

## **‘Connection’**

### **A Public Visual Information Centre in Newtown, Johannesburg**

By Bronwyn Holliday

23346452

Study Leader: Prof B. Jekot

Submitted in fulfilment of part of the requirements for the degree Master of Interior Architecture (Professional) in the Faculty of Engineering ,  
Built Environment and Information Technology, University of Pretoria.



## 1. ABSTRACT

The Migrant Workers Hostel and the four Artisan houses, situated on a corner site within the Newtown Cultural Precinct, holds untapped historic and cultural potential that no facility occupying that site has allowed it to reach.

The desire to conceptualise a new role for these abandoned heritage buildings on this culturally significant site was the initial motivation for intervention.

The intended design intervention transforms the existing derelict site into one of opportunity, through a public education facility, allowing information to be accessed through the film media.

The theme that informs this project is the concept of connections. As 'Connection' is the literal and figurative intersection of the three solids, the two voids with the many layers of time, through the seed idea of connection.

The facility will function as a public resource that will house both educational and cultural components, interacting together to form an asset to the Newtown Cultural Precinct.

The educational components will be made up of a Public Visual Information Centre, an educational cinema, multifunctional exhibition space as well as a museum. The commercial component consists of a café/ bar and an 'Arts and Culture' cinema.

Through the new interpretation of a safe study environment, 'Connection' allows everyone the opportunity of accessing information and furthering oneself.

*'Lack of access to information has a debilitating effect on the development and the empowerment of poor and disadvantaged groups who are isolated from opportunities. Access to information and technology immediately opens up opportunities for self improvement.'* (Goldstone 2004:16)



1. Abstract
2. Index
3. Introduction
  - 3.1 Brief Documentation
    - 3.1.1. Real World Problems
    - 3.1.2. Problem Statement
    - 3.1.3. Sub-Problems
    - 3.1.4. Definitions
    - 3.1.5. Delimitations and Assumptions
    - 3.1.6. Research Method
  - 3.2. User
    - 3.2.1. User Background
    - 3.2.2. State of Education in Johannesburg
    - 3.2.3. Education Facility
  - 3.3. Funding
4. Design Approach
  - 4.1. Film
    - 4.1.1. A Solution to the Current Educational Problem
    - 4.1.2. Film Material
    - 4.1.3. Film in Schools
  - 4.2. Theoretical Stand
    - 4.2.1. Architecture and Cinema
    - 4.2.2. Connection
  - 4.3. Goals of the Design
5. Physical Overview
  - 5.1. Johannesburg General
    - 5.1.1. Johannesburg Beginning
    - 5.1.2. Johannesburg Today
    - 5.1.3. Johannesburg's Future
  - 5.2. Newtown General
    - 5.2.1. Newtown's Beginnings
    - 5.2.2. Newtown Today
    - 5.2.3. Newtown's Future
  - 5.3. Site Context
    - 5.3.1. Site Position
    - 5.3.2. Vehicular and Pedestrian Movement
    - 5.3.3. Mary Fitzgerald Square
    - 5.3.4. Newtown Park
    - 5.3.5. Pedestrian Walkway
    - 5.3.6. Education Facilities within Newtown
    - 5.3.7. Schools in Surrounding Areas
  - 5.4. Building Envelope
    - 5.4.1. The Political History of the Migrant Hostel
      - 5.4.1.1. The Diamond Mines
      - 5.4.1.2. The Gold Mines
      - 5.4.1.3. The Design Additions
      - 5.4.1.4. Khanya College
    - 5.4.2. Analysis of the Existing Building Envelope
      - 5.4.2.1. Evaluation of the Public and Private Spaces within the Site
      - 5.4.2.2. Evaluation of the Interior Structure
    - 5.4.3 Current Evaluation
      - 5.4.3.1. Analysis of the Failure of the Workers Library and Museum
- 6.2. Glass Video Gallery
- 6.3. Packer Collegiate Institute
- 6.4. The Constitutional Hill
- 6.5. The Apartheid Museum
- 6.6. The Canova Plaster Cast Gallery
- 6.7. Supershed and Pods
- 6.8. The Knowledge Base
- 6.9. Claydon Hefley Jones Mason Advertising Agency
7. Design Development
  - 7.1. Design Proposal
  - 7.2. Access to the Site
    - 7.2.1. Linking the Two Open Public Areas
    - 7.2.2. Artwork in the Pathway
    - 7.2.3. The Entrances
    - 7.2.4. Central Point within the Site
  - 7.3. Educational Component
    - 7.3.1. The Formal Areas
    - 7.3.2. The Informal Areas
    - 7.3.3. Group Interactive Area
    - 7.3.4. The Newtown Mining Museum
    - 7.3.5. Multi-functional Exhibition Area
  - 7.4. Commercial Component
    - 7.4.1. 'Art and Culture' Cinema
    - 7.4.2. The Café and Bar
    - 7.4.3. The Look out Tower
    - 7.4.4. The Courtyards
  - 7.5. Interior Architecture
    - 7.5.1. The 'Ribbon'
    - 7.5.2. The Auditorium
    - 7.5.3. Group Viewing Stations
    - 7.5.4. Individual Viewing Stations
8. Technical Development
  - 8.1. Technical Design
  - 8.2. Acoustic Design
  - 8.3. Makrolon Polycarbonate Sheeting
  - 8.4. Baseline Document
    - 8.4.1. Social Criteria
    - 8.4.2. Environmental Criteria
    - 8.4.3. Economic Criteria
9. Technical Requirements
  - 9.1. Schedule of Accommodation
  - 9.2. Technical Requirements
10. Technical Drawings
11. Conclusion
12. Appendix
13. Reference

- Fig.1.1 Photo of Migrant Workers Statue  
 Fig.1.2 Carved Wooden Heads  
 Fig.3.1 Photo of Western Wing of Hostel  
 Fig.4.1 Photo of Western Wing of Hostel  
 Fig.5.1 Map of Gauteng  
 Fig.5.2 11 Different areas of Gauteng  
 Fig.5.3 Surrounding areas  
 Fig.5.4 Newtown  
 Fig.5.5 Newtown  
 Fig.5.6 The Newtown Cultural Precinct  
 Fig.5.7 Regeneration Areas  
 Fig.5.8 Refurbishment Areas  
 Fig.5.9 Public Spaces  
 Fig.5.10 Site 5 and 6  
 Fig.5.11 Photo of Pedestrian Route  
 Fig.5.12 Panoramic view of surrounding area  
 Fig.5.13 Inner City  
 Fig.5.14 Newtown  
 Fig.5.15 Site  
 Fig.5.16 Movement near Site  
 Fig.5.17 Mary Fitzgerald Square  
 Fig.5.18 Surveillance cameras  
 Fig.5.19 Information Boards  
 Fig.5.20 Public Seating  
 Fig.5.21 Lighting  
 Fig.5.22 Open Land  
 Fig.5.23 Drinking Fountains  
 Fig.5.24 Pathways  
 Fig.5.25 Security as artwork  
 Fig.5.26 Sculpture  
 Fig.5.27 Newtown Park  
 Fig.5.28 Pedestrian Walkway  
 Fig.5.29 Palm Trees  
 Fig.5.30 Road Blockage  
 Fig.5.31 Benches  
 Fig.5.32 Security  
 Fig.5.33 Adjacent to Parking  
 Fig.5.34 Newtown Cultural Precinct  
 Fig.5.35 Surrounding Schools  
 Fig.5.36 Schools in nearby Area  
 Fig.5.37 School children at Bephelo-Impilo School  
 Fig.5.38 Crown Reef Primary School  
 Fig.5.39 Classroom at Crown Reef Primary School  
 Fig.5.40 Map showing location of Bephelo-Impilo School and Crown Reef Primary School  
 Fig.5.42 Plan of the Original Migrant Workers Hostel  
 Fig.5.43 Plan of Additions to Migrant Workers Hostel  
 Fig.5.44 Activities around the Site  
 Fig.5.45 Workers Hostel Building  
 Fig.5.46 Shower Blocks  
 Fig.5.47 Interior Courtyard  
 Fig. 5.48 Vandalized Outer Wall  
 Fig.5.49 Artisan Houses  
 Fig.5.50 Veranda Area  
 Fig. 5.51 Middle House  
 Fig.5.52 Existing Windows  
 Fig.5.53 Managers House  
 Fig.5.54 Veranda Area  
 Fig.5.55 Existing Windows  
 Fig.6.1 Steel Bookshelf  
 Fig.6.2 Interior Space  
 Fig.6.3 Plan  
 Fig.6.4 Computer Counter  
 Fig.6.5 Exterior View  
 Fig.6.6 Perspective  
 Fig.6.7 Glazing Structure  
 Fig.6.8 Transparency  
 Fig.6.9. Structure  
 Fig. 6.10 Section  
 Fig.6.11 Plan and Elevation  
 Fig.6.12 Middle School classrooms  
 Fig.6.13 Glazed Circulation space  
 Fig. 6.14 Assembly Hall  
 Fig.6.15 Free Standing Structure  
 Fig.6.16 Night View  
 Fig.6.17 Plan  
 Fig. 6.18 Section  
 Fig.6.19 Relaxing Area  
 Fig.6.20 Plan  
 Fig.6.21 Library  
 Fig.6.22 Library Sketch  
 Fig.6.23 Tree Concept  
 Fig.6.24 Colourful Interior  
 Fig.6.25 Library  
 Fig.6.26 Interior Courtyard  
 Fig.6.27 Entrance  
 Fig.6.28 Media Exhibition  
 Fig.6.29 External Pathway  
 Fig.6.30 Audio Visual  
 Fig.6.31 Plan  
 Fig.6.32 Sculptures  
 Fig.6.33 Light  
 Fig.6.34 Windows  
 Fig.6.35 Additional Structure  
 Fig.6.36 Pods under Supershed  
 Fig.6.37 Individual Pods  
 Fig.6.38 Photos of Knowledge Base  
 Fig.6.39 Flowing Countertop  
 Fig.7.1 Linkage between the two open facilities  
 Fig.7.2. Artwork Pathway  
 Fig.7.3 Conceptual Panels  
 Fig.7.4 The Plan of the 3 entrances  
 Fig.7.5 Concept Sketches of Rotating Panels  
 Fig.7.6 Entrance 2

- Fig.7.7 Central Point
- Fig.7.8 Conceptual Sketch of information Desk (Aug 2007)
- Fig.7.9 Conceptual Sketch of Information Desk (Sept 2007)
- Fig.7.10 Information Desk
- Fig.7.11 Plan of Intimacy Gradient
- Fig.7.12 Plan of Formal and Informal Areas
- Fig.7.13 Interactive Area
- Fig.7.14 Museum Layout
- Fig.7.15 Multifunctional Exhibition Area
- Fig.7.16 Commercial Components
- Fig.7.17 Cinema Layout
- Fig.7.18 Addition
- Fig.7.19 Café and Bar
- Fig.7.20 Café and Bar Layout
- Fig.7.21 Conceptual Sketches
- Fig.7.22 Perspective
- Fig.7.23 Courtyard Perspective
- Fig.7.24 Lookout Tower
- Fig.7.25 Lookout Tower Sketch
- Fig.7.26 Conceptual Sketches
- Fig.7.27 Ribbon Concept
- Fig.7.28 Detailed Plan
- Fig.7.29 Ribbon Perspective
- Fig.7.30 Ribbon Position
- Fig.7.31 Conceptual Colours
- Fig.7.32 Conceptual Sketches
- Fig.7.33 Ribbon Detail Section
- Fig.7.34 Ribbon Concept Sketch
- Fig.7.35 Adler Ergonomic Dimensions
- Fig.7.36 Floor Detail sketch
- Fig.7.37 Plan
- Fig.7.38 Conceptual Sketches
- Fig.7.39 Information Desk
- Fig.7.40 Auditorium
- Fig.7.41 Plan
- Fig.7.42 Adler Ergonomic Dimensions
- Fig.7.43 Auditorium Layout
- Fig.7.44 Conceptual Sketches
- Fig.7.45 Lapdesk
- Fig.7.46 Perspective
- Fig.7.47 Group viewing stations
- Fig.7.48 Sliding Panels
- Fig.7.49 Plan
- Fig.7.50 Section
- Fig.7.51 Perspective
- Fig.7.52 New and Existing Wall Junction Sketch
- Fig.7.53 Conceptual Sketch
- Fig.7.54 Henderson Sliding Door System
- Fig.7.55 Perspective
- Fig.7.56 Glass VU System
- Fig.7.57 Interior View
- Fig.7.58 Perspective
- Fig.7.59 Individual Viewing Station
- Fig.7.60 Conceptual Section
- Fig.7.61 Sheltering of Direct Light
- Fig.7.62 Plan
- Fig.7.63 Section
- Fig.7.64 Perspective Section
- Fig.7.65 Perspective
- Fig.7.66 Assembly
- Fig.7.67 Sliding Panels
- Fig.7.68 Sound Domes
- Fig.7.69 Perspective
- Fig.7.70 Perspective

## 3. INTRODUCTION

### 3.1.1. Real world problems:

#### World:

Education is essential for positive change in children's lives. Yet for millions of children, as well as adults, in developing countries, education is beyond their reach.

The children are the future and their education should be seen as an investment into the country's future.

#### South Africa:

Through education, South Africa will be able to reach economic prosperity. Through economic prosperity quality of life increases allowing for an opportunity to develop a peaceful, productive and democratic nation.

*'Children are the major repository of South Africa's potential human capital for the future. The fact that children are the workers, scientists, parents, leaders and civil society participants of tomorrow means that their survival, health, nutritional and educational progress are key issues for Reconstruction and Development today.'* Nelson Mandela (Goldstone 2004: 2).

#### Johannesburg:

The following information is summarized from *'Children in Johannesburg'* by Dr Cheryl Goldstone, 2004.

Johannesburg is located within Guateng, South Africa's smallest, but most densely

populated province. Johannesburg is one of the most urbanised, densely populated and fastest growing cities in the world. The city is home to 1 049 175 households and 3.2 million people.

Almost one third of the City of Johannesburg is made up of children. This means that around 1 million children between the ages of 0 and 19 years are found in Johannesburg alone.

Over half of Johannesburg's households earn less than R1600 per month and are considered to live in economic poverty, it can therefore be concluded that half of Johannesburg's children live in poverty. In 2001 there were 997 356 children aged 19 or younger in the City of Johannesburg.

*'Together, the increases in poverty and inequity in Johannesburg in recent years represents one of the most serious challenges to ensuring that children in the City lead healthy, happy and productive lives.'* (Goldstone 2004: 10)

The City of Johannesburg is currently focusing on three main aspects that will greatly affect the lives of these children in the City of Johannesburg.

*'Firstly the ECD is to provide the best start for children in their early years. Secondly, safe study environments for children of school going age when they are out of the classroom will be provided and thirdly, the*

*creation of a support that will allow for the guidance for adolescents in navigating the sensitive transition to adulthood.'* (Goldstone 2004: 10)

Through the implementation of new interpretations of the requirements and the functions of safe study environments, public study areas have the potential to be solutions to the educational problems that the country currently faces.

*'Not all of us have the same opportunities to access these reserves of experience information. Science, technology, art, political and social life is the privilege of a few.'* (Arquine 2007: 15)

### 3.1.2. Problem Statement:

#### Major:

The Public Visual Information Centre will allow for 'education through the aid of film' to benefit learners (adults and children), thereby using film to raise the level of education, within the City of Johannesburg.

#### Minor:

Through the introduction of additional services, the Public Visual Information Centre will breathe life into these cultural heritage buildings, thereby enriching the value of the Newtown Cultural Precinct and, in turn, affecting the City of Johannesburg.

### 3.1.3. Sub - Problems: 'Education through film':

How the concept of 'learning through film' (i.e. tele-learning) can benefit learners in Johannesburg will be investigated.

The way in which film can be implemented into classrooms, as a study aid, will be investigated. How teachers can get involved in this process and be trained to use this study aid effectively will also be looked at.

How film can be used as a tool to encourage learners to get excited about learning must be considered in the design. Allowing the educational facility to be seen as an entertainment facility is vital.

Different ways in which films are viewed will be considered. Whether it is beneficial to be used individually or in groups, or with or without the presence of a teacher must be taken into consideration.

#### **Heritage Buildings:**

The buildings original functions, as well as its adjusted functions, will be analysed to find the strengths and weaknesses of the building and the success of these adjustments.

The existing interior space will be analysed to see how the building was physically altered, as well as how these alterations are able to show the history of the building.

Heritage sites that have been successfully altered will be studied. How new and existing building styles can be connected will be considered.

The heritage of the building will have to be treated according to the Heritage Acts legal documents and regulations.

#### **Facilities:**

Through the introduction of additional services, the Public Visual Information Centre will activate life back into these buildings of cultural heritage.

#### **A Public Visual Information Centre:**

The Public Visual Information Centre, will house educational film material, viewable within the facility.

What film material is available and which film material is recommended according to the national curriculum will be considered.

The needed equipment for viewing the material will be investigated. As well as considering how the facility will be able to adjust according to technology advances that will be experienced throughout the life of the Visual Information Centre.

The needs of the learners while viewing will be studied. Whether to allocated group study stations or independent study stations will have to be considered

according to learners study needs and the design needs for each will be considered.

#### **Cinema:**

Certain educational film titles will be chosen according to the learner's age and academic needs.

Leading scholars, filmmakers and media literacy experts will be involved in the drawing up of lesson plans in culture, geography, history, arts and language, media literacy, and film viewing.

The chosen films will be introduced by the librarian, who will be running the course and the learners expected outcomes will be discussed.

The lesson plan will be given to the students before the viewing at the facility allowing teachers an opportunity to go through the expected outcomes with the learners. This allows the students an opportunity to know what areas are to be focused on before the viewing, allowing better absorption of the content of the film.

The auditorium's equipment needs will have to be considered, as well as the layout being designed for viewing, the writing of notes and a discussion room.

For optimum utilisation of the facility, the auditorium will be used as a cinema showing independent 'art and culture films'

## 3. INTRODUCTION

for the adult group. The way in which this space is able to adapt will be investigated.

Monthly themes will be implemented, with the films being discussed by film critics, directors etc to allow the viewers to have a better understanding of the themes running throughout the film.

### **Multifunctional Exhibition Space:**

The multifunctional gallery space is a venue where individual's film work can be viewed by the public.

Students, or individuals, films will be shown within weekly or monthly themes depending on the interest and number of viewers.

How this multifunctional space can be designed to be flexible and easily adapted to the specific films or exhibition requirements will be considered.

### **Outdoor Cinema:**

Weather permitting, films will be projected in the interior courtyard in the evenings, allowing the venue to maximize its optimal utilisation and draw in interested users into the facility.

This furthers the aim for the facility to be used as a South African art and culture film facility.

### **Museum:**

The museum, situated within the existing museum wing, will depict specific aspects of Johannesburg's history that is not focused on solely in other Gauteng Province museums, through the use of film.

History will be depicted by a multitude of South African director's documentaries. Through the use of film, viewers will be able to connect to the past.

