

PUBLIC OPEN SPACE IN THE CENTRAL BUSINESS DISTRICT OF CAPE TOWN.

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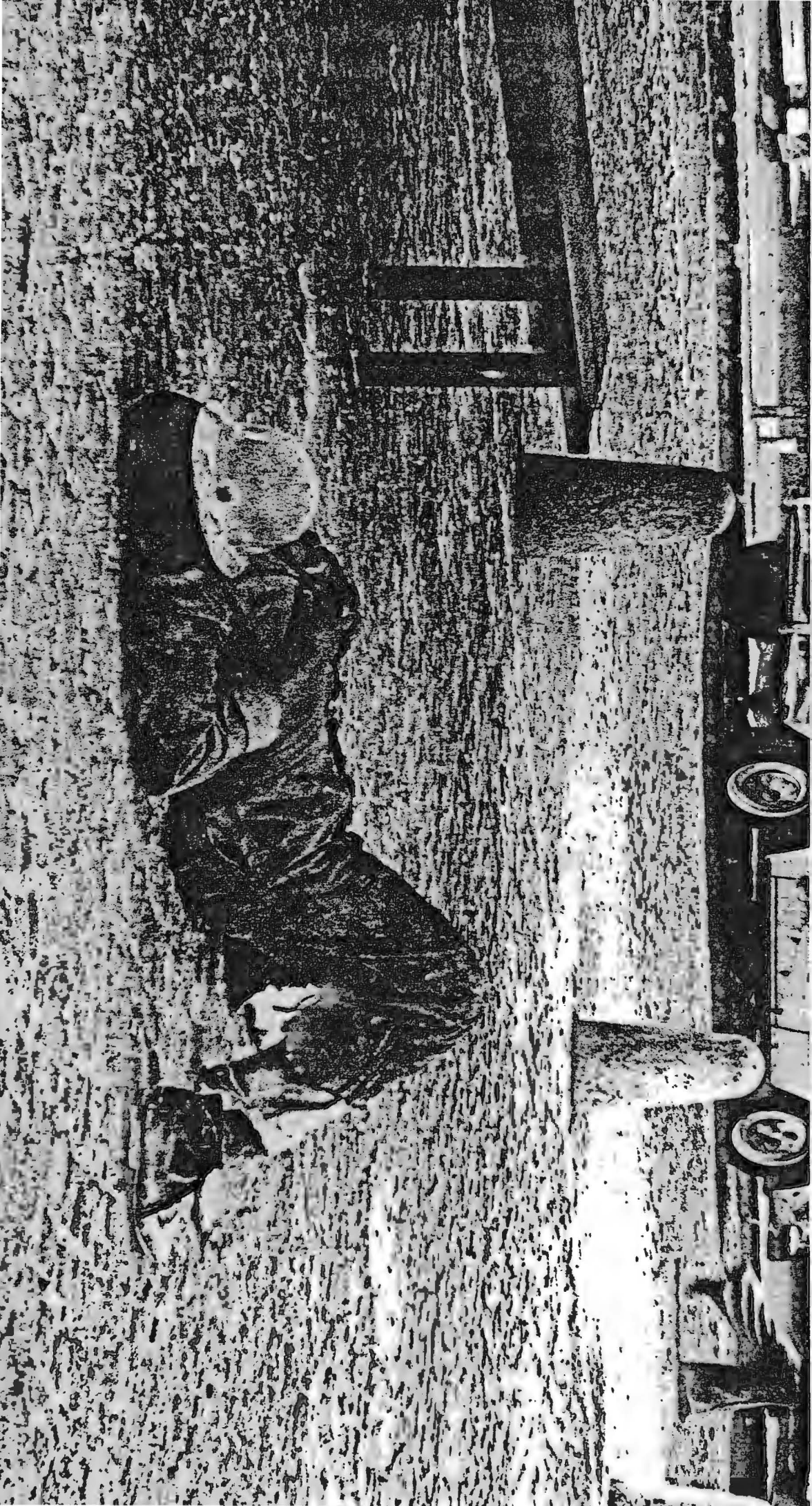
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fulfilment for the degree
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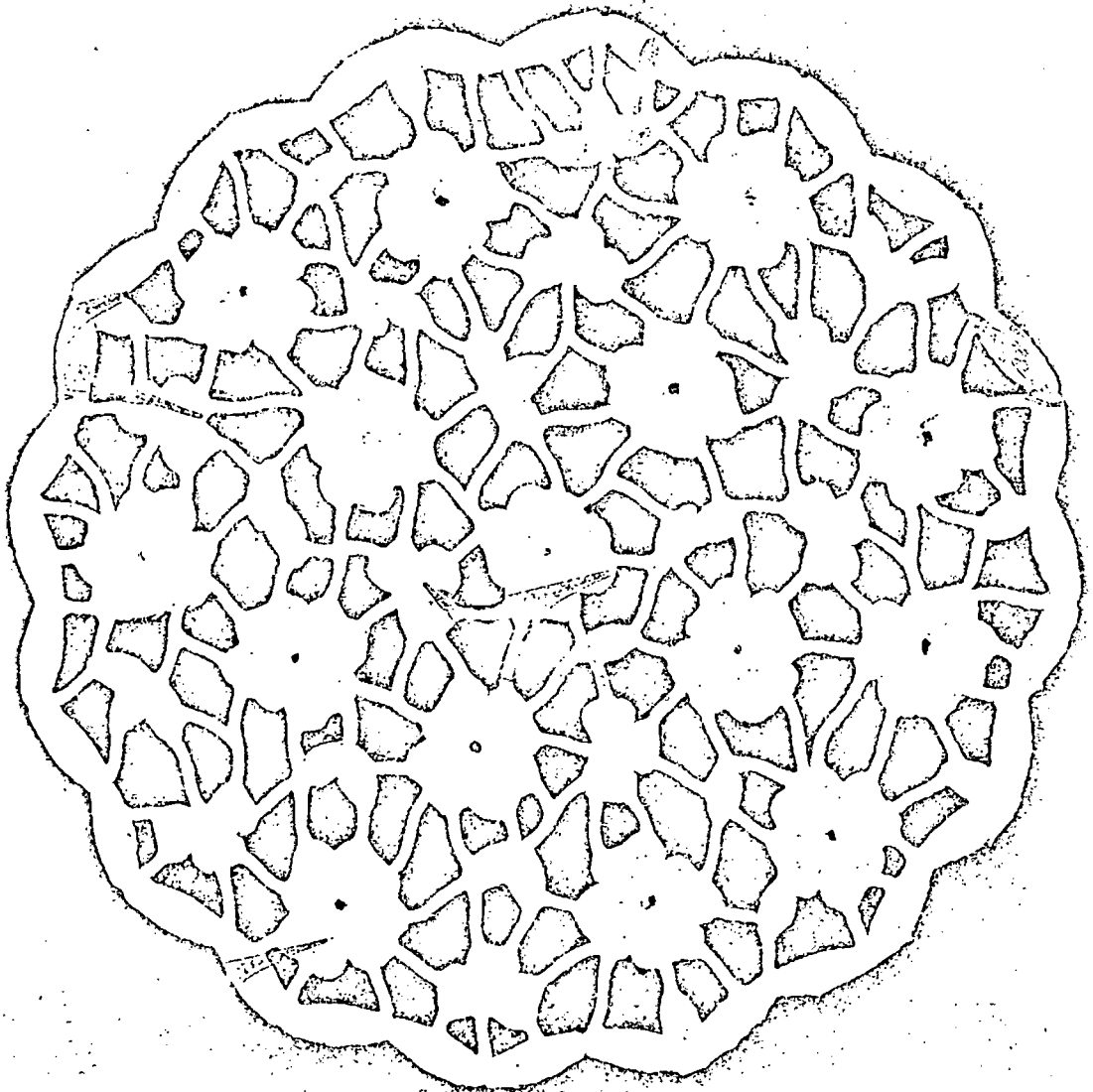
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"..... study the strands of the net not the holes. "
JANE JACOBS.

or as the Last Whole Earth Catalog would have it
" WE CAN'T PUT IT TOGETHER -- IT IS TOGETHER "

that's as may be; just try superimposing a freeway
system and a rectangular street pattern on it !

1.0 PREFACE:

For the present, at least, the Central Business District of a City has the potential to provide opportunity, amenity and diversity for those people who care to seek it out. This would perhaps not be worthwhile or so interesting were it to lack the day to day and long-ranging problems that confront the individual, the household, the firm, the interest group, the pressure group and the planner in this unique environment.

If the challenge is to be accepted then the environment should be questioned in order to find out if it will continue to exist and what structure and form it should have.

Since the city centre is traditionally the pedestrian domain it is as well to study the space in which the pedestrian has to perform, before he is driven out of it, which hopefully might not be for some time to come. Little can be said in this thesis that has not been said before and the aim is here not concerned with networks, matrices or models nor can there be any detailed determinism of standards, actual physical elements or methods of affectuation. The attempt is an investigation of some aspects of the pattern of the open spaces and of the people who use them, and an attempt to gauge the extent of the regard for people in the open space network of the C.B.D. Because of the Republic's racial policy all places downtown are not for all the people all the time and in order to be significant this investigation would have to study the different

social patterns for each race group, however the subject is treated as though the population were homogeneous.

The street in the C.B.D., more than any other place anywhere else is for everyone.

.....I would just be standing there. "I can't see anything," I would say. He would begin patiently enough, explaining how anybody can see through a microscope, but he would always end up in a fury, claiming that I could too see through a microscope but just pretended that I couldn't. "It takes away from the beauty of flowers anyway," I used to tell him. "We are not concerned with beauty in this course," he would say. "We are concerned solely with what I may call the mechanics of flars." "Well," I'd say, "I can't see anything." "Try it just once again," he'd say, and I would put my eye to the microscope and see nothing at all, except now and again a nebulous milky substance- a phenomenon of maladjustment. You were supposed to see a vivid, restless clockwork of sharply defined plant cells.

JAMES THURBER.

2.0 INTRODUCTION:

Studies of Land Use and Transportation in the Central Business District of a variety of cities are many and yet in these studies it is only rarely that the Public Open Space is allotted a land use category of its own. Open space, as such, is often found to be classified with the road and parking provision or it is designated as part of the "Government and Public" category of land use. In Metropolitan and Regional studies open space does have prominence even if only for the reason that as an urban settlement grows, open space is usually that which the expansion invades. In so doing the question arises of protecting and preserving the environment for the benefit of everyone, because there is a basic need for open space in terms of health, welfare and well-being. Open space is also required to satisfy the social, psychological and aesthetic needs of urban man. It is for his use and also to be felt and viewed by him.

Ref 1

Ref 3

Even on a Regional scale the requirements in physical terms are not prescribed, perhaps they cannot be since regions vary considerably one from the other, firstly for economic reasons existing and potential, and secondly for reasons of amenity, existing and potential.

It is doubtful if it is possible to standardise the amount of space a given population should have, yet Township Ordinances and the like attempt just this. Expanding

Ref 3

residential areas, must take the provision of open space into account and such provision is not always without problems, most of which require more than an engineering solution. Public Open Space in the Central Business District, although still required to fulfill the basic human needs of health, welfare and well-being, demands an entirely different set of considerations from those of open space in general.

The Central Business District is almost by definition the scene of the most concentrated activity; it is the scene of greatest change in building technology in particular and all others in general and it is the centre of communications. Paradoxically this great scene has tended to remain relatively small in area. The distances between its internal linkages has always been measured in "minutes walking", on the ground. (The vertical distances are almost taken for granted). Pedestrian traffic is at its highest density in the city centre, this is, and always has been, admirably suited to the compactness of the Central Business District, provided that the pedestrian has the space in which to move about. With all the greatness about him he nevertheless feels more at ease at the scale of the man in the street. The basis of pedestrian movement is the pavement, taken together with the space given over to Streets this usually represents about a third of the total area of the Central Business District. Open spaces such as squares and parks are, in terms of movement,

extensions of the pavement. The heart of the matter is that the space for pedestrian movement, as it is now is under threat and is being subjected to conflict.

The threat and conflict stem in the main, from the unwieldiness of the motor vehicle in the pedestrian domain. The traffic engineer has become so overburdened by trying to keep motor cars moving and stored that it might be as well to appoint a "pedestrian traffic planner" to deal with the considerations of pedestrian movement.

Ref 4

Vehicular traffic, however, is not the only threat to pedestrian open space. City Centre land is scarce and therefore so costly that the economic use, in terms of financial benefit, of a city centre property invariably precludes its use as public open space. Subsequent to this the property developer competes with the zoning and building regulations of the Local Authority, under which conditions the development of the site rarely contributes much towards the overall provision of pedestrian space in the Central Business District.

Ref 5

2.1 METHODOLOGY:

This study is an attempt to assess the significance of the existing open space in the Central Business District of Cape Town and the bearing this may have on the future need and desirability of such space for the use and enjoyment by people. The investigation relies to a great extent on the theories and findings of previous researches relevant to the Central Business District, much of which is taken as given or implied. Public open space in the city centre and its use is studied through four main objectives. Firstly, there is the history and appraisal of the existing open space provision, second, is the investigation of the factors which determine the need for open space, and thirdly, the broad physical requirements for open space are investigated, fourthly the observations derived from the foregoing investigations are applied to the possible future development of the Central Business District.

A limited quantity of public opinion survey method has been included because no study relating to people can overlook this aspect. The attempts herein are, of necessity cursory and the findings are therefore not strictly statistical nor conclusive; they should be viewed rather like litmus indicators, which show the presence and degree of acid or alkali, but say nothing of actual molecular structure.

2.2 PUBLIC OPEN SPACE DEFINED:

Public open space in the Central Business District, in the context of this study, is any open space in which pedestrians are at liberty to walk or linger without question to their presence in that place and without payment of a fee or toll for the privilege of making use of the space providing always that such use is not curtailed by any offence.

People tend to have more licence in the C.B.D. than in most other built-up areas. A man may lie in the middle of the street if he so wishes the other passers-by will hardly give him a second glance, the motorist may even consider stopping. Whatever their reactions the other people are going about their business. Should the would-be crank perform his daring during the lunch break he might possibly attract a crowd. This is just the sort of thing the office workers, taking a lunch-time stroll are looking for.

During normal business hours all doors, almost without exception are open to almost everyone. One might possibly even make use of a carol in a bank to write a letter not remotely connected with banking. In the C.B.D. the sign "We reserve the right....." is more common than "Trespassers will....."

2.3 CLASSIFICATION OF TYPES OF OPEN SPACE:

The types of open space accessible to the pedestrian in the Central Business District include:-

1. The Pavement (and the Street: at his own peril)
2. Pedestrians precincts, malls, decks, and arcades
3. Squares and Piazzas
4. Parks and Gardens.

The above spaces tend to be formal and easily recognised, and types 3 and 4 are generally open to the sky.

In effect the pedestrian in the city centre is free to walk through almost any door that opens onto the pavement, should he choose to do so. The person browsing around in a shop, unless harried by a shop assistant, has merely extended the pavement for himself or had it extended for him by design. In this respect the department store has more to offer. The larger department store invariably provides access to or from more than one street and very often having accesses to parallel streets which provide the pedestrian with a "short cut", offering the added attractions of the hustle and bustle of the crowd and the diversion of the merchandise on display, and escalators which invite inter-level travel.

In many cases Public and Civic buildings, Museums, Libraries, and Art Galleries similarly become incidental side-walks. The temporary parking lot and the

vacant site, if not fenced off or festooned with "No Trespassing" signs, (sometimes in spite of this) are used as "short-cuts", sitting areas and makeshift playing fields.

2.4 THE DELIMITATION OF THE CENTRAL BUSINESS DISTRICT FOR
THE PURPOSES OF THIS STUDY:

Since 1936-1945 during which period Table Bay was dredged
for the building of the Duncan Dock and the Foreshore
was added to the overall area of Central Cape Town by
the infill of dredged material, the city has been faced
with the possibility of the "Dual - Central Business
District". To date the development of the Foreshore
shows no indication of being integral with the original
city centre. The powerful barriers created by the new
Station and the widening of Strand Street may yet prohibit
this for many years to come. The area bounded by Strand
Street, (Southwest) and Strydom Avenue (Northwest) is
really part of the old Central Business District but at the
present time it is the centre of a tug-o-war between the
Foreshore and the old Central Business District.

Ref 6

Whether the dual Central Business District develops be-
yond the present state, in which the retail component
plays a very minor rôle in the Foreshore, remains to be
seen, but what is certain is that the environment being
created for the pedestrian on the Foreshore differs
greatly from that of the old Central Business District.
On a time scale relative to thought and technological
developments they might never correspond.

"We can still use the measure of the validity of both
permanence and change, but often change is conditioned
by the permanence of the surrounding which can't be
changed probably in less than 35 to 40 years."

Ref 7

On the Foreshore the scale of open space, building blocks and streets is far greater than that of the old, the shops as yet do not have the same intensity or vitality. In short it is for the time being desolate and it is isolated.

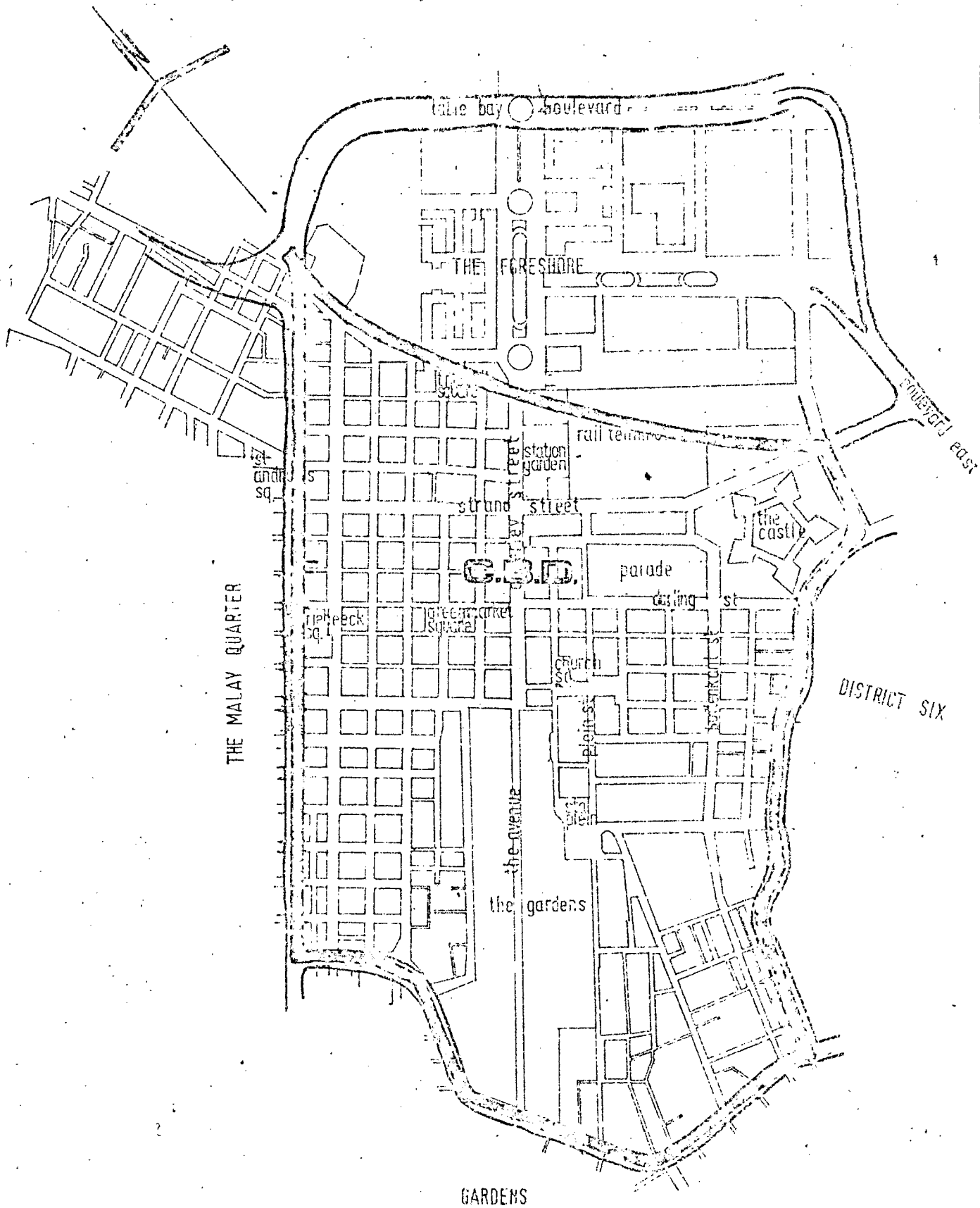
Fig 1

For these reasons the Northeastern boundary of the Central Business District (C.B.D.) is taken as the 1936 shoreline for the purposes of this study.

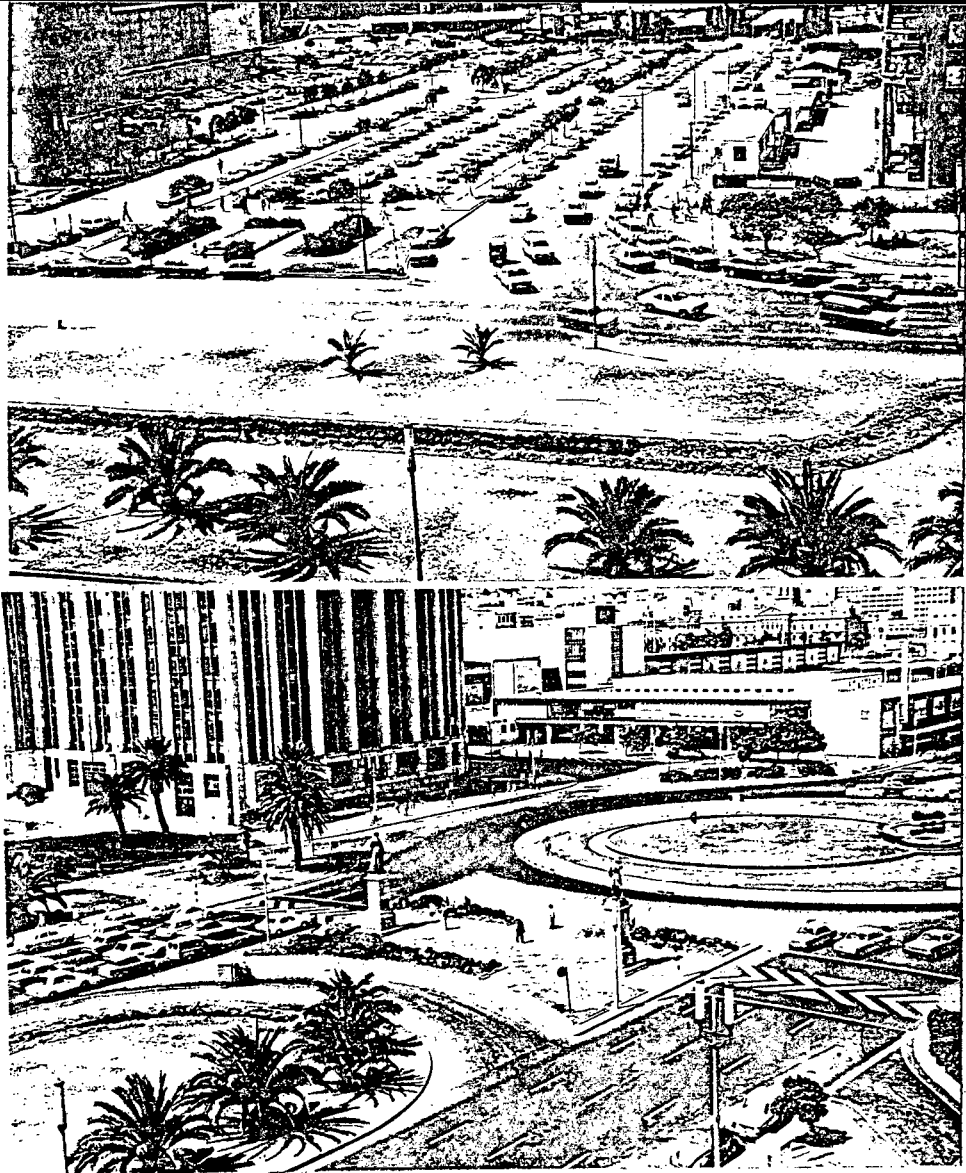
Map 1

The boundary on the other sides follows the proposed new ring-road system. In general terms to the Southeast by Canterbury Street to the Southwest by Orange Street and to the Northwest by Buitengracht Street. These boundaries are in the main fringed by residential areas and also some light-industrial land use. The future of these areas is also indeterminate firstly, because of the implications of the ring-road itself, and secondly, because of the Group Areas Act. The ring-road will be discussed in Section Four. The Group Areas act requires that the resident race group vacate the land.

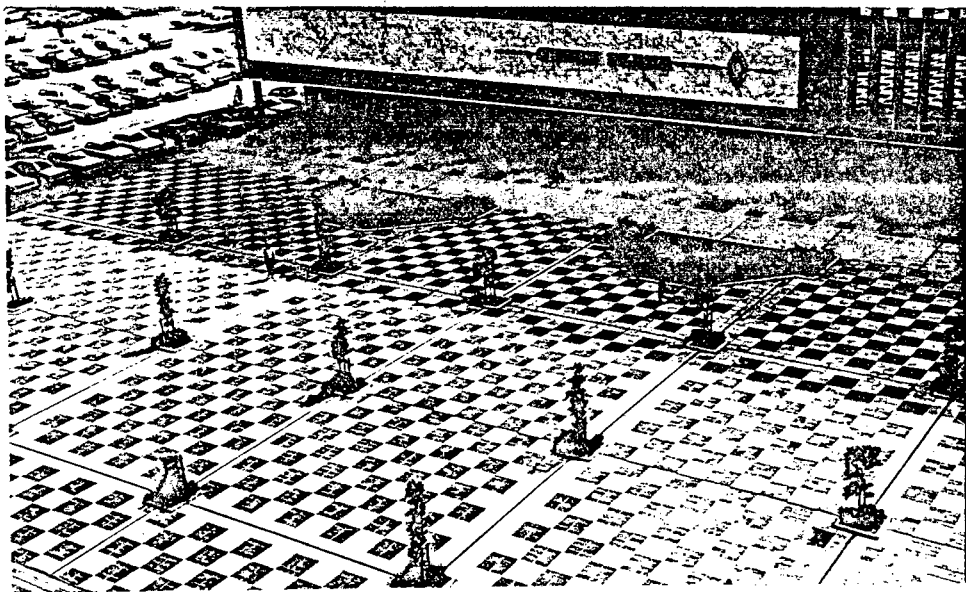
dunoon dock



THE DELIMITATION OF THE STUDY AREA



THE FORESHORE: THE HEMRENGRACHT

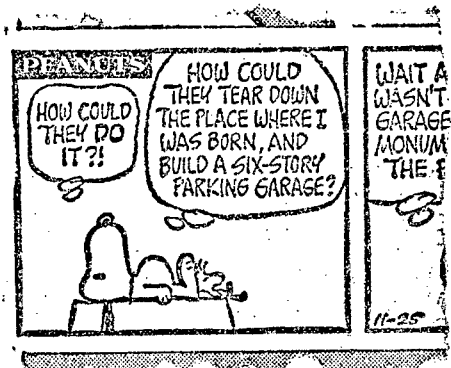


THE FORESHORE

Fig 1

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Charles
M. Schulz

3.0 AN ANALYSIS OF THE EXISTING PUBLIC OPEN SPACE IN THE
CENTRAL BUSINESS DISTRICT OF CAPE TOWN:

3.1 THE BACKGROUND TO THE HISTORIC OPEN SPACES

The existing Public Open Spaces in the Central Business District of Cape Town at the present time are somewhat reduced in extent and in use from what they were at the time of their first beginnings in the 17th and 18th Century.

