: Manufacture, supply and delivery of cables and jointing material. Specification 1530/1948. City Electrical Engineer, Cape Town. Due, 26/1/49.

Cape Town Municipality: The manufacture, testing, supply and delivery of transformers. Specification 1513/1948. City Electrical Engineer, Cape Town. Due, 12/1/49.

Durban Municipality: Electrical material: 33 k.v. and 11 k.v. out-door type, three-phase hand-operated switches. E.2195. Metering equipment. E.2194. Electricity Department, Durban. Due, 4/3/49.

Johannesburg Municipality : Electricity meters and current transformers, No. 735 ; knife switches for low tension distribution boards, No. 736. City Treasurer, Johannesburg. Due, 13/1/49.

Johannesburg Municipality : The wiring and installation of electrical appliances in the houses and men's hostel, and the installation of tubular heating in the mens' hostel on Farm Rietvlei No. 17. (Deposit of £2-2-0 — additional copies of documents at 10/6 each). Contract D. 13/48. Electricity Department, Johannesburg. Due, 8/2/49.

Kempton Park Municipality : Electricity extensions. Town Clerk, Kempton Park. Extended, 15/1/49.

Port Elizabeth Municipality : Transformers and steel poles. Specification 33L. City Electrical Engineer, Port Elizabeth. Due, 3/2/49.

Pretoria Municipality : Two panel 33,000 v., 400 amp., rating metalclad oil-immersed isolator equipments. Specification 327. Controller of Stores and Buyer, Pretoria West. Due, 17/1/49.

Pretoria Municipality : 33 k.w. 20 m.v.a. transformers. Specification 325. Controller of Stores and Buyer, Pretoria West. Extended, 17/1/49.

Pretoria Municipality : Supply and delivery, installation and maintenance for a period of 12 months of supervisory remote control equipment. Specification 328. Controller and Buyer, Pretoria West. Due, 21/2/49.

Pretoria Municipality : 75-30 volt, 10 ampere-hour switch gear tripping batteries. Specification 330. Controller of Stores and Buyer, Pretoria West. Due, 31/1/49.

Roodepoort Municipality : Section A : High tension switch gear. Section B : Low tension switch gear. Section C : Street light control apparatus. Section D : Transformer. Section E : Low tension cable. Section F : High tension cable. Contract F 7/16. (Deposit of £1-1-0 — extra copies of documents at 5/- per copy). Electrical Engineer, Roodepoort. Due, 17/1/49.

South African Railways Tender Board : Switch gear. No. 8423. Due, 17/2/49.

ROADMAKING PLANT, ETC. :

Umtali Municipality : Certain quarrying and road-making equipment all erected and tested in terms of tender documents. Contract C. 24/1948. Town Engineer, Umtali. Due, 18/1/49.

VEHICLES, ETC. :

S.A. Railways Tender Board : Crawler Tractors with bulldozers. No. 8505. Due, 13/1/49.

WATER SUPPLIES, ETC. :

Belville Municipality : Water pipes of 6-inch diameter and smaller, specials, fire hydrants, water meters and cast iron castings. (Deposit of £2-2-0). Town Engineer, Belville. Due, 17/1/49.

Belville Municipality : Waterborne pumping plant, De Villiers Township. (Deposit of £2-2-0). Town Engineer, Belville. Due, 17/1/49.

Bloemfontein Municipality : Materials for the construction of a new 10-million gallon storage reservoir. (Deposit of £100-0-0 — additional copies of documents at £25-0-0 per set). Contract 2-48/49. City Engineer, Bloemfontein. Due, 14/1/49.

Kimberley Municipality : The sinking and lining of one 6-inch diameter borehole at Wintersrush. Room 43, System Manager's Office, Kimberley. Due, 18/1/49.

South African Railways Tender Board : Borehole testing equipment. No. 8298. Extended, 10/2/49.

Stanger Municipality : Hydro-electric plant and penstock. E1/1948. Town Clerk, Stanger. Extended, 17/1/49.

