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Expedient programming

The rational design, as explained above, starts with the gathering and generation of information. Information on the context is gathered and a brief is generated in conjunction with the client goal. Because the amount of information is so vast the architect summarises the contextual reality into a conceptual personality. From this he asks: "What does the site want to be?". It is a synthesis of information. The brief on the other hand is an extrapolation of client needs and confining this explosion of desires into a feasible built form is achieved by asking the question: "What does the building want to be?". Finding a fit between these two romanticised concepts is a compromise informed by theory - See figure 1.

CONTEXT

Introduction

The description of the context here presented is already a reductive design act and should not be regarded as an objective reflection of reality - whatsoever. The architect approaches the site as an undeveloped building project and any description thereof must have at its core information that contributes to the concept. The contextual analysis is already informed by the architect's vague conceptual thinking.

The issues under investigation fall into the broad categories of economy, site and culture.

Economy

Economic considerations are foremost in any human venture. The general drive in any economic system is towards higher productivity whereby less is given in exchange for more - very unsustainable.

The Port Elizabeth economic hopes are pinned on the Coega development to kick-start growth (Andre de Wet, MEC for Economic Affairs, Environment and Tourism. 2005. Nelson Mandela Bay Review. 2004/2005). It is an industrial venture 30km north of Port Elizabeth and consists of a deep harbour (completed) and an Industrial Development Zone. This R3.4b project is waiting for international "takers" - notably Pechiney, a Canadian aluminium manufacturer - to start operating. It promises to bring international trade and business to Port Elizabeth. One could foresee that these activities would benefit from supporting services such as conferencing facilities.

The City has made some effort to make the city a more lucrative place to invest in. Currently a foreign investor sees the following when looking to invest in Port Elizabeth: a Corporate tax rate of 30%, secondary tax: 12.5% - payable on dividends distributed; Local branches of a foreign company is taxed a flat corporate rate of 35,0%; Value added tax (VAT) is currently fixed at 14% although foreign consumers can get VAT refunded. Many programs exist for organizations to qualify for tax-deductible donations and tax-exempt status and foreign direct investment is not subject to South African tax. Capital gains tax is implemented, and there are no significant tax incentives as the policy is to provide tax outside the tax system.

The following services and population characteristics support investments in the Nelson Mandela Bay (NMB) municipal boundary:

- NMB has the legal infrastructure to provide services related to property transfers, contractual arrangements, estate matters and the like.
- Regional offices of all the major financial and insurance institutions are located here, including the government's Reserve Bank.
- Surplus low-cost electricity supply, among the cheapest in the world.
- Ample water supply of excellent quality at low cost.
- Properties can be purchased by foreign visitors and residents at a significant discount compared to similar properties in the western world.
- Unemployment: 55% of economically active population are not able to contribute to economic growth. Normally this means that labour is less problematic as in China and India. This is not necessarily applicable given the lower productivity of South African labour (Author's perception).
- Majority of the area's population is classed as urban. This implies that people are mobile and can function at some degree of social literacy.

Furthermore, Nelson Mandela Bay is a regional centre that serves a hinterland with a population of approximately six million.

Port Elizabeth, like the rest of South Africa, operates under what Thabo Mbeki calls a "Double Economy". This is clearly visible on the streets of Port Elizabeth. A loaf of bread was sold on the side walk of Govan Mbeki drive for *R2* (personal observation, February 2005). On the same day, on the same street, but inside a large chain store a comparable loaf of bread was sold at *R5.49*. There is abundant proof that the president's observation is accurate. It implies a two layered society: one rich - one poor; one formal - the other informal; one concerned with status - the other with survival. Currently the CBD belongs to the latter - masses of poor people using taxi's and buses to get around. Conventional buildings are mostly occupied by civil offices and large semi-public institutions. The rich are fled to the perimeter of the city.

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Figur 4. Bourgeoisie dreaming: the top-side of the double economy promoting a leisurely lifestyle in a natural setting serviced by the friendly "locals".

Figure 5. Proletariat nightmare: the bottom part of the double economy 'existing' inside the caverns of civil structures like the central bus station.

In the words of Jonathan Mercer, planner at the Madiba Bay Development Agency: "Port Elizabeth is a blue collar town". Port Elizabeth has at its economic core the activities of industry - specifically automotive manufacturing. This fact is very clear as one enters the city from the N2 which passes the Coega Development and goes through an intensely industrial zone - called the Deal Party - before entering the CBD which is also not free from industrial elements.