The strengths and weaknesses of the museum situated in that existing building will be taken into consideration.

Institutes that make use of media to depict history will be studied with a focus on identifying media that catches and maintains a viewer's attention.

### **Café and Bar:**

The cafe makes up a part of the commercial aspect of the site that allows the facility a measure of financial viability.

How the three artisan houses that are physically connected can be adapted to perform as a cafe and bar area must be considered.

How the commercial part of the facility encourages a connection between the public spaces surrounding the site and the Visual Information Centre must be considered.

How the café will be seen as a day and night time facility and ways in which the design is able to draw in as many users as possible will be considered.

### **3.1.4. Definitions:**

*Placed in alphabetical order for easy use.*

**'Adaptation'** - modifying a place to suit the existing use or proposed use.

**'Art and Culture Film'** – a serious, noncommercial, independently made film that is aimed at a niche market rather than a mass market.

**'Connection'** - a central point of interest or activity that focuses on education through the viewing of film media.

**'Conservation'** - all the processes of looking after a place so as to retain its cultural significance.

**'Cultural Significance'** – an object that has an aesthetic, historic, scientific, social or spiritual value that is preserved for past, present of future generations.

**'Edutainment'** –education being implemented in an entertainment environment.

## 3. INTRODUCTION

**'Film'** - a medium that combines images with narration and music to form an information resource.

**'First Film'** - operates primarily as a commodity and is dominant culturally and industrially.

**'Interactive'** –communication between elements.

**'Intimacy Gradient'** – a gradient system ranging from communal, busy areas through to private, quieter areas.

**'Light Architecture'** - seemingly weightless structures rather than a calculation of relative weight.

**'Node'** – gathering area where a specific function will take place.

**'Outcomes Based Education'** – the learning process whereby the end 'products' that need to be achieved are called 'outcomes'. The learning process involves how these outcomes are achieved.

**'Platooning'** - optimal utilisation whereby a space is used in the morning to perform a specific function and then in the evening performs a different function.

**'Second Film'** – alternative to the 'first film', emphasising the importance of national cultural expression from middle

class perspective. Art cinema committed to the notion of the directors artistic vision.

**'Third Film'** - addresses popular audiences but on political subjects who are part of historic processes rather than consumers. Places great emphasis on cultural expression and identity.

**'Visual Information Centre'** – learning facility whereby one is able to view films of varied educational topics.

**'Youth'** –children of a school going age.

### 3.1.5. Delimitations and Assumptions:

#### Film education:

'*Connection*' will not include the education of film making or film techniques. The main media will be film and other media that is incorporated in film and therefore will not be a design concern for this project.

The facility will not be a school for learners (i.e. education through teachers) but rather a facility of educational aid. It is assumed that it will mostly be used by the youth during the daytime.

#### Multi-Media Library:

The facility will not adhere to the regular library standards and regulations as it is not a regular library. Only specific subjects will be available to be studied. These subjects will be aimed at a specific market.

The multi media library will be assumed to be aimed mostly at the youth.

Individuals will not be able to take films out of the facility. Schools will be able to rent films from the facility on a contractual basis.

#### 'Large Screen Viewing':

The films screened will not be linked to Ster-Kinekor and Nu-Metro so their regulations will not be followed.

Purely entertainment films will not be shown so the screening is open to view any film deemed appropriate. The large screen viewing is not a typical cinema therefore cinema standards and regulations differ.

The large screen viewing will use different technology, not just 'black box cinema', therefore the standards don't apply.

#### History Through Film Museum:

The film museum is not a typical museum therefore museum rules and regulations do not apply.

The history related to Newtown will be displayed, not global history.

The film museum will not show any history of film making. No other media will be used in the museum other than film.



## 3. INTRODUCTION

### **Parking and Transportation:**

It is assumed that the learners will be transported from their schools to 'Connection' by their own means. The donation of a minibus by Blue IQ, the Education Department or Sanlam would be a possibility.

Parking is available next to the site and will be assumed to be adequate with the correct layout.

### **Present Day Newtown:**

The proposal is designed according to what is physically found within Newtown at present. Future proposals for the Newtown Precinct will be mentioned. However, for the design proposal; it is assumed that Newtown will remain in its present condition.

### **The Design Proposal:**

The proposal focuses on the design of certain spaces within the site. Spaces that were deemed to be of most value to the functions of the site have been chosen. The proposal allows spatial layout and concepts for the other spaces within the site. It is assumed that these would be designed in more detail if not for constraints in time due to the large sized site.

## 3 INTRODUCTION

### 3.2.1. User Background:

The children in the Johannesburg area are the target users of the facility. 'Connection' is a solution to schools that currently don't have the infrastructure to allow children to benefit from the information resource of film. However, this educational facility is beneficial and open to all those wanting to better their education.

Relevant points have been summarised from the article 'Children in Johannesburg' by Dr Cheryl Goldstone.

#### Children in Johannesburg:

*'I think that if we want to say that life is changing for the better, that there is an improvement, that we are better off today than we were yesterday – I think that must show in the children.'* President Thabo Mbeki, Commonwealth Summit on Children (Goldstone 2004: 12).

In South Africa, the next generation is the potential human capital for the future. Children are the workers, scientists, parents, leaders and civil society participants of tomorrow, which means that their survival, health, nutritional and educational progress are key issues for the Reconstruction and Development of the country and its future.

*'However meeting the basic needs of children is more than a developmental issue. It is also a question of the Rights of the Child – the moral obligation of society*

*to its children. These are expressed in the UN Convention on the Rights of the Child which we ratified on June 16, 1995'* (Nelson Mandela, Children, Poverty and Disparity Reduction, May 1996.)

#### Poverty and Children:

*'Together, the increases in poverty and inequity in Johannesburg in recent years represents one of the most serious challenges to ensuring that children in the City lead healthy, happy and productive lives, and that children's rights are entrenched.'* (Goldstone 2004:10)

In Johannesburg the rate of unemployment has increased bringing with it the increase of households without an income. These drops have led to the levels of poverty and inequity in Johannesburg increasing.

*'Should these trends indicated persist, existing problems of child poverty in Johannesburg are likely to escalate in years to come, in terms of depth, scale and chronicity. As a result the City will face the concomitant social, health and environmental challenges in relation to children, and society at large'.* (Goldstone 2004:9).

#### Principals to Reach the Children's Needs in Johannesburg:

*'Resource constraints associated with unemployment and reduced livelihood options effect children's life expectancy, risk of injury and disability, growth, health,*

*well-being and education.'* (Goldstone 2004:18)

The Mayor of Johannesburg, Councillor Masondo, finds that Johannesburg's two main problems that it faces are firstly fighting poverty and secondly HIV and AIDS.

*'These two aspects directly affect the children of Johannesburg and these issues create the difficult situations that the children in the city find themselves in. If Johannesburg's children are protected from the hostile urban environments, then intergenerational poverty, violence and social exclusion could be reduced in the present and in the future.'* (Goldstone 2004:14)

In May 2002 the UN General Assembly Special Session on Children found four priorities that were to be focused on regarding the children of the country:

- 1) Promoting healthy lives
- 2) Providing quality education
- 3) Protecting against abuse, exploitation and violence
- 4) Combating HIV and AIDS

*The mayor is concentrating on the improvement of the inequality and the disadvantage that children living in vulnerable poverty groups experience through the introduction of safe play areas as well as their nutrition.* (Goldstone 2004:54)

*'Our country needs teachers and books, clean water and clinics. Billions spent on fighter aircraft should be spent on the upliftment of the people.'* Archbishop Desmond Tutu (Goldstone 2004: 5).

### 3.2.2. State of Education in Johannesburg: The History of Educational System within S.A:

Hendrik Verwoerd, a former prime minister of South Africa, in the 1950' and 1960's, is regarded as the chief architect of the Bantu education system that was used up until the new educational system was implemented after the termination of apartheid.

*'The policy of Bantu (low level or gutter) education was aimed to direct black or non-white youth to the unskilled labor market, to ensure white control and prosperity. All of the above was carefully orchestrated and implemented in the name of "God" by the powers to be. By controlling the media they convinced the white electorate that the cause was "just" and it would greatly benefit blacks in South Africa. Black political organizations reacted with anger at the new law. Thousands of parents vowed, they would rather have children roaming the streets, than to be subjected to Bantu Education.'* (Rebirth 2000:1).

Bantu education corrupted the country and its people. The South African education

system has had to go through dramatic changes to correct the inequalities of the past.

*'Many of the problems still remain, however, and are not going to disappear conveniently if ignored.'* (National Government 1994: 1)

The background to this educational crisis is the destruction of 'black' education under Apartheid, the resultant appalling teacher practice and lack of intellectual curiosity and a dominant tradition of 'classical' schooling that spoon-feeds children.

Government has now moved to 'Outcomes Based' education to introduce the exploration of reality in the lives of children.

#### Problems Facing Education in South Africa:

The following statistics are taken from the *'National State of Education in South Africa 2004'*.

There are two main gaps in South Africa's education system. 60% of South Africa's children do not reach the final matric school year.

Some 4.7 million and 9.6 million South Africans aged 15 and over have had no schooling or did not reach grade 7. This means that some 32% of the adult population, or 14.3 million, may be regarded as functionally illiterate.

Another serious matter is that many matriculants, despite being taught maths and english, underachieve in these subjects due to literacy levels. How then does one help millions achieve functional literacy and numberacy outside of the formal education system and to so restore their belief that they can move upwards and within their dominant formal economy?

The lack of education amongst parents/ carers of children means that 'between 80% and 90% of the people looking after the children are women – and the literacy level among women in the areas surveyed (KwaZulu Natal, Eastern Cape and Limpopo) is only 70% or less.

65 % of the children interviewed reported that no one in the house was sufficiently 'educated' to help them with their homework.

Paying fees becomes a problem when unemployment is above 40%, when most families live in townships and rural areas that continue to be 'non-working' local economies with 80% local economic inactivity, are still highly dependant upon the state and the modern economy, and are characterized by massive child hunger and a rising number of HIV/AIDS orphans.

11 million of 30 million adults have never had a formal job. Parents in poor communities often say that their greatest sadness is that they are 'bad parents'.

### 3. INTRODUCTION

The Constitution supports their call for assistance to become better parents but it clearly places the responsibility for children with parents. The state may only step in if there is a break down. Communities are seeking self-management and self-sufficiency, they are looking for ways to involve parents with their children so that both gain the confidence to proceed with education and schooling, and the upliftment of poor teachers are key education issues.

#### **Learning Environment Technology:**

In a vast amount of South African schools there is a lack of required materials and equipment needed at Primary and Secondary levels. Tertiary institutes are found to be more equipped due to the fact that they are high fee institutes.

It is often found that when materials and equipment are donated, the problem of security is then raised.

A solution to this security problem is a defensive thinking design that incorporates enclosed/ gated facilities and surveillance, which is often too costly for the schools to implement.

#### **Untrained Staff:**

Certain facilities that have been designed for use in education are found to be under-used due to the lack of trained skilled staff. These facilities cannot be maintained as no

one is using them and this eventually leads to theft of the equipment.

#### **Communication Networks:**

Communication networks in the rural areas are either lacking or too primitive. Copper wires used for the telephone lines are stolen when the communication networks are put in place.

Alternate technology can be implemented in this situation; however it is expensive in the initial set up stages. These alternate technologies are often difficult to operate and maintain.

#### **Adult Classes:**

There is a need for adult classes where skills and literacy are taught. Illiteracy levels are high, which reduces the ability to 'learn and earn' as well as increasing the risk of falling back onto crime.

Facilities need to house adult education or 'continuing education'. The facilities need to be flexible in order to adapt to teaching of a variety of skills as well as multi- use of the structure.

The value of adult education needs to be addressed and emphasized to loose the negative attitudes.

*'Only time and an emphasis on the reward inherent in education will induce a change in attitude.'* (National Government. 1994:2)

#### **Re-adaptation of Existing Structures: Short and Long Term Solutions:**

The educational departments do not have the funds to build the facilities that are required within the near future or to even modify what is existing to meet the new standards.

*'In many areas schools have been burned, vandalised or razed to the ground, as an often mindless protest action. Here, both short and long term solutions are needed. Where the facilities exist, they may be inappropriate since norms and standards as well as educational direction, are in a state of flux.'* (National Government. 1994:2)

Short and long term solutions are needed for the lack of building structures in education. The solutions will involve compromise while using the existing premises but with modification and upgrading.

*'Present research into "what exists, what is needed, and how to fill the gap" suggests that simple and pragmatic options exist.'* (National Government. 1994:2)

The long term plan is that by 2013 all schools are to have sufficient facilities and resources to operate completely.

Norms and standards in the education department need to be readdressed as the new education system direction is different. The past norms and standards are generally unaffordable and new space planning guidelines need to be created.

**Existing Buildings in Private Sector:**

Using existing building stock is seen in the private sector in private colleges occupying floors in office blocks.

**Community Education Centres:**

Community centres are not new ideas, however, the educational system has changed, eg. incorporating more group interaction and self study into the classroom. The community centres need to adapt to these changes to smooth the transition from school time to homework time.

The centres will be an education facility that has followed an appropriate brief. The private sector will have to provide funds towards 'community education centres'.

In the meantime the Community Centres are a short term solution. They can be owned by the community but must have a feasibility study carried out as is done for commercial projects for the project to be viable.

*'New, community owned and State subsidized facilities – one of the "quick fix" routes being followed – are not always*

*sustainable. In the short term, this may be because no feasibility studies were prepared.'* (National Government. 1994:3)

**Maintenance:**

Maintenance of existing structures needs to be considered. Low cost solutions must be implemented to allow these buildings to adjust to their new functions. These low cost solutions need to be low maintenance.

*'There is a lack of maintenance of existing facilities. Paradoxically, the older buildings were built to a higher standard and are often in better condition than newer, low cost buildings.'* (National Government. 1994:2)

**Community Involvement:**

In the building of the facility there is the possibility of employing locals into the process to aid the employment levels of the local community. This, however, adds to the cost of the project. Training of the workers can cost the project up to 3% of the total, and increases the time it takes to complete the project.

**Solutions:**

*'There is not just one solution, but a number of options, related to planning, erection, staffing and maintenance, and affected by outside issues of policy, support and finance.'* (National Government. 1994:3)

**'Reconstruction and Development Plan':**

This plan drawn up by the ANC is a statement that shows their intent on dealing with education and training on all levels in South Africa.

*'While this does not necessarily guarantee action, it at least provides evidence of a real concern and support for the issues involved.'* (National Government. 1994:3)

**Funding:**

Many educational initiatives are supported by the private sector. The support of this sector has led to the supply of teachers training, books, literacy programmes and outreach actions.

The universities of South Africa as well as large research groups are involved in the investigation of the concepts of tele-teaching, team teaching, and a variety of electronic aids that can help the system.

**Existing Facilities:**

Existing facilities are available throughout South Africa. These facilities however need to be modified to perform their new specific function.

In urban areas the townships are densely populated. This is increased even further by the learners coming from rural to the urban areas in search of a better education. This leads to overcrowding of the existing education facilities. More

## 3. INTRODUCTION

facilities can be utilised by making use of other facilities that can be adapted.

To accommodate the need for more school facilities numerous private 'cram' colleges, schools and business training institutes have sprung up. These are taking advantage of the widespread needs of the disadvantaged. Many of these are uncoordinated.

### **Community Participation:**

New schools are being built that are based on the new pattern for education by the local community themselves. These schools are fiercely protected by the members of the community who own them. This contributes to a better and more freely available education.

### **Community Ownership:**

The 'dual management system' was implemented in a rural area where the community discovered an indirect system of lease back or buy back so that an initial donor's money becomes seed money for school after school.

### **Converting Existing Building Stock to Fill Needs:**

Central Johannesburg buildings are converted to provide more education at various levels. Low cost buildings that are converted allow for fees to be more affordable.

Grade C office space found in densely populated areas can be converted for educational use.

### **Economies of Cost, Scale and Usage:**

Low cost alternatives in building materials are always being developed.

The cost of running a school will overtake its capital cost within a three to four year period. The way to overcome this is for high utilisation of everything in the school, operating 12 hours a day, seven days a week if possible.

### **New Types of Educational Facilities:**

Schools are now changing to be 'centres for education' where high usage, high tech areas – science, library, resources, information, craft and music centres – with playing fields and classrooms for all age levels clustered around these functions.

*'A global view of all schools in the country might, it seems, show that the concept of "what a school is" may be due for revision. The development of "centres for education" which could supplement, if not supplant, some conventional schools, is being investigated by one of South Africa's larger industrialists.'* (National Government. 1994:4)

### **Design for Flexibility and Adaptability:**

Buildings need to be designed (or converted) to be flexible in use, adaptable to changes in educational policy and

teaching methods and appropriate to their function related to a wide range of users.

### **3.2.3. Education Facility:**

The following summary is taken from the interview of Mr. Henry Parsons, headmaster with Scotborough High School, KZN, taken in April 2007.

The following points on the educational system, which is experienced within the schools themselves, allow insight into the current situation teachers and pupils are facing within South Africa.

It allows one to analyse the concerns and recommendations of a person who is experiencing the current education system first hand.

### **Outcomes Based Education:**

*'OBE starts with the philosophy that all learners can learn. From this starting point, OBE clearly defines the knowledge, understanding, skills, attitudes and values that learners are to learn. Thus it is clear that the end products of the learning process are called outcomes. And that when we decide, before learning takes place, what the end products of the learning process must be, we say that a system is outcomes-based.'* (Millar 2001:2)

The system has been implemented into South Africa too soon, due to the fact that for this system to work pupils need to have

## 4. DESIGN APPROACH

### 4.1.1. A Solution to the Current Educational Problem:

The educational facility 'Connection' will allow the learners an opportunity of using the media film as a learning tool for the benefit of their education.

There are many programmes currently being discussed with the aim to reach out to the underprivileged communities and supply them with needed infrastructure, specifically through the introduction of technology into South African schools.

These programmes, however, take years for the plans to be implemented. Learners therefore, have to wait until the programmes reach their schools. In some cases pupils are not given the opportunities to reach their academic potential while they wait for these programmes to reach them.

Education facilities need to be set up where learners will have access to a public facility where the educational programmes are already up and running, bridging the gap between the governments intended proposals and the pupil's current needs.

#### What is Tele-learning?

The definition of tele-learning is "making connections among persons and resources through communication and technologies for learning related purposes." (Hitchen 1994:56)

Tele-learning systems in the design proposal need to benefit the individuals wanting to raise their education level as well as teachers wanting to incorporate tele-learning into their lessons

#### Individuals Wanting to Raise their Education Level:

Education in Johannesburg schools is not all on the same academic levels, in that there is no way of maintaining equal and fair amounts of resources available to learners, in their schools or in their homes for that matter. Certain pupils have access to more resources than others.

A facility is needed to allow the learner, as an individual, to raise their level of education, thereby allowing communities to be empowered through education, and individuals to be in control of their own future.

Through the aid of multimedia, in this case film, these differences in learning levels can be narrowed, with tele-programmes that are readily available i.e. educational films.