Transvaal Provincial Tender Board : Steel rope well-boring machine. No. 2/1949. Controller of Provincial Stores, P.O. Box 857, Pretoria. Due, 12/1/49.

Umtali Municipality : 6, 4 and 3-inch water piping together with specials. Contract C.30/1948. Town Engineer, Umtali. Due, 18/1/49.

MISCELLANEOUS :

Agricultural equipment : S.A.R. Tender Board. No. 8567. Due, 13/1/49.

Air compressors : S.A.R. Tender Board. No. 8502. Due, 13/1/49.

Aluminium and other paints : Chief Electrician, Westonia. Due, 10/1/49.

Bogie wagons : S.A.R. Tender Board. No. 7698. Due, 13/1/49.

Boiler plant and boiler house : S.A.R. Tender Board. No. 7999. Due, 31/3/49.

Bolts : Department of Posts and Telegraphs, Pretoria. P.O. 1005. Due, 13/1/49.

Brass, copper and phosphor bronze sheets and phosphor bronze bars, etc. : S.A.R. Tender Board. No. 8509. Due, 27/1/49.

Bridge work : S.A.R. Tender Board. No. 8412. Due, 27/1/49. No. 8184. Due, 3/2/49.

Cable carts : Department of Posts and Telegraphs, Pretoria. P.O. 1009. Due, 13/1/49.

Canvas : S.A.R. Tender Board. No. 8479. Due, 13/1/49.

Carriage fittings : S.A.R. Tender Board. No. 8431. Due, 20/1/49.

Centrifugal pump : City Treasurer, Johannesburg. No. 724. Due, 13/1/49.

Chemicals and laboratory apparatus to Western Province Fruit Research Station : S.O. 2962 Stellenbosch. Union Tender and Supplies Board, P.O. Box 371, Pretoria. Due, 20/1/49.

Cinema projectors and spares, petrol electric generating sets, etc. : To Division of Film Services. S.O. 3110 Pretoria. Union Tender and Supplies Board, Pretoria. Due, 13/1/49.

Cloth, 240 yards dark blue Melton suitable for overcoats : Controller of Stores and Buyer, Pretoria West. Due, 14/1/49.

Cloth, green veld and scarlet Melton for postmens' and messengers' uniforms : Department of Posts and Telegraphs, Pretoria. P.O. 1012. Due, 20/1/49.

Copper piping : S.A.R. Tender Board. No. 8508. Due, 13/1/49.

Copper wire : S.A.R. Tender Board. No. 8525. Due, 13/1/49.

Cotton duck, grey : S.A.R. Tender Board. No. 8569. Due, 13/1/49.

Cranes and match wagons : S.A.R. Tender Board. No. 8426. Due, 24/2/49.

Crane, mobile : S.A.R. Tender Board. No. 8408. Due, 27/1/49.

Diesel electric shunting engine : S.A.R. Tender Board. No. 7253. Extended, 10/2/49.

Drilling machines : S.A.R. Tender Board. No. 8444. Due, 20/1/49.

Drilling machines : S.A.R. Tender Board. No. 8442. Due, 27/1/49.

Drugs and surgical sundries : Provincial Accountant, P.O. Box 11, Pietermaritzburg. Due, 26/1/49.

Electrical material : S.A.R. Tender Board. No. 8417. Due, 13/1/49.

Electric signalling material : S.A.R. Tender Board. No. 8548. Due, 27/1/49.

Fire hydrant covers : Town Engineer, Umtali. Contract C.31/1948. Due, 18/1/49.

Gas meters, pre-payment : City Treasurer, Johannesburg. No. 729. Due, 12/1/49.

Gas meters : City Treasurer, Johannesburg. Nos. 730 and 732. Due, 12/1/49.

Gear wheels, pinions, armature shafts : S.A.R. Tender Board. No. 8303. Due, 13/1/49.

Grinding machines : S.A.R. Tender Board. No. 8178. Due, 3/3/49.

Hydraulic leather : S.A.R. Tender Board. No. 8629. Due, 13/1/49.

