

## 02\_ SITE LOCATION AND CONTEXT



fig. 2.1 \_  
Graphic depiction  
of Mozambique in  
the context of the  
world map.

\_africa

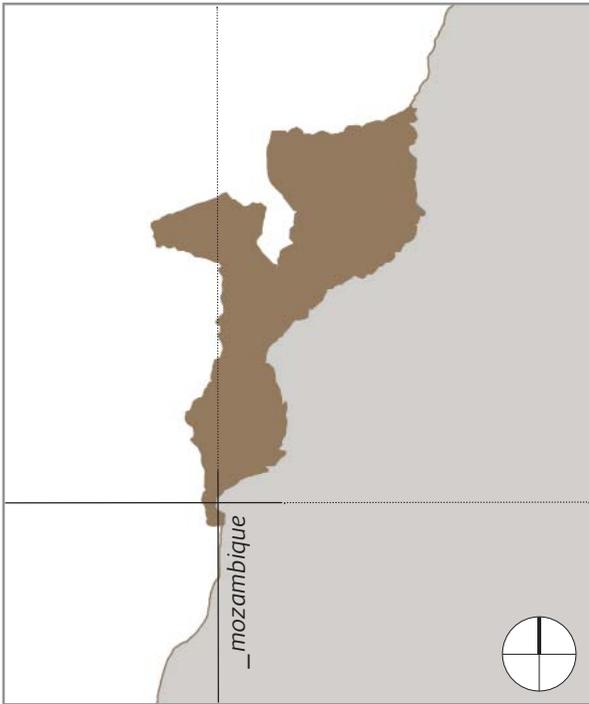


fig. 2.2\_

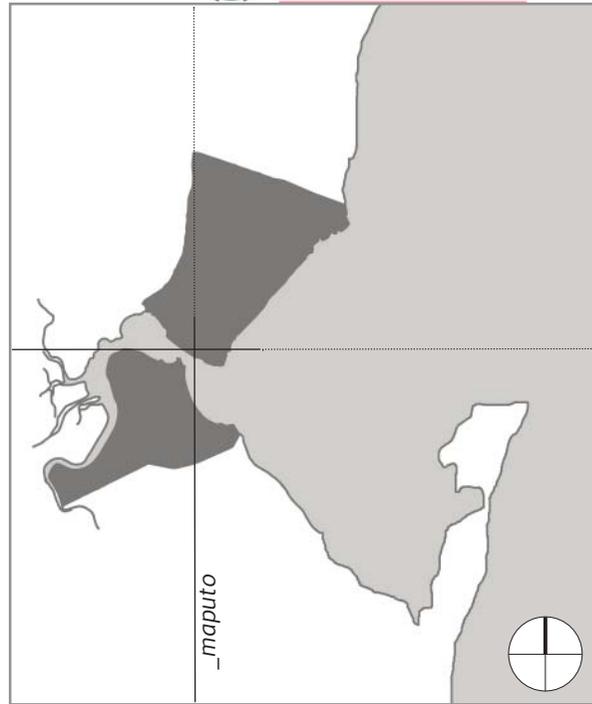


fig. 2.3\_



fig. 2.4\_

fig. 2.2\_ Graphic depiction of Mozambique with location of Maputo Bay indicated by crosshairs.

fig. 2.3\_ Graphic depiction of Maputo Bay with the location of the Baixa indicated by crosshairs

fig. 2.4\_ Graphic depiction of the Baixa with projects site location indicated by the crosshairs.

## 2.1 INTRODUCTION

Maputo, earlier an indigenous kingdom, has grown from a strategic trading base for the Dutch and then the Portuguese, into the capital of the independent state of Mozambique. Due to its location, the city serves major trade routes and forms a vital link between South Africa's northern provinces and countries in Europe and Asia.

It is a fascinating city with a rich history and cultural diversity coloured by Portuguese influences from its colonial past and its more recent emerging independent character.

## 2.2 AIM OF THE CHAPTER

The aim of this chapter is to establish a foundational understanding of the context in which the design proposal will take place. This understanding is necessary to produce a product of relevance and 'fit' with the context.

## 2.3 GEOGRAPHIC CONTEXT

Mozambique lies on the east coast of Southern Africa. The country's Indian Ocean coastline stretches for 2470km, with many bays that form natural harbours which are ideal to develop into modern trade ports (Torp, 1989:12).

At the southern end of the country is such a bay, the Bay of Maputo. The greater bay is 95km long and 30km wide. The confluences of the Matola, Tembe and Umbeluzi Rivers have formed the large and deep estuary of Espirito Santo. The estuary forms a natural harbour (Alberto & Da Silva, 1964:30).

The satellite image in figure 2.5 provides a visual orientation of Maputo City in the context of the water and surrounding regions.

The estuary of Espirito Santo opens into the western side of Maputo Bay. The greater city of Maputo, and the Baixa district, borders Maputo Bay to the east, with the Espirito Santo estuary at its western edge.

The island of Inhaca is located to the east of the bay, southeast of Maputo. On the south side

of the bay the settlement of Catembe developed under the jurisdiction of Maputo. To the west Maputo borders the city of Matola with the districts of Marracuene to the north, and Boane to the southwest.

An extensive urban area centred on Maputo can be seen to wrap around Maputo Bay.