In those earlier times, the need and desirability for these open spaces was essentially a function of socially defined requirements. There is not very much evidence as to what the determining factors for the areal requirement of any given open space were. Generally speaking their extent was fixed by existing land marks at the time.

It is not uncommon that at its founding a settlement should have an excess of open space in relation to the built up areas which encompassed them. But, it is almost incomprehensible that in the face of changing social attitudes and land-hungry market forces these open spaces should have survived in any form at all over such a relatively lengthy time span.

Thus it is apparent that wherever man erects buildings his social conscience dictates that he should provide attendant open spaces, and he will go to great lengths to retain historically established ones, even though

his social aims remain more or less undefined or at best ill-defined.

Certainly in days gone by the location of a particular open space was usually determined by either it's complementary relation to some or other building or else it was conveniently sited by reason of it's predominant use. This is borne out by the fact that in the case of almost every surviving square or "plein", in the Cape Town Central Business District the name is either derived from the building which served and abutted it or it has been named after it's original function.

Of the original open spaces in the Cape Town Central Business District only Caledon Square has been completely covered by buildings. Building operations began as early as 1767. The major surviving historical open spaces in the Cape Town Central Business District with approximate dates of delimitation shown in brackets are:-

The Parade (1695)

Church Square (1764)

Greenmarket Square (1710)

Riebeeck Square (1772)

Stal Plein (1791)

The Gardens. (While being the motivating factor for the original settlement at the Cape the Gardens were not finally opened to the public until the early 19th Century).

While the study of the historical background to the original Open Spaces in the City Centre does not in itself necessarily point the way to the future provision of Open Space in the Central Business District it is important in that these spaces tend to remain a fixed quantity in City Centre land-use. These Open Spaces may in fact survive every change to which the Central Business District may be subjected.

It might well come about that subsequent development surrounding any established open space will be quite uncomplementary to or even incompatable with such space. In short it might be preferable to put the land to some other use, but such a proposal would have to withstand the public outcry which it would almost certainly arouse.

3.1.1 CALEDON SQUARE: (See Maps 4 to 7)

At the time when it was mooted that the old hospital, originally sited opposite the entrance to the Gardens, be replaced, a part of the Parade was put forward as a possible location. This site was rejected owing to its proximity to the Castle.

The Caledon Square site was considered more suitable because of its access to water from the timber aqueduct which bordered it leading to the Castle.

The Square was originally called "Hospitaalplein", but by 1795 the Hospital was converted to barracks and the

open space was used for military exercises. This change in function caused some confusion because the Square was called by some "Exercitie Plein" thus confusing it with the Parade. The name "Cazerhen Plein" was also used, "Cazerhen" being the Dutch word for Barracks. The Barracks were demolished in 1803.

Ref 1

In 1819 the Square was named after Governor Caledon six years after the Government had repurchased the land from one Jacob Hendrikz who had meanwhile erected the granary building, which is still standing today and which houses a Post Office and certain government offices.

The Magistrates Courts, Police Station and a Prison for women were housed in the building from 1840 until 1924.

The existing Police Station and Magistrates Court stand on part of the original Caledon Square, as do the Drill Hall, the Technical College, Town Hall and the so-called Mayor's Garden.

3.1.2 THE PARADE (See Maps 4 - 9)

The Parade originated as the open ground that lay between the original Fort of Van Riebeeck and the Castle, and was bounded on the two long sides by the laying of the Keisergracht (now Darling Street) from the Heerengracht (now Adderley Street) to the back of the Castle on the Southwest side, and by the shoreline on the Northeast side.

The site was levelled in 1699 and again in 1740, this time for the planting of grass.

In 1710 the Here Sewentien prompted by Governor Van Assenburgh proposed that the Parade be built upon but the Burgher Council was unanimously opposed to this action and at their request the proposal was dropped.

In 1763 a road was built across it from the Keisergracht to the sea.

At the time of the Batavian Republic (1803 - 1806) an attempt was made to improve the Parade. Levelling was once again carried out, trees were planted, water pumps were installed and a fountain, designed by Anreith was erected on a site now occupied by the Post Office. A wall was later built dividing the area to separate marching soldiers on the Castle side from the sale of farm produce on the Heerengracht side.

By the time of the 2nd British Occupation the name "Grand Parade" became generally accepted and the names "Wapen Plijn" and "Exercitie Plijn" fell away forever, although during the visit of Prince Albert in 1860 an attempt was made to change the name to Prince Albert Square.

The Parade was a focus for a variety of social events. There was the great New Year's Day fair, chiefly a military review, at which the Burghers were amply supplied with food and drink. The space served as a

playground for children, and as a promenade for ladies of society. It was, as already mentioned, a market place for the farmers selling their produce.

Justice could be seen to be done on the Buitenkant side of the dividing wall where stood the pillary and the gallows. It was the venue for many public meetings, agitations and political gatherings. In 1849 one such gathering of the Anti-Convict League resulted in the diverting of British Convicts to Australia.

Auctions were conducted and early agricultural shows were held here although the latter never made much of an impact. The Parade has, however over the years been subjected to some diminution in size.

Ref 2

From 1822 until 1892 the Commercial Exchange building stood on the Darling Street half of the present Post Office site. The building also served as a social centre being the venue for balls and receptions, it housed a Library and Museum and in so doing generally complemented the Parade's centralised activities. An Opera House was built on the same site after demolition of the Commercial Exchange. Further encroachments were the present Standard Bank on Adderley Street, and a Post Office (the site now occupied by the O.K. Bazaars). Plein Street was extended towards the Old Railway Station leaving the Parade as it is today.

3.1.3 GREENMARKET SQUARE: (See Maps 4 to 9)

In 1710 the Burgher Councillors petitioned the Council of Policy requesting among other things that they be given title to the land on which the Watch House stood and certain adjoining tracts which together made up the basic limits of Greenmarket Square as it is now.

Ref 3

Originally the open space in front of the Watch House was known simply as "the place on which the Burgher Watch House stands" (Burgherwagts Plejn).

The said building dates back to 1696 when it first accommodated Cape Town's first rudimentary police force, Simon Van der Stel's Burgher Watch. The Watch House was the base from which the Burghers by turns patrolled the streets at night to ensure the maintenance of law and order, these were known as the "Rattle Watches"

This scheme, however, did not succeed as exemptions could be bought and in order to put an end to this malpractise the Rattle Watches became a professional body. The "professionalism" in turn was none too successful for the night patrols were given to drinking and brawling and the watches were abolished in 1792. The Burgher Senate used the building from 1796 until 1826. The building is known today as the Town House. Greenmarket Square had always served a secondary function, that of a vegetable market. With the disbanding of the Watches it continued primarily as a market place known as "Groente Markt", and later Greenmarket Square.

3.1.4 CHURCH SQUARE (See Maps 4 to 9)

The earliest maps indicate a Church with open space surrounding it more or less the same position as that on which the Groote Kerk stands today.

Church Square, as such, has no particular history of development other than that it was linked to the Groote Kerk, which was inaugurated in 1764.

The space on the opposite side of the now Parliament Street was known as "Kerk Pleijn" and was officially named in 1790. In 1845 it became Church Square.

3.1.5 RIEBEECK SQUARE (See Maps 5 to 9)

As in the case of the Parade, Riebeeck Square came very close to being built upon, and again it was the Burgher Council which, in 1772, successfully petitioned the prevention of this.

Originally the land was called "Boerenpleijn" and served as an outspan for horses and wagons. A pump was built on the Square round about 1785.

The British, in 1809 changed the name to Hottentots Square and used it as a place for public floggings until 1842.

One building was however, built on the Square, that being the "Ou Komedie Huis" or Play House in 1797. This was

Cape Town's first public Theatre. (Up until that time plays had only been performed privately.)

In 1839 the Theatre became St. Stephens Church and School and continued so until 1851 when the building came under the control of the Dutch Reformed Church. The building still stands today in use as offices and store rooms.

The Square has been known as Riebeeck Square since 1854.

3.1.6 STALPLEIN (See Maps 6 to 9)

Stalplein was, before it became known as such, a tract of open land in front of the official Guest Lodge in the Company's Gardens.

The land was the site for the Governor's stables after the original stables at the Castle had burnt down. A portion of the land "Looyersplein" (Tanners Square) was sold to the Catholic Church in 1845 as a site for the building of St. Mary's Cathedral.

The Guest Lodge was much altered and added to and in its present form is known as Government House. The stable buildings were demolished piece-meal over the years and by 1900 the resultant open space had dwindled to the Stalplein of today.

3.1.7 THE GARDENS (See Maps 2 to 9)

The present Gardens at the top end of Adderley Street covered approximately 10,5 hectares when Jan Van Riebeeck established the Company's Gardens. At his departure the Gardens had been extended to almost 20 hectares. Under Simon Van der Stel it was further enlarged in the direction of Table Mountain, while a portion at the lower end was given over to the building of a Hospital. The function of the Gardens was the cultivation of fruit and vegetables for the provisioning of the Dutch East India Company's ships. The Burghers did not have access to the Gardens and since this was the only source of supply severe punishment was meted out to anyone caught stealing the produce.

As the farms along the Liesbeek River developed the Gardens were opened to the Public and between sunrise and sunset they provided an amenity for relaxation and entertainment.

Simon Van der Stel had the lands laid out in regular blocks with surrounding hedges to serve as windbreaks.

During the same period, 1680, a Guest House was built in more or less the position where the Statue of Queen Victoria (at the side of the Houses of Parliament) now stands. Later slave quarters were built on the present "Old Supreme Court" site too close to the Guest House and a new Guest House was built opposite Stal Plein.

Simon Van der Stel was also responsible for the present oak-lined Avenue, many of the oaks dating back to that period.

Adriaan Van der Stel erected a menagerie at the top of the Gardens, and he was also responsible for the provision of a Museum. During his Governorship the Gardens had a very good reputation for fruit and vegetables. Captain Cook referred to the Gardens as "the best source of fruit in Europe and Asia".

Ref 4

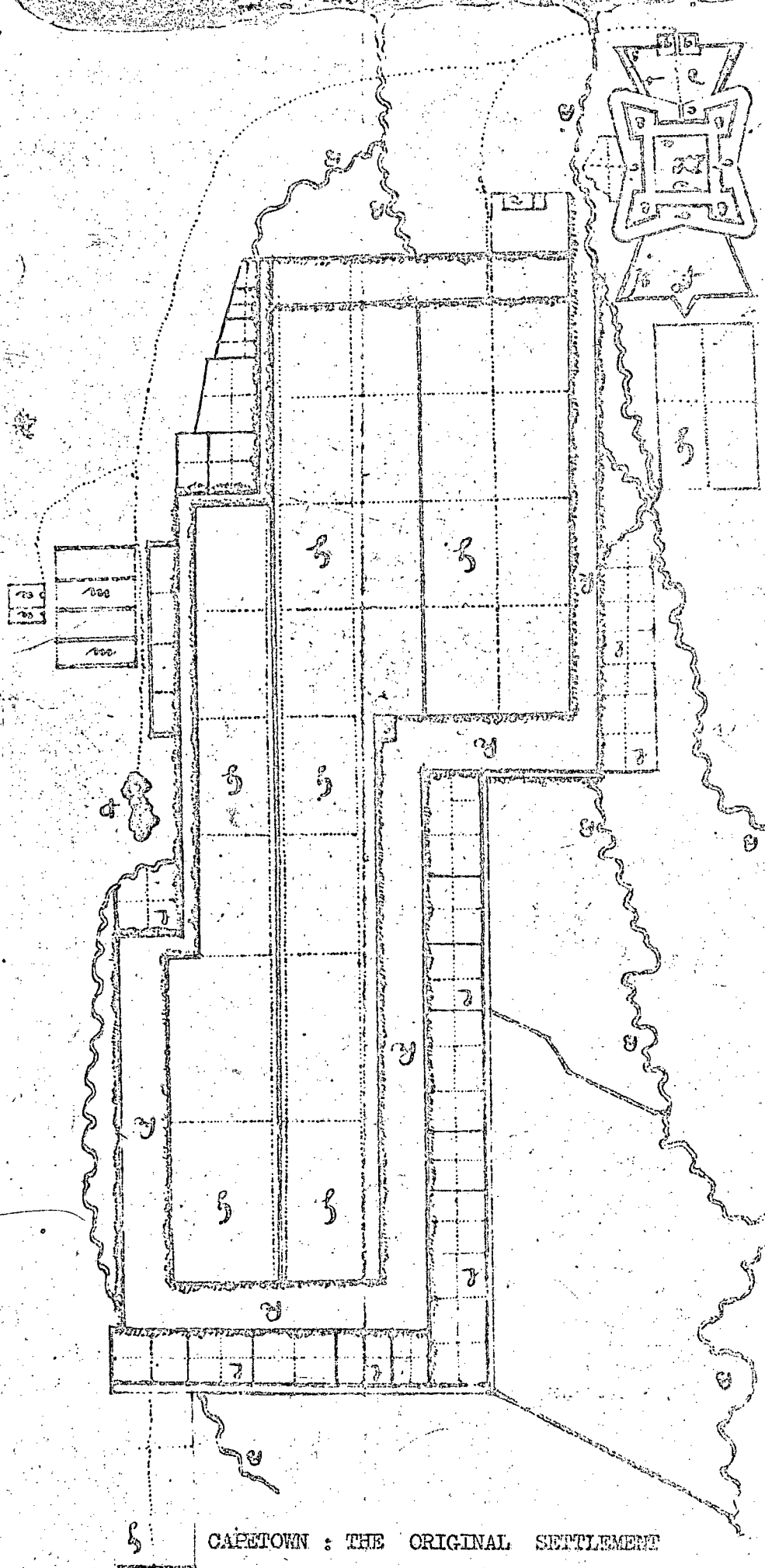
At the time of the First British Occupation the Gardens fell into disuse. The neglect was later set in order by the Governor, Sir George Yonge who reinstated the pathways and canals and built a fishpond with money levied from taxes. This use of public funds resulted in an outcry by the Burghers especially in view of the fact that they were now barred from entry to the Gardens, a denial of what in the eyes of the Burghers had become an entrenched right. Eventually the Governor conceded the right of access through the Avenue only and an attempt by him to have the Gardens enclosed with high walls failed.

After the recall of Yonge the Gardens were again opened to the public and the early 19th Century saw the heyday of the Gardens as a centre for recreation. Brass bands played on Sundays, fashion conscious crowds promenaded within and outside the gates. African slaves danced. The Gardens were botanically

important because they were a repository of many rare plants. They have, continued, however, merely as an example of well-attended decorative gardening since the opening of the Botanical Gardens at Kirstenbosch.

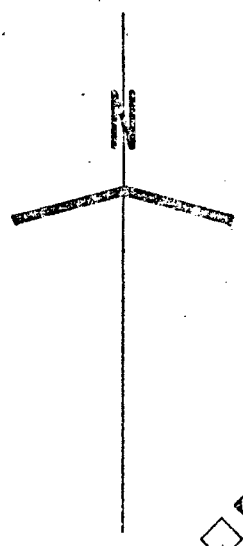
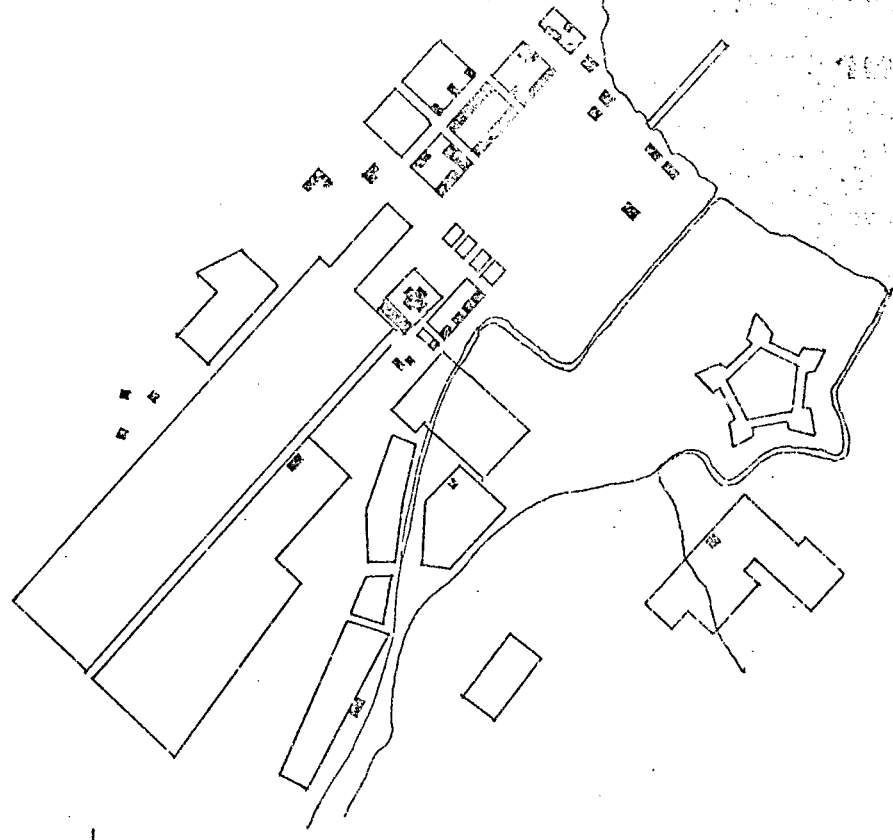
From 1830 onwards the Gardens had begun to shrink in size with grants of land being made to the Anglican Church for the St. George's Cathedral site, a portion to the South African College, allocations to the Public Library, Museum and Art Gallery and finally the Houses of Parliament.

(Source: State Archives, Cape Town)

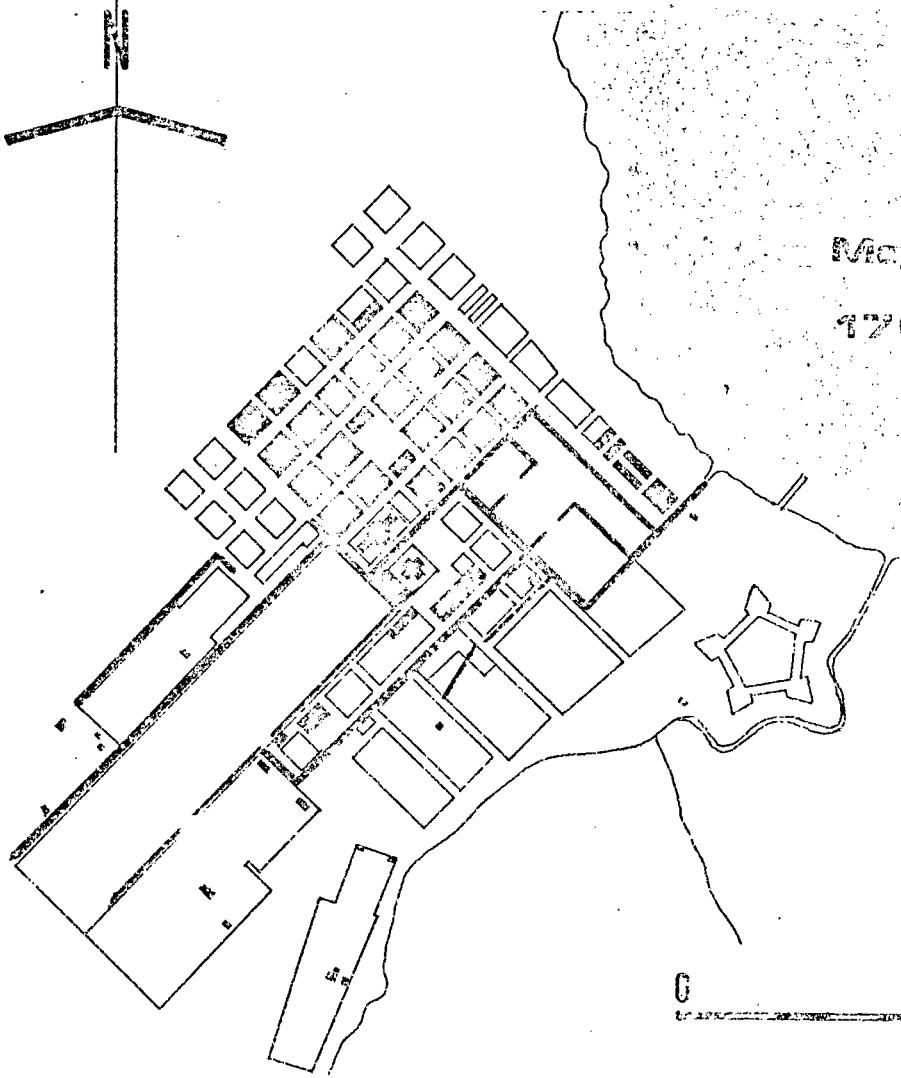


CAPE TOWN : THE ORIGINAL SETTLEMENT

Map 3
1939



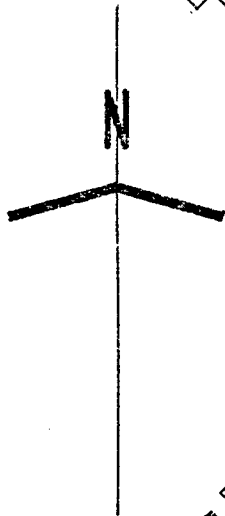
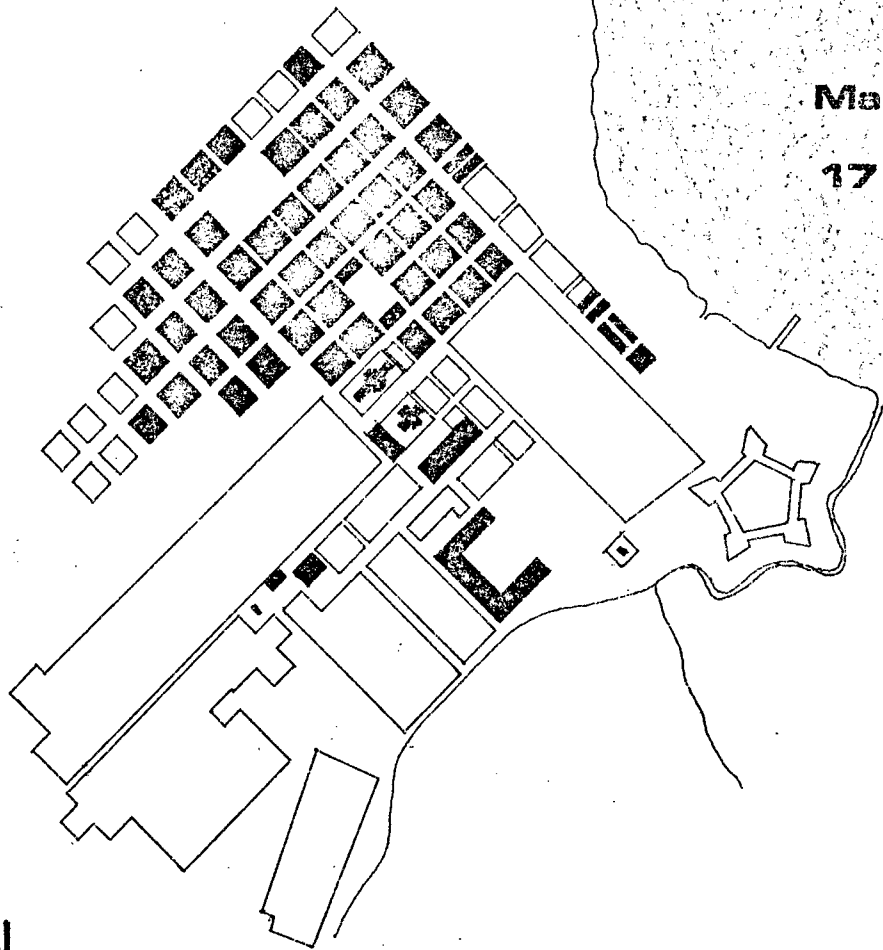
Map 4
1787