The proposed educational facility will allow the benefits of tele-learning to:

- Uplift learners in Johannesburg, by improving education levels through the use of the supporting multimedia aimed at the personnel, social, cultural and economic development made possible

through the availability of contextually relevant educational material.

- Be made available with an already equipped facility with the required infrastructure such as PC's, video recorders, televisions, satellite dishes and decoders.

- To bring the world into the classroom, through film, and allow the learners have experiences that they would not otherwise be able to have.

*'A good video documentary, accompanied by a variety of other learning resources can provide this feeling of being there while still being in the classroom, and is one of the major motivations for television.'* (Hitchen 1994: 64)

- Enhances thinking skills in learners, such as those needed for enquiry and analysis of multiple forms of information and is a stimulus for problem solving activities.

- Provides learners with an opportunity to consolidate new knowledge or skills through follow up activities.

## 4. DESIGN APPROACH

### 4.1.1. A Solution to the Current Educational Problem:

The educational facility 'Connection' will allow the learners an opportunity of using the media film as a learning tool for the benefit of their education.

There are many programmes currently being discussed with the aim to reach out to the underprivileged communities and supply them with needed infrastructure, specifically through the introduction of technology into South African schools.

These programmes, however, take years for the plans to be implemented. Learners therefore, have to wait until the programmes reach their schools. In some cases pupils are not given the opportunities to reach their academic potential while they wait for these programmes to reach them.

Education facilities need to be set up where learners will have access to a public facility where the educational programmes are already up and running, bridging the gap between the governments intended proposals and the pupil's current needs.

#### What is Tele-learning?

The definition of tele-learning is "making connections among persons and resources through communication and technologies for learning related purposes." (Hitchen 1994:56)

Tele-learning systems in the design proposal need to benefit the individuals wanting to raise their education level as well as teachers wanting to incorporate tele-learning into their lessons

#### Individuals Wanting to Raise their Education Level:

Education in Johannesburg schools is not all on the same academic levels, in that there is no way of maintaining equal and fair amounts of resources available to learners, in their schools or in their homes for that matter. Certain pupils have access to more resources than others.

A facility is needed to allow the learner, as an individual, to raise their level of education, thereby allowing communities to be empowered through education, and individuals to be in control of their own future.

Through the aid of multimedia, in this case film, these differences in learning levels can be narrowed, with tele-programmes that are readily available i.e. educational films.

The proposed educational facility will allow the benefits of tele-learning to:

- Uplift learners in Johannesburg, by improving education levels through the use of the supporting multimedia aimed at the personnel, social, cultural and economic development made possible

through the availability of contextually relevant educational material.

- Be made available with an already equipped facility with the required infrastructure such as PC's, video recorders, televisions, satellite dishes and decoders.

- To bring the world into the classroom, through film, and allow the learners have experiences that they would not otherwise be able to have.

*'A good video documentary, accompanied by a variety of other learning resources can provide this feeling of being there while still being in the classroom, and is one of the major motivations for television.'* (Hitchen 1994: 64)

- Enhances thinking skills in learners, such as those needed for enquiry and analysis of multiple forms of information and is a stimulus for problem solving activities.

- Provides learners with an opportunity to consolidate new knowledge or skills through follow up activities.

## 4. DESIGN APPROACH

### Teachers Wanting to Incorporate Tele-learning into their Lessons:

*'While South Africa has many dedicated teachers there is a desperate shortage of those that teach maths and science. So much so that almost 30% of learners are taught math's by teachers with no qualifications in math's and almost 40% of learners are taught science by teachers with no qualifications in science.'* (Lamont Citichat 2003)

Within many Johannesburg classrooms, teachers give lessons without the aid of technology, excepting an overhead projector.

In some cases there are computers available in the school's computer room but a lot are not connected to the internet.

Facilities need to be implemented to demonstrate to teachers how tele-learning can be used as a teaching aid. These lessons need to be given continuously as well as refresher courses. Motivational talks need to be given to encourage the teachers to update and raise their teaching skills wherever possible.

The teacher may wish to enrich their lessons and their outcomes within the classroom through technology, by learners experiencing a range of options and ideas beyond those of their teacher and the textbook. For example, the teacher may give the students a handout to accompany

a lesson that includes information the teacher obtained from various film footage. Teachers can access information from education programmes on the television. As well as gather lesson ideas from these programmes through viewing which are successful methods of teaching certain aspects of subjects.

Tele-learning allows qualified teachers in all subjects to be available at all times to the students, through recorded lessons, based on the national curriculum. This can be a great teaching aid to teachers in areas that they themselves battle to understand as well as helping teachers to address the dull, difficult and dangerous topics

Tele-learning can be easily implemented into the classroom as:

- Television is a familiar form that is widespread and well established throughout the world
- Advances in transmission and video processing have made it possible for schools to own a television
- It can easily be integrated with other learning activities, through careful preparation by the teacher.

Television programmes or clips must be included by the teacher, meaning that the programmes are not merely just played,

but rather the teacher and the learners interact with the lessons in order to make it a useful teaching tool.

The teacher must:

- Preview the specific outcomes
- Prepare the video and television equipment
- Explain unknown terminology (vocabulary) or concepts to the learners
- Inform the learners what is expected of them whilst watching the video. They must make notes, look up certain facts etc.

### Adult Learning Classes:

Tele-learning can also benefit the adult group that can be educated during evening classes in the facility. Tele-learning for the adult groups allows adults the opportunity of learning skills that will benefit them, years after attending school.

### What is Film?

*'Film is a medium that combines images with narration and music to form an information stream. The medium is ideal for situations where a visual component is required for optimal understanding.'* (Sardar 2006: 75)

## 4. DESIGN APPROACH

The uses of film would be for the following purposes:

- education – (information videos, lectures, training, pedagogical documentaries)
- news (happenings, events, announcements, analysis)
- entertainment (where the content is distinct from the normal fare of television, e.g. Short films)
- discussions (interviews, panel discussions, interactive programming)
- local sports coverage

Film, as summarized from 'Introducing Media Studies', by Sardar 2006, can be divided up into the four main types of uses that it performs:

- diversion – which is the emotional release to avoid problems or work
- Personal relationship – which it provides company when one is alone and becomes a subject of discussion with others.
- personal identity – assesses and locates our own selves against the social world
- Surveillance- provides information about issues and events.

*'On average, we spend over 15 years of our waking lives just watching television. Films, videos, newspaper, listening to music, surfing the net – means that we*

*spend one third of our lives immersed in the media'* (Sardar 2006 : 78).

### Why Use Film?

*'The purpose of filming is to 'render an approximation of actually in an interesting and visually pleasing way.'* (Hadland 2006 : 15)

*'Films are more brilliant and wiser, more complete, patient and generous than their directors. Film makers put the best of themselves into their work. They have time to think about what they film, research, compare their information and ideas with those of others, to polish their words, which is to say polish their thought and their mode of expression.'* (Sardar 2006: 80)

The following points are summarized points, found relevant to the project, from the following books: Introducing Media Studies, Re-visioning Television and Tele-learning.

Television has the ability to communicate with activities at local level which makes it a powerful tool.

Many people are already using film for arts, raising awareness, training as well as for creative pleasure.

### Television Can Reach People Across the Globe:

Through mediation (human communication put into material form – words, gestures,

songs, pictures, writing), we communicate across space and time with as many people as possible. Film has the ability to reach a vast number of people, in all areas throughout the world.

### See Other People's Experiences:

Film teaches us that others have experienced doubts, suffered losses, confronted obstacles, and sought answers. Films allow us to experience other times in detail

### Improve Democracy:

It is assumed that improved access to more diverse media is good for democracy, development and empowerment in a country. Everyone has the right to communicate, the right to equality and dignity and to linguistic and cultural expression i.e. the right of access to media and access to information.

### Improve Access to Materials:

One of the problems faced by students in South Africa is access to materials, which may be costly. Issues of access have made media the only way in which the educational needs of certain groups can be met.

Through film the course materials can be discussed and made easily and more cheaply available. A main advantage is that there is not only one book, as the group can participate in watching and discussing the films at the centre.

## 4. DESIGN APPROACH

Education films are made and distributed easily through digital technology.

Digital technologies drive down barriers to entry, meaning in the future more people will become video producers and their ability to contribute to television programming will be limited by their skills, imagination and ability to use the medium rather than new technology and costs. This makes television more available for both viewers and producers.

*'Digital technologies are also lowering the barriers to entry for video producers, enabling people to produce material at a good level of technical quality at the beginning of the production-transmission chain. This allows more films to be made'* (Sardar 2006: 4).

Digital information has further benefits; it does not decay during its passage through the production-transmission chain as analogue information. Digital is more readily manipulable and accessible during production. Digital can be transmitted over multiple channels and stored by the end-user on multiple devices. This allows educational films to be circulated over the world with ease.

The quality of video over data networks does not need to be as high as that required for television because:

- the video is not subject to the limitations of transmission over the airwaves
- it need not be shown full screen, full motion video
- the information value of the content is of greater than the value that the clarity of the accompanying images.

For these reasons, low-end consumer video cameras can be used allowing educational films to be made cheaply and therefore more often.

### Why is Film Good for South Africa?

The following is the summarized points found in Re-visioning Television. South Africans Television Audience Analysis:

- Television reaches 68 % of the total population. The highest penetration is in the Gauteng and KZN regions, with 20 % of the TV viewers in these provinces.
- Of the population amount that TV does not reach, (approximately 30% of the total population), 90% are in the lower LSM categories. However in the last five years the number of lower LSMs access to television has grown by 200 per cent.
- Television reaches over 40% of households in South Africa.

The highest penetration of households is in Gauteng.

In South Africa there is a great disparity between poor and affluent groupings, which are overlaid by racial divides, lack of electricity, low TV ownership levels and a lack of access to production skills and facilities.

There is a current under-utilisation of media facilities in the community, and the huge need to disseminate information and to reach within and between communities.

*The structure of the past has left its imprint on the demographic profile of the population, which when viewed in terms of economic, social and political factors reveals wide disparities that yet reflect the racial inequities of the apartheid and colonial years.* (Hadland 2006: 37)

Media, like other sectors of society, have a role to play in its readjustment to the current objectives of racial parity within the overall economic framework.

In Johannesburg there are huge gaps between the First and Third World economies within the country. There are attendant populations of information rich and information poor, meaning not all people have the same access to film. Although most watch television few realise the potential that it has of educating one.



## 4. DESIGN APPROACH

### Why is There a Shift from Books to Film?

The following is the summarized points found in 'Introducing Media Studies' by Sardar, 2006.

Education through the media film allows tradition to be disrupted with the new media, therefore the social and cultural environment are reshaped.

*'Television reconnects the senses that were fragmented by print. Electronic media is taking society back to a kind of preprint state of harmony.'* (Sardar 2006:65)

### What are the Possibilities of Film in the Future?

The following is the summarised points found in Introducing Media Studies by Sardar, 2006.

#### The Combination of Film and Internet:

Television is no longer a stand-alone medium but rather one that is merging into information and communications technology (ICT) networks.

In the future as digital technology progresses and bandwidth availability increases, so television will become more available. It will also cease to be a passively received medium, but rather become more interactive allowing audiences to interact with the film.

The internet can be used as a distributing channel, allowing the viewers the option of seeing archived TV programmes at their digression.

#### Video Conferencing:

Video conferencing allows round-table discussions using the webcam hook-ups. This allows audience participation through chat rooms and the telephone.

In South Africa providers have extended broadband connectivity speeds through their various fixed-line and wireless products. This means that high speed internet is more affordable. Through its ADSL line, Telkom has provided television broadcasting distribution. Subscribers can download video streams. This allows the multicast stations reach to include rural areas and could be used to aid the empowerment initiatives in these areas.

#### Newspapers:

In the future Print newspapers will disappear leaving newspapers that are tailor-made to our needs to arrive on screens in the morning.

#### 4.1.2. Film material

The nine learning areas that need to be covered according to the 'Outcomes Based Education Teachers Manual'

There are eight learning areas within the schooling system that replace the subjects

of the previous system. These learning areas are:

- Language, Literacy and Communication;
- Mathematical Literacy; Mathematics and Mathematical Sciences;
- Natural Sciences;
- Technology;
- Human and Social Sciences;
- Economic and Management Sciences;
- Arts and Culture;
- Life Orientation.

Educational films and programmes that will be available to be viewed in 'Connection', will be related to these nine learning areas

## 4. DESIGN APPROACH

In many schools of architecture around the world, architecture has sought connections with other fields of art; the most recent interest is cinema.

Cinema is studied for the purpose of discovering a more subtle and responsive architecture. Many architects today, such as Bernard Tshumi, Rem Koolhaas and Jean Nouvel, have used the influence of cinema in their approach to architecture.

The similarities that exist between cinema and architecture make up the theoretical reasoning behind the design decisions of the visual information centre.

### 4.2.1. Architecture and Cinema

The following points are summarized from the book *'The Architecture of Image: Existential Space in Cinema'* by Juhani Pallasmaa, 2000, and shown how it is interpreted into the design of the educational facility.

#### Architecture and Cinema show an Image of the Life at that Time:

Cinema is the art form which is closest to architecture due to both using current affairs and spatial structures. Images of culture and a particular way of life are created and remembered by cities and buildings.

*'Both cinema and architecture mediate comprehensive images of life.'* (Pallasmaa 2000:5)

Cinema is able to capture a scene and life situation of a city during a certain time as well as creating that life experience.

#### How can it be Shown in the Design Proposal?

Images of life can be shown through the combination of contemporary architecture with heritage architecture.

This contrast draws the user's attention to the history of the building and the timeline of the alterations.

The contrast can be seen clearly through the introduction of contrasting materials, contrasting styles of architecture, and where the contemporary buildings are positioned within the site.

#### Movement and Sequences:

*'To erect a building is to predict and seek effects of contrast and linkages through which one passes. In the continuous shot/sequence that a building is, the architect works with cuts and edits, framings and openings like the director.'* (Pallasmaa 2000: 3)

#### Movement

*'Architecture exists, like cinema, in the dimension of time and movement.'* (Pallasmaa 2000:4)

#### Sequences

*'One conceives and reads a building in terms of sequences.'*

(Pallasmaa 2000:4)

#### How can it be Shown in the Design Proposal?

The sequence of the functions taking place in a building determines the layout of building. Users of the building follow certain sequences that determine the essence of the design.

Certain sequences are more important than others and through the design users can be shown which sequences are of primary importance while others are viewed to be secondary sequences within the building.

#### The Emotion Felt in a Room, Created by the Architect and the Director:

*'Houses are built in the world of Euclidian geometry but lived space always transcends the rules of geometry.'* (Pallasmaa 2000:2)

Lived space resembles the structure of the unconscious, organized independently of the boundaries of physical space and time. One finds that one unconsciously feels more comfortable in certain rooms than in others.

#### How is this Shown in the Design Proposal?

A lived space is filled with emotion rather than perfect geometry.

An educational facility structurally needs to perform certain functions. However, the way users feel leading up to, entering, walking through a building and within the individual spaces, will be due to the emotional feel of the spaces, not their geometry.

The emotional feel that is created in spaces and within the facility overall can be created through the manipulation of:

- Different heights within the spaces,
- Whether spaces are open up to the outside or more confined.
- Whether the furnishings in the spaces are soft or hard.
- Whether the lighting is harsh or dimmed.
- Whether the space is flexible or more rigid.

### **The Individual's Experiences of Architecture and of Cinema:**

Lived space is always a combination of external space and inner mental space, 'actuality and mental projection'.

*'We do not live separately in material and mental worlds, these experiences are fully intertwined. We live in mental worlds, in which the experienced, remembered and imagined, as well as the past, present and future are inseparably intermixed. The modes of experiencing architecture and cinema become identical in mental space.'* (Pallasmaa 2000: 5)

### **How is this Shown in the Design Proposal?**

The users past experiences, whether imagined or remembered, will be combined with the facility, as it is creating a mixed reaction to the educational facility.

The question of whether film is viewed as an educational facility or an entertainment facility, as well as whether watching educational films is considered learning or entertainment will be determined by the users mental state.

This mental state will be determined by their past experiences, in other educational facilities, and what they imagine the facility to be.

The design can challenge these ideas by the education facility being seen as an entertainment facility.

The users will come with a mental idea of a 'library' due to past experiences that they have remembered. The challenge of the design is to change these mental negative connotations through a new interpretation of a 'library' and learning.

This idea can be achieved by:

- the incorporation of more commercial elements not usually found in an educational facility
- the design of more playful, relaxed spaces not associated with a more

formal educational facility that is more institutionalized.

### **Human Interaction with Architecture and Cinema:**

*'Architecture is eternalized in matter, whereas cinematic images are only an illusion projected on the screen. Both art forms define frames of life and situations of human interaction.'* (Pallasmaa 2000:11)

Although the situation of viewing a film turns the viewer into an observer, the illusory cinematic space gives the viewer back his/her body, as the experiential haptic and motor space provides powerful kinesthetic experiences.

### **How is this Shown in the Design Proposal?**

The users experience the building physically through the walking in and around the building.

The design allows cinema to be experienced by it being 'physically' projected onto the walls of the structure itself.

Users will experience the cinema physically by walking through the film that is being projected on the walls, allowing users silhouettes to collide with the cinema itself.

## 4. DESIGN APPROACH

### Restructuring and Articulating Time in Cinema and Architecture :

Restructuring and articulating time – re-ordering, speeding up, slowing down, halting and reversing – is as important in cinema as in architecture.

*'Architecture is not only about domesticating space, it is also a deep defense against the terror of time.'*  
(Pallasmaa 2000:7)

### How is this Shown in the Design Proposal?

The design is able to manipulate time by creating spaces that one is to experience differently.

Certain spaces in the building are meant to be experienced slowly, while others are meant to be experienced more quickly.

Through the designing of how one walks through the different spaces, and how comfortable these experiences are made to feel, will allow the design to manipulate time.

### Buildings and Emotions in Cinema and Film:

*'Scenes and buildings reflect a somewhat naïve life. Different buildings create different feelings and effects throughout the film, changing from day to night time. The very same architecture can turn gradually into a generator and container of fear.'* (Pallasmaa 2000: 12)

### How is this Shown in the Design Proposal?

The way the building is experienced at different times of the day and night is influenced by how the design is able to adapt to the needed functions at these different times.

Through the multifunctional-use of a space, a different function can occur in the daytime and a different function in the nighttime for optimal utilization.

By allowing the design to adapt to these changes, the facility is able to change from being one of education to one of entertainment.

This can be created through:

- The design introduction of lighting.
- Through the inclusion of projections onto the building at nighttime
- Through opening and closing of the different entrances in the facility at different times during the day and night.

### People's Emotions Placed onto the Building and Film:

*'Buildings are also devoid of emotion. A work of architecture, in the same way as literature and cinema, places our emotions into it.*

*The buildings of Michelangelo do not mediate feelings of melancholy, they are*

*buildings fallen into melancholy, or more precisely, we confront our own melancholy in them'. (Pallasmaa 2000: 15)*

Cinema and architecture, as in all art, function as projection screens for our emotions. A building cannot be sad. Our ideas and emotions are projected onto the building.

