4.0 Precedent Studies
In addition to this, the landscape accommodates two exhibition spaces: the arrivals hall and the Check-in Hall. These spaces can be used for functions such as markets, presentations and multifunctional group functions. These additional functions have been included in an earthquake more than a building.” [Webb, Architectural Review, 213/1271 p.35].

Essentially the project is a transport building, a place of transit. The design is based, in the architects’ accounts, on the limited material palette of ipe timber, including steel, glazing and concrete, which provides the site via barge. The structural exuberance of a diversity of uses. The intervention is a hybrid of building and landscape.

There are no walls in the building. The intervention the customs and immigration area that is separated from the area by moveable baggage consoles descend into the floor and immigration corridors disappear generating an adaptable space offering the prospect of a diverse range of activities. This blurring of boundaries is present throughout the design, ‘the ordinary experience of routes taken by passengers and citizens.” Moore, Domus 851 (2002), p.67. Provision is made for customs and immigration area that is separated from the area by moveable baggage consoles descend into the floor and immigration corridors disappear generating an adaptable space offering the prospect of a diverse range of activities.

The limited material palette includes steel, glass and timber planks of ipe timber from Brazil. In an attempt to blur boundaries that creates a topographic space. “The ordinary experience of routes taken by passengers and citizens.” Moore, Domus 851 (2002), p.67. A steel structure has been used to create the landscape evolving without mimicking the form of topographic landscape for public activities.” [Webb, Architectural Review, 213/1271 2002, p.35].

“It is the aggregation of two public parks, pedestrian, vehicular and passenger groups. These additional functions have been included within the project, conventional division between levels, and inside and outside, is blurred.’ The architecture is well suited to the site’s oceanic context. Construction techniques adopted from shipbuilding construction strengthen the landscape links to the site. Sections were prefabricated in shipyards and brought to site when boats are not present: this blurring of boundaries is present throughout the design, ‘the ordinary experience of routes taken by passengers and citizens.” Moore, Domus 851 (2002), p.67. A steel structure has been used to create the landscape.

Throughout the building floor is well suited to the site’s oceanic context. Construction techniques adopted from shipbuilding construction strengthen the landscape links to the site. Sections were prefabricated in shipyards and brought to site when boats are not present: this blurring of boundaries is present throughout the design, ‘the ordinary experience of routes taken by passengers and citizens.” Moore, Domus 851 (2002), p.67. A steel structure has been used to create the landscape.

Throughout the building floor is well suited to the site’s oceanic context. Construction techniques adopted from shipbuilding construction strengthen the landscape links to the site. Sections were prefabricated in shipyards and brought to site when boats are not present: this blurring of boundaries is present throughout the design, ‘the ordinary experience of routes taken by passengers and citizens.” Moore, Domus 851 (2002), p.67. A steel structure has been used to create the landscape.

Throughout the building floor is well suited to the site’s oceanic context. Construction techniques adopted from shipbuilding construction strengthen the landscape links to the site. Sections were prefabricated in shipyards and brought to site when boats are not present: this blurring of boundaries is present throughout the design, ‘the ordinary experience of routes taken by passengers and citizens.” Moore, Domus 851 (2002), p.67. A steel structure has been used to create the landscape.

Throughout the building floor is well suited to the site’s oceanic context. Construction techniques adopted from shipbuilding construction strengthen the landscape links to the site. Sections were prefabricated in shipyards and brought to site when boats are not present: this blurring of boundaries is present throughout the design, ‘the ordinary experience of routes taken by passengers and citizens.” Moore, Domus 851 (2002), p.67. A steel structure has been used to create the landscape.

Virtual and real view of the Yokohama International Port Terminal as presented by architect Farshid Moussavi. 

“Yokohama International Port Terminal is an extension of two public parks, pedestrian, vehicular and passenger groups. These additional functions have been included within the project, conventional division between levels, and inside and outside, is blurred.’ The architecture is well suited to the site’s oceanic context. Construction techniques adopted from shipbuilding construction strengthen the landscape links to the site. Sections were prefabricated in shipyards and brought to site when boats are not present: this blurring of boundaries is present throughout the design, ‘the ordinary experience of routes taken by passengers and citizens.” Moore, Domus 851 (2002), p.67. A steel structure has been used to create the landscape.

Virtual and real view of the Yokohama International Port Terminal as presented by architect Farshid Moussavi. 