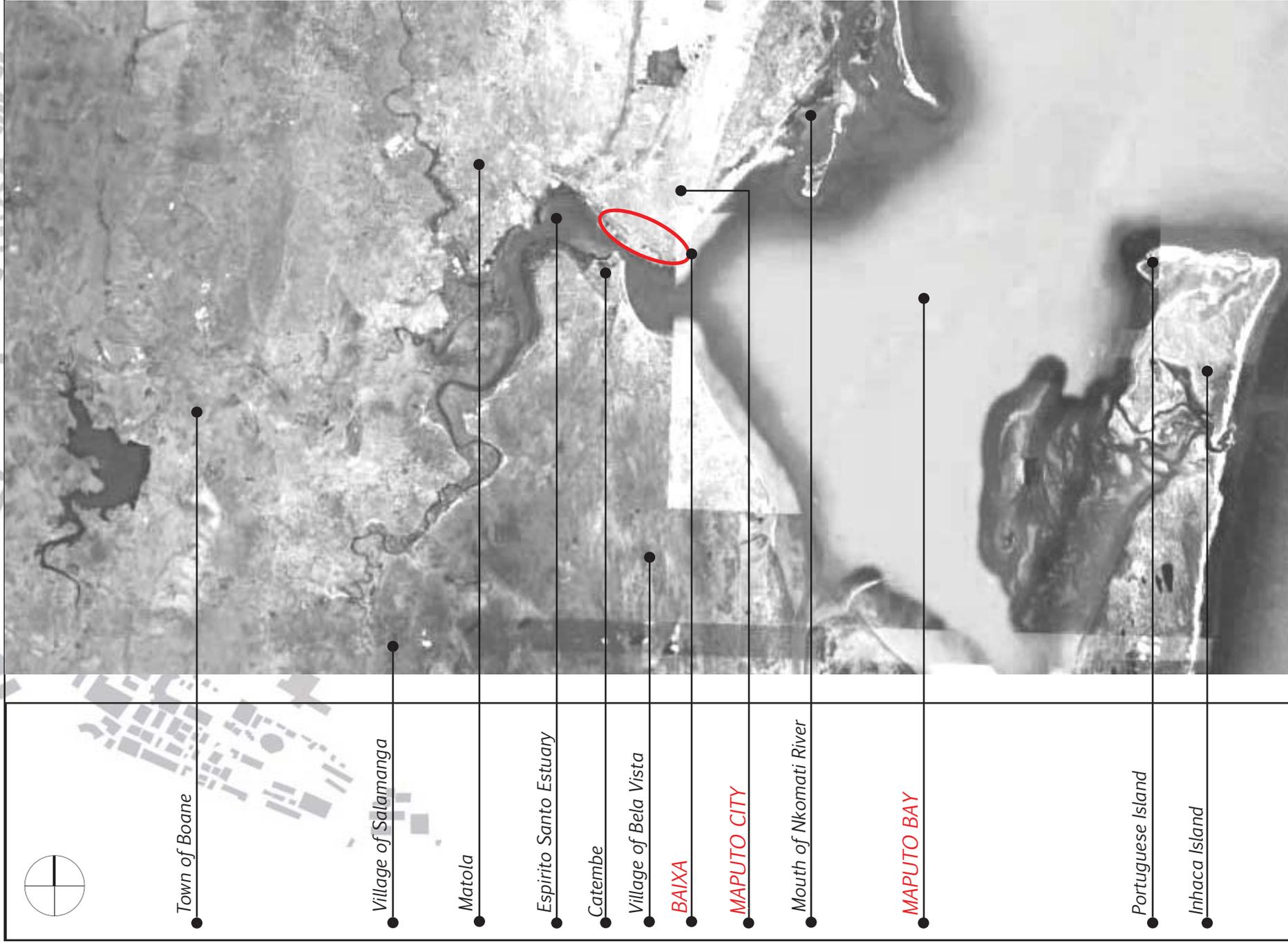


fig. 2.5\_ Aerial map of Maputo Bay showing the extent of Maputo Province. Note the proximity of the Catembe headland to the Baixa.



fig. 2.6\_  
existing context





Matola harbour

Maputo harbour

Avenida 25 de Setembro

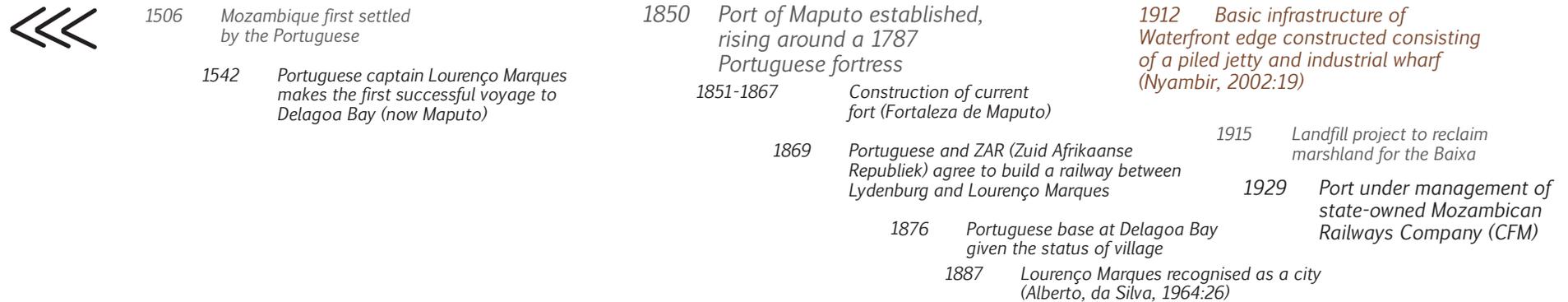
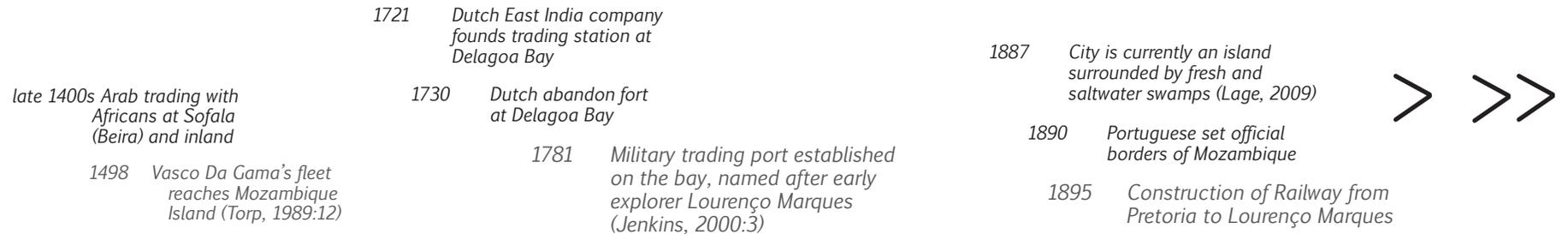
Predio Pott building

National Botanical Gardens

Municipality

Catedral





## 2.4 HISTORIC CONTEXT

### 2.4.1 A Brief History of Mozambique

Africans from the west and north of the continent migrated into the coastal regions of what is today Mozambique. Trade ports were established along the coast to trade with Arabs, who had been trading with Madagascar and the Far East.

The Portuguese navigator Vasco Da Gama first reached Mozambique in 1498, and the Portuguese began to settle and trade on the coast early in the Sixteenth century. The colonial interest in the region

stemmed from its strategic location along Indian Ocean trade routes. (Torp, 1989:12) In 1781 a military trading post was established on the bay, which was named after an early Portuguese navigator, Lourenço Marques (Jenkins, 2000:3).

By 1850, the Port of Lourenço Marques was properly established around the original 1787 Portuguese fortress. From 1851 to 1867 a new fort was constructed on the site of the original fort (Vincente,

2010). In 1876 the base was given the status of a village, and was recognised as a town in 1887 (Alberto, Da Silva, 1964:26).

Mozambique was administered as an 'overseas province' of Portugal from 1951. The country developed strong links with South Africa through import and export via the 1893 NZASM railroad linking the then Transvaal with the port of Lourenço Marques (now Maputo).