G 500 m

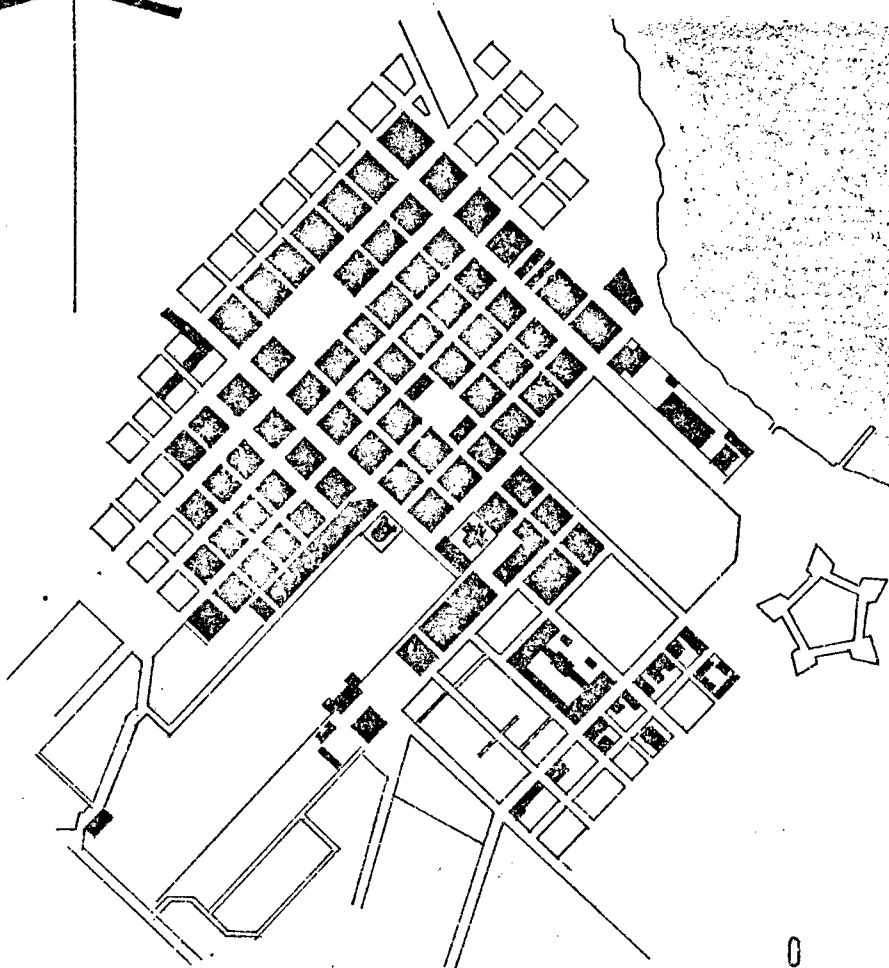
Map 5

1790

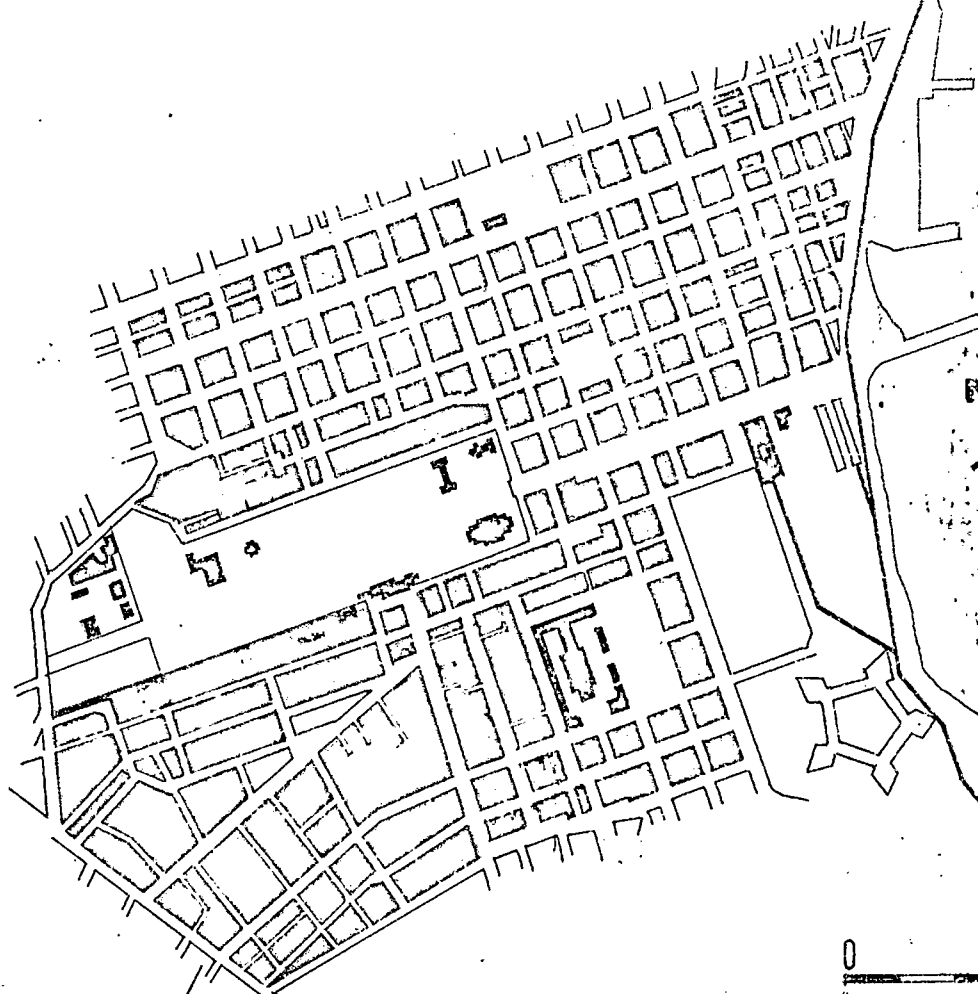


Map 6

1845

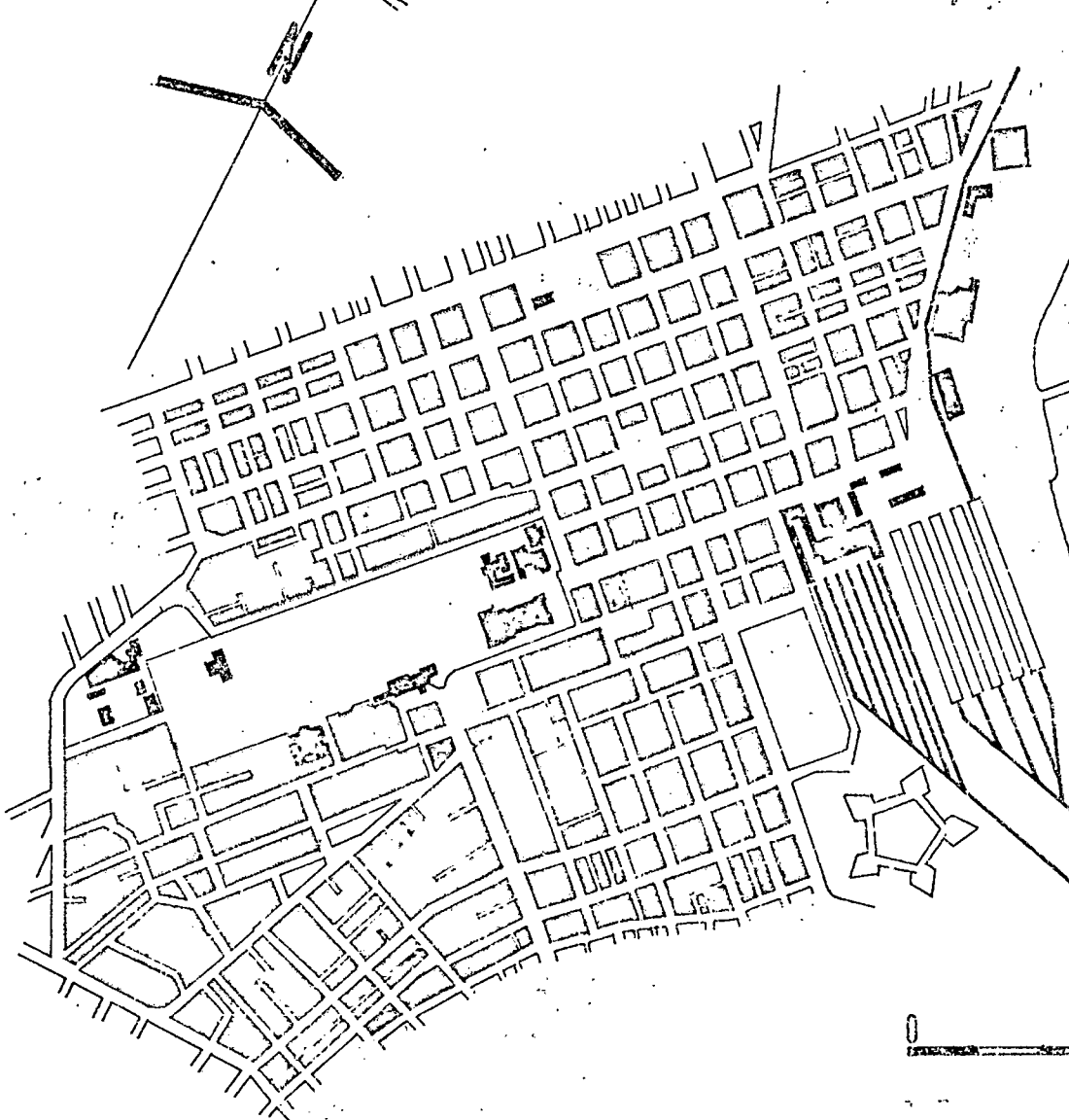


0 500 m



Map 7
1900

0 500m



Map 8
1937

0 500m

3.2 THE CHARACTER AND AMENITY OF THE HISTORIC PUBLIC OPEN SPACES IN THE CENTRAL BUSINESS DISTRICT:

The five historical public open spaces in the Central Business District with the exception of the Gardens, are relatively small in size. They are all confined by the regular rectangular street pattern of the City, so that they themselves are usually rectangular in plan.

The spaces are discrete and are not connected to each other by linkages of any kind, and the pedestrian wandering liesurely in the City will not find that he is drawn along from one place to the other by connections of interest or along a flowing continuity.

Although the spaces represent a heritage from the past their form and character do very little or nothing at all to reflect their origins. At no time in their history were any of the squares ever unified by enclosing them with buildings in the manner employed by the now long surviving London Squares. They have remained merely tracts of land in the Central Business District that have, for one or another reason, not been completely built upon. In the case of every space there are no signs of the existence of the elements and qualities considered essential for successful Squares in the City even if they are analysed according

to the tenets of Camillo Sitte. It would be interesting to make such analyses of the open spaces but such diversions are not germane to this thesis. At best the historic public open spaces in the Cape Town Central Business District possess some or other dignified Statue, which may or may not be sited strictly according to sitte. Those spaces that are not graced by monuments can however boast of public conveniences.

Ref 6

In the context of present day City planning these open spaces, whatever their character, are subjected to the changes that affect the other land uses in the City Centre. They are intrinsic to the overall pattern of the development of the Central Business District, what has become of them to date?

3.2.1 THE PARADE:

The Parade has an area of 3,5 hectares, all of which is covered with tarmacadam. It has two statues, one roughly in a position opposite the main entrance of the City Hall. It is bounded to the Northwest by Plein Street, to the Southwest by Darling Street, to the Southeast by Buitenkant Street and the Castle and to the Northeast by Castle Street.

Fig 2a

The connections of the Parade with the Castle and the City Hall, the major buildings facing onto it, are tenuous although military parades might still occur once or twice annually. At the Plein Street end

are located permanent fruit and vegetable stalls and soft drink kiosks of very temporary-type construction forming an alleyway approximately 10 metres wide.

Fig 2c

If character is sought on the Parade then it is here that it may be found and perhaps at the bi-weekly (Wednesdays and Saturdays) morning trestle-table market, virtually anything in the range of junk may be purchased. The merchandise is slowly, and perhaps sadly, changing to the soft goods range. There are trees along the boundary of the Darling Street and Plein Street sides.

For the rest the Parade is an open-air all-day, pay-parking lot (30 cents a day) which is invariably fully parked by 8.30 a.m. on weekdays. At nighttime two food preparing waggons purvey snacks all-night in the drive-in road house manner. (The Parade was declared a National Monument in 1962.)

Fig 2b

3.2.2 GREENMARKET SQUARE:

Greenmarket Square is roughly square on plan having an area of .65 hectares including the streets. The square is enclosed on all sides by buildings over five storeys high with the exception of a Church and the Town House on the Southwest side. The streets are on all four sides and only two of these are actual streets, namely Shortmarket Street on the Northeast and Longmarket Street on the Southwest. Burg Street cuts across the two

last-mentioned streets and bisects the Square into halves. The entire Square has a cobblestone surface with bollards demarcating the way for use by vehicles. In one half is a partly underground public convenience a few small trees and benches for sitting upon. The other half is much the same with the exception of the public convenience. It is difficult to assess the character of the Square but, for all its hardness, it does serve as a resting place, especially during the lunch break. There are "No parking" signs flanking all the roadways. The square serves a function as a pythagorean "short cut" for pedestrians.

Fig 3a

Fig 4

The amenities for nighttime activities are non existent and although Greenmarket Square is the closest open space to the night club area it would appear, from observation that the recently quoted figure for prostitution (6 000 to 8 000) in Cape Town does not, by absence of the phenomonon, include the public open spaces.

Ref 7

3.2.3 CHURCH SQUARE:

The area of Church Square is approximately ,18 hectares separated from the Groote Kerk by Parliament Street it is bounded on the Southwest by Spin Street and on the Northeast and Southeast by buildings of over four storeys.

Opposite the entrance to the Church is a Statue, and the rest of the area is paved with tarmacadam.

The Square serves as a free-parking area (2 hour limit) during the day. At night it serves as a parking area for a nearby Theatre.

Fig 5

3.2.4 RIEBEECK SQUARE:

1 hectare = 10,000 m²

Covering an area of ,82 hectares Riebeeck Square is bounded by Shortmarket Street on the Northeast, Bree Street on the Southeast, Church Street on the Southwest and Buitengracht Street on the Northwest. The surface is tar-paved throughout.

The Square has no features of any interest except for the Old Play House discussed in the foregoing section.

In affording amenity Riebeeck Square has been most consistent. From the time of its earliest delimitation the Square has served as a parking area, at first for ox-wagons and horses and later from about 1919 for motor vehicles. Today it is an all-day open-air parking lot (30 cents a day).

Fig 6

3.2.5 STALPLEIN:

Situated in the core of the Governmental/Ambassadorial area Stalplein covers roughly ,25 hectares.

It has a Statue and some trees and of all the Squares only it has some vestige of "monumentality". Now closely linked to the new H.F. Verwoerd Building

(Government Headquarters) it provides some free short-term parking restricted to the public during Parliamentary sessions.

3.2.6 THE GARDENS:

From its original extent the Gardens today has shrunk to about 6 hectares, set out in a basically rectangular pattern stretching from Wale Street on the Northeast to Orange Street to Southwest. It is bounded on the Northwest by Queen Victoria Street and by Parliament and Hatfield Streets on the Southeast. The Avenue runs for an uninterrupted length of 930 metres through the middle, in line with Adderley Street, from Wale Street to Orange Street.

Fig 8b

The Gardens may be said to possess everything of a public and Governmental nature that such an area should. (A notable non-feature being the absence of vast parking lots although an informal inroad is in evidence on vacant ground along Hatfield Street.) By way of amenity the Gardens offer the public a Restaurant with some outdoor seating

Fig 8c

Statues and memorials abound here and there are fish ponds, an Aviary, and a hot-house dispersed along the pathways among the flower beds and lawns. The public is provided with benches for sitting on and lawns for reclining upon although "Keep off the grass" signs are rotated in order to give the grass recovery time.

Fig 9

Much of the original land in the Gardens has been given over to buildings, the most extensive users being the Houses of Parliament together with Government House (recently restored) and the University of Cape Town Departments of Law, Economics, Fine Art and Drama. Other buildings are the Anglican Cathedral and School, The South African Library, Art Gallery and Museum, a Synagogue, three other schools, one of which is now vacated and a Medical Laboratory.

The need for security, presumably, has resulted in the confining of all the buildings, with perhaps the exception of the Art Gallery, within their own separate precincts in a somewhat forbidding manner.



a



b



c

THE PARADE

Fig 2



a



b



c

GREEN MARKET SQUARE

Fig 3



a



b

GREEN MARKET SQUARE

Fig 4



CHURCH SQUARE

Fig 5



a



b



c

RIEBECK SQUARE

Fig 6



a



b



c



a



b

THE GARDENS: THE AVENUE



c

THE GARDENS: THE RESTAURANT

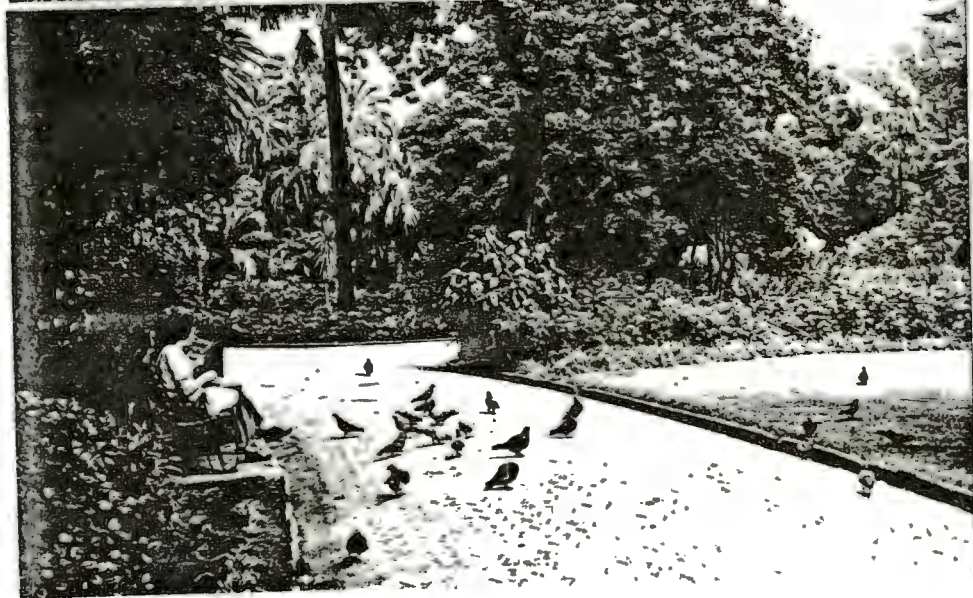
Fig 8



a



b



c

3.3 THE EFFECT OF THE FORESHORE PLAN ON PUBLIC OPEN SPACE
IN THE CENTRAL BUSINESS DISTRICT:

The creation of the Foreshore by the reclamation of land from the sea has had a marked affect on the old C.B.D. There is the startling change of the seaward periphery from what was a soft coastline to what is a hard cultural boundary, and there is the inevitable give and take along this new line of demarcation in order to force the old and the new to knit together.

Since the turn of the century the loss of the coastline has been a substantial loss of public open space to the old city, which even the Foreshore scheme failed to recapture (the term "loss" is here used in the sense that certain amenity, the value of which can now only be subjective, no longer exists).

The proximity of and to the water can no longer be sensed. Gone are the Roggebaai beach and fish market, gone is the Pier, bandstand and boating and gone is the beachfront promenade.

Of the give and take aspect the most significant factor is the re-location of the rail terminus. This has resulted in a considerable addition to the existing stock of open space in the city centre, a phenomonon that must surely be rare in developing cities the size of Cape Town.

3.3.1 THE STATION DECK:

The full extent of the new Station platforms is roofed over creating a vast expanse of level deck which provides, parking (30 cents per day) for 1 000 cars. Access to the parking area is from Pirow Street on the Southeast beyond the Castle.

3.3.2 THE STATION GARDEN:

Whereas the old railway station buildings fronted directly onto Adderley Street the new buildings are set back to a line approximately 120 metres from it. This has led to the provision of a new open space in the city Centre and the formation of what can be called the Station Garden, an area of 1,4 hectares of paving, planting and grassing in a more or less formal layout, and the provision of a limited number of benches for sitting.

Fig 10

3.3.3 THE GOLDEN ACRE:

(This tract of land is included in the inventory of open space only because the future use of the land was the subject of controversy.)

The demolition of the old railway station resulted in the formation of a site one city block in width stretching from Adderley Street to the Castle.

Fig 11

The land belongs to the City Council which intends using the portion between the Castle and Plein Street as a bus terminus. The portion between Plein Street and Adderley Street came to be known as the "Golden Acre", because of its location at the centre of the peak of the land isovals.

Ref 8

At the end of August, 1968 the newly acquired land (\pm ,50 hectares) was reported by a local newspaper as being possibly zoned as open space. At the same time the City Council estimated that development of the site could provide the city with an annual income of about half a million Rand if zoned for business. The main body of antagonists (letters to the Editor) to business development of the site were led by regular columnists who favoured the "open space/garden/City lung" concept and pointed out that value of the income quoted represented only ,01% of the city's anticipated expenditure for 1969.

There were observations relating to the intensity of land use and the question of development by either the public or the private sector.

Suggestions for the activities for which the site should provide included tourism, sport and cultural pursuits and multi-function development. One particular correspondent warned the layman not to meddle.

Ref 9

Because of the undisputedly high value of the land there was never any doubt in the minds of property developers

that the land would be given over to buildings. It remains to be seen what provision, if any, the ultimate development of the site will make for open space.

3.3.4 THIBAULT SQUARE:

Thibault Square is situated at the point at which the old Dock Road intersected with St. George's Street. Dock Road now connects with Strydom Avenue and St. George's Street ends at the Square. The Square measures ,5 hectares and is completely surrounded by buildings. B.P. Centre, the most recent building closes the Northwest side of the Square, which has now been provided with paving and planting.

Fig 11a/b

3.3.5 THE CASTLE PRECINCT:

The Castle walls are surrounded on the outside by lawns and planting. On the Northeast side, flanking the new Boulevard East Freeway, the lawns are continuous with the pavement. On all the other sides the ground is fenced off and the public do not have free access to all the garden areas.

3.3.6 OTHER OPEN SPACES IN THE CENTRAL BUSINESS DISTRICT:

There are areas in the city which, although not specifically set aside as Public Open Space, are nevertheless part and parcel of the land use pattern as open space.

Such open space as may result from the adjustment of streets for the building of freeways and where the remnants of sites expropriated for road widening are of such shapes and sizes as to be unviable for development. This is occurring along the route of the ring road system. Mention must also be made of traffic islands and roundabouts, which are found predominantly in Adderley, Bree and Buitengracht Streets. It is not impossible that a proposal be made that the expansive spaces now gracing the centre of the Heerengracht be extended up the full length of Adderley Street.

Fig 1b.

There are two other very minor open spaces in the City. One being a wedge shaped site at the beginning of Somerset Road which used to be known as St. Andrew's Square, being located opposite a Church of the same name. The other, also a wedge shaped site, is a children's playground in Hope Street in the Southeast sector of the City.

There are relatively few open spaces interspersed between the buildings on the city blocks. There is an open space at the corner of Adderley Street and Strydom Avenue on the Southwest, it is tucked into L-shaped buildings and has a few trees and shrubs.

Trafalgar Place, the area used by the flower sellers between the O.K. Bazaars and the Standard Bank, runs from Adderley Street to Parliament Street, having a width of

about 15 metres. Two pedestrian passages flank the flower troughs in the centre.

Fig 12

City centre buildings have historically tended to fill the whole site primarily to take full advantage of building regulations relating to coverage and bulk.

The most recent developments providing for a measure of open space within the site are the African Life Building in Riebeeck Street, which includes an arcade linking Riebeeck Street with Thibault Square, and an open internal courtyard, Cartwrights corner which has a Tee-shaped arcade accessible from Adderley, Darling and Longmarket Streets, and the Trust Bank building which has an arcade linking Adderley Street with Thibault Square. The ground level of the new B.P. Centre is treated as an extension of Thibault Square.

3.3.7 THE LONGMARKET STREET SHOPPING MALL:

An experiment was undertaken by the City Council to test the effectiveness of a pedestrian shopping Mall by curtailing vehicular traffic. A section of Longmarket Street between Adderley and Corporation Streets was chosen as the test area. The experiment lasted from June, 1971 until April, 1972, and was discontinued for reasons that will be discussed in a subsequent section.



a



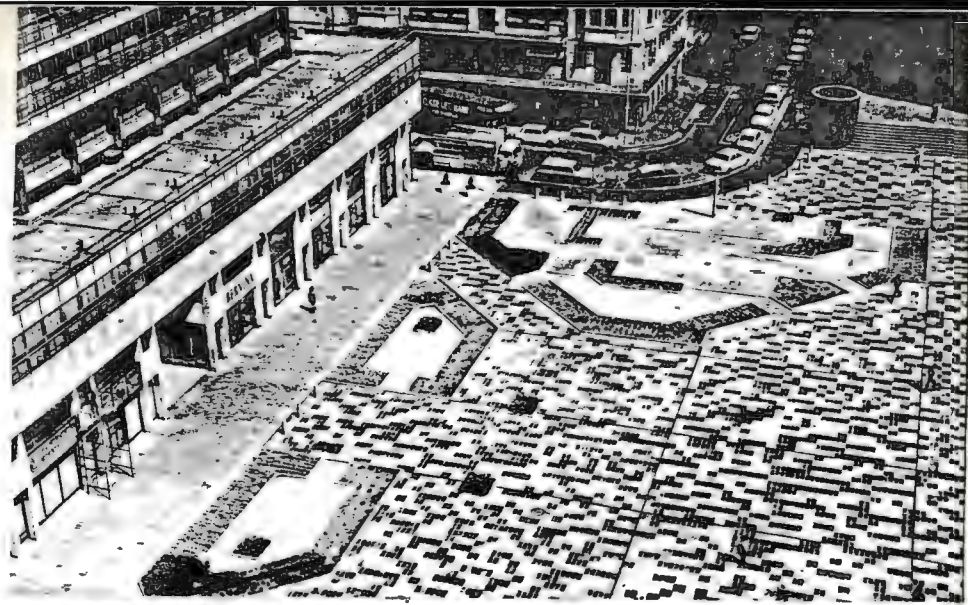
b



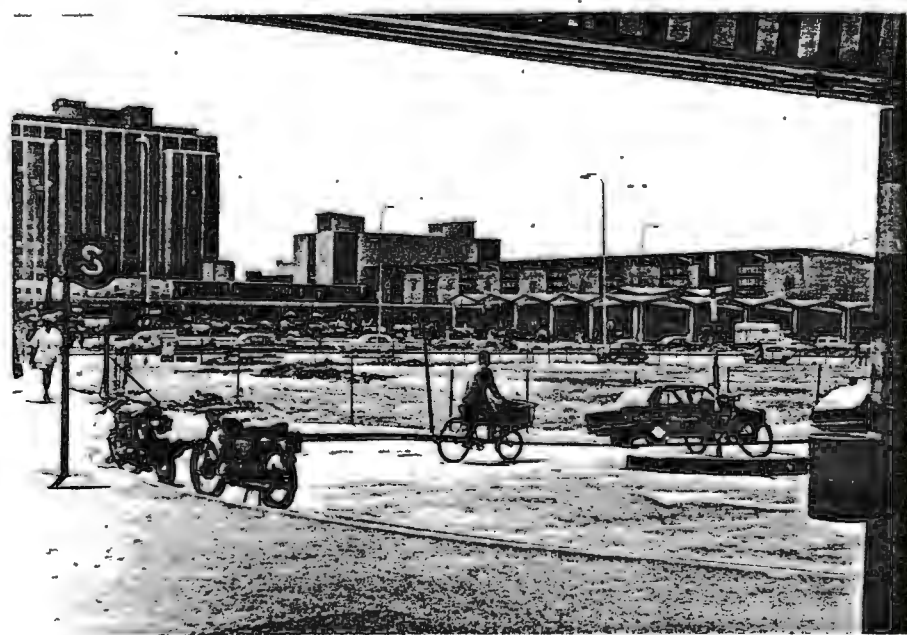
c

THE STATION GARDEN

Fig 10



THIBAULT SQUARE



" THE GOLDEN ACRE "

Fig 11



a



b

TRAFALGAR PLACE

Fig 12

3.4 THE EXISTING PUBLIC OPEN SPACES PROVISION

SOME CONCLUSIONS:

3.4.1 THE HISTORIC OPEN SPACES:

While it is admitted that the assessment of the character and amenity of the Historic Public Open Spaces is naive, this naivety stems not so much from the descriptions themselves as from the rôles these open spaces have in the overall city centre environment.

With the singular exception of the Gardens, and to a lesser extent, Greenmarket Square, the open spaces contribute little or nothing to the benefit of the city other than the fact that they exist. They all, except the Gardens, lack the treatment and the provision of amenity usually described as imaginative; they generally do no more than augment the parking provision of the city and in fact they constitute a substantial 33% of the total number of parking spaces. There are 2 720 parking spaces in the three existing public parking garages. The public open spaces have parking for 1 260 cars, this figure does not include the Station deck (1 000 spaces). As Public Open Spaces, per se, they have a negative value and to all intents and purposes they are non-existent, they are merely extensions of the vehicular movement system.