Figure 6.

Figure 7.

Figure 8.

Figure 9.

Figure 10. Industrial activities are the hallmark of the Port Elizabeth economy. Even the more central parts of the city are not free from industrial ventures

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Site

1. Location.

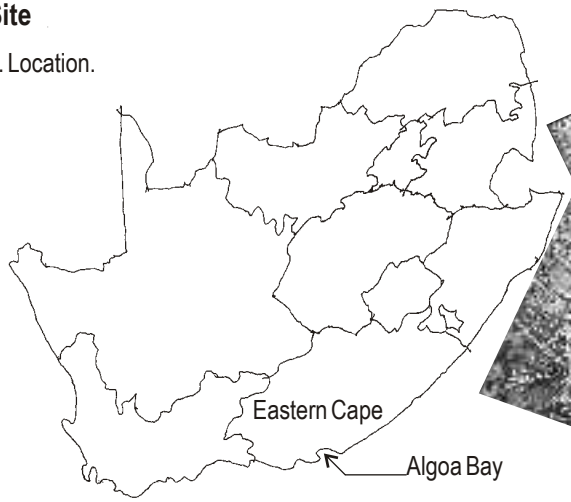

Figure 11. Map of the Republic

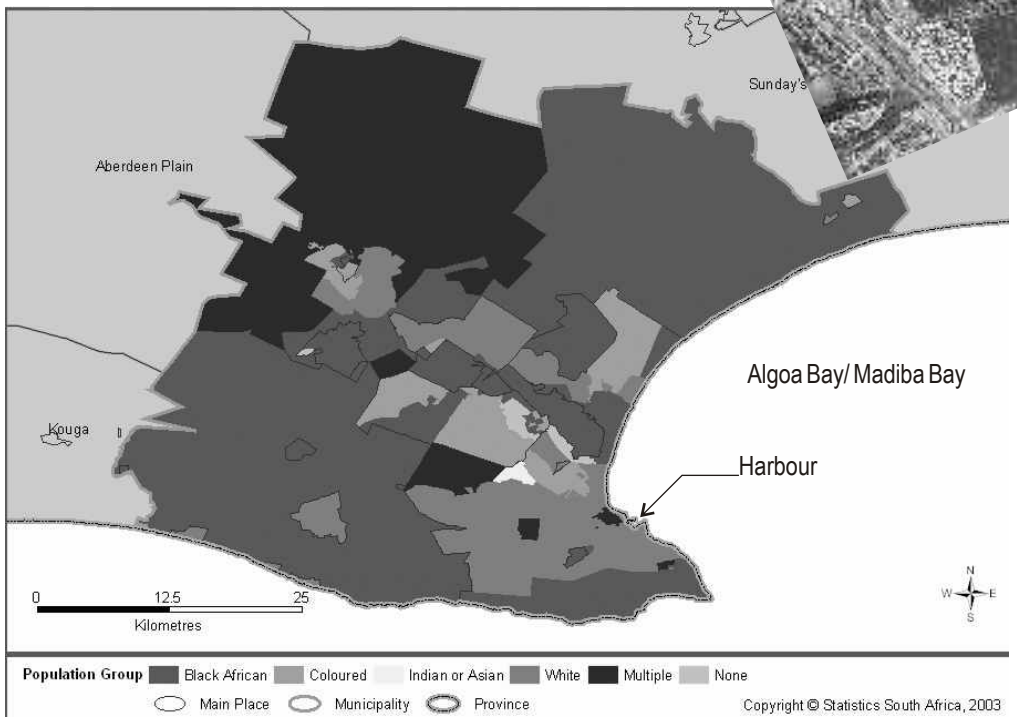

Figure 12. Map of Nelson Mandela Metropolitan Municipality showing "population groups". Note the significant portions of "Multiple".

2. Terrain description.

The site is an un-proclaimed (legal/ urban) piece of land on grounds belonging largely to Spoornet, cutting the harbour from the CBD. It lies on man-made/ reclaimed soil that was formerly beyond the high-water mark. The site and its surroundings will be discussed by way of a numbered description of figure 000.