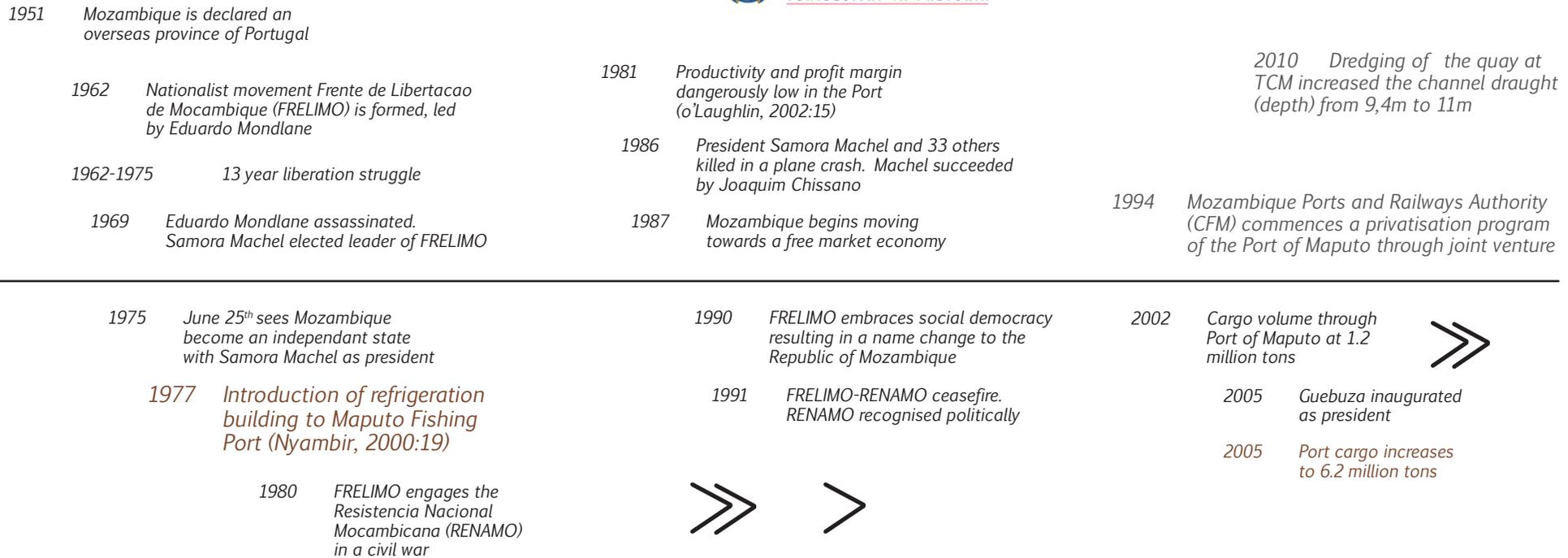


fig. 2.7\_ Timeline of Mozambican history depicting subject related events in context of events of national importance.

### 2.4.2 A synopsis of Recent History

With the establishment of the Front for the Liberation of Mozambique (FRELIMO) under the leadership of Eduardo Mondlane in 1962, Mozambique became part of the movement for independence from colonial rule that swept across Africa. The struggle for independence ended in 1975 when the country became an independent state.

Following independence from Portugal, Mozambique underwent a long and violent civil war between the anti-communist Mozambique National Resistance (RENAMO) and Marxist FRELIMO. The war continued

for more than ten years until peace in 1991. Since then Mozambique has been building a multi-party democracy and has held five general elections.

The struggle for independence and the subsequent civil war left the country economically devastated. Privately-owned industries were nationalised and infrastructure decayed as investment in productive assets stopped. Mozambique became one of the world's poorest countries. Political and economic reforms began during the late 1980s and since then the social and economic recovery of the country

has continued.

A new constitution provided for free elections and a free market economy. Nationalised enterprises have again been privatised, and the combination of economic reforms and foreign aid have put the country on the path to recovery.

Mozambique's social and economic recovery during the first decade of the 21st century has been substantial, albeit from a low base. Maputo is at the centre of the economic recovery.

### 2.4.3 Historic Context of Maputo

The old Baixa, or ‘downtown’ of Maputo, dates back to the second half of the 19<sup>th</sup> century, and is the city’s historic core. The original city was established around the fort and harbour area. Until 1887 the area was essentially an island surrounded by fresh and salt water swamps. From 1887 to 1915 a landfill project was undertaken to reclaim the marshland that became the Baixa. This resulted in the stitching of the Baixa to the expanding city (Lage, 2009).

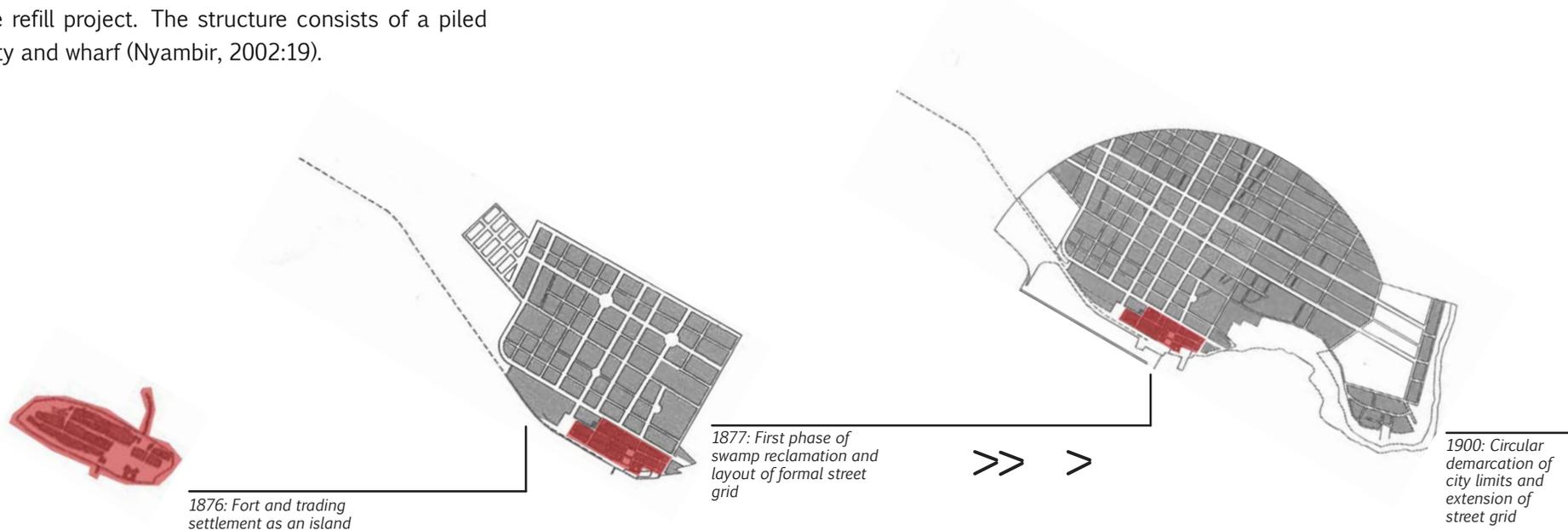
In 1912 the basic infrastructure for the working harbour adjacent to the Baixa, including the fishing port, was constructed. This happened on a site that was previously underwater, but reclaimed through the refill project. The structure consists of a piled jetty and wharf (Nyambir, 2002:19).