*'The value of great film is not in the images projected in front of our eyes, but in the images and feelings that the film creates.'*(Pallasmaa 2000:15)

### How is it Shown in the Design Proposal?

*'A great building makes us experience gravity, time – experience old and new and – ultimately – ourselves, in a strengthened and meaningful way'.(Pallasmaa 2000:14).*

The feeling of sadness and doom is currently projected onto these building, due to the hostels reminding people of Apartheids past.

The buildings themselves are not sad and are not buildings of doom. These negative connotations are placed onto these heritage buildings through people's emotions.

The designs challenge is for users to have a positive emotion projected onto these buildings, allowing the building to project the emotion of hope for the future.

The design can achieve this by:

- Making the target market the future, i.e. the children.
- Not concealing what happened on the site in the apartheid years but rather openly displaying it and letting people learn from the mistakes of the past.

### 4.2.2. Connection

**Connect Definition:** to come or bring something together or into contact; to join

- to associate or link somebody with somebody.
- To think of different things or people as having a relationship to each other.

**Connection Definition:** 'point where two things are connected; a thing that connects:

(Oxford Advanced Learners Dictionary)

'Connection' forms the seed idea for the design proposal. Through the connection of elements, mainly the buildings themselves and their functions, a link is created between the education system in place in South Africa today, and the introduction of the proposals for the future education system slowly being implemented into South Africa.

The connection of the following elements within the proposal design and its functioning came into consideration.

### **The Connection to Education: The Connection of Learners to a Needed Information Resource.**

Information in the form of the media film is available and can be found in a variety of topics and at a wide range of levels.

The problem we face in Johannesburg and in South Africa as a whole, is making this information available to all those who are interested in empowering themselves with knowledge.

Knowledge will be obtained by the users of this facility through the centre being the missing connection between information and knowledge.

Through the provision of the educational facility '*Connection*', the media film will be able to be used as a study aid to the learners, and be one of the solutions to the following concerns:

- How are children able to improve their knowledge without access to the internet or any other information resources other than their teacher?
- Educational tapes are aids for children that are having difficulty understanding certain school subjects. How are these tapes benefiting the poorer students that have no access to televisions and DVD's players or the tapes themselves?

- Educational shows are broadcast in the mornings on SABC during the week days. How are these shows benefiting the group that they are aimed at, when the children are in school at the time they are broadcast?
- How are school lessons, in many schools kept up to a standard level?
- How are teachers able to improve their lessons, with regard to making lessons more enjoyable for the students, maintaining their attention and keeping the subjects up to date?
- Where are teachers able to go for help with regard to subjects they don't understand themselves?
- How can children from a multitude of backgrounds be educated so that they can all understand? What is a universal media that is common to all?
- How is a child able to improve their education level without money?
- How can education be made more interesting and be seen as something more recreational and fun?

## 4. DESIGN APPROACH

### **The Connection of the Educational Proposals, namely plans for 2013, and the Present Situation.**

The education minister aims to have necessary resources available in every school in Guateng by 2013.

What is to happen in between now and the next six years? Too many school goers will pass through the system without having the necessary resources for them to be able to reach their full potential.

Facilities need to serve the needs of these children within these 'in-between' six years. These children caught in these 'in-between stages', will have an opportunity of empowering themselves with the necessary resources.

In the future, i.e. after 2013, the facility will still be an after school education resource facility that becomes an additional aid to the schools themselves, as well as still serving the users out of school.

### **The Physical Connections within the Site:**

#### **The Connection of the Previous Functions of the site to the Proposed Functions.**

The aim of the previous alteration was to alter the building's functions to be a facility of empowerment used by those wanting to gather knowledge but unable to reach it alone.

The proposal will include these goals of the past alteration, i.e an empowerment tool but will be adapted to suite the needs of the users today, as well as considering what the futures needs might be.

### **The Connection of the Past to the Future (i.e. the children).**

*'They are the core focus of perhaps the most destructive social engineering of the country's history, the migrant labour system, and clearly show the part played by spatial designers, including architects, in creating a divided, oppressive and eventually violent society.'* (Cooke 2007: 54)

What happened in the past in the Apartheid Era cannot be ignored and swept under the rug. Children in South Africa need to know what happened in this significant heritage building in the Apartheid years, or else they will never learn from the country's past mistakes.

The facility will allow for the opportunity of connecting the past, in the use of the existing building, with the future, which will be the users benefiting from this information resource, to better their futures.

### **The Connection of the 'Black' and 'White' buildings of Apartheids Past.**

The site is one of tragedy and violent Apartheid crimes. The three buildings on

the site are therefore all marked for heritage sites.

The four artisan houses in the front were owned by the mines and housed the white managers of the black mining workers.

The Miners Hostel behind the artisans' houses was where the black mine workers were housed. These three buildings were constructed at the same time and were all involved within the mining scene, but have been vastly separated both literally and figuratively.

They have clearly remained symbols of the Apartheid Era still to this day. The buildings are still separated by a fence and a wall and are clearly still separated in people's minds.

The proposed designs additions allows the proposed function to connect to the existing building. Additions will form the physical connection of these three significant buildings, as well as additional required spaces to perform the facility's proposed functions.

By physically connecting them, one gets rid of the segregation that is still evident, both physically and mentally.

The facility's functions will continue this connection with the centre being open to the public, ie anyone wanting to learn.



### 4.3. Goals of the Design:

The outcome of the design of 'Connection, A Public Visual Information Centre' should challenge the traditional idea of watching educational films as a form of learning, rather allowing it to be viewed as a form of entertainment while learning.

Challenge the institutionalized ideas of what an educational facility should feel like with a new interpretation of an educational facility that aims to make users feel:

- Comfortable, instead of rigid,
- Part of a whole, instead of isolated,
- Welcome instead of intimidated,
- An individual instead of one of the majority.

Challenge the negative connotations associated with the workers hostel and the artisan houses through the design of a site that is viewed as the hope for the future.

Challenge the idea that a building is either an educational facility or an entertainment facility but rather allowing the site to be both, but at different times during the day and nighttime, through optimal utilisation of the facility.

Challenge the idea that the three separated buildings on the site cannot be connected together, to literally and figuratively, connect their separated past and functions, so they are able to function

as a whole.



### 4.3. Goals of the Design:

The outcome of the design of 'Connection, A Public Visual Information Centre' should challenge the traditional idea of watching educational films as a form of learning, rather allowing it to be viewed as a form of entertainment while learning.

Challenge the institutionalized ideas of what an educational facility should feel like with a new interpretation of an educational facility that aims to make users feel:

- Comfortable, instead of rigid,
- Part of a whole, instead of isolated,
- Welcome instead of intimidated,
- An individual instead of one of the majority.

Challenge the negative connotations associated with the workers hostel and the artisan houses through the design of a site that is viewed as the hope for the future.

Challenge the idea that a building is either an educational facility or an entertainment facility but rather allowing the site to be both, but at different times during the day and nighttime, through optimal utilisation of the facility.

Challenge the idea that the three separated buildings on the site cannot be connected together, to literally and figuratively, connect their separated past and functions, so they are able to function

as a whole.

## 5. PHYSICAL OVERVIEW

### 5.3.1. Site Position

The site is located between busy pedestrians routes and busy vehicular routes so it can be seen by foot and by road. All the buildings are situated on the large stand, RE-599.

It is positioned opposite Miriam Mabeka Street (formerly Bezuidenhout) and the busy one way Jeppe Street.

Mary Fitzgerald Square is considered to be the heart of Newtown meaning that all activities within Newtown are surrounding the Square. Most activities then will force people to see the facility.

The site forms the link to the two largest open public grounds in Newtown, namely Newtown Park and Mary Fitzgerald Square. Activities take place in these open lands all the time meaning that the site is visible from both these areas.

It is situated right next to a large parking lot. Parking lots in Newtown are scarce and future plans want Newtown to be mostly a pedestrian area with a few parking lots. The fact that the parking lot is right next to the site allows it to be a facility that can be used at night and can be easy for parents to drop their children off right next to the site and watch them walk into the site.

The available parking lot that is adjacent to the structure will function as parking for the site.

Students and children will not have to cross over a road, making it a safe venue. Buses will be able to park directly outside the building allowing schools to use the facility with ease. The parking lot is accessed from a less busy road and will be easily accessible.

Tourists will notice the site as it is situated near all the restaurants that are popular around Newtown Park.

The site is surrounded by greenery which is not common so close to the CBD. The park as well as all the fully grown trees surrounding the site, creates a study environment that is surrounded by nature.

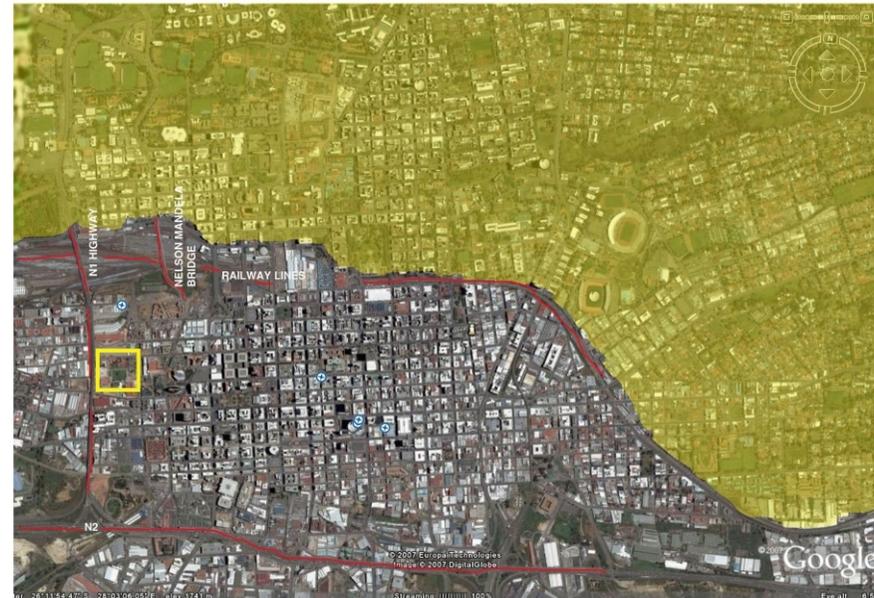


Fig. 5.3.1. Inner City

## 5. PHYSICAL OVERVIEW



Fig. 5.3.2. Newtown



1. Mary Fitzgerald Square
2. Newtown Park
3. Parking lot

Fig. 5.3.3. Site

## 5. PHYSICAL OVERVIEW

### 5.3.2. Vehicular and Pedestrian Movement

The site is situated between major vehicular and pedestrian routes. The northern side faces onto Jeppe Street, a busy one way vehicular route for taxis and buses. The busy vehicular route is the route used by most taxis leading to and from the Metro Mall positioned to the north- western area of the site.

The southern side faces onto the pedestrianized area of Newtown Park, which has pedestrian routes leading to all facilities surrounding the park.

The site forms the link between the vehicular area of Newtown and the pedestrianized area of Newtown.

Tourist taxis are positioned on the one way street linking to Jeppe Street. This street is hardly used by vehicles, allowing it to be occupied by pedestrians and the yellow taxis.

A parking lot, adjacent to the site to the east, is used by buses and as parking for the visitors to Sci-Bono and the surrounding facilities.

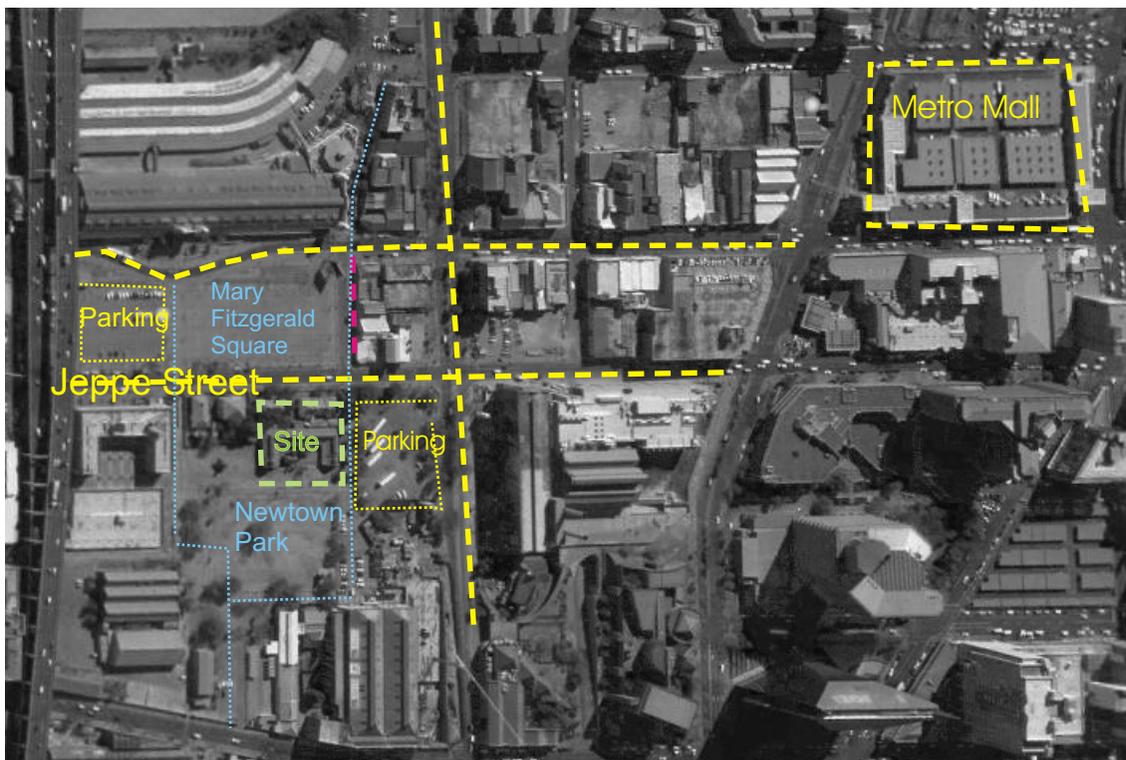


Fig. 5.3.4. Movement near site

- Vehicular Routes
- Yellow Cabs
- ..... Pedestrian Routes

Fig. 5.3.5. Mary Fitzgerald Square



### 5.3.3. Mary Fitzgerald Square

To the north of the site Mary Fitzgerald Square. This public open ground is a major pedestrianized area surrounded by two busy one way vehicular routes.

Mary Fitzgerald Square is the busy hub of Newtown, with most activities taking place on the weekend within the Square from sports events, concerts to flea markets, making this the heart of Newtown.

Large pedestrian pathways lead people through the square, with lighting and water fountains positioned in the busiest areas.

A security presence is felt in the Square with surveillance cameras as well as security guards on foot and motor bikes.

The square acts as the central hub of Newtown with large signposts showing the Newtown Cultural Precinct.



Fig. 5.3.6. Large Screen



Fig. 5.3.7. Surveillance Cameras



Fig. 5.3.8. Information Boards



Fig. 5.3.9. Public Seating



Fig. 5.3.19. Lighting

## 5. PHYSICAL OVERVIEW



Fig. 5.3.20. Open land



Fig. 5.3.21. Drinking Fountains



Fig. 5.3.22. Pathways



Fig. 5.3.23. Security as Artwork

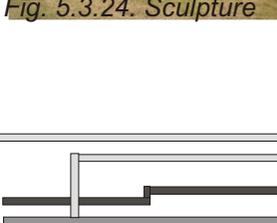


Fig. 5.3.24. Sculpture



Fig. 5.3.25. Newtown Park

### 5.3.4. Newtown Park

The Newtown Park is situated to the southern side of the site. This area is the only green open space in Newtown.

The large open grass area is a popular space for people working in the area to have their lunch under the trees as well as students in the area.

The pedestrianised area has many pedestrian pathways leading to all the facilities surrounding the park. The facilities surrounding the park are mostly of an educational nature, causing it to be occupied by many children in the daytime.

The Newtown Park is a quiet area with no cars posing a threat to the pedestrians walking in and around this area.

Art, in the form of wooden sculpture heads, a car sculpture as well as live dance performances by the dance school adjacent to the site, create a relaxed, enriched experience as one walks through it.

Newtown Park becomes a large pedestrian link between Newtown's facilities that are accessed by road and the pedestrian routes that link all the educational facilities.



*Fig. 5.3.26. Pedestrian Walkway*

### 5.3.5. Pedestrian Walkways

A large pedestrian pathway is situated to the east of the site. This pathway is covered by large palm trees that create a shaded, rest area for the pedestrians in the area.

Concrete seating is found along this route, encouraging pedestrians to sit and catch their breath in the shade.

The pathway is positioned next to the parking lot, which is used mostly by the buses of group outings to the area.

The pathway becomes the link from the busy, vehicular side of the Mary Fitzgerald Square to the quiet, pedestrianized side of the Newtown Park.



*Fig. 5.3.27. Palm Trees*



*Fig. 5.3.28. Road Blockade*



*Fig. 5.3.29. Benches*



*Fig. 5.3.30. Security*



*Fig. 5.3.31. Adjacent to Parking*

## 5. PHYSICAL OVERVIEW

### 5.3.6. Education Facilities within Newtown

The site is surrounded by educational facilities and within walking distance, in a safe pedestrian environment. The area should be seen as an educational hub instead of a stop over on the way to other educational day outings in Johannesburg. The educational facilities within the area, can therefore, feed off each other. The Newtown Cultural Precinct has many educational facilities. Most of these are situated around the Newton Park area and the Mary Fitzgerald Square.

The educational facilities are used by children mostly during the day with the adult group using them during the evenings and on weekends.