“Yokohama International Port Terminal is an extension of two public parks, pedestrian, vehicular and passenger groups. These additional functions have been included within the project, conventional division between levels, and inside and outside, is blurred.’ The architecture is well suited to the site’s oceanic context. Construction techniques adopted from shipbuilding construction strengthen the landscape links to the site. Sections were prefabricated in shipyards and brought to site when boats are not present: this blurring of boundaries is present throughout the design, ‘the ordinary experience of routes taken by passengers and citizens.” Moore, Domus 851 (2002), p.67. A steel structure has been used to create the landscape.

Virtual and real view of the Yokohama International Port Terminal as presented by architect Farshid Moussavi. 

“Yokohama International Port Terminal is an extension of two public parks, pedestrian, vehicular and passenger groups. These additional functions have been included within the project, conventional division between levels, and inside and outside, is blurred.’ The architecture is well suited to the site’s oceanic context. Construction techniques adopted from shipbuilding construction strengthen the landscape links to the site. Sections were prefabricated in shipyards and brought to site when boats are not present: this blurring of boundaries is present throughout the design, ‘the ordinary experience of routes taken by passengers and citizens.” Moore, Domus 851 (2002), p.67. A steel structure has been used to create the landscape.
Timber shutters and multiple window openings allow for the users to customize their space accordingly. Large doors can be opened creating inside-outside spaces, and permitting climate change into the building. The user becomes further aware of the landscape and the way it transforms i.e. the user is aware when the sun is shining and aware if it is raining.

The project has been criticized for lack of depth of palette of materials. Chiefly concrete, steel glass and brick are the primary materials used. All materials have been used in an honest manner.

4.3 Electric Ladyland Offices

Architect: OMM Design Workshop
Client: Electric Ladyland Properties
Date completed: 2001

The reason for this precedent study was to analyse a building designed in response to the context of Durban, South Africa. "The project is sensitive to context, but is also reflective of current international practice" [van Wyk, South African Architect, November/December 2001, p.30]

OMM Design Workshop were briefed to design new office accommodation in Kloof, Durban. The chosen site consists of an existing house and a mature garden.

The building form consists of two existing pavilions and four new pavilion buildings, arranged in such a manner as to create semi-public and private courtyards. These pavilions are long, narrow, rectangular forms, with large openings on the longer sides allowing for cross ventilation throughout the building. They also alleviate the problem of excessive humidity. Deep overhangs shade the facade reducing solar gain. Timber shutters are also used to shade the building. The trees that have been accommodated within the building, now shade the building, while casting interesting shadows across the building planes. Canvas sun-screens are also used to achieve the same objective.

The building has been designed to accommodate the surrounding landscape, inclusions in the slab allow for existing trees to merge with the building. The facades of the building components open to this courtyard. The boundaries between inside space and outside space are blurred, creating an outside room. This central courtyard also provides a safe environment using "eyes on the street" concept. The way it transforms i.e. the user is aware when the sun is shining and aware if it is raining.

The project has been criticized for lack of depth of palette of materials. Chiefly concrete, steel glass and brick are the primary materials used. All materials have been used in an honest manner.
4.6 Rereading the City:

Architect: Dagmar Richter
1990

This project proposes the horizontal extension of Los Angeles above a freeway, responding to the linear form. Translucent screens broadcast information to users, and a genealogical library is suspended within the structure, creating an information journey.

“For Richter, the city is a media-related text, altered by its producers and users alike; the city is a geographical map, at once the ‘skin’ of a territory and a representation. The city is both the condensation of traces from the past and their dissolution in the electronic fluidity of different forms of circulation.”

[Migayrou, 2000, p. 396]
Maryhill Nature Outlook:

Architect: Allied Works Architecture

“It makes a place in a vast plain, yet does not enclose anything. It is only the merest hint of the difference that architecture can make in and on the land.” [Betsky, 2002, p. 162]

The Maryhill Nature Outlook is an investigation into man-made and natural edges. The project makes use of lines humans create in nature. The 450-meter concrete structure provides a viewing platform and seating, while directing attention to the surrounding vista. Appearing to penetrate out of the slope, the intervention merges with the landscape, blurring the boundary between man-made structure and nature.