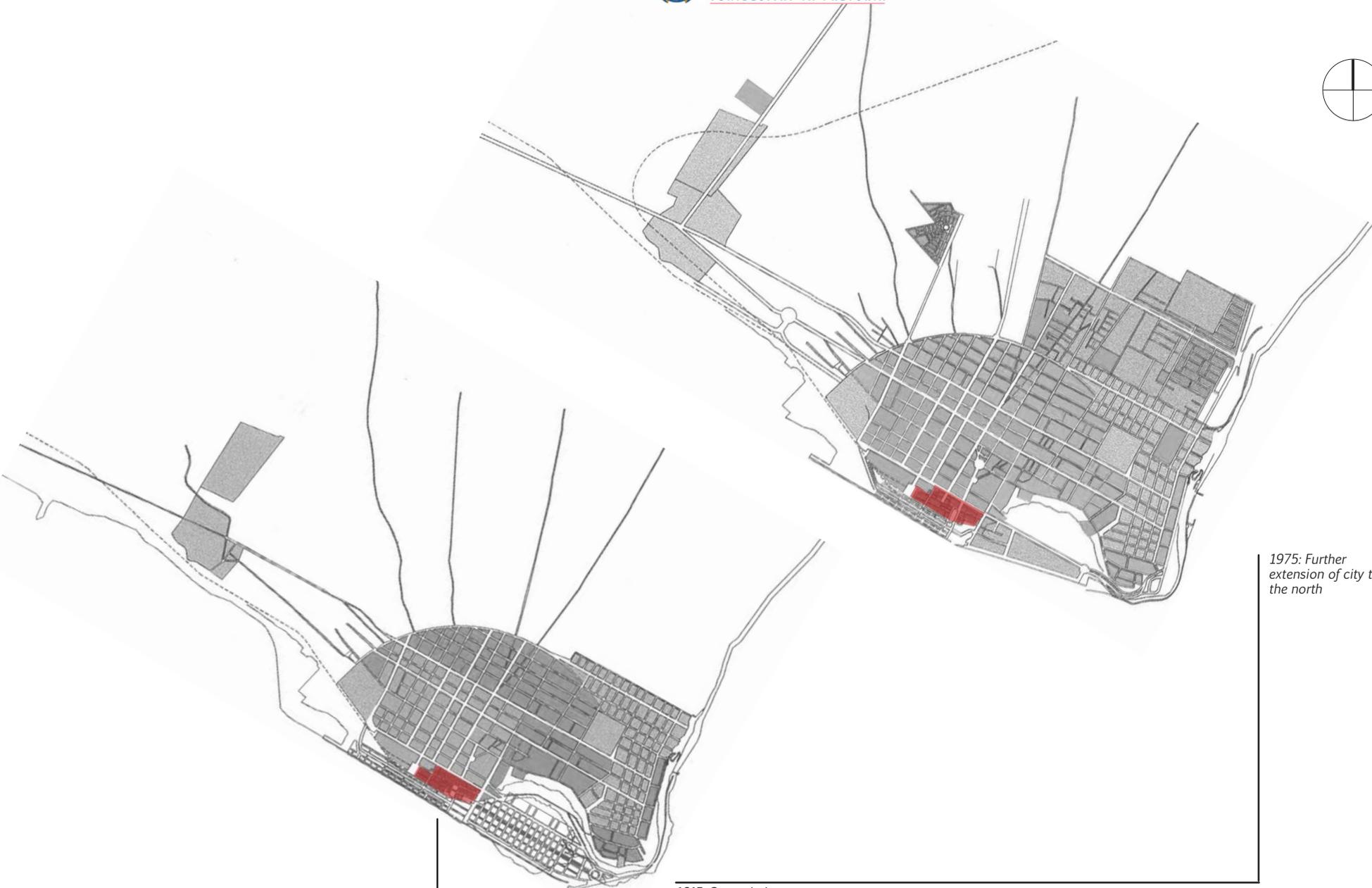
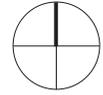
During the 1960s and 1970s, water-borne transport occurred from this working harbour. Due to the increasing industrialisation and expansion of the port, the water transport facility was moved out of this area and relocated further east up the coast. The intended civic and public in quality of the space thus became increasingly marginalized and today the waterfront no longer provides for water-city integration.

By re-introducing the original public transportation program to this site, an opportunity arises to again celebrate this richly historic site as a social interaction point in the city.

The development of Maputo from the first settlement in the 1870’s, around the original fort, to the city layout evident today, is illustrated by figure 2.8. The original heart of the city is shaded in the progressive depiction of the developing city. The original circular street depicting the city’s outer limits is evident.

The series of figures below show how the residential expansion of Maputo occurred eastwards while westward expansion was more industrial and driven by the trade port.





1915: Second phase of swamp reclamation and city extension >>



1975: Further extension of city to the north

fig. 2.8\_ Development of Maputo showing swamp reclamation and city expansion beyond circular demarcated limits. Original island indicated in red

*“The African Metropolis will never be a generic global city - and not only because of lack of prosperity and perspective, but also because the African city consists of more than imported western technology and institutions. The African city is both a symbol and a mirror of a culture that adamantly differs from western cultural norms.”*

Folkers (2010:143)

## 2.5 SOCIAL CONTEXT

Although Mozambique is one of the poorest countries in the world (UN Habitat, 2008:6), it is a developing country with expanding industrial and tourism sectors and a growing economy.

Maputo is the largest city in the country, with the 2007 census determining the population to be around 1.8 million people.

The Baixa and immediate surrounds form part of the formal city known as the ‘cement city’. Informality increasingly becomes more apparent as one moves north from the city centre and around the bay and estuary towards Catembe.

The greater Maputo area is the economic backbone of the region and the country. As is the case in and around Africa’s capitals and economic centres, Maputo’s population is growing steadily as more people move into the city from surrounding provinces. As mentioned earlier, growth rates recorded pre-1950 indicated the annual natural rate at approximately 3%. After 1950 this value increased to over 9%. These values are indicative of a high urban migration rate (Jenkins, 2000:15).

In a social context such rapid growth combined with a turbulent history can lead to contrasts. Against the backdrop of a formal capital city, a strong culture

of informality exists. Many people travel from the suburban areas and informal outskirts of the city via public transport to make their living in the ‘cement city’, in both the formal and informal sector.