Hydraulic presses : S.A.R. Tender Board. No. 8439. Due, 27/1/49.

Jacks : S.A.R. Tender Board. No. 8615. Due, 27/1/49.

Linoleum : S.A.R. Tender Board. No. 8481. Due, 20/1/49.

Machine tools : S.A.R. Tender Board. No. 8452. Due, 20/1/49.

Mild steel tubes : S.A.R. Tender Board. No. 8587. Due, 27/1/49.

Paper and boards : Government Printer, Pretoria. G.P.-P.36. Due, 13/1/49.

Pattern-making pine : S.A.R. Tender Board. No. 8590. Due, 27/1/49.

Pick handles, universal type : Department of Posts and Telegraphs, Pretoria. P.O. 1008. Due, 13/1/49.

Pig lead : S.A.R. Tender Board. No. 8596. Due, 3/2/49.

Pipe screwing tools : Controller of Stores, Irrigation Department, P.O. Box 277, Pretoria. Irr. 385. Due, 20/1/49.

Planing and moulding machine : S.A.R. Tender Board. No. 8457. Due, 20/1/49.

Plate-bending rolls : S.A.R. Tender Board. No. 8449. Due, 20/1/49.

Proofing solution : S.A.R. Tender Board. No. 8577. Due, 27/1/49.

Pump, 3-inch portable petrol engine-driven : City Treasurer, Johannesburg. No. 737. Due, 13/1/49.

Rail and flange lubricators : S.A.R. Tender Board. No. 8460. Due, 13/1/49.

Refuse receptacles, 100 : Health Inspector, Westonaria. Due, 10/1/49.

Rotary rock bits : Controller of Stores, Irrigation Department, Pretoria. Irr. 384. Due, 20/1/49.

Screw eye augers and auger bits : S.A.R. Tender Board. No. 8557. Due, 13/1/49.

Shaving and sawdust extraction plant : S.A.R. Tender Board. No. 8289. Due, 10/2/49.

Sisal and Manila rope : S.A.R. Tender Board. No. 8585. Due, 13/1/49.

Slat conveyors : S.A.R. Tender Board. No. 8562. Due, 27/1/49.

Steel tool boxes : Department of Posts and Telegraphs, Pretoria. P.O. 1011. Due, 13/1/49.

Super-heater flue and boiler tubes : S.A.R. Tender Board. No. 8474. Due, 3/2/49.

Tandem rollers, variable weight : Transvaal Provincial Tender Board, Controller of Provincial Stores, P.O. Box 857, Pretoria. No. 1/1949. Due, 12/1/49.

Telegraph line material : S.A.R. Tender Board. No. 8199. Due, 3/2/49.

Welding machines : S.A.R. Tender Board. No. 8458. Due, 27/1/49.

Weldless steel tube : Director of Irrigation, Salisbury. No. 2263. Due, 31/1/49.

Bogie wagons : S.A.R. Tender Board. No. 7698. Extended to 17/2/49.

Boiler stay taps and reamers : S.A.R. Tender Board. No. 8520. Due, 10/3/49.

Bridge work : S.A.R. Tender Board. No. 8572. Due, 10/3/49.

EARTHWORKS, ETC. :

Southern Rhodesian Government : Hunyani (Salisbury) earth dam : Investigations into the construction of an earth dam are being carried out and it is desired to know what possibilities there are of firms, with the requisite equipment, being available. The proposal is to build a dam 120 feet high containing, approximately, 500,000 cubic yards of earth fill from borrow pits and 200,000 cubic yards of rock fill from spillway excavations, plus various ancillary works containing about 30,000 cubic yards of concrete. It is desired to ascertain the names of firms who would be prepared to tender for this work which will probably be required to be commenced about July or August, 1949, and completed by the end of 1951. Any firms interested at this stage may obtain further information from the Director of Irrigation, P.O. Box 1383, Salisbury, Southern Rhodesia, or from Stewart, Sviridov and Oliver, Balgownie House, 66, Commissioner Street, Johannesburg.