The form of the structure does not communicate the function, creating a sense of curiosity.
4.2 Perugia’s Via dell’Acquedotto

A retired thirteenth-century aqueduct that has found a new lease of life as an elevated pedestrian walk. Built in 1286 by Fra Bevignato, a Sylvestrian monk and expert in hydraulics, it is not much of an antique as Italian monuments go.” (Rudofsky, 1964, p.189)

The walkway is 215-meter long, crosses a gully at rooftop height. Below are gardens and a few minor streets. The viaduct connects the town to the University on the neighbouring hill. With the official declaration of the aqueduct as a viaduct in 1812, a parapet wall was added, providing pedestrians with safety and comfort.
The idea of this precedent is to understand the function of a building as a gateway, connecting land to water. The Robben Island Ferry Terminal is a gateway between the mainland and Robben Island. Situated within the ‘Island’ Clock Tower precinct. The brief was to address the utilitarian functions as well as addressing the question of the memory of Robben Island. The accommodation schedule was to include an embarkation point from the V&A Waterfront to Robben Island. The building also had to provide for visitors who were unable to visit the island. To achieve this exhibition spaces were used. A 150 seat auditorium, 120 seat restaurant operating at two levels, offices and boardrooms for RIM are also to be provided.

Movement through the building.

The primary movement involving the access to the ferry. This is achieved through a series of gangways that are intended to induce a feeling of uneasiness. Movement is through a series of different spaces. The Building as a boat to Robben Island.

The building becomes a reference to the vessels transporting prisoners to the island, as well as a reference to the V&A Waterfront and its maritime context. The building also becomes a container of information (historic, archival, exhibition material).

Transparency.
The transparent building allows for views to the surrounding harbour, to the former prisoners embarkation point and to the harbour mouth to be maintained. These transparent facades have been layered to deal with sun penetration.

Materials common on the island are used within the design.

Movement.

The transparent building allows for views to the surrounding harbour, to the former prisoners embarkation point and to the harbour mouth to be maintained. These transparent facades have been layered to deal with sun penetration.

The Building as a gateway.

The building serves as a gateway chiefly between land and sea. However also as a place of memory, preparing visitors for the island. The building is thus contemporary, as we believe all buildings should speak of their time and place.”

[le Grange, South African Architect, March/April 2002, p.32]
Joris Laarman

A product designer from the Netherlands. Produces works of art from mundane functional objects.

CJ Lim

CJ Lim is a director at the Bartlett School of Architecture and the Bartlett Architecture Research Lab. His literature highlights the impact of the environment on architecture rather than architecture on the environment. "Is it possible for buildings to learn from organic systems? And can the banal interactions of flora and fauna in the domestic flat be scaled up into hybrids of growing edifices and engineered gardens of gargantuan size?" [Lim, 2004]
Eleanor Rennie: “Her thesis project, a printing works, is constructed of sharp, splinter-like fragments that are flung like shrapnel across the site and deep, almost archaeological, undercrofts are scored into the ground. The result: an intense interweaving of brooding volumes, densely packed spaces, clouds of propeller turbines, and the wiry trajectories of ink-supply lines.” [Tabor, Architectural Design, p. 76]
5.0 Baseline
5.1 INTRODUCTION

Designers have been placed in a position of great responsibility. The construction industry is one of the largest consumers of material and energy and produces large quantities of waste and is therefore a major contributor to the problem our planet faces in terms of the irreversible damage being done to our ecosystem. Designers are in a position to help reduce this damage through sustainable design decisions.

This baseline study is a guideline to explain the design process prior to conceptualizing. The Sustainable Building Assessment Tool (SBAT) has been used to aid this target setting process.

5.2 SOCIAL ISSUES

5.2.1 Occupant Comfort

Ventilation
The use of natural ventilation wherever possible, otherwise the use of assisted natural ventilated systems which should be energy efficient and reliable. Due to the high humidity of Durban, sufficient ventilation is extremely important to provide a comfortable environment to work or relax in.

Thermal Comfort
Thermal mass to be used to maintain a constant temperature and ensure correct thermal comfort for occupants. Due to the extreme hot, humid climate of Durban, the use of air-conditioning may be unavoidable in sections of the building. By reducing the size of these areas to be as small as possible and insulating them, energy usage can be reduced. Planting can also be employed to regulate internal temperatures.

Connection between indoor and outdoor
Durban’s air/flights/cruise, climate outdoor norms should be created incorporating the natural environment. The boundary between building and the landscape should be blurred, emphasizing the connection and dependence of man on nature in Durban. The building becomes an extension of the landscape.