It might be true to state that, with the exception of the Gardens and to some degree Greenmarket Square, the Historical Open Spaces in the Central Business District

provide little or no amenity for the pedestrian in the City centre.

3.4.2 OPEN SPACES RESULTING FROM THE FORESHORE PLAN:

The provision of amenity by the open spaces along the periphery adjoining the Foreshore is minimal. The Station Garden is in some measure an aggravation of the succession of "dead spots" that line the right hand side of Adderley Street facing the Foreshore insofar as the pedestrian shopper is concerned.

Thibault Square has some potential for pedestrian use because of its enclosed feeling and because of the continuity of pedestrian space around the Square itself as well as through the spaces in the buildings that surround it.

3.4.3 OTHER OPEN SPACES:

The other open spaces are all relatively very small and are in the main really incidental spaces. But for these reasons they should not be discounted. They can still offer some amenity not the least of which is the element of surprise to the itinerants who may suddenly come upon them and find there something of interest. The impact of the flower market is one example of this. It is interesting to note that, although there are two rows of water troughs, the flower-sellers have chosen to turn their backs to the blank wall of the Bank.

Counts of pedestrians passing through the area showed that between twice and four times as many people passed between the flower sellers and the shop front as did on the side of the "dead" front Bank wall. (Appendix 1)

While this cannot be conclusively taken to represent the reaction of pedestrians to all dead-frontage in the C.B.D. it does show some indication of the rejection of dreariness.

3.4.4 THE LONGMARKET STREET SHOPPING MALL EXPERIMENT:

At the request of several of the shop keepers along Longmarket Street (Southeast of Adderley Street) the Junior Chamber of Commerce persuaded the City Council to experiment with a shopping mall in the area.

From the 29th of June, 1971 until the 27th of April, 1972 section of Longmarket Street (the length of 3 City Blocks) from Adderley Street to Corporation Street was closed to all vehicular traffic between the hours of 12.00 noon and 2.00 p.m., and to all vehicular traffic except for delivery vehicles in the two periods 9.00 a.m. to 12.00 noon and 2.00 p.m. to 4.00 p.m.; cross traffic along the intersecting streets (Parliament and Plein) was at no time curtailed. The area comprised thirty shops. Information obtained from the Town Clerk's Office revealed that a video-tape recording of interviews with shoppers was undertaken by the City Council at the time but that this has since been discarded.

At the end of the experimental period the Council considered that the test area was unsuitable for the following reasons:

1. The volume of vehicles servicing the shops was high. Only one shop had its service entrance away from Longmarket Street.
2. Service vehicles attained greater speeds than before due to the overall reduction in volume of traffic.
3. Traffic Officers were unable to effectively curtail the entry of vehicles other than service vehicles.
4. Access to the parking garage in the basement of Cartwrights Corner in Longmarket Street could not be prohibited.

A survey of the opinions of pedestrians in the area at the time would have provided some indication of the success or otherwise of the experiment but as this was not possible an interview survey of the opinions of the shopkeepers was undertaken. (See Appendix 2)

3.4.5 FINDINGS OF THE SURVEY:

The Survey revealed the following:-

1. The shops on the whole did not show a significant increase in the number of customers.
2. The shops did not show a marked increase in turnover.
3. With regard to having the road closed permanently there was a majority of disinterested and indifferent opinion.
4. The general comment was that if a mall was to be created it should be "done properly"

5. Several boutiques favoured the movement of cars past the shop, it was thought to be more "exciting" to overall effect.

A similar experiment was tried in New York, closing off 5th Avenue appears to have been more successful. But there is no relevant data to support this. What would have occurred had Adderley Street been used as the test area? It would seem unlikely that the result would differ very much from the Longmarket Street experiment for very much the same reasons.

The Longmarket Street survey confirmed the observations of the City Council but while the Council's observations are confined to vehicular traffic the survey shows some indication of the effect on pedestrian movement in the area.

Two further thoughts are suggested. Firstly, that the shops are at present patronised at a level that would not vary even if the "mall" were to be instituted in the accepted sense of the term. Secondly, that volume of vehicular traffic in a narrow, short city-block, street like Longmarket Street has no effect on the density of pedestrian shoppers.

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MAPS: 2 to 8 The State Archives, Cape Town.

4.0 THE FACTORS WHICH DETERMINE THE NEED FOR PUBLIC OPEN SPACE
IN THE CENTRAL BUSINESS DISTRICT:

From the preceeding chapters it has become evident that the existing open space provision in the Central Business District has little more to offer than the fact of its existence and that in spite of this the assumption can be made that open space will always be a category of Central Business District land use.

From the point of view of the history of urban design and development, the perusal of the plan of just about every existing city at the present time will show a section or sections of these cities that is given over to open space. Open spaces formerly fulfilled the requirements of being places in which certain specified activities could take place. In this respect the ancient city catered for every aspect of life; religion, politics, commerce, drama and sport; each sphere of activity in a specially derived space. The medieval city provided for life in public in much the same way, although the areas for performance were not as rigidly defined as those of the ancients and the activities became more concentrated. During the Renaissance there was a return to order, and in the words of Mumford, to "Court, Parade and Capital".* The emphasis was again on the visual order as it was in the ancient Greek City but with a new kind of monumentality, a seemingly sterile landscape in which the crowd scene

of the Medieval City was no longer an essential element. Throughout these developments of urban planning and the social elements that fostered them there were concomitant components of the city that were apparently taken as read in the pre-industrial city but were to become all-important considerations of the industrial city.

With the coming of the industrial city came divisions of labour, purpose and interests hitherto unequalled. The City became fractionated and the elements that had before been so well knit and ordered rivalled each other for space in which to operate. Among the facets of urban growth were the increase in enterprise and pursuits, the bid for potential sites, the growth of populations and lastly but by no means least the spread of transportation networks which came to be of primary importance.

The transportation systems which were developed to serve the needs of the expanding city and to ensure the efficiency of the city's functions have today taken control. Transportation is perhaps today the most important component of the urban realm and at the same time it is responsible for some of the weightiest problems that confront urban planning and design.

Ref 2

With the sophistication of communications urban man has a clear choice, between decentralisation, which may be more conducive to survival, or concentration.

Ref 3

"It is no doubt that the Central Business District continues to offer certain efficiencies and scale economies, distances separating firms and households there are shorter than in the suburbs. It is no doubt also true that the face to face contacts, and especially the chance contacts that the proximity engenders still make the Central Business District an effective communications system and it appears that decision makers still place greatest trust in information that is compounded with the lunch time Martini".

Ref 4

Accepting that the Central Business District is an effective communications system it is not unreasonable to suppose that there are those firms and individuals who will choose concentration in order to avail themselves of the efficiencies and scale economies that are offered. This is true in the case of very nearly every Western city today.

At the forefront of change in almost all cities is the fact of population growth, an increase in the intensity of Central Business District activities and an increase in the load of the transportation systems, especially freeway systems, which serve the region as a whole. The C.B.D. has become more accessible to a growing number of people.

4.1 THE TRANSPORTATION SYSTEM:

While the problems that beset decentralised activities and sub-centres are not to be discounted, the transportation links that originate at various places in the Metropolitan Region all impinge upon the Central Business

district sooner or later. Central Business Districts have changed over time employing piece-meal solutions to cope with this problem. The impact of freeway system on the city centre has become a threat to its future not only because of its direct affect on the Central Business District but also because of the trend of re-tailing to strenthen in suburban locations. The free-ways make it just as easy to leave the Central Business District as enter it.

Ref 5

A reassessment of the components which are necessary for the survival and optimal functioning of the Central Business District is needed.

The peripheral freeway once fixed is immutable. It requires extensive use of land and it causes an abrupt transition of land use along its course. Parking is usually provided along the inner loop, and this coupled with the redevelopment of the periphery will change the pedestrian movement pattern.

Ref 6

It seems unlikely that the popularity of the motor car as a mode of travel to the Central Business District will decrease for some time to come; ~~and~~ given that car-ownership in the metropolitan area is increasing.

Access from the ring-road into the established street pattern of the city centre will cause further disruption. At ground level, along those streets onto which the

heavier vehicular traffic volumes are channelled, points of conflict will develop at the cross-overs of pedestrian space and the vehicular movement system.

Since the activities of the Central Business District are likely to intensify the office function in particular job opportunities can be expected to increase. This being the case travel to the Central Business District by bus and train will also increase and thus affect pedestrian movement by the journey to and from work flows.

4.2 PEDESTRIAN MOVEMENT IN THE CENTRAL BUSINESS DISTRICT:

The Central Business District is pre-eminently the domain of the pedestrian.

"Of all transportation modes the foot offers the greatest degree of flexibility".

Ref 9

Within this relatively confined area the flexibility of the walker is well-suited to the multiplicity of pedestrian generators that operate in the larger city centre. In this respect the "trip" classification adopted by Morris and Zisman seems applicable. Their classification, in order of maximum frequency, is:-

1. Terminal Trips
2. Use Trips
3. Health and Pleasure Trips
4. The Parade

Ref 10

4.2.1 TERMINAL TRIPS:

The terminal trip is the most frequent largely because these trips occur at peak hours to or from the parking spaces, rail and bus stations and other components of the Central Business District. All such trips stem originally from linkages outside the Central Business District and culminate, almost without exception, in the pedestrian movement system within the city centre.

A recent study of the city centre of Cape Town gives the modal split of the numbers of people entering the Central Business District before 9.00 a.m. is as follows:-

Ref 11

1. Train	44 000	47%
2. Bus	20 400	23%
3. Car	30 000	30%

Fig 13a

4.2. 2 RAIL TERMINI:

The aforementioned study also revealed by analysing the movement of pedestrians from the Railway Station that 70% of all commuters had destinations in the old Central Business District, the other 30% was directed at the Foreshore. Under the existing circumstances all the pedestrians had to cross a major road, either Adderley Street or Strand Street or, as in the case of the majority both.

Fig 13b

At the present time the only provision for the alleviation of the points of conflict of pedestrians and motor vehicles is a temporary pedestrian footbridge over Strand Street rising from the Southeastern side of Strand Street, and linking with the Station deck, at the part of the Station set aside for race groups other than White.

It is the City Council's aim to provide such cross-overs in a permanent form from the proposed bus-station and "Golden Acre" sites in the future.

4.2.3 BUS TERMINI:

Bus termini, such as they are, are located mainly in Plein Street and around the Parade, in Adderley Street along the Southeastern side, along St. George's Street and in Riebeeck Street outside the African Life Building.

The regular, low frequency, regional and inter-regional bus services centre on the Station and the Parade.

The regular high frequency local bus routes make extensive use of a high proportion of the streets in the Central Business District. The added congestion to vehicular traffic, notwithstanding, the bus service is a convenient method of entering the city because of the accessibility it affords in being able to deposit commuters close to their destinations in the Central Business District and thus minimising to a certain extent the conflicts that

would arise were the bus-termini to be concentrated at a point which would almost certainly be bounded by major roads. The volume of vehicular traffic that a bus-station would generate would also aggravate the points of conflict with the pedestrian movement.

4.2.4 CAR PARKING TERMINI:

Increased traffic, because of the ring-road system, places an ever-increasing burden on the land-use in the Central Business District. The improved accessibility made possible by the freeway requires that additional parking places be provided at destination. Given that off-street parking, is if not essential, preferable to the other forms of parking, on street metered and free parking and open site parking, it is likely that much of this will look to private sector for its provision.

Ref 12

The trend in the location of parking garages is the use of land adjacent to the access points along the ring road and development, nearer to the city centre, usually by the private sector, tends to provide for parking between ground level shops and office use on the higher floor levels. At present parking of this type is provided by three parking garages, Pleinpark in Plein Street/Barrack Street, the Parkade in Strand Street/Waterkant Street and City Park in Loop Street/Bree Street. Together these offer a total of only 2 800 parking places which,

taken at the relatively high rate of 1,7 for car occupancy generates only a possible 4 760 pedestrians.

The open site parking lots generate about 50% of the total given for parking garages. These figures, however, do not include the parking provided in the same manner but reserved for private use.

On street parking places probably generate the most pedestrian trips firstly, because these spaces are in the majority and secondly, the metred space tends to have a greater turnover of user in that the parking time is limited by the enforcement of controls.

All the on-site and open-parking place dealt with above are within ten minutes walking of the peak land value intersection, a distance of roughly 850 - 900 metres.

4.3 USE TRIPS:

Use trips are essentially trips generated by linkages between the component functions of the Central Business District. These trips may be further sub-divided:

- a) Business Trips, and
- b) Shopping Trips.

4.3.1 BUSINESS TRIPS:

A study in Washington D.C. found that 70% of all trips with inter-office linkages were pedestrian trips.

Ref 13

The office and retail functions in the Central Business District tends towards clustering and certain inter-reliant clusters tend to overlap and therefore pedestrian movement within the cluster is facilitated. Efficiency in the dispensing of information services and goods foster the scale-economies that are sought after in the Central Business District. The Washington study gave a distance of 850 metres as an average for this type of trip. During the lunch-break between 70 - 80% of employees left the buildings in which they worked. This was found to vary according to the office workers' income, proximity to restaurants and staff facilities provided by their firms. In the case of the office worker lunch time trip the distances travelled were appreciably shorter than other trips. The average was 150 metres.

Ref 14

4.3.2 SHOPPING TRIPS:

Shopping trips were found to be of two types:

- a) Purposeful shopping
- b) Incidental shopping.

Purposeful shopping trips, although included to some extent in the terminal trip category, are usually undertaken by people working in the Central Business District who do not have the time or opportunity to shop nearer home during the week. To this end the Supermarkets in department stores serve a necessary function. The Central Business District retail outlets have a distinct advantage over sub-centre locations in that the C.B.D. has the patronage of a large population of "captive" workers.

The "captive" worker aspect is also responsible for shopping of the incidental type. A study of Cleveland, Ohio, estimated that at least one third of all purchases in the Central Business District were the result of impulse buying. Pedestrians on business trips and lunch-time strolls in the Central Business District tend to be more attracted to routes taking them past or through shops rather than along "dead-frontage" areas.

Ref 15

It was also found that 68% of shoppers visited at least one department store.

The shopping trip distance was found to average 610 metres; this is somewhat shorter than the preceding trip-type.

4.3.3 HEALTH AND PLEASURE TRIPS:

These trips are confined, during the week to the hours other than business or office hours and to visits to the Central Business District at weekends. The length of the trip is indeterminate.

4.3.4 THE PARADE:

The pedestrian movement pattern usually allows for events such as martial parades, interest-group, marches, fêtes, fiestas and processions.

These events tend to occur as a rule in and around large open spaces and Public Buildings (assembly) and along ceremonial and monumental Avenues or Boulevards (movement).

4.4 THE CENTRAL BUSINESS DISTRICT PUBLIC OPEN SPACE USER:

The components and generators of the Central Business District dictate, broadly speaking, the flow-lines of the pedestrian movement pattern, and by their nature they tend to fix the major elements of the open space system. Herein lies a certain fixity and immovability in which the user of public open space must be able to perform. Given that the job opportunities are increasingly available in the Central Business District and that the office function is strengthening then it is to a great degree, the office workers for whom the open space system must be

designed. It is their milieu and they, no doubt, have some ideas about what they require from it. A questionnaire survey was undertaken, the main objective of which was to test the office worker's awareness of, and reactions to, public open space in the Cape Town C.B.D.

(See Appendix 3)

4.4.1 FINDINGS OF THE SURVEY:

The results of the survey with regard to the use of open space during certain periods of time showed that:-

1. All the people interviewed started work between 8.00 a.m. and 9.00 a.m. and of these 11,3% made a point of visiting an open space on the walk to the office. The Station Gardens were visited most often. (This must be considered together with the observation that 47,6% of the people interviewed travelled to the city by train).
2. Purposeful visits to open space during the lunch break (between 12.30 and 2.00 p.m.) were most frequent, 27,2%, the Gardens being visited most often.
3. Purposeful visits on the journey to home from the office and special visits in the evening were undertaken in both cases, by only 4,6% of the people interviewed.
4. Purposeful visits to open spaces in the city at weekends were undertaken by 20,4%, again, the Gardens was the venue frequented most.
5. The above percentages show that the office worker has relatively little conscious association with the public open spaces and when this is considered together with the low frequency of visits to the open spaces during the periods listed the earlier assessment of the non-existence of amenity is endorsed.

6. The Gardens, of all the open spaces feature most prominently and although the frequencies of visits are not excessive there is an indication that the Gardens do offer some amenity which the people recognise and to which they will relate themselves.
7. Opinions expressed in a number of cases were to the effect that:-
 - a) The lunch-break was too short
 - b) The lunch-break was a time for shopping
 - c) At weekends and in the evenings the office-worker wished to be as far away from the city centre as possible.

4.4.2 PUBLIC OPINION REGARDING PUBLIC OPEN SPACE:

When asked to comment on public open space 25% of the people interviewed had no comment to make; this was due mainly to a lack of interest in open space in the city. The remaining 75% commented in order of majority of opinion as follows:-

1. The open spaces lack amenity (25%)
2. The open spaces should have more planting (15%)
3. There should be more open space (13%)
4. Open space was frequented by undesirables and was dangerous (13%)
5. Greenmarket Square should be made more pleasing (3%)
6. There were restrictions for use by the Coloured Race Group
7. There should be amenities for use in the evening
8. There should be amenities for use on Sundays
9. The open spaces were too dirty
10. The scale of the Foreshore is too great

- 11. Shopping malls are needed
- 12. Open space has no meaning.

4.5 THE NEED AND DESIRABILITY FOR PUBLIC OPEN SPACE IN
THE CENTRAL BUSINESS DISTRICT:

That the majority of opinions expressed were adverse is significant to this study of open space in the Central Business District of Cape Town in that it reflects the negativeness of the spaces as discussed in the preceding section. But it does show that the majority of the people did have some wish for open space improvement.

The negativeness reflected does not seem to be particularly localised. Marion Clawson has observed, "Open Space is too largely a negative concept". Open space for the best part and especially outside of the city is looked upon as land from which development must be "kept off", and which then receives little improvement by way of amenity or exploitation of worthwhile features.

Ref 16

At the regional scale where the movement on foot is sparse this may still hold good in some measure, and according to the Clawson classification the purpose of open space is:

- a) For the specific use of buildings which it surrounds
- b) For recreation
- c) For ecological protection

- d) Urban structural and aesthetic purposes
- e) For future expansion.

Ref 17

In the Central Business District the influences and requirements are somewhat different, the use of the open space system is presupposed by pedestrian movement, and the weave is, of necessity, much finer. It is that of the city block and the street. The emphasis is on a) and d) above which is elaborated upon by Jane Jacobs:-

1. Projects must capitalise on the City's unique qualities such as the waterfront and the topography
2. How can old buildings be tied to the new, to complement and reinforce quality and continuity?
3. Can new projects fit existing street patterns? The best sites may be outside; does the choice anticipate normal growth, are they inter-supporting?
4. Will the new project exploit or obliterate the street?
5. Will the new project mix activities or mistakenly segregate them?

In short: "WILL THE CITY BE FUN?"

Ref 18

Returning to the classification of open space purpose of the Central Business District:-

Recreation is usually an extensive space user, but there is no reason to suppose that the kinds of sport that take place indoors must be excluded; entertainment already has a place in the Central Business District.

Ecological protection is not normally a function of open space in the Central Business District, this is a matter for the Metropolitan region as a whole and which may or may not require the inclusion of the Central Business District. Oxygen from trees in the city centre could not be expected to balance the emission of motor car exhaust fumes; this should be eliminated at the source. The tree in the Central Business District is for the psychological well-being of the Central Business District user.

Open space for expansion purposes especially in the larger Western city, is something of the past.

4.5.1 THE NEED AND DESIRABILITY FOR PUBLIC OPEN SPACE IN THE CENTRAL BUSINESS DISTRICT OF CAPE TOWN:

The Central Business District of Cape Town functions as a centre of Metropolitan Region and it therefore has all the properties of a developing Western city. As such it is subject to the pressures and problems that have beset many other cities that predate it. The C.B.D. is now in a state of transition in that it has become necessary to re-evaluate its space requirements.

Ref 19

The ring-road has been fixed, the old Central Business District is in the throes of substantial redevelopment, the frame and its fringes are not intensively developed and consist of buildings that can be described as aged.

Map 12

Added to this normal state of transition is the duality caused by the Foreshore development. Viewed in this light the prediction of the space requirements for public open space can be no more than an abstraction.

The residential function of the Central Business District has declined. Available hotel accommodation has dropped drastically with the introduction of standard requirements for classification. The permanent residence function is negligible, but the Malay Quarter to the Northwest and the Suburb of Gardens to the Southwest are close enough to generate pedestrian traffic. It is, as yet, premature to assess the repercussions the redevelopment of District Six will have on the Central Business District.

In the main, where the Office and Retail functions of the Central Business District locate there will go the pedestrian and there will be the necessity for the open space network.

✓ As a seaport and seasonal resort city, Cape Town has a further requirement in that the gates of the Harbour open into the Central Business District, this increases the pedestrian traffic flow under the category "health and pleasure walks" and at the same time contributes to incidental shopping, the route from the Harbour is along the Heerengracht into Adderley Street.

There are two goals to be achieved in the provision of public open space in the Central Business District:

1. The pedestrian movement system must not become curtailed or secondary to the vehicular movement system.
2. The open space system must satisfy the pedestrian in so far as, it is identifiable to him, to his scale, and that it provides him with the things that can interest him, exhuberance and quietude.

✓ The existing public open spaces in the Cape Town Central Business District fall far short of these goals. Since this was discussed at some length earlier, no more can be said.

Future development in the Central Business District will require fresh considerations with regard to open space in relation to the vehicular movement system. The speed the motor car has on the freeway is greatly reduced once it enters the city centre. Apart from the great demand the car makes on the space required for its storage its efficiency is reduced to zero when parked. The monthly rental of a space occupied by a car parked in an open parking lot, the Parade for example, at 30 cents per day works out at ± 7 cents per square metre, and at a parking meter (excluding the traffic fine) ± 22 cents per square metre. Low priced office accommodation is ± 55 cents per square metre.

Ref 20

A further dilemma is that the car driver becomes a pedestrian once the vehicle is parked and he demands the rights

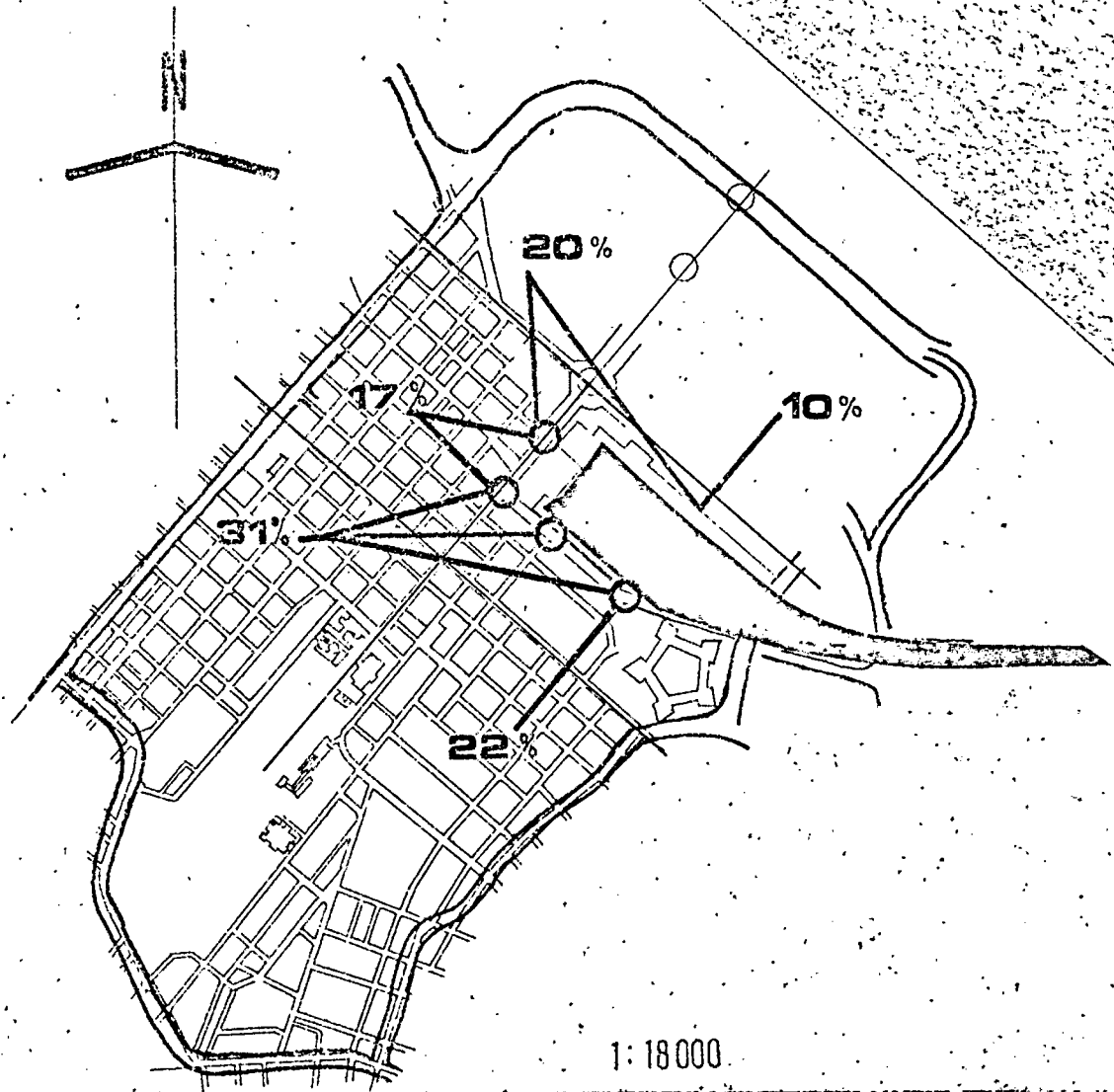
and considerations of the mode he happens to be using.