A) The Campanile: completed in 1923 to commemorate the British Settlers it is probably Port Elizabeth's most identifiable landmark. Today it stands as a mere afterthought and enjoys no spatial hierarchy - despite its height. Its surroundings completely ignore its presence. But it was not always like this.

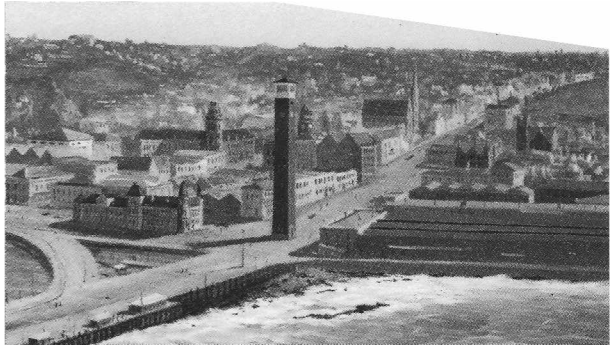

Figure 13. Painting by Ron Belling 1928.

As figure indicates, the Campanile was originally built in the middle of the road leading into the harbour. This east-west axis was crossed by a north-south consisting of the beach line and reinforced by the Train Station. The crossing point of these axes was marked by the Campanile. It stood as a marker in narrowly bounded space. Assume that this is, spatially, the Campanile's 'natural' environment - or at least its original setting.

With the reclamation and establishment of the new harbour the Campanile remained the centre point of the cardinal axes that passed through it. However, smaller qualitative changes were made. The Campanile became more of a

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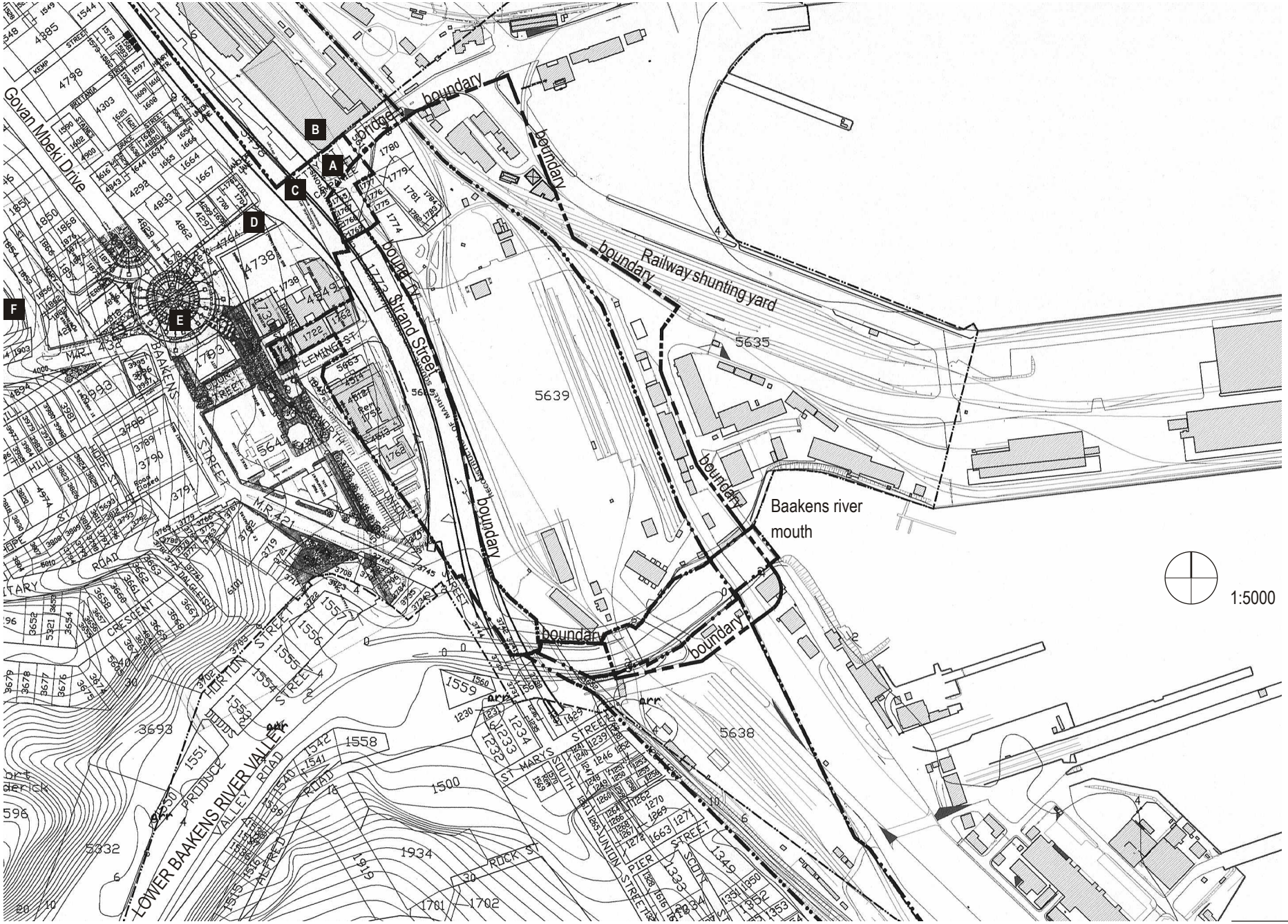