Informal trade is a very real condition in the city and needs to be designed for. Much of this trade happens at interchanges where large numbers of pedestrians congregate or where they move, particularly where public transport culminations occur.



fig. 2.9\_



fig. 2.10\_



fig. 2.11\_



fig. 2.12\_

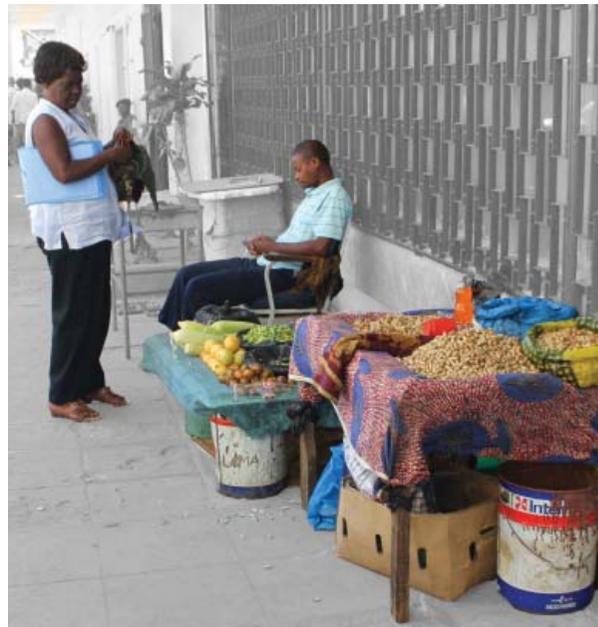


fig. 2.13\_



fig. 2.14\_

fig. 2.9\_ Image of a mobile informal trader selling fruit from a Tchova

fig. 2.10\_ Image of an informal trader selling bread and refreshments near a taxi stop.

fig. 2.11\_ Image of a mobile informal trader selling a nail-painting service in the Baixa

fig. 2.12\_ Image of an informal traders vending stall near to the train station, selling snacks and other essential items.

fig. 2.13\_ Image of an informal trading stall in the Baixa.

fig. 2.14\_ A mobile trader carries his wares, selling them on foot throughout the Baixa.

fig. 2.15\_  
 Map showing  
 the extent of  
 the historically  
 protected precinct  
 of the Baixa.  
 Individually  
 protected  
 buildings are  
 indicated.

## 2.6 PRECINCT CONTEXT

### 2.6.1 Site Location

The term ‘Baixa’ means ‘low’ in Portuguese and defines the flat, reclaimed area of Maputo.

The ‘old’ Baixa, indicated of figure 2.16, refers to the historic downtown of the city, the precinct located between the railway station in the west and the fort on the eastern edge.

The ‘new’ Baixa, indicated on figure 2.16, describes the flat area to the eastern side of the city, stretching from beyond the fort eastwards to the yacht club at the culmination of the Marginal. This area features much new development.

The ‘old’ Baixa (hereafter referred to as the Baixa) is the study precinct for this dissertation. It falls within a historic zone of Maputo protected by legislation in which buildings built before 1920 are protected by law. (Vincente, 2010)

In addition to these individually protected buildings, the legibility of the Baixa as a whole results in a coherent precinct. Development in the area should be sensitive to this.



#### Statutory declared heritage buildings

- |                                      |  |
|--------------------------------------|--|
| 1_ Conselho Municipal (City Council) | 10_ Predio Pott  |
| 2_ Catedral (Cathedral)              | 11_ Correios de Mocambique (Central Post Office)       |
| 3_ Radio Mozambique                  | 12_ Imprensa Nacional (National Press)                 |
| 4_ Telecommunications of Mozambique  | 13_ Museu de Moeda (Museum of Money)                   |
| 5_ Centro Cultural Franco Mozambique | 14_ Caminhos de Ferro de Mocambique (Central Station)  |
| 6_ Casa de Ferro (Iron House)        | 15_ Monumento a Primeira Guerra Mundial (WW1 Monument) |
| 7_ Statue Samora Moses Machel        | 16_ Casa dos Azuleijos (House of Tiles)                |
| 8_ Tribunal Supremo (Supreme court)  | 17_ Fortaleza de Maputo                                |
| 9_ Mercado Centrale (Central Market) | — Boundary of Declared heritage zone                   |



- Current Cruise Ship Dock
- Start of Port of Maputo
- Catembe Ferry Dock**
- Railway Station
- Site of Proposed reprogramming of former port area into public waterfront space
- Banco Commercial
- Museu de Moeda (Museum of Money)
- PROPOSED SITE**
- Praca 25 de Junho (25<sup>th</sup> June Square)
- Maputo Fishing Port
- Fortaleza
- Avenida Samora Machel
- Current ferry dock**
- 'Old' Baixa
- 'New' Baixa
- Maputo Yacht Basin

fig. 2.16\_ Aerial map of precinct in context. Notable buildings of historical significance highlighted. Existing and proposed new ferry docks highlighted.

fig. 2.17\_  
Image and  
dimensions of  
a Tchova, the  
push cart used in  
Mozambique for  
informal trade.

## 2.6.2 Baixa Character

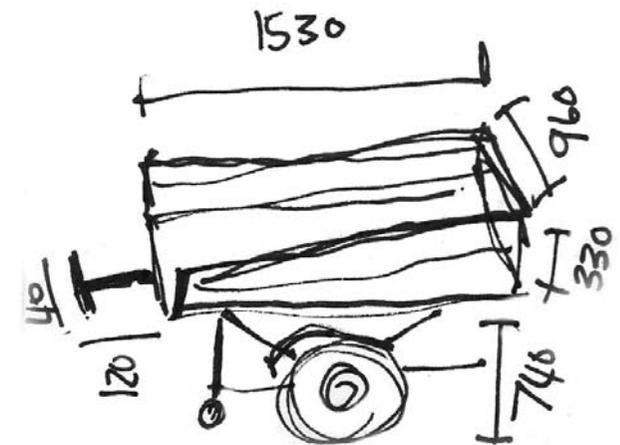
The Baixa's character is layered with influences. The Portuguese colonial influence is clearly evident in the urban layout of the area. Public open squares and plazas, narrow colonnaded streets complimented by generous boulevards and classic colonial buildings all reveal the Portuguese heritage of the city.

The influence of the modernist tradition in Maputo is evident in many buildings in the Baixa. Climatic conditions are addressed in the facade through shading techniques and the use of brise soleil.

The informal retail quality of its streets adds another character-defining layer to the downtown, revealing the African dimension of the city. Informality thrives in the area, with pavement stalls often being linked

to the formal shop behind. The informal retail is closely associated with high pedestrian density, concentrated at places of interest, recreation and public transport nodes. The informal trade is often mobile, being operated from "Tchovas", which are custom-made carts on wheels to accommodate anything from fresh produce to public phones. Most vending is linked to necessities, such as food, clothing and mobile phone airtime.

In contrast, the southern waterfront part of the Baixa is industrial in character. The area is under-utilised and has become redundant space. This precinct is discussed in further detail in the pages to follow. Of relevance here is that the area is a legible district with a defining character.