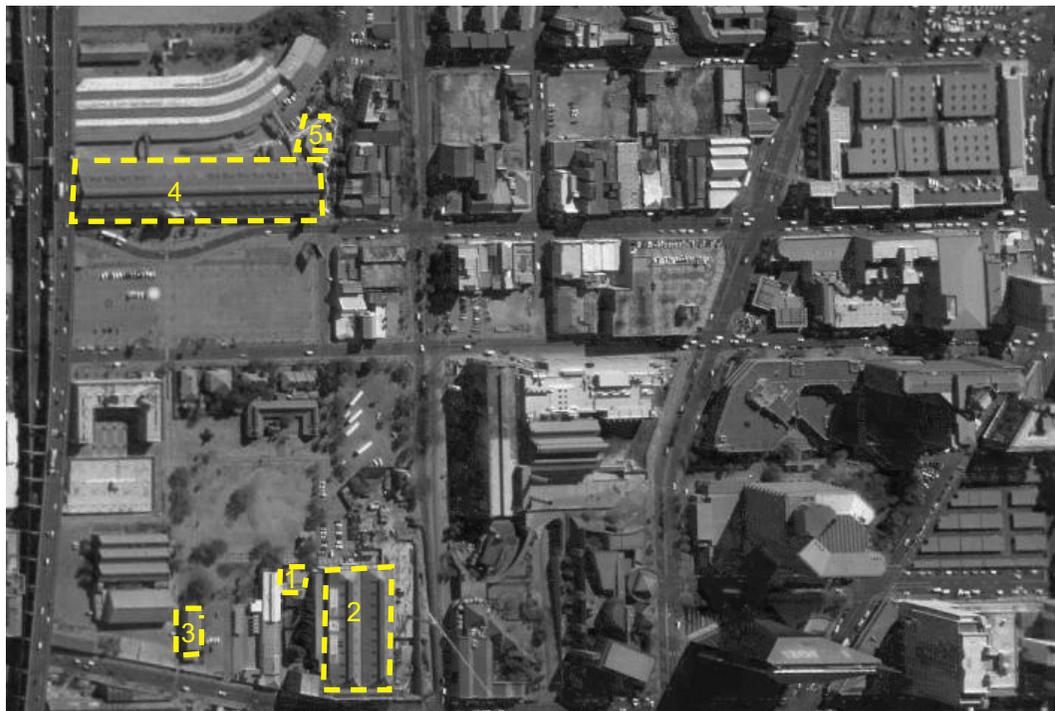


Fig. 5.3.32. Newtown Cultural Precinct

1. The Youth Computer Centre
2. Sci-Bono
3. Moving into Dance
4. Museum Africa
5. Market Theatre
6. National Design and Craft Centre

## 5. PHYSICAL OVERVIEW

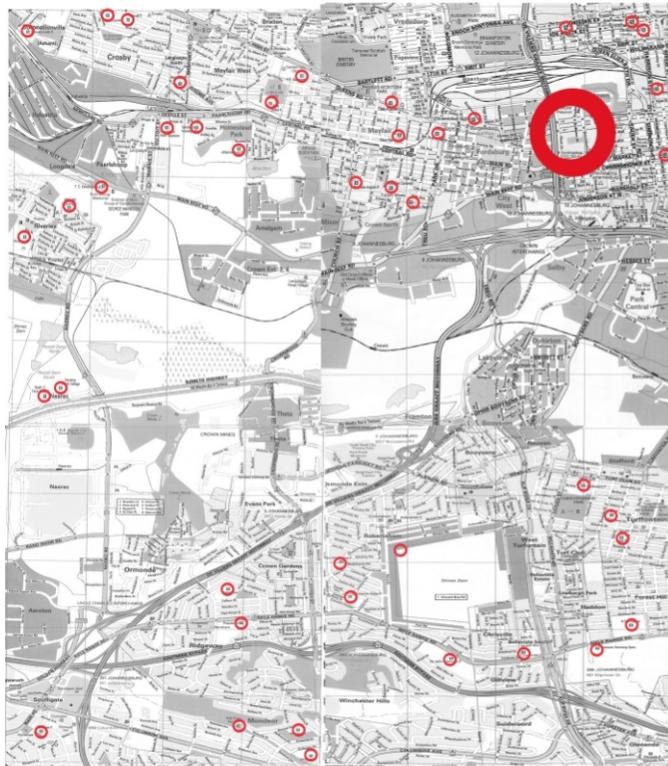


Fig. 5.3.33. Surrounding Schools

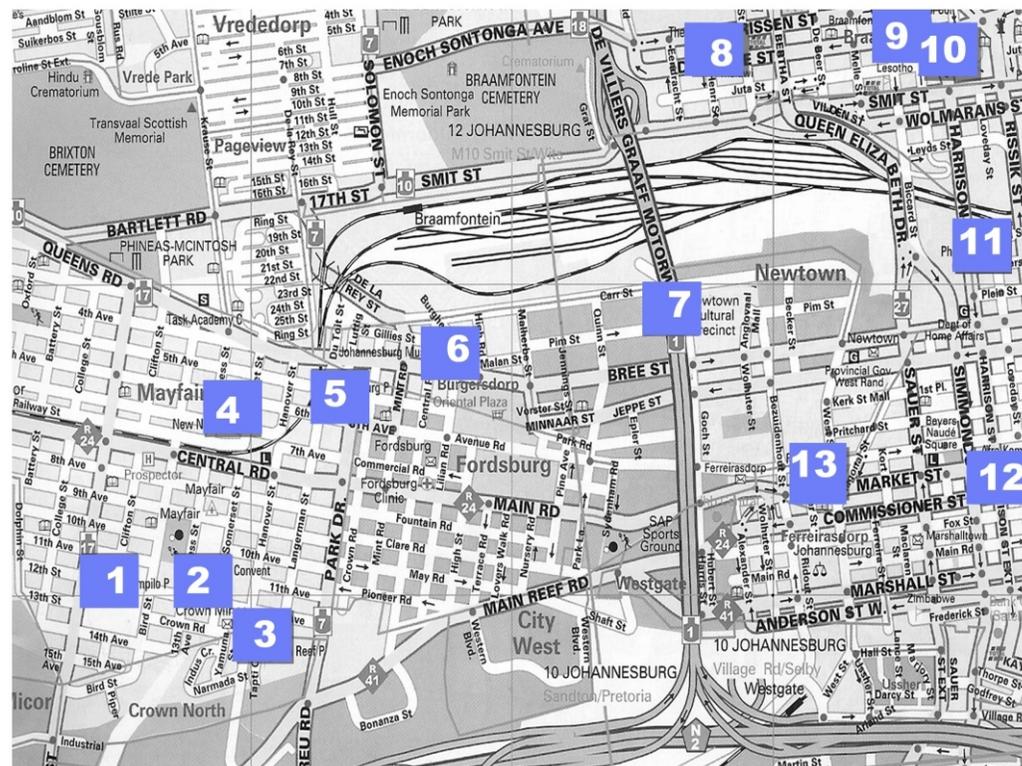


Fig. 5.3.34. Schools in Nearby Area

- 4. New Nation College
- 5. Fordsburg Primary School

- 6. Johannesburg Muslim School
- 7. Bekezela College
- 8. The Star School
- 9. Studywell College
- 10. Damelin/ Eden College
- 11. Phoenix College
- 12. Afro Combs College
- 13. Ferreira Primary

## 5. PHYSICAL OVERVIEW



Fig. 5.3.35. School children at Bephele-Impilo School



Fig. 5.3.36. Crown Reef Primary School



Fig. 5.3.37. Classroom at Crown Reef Primary School

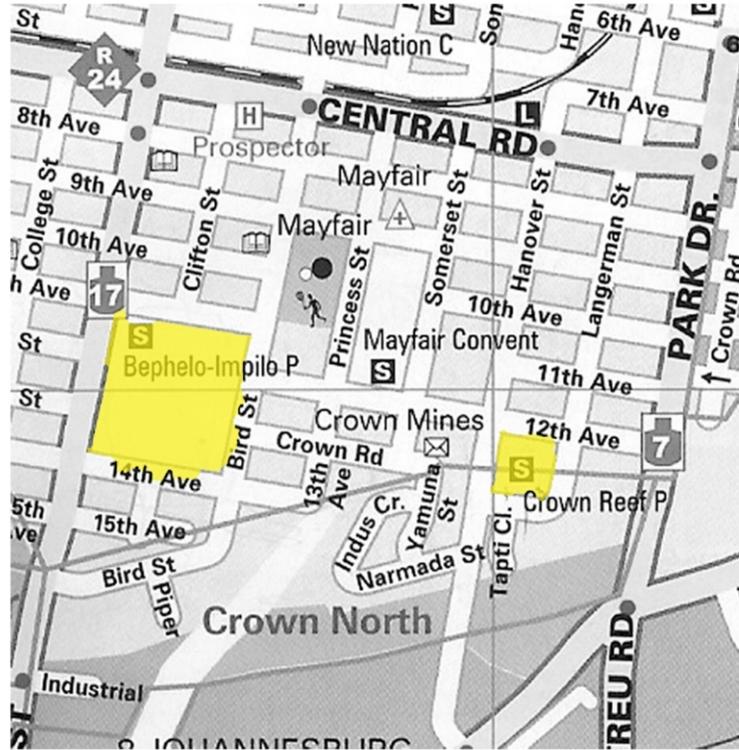


Fig. 5.3.38. Map showing location of Bephele-Impilo School and Crown Reef Primary School.

The school of that was studies is to the western side of the Newtown Precinct.

Bephele-Impilo School:  
Grades: Grade R-Grade 12  
Number of students: 591  
Boarders: 300

Computers: 12 but computer room closed for the last year due to no teacher being available to teach computer skills.

Internet: No  
Students per class: Grade R – Grade 7: 30 pupils  
Grade 8 – Grade 12: 40 pupils  
Number of TV's in the school: 1

Newtown's identity has changed and is now aiming at the incorporation of the youth as one of the main target groups.

The past Workers Library and Museum aimed at groups of people who were the workers and laborers in today's society. This older generation would use the workers rights books. The Workers Library benefited the workers target market.

*'The demand on public resources for the basics of housing and health and education mean that Newtown Cultural Quarter must also conceive itself as a fundamental resource for schools in the delivery of the National Curriculum ( via Sci-bono, the crafts centre and Museum Africa), a gateway to further and higher education and a stimulus to adult learning' (JDA 2006: 46)*

### **Cultural Centre:**

*'Newtown is fully aligned with relevant existing policies for the inner city, the economy, education, training and culture. There is a particular synergy with Johannesburg 2030, with the plans for Guateng to be the 'smart Province' (JDA Business Plan 2004, 35)*

Newtown's new proposal aims at it becoming the "Cultural Capital of Johannesburg". All large investments into the Cultural Precinct are aimed at encouraging people to visit Newtown to

experience the cultural richness of South Africa, Johannesburg specifically.

*'There is a need to establish Newtown as a national centre for professional workplace based training in the Creative Industries with a special emphasis on management training for the sector and the support and development of creative enterprises.*

*This must be done with a specific focus on achieving the economic empowerment of previously disadvantaged individuals.*

*It must be a "laboratory" for the identification of talent and for the transfer of the "craft" and management skills and knowledge necessary to ensure its sustainability in the market, a nationally important centre for work place based learning and training in the Creative Industries and an "Incubator" for creative enterprises' (The Greater Newtown Business Plan 2004).*

### **Technology:**

The Workers Library and Museum did not incorporate any technology into the existing building, except in a room that was only used by the administrative staff of the building.

It was, therefore, not made available to all users. There were no systems that allowed the users to get used to technology skills needed in today's society.

Technology is an essential part of children's education and needs to be accessible to everyone. Libraries and museums must keep up with the rest of the world and include technology to keep the users interested.

### **Opportunity to Further Yourself:**

The Workers Library provided information resources in the rights and regulations of workers. The library did not provide the resources for the users to learn new skills or allow an opportunity for the users to further themselves.

### **Continuously Changing:**

The Workers Museum and Library remained a static building in that the contents never changed. Once visitors had been and seen the museum wing, there was no need to return to the museum.

By continuously changing and bringing in fresh new films and ideas into 'Connections', it will create a constant flow of users and visitors to the centre to experience something new on a regular basis.

## 6. PRECEDENT STUDIES

### 6.1. The Vasconcelos Library:

**Location:** The library is positioned next to the Buenavista train station, an abandoned building in Mexico

**Designed by:** Mexican architects headed by Alberto Kalach and made up of Juan Palomar, Tonatiuh Martinez and Gustavo Lipkau.

The following points are summarised from Biblioteca Vasconcelos Library by Arquine & RM 2007.

*'In a public library there is room for all orientations of knowledge, for all aspects of thought, for all the daring of the imagination. There is room for the classics and the avant-garde. There is room for children and old people, for women and men. It is the house of all.'* (Arquine 2007: 45)

*'Not all of us have the same opportunities to access these reserves of experience information. Science, technology, art, political and social life is the privilege of a few.'* (Arquine 2007: 56)

The design forms a linear building running parallel to the railines. There are two focal points in the design, the central botanical garden space and the solidity of the slanted facades.

The architect created two solid blocks, which were emptied out and then perforated their surfaces. Vegetation was then incorporated into the design by letting the plants fill the space with time. The garden was used to soften the rigid volumes.

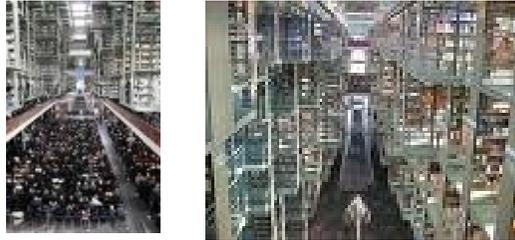
The library itself consists of the space contained in the interior, within the concrete and steel cage is an open space, 250 metres long and 30 metre high. It lets light through the slanted walls and roof, from which clusters of shelving, filled with books, are suspended.

*'The great bookshelf is an independent structure of steel and glass, suspended from the roof beam. It can be modified and expanded by modular sections in accordance with the needs of different areas of the library, and can be followed both vertically and horizontally.'* (Arquine 2007: 95).

Each room was designed according to how it is situated in relation to the great central space that forms the vertebra of the library. All rooms and pieces making up the library space are symmetrical.



6.9. Steel Bookshelf



6.10. Interior Space

The spacious reading rooms are situated on either side of the central spinal column in direct contact with the surrounding garden and equipped with blinds to control the entry of sunlight.

Lighting is ensured by a series of large northward-facing windows opened into the saw-toothed roof.

In addition to this main structure, there are three attached volumes integrated with the garden: one contains office space, a bookstore, and a third, to the north, an auditorium.

An auditorium seating 500 people is situated at the end point of the central axis.

### The Garden:

The idea was to change certain ideas and connotations about the traditional library through the incorporation of the gardens. Libraries have a tendency to restrict conversation and personal interaction. The garden therefore becomes a space suitable for both reflection and conversation.

The conceptual idea of the project is of 'creating an ark, a carrier of human knowledge, immersed in a lush botanical garden' (Arquine 2007: 48).

The Biblioteca Vasconcelos became a building and at the same time a botanical garden. This symbiosis between nature and construction is seen.

*'73% of the site is opened up for the botanical gardens. The garden seems to be everywhere, but is composed of two great taluses – worked on various levels – which frame and protect the library'.* (Arquine 2007: 67)

The garden functions as a large buffer against noise and other aggressions from the immediate surrounding context. Library users can wonder about freely in it.

The design, according to 'Biblioteca Vasconcelos' by Arquine in 2007, started from the combination of a library with a botanical garden from four basic perspectives:

- In the aggressive and contaminated urban context of Mexico City, the construction of public buildings should make the most of the opportunity to create new green spaces.
- Within the arid urban context in which the new library is to be

inserted; it should generate the civil and ecological renovation of an extensive area.

The library is in itself an attempt to combine the sum of human culture and knowledge; the botanical garden complements this idea by collecting a sampling of the flora of the country. Culture and nature, so often counterpoised, form a symbiosis in which users can encounter an ambience that reconciles the principal factors conditioning their existence.

The new cultural equipment offers citizens the opportunity of reading in direct contact with the garden, combining intellectual and sensory experience.

### How it Influenced my Design Proposal:

#### Comfort:

The Vasconcelos Library successfully includes nature into the design, and creates a more comfortable situation for the users.

#### Welcoming:

Through its design it creates an environment that welcomes and thereby influences the under privileged people.

#### Light:

The design successfully incorporates light into the building, allowing users to feel connected to nature and not inside a closed box.

## 6. PRECEDENT STUDIES

### 6.2. Glass Video Gallery:

**Location:** Groningen, Netherlands

**Designed by:** Bernard Tschumi, Mark Haukos, Robert Young

The following points are summarized from the articles relating to the Gallery investigated in 'Light Constructions' by Riley 2003.

The design brief was to design a special environment for viewing pop music videos, offering an opportunity to challenge the preconceived ideas about television viewing and privacy.

*'Was the video gallery to be a static and enclosed black box like the architectural type created for cinema, and extended living room with exterior advertising billboards and neon light, or a new type that brought what was previously a living room, bar lounge event into the street by reversing expectations.'* (Riley 2003:89).

The concept of envelopes was explored in the Glass Video Gallery, at the video and music festival in Holland.

Only a small budget was allocated to the project, therefore a very simple design was created.

The design is all about the movement of the body as it goes through the exhibition space.

The only material used in the construction of the Glass Video Gallery, was glass with panels held together by clips, including vertical and horizontal beams. This was the first real 'glass house', with the roof of the structure also being of glass.

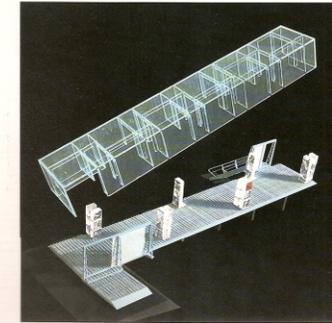
*'The appearance of permanence (buildings are solid; they are made of steel, concrete, bricks etc), is increasingly challenged by the immaterial representation of abstract systems.'* Riley 2003 88)

Monitors provide unstable facades, glass reflections create mirages and limitless space is suggested.

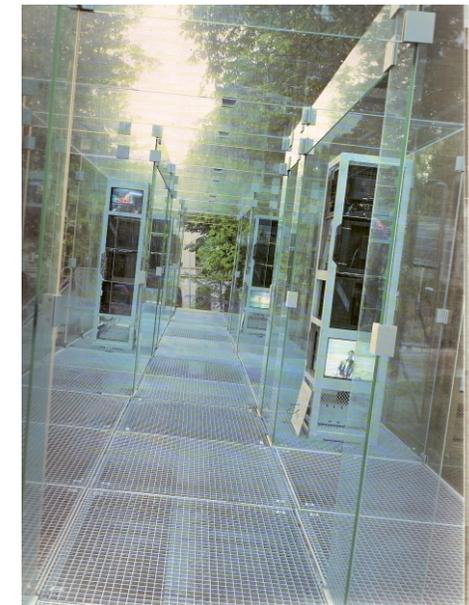
*'The visitor to the gallery is not allowed the anonymous subjectivity of peering out of a darkened space, as in a movie theatre, but is instead on view. In a transparent box, the spectator becomes the spectacle, and the feasibility of private life in a media-suffused culture is questioned.'* (Riley 2003: 88)

*'At night the architectural volume disappears altogether, supplanted by countless reflections and incorporated video screen images.'* (Riley 2003: 88)

The Glass Video Gallery and urban space also contain both video objects on display and objects for displaying.



6.1. Glazing Structure



6.2. Transparency

## 6. PRECEDENT STUDIES

### How it Influenced my Design Proposal:

#### Material:

Through the designers' material choices, in this case the use of glass, the difference between the outside and the inside of the structure is narrowed.

It is successful as it creates an environment that does not isolate the viewer, challenging the idea of video being watched in a 'black box' environment, It creates the effect of the 'viewer being viewed'.

#### Movement:

The idea of 'movement' being shown is through the movement of the body as one physically walks through the exhibition.