Figure 14. Drawing of the surroundings of the site

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Figure 15. View from the jetty west towards the Campanile, Market square behind it and Donkin Hill in the Background.

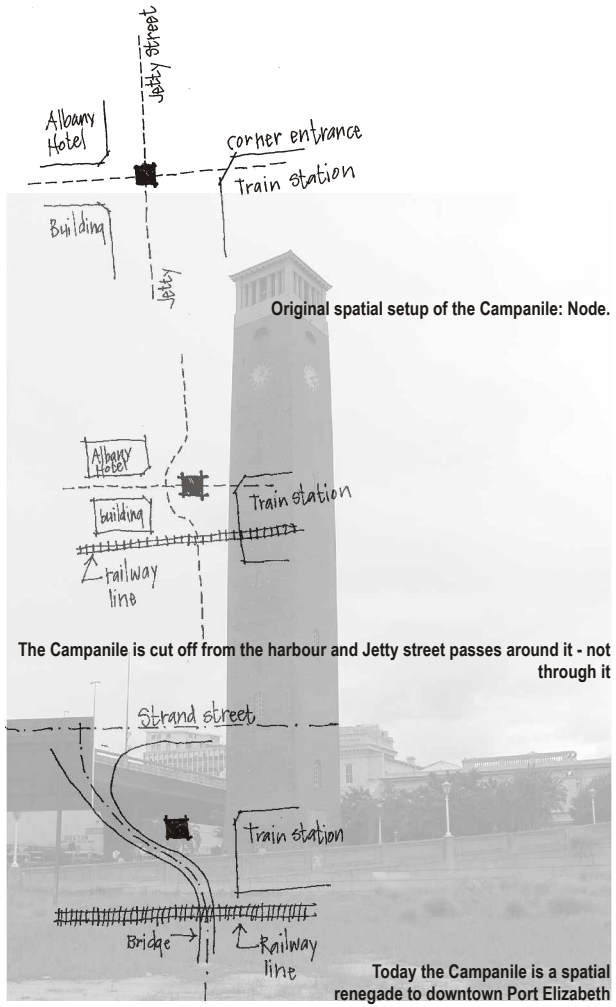
Figure 16. View of the newly reclaimed harbour and the new bridge over the railway. The Campanile remains mid-stream to any movement around it.

Figure 17. Most recent developments around the Campanile has seen the demolition of the Albany Hotel

'gateway' element to the entrance of the harbour - the dividing line between the city and the harbour being the railway line. The railway line is not an axial element as much as it is an 'edge' element.

Another alteration, so small that there is little recorded of when and why it happened, was the real end to the spatial layout so fitting to the Campanile. Jetty street that passed on both sides of the Campanile was cut off to the north of it. Movement therefore, only passed *around* the tower and not *through* it anymore. This effectively side-stepped its nodal significance and was 'moved' into a dead corner behind the station.

In a last act of humiliation some landscaping features were built at the foot of the Campanile. This was part of a municipal 'pedestrianisation' effort in the late 1980's that also saw the establishment of circular brick paving on Market Square. These bricked up semi circles of dirt and palm trees only reinforce the Campanile's motionless environment. Its only redeeming feature is a narrow walkway between itself and the train station that accesses the bridge with a non-descript concrete stair.



Original spatial setup of the Campanile: Node.