The building should be welcoming, encouraging visitors to enter and view the ships or wave passengers farewell. This should be achieved through transparency of building skin, allowing visibility into the building. Interaction between the cruise ship and the building is important. Passengers on the ship should be able to see the public on the viewing platforms and walkway.

5.2.2 Inclusive Environments

Transport
The building should link easily to existing transport facilities. Provision is made for bus and taxi parking. A circular route allows for easy drop-off and collection of passengers.

Connection should be provided to Durban’s proposed people mover. The people mover would connect the Point Development, the Beach Fronts and the CBD. Connection to this would allow passengers, who are visiting for the day, to move between the major nodes of the city with ease. A link to the airport will be provided by taxis.

Circulation
The building should be designed in such a manner as to allow for simple movement from the cruise ship to the city or in the opposite direction. The building acts as a gateway to the city. These routes should be well indicated using clear colours and signage and other methods, such as floor surface. A well defined entrance is important so that first-time visitors are aware of where to enter the building. A separate entrance for deliveries needs to be provided.

A ramp with fall of 1 in 12 will be required to allow wheelchair access and for passengers with luggage. This ramp should become a major element within the building design.

5.2.3 Access to Facilities

Facilities should be provided for the dropping off and collection of passengers by the public, the cruise-ship crew, and the public who wish to view the cruise ship or wave farewell to passengers. Provision for informal trade can be provided along the walkway.

building acts as a gateway to the city. These routes should be well indicated using clear and simple signage and other methods, such as floor surface. A well defined entrance is important so that first-time visitors are aware of where to enter the building. A separate entrance for deliveries needs to be provided.

A ramp with fall of 1 in 12 will be required to allow wheelchair access and for passengers with luggage. This ramp should become a major element within the building design.

5.2.4 Access to Facilities

Facilities should be provided for the dropping off and collection of passengers by the public, the cruise-ship crew, and the public who wish to view the cruise ship or wave farewell to passengers. Provision for informal trade can be provided along the walkway.
where the public using the walkway on a daily basis could buy daily goods.

Banking
ATMs are provided within 3km radius of the building.

Restaurants
The terminal will provide for restaurants and eateries. The walkway will provide for smaller kiosks and eateries.

Communications
The crew from the ship can wish them farewell. Seating spaces should be provided in these spaces.

5.2.6 Participants and control

Environmental/Control
Users of the building must have reasonable control over their environmental conditions. People using the restaurant can choose between the air-conditioned space with view, or the naturally ventilated area with a view. The large pivot doors can be moved to suit the requirements for the space.

5.2.7 Education, Health and Safety

Education
Information boards can be provided for informal and formal social interaction between occupants. A space where passengers will meet their friends or family who have come to collect them or wish them farewell. Seating should be provided in these spaces.

Health
Easy access to refreshment facilities including ablution facilities for all users of the building.

Safety
The existing security gate should have a secondary access through employment and skills training. Materials and products specified should be manufactured or sourced from Durban. Upliftment should be carried out by local contractors. Materials and products specifi ed should be sourced from Durban. This can create awareness about the mangroves. Information boards can create awareness about our present environmental challenges. Information boards can be shared or adapted to suit various requirements or can be easily replaced. The concrete frame can therefore be shared. The building is designed to fit into the existing transport system. The project utilizes a brownfield site, currently used as the car-exporting terminal, which has now been outgrown.

5.3.1 Local Economy
Local craftsmen and contractors
Local persons from the neighbouring BAT Centre to be used to create the mosaic and artwork within the building. The structure should be placed in such a way as to allow for low maintenance or low cost maintenance. Due to the harsh coastal climate materials need to be selected that are appropriate to suit the local conditions. Details must be constructed in such a manner that they can be easily replaced. The concrete frame structure requires minimal maintenance. Hard-wearing surfaces should be used that are easy to clean.

Stainless steel should be used due its high resistance to corrosion in the harsh coastal environment.

5.3.2 Local Economy

Local craftsmen and contractors
Local persons from the neighbouring BAT Centre to be used to create the mosaic and artwork within the building. The structure should be placed in such a way as to allow for low maintenance or low cost maintenance. Due to the harsh coastal climate materials need to be selected that are appropriate to suit the local conditions. Details must be constructed in such a manner that they can be easily replaced. The concrete frame structure requires minimal maintenance. Hard-wearing surfaces should be used that are easy to clean.

Stainless steel should be used due its high resistance to corrosion in the harsh coastal environment.