#### Altering :

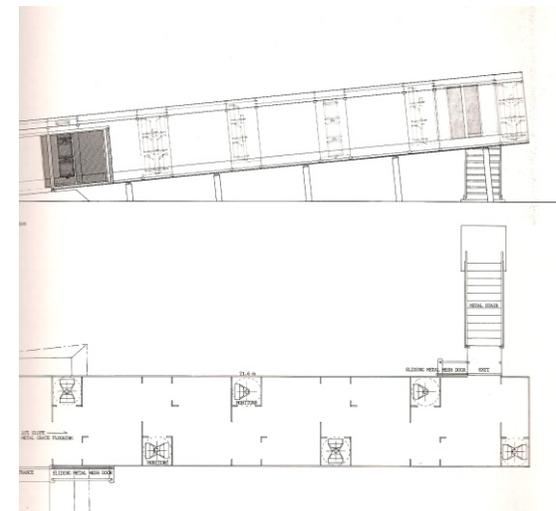
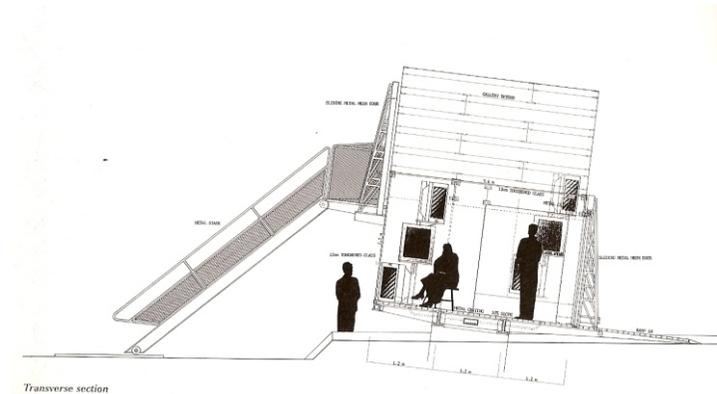
Through the structure changing from the day to the night, the structure is experienced differently.

#### Experience:

The structure is not designed for comfort but rather is designed for the experience in walking through the Glass Video Gallery.



6.3. Structure



## 6. PRECEDENT STUDIES

### 6.3. The Packer Collegiate

#### Institute:

**Location:** New York City

**Designed by:** Hardy, Holzman, Pfeiffer Associates

The points of importance to the design have been summarised from their website. [www.packercollegiate.com](http://www.packercollegiate.com)

The Packer Collegiate Institute was founded in 1845 and is one of the oldest educational institutions in New York City.

Today 942 students attend the school in pre-kindergarten through 12th grade.

Packer has had to expand its campus over the last 162 years to accommodate the number of students, while at the same time maintaining many of their traditional spaces.

*'The original Packer building was constructed of "brick with brownstone dressings" and a slate roof. It contained a 112 feet tower fitted with a revolving dome as well as a Chapel that can seat up to 700 people, used as an assembly space, with its Tiffany stained-glass windows and 1912 organ.'* ([www.packercollegiate.com](http://www.packercollegiate.com))

In 2003, a building project was designed to provide the needed space.

*'The program moves the lower and upper schools into the main building with the*

*most impressive element of the project being the new middle school. This division of the school is now creatively housed within the former St. Ann's Episcopal Church, built in 1869. This blending of new and old architecture provides a unique Middle School facility'.* ([www.packercollegiate.com](http://www.packercollegiate.com))

The architects took into consideration, the school's academic needs, as well as the need to retain the church's architectural character.

The Middle School is situated within the new structure that is independent of the original church building.

A freestanding three-story structure of glass and steel is positioned within the church's central aisle. This addition allows for 18 classrooms, three common rooms, improved facilities for the arts, laptop depots, expanded dining spaces, and seminar rooms.

The addition consists of a glazed circulation space that connects it to the existing school buildings. This space provides informal spaces for socialising and are perfect gathering places for special events.

*'Its transparent nature allows students and faculty to experience elements of the original architecture as they walk through*

*the new facility.'* ([www.packercollegiate.com](http://www.packercollegiate.com))



6.11. Middle School Classrooms



6.12. Glazed Circulation Space

## 6. PRECEDENT STUDIES



6.13. Assembly Hall



6.14. Free-standing Structure



The clerestory area of the church has been altered to form the Middle School English classrooms spaces. These classrooms are under the Victorian trusswork of the clerestory, and consist of movable dividers that occupy the fourth floor of the new building,

### How it Influences my Design Proposal:

#### Existing and Contemporary

The precedent successfully combines existing buildings with contemporary architecture by allowing it to be visible and to be seen as an addition.

The glazed circulation spaces is successful in that it connects the different parts of the buildings, allowing one to see the combination of the old and the new.

#### Height:

In the centre the additions are free standing, in that they do not touch the existing building, other than the floor. This is a successful way in which to treat a Heritage Building.

The utilization of the building's height is used successfully by creating additional spaces for learning.

#### Technology:

The school introduces technology into an existing building, allowing it to be seen as a benefit to students today



## 6. PRECEDENT STUDIES

### 6.4. The Constitutional Court

**Location:** Johannesburg, South Africa

**Designed by:** Andrew Makin, Janina Masojada and Paul Wygers

#### The Library:

The library makes up the fourth component of the Court complex. The four individualized areas are the Foyer and Chamber, the Administration Wing, the Judges chambers, and the library. It is situated along side the Solitary Lane pedestrian route. It is positioned at the bottom of the slope of the site. *'It was designed as the tallest form on the side Ridge so that it could be a glowing beacon.'* (Viljoen 2006: 78)

On either side of the building are light perpendicular wings, with pitched clay tiled roofs reminiscent of the colonial architecture of the Union Buildings.

The ground floor of the library is accessible to the public and open up to the public spaces.

The library was designed with its initial inspiration being a singular-space agricultural building, such as tobacco drying sheds.

*'Consistent indirect natural light permeates the interior along the northern and southern facades. The horizontal recast concrete window panels accentuate the*

*idea of the prefabricated shed, a solid building from the outside allowing horizontal views of the landscape from the inside.'* (Viljoen, 2006: 78)

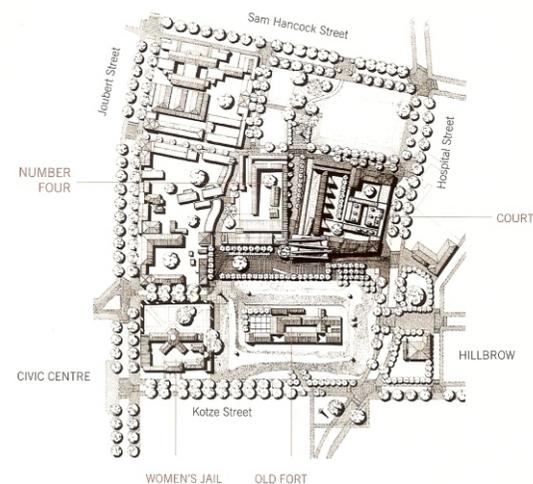
The open space of the structure allowed many space layouts to be explored. The library leads from one area of research to another in a continuous route through the space, without the need to climb stairs.

The entrance to the library is through the Exhibition Gallery. The Library is separated from the Administration Wing by a courtyard that enhances the idea that the Courts 'building' is treated as part of a greater whole.

The lightweight connections between the building parts are achieved by steel and glass bridges. This same type of separation is seen inside the library with the ramped book stacks and the Welsh tower being separated by timber and steel landings at each level.

The library box wraps around the internal garden that defines the two sides of the private space.

The library panels are made of precast panels that are made off site and then fixed onto a steel structure. *'The library façade is articulated along its length with the introduction of alternative materials (timber bay windows) and attached forms (the cylindrical stairwells). These elements and*



*the play of light across walls make the façade a perforated skin over the inner activity.’ (Viljoen 2006: 82).*

Translucent sheeted cylinders attach to the Library face. These function as stair towers and a book hoist. They stand like agricultural forms in the green landscape of the judge’s garden.

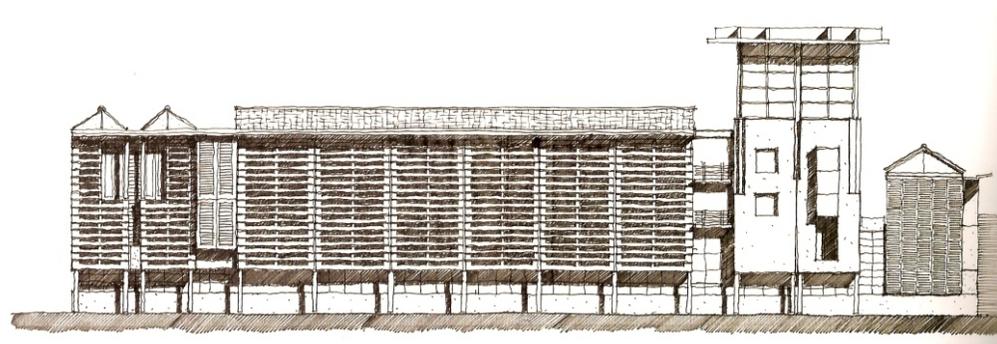
The Welsh Tower houses the Rex Welsh Collection of books on the upper levels of the structure. This special collection is found on the upper part of the tower that is accessed by stairs.

*‘The materials used in the construction of the Library are consistent with the materials throughout the Court building. Reinforced and precast concrete surfaces play a primary role in the natural ventilation system. Slate, timber and glass finish the concrete frame.’ (Viljoen 2006:94).*

### Transparency:

*‘Transparency is a euphemism. It shouldn’t mean simply visual transparency. Architecturally speaking, it would much more accurately be described as accessibility where appropriate, public where appropriate. Contained where appropriate, open where appropriate’.* (Viljoen 2006: 134) **The Great African Steps:**

The steps are situated between the solid stone wall of Number Four Prison on the right hand side and on the left the west



elevation of the Exhibition Gallery of the new Court building.

These two walls face each other. *‘One wall is massive and impenetrable, except for the tiny ventilation openings high above the internal floor level. The new façade is lightweight, transparent, layered and covered with sunscreen panels that are illustrations of life stories as told by local artists.’* (Viljoen 2006: 165)

### Tower:

The architects wanted to create a tower on Constitutional Hill that would be a beacon of light without being monumental and that would join the chorus of towers on Johannesburg’s distinctive skyline.

**Collage:**

One reads the building as a collage. New and old become one: an impenetrable solid surface and transparent surfaces layered over one another, binding past and present.

*'We wanted to design a place in which all people would feel welcome, where South Africans from urban and rural area, the young and old, could gather without inhibition, and have a connection, a sense of belonging and identity.'* (Viljoen 2006: 45)

**How it Influenced my Design Proposal:  
Existing and Contemporary:**

The Constitutional Court successfully creates a new function on an already existing and developed site.

It allows for the site to become a place of hope and positive thought on a site that is associated with suffering and misery.

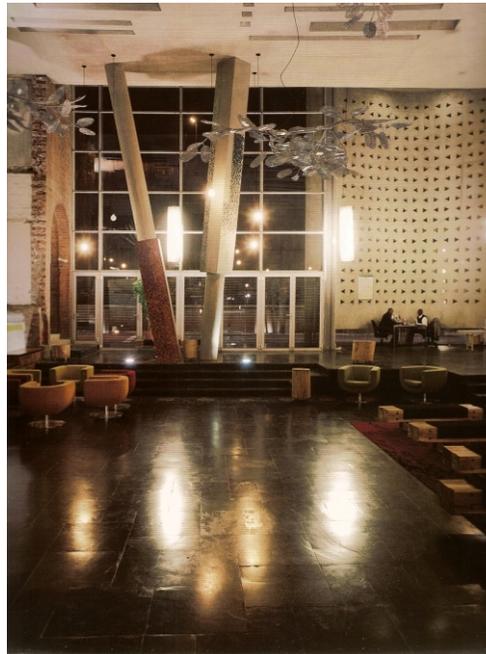
The design reacts and is developed according to South African ideas and beliefs that allow the building to be a unique court of law.

The combination of old and new is successful as they are merged together to form a collage effect.

**Materials:**

The use of precast concrete shuttering system that creates a 'light architecture' is successful in the reaction to the

Johannesburg climate as well as creating an honest, open feel in the Constitutional Hill.



## 6. PRECEDENT STUDIES

### 6.5. The Apartheid Museum:

**Location:** Johannesburg, South Africa

**Designed by:** Gapp Architects, Mashabane Rose Architects, Britz Roodt Vernootskap, Linda Mvusi Architects, built in 2003.

The following points are summarised from the Apartheid Museum's main website ([www.apartheidmuseum.co.za](http://www.apartheidmuseum.co.za)) and from personal analysis in August 2007.

The Apartheid Museum is the only museum dealing with 20<sup>th</sup> Century South Africa, and the rise and fall of apartheid.

'The museum is a beacon of hope showing the world how South Africa is coming to terms with its oppressive past and working towards a future that all South Africans can call their own.'  
([www.apartheidmuseum.org](http://www.apartheidmuseum.org))

The museum is located on a seven hectare site adjacent to the Gold Reef City Casino.

The museum is constructed out of contours of stone, rusted and galvanized steel, red brick, wood, glass and concrete, which capture the history of Apartheid through the structure conveying emotion and mood.

"The synergy between the natural element and the building finish of plaster, concrete, red brick, rusted and galvanized steel, creates a harmonious relationship between

the structure and the environment,"  
(Website)

"This is a minimalist building reflecting the fact that apartheid buildings were born of incarceration, We wanted to reflect the harshness, crudity and horror of apartheid. We wanted something so different because apartheid was so different." (Website)

#### **The Pillars of the Constitution:**

The seven fundamental values of South Africa's new constitution are represented by the pillars in the first courtyard; democracy, equality, reconciliation, diversity, responsibility, respect and freedom.

The concrete theme continues from outside through into the inside of the building. This is evident in the smooth grey walls and concrete floors, with the minimal windows.



6.4. Interior Courtyard



6.5. Entrance



6.6. Media Exhibition

## 6. PRECEDENT STUDIES



6.7. *External Pathway*



6.8. *Audio Visual*



### **The Exhibits:**

The exhibition rooms consist of tall halls, circular silo-type rooms, smaller low-roofed rooms and two windowless prison cells. The exhibitions contain the film footage, photographs, text panels and artifacts that illustrate the events and human stories that were a part of the Apartheid years.

22 individual exhibition areas take the visitor through this dramatic, emotional journey through the museum.

Visitors are led through room after room in a zigzag of shapes, some with tall roofs, some dark and gloomy, some looking through to other images behind bars or cages.

The exhibition rooms consist of double volume ceilings, concrete and red brick walls and grey concrete floors, large blown up photographs, metal cages and numerous monitors recording continuous replays of apartheid scenes

### **How it Influenced my Design:**

#### **Exhibition Media:**

The precedent is successful in the introduction of television as an exhibition media, influencing the design of the museum on the site.

The Apartheid Museum is successful in the way it incorporated all digital media into the exhibition. It introduces the different ways of viewing film. It aided in what technology is needed, as well as how to implement it.

#### **Showing the History:**

The Apartheid Museum is successful due to it not hiding the horrors of the past, but letting the viewers decide how they feel about the history.

#### **Journey:**

The exhibition rooms are not separated but rather the visitor is led on a journey through the museum.

#### **Materials:**

The Apartheid Museum material choices allow 'emotions' to be placed onto the building .

## 6. PRECEDENT STUDIES

### 6.6. The Canova Plaster Cast Gallery

**Location:** Passagno, Treviso

**Designed by:** Carlo Scarpa

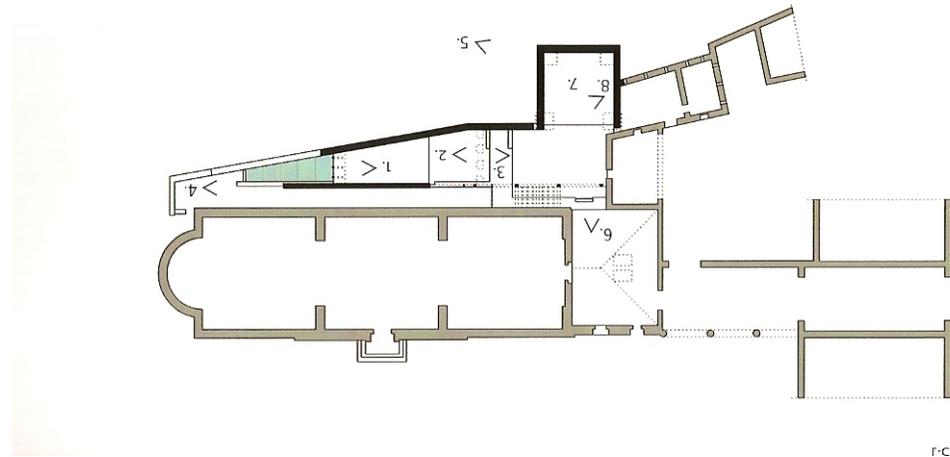
Carlo Scarpa accumulated a vast store of knowledge – of materials, processes and images. This knowledge allowed him to test the extent of traditional methods. He combined materials and methods that would not be used by traditional craftsmen. Scarpa allowed them to experiment.

Scarpa added colour and framed surfaces with a metal profile he chose materials for their brightness and colouristic character. Through the use of their minimal chromatic range Scarpa allowed spaces to unify that would in most cases be broken apart.

Scarpa's mingling of what seemed to be incompatible materials that he tested to the brink of their properties.

*'Scarpa considered a window to be a cut out on a wall, he found the glazing need not simply fit the opening, but may be applied like dressing to a wound, as subtle as gauze on the skin, or an external to a façade as sunglasses are to the face.'* (Palladio 2006: 25).

When he opened by the southern flank of the extant museum building at Castekvecchio, he left every layer and its physical composition in evidence,



separating the steel frame that was to take place of its former walls, and peeling back the roof tiles.

#### **The Canova plaster cast gallery, Possagno, Treviso, 1955-57**

The sculptor Antonio Canova a work of plaster and terracotta were moved between 1820 and 1830 to the abbot Sartori Canova. The abbot was built by the sculptors step brother to house the artworks, after his death.

In 1955 the room was designed by Francesco Lazzari was painted grey and was too small to house all the sculptors works.

The building was commissioned to Carlo Scarpa to enlarge the building, with the main purpose being to move the enormous model of Theseus (fighting the centaur) from the Accademia to the Possagno museum.

Scarpa designed a building that was situated on the western side of the existing building. The area was elongated and sloped.

## 6. PRECEDENT STUDIES

*'He placed a smaller building alongside the prominent mass of the old plaster cast gallery, whose proportions were delicately inserted in the dense urban fabric.'*  
(Palladio, 2006: 114)

A gradual incline is seen between the two adjacent buildings. A high square room is positioned next to a terraced gallery. This caused the shape of the site to narrow that ended with an open aired corridor that leads onto a small garden.

The architect made new suggestions of the selection and arrangement of the models that would compliment the new architecture.