WATER SUPPLIES :

Knysna Municipality : Supply and installation of chlorination plant. Contract 25/1948. (Deposit of £2-2-0). Consulting Engineer : Ninham Shand, 806, Groote Kerk Buildings, Cape Town. Due, 15/2/49.

Worcester Municipality : The construction of reinforced concrete settling tanks with mechanical clarifying equipment. Contract 23/1948. Town Clerk, Worcester. Extended, 12/2/49.

ELECTRICAL EQUIPMENT, ETC. :

Hermanus Municipality : Materials for the construction of extensions to the electricity undertaking : Section A : Municipal sub-station, 11 k.v. switch gear ; Section B : Distribution sub-station low tension switch gear, 11 k.v. high tension switch gear ; Section C : 11 k.v. transformers ; Section D : 11 k.v. high tension transmission lines ; Section E : Cables and jointing, high tension and low tension. Contract 9/1948. (One set of specifications on deposit of £2-2-0). Town Clerk, Hermanus. Due, 28/2/49.

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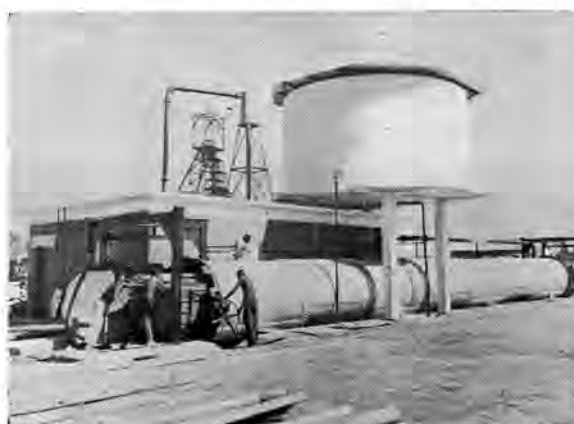
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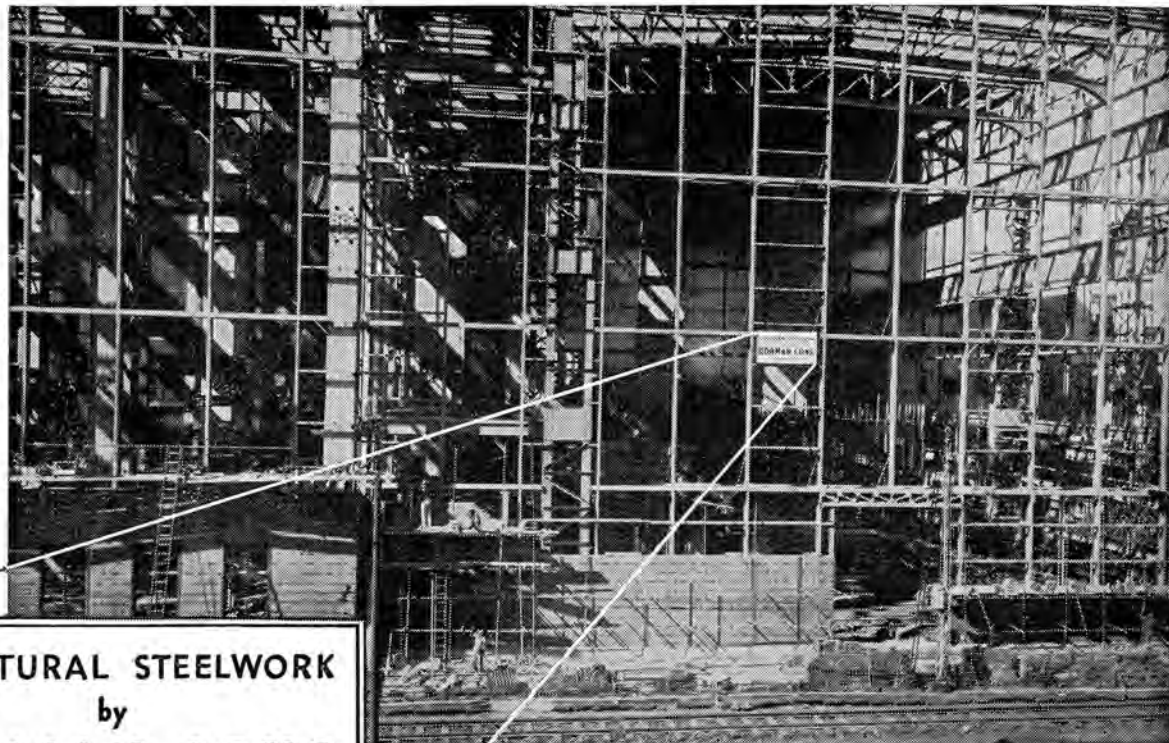
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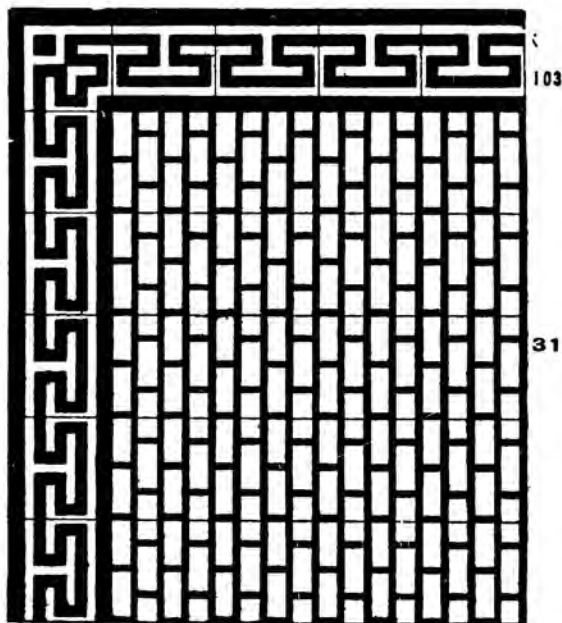
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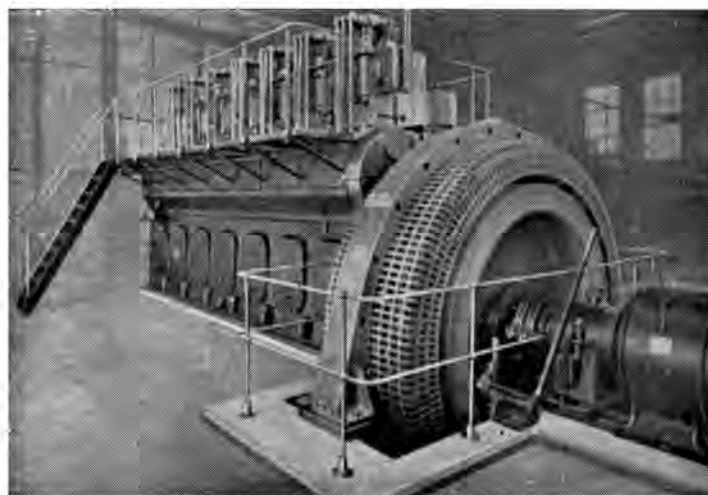
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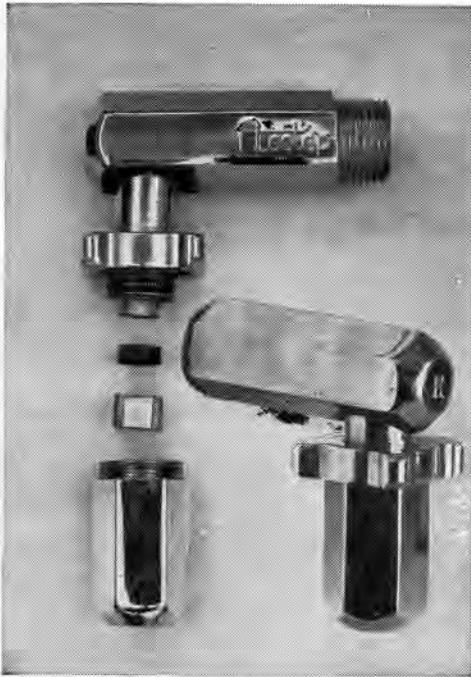