Human interchange and association are improved by speed and efficiency but this may also aggravate problems of form and structure. The greatest difficulty facing the urban planner and designer is the adjustment of the speedier movement patterns to the old physical forms, and at the same time be certain that the people have an identifiable environment. Or as it is summed up by Charles Abrams:

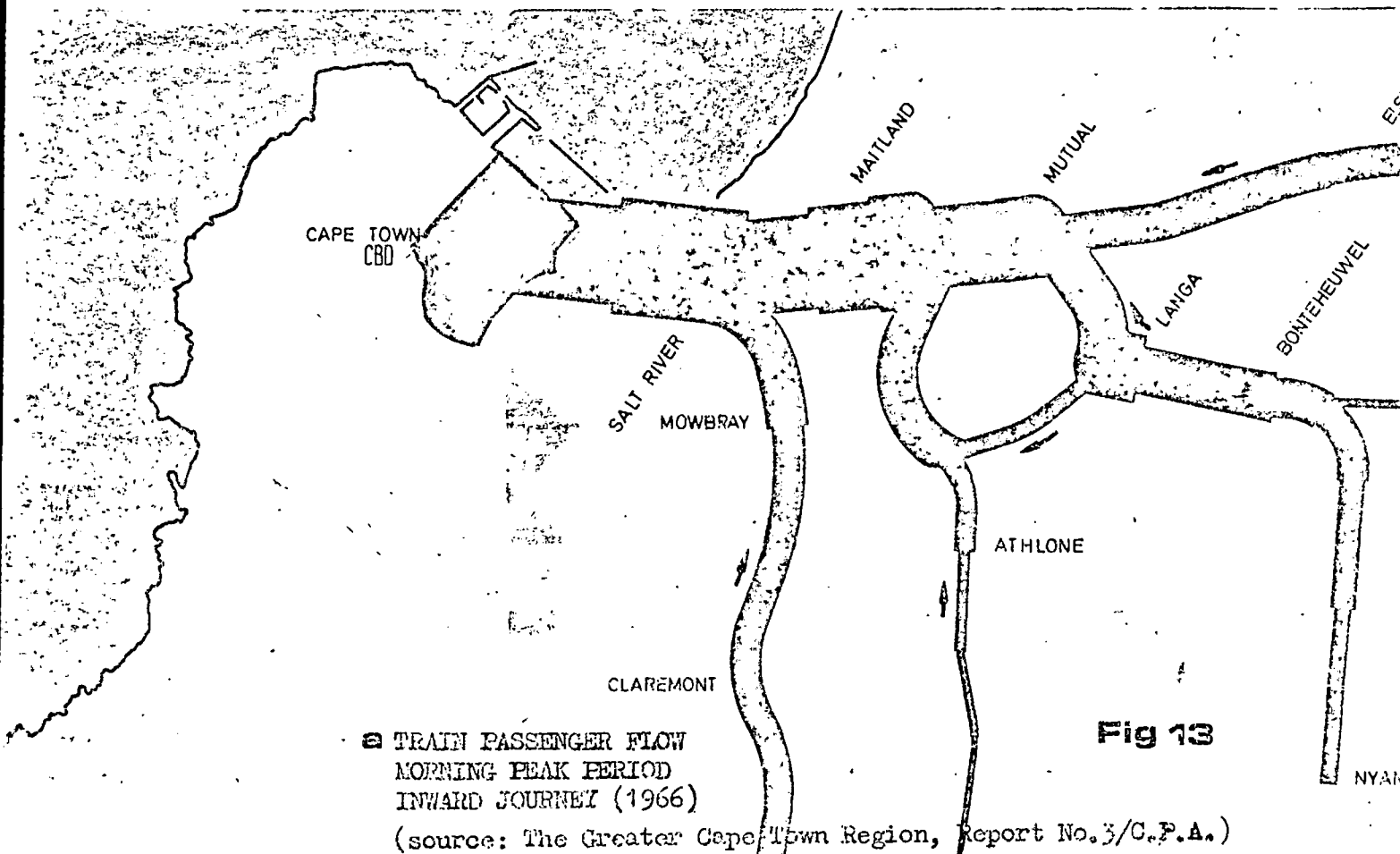
Ref 21

"No sound plan for downtown can be made unless one knows not only the physical problems besetting the area but also the needs of the people and some of their deeply laid habits, folkways and sensitivities."

Ref 22



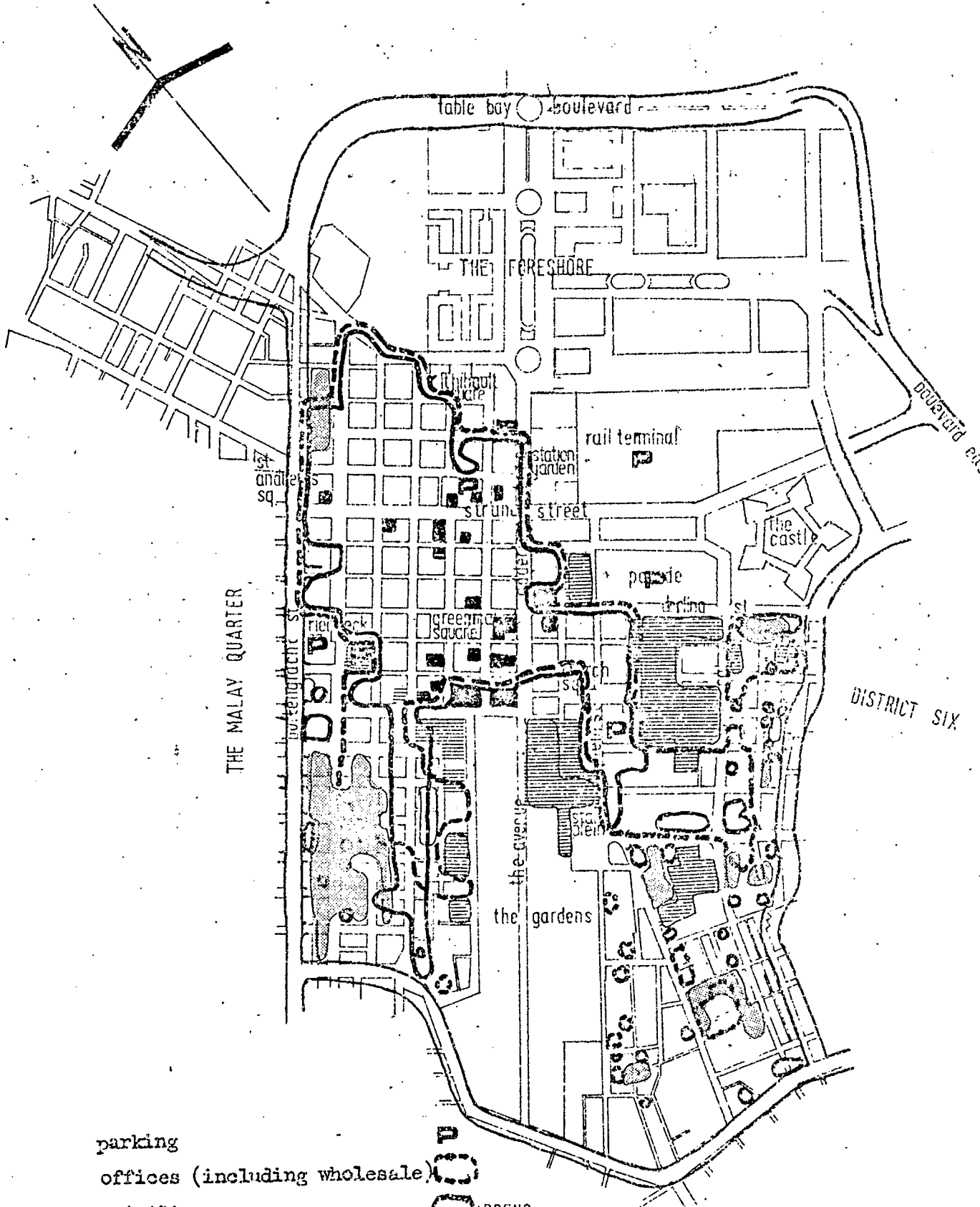
b % MORNING PEAK PEDESTRIAN TRIPS INTO THE C.B.D.
 FROM THE RAILWAY TERMINAL. ○ POINTS OF CONFLICT WITH VEHICLES
 (source : Johnston & Others, Cape Town Central City Study 1972)



a TRAIN PASSENGER FLOW
 MORNING PEAK PERIOD
 INWARD JOURNEY (1966)

Fig 13

(source: The Greater Cape Town Region, Report No. 3/C.P.A.)



- parking
- offices (including wholesale)
- retailing
- government
- manufacturing



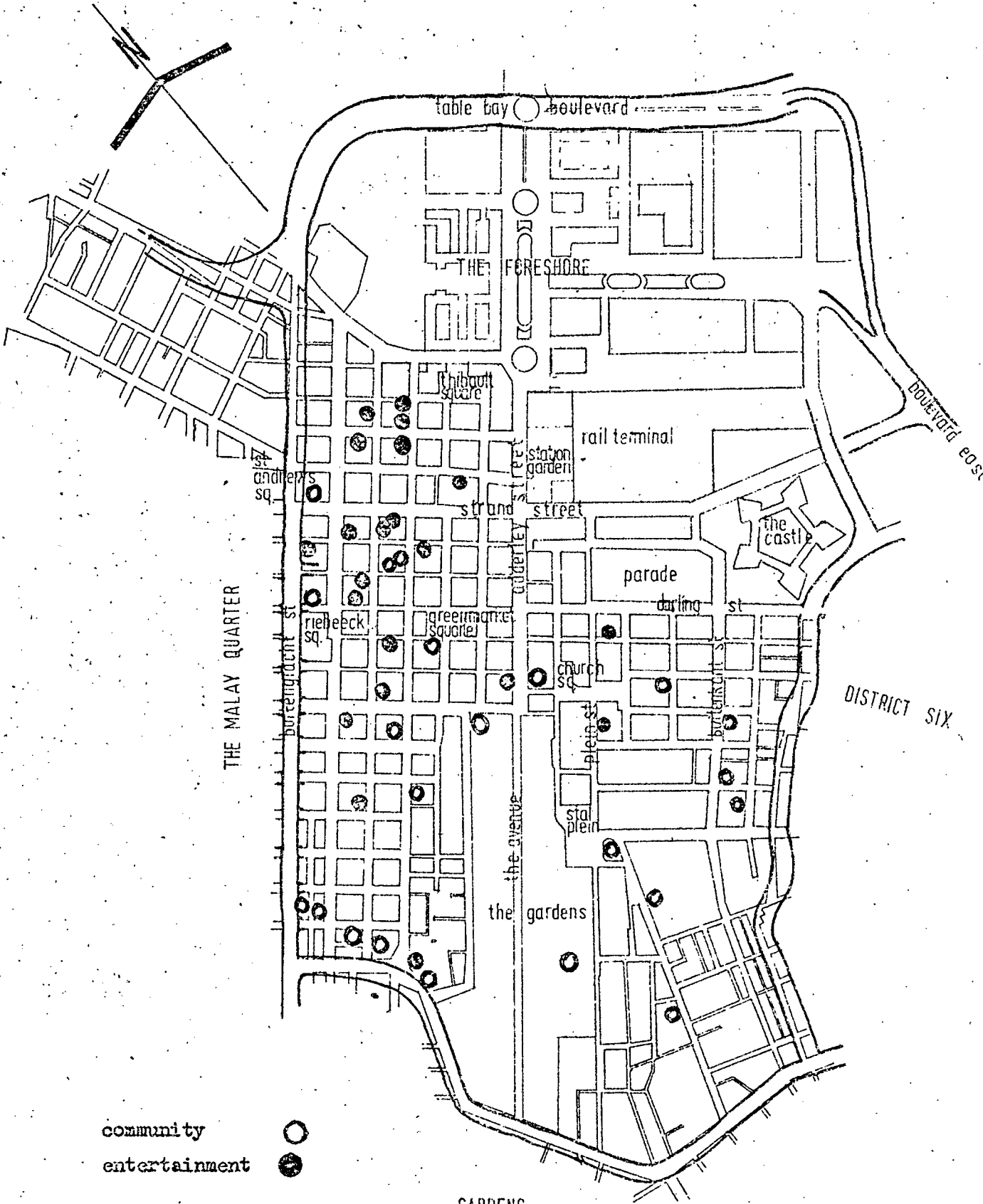




 GARDENS

0 500m

OVERLAPPING FUNCTIONS : DAYTIME PEDESTRIAN TRAFFIC GENERATORS



community
entertainment

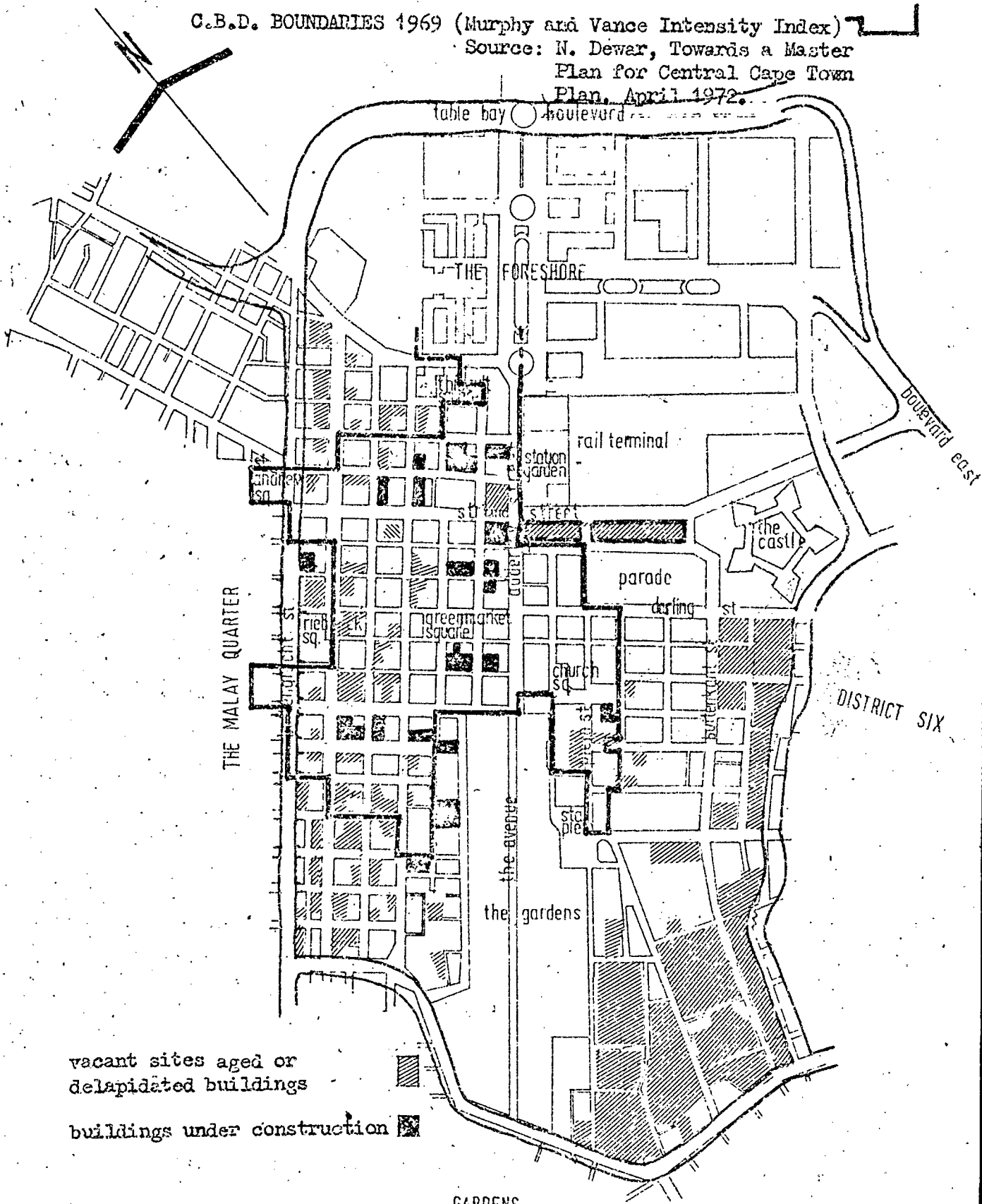
GARDENS

0 500m

NIGHTTIME PEDESTRIAN TRAFFIC GENERATORS

C.B.D. BOUNDARIES 1969 (Murphy and Vance Intensity Index)

Source: N. Dewar, Towards a Master Plan for Central Cape Town Plan, April 1972.



vacant sites aged or delapidated buildings

buildings under construction

0 500m

VACANT SITES, AGED OR DELAPIDATED BUILDINGS

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"Not so fast! You're driving too fast!" said Mrs Mitty. "What are you driving so fast for?"

"Hmm?" said Walter Mitty. He looked at his wife, in the seat beside him, with shocked astonishment. She seemed grossly unfamiliar, like a strange woman who had yelled at him in a crowd. "You were up to fifty-five," she said. "You know I don't like to go more than forty. You were up to fifty-five". Walter Mitty drove on toward Waterbury in silence, the roaring of the SN 202 through the worst storm in twenty years of Navy flying fading in the remote, intimate airways in his mind. "You're tensed up again," said Mrs Mitty. "It's one of your days. I wish you'd let Dr Renshaw look you over."

JAMES THURBER.



Buddhist temple in San Francisco: There must be room downtown for crazy, eccentric, lovable building like this one. If an architect's plan for redevelopment hasn't several corners where something unplanned is going on there's something wrong. It ought to have. A look at this Buddhist temple is better than a trip to the psychoanalyst.

IAN NAIRN.

5.0 THE REQUIREMENTS OF OPEN SPACE IN THE CENTRAL BUSINESS DISTRICT:

Most large cities in the Western world today are confronted by the fact of congestion. In the case of motor vehicle, congestion is odious and nerve-straining. In the case of the pedestrian the jostling hustle and bustle of the crowd may be desirable for it is people which give the formal city its vitality.

Traditionally the city street served no purpose other than to ensure light and air around houses and to provide access to them. The street space itself was a place for walking in where people could meet and converse without being harried.

When the industrial city started on its course of rapid growth the point of no return was achieved, and men like Ebenezer Howard rejected the city's looming self-defeating prospect. He advocated a new kind of "limited" self-contained city that would have neither congestion at its centre nor the dullness of suburbia at the other extreme but would be a self-sustaining urban form, which maximised the benefits of urban life.

Ref 1

Howard's postulation that all cities had a limit to physical growth was the beginning of sub-centralisation, if not always in the form of Garden Cities, then certainly the various subsequent methods of decentralising the city's

functions.

Yet in spite of all this very few cities have ceased to grow, in absolute terms, and the Central Business District as a concept has not declined but it is in need of master planning to meet changing needs.

The Central Business District, apart from having to solve problems of transportation is increasingly faced with competition from developing sub-centres. The retail function is re-locating outside the Central Business District because of the problems of accessibility this does not state the case fully. In many instances it is because of the failure of the Central Business District to provide the environment and amenity which would ensure its continued use by the people who wish to go there.

The newly developed town or city has the advantage of being able to plan the spatial arrangement of its functions, vertically or horizontally as needs be, and transportation networks can be built in a manner that will eliminate friction and points of conflict.

The Suburban location for shopping is often preferred to that in the Central Business District because the outlying shopping complex has the opportunity to avoid those things that are considered undesirable in the Central Business District. At the same time it strives to provide its customers with an acceptable environment in

which to shop and walk.

Vested interest in some declining Central Business Districts have responded to the competition by regenerative renewal or replanning of one kind or another in order to make the city's components function effectively once more as in the case of Baltimore, U.S.A. There have also been more original solutions. Victor Gruen's plan for Fort Worth, Texas introduced vehicular traffic free zones as a solution to some of the problems and there have been large scale redevelopments in which the old city block size has lost its meaning. Multifunction developments like the Place Ville Marie in Montreal, Canada offer separation of transportation modes and the provision of a variety of facilities and amenities in one single location. They offer not only improved environments but also controlled environments.

5.1. THE PEDESTRIAN ENVIRONMENT:

The analysis of any environment is surely one of the most confounding exercises which a designer may undertake but shaping or improving a suitable environment can be even more elusive.

In a far broader context Doxiadis has stated that

"Settlements will never change the fate of man, but by being better they will help him to be happier and more secure".

In the urban settlement sociology already has its work cut out in attempting to understand the major problems of the untenables in society which are generally attributed to the degenerate city. These things, like the statistic of Mrs. Sheasby quoted earlier, are largely concerned with unrespectability. No doubt they are very often the malfunctions that threaten to render the urban system unworkable and it is important that they be studied and understood as a means towards greater happiness and security.

Ref 3

Apart from the major sociological issues that require investigation when dealing with the Central Business District there are also minor-key considerations.

To all intents and purposes these considerations are such that their absence will not seriously affect the essential functioning of the city, but on the other hand there are many things that can make for a better environment wherein people will be happy to work and walk about.

David Riesman has written of the anomie that routine and uninteresting work induces and that this eventually expresses itself as anomie with regard to leisure. It was stated earlier, somewhat simplistically that a tree in the Central Business District is for the psychological well-being of the Central Business District user, but that is the extreme, as an environmental consideration its provision and maintenance is a minor social act.

Inside the Adderley Street and St. George's Street entrances Stuttaford's Department Store provides a number of chairs for its clientele. These seats are in almost continuous use, generally by elderly people. The provision of the chairs might be good for business, but no matter whether by design or coincidence, they are most certainly a minor social act. The plastic bench in the wide-open landscape of the Station Gardens is something else.

5.1.1 MOVEMENT AND ACCESS:

The pavement while being, as it were, the unit of the pedestrian movement pattern also serves the primary function of providing access to the building in the Central Business District which are physical fixes within the flexibility of the pedestrian realm.

The width of the pavement does not govern pedestrian volume. If the routes between pedestrian traffic generators is sufficiently strong the pedestrian will walk in the street if necessary. The volume of pedestrians along the narrow pavements in the Longmarket Street/Plein Street shopping area are no less travelled than the generous walkways on the Foreshore.

Ref 4

The overall impression of the pavement is one of movement particularly at peak periods, the open spaces along the flow must provide for lingering. In all the Northwest-

(See Appendix 4).

The conclusion to be drawn from the limited evidence is that open space cannot be quantitatively standardised in any way whatsoever. From the fifteen cities studied, allowing for the various local interpretations of the term Central Business District and the definition of public open space it emerges that the open space provision ranges from Nil (Perth and East London) to 9,9% (Kimberley) of the Central City area. The Cape Town Central Business District, in terms of this analysis is well endowed, 8,2% of the area of the Central Business District being given over to formal public open space, this figure does not include the Foreshore.

The average for the open space provision is 0,19 hectares per thousand population.

The Cape Town C.B.D. provides 0,17 hectares per thousand population. The more consistent range appears to be between 0,04 and 0,07 per thousand population.

5.1.3 TOPOGRAPHIC FEATURES OF THE CENTRAL BUSINESS DISTRICT:

Not all historical settlements have the fortuitously plane terrain of Broadacre City, although for facility of roads and drainage and the minimisation of construction costs this type of location is often preferred.

Cape Town is not a particularly old City and its founding

may, perhaps, be just another accident of history but its siting, however, was full of purpose. The bay offered shelter for the ships of the Dutch East India Company. The mountain streams provided fresh water and the contours of the land were considered to be suitable for the agricultural purposes.

The development of the Harbour was relatively slow and had it not been for the mining and industrialisation which began to develop inland during the 1880's the rate of growth might not have changed as drastically as it did. In the meantime the railway and the harbour have insinuated themselves into the topography.

Taken with the facts of the freeway system and the new land provided by the Foreshore this has effectively altered the situation of the old Central Business District from that of a coastal one to being a land locked one.

The Duncan Dock is correctly sited with regard to marine engineering because the undersea topography provided greater depths in that location. The harbour is unfortunately a moderate security area and this to some extent precludes the free flowing of the pedestrian movement system of which it is a generator.

Map 13

The site occupied by the new Railway Station is about the same in width as the Central Business District is from Strand Street to the entrance at the foot of the Garden, and the Station is as much a barrier to expan-

sion, movement and sightlines as if it were cliff-face.

Table Mountain, Devil's Peak and Signal Hill form an amphitheatre around the central city and because of the scale which they present in close proximity to the Central Business District they contribute to the open space system in an abstract and at the same time very real manner.

Views of mountain and hillside between buildings and streets are an additional element to the city landscape.

Signal Hill is a further influence on the topography of the city in that the Northwestern third of the Central Business District is along its lower slopes, but the rising contours were not severe enough to preclude development, although in some places the gradients are steeper than the maximum slope of 1 : 8 accepted for comfortable walking. The remaining sectors of the city have a gradual slope toward the sea.

Map 14

(The plans of cities studied for areal comparisons serve to illustrate in a superficial way to the effects of city development in the coastal situation and are included in Appendix 4).

5.1.4 CLIMATIC CONDITIONS WHICH AFFECT THE CENTRAL BUSINESS

DISTRICT:

The overall climate of the region is described geographically as "Mediterranean", a winter rainfall area in a temperate zone and it is further influenced by the South East Trade winds in the summer months. The weather data referred to in this study were recorded at Wingfield about 5 kilometres from the Central Business District for which there are no specific data available.

Ref 5

Table Mountain causes the micro-climate to vary at places throughout the Cape Peninsula, especially with regard to rainfall and wind velocities, but the variations do not differ markedly and the data can be applied.

Fig 14

Rainfall and wind are necessary considerations in the study of pedestrian movement in the Central Business District and in particular the frequencies of these conditions.

In the summer months (October to March) the number of rainy days per month are negligible but the wind can be expected to blow on about twenty six days in every month, mostly at velocities of above 13 Km per hour which can be regarded as unpleasant.

In the winter months (April to September) the number of rainy days per month varies from ten to fifteen, these

are invariably accompanied by wind, so that considered altogether, the monthly average for days of calm is about six.

Conditions of wind have the effect of reducing the air temperatures experienced. On a summer's day when the air temperature is $20^{\circ}\text{C}.$, a wind velocity of 16 Km per hour, a pedestrian exposed to these conditions experiences a temperature of $16^{\circ}\text{C}.$, this effect is aggravated by the colder, damp conditions of the Cape Winter.

Ref. 6

It is little wonder that the Metropolitan Region, for all its natural beauty, has a relatively short seasonal period for tourism.

The pedestrian in the Central Business District is per force exposed to these conditions throughout the year and as yet very little consideration is afforded him in this respect. Even along Adderley Street, which is the main shopping precinct, there are buildings that do not provide canopies over the pavements, as protection against sun or rain, while others which do, have them positioned about two storeys high to no avail.

The summer temperature extremes are heightened by the closeness of vehicle-exhaust polluted air and by throngs of people and the exertion of the pedestrian hurrying to reach his destination in the city centre on time.

5.1.4 THE MAINTENANCE OF RIGHTS SAFETY AND ORDER:

Despite its basis of co-operation the human settlement has been responsible for a most negative concept in the evolution of agencies to ensure the well-being of people and to protect their property.

As non-creative as this control may be, it is certain that the range of misdoing is vast, the incidence ubiquitous, no city is exempt and in any environment which seeks to provide amenity for the use and enjoyment of people misuse is likely to occur.

Cape Town is a seaport city, with great disparities of race, employment opportunity and education. The open space user fears the deserted place in the city because the mis-user has shown a preference for it. Sociology of the "disrespectable" has a fertile field.

The Central Business District at present does not appear to have a particularly high crime rate in spite of statistics for Cape Town as a whole given by Professor S.P. Gilliers. In an interview with the Station Commandant at Caledon Square Police Station it was stated that:-

Ref 7

- a) As a Seaport City the Central Business District was relatively crime free.
- b) The Central Business District was patrolled regularly day and night.
- c) The incidence of assault was not confined to any particular area of the Central Business District,

except that police action, if summoned was likely to be in the night-club district, but then confined to a particular club.