The Campanile is cut off from the harbour and Jetty street passes around it - not through it

Today the Campanile is a spatial renegade to downtown Port Elizabeth

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B) The Port Elizabeth train station is a long and low building parallel to the harbour and Strand Street. It receives passenger trains but is also a depot for long distance buses to and from the rest of the country. In keeping with this, long distance taxi's have also established themselves on the doorstep of the station. The elevated expressway that rushes past the CBD towards the beach resorts also pass by the station. All in all, the station is an arrivals landmark for anyone entering or leaving the city - apart from the airport which is also only a few kilometre away. Together with the Campanile it is a gateway element to the harbour.

Figure 18. Southwest elevation of the Port Elizabeth Train Station

Figure 19. Interior perspective of the waiting area of the Station. Access to the perron can only be gained via a gate through a 'cheap and nasty' palisade fence made of devil's fork steel sections. These 'temporary measures' detract from what could be a pleasant experience

C) Settlers Freeway. Port Elizabeth's elevated freeway was built in stages over several decades only to be hated by its populace. Most recently the Major has asked for an investigation into the feasibility of demolishing it. The author maintains that it is not the freeway, but the dead-end edge condition - mainly caused by the railway line, that gives the ocean-edge of the CBD its characteristic gutter appearance. There is ample evidence that the freeway can be regarded as an asset to the city - not only in the sense of the infrastructure it provides (Motorised inhabitants proudly laud the ease with which they travel from one part of the city to the other in 15 minutes), but also the many opportunities for shelter to informal ventures it allows.

Figure 19. Strand street below, Settlers freeway above, the city to the left and people in between

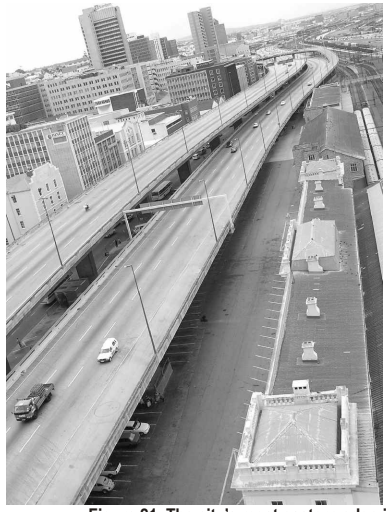

Figure 21. The city's most eastern edge is defined by the freeway. More significantly though, access to the shoreline is denied by the railway line just beyond the freeway. The freeway gives fast access to any part of the CBD. Would it not be beneficial if a trend of going through under the freeway could be established?

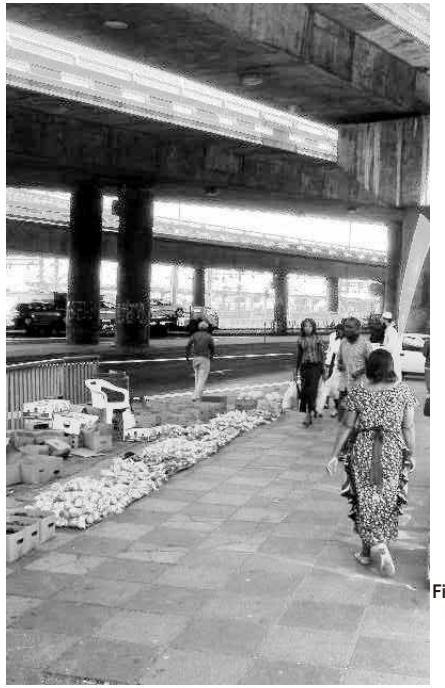

Figure 22. For some, the Freeway is a city-sized roof under which one can trade and prosper

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D) Central bus station. The station houses the very efficient Algoa bus service. During peak times the station is a hub of human activity despite its hardened setting. After school it becomes a playground with soccer balls flying over slow moving buses and protective parents chattering away on the benches. This dark, noisy, diesel-fume pervaded hole would greatly benefit from demolishing the part of its roof that does not support the Norwich centre above. Instead a large staircase could be built that connects Market square to Strand street and the Campanile square. This would open up the station to more natural light and ventilation. Light canopies could protect pedestrians along its northern shopfront.

Figure 23. Interior view of the Algoa Bus Station.