*'The resulting space with its height variations caused plastic effects that would have been disrupted by a single large statue.'* (Palladio, 2006: 114)

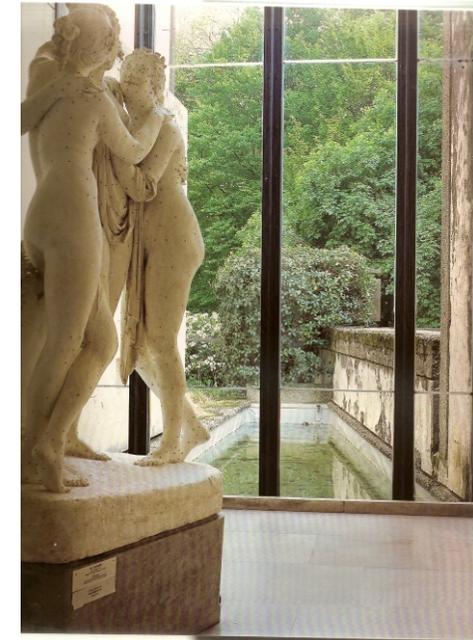
Carlo Scarpa starting point of the design was to gain a close and appreciative understanding of the works to be exhibited to benefit the layout. He contrasted the unique nature of each model with the fragility of the material of the material in which they were made.

Carlo Scarpa introduced natural light into the gallery to emphasize the 'amorphous' nature of the sculptures. Through the introduction of openings he was able to bring in the blue sky into the building.



Three vertical windows emphasize the lowering of the ceiling in the gallery. The light penetrated the space intensified the whiteness of one of the walls. *'Scarpa's audacious choice of white went against every idea of chromatic contrast, creating an absolute sense of special continuity.'* (Palladio 2006: 114).

The new extension is very different to the original museum. The gallery space shows the close link between the architecture and the works of art. The light variations in the space are the only aspect that interrupts them.



The entrance to the Istituto Universitario di Architettura di Venezia, Venice, 1976 -78

The work is distinguished by a big sloping canopy, suspended between thick leaning walls lined on the inside with terracotta like terrace at the Villa Palazzetto, and by the original recovery of an ancient doorway found during the restoration of the nearby Tolentini convent.

The new extension is very different to the original museum. The gallery space shows the close link between the architecture and the works of art. The light variations in the space are the only aspect that interrupts them.

**The entrance to the Istituto Universitario di Architettura di Venezia, Venice, 1976 -78**

The work is distinguished by a big sloping canopy, suspended between thick leaning walls lined on the inside with terracotta like terraces at the Villa Palazzetto, and by the original recovery of an ancient doorway found during the restoration of the nearby Tolentini convent.

**How it Influences my Design Proposal:  
Existing and Contemporary:**

Carlo Scarpa successfully creates additional space to an already existing building.

Through the use of materials and the detailed ways that they are introduced into the existing building the new can be told apart from the existing.

**Light:**

The introduction of light sources into the additional spaces creates a gallery area that is connected to nature.

His fearless approach of introducing light colours into the space allowed the space to seem to be more open.



## 6. PRECEDENT STUDIES

### 6.7. Supershed and Pods

**Location:** Alabama's Hale County.

**Designed by:** Samuel Mockbee and his students from the Auburn University

*'Through the collection and reuse of a variety of materials such as salvaged lumber and bricks, discarded tyres, hay and waste cardboard bales, concrete rubble, coloured bottles, and old license plates creating inexpensive buildings making it a model of sustainable architecture'.* (Mockbee )

Mockbee describes the style as "contemporary modernism grounded in Southern culture."

The second year males are housed in barn like supershed shelters and in the pods. .

#### **The Supershed:**

The super shed was meant to 'keep the rain off' something of value and allowed us to be very free and sculptural with the architecture underneath it. Former railroad trestle was recovered and used as support (Dean 2002: 45).

Each cottage fits into nine bays between timber columns allowing each pod and the shed to form a whole. The nine living units house eighteen students.

Each pod is uniform in size and each arranged in two parallel rows, facing a

public area, allowing them the soldered-together look of a street wall with varied facades.

#### **The Pods:**

The cottages, beneath the Supershed's shelter, consists of a mixture of materials from old street signs, bits of steel plate, printing plates from the local newspaper to surplus license plates.

Mockbee says it is 'continually collaging together ideas and experiences.'

The result is a quirky vernacular aesthetic.

#### **Toilets and Showers:**

The supershed slopes towards three buildings- a compost toilet and two showers, one a closed shower the other an open shower at the top

*'These buildings are a medley of shapes and materials: the toilet, which perches on a concrete-block base containing the composting mechanism, is covered in old license plates, silver side out and arranged like shingles, and is topped by a long, shallow gable. The closed shower, a T-shaped metal structure, stands on a round brick base; the topless shower is a brick and glass-shard cylinder.'* (Mockbee)



6.15. Pods Under Supershed



Investigated to see how different aspects are connected under a central shelter.

**How it Influences my Design Proposal:**

**Materials:**

The design successfully creates a contemporary design using common materials. It shows how the recycling of materials into a new design can create something that is beneficial to others.

**Connected:**

The Supershed and Pods are successful in showing how separated elements in a design can be connected to form a whole. The design does it successfully through the creation of a linking element, in this case the Supershed.



6.16. Pods



## 6. PRECEDENT STUDIES

### 6.8. The Knowledge Base

**Location:** Johannesburg, South Africa

The Knowledge Base is centrally located between the Bryanpark Shopping Centre and Bryandale Primary School, on the corner of the busy intersection of Cumberland Avenue and Grosvenor Road, Bryanston.

The facility consists of a conference facility, including catering facilities, a computer room, technology laboratory, and an art studio.

The centre is successful due to its optimal utilization. It is used by the school children during the mornings, the students using the ICDL Computer Training and ICDI examinations in the afternoons and the teaching of basic computer skills to adults in the evenings and on Saturdays.

The facility is used to hold church services on Sundays, as well as the facility being rented out to business corporations for seminars during the week. Bryandale Primary School has the rights to the centre from 8am to 1pm during the weekdays.

The centre also has a large computer room that is used by Bryandale Primary School. The school increased in size to such a large extent that its facilities were unable to cope with the number of learners and the needed computers.

Therefore the classes are split up with some pupils using the centres computers while others use the existing schools facilities.

The computers are loaded with Computers for Kids, a computer programme that aids teachers in getting pupils excited about learning all subjects from maths to art class.

The pupils are literate in Microsoft Word, PowerPoint, Excel, internet and e-mail by the time they reach Grade 7.

The building is constructed out of corrugated roofing with red brick and brightly coloured doors and gutters, being clearly visible and standing out from all angles.

The conference room is a rounded structure consisting of a steel structure with polycarbonate wall sheeting in IBR profile.

The building is secure with burglar bars being incorporated into the design of the building along with alarms and panic buttons installed at all staff members workstations.

The slope outside the facility, leading up to the entrance, is a steep slope that doubles up as seating for an outdoor auditorium space.

### 6.7. Claydon Hefley Jones Mason Advertising Agency

**Location:** London

**Designed by:** Kathryn Findlay

Claydon, Heeley Jones Mason is one of the leading advertising agencies in London. It depends on its wit and creativity to stand out from the rest, which was the design challenge of the interior of the project.

*'Unlike most designs that are created according to the work purpose, this project questioned how to link the diverse spaces, thereby 'linking the feeling rather than the function' (Coates 2004:166).*

The design consists of countertops that flow through and transform their function as they travel through these spaces. They change as they progress from one area to the next within the design, allowing the people to freely wonder from area to area.

*'The work environment that needed to be created was for the creative people working in the office that needed to feel 'liberated rather than stifled by a corporate environment.' (Coates 2004:167).*

*'Findlay wanted the project to have a sense of flow that would override the traditional hierarchal uses of scale and material.' (Coates 2004:167). Therefore the*

spaces that were designed are organized and comprehensible but at the same time provide a stimulus to creative thought.

Desks were designed to work together that were organized yet not regimented and that can grow and shrink, by encouraging change in the design within a grid.

The countertops are silver, reflecting the colour of the Thames River seen outside the window. Orange is incorporated into the countertop, as it is the corporate colour of the agency.

The materials used in the construction of the countertops was PVC, mild steel, rubber and laminated MDF to construct the playful feel.

#### How it Influenced my Design Proposal:

##### Material:

The materials that are used for the construction of the countertops and chairs are strong enough and maintain an elegant appearance.

##### Joining of rooms together:

The countertops link different functions throughout the building together, creating a successful united feel for the office environments.

##### Creativity:

The countertop and chair successfully allow a creative atmosphere to be felt in an

office environment which is usually associated with feeling of more rigidity.



6.18. Flowing Countertop



## 7. DESIGN DEVELOPMENT

### 7.1. Design Proposal

'Connection' is a new interpretation of the safe study environments that the government is implementing throughout South Africa.

'Connection' moves away from being a study environment where learners complete their homework using the text books or notes that are given to them, by their school, to complete the needed requirements.

'Connection' is rather an educational facility that enables learners to further themselves, independently, through a media that is easily related to, as well as being accessible on varying academic levels.

This educational facility allows the learners the opportunity to research, investigate and analyse topics, and their related topics and themes, independently. This empowers the learners to reach the goals they set for themselves, allowing them an opportunity to reach further than just the requirements to be met by the schools.

'Connection' consists of educational components, namely:

- Public Visual Information Centre
- Educational Cinema
- Multifunctional Exhibition area
- Museum

'Connection' will optimize its utilisation through accommodating different groups using its facilities through day and night time activities.

#### Daytime Use:

Day outings:

The educational facility is designed to accommodate day-outings, where the school children are divided into groups to visit all the surrounding educational facilities within the Cultural Precinct.

The group outings to this area, will benefit the surrounding educational facilities by allowing Newtown to become a day outing destination, visiting all the educational facilities that are in the Precinct, rather than a mere stopover on the way to Gold Reef City and other activities within Johannesburg.

'Connection' is designed for up to a hundred learners to use the facility at a time, 50 involved in group, individual and interacting activates throughout the facility at the same time and 50 in the large auditorium space. The allows the rest of the group to be divided up to visit Sci Bono, The Youth Computer Centre, Museum Africa, Market Theatre and the Dance Workshop.

'Connection' is designed to facilitate the needs of learners in the surrounding schools, during the day, as a study aid.

The school children are welcomed in the gathering area outside, weather depending, and are lead through the facility to the auditorium for a group viewing of the facility's demonstration video.

The librarian, who would have already met with the teachers to discuss the required outcomes and learning topics, will show the class the benefits of educational films and how to benefit the most from them through a demonstration film.

The class will then be split up into varying groups, to study related topics with assistance of staff members.

The children will be required to present their findings back at school.

#### Afternoon Use:

The afternoons accommodate the learners, using the facility independently after school. The design also accommodates the needs of the students, studying in nearby colleges and universities.

Adults can further themselves by making use of the films based on their required learning topics and the internet facilities in the interactive area. The adult group can also benefit from the facility through basic skills being taught by film, which can be implemented in 'adult classes' in the auditorium space.



separated from the rest of the educational faculty, allowing the learners in the educational facility to be protected.

The Museum and the Multifunctional Exhibition Space allow the facility to have entertainment aspects that form part of the educational facility. These two components draw in interested viewers into the site, and through the continuous change in their film material, it allows for a steady flow of viewers into the facility.

'Connection' consists of Commercial components, namely:

- Café and Bar
- 'Art and Culture Cinema'

The commercial aspect of the facility, the café and bar and the 'Art and Culture Cinema' draw in additional groups of viewers, allowing the site to be vibrant and full of activities. The continuous changing films in the 'Art and Culture cinema' will also allow for a steady flow of visitors to the site.

## 7. DESIGN DEVELOPMENT

### 7.2. Access to the Site:

#### 7.2.1. Linking the Two Open Public Areas:

The proposed design of the public facility completes the street grid to enable continuity of movement between the Mary Fitzgerald Square and Newtown Park, the two open public facilities within Newtown.

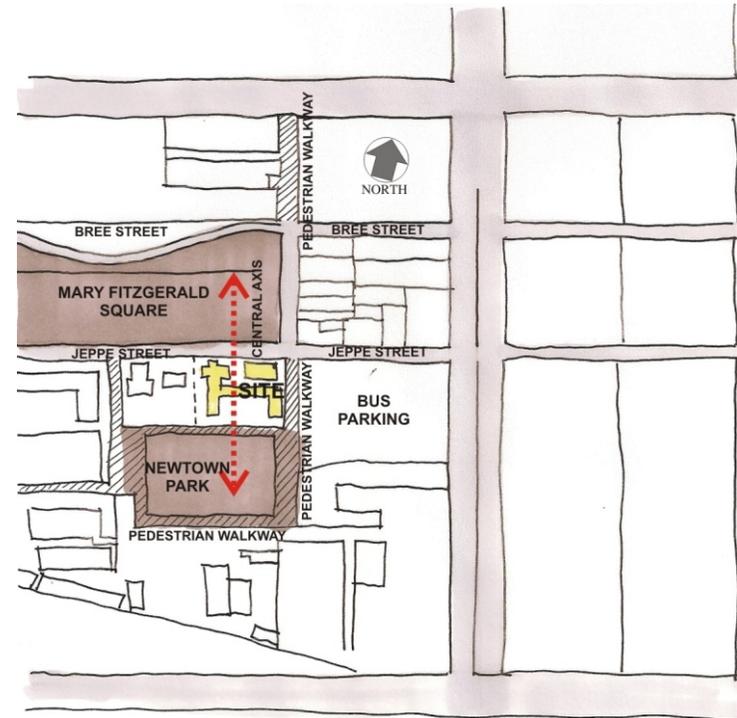
Connecting of the different areas within the site, and the movement of the users physically experiencing these areas, is made possible through a central axis running directly through the site, from the Mary Fitzgerald Square directly through to Newtown Park.

The two artisan houses on the northern side are separated by an ideal entrance way. The gap between the houses is large enough for it to be the main entrance and allows a central axis route thorough to the hostel at the back where the entrance from the quieter side is found.

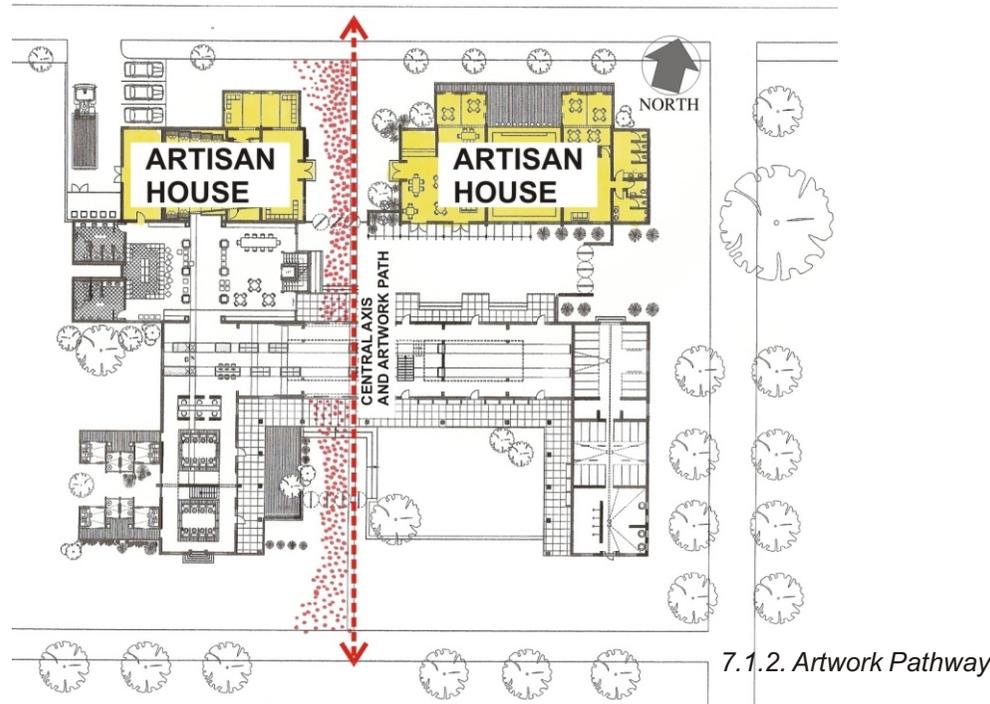
The connectivity of the pathway is emphasized in the design by allowing this central axis to be clear of any obstacles, allowing visitors to see directly through the site from one side to the other.

The openness of this axis allows the public facility to look accessible and open to all.

At night the axis is well lit, so the artistic pathways will still be visible and allow users to see how one enters the facility.



7.1.1. Linkage between the Two Open Facilities



### 7.2.2. Artwork in the Pathway:

As the site is situated within the heart of the Newtown Cultural Precinct, it is therefore situated within an art and culturally dominated area.

The art found within Newtown, and which defines Newtown, that surrounds the two public facilities, Mary Fitzgerald Square and the Newtown Park, can be seen in a variety of materials ranging from wood to bronze to scrap metal and smaller detailing of mosaic tiling.

The design proposal introduces the art and culture of this area, into the visual information centre, through the inclusion of mosaic artwork in the central pathway running through the site.

The mosaic tiling will be created by local mosaic artists in the Newtown area. The art of Newtown is carried through the mosaic tiling, from the outside of the site into the interior of the site, through the introduction of the vibrant colours and the variety of textures found within Newtown.

At either end the mosaic tiling spreads out, drawing people into the site with this expanded, unordered artwork.

The mosaic pathway captures passerby's attention as they walk over the 'advertisement' for the site, without blocking the pedestrian flow along the busy routes.

### 7.2.3. The Entrances:

The entrances gates need to draw people's attention to the site and direct them to where they can enter into the site.

There are three entrances into the site. Each entrance is opened at different times during the day and night to allow for the safety of the users of the facility.

The educational facility entrance is open during the day.

The main entrance is open during the day and the evenings

The exhibition entrance is open during the daytime.

The gates are tall, allowing them to be clearly visible, to draw people's attention towards the entrances.

When the gates are open they do not block the view of the interior site or block the view through the open central pathway. People passing by are able to see all activities and movement within the site.

## 7. DESIGN DEVELOPMENT

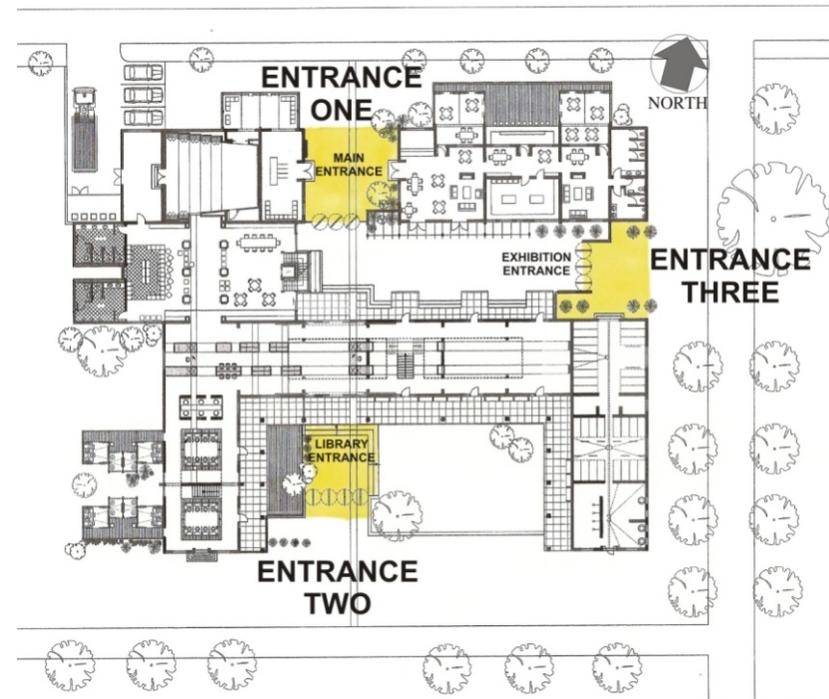
All entrances are marked by large rotating steel light boxes that define the entrances to the site.