- d) The most frequent complaint was theft from motor vehicles.

Perusal of files in the Library of a local newspaper did not show any localised pattern of crime in the Central Business District nor produce any statistic other than isolated incidents.

During the daytime people in large numbers in the Central Business District is in itself a crime deterrent. At nighttime the Central Business District as it exists has not much to offer the user after the normal hours of evening entertainment and the residential function of the Central Business District is minimal, there is no reason for anyone to be there.

There are, however, other aspects of the maintenance of order. Increased vehicular traffic using the freeways, which will reach peak loads by 1991, according to the Cape Town City Engineer, will require more efficient methods of traffic control, both for movement and for storage.

This efficiency applies equally for the control by agencies of such things as fire prevention and fighting, accident and sickness emergencies as well as the protection of people and property, and to keep a check on pollution.

There is no reason to suppose that these controls cannot be supervised by a central communications system, perhaps using closed-circuit television, linked to strategically located maintenance units.

As an aid to what has been discussed above, future planning of open space should provide amenities for the Central Business District user that are easily recognisable by him. Education on the part of the user will play a part in his acceptance that the provision of amenities is for his benefit and good-use.

5.1.5 THE PROVISION OF AMENITIES RELATED TO OPEN SPACE:

The public opinion survey dealt with in section 4.4.2 if achieving little else does give some indication that the office-worker in the Central Business District has some expectations regarding amenities in public open space.

If the Central Business District is to be enjoyed by the user then all that he uses and senses should make the most of the diversity which the Central Business District has to offer.

Ebenezer Howard's concept of a city was based on maximising the benefits of urban life. In the same way the Central city can maximise the benefits of "urbane" life and so too be self-sustaining and desirable.

The process begins at the transportation interchanges. There the rider becomes the pedestrian and a part of the great social interchange that is the Central Business District. The emphasis is on articulation and legibility of the open space and pedestrian movement system.

The scope of amenity in the city is endless. The real problem is the provision of amenities based on social values, some of which change over time and therefore require the flexibility to maintain the environment at an acceptable level.

The basis of the solution lies in the continuing study of those values which will indicate what should be provided modified or omitted. Thus far history has shown that the change has not been too drastic, the needs of people and how they act and react remain fairly constant.

The Central Business District must provide in the overall environment, what Kevin Lynch calls an "openness" which makes allowance for junkyards as well as rose gardens.

Ref 9

And Jane Jacobs advocates the retention of focal points as a means of orientation in the lifeless pedestrian grid.

Ref 10

There should be clear definition of the areas which have been retained for historical reasons, areas which contain the interest and excitement of the market place and others to serve as resting places. These should be not only for daytime activities but for use at nighttime and at weekends as well. In between there are endless

possibilities for the elements of surprise and spectacle.

Fig 15

5.1.6 THE OPEN SPACE LANDSCAPE:

The physical development of the Central Business District characteristically shapes its own landscape. The size, and spacing of city blocks and of the buildings erected upon them forms the basis of the open space pedestrian network. Herein lies the potential of shaping the links between the components and functions of the Central Business District or as Jane Jacobs suggests, "study the strands of the net not the holes". The strands are in fact voids which require consideration of the treatment of all surfaces, vertical as well as horizontal, in order to define their content and volume.

Ref 11

An existing city centre such as Cape Town offers a diversity in the shaping of the pedestrian environment which entirely new centres, like Cumbernauld, are not able to do, although this does not render them any less acceptable.

The difficulty of the old city lies in the limit to which the redevelopment could be taken and the assessment of what is worth preserving.

The preservationist starts at a disadvantage because land in the Central Business District is usually at a premium and the improvement of a site which has on it obsolescent buildings will be considered primarily in terms of economic

benefit. Should the proposed development make provision for the needs of the pedestrian it is implicit that such provision, while benefitting the pedestrian will at the same time ensure increased returns for the developer. Cost benefit analysis of the purely social costs of providing open space and its surrounding landscape is more complex. The techniques for quantifying such benefits are relatively untried as yet, and tend to be highly subjective. The city centre is unique in that when viewed from the distance its tightly packed building tower so noticeably above the surroundings. Once within the precincts formed between the buildings the great vertical scale is not so impressive unless one looks purposely upwards, and provided that the feeling of space is not one of confinement in that light and air have been unduly excluded, the pedestrian perceives mostly what is at eye level.

Ref 12






The scale of the open spaces in the Central Business District is that of the man on foot and must be defined and modelled on this basis. In this respect the Cape Town Central Business District falls short. Those open spaces that are not covered with motor cars are vast wind-swept and inhuman.

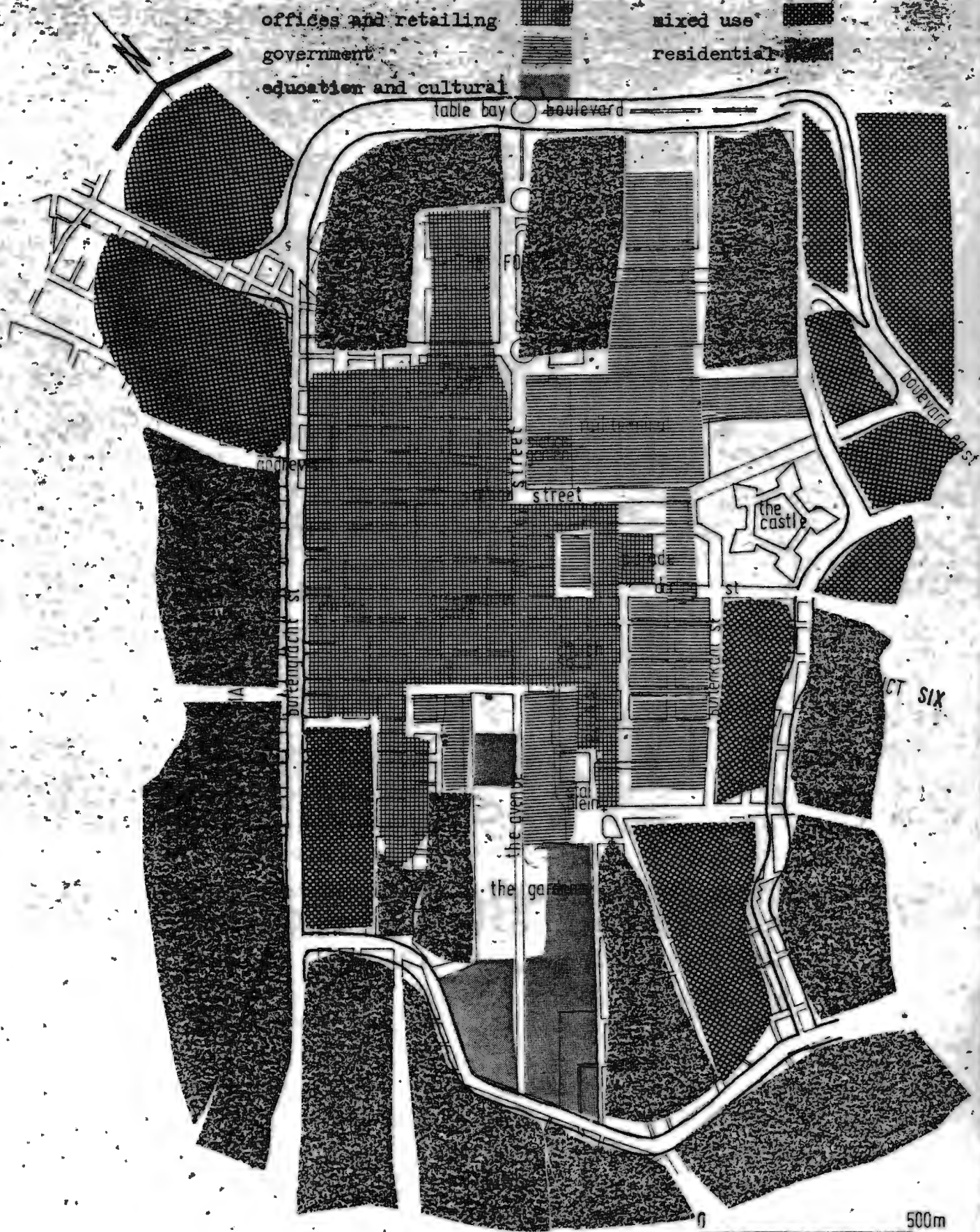
Surface treatment should be for the pedestrian with the facades of surrounding buildings to unify the overall

effect and at the same time allow views of the sky and landscape beyond in such a way that whatever character the space attempts to capture is regular and identifiable but not monotonous.

Ref 13

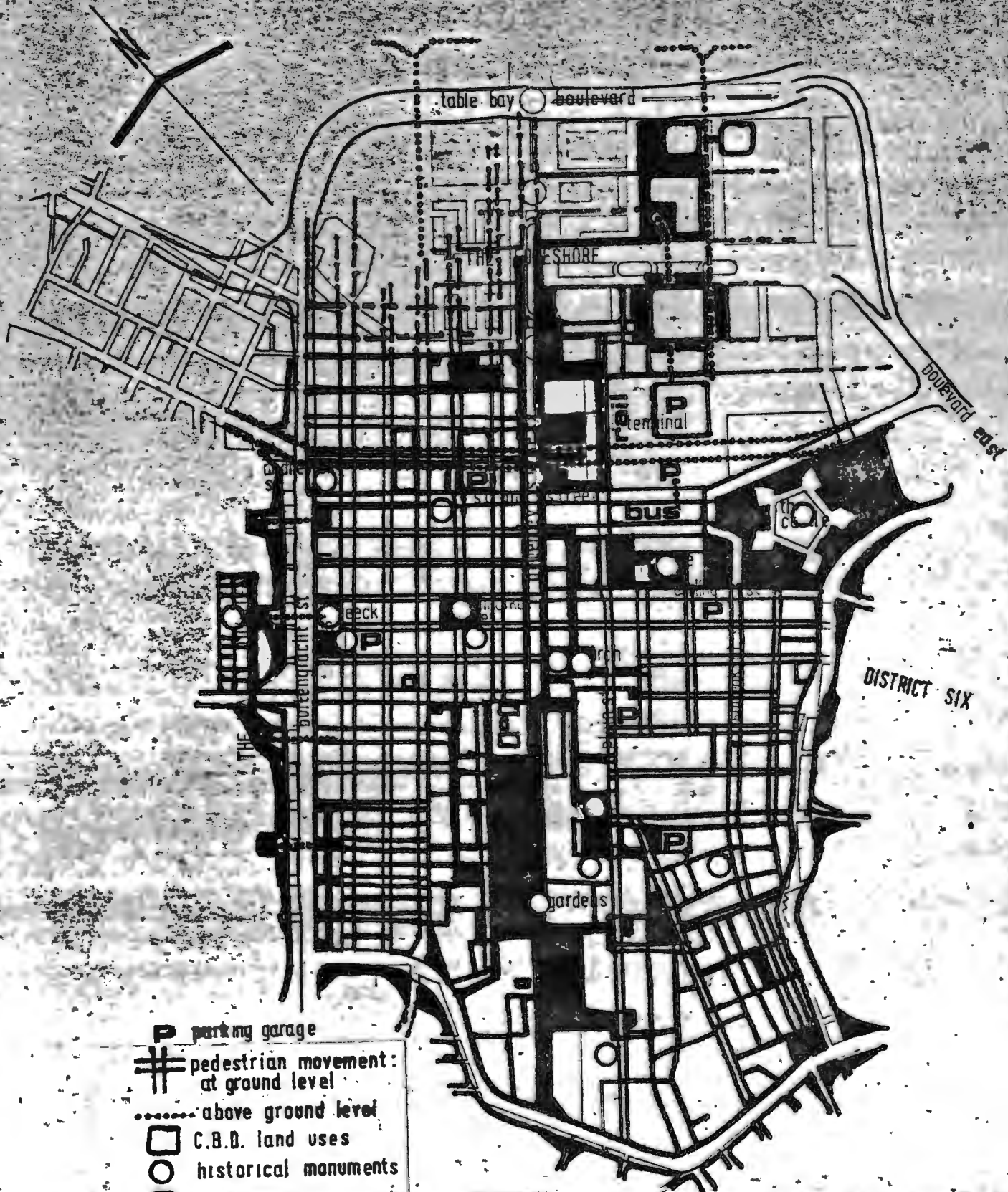
A Square in front of a civic building differs from that of the market place in its purpose and the scale and detail design should be consistent for the function of each. The spaces for viewing, lingering and movement need to be ordered for their optimal functioning, both as entities in themselves and as parts of the overall pedestrian movement system.

offices and retailing		mixed use	
government		residential	
education and cultural			



COMPONENTS : C.B.D. AND SURROUNDING AREAS

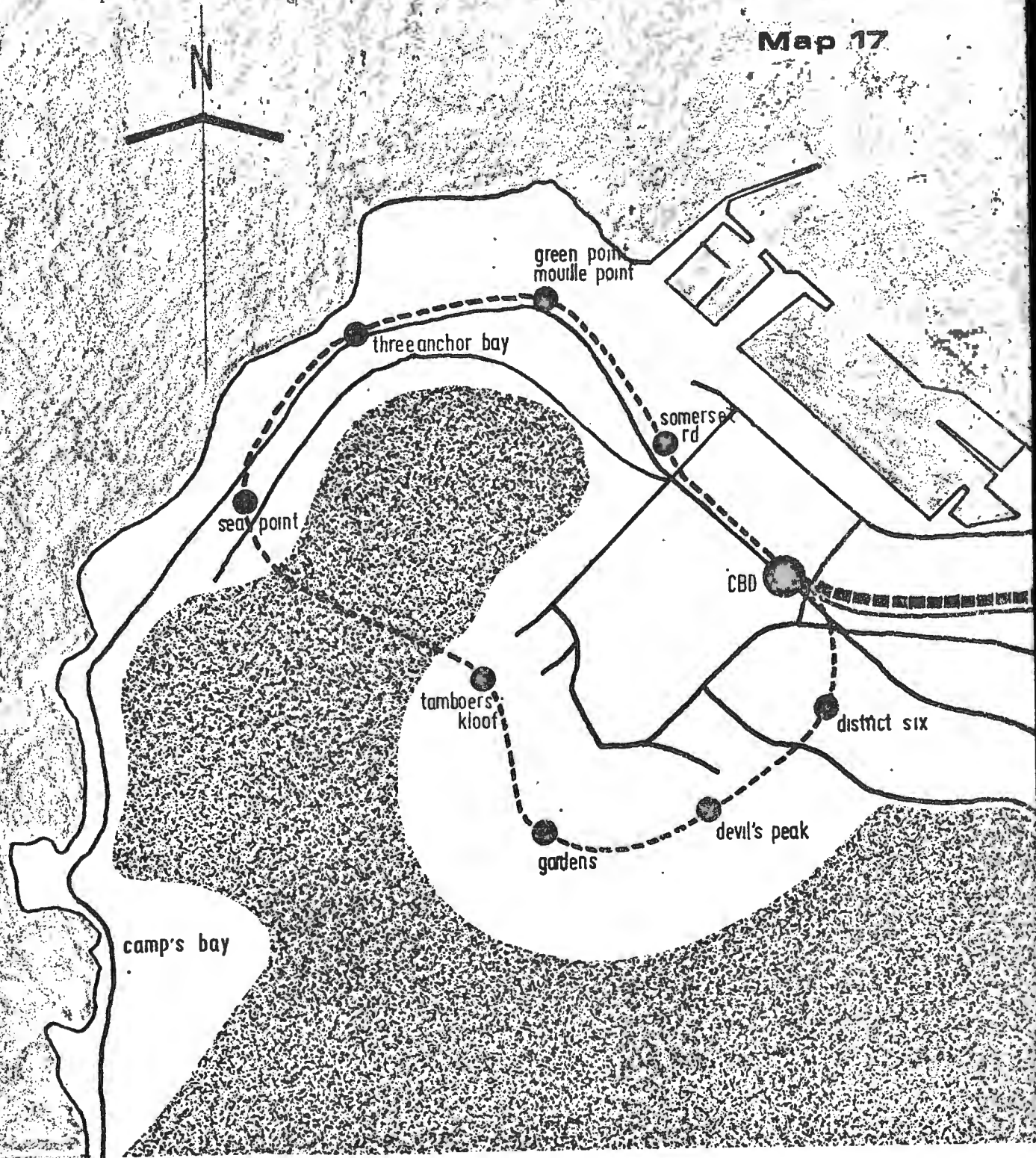
durban dock



- P** parking garage
- #** pedestrian movement:
at ground level
- above ground level
- C.B.D. land uses
- historical monuments
- open space
- elevated freeway

0 500m

PROPOSED OPEN SPACE AND PEDESTRIAN MOVEMENT SYSTEM



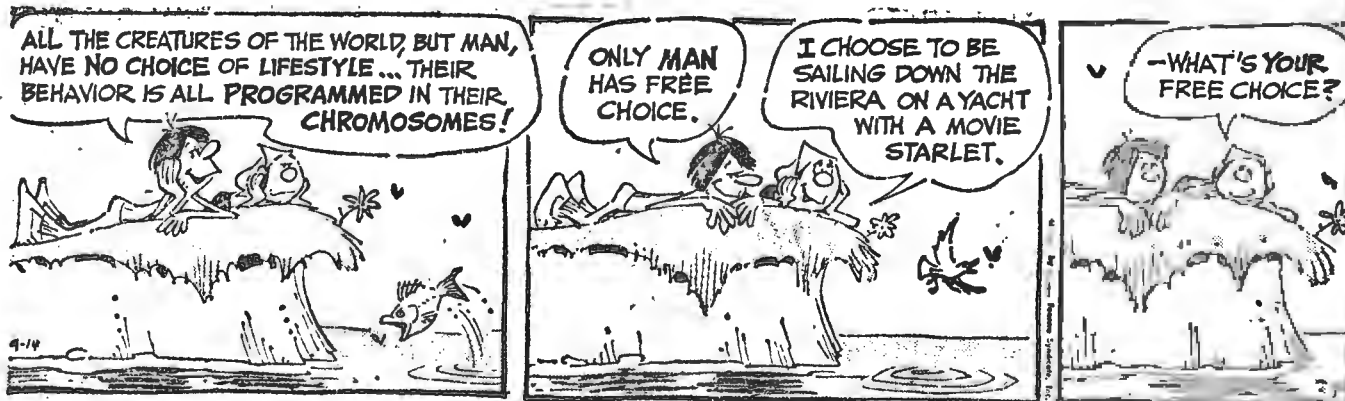
underground transit route
regional & inland rail
major roads
limit of development contour

0 0.5 1km

PROPOSED UNDERGROUND TRANSIT SYSTEM

REFERENCES: SECTION 6

1. Darlow, Clive: Enclosed Shopping Centres. Architectural Press, London, 1972. p. 179
2. McLuhan, M.: Op cit p. 115
3. Roth, Gabriel: Paying for Roads. Penguin Books, 1967. pp. 33 - 39
4. Johnston and others: Op cit
5. Le Corbusier: The Radiant City. Faber and Faber Limited, London, 1967. pp. 119 - 122
6. Dewar, N.: Op cit.



Howard Post

APPENDIX 1

TRAFALGAR PLACE: PEDESTRIAN COUNT.

Cursory counts of pedestrians moving through Trafalgar Place were made during the lunch-break.

Five counts, made on different days with 10 minute period varying between 1. 00 and 2. 00 p.m. showed that between 70 and 90 pedestrians during each period emerged from the walkway which was between the Department Store shopfront and the Flower Sellers.

On the side of the Bank wall the count was between 25 - 35 persons.

Ratios for the two routes vary from 2: 1 to 3,6: 1

APPENDIX 2.

LONGMARKET STREET SHOPPING MALL EXPERIMENT.

Owners / Managers of the shops in the Longmarket Street experiment area were asked by the interviewer to answer the following questions:

During the experimental period in question:

1. Was there a marked increase in the number of customers entering your shop during the hours 9. 00 - 12. 00 a.m. and 2. 00 to 4. 00 p.m.?
2. Was there a marked increase in the number of customers entering your shop during the hours 12 noon - 2. 00 p.m.?
3. Was there a significant increase in trade and turnover in your business?
4. Did the experiment cause your business any inconvenience?
5. Do you think the street should be closed to vehicular traffic permanently?

Beginning at the Adderley Street end of the Longmarket Street precinct the responses obtained from shops in each block are tabulated overleaf:-

APPENDIX 2. (continued)

		QUES 1		QUES 2		QUES 3		QUES 4		QUES 5	
SHOP	TYPE	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
L1.1	Ladies Boutique		o	•			o		o	•	
L1.2	Appliances		o		o		o		o	•	
L1.3	Ladies Boutique		o		o		o	o	o	•	o
L1.4	Chemist		o		o		o		o		o
L1.5	New Management	N A		N A		N A		N A		N A	
L1.6	Optician		o		o		o		o	N R	
L2.1	Clothing		o		o		o		o	•	
L2.2	Men's Clothing		o		o		o	o			o
L2.3	Footwear		o		o		o	o			o
L2.4	Grocery		o	•		•			o	•	
L2.5	Footwear		o		o		o		o	•	
L3.1	Department Store		o	•		•		o		•	
L3.2	Bio Cafe	N A		N A		N A		N A		N A	
L3.3	Men's Clothing		o		o		o	o			o
L3.4	Footwear		o		o		o		o		o
R1.1	Vacant	N A		N A		N A		N A		N A	
R1.2	Jewellery		o		o		o	o			o
R1.3	Ladies Boutique		o		o		o	o	o		o
R1.4	Men's Clothing	•		•		•		o		•	
R1.5	Jewellery	N R		N R		N R		N R		N R	
R1.6	Appliances		o		o		o		o	•	
R1.7	Ladies Clothing		o		o		o		o	•	
R2.1	Jewellery		o		o		o		o	•	
R2.2	Men's Clothing		o		o		o		o	•	
R2.3	New Management	N A		N A		N A		N A		N A	
R2.4	Clothing		o		o		o		o	N R	
R2.5	Off-Sales		o		o		o		o	•	
R2.6	Soft - Goods		o		o		o		o	N R	
R3.1	Department Store		o		o		o		o	N R	
R3.2	Restaurant		o		o		o		o		o
TOTALS Excluding NA & NR		1	24	4	21	3	22	6	19	12	8
%		4	96	16	84	12	88	24	76	60	40

% of Retailing by type excluding the two Department Stores:-

43 : Clothing

14 : Footwear

11 : Jewellery

7 : Appliances

3,57 each, all others including vacancy.

APPENDIX 3.

SURVEY OF OFFICE WORKER / OPEN SPACE USE.

An office building in Adderley Street in close proximity to the peak land value intersection was selected to provide office-worker sample population.

The building housed the offices of the company which owned the property and it was decided to exclude these offices since the employees were offered staff dining facilities in the building. The remaining floors were occupied by offices of the general variety.

Office - workers on two floor levels were interviewed.

The questionnaire form including tabulation of some of the responses is set out in the following two pages:

APPENDIX 3 (continued)

The personal (anonymous) questionnaire about the use of Public Open Space by office workers in the City Centre.

Total questionnaires: 44

Would you please answer these questions about your use of the Public Open Spaces in the City Centre?
(Questionnaire filled in by interviewer)

1.	What is your occupational status?	Responses %
	1 Professional Senior	3 6,8
	2 Professional Junior	4 9,2
	3 Management Senior	7 15,8
	4 Management Junior	2 4,6
	5 Clerk Senior	8 18,4
	6 Clerk Junior	3 6,8
	7 Typist Copy	3 6,8
	8 Typist Secretarial	7 15,8
	9 Other	7 15,8
	TOTAL	44 100,0
2.	Where is your home?	
	1 Adjacent City Centre	5 11,4
	2 West Coast	6 13,4
	3 North Coast	2 4,6
	4 Northern Suburbs	8 18,4
	5 Southern Suburbs	18 40,8
	6 Cape Flats	3 6,8
	7 Other	2 4,6
	TOTAL	44 100,0
3.	How do you travel to your place of work?	
	1 Train	21 47,6
	2 Bus	9 20,4
	3 Car driver	8 18,4
	4 Car passenger	3 6,8
	5 Walk	3 6,8
	6 Other	nil nil
	TOTAL	44 100,0
4.	If by car driver, what parking facility do you use?	
	1 On street (free parking)	nil nil
	2 On street (metered parking)	nil nil
	3 Open parking lot	6 13,6
	4 Parking garage	2 4,5
	5 Other	nil nil
	TOTAL	8 18,2
5.	Hours of work.	
	1 At what time do you start work?	all after 8 before 9a.m
	2 At what time do you finish work?	all after 4 before 6p.m.
	3 What are the times of your lunch break?	variation 11- 2p.m.

APPENDIX 3 (continued)

6. Which Public Open Spaces in the City Centre do you purposely visit:

1 On your way to work?	Frequency (per week, month or year each)
2 On your way home?	
3 During your lunch break?	
4 During nighttime trips to the City Centre?	
5 During weekend trips to the City Centre?	

7. What are your opinions regarding Public Open Spaces in the City Centre?

APPENDIX 4.COMPARATIVE CITY POPULATION SIZES AND AREAL PROVISIONS
OF PUBLIC OPEN SPACE.

By correspondence through postal communication

30 City Municipalities were requested to provide the following information:-

- 1 The estimated number of people employed in the Central Business District of the City.
- 2 Area of the Central Business District.
- 3 Total area of open space, Parks, Squares etc., in the Central Business District.
- 4 A small scale map 1: 5000 was requested showing the locations of the open spaces in the Central Business District.

SELECTION OF CITIES FOR PURPOSES OF COMPARISON.

The basis of selection of the Cities was:-

- a) The larger South African Cities, namely Johannesburg, Durban, Pretoria, Port Elizabeth, Bloemfontein, East London and Kimberley, all of which responded.
- b) Coastal Cities or urban agglomerations with populations from 100 000 to \pm 1 million inhabitants, (according to the Demographic Yearbook 1969. Statistical Office of the United States New York, 1970) which were Mediterranean Sea countries or were attributed Mediterranean climates i.e. winter rainfall areas in temperate zones (according to the Times Atlas of the World. Time Newspapers Limited, London 1968.)

APPENDIX 4 (continued)RESPONSES.

Out of 23 Municipalities approached 7 responded

these were San Diego, U.S.A., Tel-Aviv - Yafo and

Haifa, Israel, Cannes and Toulon, France, Porto Portugal

and Perth, Australia.