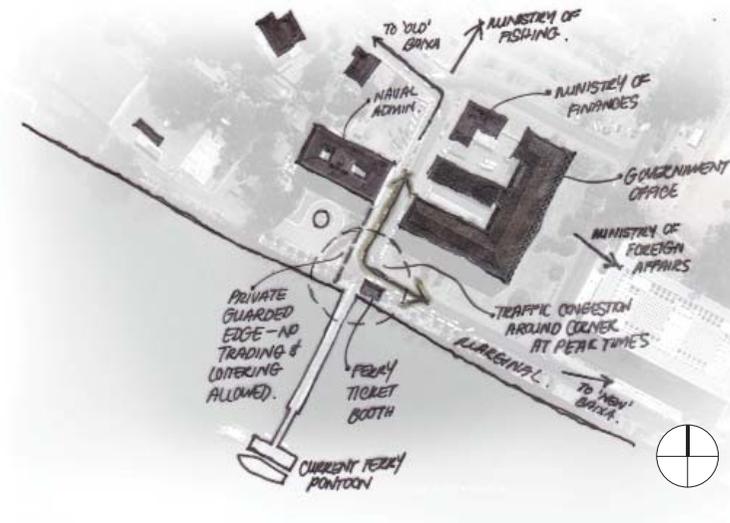


fig. 2.18\_ Figure ground sketch of area around the current ferry terminal at Maputo, emphasizing physical constraints of site, traffic congestion problems and location within an administrative precinct.

### 2.6.3 Transport within the Baixa precinct

Being the oldest part of the city, the Baixa is the arrival point into the city for all modes of transport.

The three main vehicular modes of transport, namely municipal buses, Chapas (mini-bus taxis), and tuk-tuks (motorised people carriers), have terminuses in the Baixa. In addition, many commuters arrive in the Baixa from surrounding suburbs by train or ferry.

As mentioned, Maputo's current ferry terminal provides the link between the city of Maputo and Catembe across the bay to the south. The current facility provides the fundamentals but does little to facilitate connection, a sense of arrival, or a means of orientation. Additionally, it provides no amenities to the commuter. The infrastructure supporting this service is thus failing to harness the immense potential lying dormant at such a dynamic transit point.

The current location is further unsuitable from a social, people-focused perspective. The terminal is removed from the pedestrian-rich old Baixa, and is located on the edge of the so-called 'new' Baixa, a more car-focused, heavier-grain part of the city. Analysis referenced in a later chapter shows that most users of the facility are destined for the old Baixa, either as a destination or to continue their journey from there, making use of other available public transport modes. Users of the facility are thus inconvenienced as the water-borne public transport fails to drop them at an optimal site for access to the parts of the city they require.

In addition, physical constraints at the current site do not allow for expansion of support facilities. It is locked between two formal government administrative buildings with strict security. This allows no breathing space around the site, with resulting bottle-necking and traffic jams at peak times.



fig. 2.19\_ Photograph showing the current ferry terminal and the lack of physical space for expansion due to administrative buildings bordering the site.

fig. 2.20\_ Archive image showing public edge to the old harbour.



fig. 2.20\_

fig. 2.21\_ Archive image showing vessel departing from the public edge to the old harbour.



fig. 2.21\_

fig. 2.22\_ Image showing signage from original passenger terminal at the waterfront. Photo emphasizes the heritage value of the precinct. Photo by author



fig. 2.22\_

## 2.7 SITE CONTEXT

fig. 2.23\_ Opposite Figure depicts buildings in immediate context

The proposed site (fig. 2.23) for the water-borne public transport node is at the end of Avenida Samora Machel. This boulevard is the axis connecting the city to the sea, and forms part of the vision of the greater urban framework for the industrial waterfront of the Baixa.

Archive images reveal that the area was the original location of water transport but has since been relocated. This was due to the increased industrialisation and privatisation of the harbour during the mid twentieth century.

Dramatic changes in commercial ports and shipping have led to

“Public space at transit points offers great capacity for multi-dimensional placemaking: recreation, transportation and potential commercial spheres all merge in a cacophony of urban energy.”

—Isichei, U. 2002

specialised terminals and container facilities. These developments could not be accommodated at the original port and were thus built into new specialised berths further into the bay towards Matola. This relocation of the trade and shipping activity has resulted in the decay of the original harbour area adjacent to the Baixa.

By consolidating water-borne transport to one site, proximity between the different public transport nodes is greatly improved and the arrival experience enhanced for the visitor. Additionally, relocation to the original site commemorates the historical heritage of the place.

The site thus serves the user better, and integrates into the city better. These improvements will help arrest and reverse the decay of the old port area.

The current ferry site features a pier and terminates in a substantial floating pontoon. This facility is easily adapted for reuse as a destination facility for a smaller amount of people. The site is optimal for a restaurant or bar, as the proximity to the marginal is suitable for weekend activities.

Alternatively, there is a tradition in Maputo of weddings and other ceremonies taking place on piers and breakwaters. These festivities and celebrations on weekends and public holidays are regular further up the coast. Such activities could begin to occur at the old pier.

### 2.7.1 Site Plan showing Immediate Context



#### PROPOSED SITE

- 1\_ Current fish processing facility  
Single storey concrete warehouse.
- 2\_ Underutilized industrial harbour precinct
- 3\_ Industrial warehouses  
Single storey portal frame structure with brick infill.
- 4\_ Clock tower
- 5\_ Maputo fishing port administration buildings
- 6\_ Dry dock
- 7\_ Fortaleza de Maputo  
Site of original Portuguese fort - protected by heritage legislation.
- 8\_ Naval precinct
- 9\_ Current ferry terminal
- 10\_ Administration building  
9 stories high
- 11\_ Office building  
12 stories high
- 12\_ National Theatre
- 13\_ Museu de Moeda  
Museum of Money - protected by heritage legislation.
- 14\_ Police station
- 15\_ Maputo shopping centre
- 16\_ Original train tracks of harbour train loading ships with cargo.