E) Market square. The 'Mayor's garden' is the heart of Port Elizabeth's civil arena. Govan Mbeki Drive terminates into it from the north and Whites Road from the west which makes it the centre point of the CBD to the north and Donkin Hill precinct to the west. It is enclosed by the City Hall to the south (which was rebuilt after being burnt to the ground), the C.M.L. Building to the southwest (which houses some important civil functions), the beautiful Library to the northwest, union castle corner to the northeast and Norwich house to the east - which effectively dominates by its size. It received a circular brick paving installation during a pedestrianisation scheme in the late 1980's which served to galvanise its significance.

Sadly though, probably in an effort to keep the square "picture perfect", its connection to the harbour bridge and the Campanile was severed by a concrete platform that forms the roof of the bus station. This platform also hides a little shopping mall - Traduna mall. To get down to Strand street from the platform one has to climb a set of concrete stairs suspended over the bus station entrance. Alternatively one could jump into, what seems to be a make-shift hole in the platform, that leads past the "underground" remnants of the quant shopfronts to the station below.

One of the important tasks of this project would be to establish a functional connection between Market square and a first touching point towards the planned Waterfront development.

Figure 24. View of Market Square from the west. Norwich house/ Kwanto towers dominate through size. To the right lies the reserve bank. On the left is the back of the Library. The Campanile remains a strong reminder of that which lies beyond the square's eastern edge and the freeway - the harbour.

Figure 25. The connection with the Campanile and the harbour entrance is effectively severed by the platform that extends towards the freeway over the bus station below. A make-shift hole leads to the underground. A make-shift sign reads: "Police vehicles only - no entrance" - a police station, whatever for?

F) Donkin Hill. The Donkin Hill memorial and the light tower are significant features of the Port Elizabeth landscape. The stone pyramid of the Donkin memorial is not only a reminder of the heartbroken sir Rufane Donkin's young wife Elizabeth Donkin, but is also the most recognizable landmark of Port Elizabeth's historical district. Apart from the well-known staggered units to north there are other distinctive buildings and streets in the area including fort Frederick. The view from the Hill towards the Campanile is also significant in that it connects the light house to its previous *raison d'etre* - the harbour.

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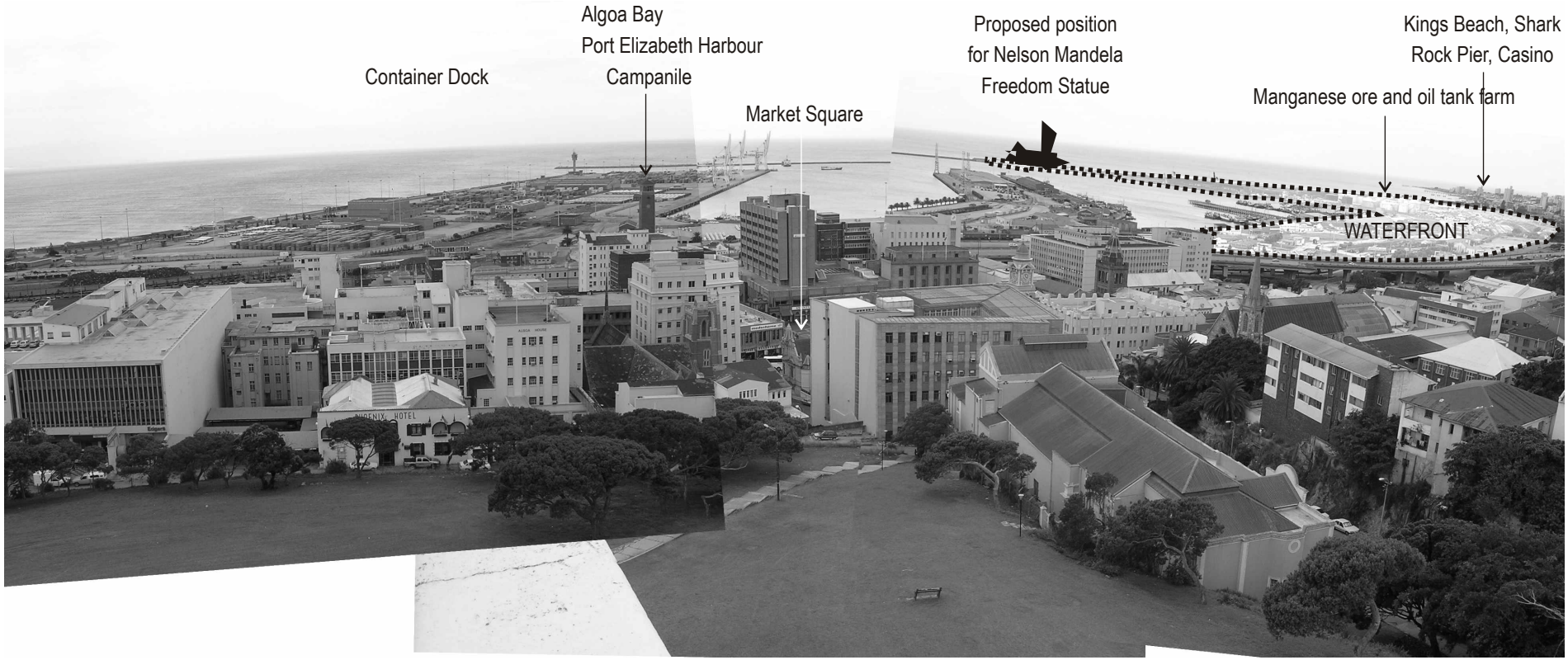