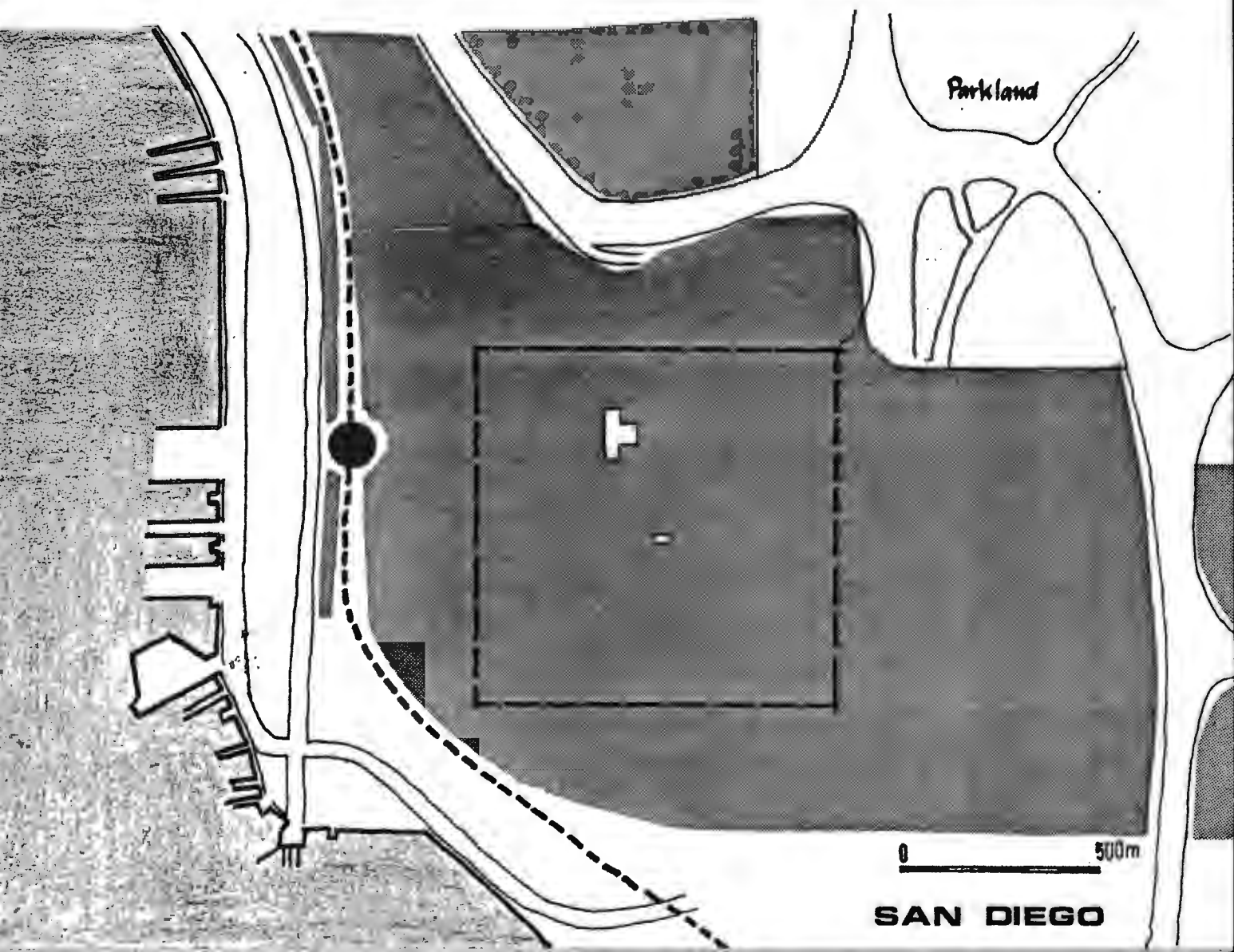
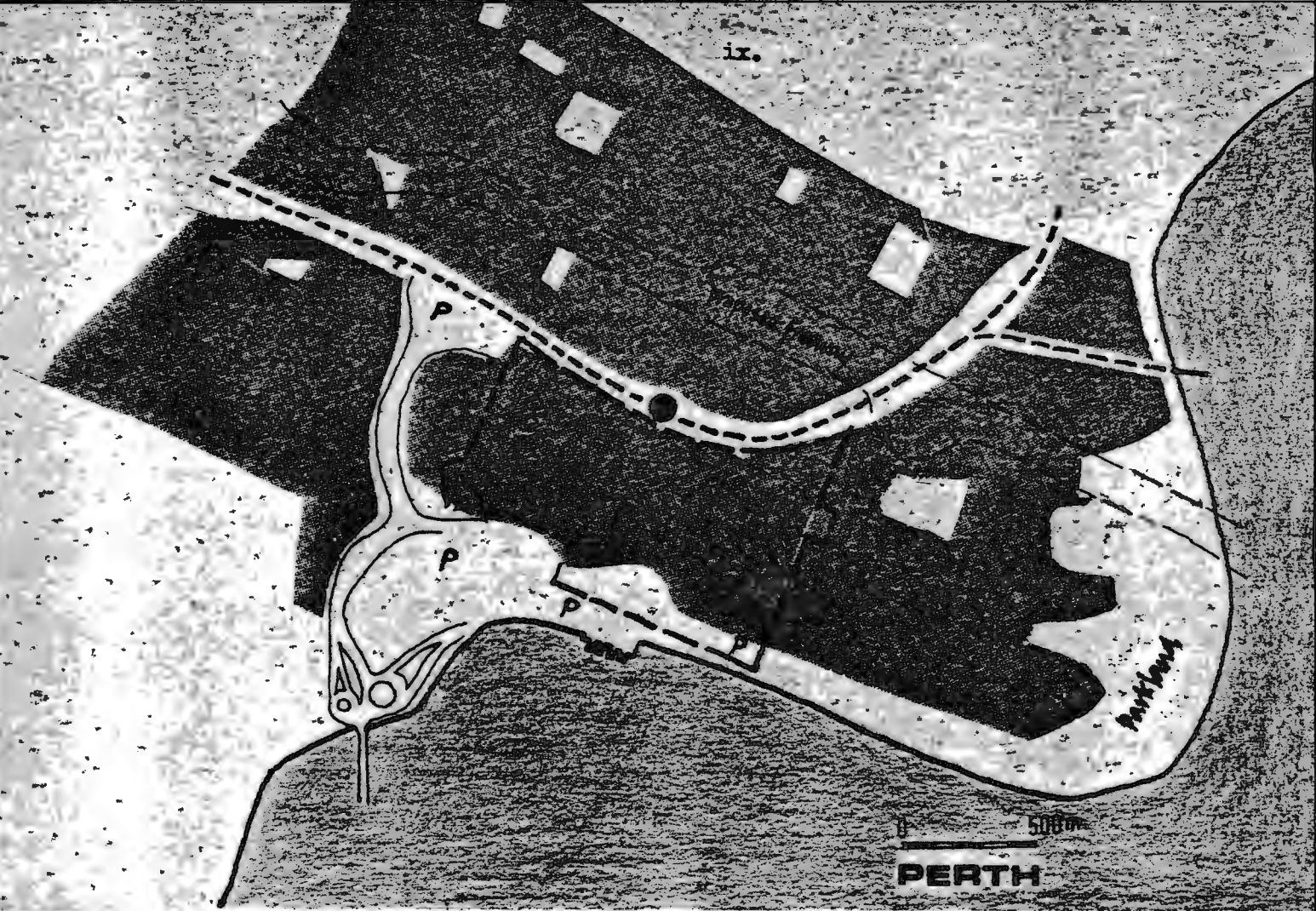
All outgoing correspondence was in English.

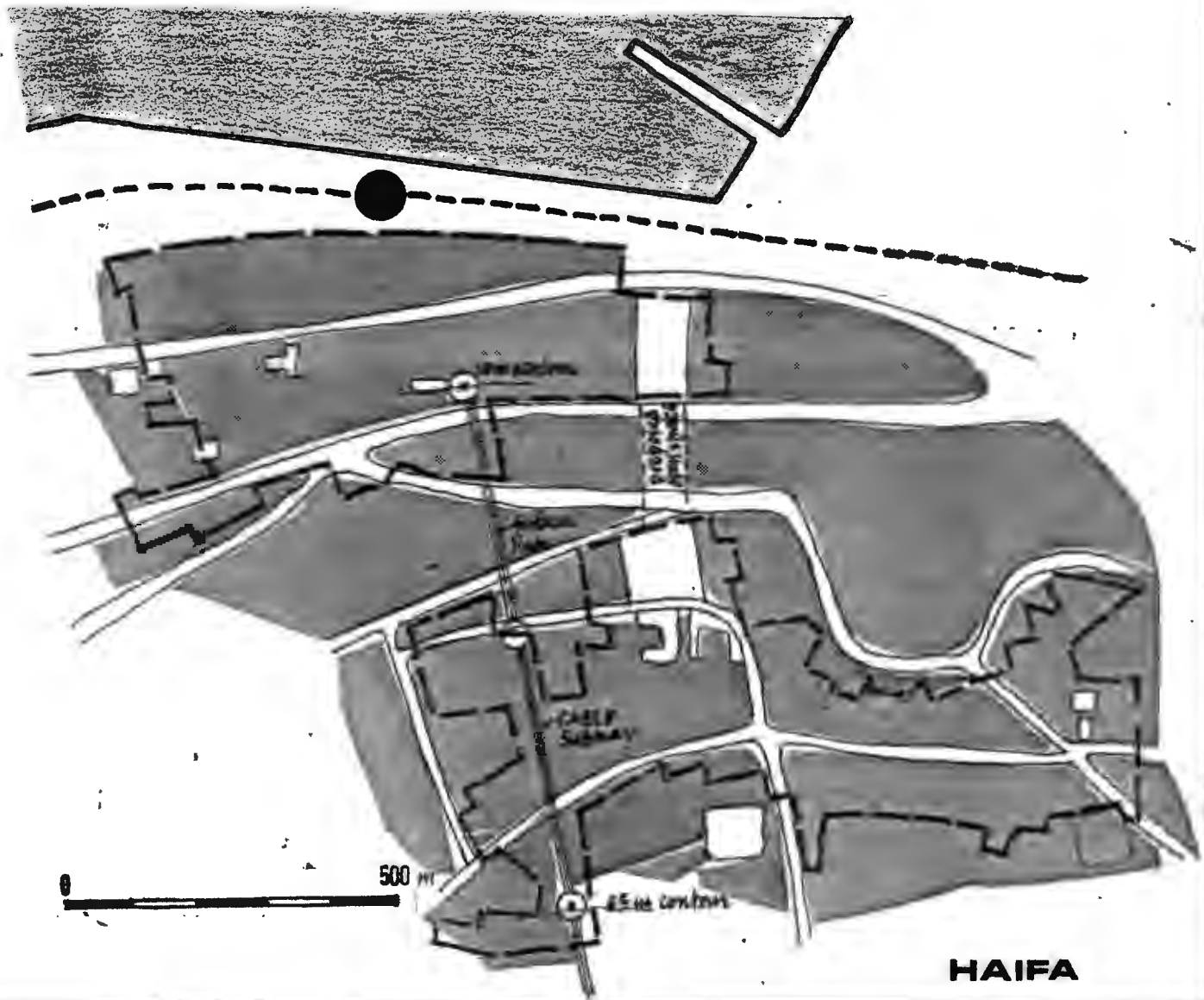
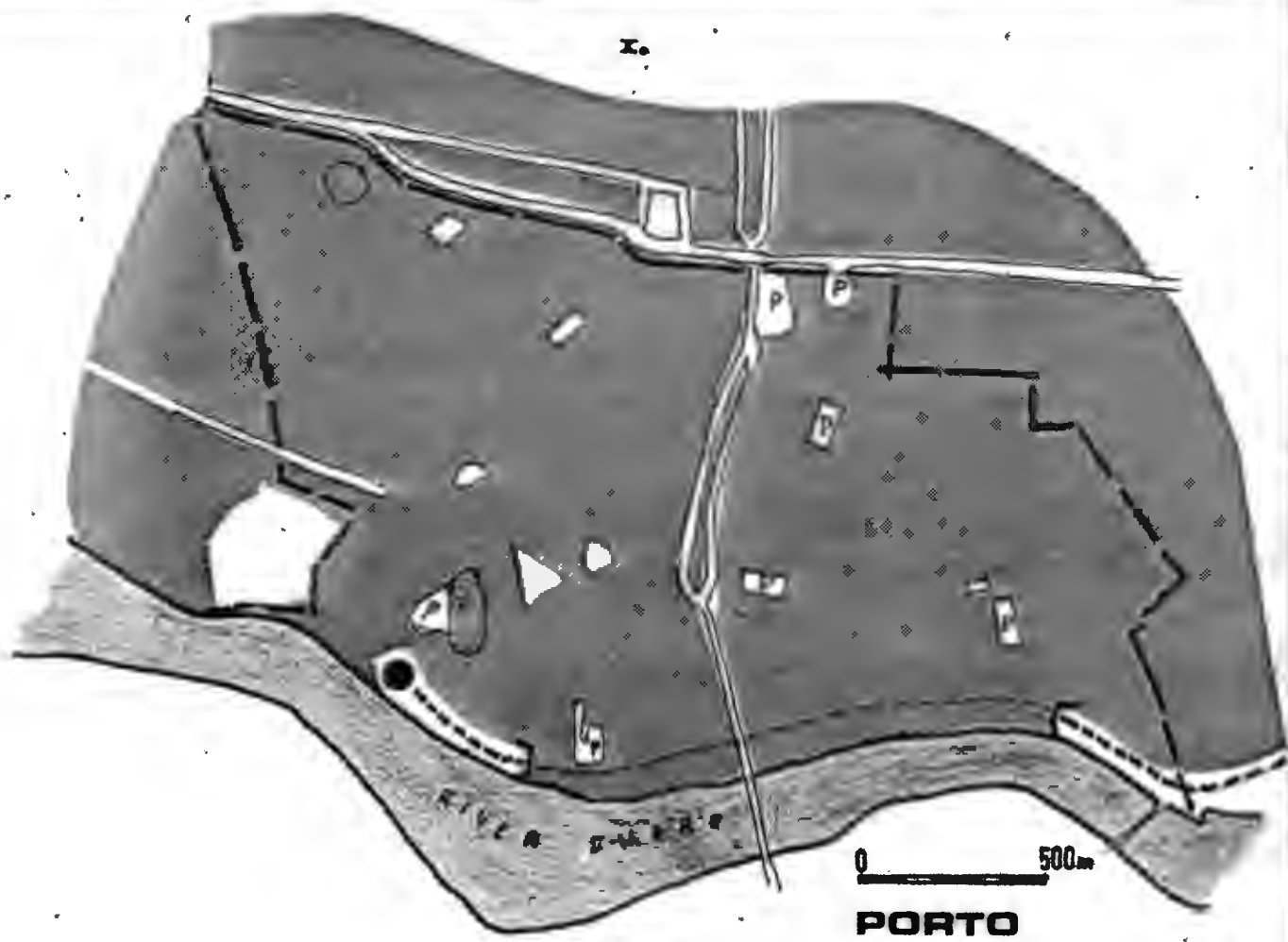
In - coming correspondence did not furnish complete information

in all cases.

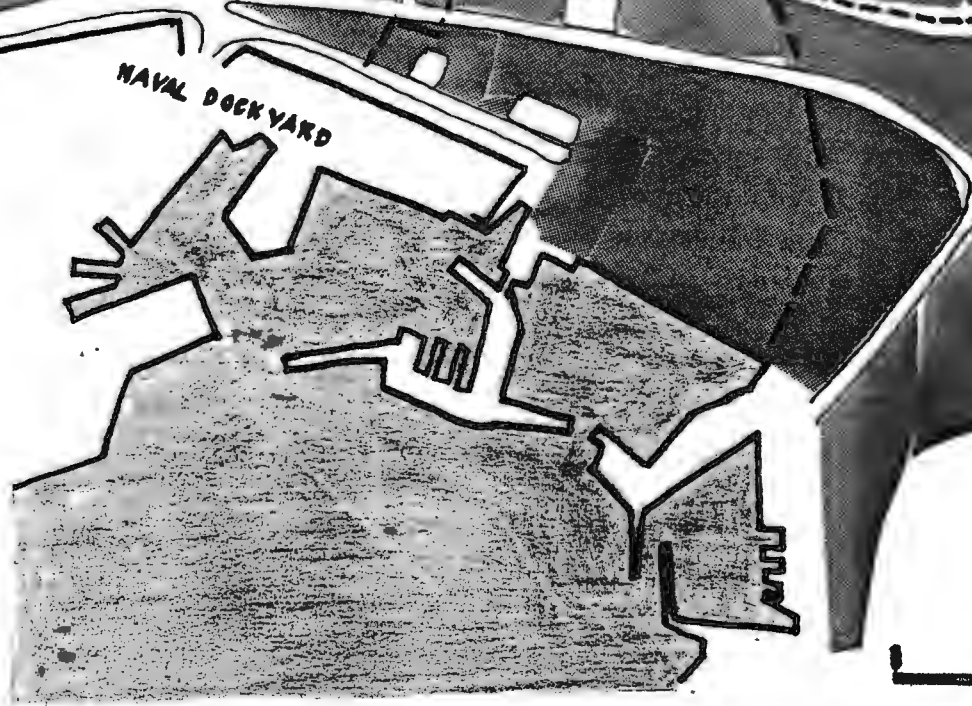
The following table must be regarded therefore, as approximate:-

	METROPOLITAN POPULATION	C.B.D. POPULATION	C.B.D. POPULATION AS % OF METRO.	AREA OF C.B.D.	AREA OF C.B.D. OPEN SPACE	OPEN SPACE AREA AS % OF TOTAL	AREA PER 1000 POPULATION
	THOUSANDS		%	HA	HA	%	HA
JOHANNESBURG	1440	240	16,7	550	12,0	2,2	0,05
DURBAN	700	130	18,6	188	8,5	4,5	0,07
PRETORIA	560	100	17,9	216	7,0	3,2	0,07
PORT ELIZABETH	470	20	4,3	200	5,6	2,8	0,28
BLOEMFONTEIN	180	20	11,1	53	1,0	1,4	0,05
EAST LONDON	120	10	8,3	54	nil	nil	nil
KIMBERLEY	100	10	10,0	42	4,2	9,9	0,99
CAPE TOWN	800	80	10,0	158	13,4	8,2	0,17
SAN DIEGO	1220	20	1,6	83	0,8	1,0	0,04
TEL-AVIV-YAFO	838	120	14,3	45	N/A	N/A	N/A
PERTH	499	40	8,0	137	nil	nil	nil
HAIFA	477	50	11,1	51	2,8	5,5	0,06
TOULON	340	N/A	N/A	25	1,0	4,0	N/A
PORTO	324	23	7,1	318	4,9	1,5	0,06
CANNES	213	N/A	N/A	103	6,4	6,2	N/A





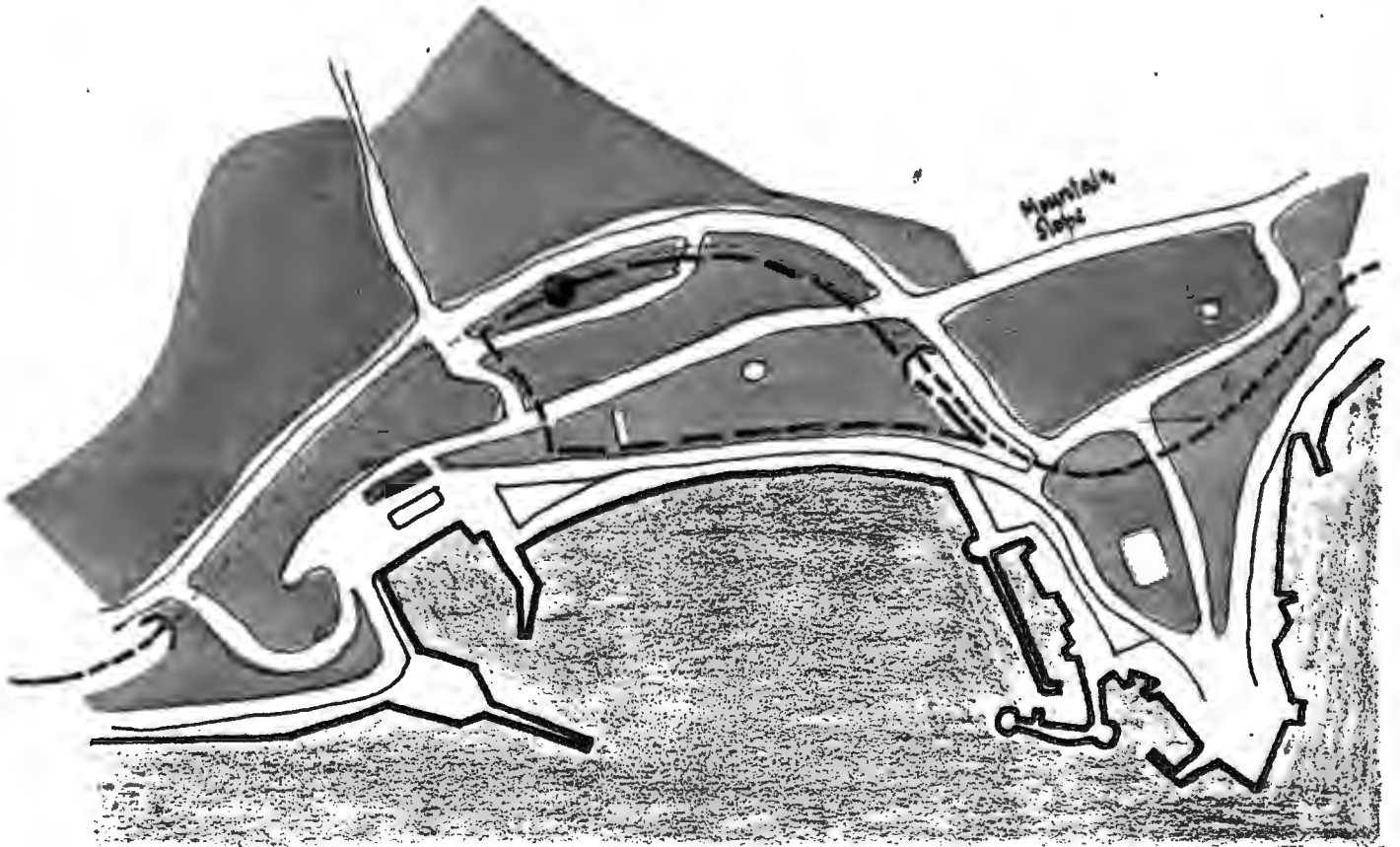
xi.
NAVAL DOCK YARD



500m

TOULON

Mountain Slope



0 500m

CANNES

APPENDIX 5DISTRIBUTION OF SHOPPERS ON THREE FLOOR LEVELS IN
DEPARTMENT STORES.

Five cursory counts of shoppers on three floor levels, Basement, Ground Floor and First Floor, were made in five Department Stores in the Central Business District. Three of these are in Adderley Street and two are in Plein Street.

The counts on each floor level, made simultaneously in each store, were of shoppers in the aisles between counters. Food Supermarkets and Restaurants were not included in the count.

The counts were made during off-peak shopping hours for office-workers: The following table shows average number of persons and percentage for each store:-

LEVEL	STORE	ADDERLEY STREET					PLEIN STREET				
		GARLICKS		STUTTAFORD		O.K.BAZAAR		O.K.BAZAAR		ACKERMANS	
BASEMENT		18	13,8	N/A	N/A	51	21,7	15	16,1	14	19,4
GROUND FLOOR		68	55,3	108	60,7	149	63,1	63	67,8	43	60,3
FIRST FLOOR		37	30,9	70	39,3	36	15,2	15	16,1	15	20,3
TOTAL		123	100	178	100	236	100	93	100	72	100

APPENDIX 6:ELEVATED PEDESTRIAN CROSSING OVER STRAND STREET.

A count was made to determine to what extent pedestrians made use of the elevated crossing over Strand Street at the Castle end of the Railway Station. Within the journey to work peak for commuter traffic the period 7. 45 to 8. 15 a.m. was selected for the survey.

A study of the Railway Time-table showed that during the period a total of 19 trains were scheduled for arrival in the Central Business District at intervals varying from one to four minutes, from all Suburban rail origins. A preliminary survey showed that the traffic was generated in "Surges" and "Lulls" and it was decided to make separate counts of each flow.

The Count was made of a) pedestrians at two pedestrian road crossings outside the entrance to the Station and b) at the elevated crossing:-

For "Lulls" the ratio was found to be 1,8 : 1

For "Surges" the ratio was found to be 3,3 : 1

SUMMARY:

PUBLIC OPEN SPACE IN THE CENTRAL BUSINESS DISTRICT
OF CAPE TOWN:

1.0 PREFACE:

The subject of public open space system in the Central Business District was chosen because open space is a component of the city centre which is either taken as given in that history has provided it or else it is automatically provided in conjunction with civic buildings. Open space is a vital part of the overall pedestrian movement system in the Central Business District which is essentially the pedestrian domain.

2.0 INTRODUCTION:

2.1 An assessment of the requirements of the pedestrian environment is necessary. Certain functions of the Central Business District face possible decline because of competing sub-centres in the region and because of congestion in the Central Business District itself, therefore, in order to continue to attract people the C.B.D. must provide an acceptable environment.

2.2 Public open space is defined as those spaces or places where the pedestrian may walk or linger freely at his leisure.

2.3 The boundaries of the C.B.D. are delimited to the seaward side by the junction with the Foreshore scheme which approximates to the 1937 shoreline. The other boundaries are formed by the new ring-road system.

2.4 The methodology adopted involves:

1. The history and appraisal of the existing open space provision.
2. An investigation of the factors which influence the need for open space.
3. The study of the requirements open space should satisfy.
4. The conclusions of 1., 2. and 3. are applied to possible future development of the Cape Town C.B.D.

3.0 HISTORICAL BACKGROUND TO THE EXISTING OPEN SPACES:

3.1 The history of each existing Public Open Space is separately traced from its origins, through the various social changes, to its present state. This is dealt with at some length.

3.2 The present character each open space is then discussed in turn, somewhat inventorially in an attempt to stress the negativeness of the existing provision of the amenities.

3.3 As a result of the Foreshore Scheme the seaward periphery of the old C.B.D. is affected by the creation of

new open spaces and by the new Station development on this boundary.

- 3.4. Several other minor open spaces such as the flower market in Trafalgar Square and the attempt at the creation of a shopping mall in Longmarket Street are discussed.
- 3.5 The conclusion is drawn that the existing open spaces in the C.B.D. contribute little to the pedestrian environment and are almost totally lacking in amenity.
- 3.6 The Longmarket Street shopping mall is discussed in terms of a survey which was made in order to assess the merits of the experiment. Again this gave a negative result and it would appear that within the existing C.B.D. pattern the shopping mall is not viable.
- 4.0 FACTORS WHICH INFLUENCE THE NEED FOR PUBLIC OPEN SPACE:
- 4.1 Since the C.B.D. is at the terminal end of much of the metropolitan freeway system the changes occurring along the ring-road are likely to affect the pattern of pedestrian movement.
- 4.2 Pedestrian movement in the C.B.D. as generated by the various components of the city centre, transportation

interchanges, the office and retail function is discussed. An attempt to ascertain the extent to which the formal open spaces act as a pedestrian generator for the office worker, reveals that these spaces do so to a very limited extent, but that the provision of amenities might improve the use of open space.