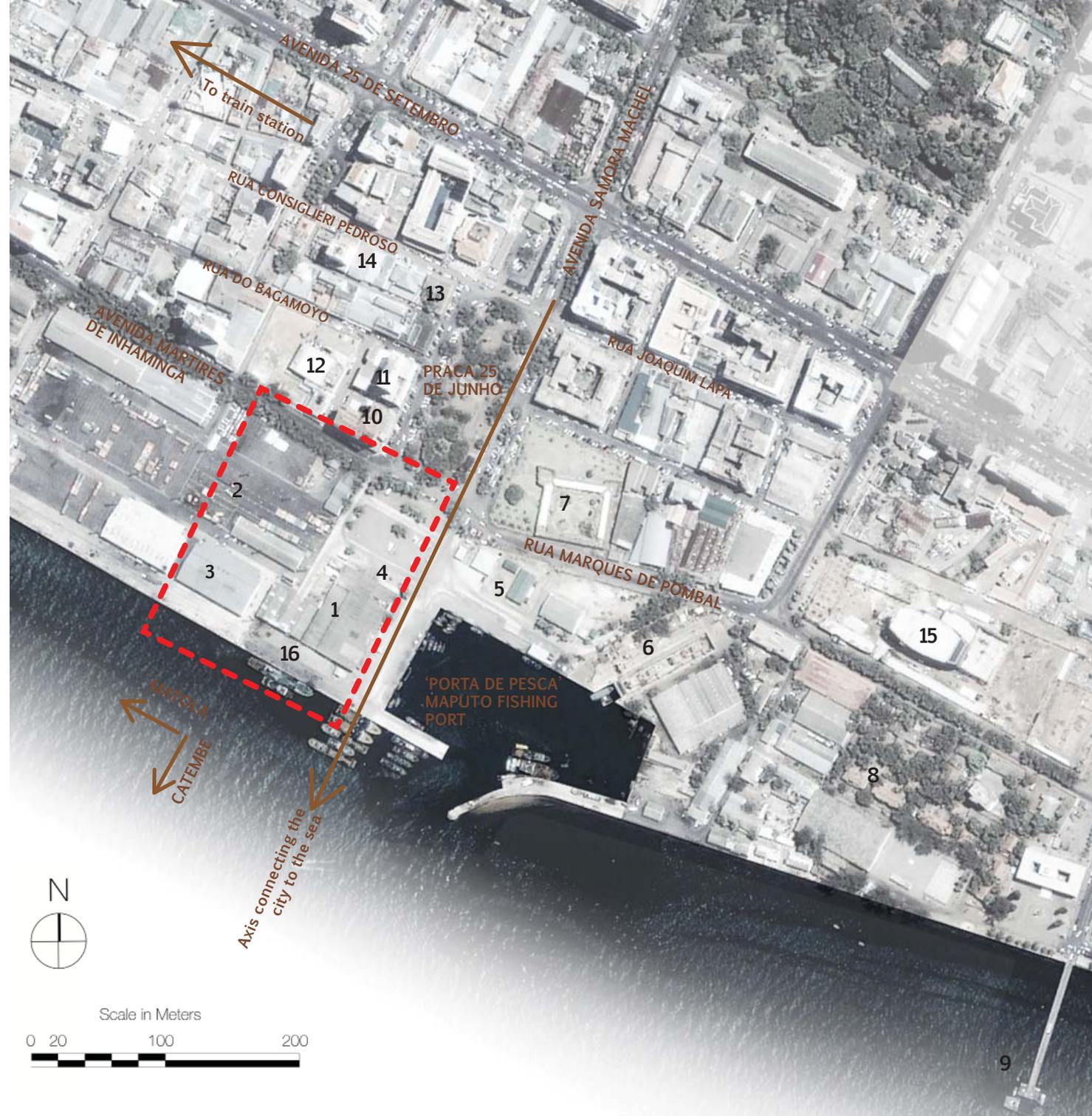


fig. 2.24\_  
Aerial map key to  
show location of  
each site view.

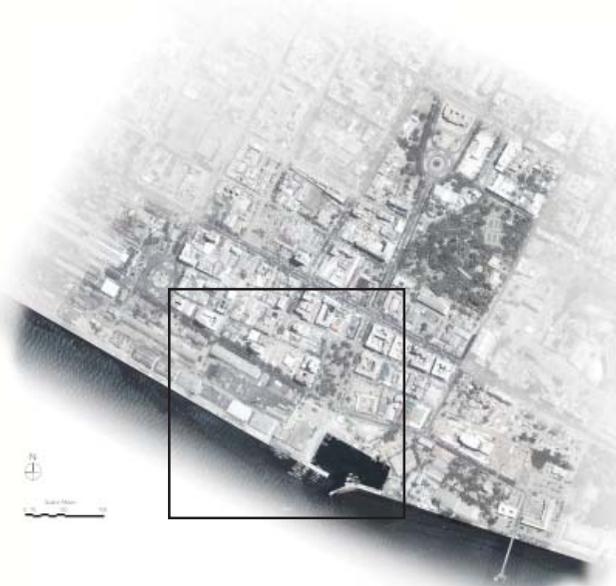


fig. 2.24\_

fig. 2.24\_i  
Aerial map key  
showing location  
of site view fig.  
2.25\_ fig. 2.26\_  
and fig. 2.27\_



fig. 2.24\_i

fig. 2.24\_ii  
Aerial map key  
showing location  
of site view fig.  
2.28\_ and fig.  
2.29\_



fig. 2.24\_ii

fig. 2.25\_  
View of site  
entrance off  
Avenida Martires  
de Inhaminga.



fig. 2.25\_

fig. 2.26\_  
View of site  
from the Fishing  
harbour looking  
eastwards  
showing original  
railway tracks.

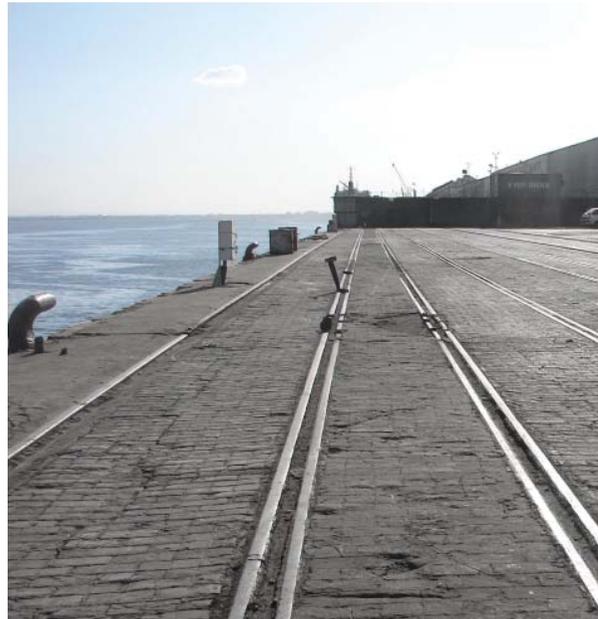


fig. 2.26\_

fig. 2.27\_  
Aerial view over  
proposed new  
harbour site.



fig. 2.27\_



fig. 2.28\_

fig. 2.28\_  
View of southern  
side of Praca 25  
de Junho from  
site entrance.



fig. 2.29\_

fig. 2.29\_  
View of site for  
proposed public  
event square  
adjacent to  
ferry terminal  
site. Building to  
be demolished  
as per Urban  
Masterplan.

## 2.8 ENVIRONMENTAL CONTEXT

Two important environmental factors need to be considered for this dissertation, namely City Climate and Tidal Range.