Group of Figures 26. The view from Donkin Hill and the beautiful historic neighbourhood that surrounds it

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3. Precipitation, wind, temperature: Port Elizabeth falls within a all-year rainfall region and receives 574-725 mm mean annual precipitation.

The city is known as the windy city with good cause. Winds of near-gale strength is an everyday affair. Complete window casings can be found on the pavement next to some buildings after such a spell of gusts. The combined effect of the two abovementioned characteristics is a driving drain from the southwest and most buildings in the region, especially the harbour, have considerable pitch. Furthermore, the coastal environment is highly destructive to all building materials because of the simultaneous presence of water and oxygen (oxidation) and the acid attack that accompanies the sea-water. Additionally, once atmospheric moisture has penetrated a building's fabric the salts will accumulate and expand over time to cause blistering - a force strong enough to disengage concrete from its reinforcing.

Figure 27. This beautiful Art-Deco balcony have just about rusted and blistered away.

Figure 28. A complete window casing came loose during a brief spell of gusts

The variation in temperature in Port Elizabeth is relatively small compared to inland regions because of the large body of water - the ocean - that absorbs variations over the diurnal and annual cycle.

Figure 30. Wind is a strong shape-giving force in Port Elizabeth.

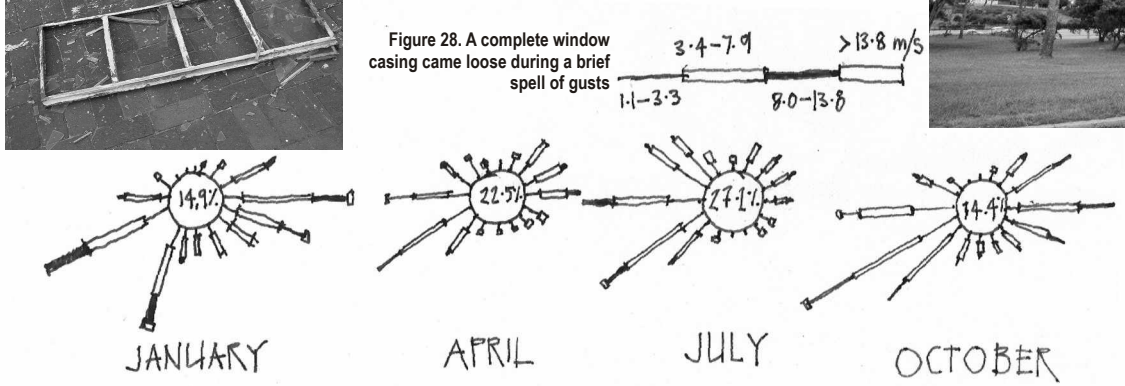

Figure 29. Wind roses for P.E. Indicating high strength winds from the southwest

4. Geology and soil: The site's grade level is man-made and carrying capacity - according to the NBR - may therefore not be assumed and should be subject to a rational test.

The sub-soil geology is Arenitic - sandy. This indicates a low load carrying capacity. It is inadvisable therefore, to build tall concentrated loads on the site. Development will be cheapest - in terms of foundation costs - with a squat building that spreads its weight over a larger area.