4.3. The open space system should be provided, firstly, within the context of the functioning of the components of the C.B.D., and secondly, it should provide for an environment which will be compativle with the pedestrian.

5.0 The environment should include the many minor considerations that allow for the happiness, well-being and security of the pedestrian, allow free movement and access, take account of identifiable areas (although these cannot be standarised) topography and climatic conditions. The means for maintaining safety and order are essential. The amenities provided must satisfy a variety of interests in order to sustain the C.B.D's attraction. The city landscaping should be unified, but not uniform, it must be legible and of a scale that is psychologically satisfying at the level of a man walking.

6.0 CONCLUSION:

Open space in the C.B.D. should be consciously linked with the pedestrian movement system and this should be

included as part of the conditions for property development if necessary, and the Local Authorities should make allowances for compensatory concessions to the developer in such cases. Every effort should be made to promote the awareness of the public to planning proposals regarding C.B.D. development and the open space system and studies of every aspect of pedestrian behaviour in the environments which will be created by these proposals must be undertaken.

6.1 Broad proposals regarding future provision of open space include:

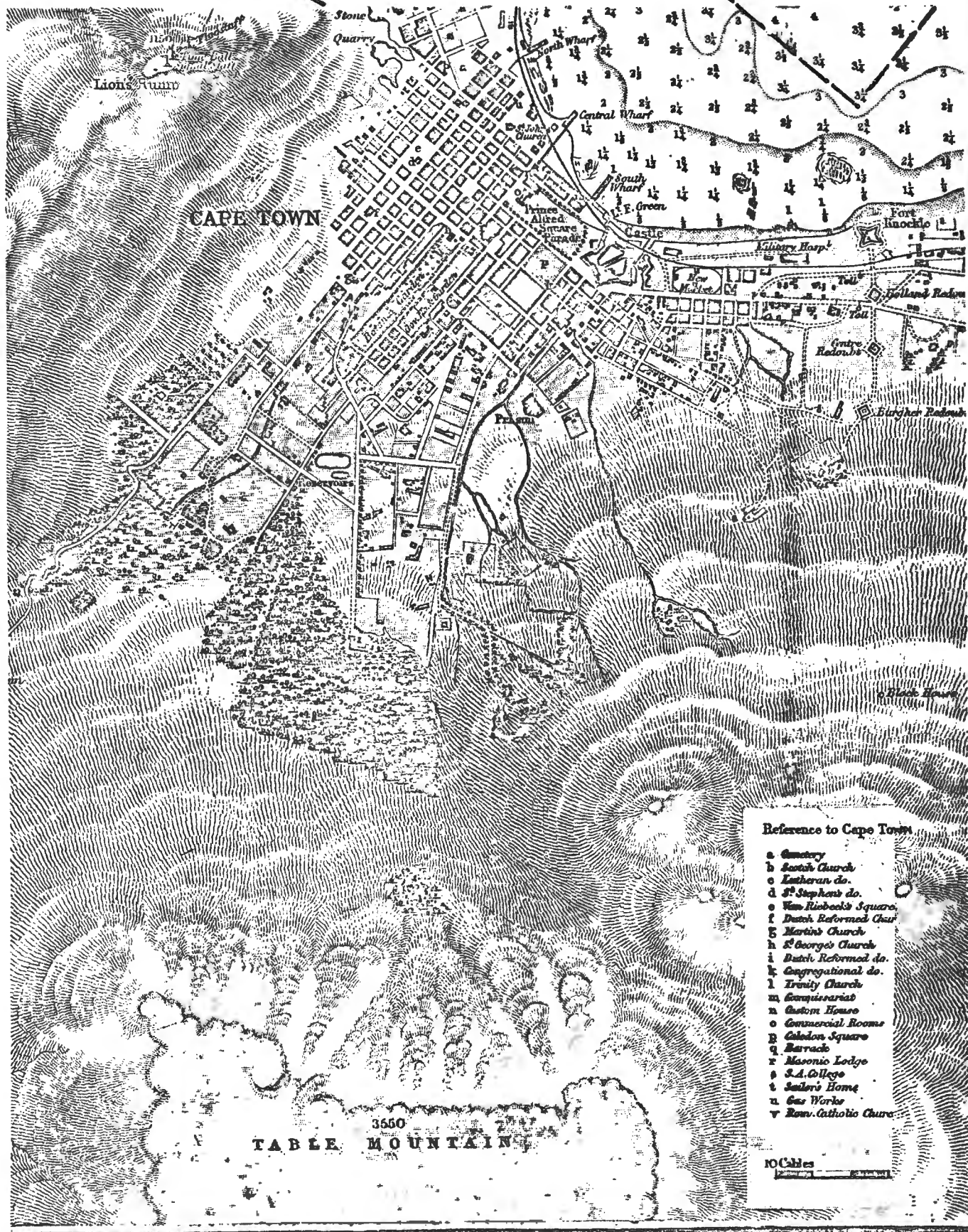
1. The control of vehicular movement.
2. General proposals concerning the old C.B.D.
3. General proposals concerning the areas adjoining periphery.
4. Future commuter transportation to the C.B.D.



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Mrs. C.K. Marsh for the typing; my
supervisor Mr. R.A. Chapman for his
guidance; my family, friends and
co-workers for their patience.

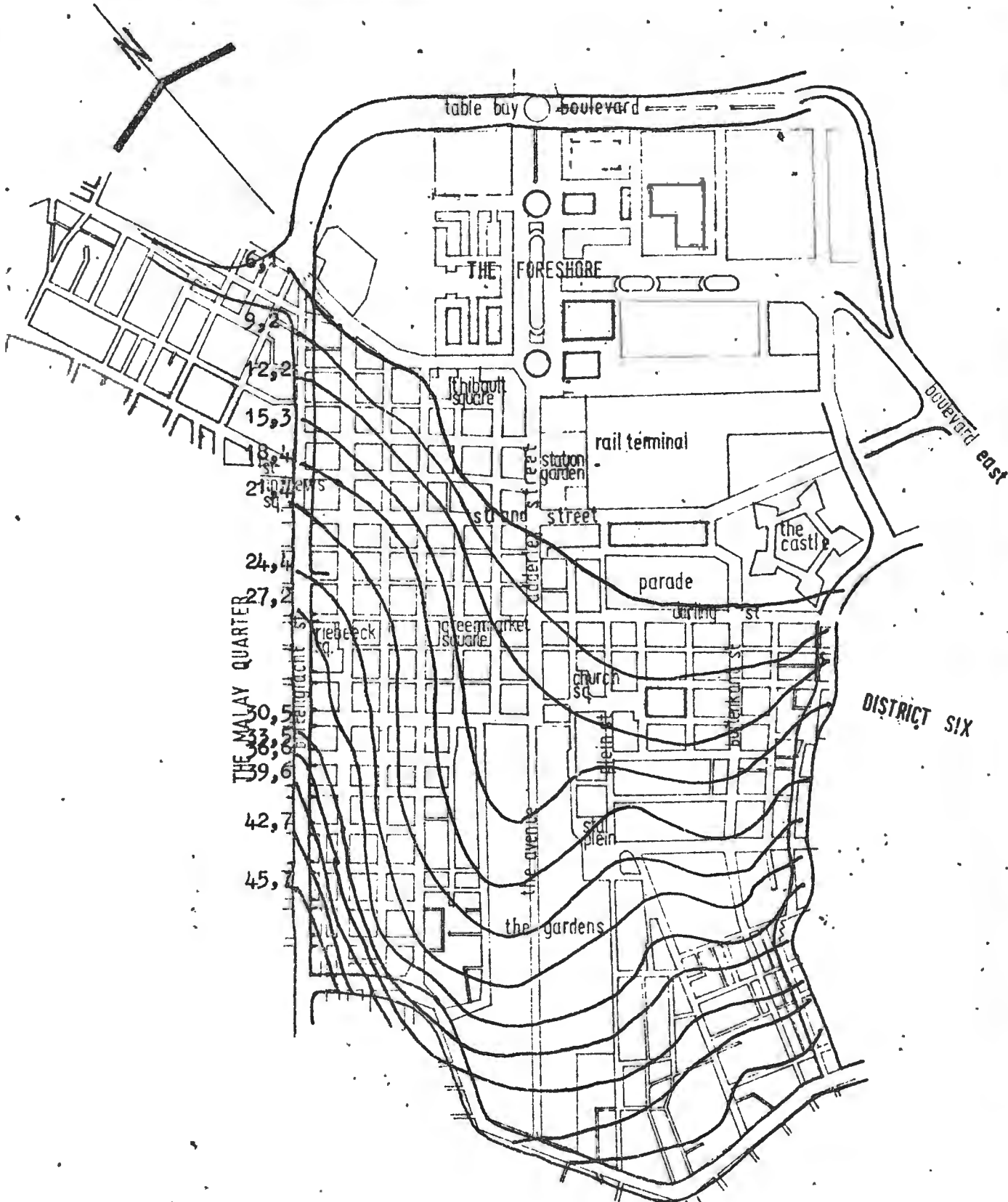
Map 13 DUNCAN DOCK

(Source: State Archives Cape Town)



London. Published at the Admiralty 15th Aug. 1857, under the Superintendence of Capt. W. H. R. S. Hydrographer. Additions to Aug. 1859.
Sold by J.D. Patten, Agent for the Admiralty, Cannon St. & R. Cross Street, London E.C.

THE SITING OF THE DUNCAN DOCK RELATIVE TO THE OLD SHORELINE



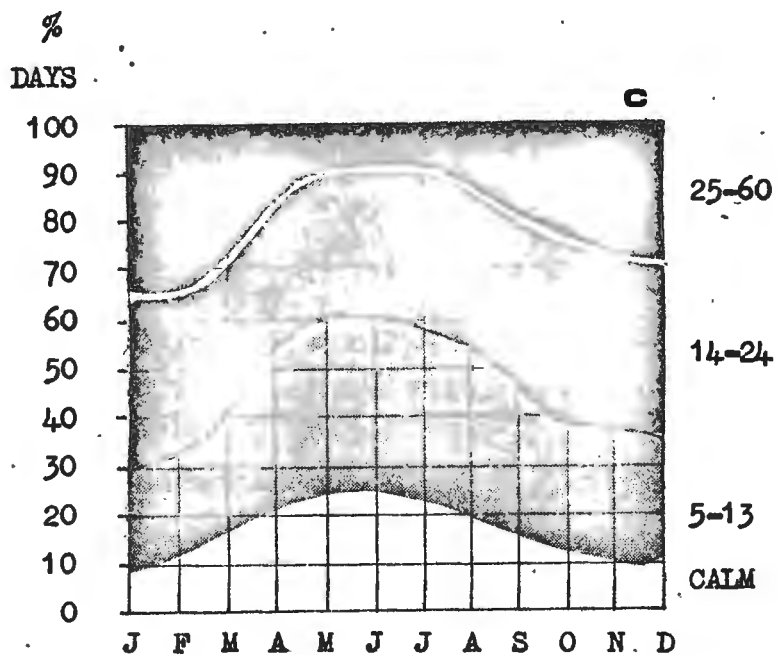
GARDENS

0 500m

TOPOGRAPHY

TEMPERATURE °C			
	DAILY MAX	DAILY MIN	<u>MAX+MIN</u> 2
JAN	25.6	15.5	20.5
FEB	26.2	15.5	20.9
MAR	20.0	14.2	19.6
APR	22.4	11.8	17.1
MAY	19.7	9.5	14.6
JUN	18.3	7.7	13.0
JUL	17.0	7.2	12.1
AUG	17.8	7.9	12.9
SEP	18.5	9.5	13.9
OCT	21.0	11.2	16.1
NOV	23.0	13.0	18.0
DEC	24.0	14.8	19.4

RAINFALL	
AVE mm.	AVE No. RAINY DAYS
15	4,7
8	3,9
18	6,5
47	10,1
78	12,7
85	12,8
90	15,1
66	13,1
42	12,2
31	8,9
18	6,2
10	5,7

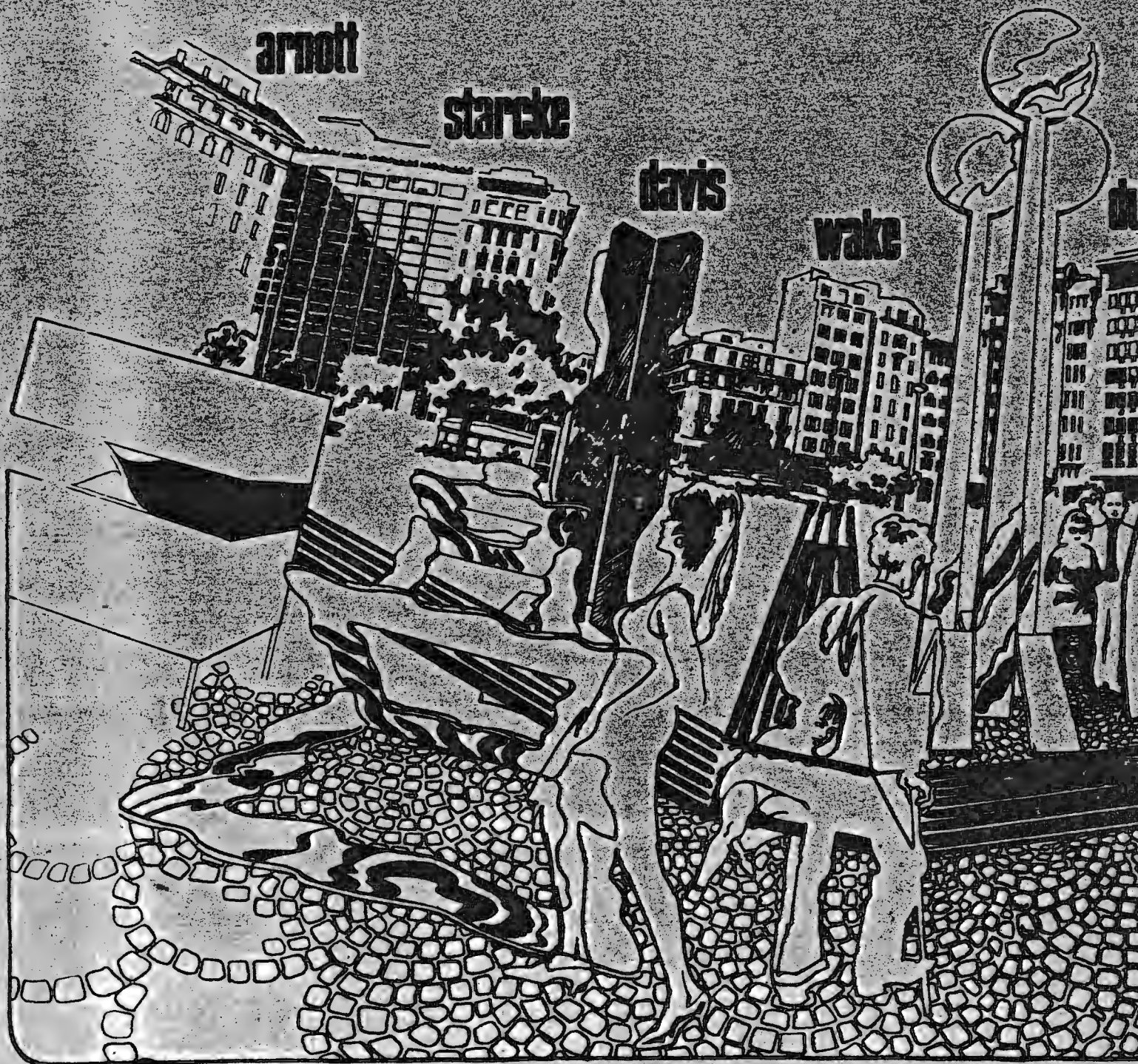


% WINDS OF VELOCITIES FROM CALM TO 60 Kmph

CLIMATIC DATA FOR WINGFIELD (source : Weather Bureau Department of Transport)

Fig 14

greenmarket square aug-sept. '68 * metal sculptures



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'N DROOM

Ek droom die wêreld snuit

Uiteindelik

Sy stede uit.

God kom daar aan en waai

Soos muggies

Vlieënde voorwerpe.

Dan hurk hy

Sit en soek tussen die meeue

In die puin

Met sy voorvinger ou distriksesse.

KOBUS VAN ZYL.

6.0 CONCLUSION:

"The world is now rapidly entering upon a new area of civic development, one in which progress is no longer described as in mere quantity of wealth and increase of population but is seen to depend upon the quality of these. The last generation has had to carry out great works of prime necessity, as of water supply, sanitation, and the like; elementary education, too, has begun; so that to some, even pioneers in their day, or city development may seem well nigh complete. But a new phase of civic development has become urgent - that of ensuring healthier conditions, of providing happier and nobler ones." Patrick Geddes. City Development: A study of parks, gardens and culture institutes, a report to the Carnegie Dunfermline Trust, Birmingham, 1904.

The old Central Business District of Cape Town is over three hundred years old. The Foreshore and the freeway system not yet thirty. Is the old Central Business District any better for having the experience of centuries to shape it or does the Foreshore have the benefit of improved science and technology of the time lapsed?

It is certain that the civic development of the one differs greatly from that of the other. It is difficult to compare their effectiveness in terms of progress and to ascertain in what form they will merge.

Works of prime necessity are still to be carried out but the emphasis has shifted from pipe flows to flows of people. The Central Business District continues to generate increased flows of vehicular and pedestrian traffic which are not always compatible with each other. Of the two pedestrian movement is far more flexible, and

it is this very quality which sustains the Central Business District. It would seem that vehicular movement takes advantage of this flexibility to the point of disregard, whereas the main objective in this situation should be the efficient functioning of the pedestrian movement system.

Furthermore the existing pedestrian movement and public open space system in the Central Business District does not function as a cohesive component and does little by way of providing a desirable and intelligible environment for the user. Consideration of the basic requirements is necessary to render it effective in itself and to coordinate it with future city planning.

Other than street widths the provision of open space in City centre is non-statutory, but it will be in the interests of the primary component development, offices and retailing to consider the needs of the pedestrian in future planning.

If this is to be in the form of concessions on the part of the property developer then the local authority should include as part of a master plan for the city centre allowances, or inducements that will compensate the property developer for any of the advantages, he might have to forego, under the terms of the existing zoning regulations. The master plan can in this way, be a flexible guide to the future growth and change of the Central Business District

and ensure the efficient functioning of its components.

Within this framework it will be the responsibility of architecture to give meaningful form to the buildings and the space that encompasses them, the space that throughout history has been set aside for the pedestrian

To provide open space does not presuppose that it will be used and enjoyed to the full extent. Public awareness of, and interest in the open space system is a prime requisite for its maximum use and enjoyment.

In order to achieve this goal it is necessary to begin with a study of the sociological nuances of the pedestrian in the Central Business District which differ, perhaps, from those of the pedestrian in the Suburbs or in the countryside. Unlike the chicken or the egg dilemma, Post-Adam man has definitely preceded his environment and it has been his aim ever since to shape it according to his needs and his will to survive. If the environment is not healthy, happy or ennobling he either changes it or abandons it and there is no reason to suppose that the latter will never occur in the case of the Central Business District.

Recent experience in the changing equilibrium of the Central Business District has demonstrated a kind of Archimedean restatement.

"When a Central Business District is wholly or partially subjected to a freeway system it apparently loses something, and this something will be found to be equal to those people, firms and individuals, who benefit more by going elsewhere."

Part of the statement is understandably urban geography and by now intrinsic to the development of a metropolitan region. The first major regional shopping centre was opened at Kansas, U.S.A. in 1923, the trend is now gaining momentum in the Cape Town metropolitan region.

Ref 1

Other reasons for people preferring to go elsewhere are the increasing congestion in the city centre and inability of the city centre to provide an acceptable environment for those who use it. Among these people are the pedestrians whose freedom of movement is threatened with curtailment under the present conditions.

Between the property developers and the active pressure groups is an array of interest groups which are concerned with many aspects of their future environment. Altogether this is problematic, firstly, in that public apathy often outweighs the efforts of relatively small interest groups acting independently and seldom in concert. Secondly, planning proposals tend to deal with discrete parts of the Cape Town Central Business District, it is perhaps opportune for an overall reassessment of its future development. Thirdly, the study of how the

pedestrian might behave in the environment, which will be created by any such proposals, involves a multitude of considerations from the major issues right down to the miniscule and seemingly unimportant.

6.1 OUTLINE PROPOSALS FOR THE FUTURE OPEN SPACE SYSTEM IN THE CENTRAL BUSINESS DISTRICT OF CAPE TOWN:

In the light of the conclusions of this study the following proposals are intended as a broad guide towards the continued use of the C.B.D. by the pedestrian. The detailed requirements for the open space system would be arrived at through closer study of the needs and behavioural patterns of the pedestrian within this context.

Maps 15/16

6.1.1 THE CONTROL OF VEHICULAR MOVEMENT:

1. Given that the motor vehicle will remain a desirable mode of travel for an increasing number of people the primary consideration with regard to pedestrian movement in the C.B.D. will be the regulation of congestion and conflict.

If the prediction that electricmedia will in future shatter the spheres of human involvement to the extent where man will "yearn for the simple days of the automobile and the super highway", then the C.B.D., which relies on face to face contact, should seek to optimise the use of vehicles as well as the flexibility of the pedestrian. Ref 2

The C.B.D., in terms of space, is not able to avoid congestion by providing streets of unlimited width nor can it afford to allow vehicular traffic to control itself by its own maximum levels of congestion

Ref 3

Roads remain a fixed quantity and the demand for their use must be priced according to their benefit to the user. This applies equally to the provision of parking facilities. The optimum level of congestion in the C.B.D. should be maintained by a pricing system which will ensure that those who use the facilities will be willing to pay for them to the point at which benefits equal costs. This must be combined with the efficient routing and regulation of the flows and speeds of vehicular traffic in the city streets, and by the strategic location of parking garages. Bus services, both extra- and intra- Central Business District should co-ordinate with private vehicle movement in their use of the roads. On this basis the points of conflict with pedestrian traffic will become a known, almost constant factor, and the pedestrian movement system can be planned accordingly.

At present Strand Street is responsible for many of the points of conflict, the main concentrations being at the intersection with Adderley Street and at the exits from the Railway Station.

Fig 13b

2. A possible solution to this conflict is movement separation by the provision of a pedestrian deck above ground level over Strand Street which will also link the old C.B.D. with the Foreshore development.

Ref 4

A movement system of this kind might to some extent curtail the flexibility of the pedestrian in that the directions for movement are limited as are access points, which might be the cause of disruption by the relatively excessive space required by changes of direction and gradients, in a situation of small city blocks and narrow streets. It is also difficult to assess how far the deck system would extend before changing the character of the old C.B.D. and at the same time bequeathing the ground to the motor vehicle.

The movement of people relating to changes of level will depend on the enticement of what is above or below ground level and also on the subtleties of free flow. (See Appendices 5 and 6)

3. On the other hand the raising of vehicular traffic above the ground as a general principle as envisaged in le Corbusier's Radiant City if applied to the old C.B.D. might protect the pedestrian from the elements but little else.

Ref 5

Consideration might, however, be given to the re-design of the Boulevard East freeway interchange, so that instead of feeding into Strand Street the road would pass along above the railway line, across the Station deck and continue over Waterkant Street until it meets the contours of Signal Hill. This would help to preserve the historic character at the end of Strand Street allowing Buitengracht Street to remain at grade. It would also facilitate pedestrian movement towards the Foreshore.

6.1.2 THE OLD CENTRAL BUSINESS DISTRICT:

1. Planning of the old C.B.D. should be such that future development would retain and improve its existing character.

2. The existing open spaces require positive treatment in order to unify them and their surroundings, especially with regard to buildings of historic significance. An appraisal of the contributions which the Parade and Riebeeck Square make to the C.B.D. as vacant site/parking lots should not preclude the possibility of erecting buildings on them.

The Gardens and the blocks immediately adjoining them should be unified and continue to serve as open space, cultural and educational precinct, with particular attention being given to avoid the abrupt edges along Queen Victoria Street.

3. The Government and Civic component which is fairly extensively located in the C.B.D., is usually developed as "dead-frontage". These areas should in future provide a balance between monumental and reflective spaces and allow for connecting links with the cultural and educational component.

4. The "core" of the C.B.D. should provide for exuberance and although the shop-front contrasts sharply with the finance house's expression of prestige they should be foils for each other and still be integral parts of the city landscape.

5. The entertainments district should be adequately provided with parking; possibly free parking, and it should be linked to a variety of amenities provided in the open space system to promote greater nighttime use.

6. The periphery of the C.B.D. should serve as a cohesive link with development on the outside of the ring-road. With consideration given to the treatment of its edges and access across the road.

7. Consideration should be given to protection from weather in the open space system, especially along the major linkages between components.

6.1.3 THE SURROUNDING AREAS:

1. The present trend in the expansion of the "core" to the Northeast of the Foreshore is by a bottle-neck effect along Adderley Street on one side only; the Railway Station creates a barrier on the other. The elevation of Strand Street could, perhaps, facilitate and unify future expansion by allowing freer access in the direction of the harbour. And in the long term align the city blocks in the Western sector and reduce the width of the Heerengracht. If the Foreshore retains its present form of development the edges abutting the old C.B.D. should not be treated as an abrupt division. The Foreshore development should augment the residential component of the areas surrounding the ring-road on the Southern boundaries and to provide the C.B.D. with the population to sustain the facilities and amenities both for daytime and nighttime use.

If Table Bay Boulevard is kept at grade the Foreshore development could possibly link with amenities which could be provided in the Harbour. Elevated decks would be appropriate in the event of this since the movement of goods in the harbour requires an extensive ground level operation. The deck would also serve to separate the circulation of casual pedestrian movement from the wharftside activities and security arrangements. If in the long term the development of the Harbour at

Saldanha Bay results in a decline in the importance of the Cape Town Harbour then the city should be in a position to avail itself of the waterfront.

2. The existing residential areas around the Southerly sector should be linked to the periphery of the C.B.D. to prevent its becoming an isolated enclave within the ring-road system.

Special attention should be given to the linkage of the Historic Malay Quarter with the city.

District Six should not be subjected to wholesale razing and the central city should be surrounded by a cosmopolitan ethnic mix that in the long run will create a city centre that will provide for more diversity and interest than is the case at present.

6.1.4 FUTURE TRANSPORTATION TO THE CENTRAL BUSINESS DISTRICT:

On the basis of the projected date of 1991 for the freeways to reach maximum capacities consideration might be given to the reorganisation of the Metropolitan rail commuter system to maintain the accessibility of the C.B.D. This could include for an underground transit system connecting the residential components, including the West Coast Suburbs, with each other and with the C.B.D. and from there connect with the regional transit system. The length of the system would be approximately 10 Km.

Boarding points would be 1 Km apart and located within walking distance of the residential areas which they will serve.

Map 17

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