### 2.8.1 City Climate

Located on the east coast of Africa, Maputo is affected by the warm Mozambican Current flowing through the channel between Mozambique and Madagascar. The result is a tropical climate, with a warm and prevalent humid daytime condition. Winds are predominantly easterly, south easterly and southerly. This provides some relief from the heat and humidity. (Jenkins, 2000:8) Occasionally the Indian Ocean tropical monsoons move down the coastline as far as Maputo.

Maputo's rainy season is from October to March, with an average annual rainfall of 770mm.

Temperatures and humidity drop somewhat in the drier winter months from April to September. Monthly relative humidity ranges from 59% in June, to 67% in November.

The climate influences the design in that occupant comfort will be an important consideration in this particularly humid environment. Orientation of the building should maximise possibilities for airflow and cross ventilation, making use of the prevailing wind direction. Additionally, effective shading methods shall be incorporated to ensure maximum occupant comfort and protection from the heat.

### 2.8.2 Tidal Range

Maputo has a particularly large tidal range as a result of its location within the large enclosed bay. The tidal range from spring high to spring low is in excess of 3.7 metres. To put this in comparative perspective, the tidal range in Cape Town is 2 metres, while the tidal range in Venice is only 800mm.

As a result of this, harbour edge conditions catering for the public require careful design consideration. Effectively, access from land to ferry can vary by a story in height throughout the day. Investigations into the use of ramps, stairs and lifts for universal access to the water transport vessels for both vehicles and people are dealt with in more detail in the design development chapter of this dissertation.

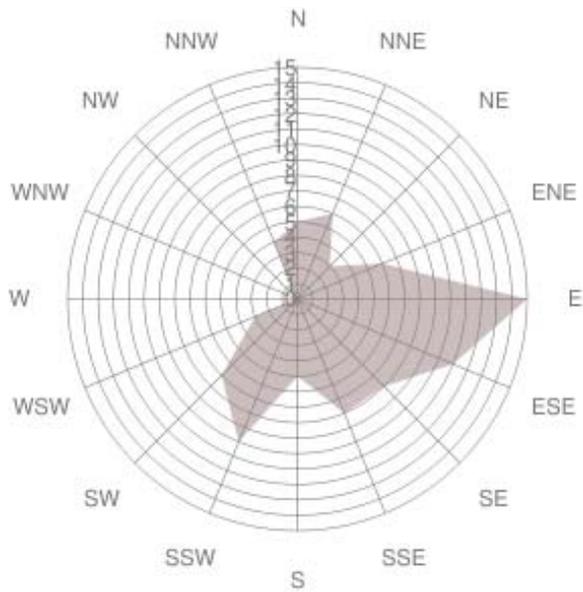


fig. 2.30\_ Average annual wind rose for Maputo

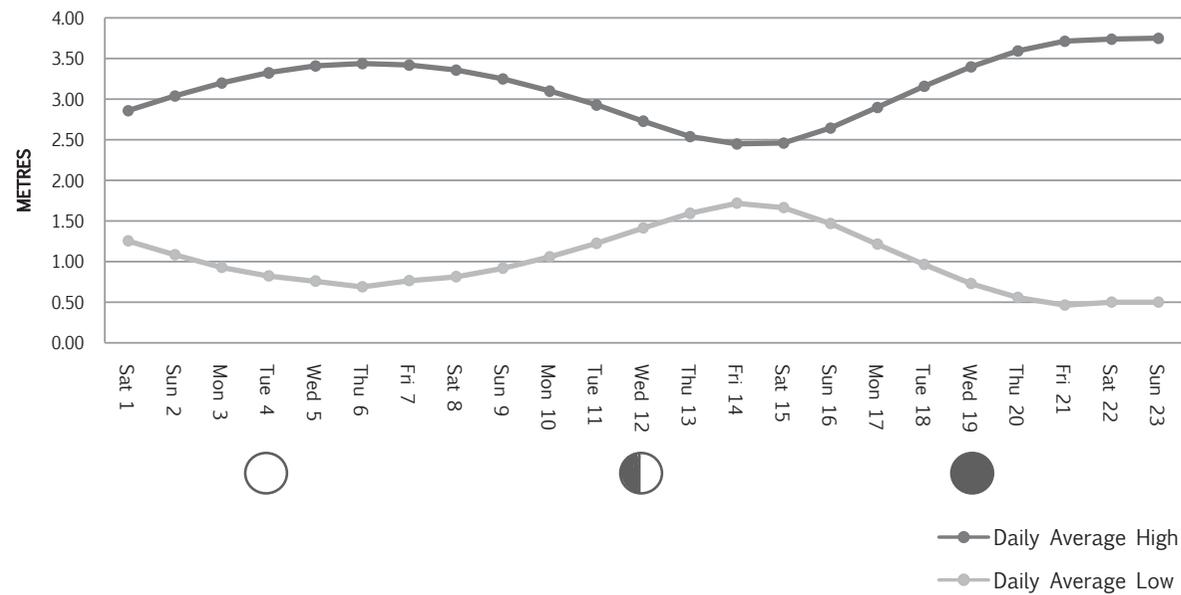


fig. 2.31\_ Tidal Graph showing average daily tidal range for a typical month in Maputo Bay

“ ‘Contextualism’ is an approach that respects the setting in terms of its history, topography, memory, route and so on.”

\_Porter (2004:31)

## 2.9 ARCHITECTURAL RESPONSE

Architecturally, contextual design is an important driving force behind this dissertation. Contextualism in all spheres is considered, with certain aspects particularly relevant to this project.

Geographically, the orientation and relationship of the building to the site will require consideration. Proximity to the water will affect material choices, and tidal range will determine access options.

Historical context is an important reference in order to integrate the building sensitively into an incredibly dynamic and layered context. The industrial character of the precinct itself guides an appropriate architectural response, and drawing on the heritage clues to the area, both tangible and intangible, aids in producing a product of relevance.

Due to the public nature of its program the social context of the city is of specific relevance to this design, . The layers of formal and informal trade prevalent in the Baixa are a character-defining trait of this city. With this in mind it is important for

this design to understand the way in which this proposed transport node could facilitate and serve this sector,.

Environmentally, the humid tropical climate of Maputo will require a contextual architectural response focussing on occupant comfort. Much of the city’s architecture exhibits features effectively adapted to the Mozambican environmental context. The use of *brise soleil* and other shading techniques is widely evident, providing increased thermal comfort to building occupants.

Due to the public nature of the building and the context of Maputo as a city in a developing country, passive techniques are pursued rather than high tech solutions.

North-south orientation of the building will be strived for, with narrow plan widths allowing for naturally ventilated spaces using the prevailing winds where possible. The use of shading and screens will be maximised to provide relief from the harsh tropical heat. These factors are dealt with in specific detail during design development.

Contextualising the design proposal is important. It should acknowledge the industrial tradition of the chosen site, whilst equally importantly responding to climatic requirements and social nuances.