5. Vegetation: The city of Port Elizabeth lies at the junction of three major South African vegetation zones, namely Karoo-, fynbos- and valley bushveld-biomes, with coastal vegetation on the sand dunes (NMMM Economic Report). ENPAT states that the site is within a vegetation zone called Alexandria forest. These descriptions are, however, nominal as vegetation growth on and around the site is sporadic - at best.

6. Services & Utilities: electricity, water, sewer, stormwater drainage, data:

The Nelson Mandela Metropolitan Municipality is a reliable services supplier to Port Elizabeth: Electricity can be bought at extremely low cost. There are doubts however, as to how long this supply can be maintained with South Africa's current number of power plants. A nuclear power plant is currently in the pipeline (Pebble Bed Modular Reactor). It is not feasible to consider solar panels or wind driven generators as they do not compare well with the cost of conventional municipal current - yet.

Water too is extremely cheap, by world standards, and of a high quality. It can be acquired from the NMMM at an acceptable pressure level.

Sewer processing is problematic at the harbour.

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Although the National Ports Authority provides a service and runs its own plant, it is doubtful whether it has the capacity to cope with an international congress centre. NMMM can provide the service but only from a certain height to which it has to be pumped. Here too the capacity of the municipal pumps may require upgrading at the developer's cost and consideration should be given to installing and operating a dedicated plant.

Storm water flow can be piped to the Baakens river or into the harbour.

Land-line Telecommunication is provided throughout South Africa by Telkom - a national monopoly. A Second National Operator is apparently in the pipeline but cannot be accommodated in planning at this stage. Other, very competitive, alternatives exist in the line of satellite and cellular technology. In terms of planning the difference between the abovementioned implies how the data signal enters the building - either by an underground cable or by a dish on the roof. Inside the building data will be distributed with fibre-optic cables. In this regard radio signal is also becoming a viable option and requires much less infrastructure although it is doubtful if radio signal have the same capacity as a fibre-optic backbone.

Culture

A description of the people who are interested in and affected by the current project is necessary in order to avoid developing an inappropriate building. This social profile will focus on the metropolitan area. It should be remembered that the purpose of an international congress centre is to attract international clientele and their character, requirements and expectations are foremost. Even though the marketing appearance of the project is aimed at a globalised/ western civilized population, the local populace is regarded as an important stakeholder in guaranteeing the success of the centre through their employment effort. The factors under consideration include population density, employment and access to services. The data given below are derived from the census 2001 results.

Population

The Nelson Mandela Metropolitan Municipality consist of approximately 1 000 000 people, the majority of which reside in formal housing supplied by government such as Soweto-on-sea. The majority of the population (57%) are isiXhosa speaking and 60% of the population are Black African while 23% are coloured and 16% white. 30% of the population are Afrikaans speaking and 12% speak English. The largest portion of the population 37% fall between the ages of 14 and 34 while the older labour force , with ages between 34 and 64, make up 31% of the population. A strong work force is thus available in the area.

Employment and household income

According to the 2001 census, only 42% of the population form part of the total labour force, although only 22 % of the total population are formally employed. 5% of the total population over the age of 24 does not have any schooling, while 45% have levels of education higher than primary school.

Access to services

46% of the 260 800 households in the area has access to potable water in their homes, while 33% have access to clean water in their yard. Of the remaining 21%, 18% has access to water within 400m of the homes. 79% of the population have access to flush toilets in their homes, however 14% still makes use of bucket latrines. Pit latrines and chemical toilets make up the remaining 7%.

The information above implies a rather improved situation from a decade ago in which the majority has access to basic services, including sanitation and education even though 60% of the population was previously disadvantaged, having not enjoyed the 'benefits' of western culture. This may be indicative of the tendency to easily accept the western capitalist values and technology.

Considering this background, the acceptance of an international congress centre, could be tentatively assumed. A systematic and controlled integration between the international clientele and the local population - in spatial terms - would however still be important in order to accommodate different levels of western cultural literacy - which would be the mainstay of the centre's activities. Although these sentiments betray the author's privileged, cultural elitist nay, racist colonist paradigm, the approach is still deemed relevant.

The question therefore arises, as with all developments of any kind in South Africa: How should the threshold manifest between poor and rich, African and Western - ultimately - **black and white?**