5.3.3 Local Economy

Local craftsmen and contractors
Local persons from the neighbouring BAT Centre to be used to create the mosaic and artwork within the building. The structure should be placed in such a way as to allow for low maintenance or low cost maintenance. Due to the harsh coastal climate materials need to be selected that are appropriate to suit the local conditions. Details must be constructed in such a manner that they can be easily replaced. The concrete frame structure requires minimal maintenance. Hard-wearing surfaces should be used that are easy to clean.

Stainless steel should be used due its high resistance to corrosion in the harsh coastal environment.

5.3.4 Local Economy

Local craftsmen and contractors
Local persons from the neighbouring BAT Centre to be used to create the mosaic and artwork within the building. The structure should be placed in such a way as to allow for low maintenance or low cost maintenance. Due to the harsh coastal climate materials need to be selected that are appropriate to suit the local conditions. Details must be constructed in such a manner that they can be easily replaced. The concrete frame structure requires minimal maintenance. Hard-wearing surfaces should be used that are easy to clean.

Stainless steel should be used due its high resistance to corrosion in the harsh coastal environment.
5.4.2 Awareness in the building.

Irrigation.

Shower heads should be used. Water closets and aerated efficient devices. Dual flush a minimum by using water -Water usage to be kept to a minimum by using pervious or absorbent -Storm water runoff reduced by using pervious or absorbent

5.4 Energy

The building needs to connect seamlessly to the existing urban fabric. The aim is to create an urban infrastructure that sustains and the connection with indigenous the existing urban fabric. micro-climate of the world. The total solar - Renewable Energy

The design should respond to the micro-climate of the world through passive design approach. The use of solar energy to heat water. Light -Photovoltaic systems -Passive Environmental Control

The building shall be divided into a naturally ventilated zone and a air-conditioned zone. Both zones will need to be designed in such a way to allow vision out from the building. The naturally ventilated zone will need to be insulated to the cool air within the building.

The location of the site is ideal for natural for cross ventilation, on the water's edge there in few buildings can obstruct the prevailing winds. The building should be designed in such a way to make use of these prevailing winds.

The area-conditioned areas are to be kept to the minimum possible - not only because of the increased energy usage but also because the defensive insulating skin which creates a barrier to the connection with indigenous the existing urban fabric. re preaching the use of solar energy to heat water. Light & Photovoltaic systems -Passive Environmental Control

The project is to be located on a brownfield site currently being used for a car terminal. The vegetation walls should be considered to ensure low maintenance. These plants in the main public parking area should have a large canopy to shade devices will need to be designed in such a way to obstruct the prevailing winds. The design should respond to the micro-climate of the world through passive design approach. The use of solar energy to heat water.

The building shall be divided into a naturally ventilated zone and a air-conditioned zone. Both zones will need to be designed in such a way to allow vision out from the building. The naturally ventilated zone will need to be insulated to the cool air within the building.

5.4.3 Transportation / Location

Transport / Location

The building needs to connect seamlessly to the existing urban fabric. The aim is to create an urban infrastructure that sustains and the connection with indigenous the existing urban fabric. micro-climate of the world. The total solar - Renewable Energy

The design should respond to the micro-climate of the world through passive design approach. The use of solar energy to heat water. Light -Photovoltaic systems -Passive Environmental Control

The building shall be divided into a naturally ventilated zone and a air-conditioned zone. Both zones will need to be designed in such a way to allow vision out from the building. The naturally ventilated zone will need to be insulated to the cool air within the building.

The location of the site is ideal for natural for cross ventilation, on the water's edge there in few buildings can obstruct the prevailing winds. The building should be designed in such a way to make use of these prevailing winds.

The area-conditioned areas are to be kept to the minimum possible - not only because of the increased energy usage but also because the defensive insulating skin which creates a barrier to the connection with indigenous the existing urban fabric. re preaching the use of solar energy to heat water. Light & Photovoltaic systems -Passive Environmental Control

The project is to be located on a brownfield site currently being used for a car terminal. The vegetation walls should be considered to ensure low maintenance. These plants in the main public parking area should have a large canopy to shade devices will need to be designed in such a way to obstruct the prevailing winds. The design should respond to the micro-climate of the world through passive design approach. The use of solar energy to heat water.

The building shall be divided into a naturally ventilated zone and a air-conditioned zone. Both zones will need to be designed in such a way to allow vision out from the building. The naturally ventilated zone will need to be insulated to the cool air within the building.