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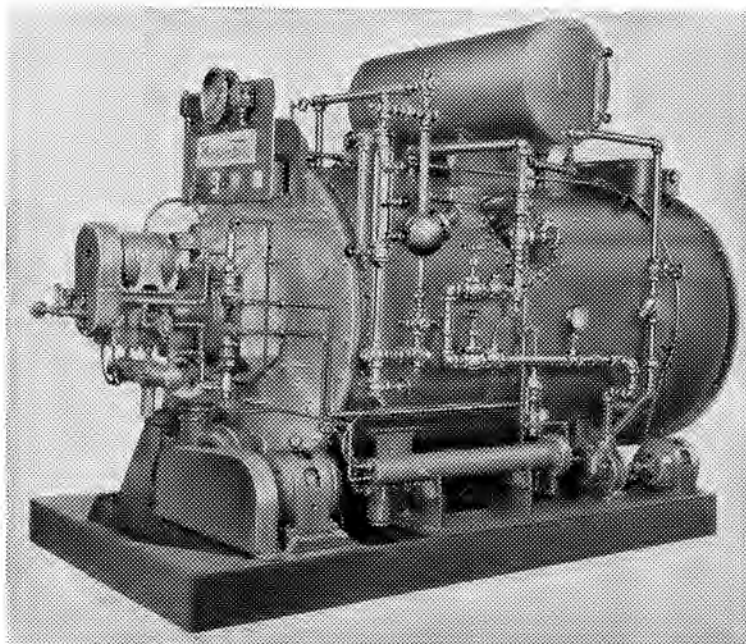
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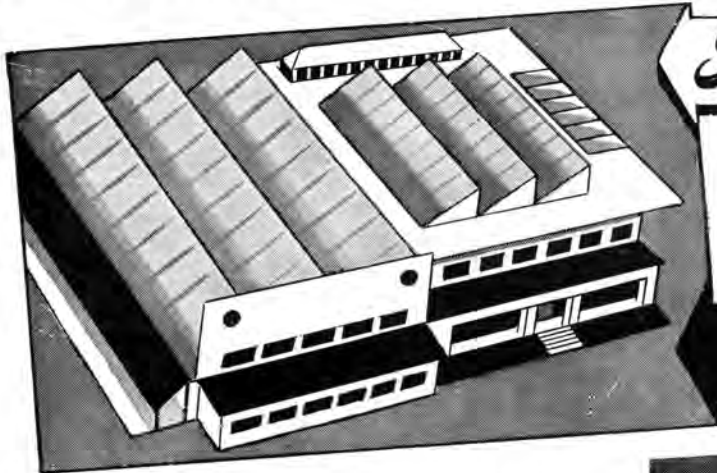
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WIRE INDUSTRIES STEEL PRODUCTS AND ENGINEERING CO., LTD.

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Lime
and
Time

★ Portion of one of our Buxton quarries. The contoured area is the "island" left at the discovery site of the "Taungs Skull."

★ Inset: The Taungs Skull, discovered in 1925.

*Aerial view: Aircraft Operating Co.
Inset: Courtesy The Star.*

THE NORTHERN LIME COMPANY is well aware that several of the more important and fast-growing Union industries depend upon adequate supplies of high-calcium Lime materials.

AS MAJOR PRODUCERS of these commodities, the Company regards the assurance of an unrestricted, long-term and economical supply as its obvious duty to present and future industry.



THE NORTHERN LIME COMPANY LTD.

Head Office:
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Telephones 33-4910 & 33-4919.
Telegrams: "Northern,"
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Works:
P.O. Norlim,
via TAUNGS.

Works and Quarries at Buxton and Thoming, near Taungs, C.P.