The gates are made out of polycarbonate, as this is the material found in the additions to the existing building and needs to be carried through to the entrance, redefining that they are a new addition.

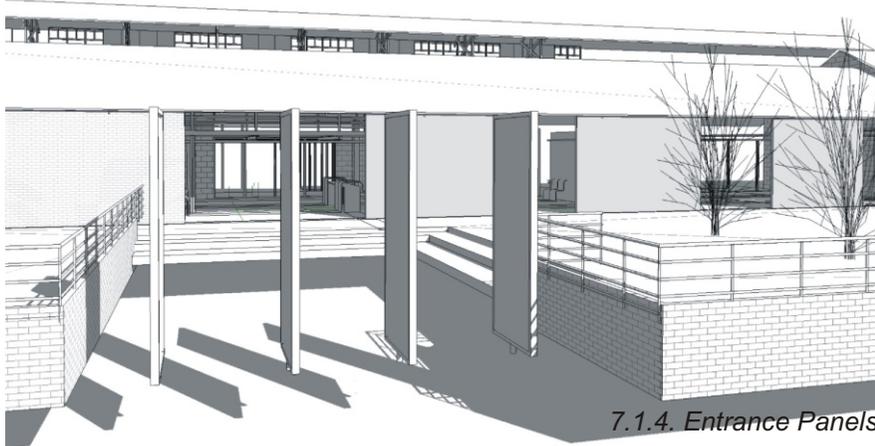
The tall boxes on steel metal tubing rotate to open and close and can be locked to the floor to secure the site at night.

Compact fluorescent lighting is installed into the polycarbonate light boxes with steel framing for the structure. At night the polycarbonate entrance panels glow.

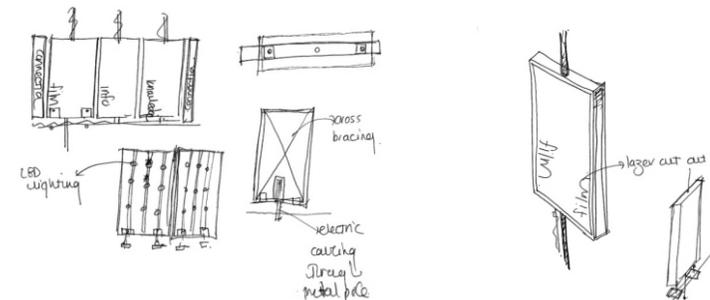
Security guards are positioned at the open gates of the facility to ensure learners protection.



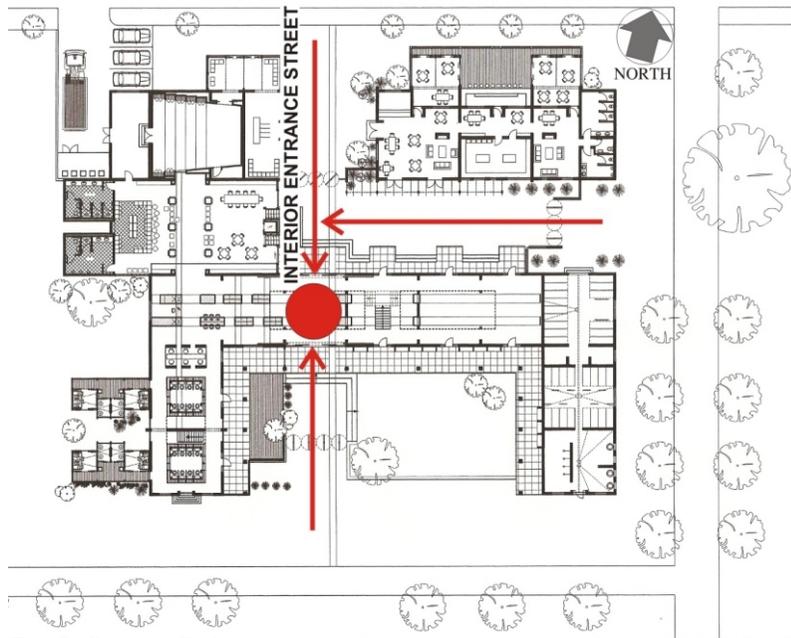
7.1.3. Plan of Three Entrances



7.1.4. Entrance Panels



7.1.5. Concept Sketches of Rotating Panels



7.1.6. Central Point

**7.2.4. Central Point within the Site:**

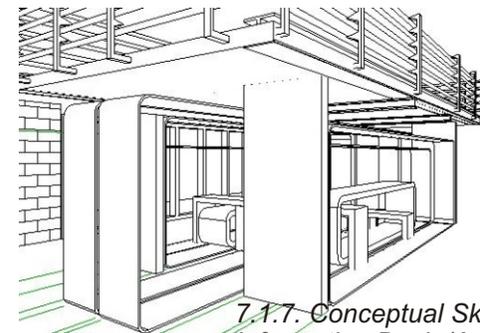
The interior entrance street is the interface between the city and the Public Visual Information Centre.

It is where the visitors come together whether they enter from the northern entrance, the southern pedestrian entrance, or the entrance to the east of the site.

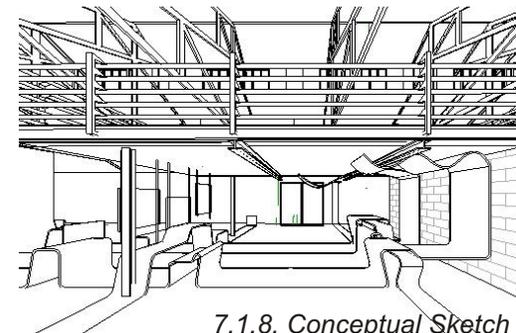
The main interior pathway, which runs perpendicular to the longitudinal axis of the building, leads all visitors to the central point.

The information station acts as a security measure with all users to the education facility having to pass through. The information desk is located at the intersecting points of the pathway with the longitudinal building.

Large frameless, toughened glass sliding doors, which allow the interior space to be linked seamlessly to the outside, open up into the existing Workers Hostel building.



7.1.7. Conceptual Sketch of Information Desk (August '07).



7.1.8. Conceptual Sketch of Information Desk (September '07).

## 7. DESIGN DEVELOPMENT

### 7.3. Education Component

The design of the educational facility has been influenced by different aspects, allowing it to function as a 'new interpretation' of a public education facility.

#### Formal and Informal:

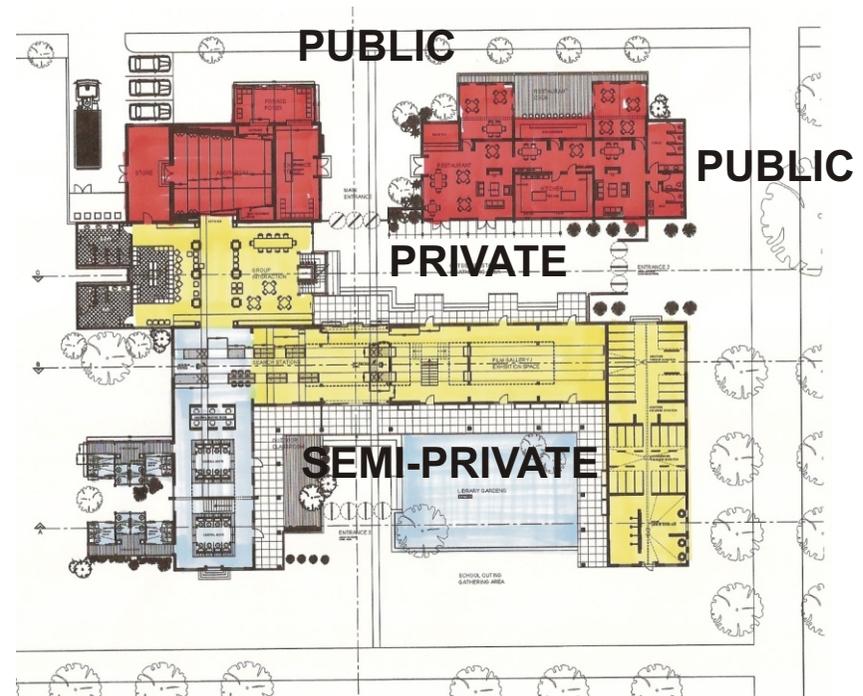
The educational facility is divided up into the more 'formal' and 'informal' spaces.

These formal and informal areas are positioned to relate to the building's surroundings, as can be seen in the intimacy gradient that is evident within the site.

The more formal area is positioned on the quieter side of the site, as it allows for the learners to experience more privacy and a calmer learning environment with less activities being a distraction.

The more informal areas are situated near the busier side of the site and are designed to function within these areas. This is made possible through the incorporation of acoustic design or allowing the area to be an informal group study area, encouraging discussions and interaction with other users.

The Outcomes Based Education System that is the country's national curriculum, emphasize, in the teachers manual, that learners need to learn the skills of :



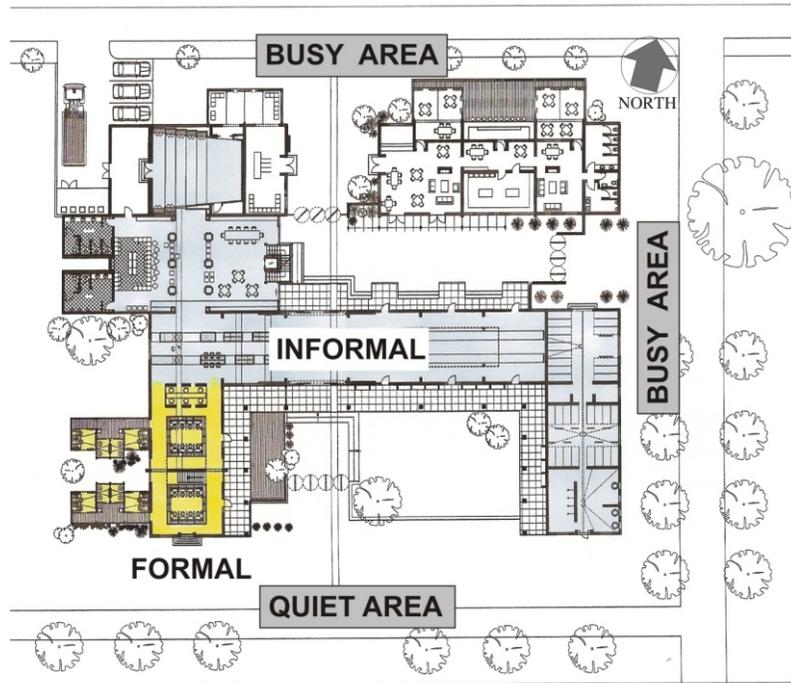
7.19. Plan of Intimacy Gradient

- *'Working effectively with others as members of a team, group, organization and community.'*
- *'Organizing and managing oneself and one's activities responsibly and effectively.'*
- *'Collecting, analyzing, organizing and critically evaluating information.'* (Miller 2001:17)

For the learners to acquire these skills, while learning in the educational facility, as well as in their schools, these points need to be interpreted into the design.

This has been done through the design of spaces for group viewing, group discussions and individual viewing and individual study areas.

## 7. DESIGN DEVELOPMENT



7.20. Plan of Formal and Informal Areas

### 7.3.1. The Formal Areas:

The formal side is divided up into individual and group viewing stations. The design of these spaces, allows viewers to learn in environments that are not distracting, through the introduction of sound systems that prevents sound from interfering with other learners, and in more enclosed stations.

The formal stations do not encourage discussion as much as the open areas within the facility, as viewers experience the films individually.

The more formal areas of the educational facility are shown in the design of symmetrical, clean lines that are free of clutter allowing the flow through the area to operate in an orderly manner. It is not as

flexible in that, the furniture cannot be rearranged to clutter the space.

The formal spaces within the educational facility are:

- the group viewing station in the additional stations
- the individual viewing stations

### 7.3.2. The Informal Areas:

The more informal areas are the open group discussion areas, where students are able to discuss learning in a more relaxed environment.

These informal areas are open, creating busy, vibrant spaces that are flexible and can be used for a variety of functions.

The informal spaces within the educational facility are:

- the group interactive area
- the reading areas/ classrooms
- outdoor classrooms
- the museum
- the multi-functional exhibition area

## 7. DESIGN DEVELOPMENT

### 7.3.3. Group Interactive Area

The group interactive area acts as the more informal area of the educational facility.

This space is divided up between different needed functions of the area i.e. learning area, locker room, toilets and foyer.

The 'connecting' building forms part of the education facility. The building becomes the physical connection between the two buildings on the site.

This building can clearly be seen as an addition through the introduction of the contrasting materials of a steel structure with polycarbonate walling and a concrete roof.

This area is designed to encourage group discussions, with the table layouts being able to be adjusted by the joining and pulling apart of the tables.

Two long countertops, made up of individual tables, ranging in height to accommodate all users, are joined together and run through the space.

These countertops are all fitted with electrical plug points for the use of laptops in the facility, encouraging users to work in this informal learning area. The entire site is a Wi-Fi area.

A few computers belonging to the facility are positioned along this countertop allowing users to access the internet.

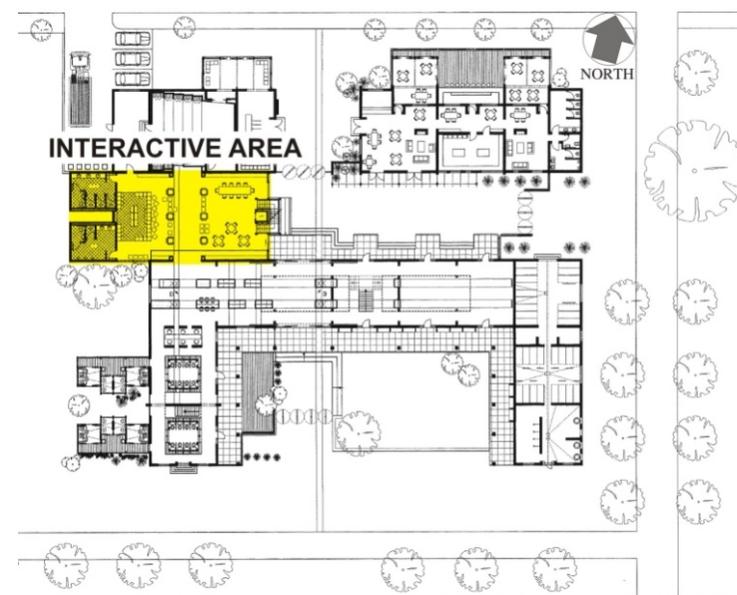
Bookcases are found containing the written summaries of the topics investigated in the films. These written documents can be read within this communal space at the provided tables, or on the stairs that double as seating. These books can be photocopied at the librarian station.

The central space of this additional connecting building doubles as a foyer area for the learners going into the auditorium. This area is adjustable with moveable ottomans allowing it to be a waiting area.

Suspended televisions showing a range of available films are accompanied by sound domes, in the foyer area, allowing the space to be a more relaxed area.

Lockers are available for the users of the facility, preventing the learners from having to carry their school bags around the facility. These lockers are made of timber with PG Bison laminates in bright colours with a metal grid backing and doors, allowing people to see through the lockers and not blocking the space. The librarian has the spare set of keys.

The toilets are situated within this communal area as they are easily accessed from all areas of the educational



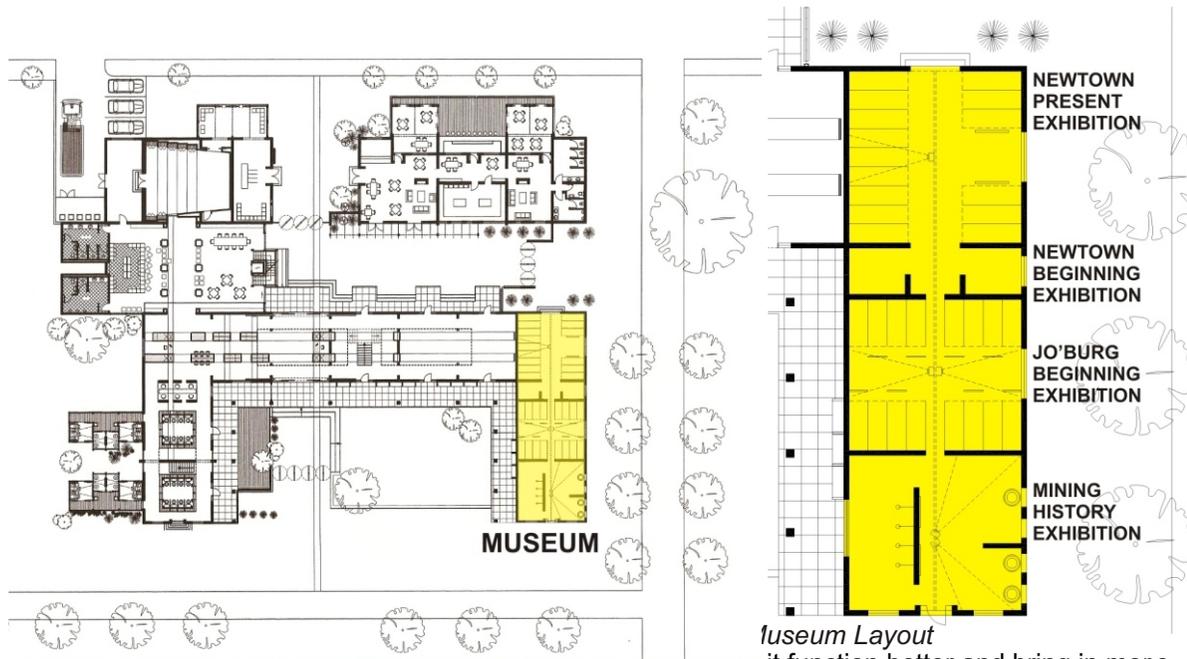
7.21. Interactive Area

facility. Disabled toilets are found in the male and female bathrooms. These toilets are solely used by the learners during the daytime and at night can be used by the users of the entire facility.

The polycarbonate sliding doors are opened at night, allowing the toilets of the facility to be accessed easily from the outside areas and the gallery space.

This building glows at night creating an ambient lighting effect that can be seen from the commercial aspects of the site.

## 7. DESIGN DEVELOPMENT



### 7.3.4. The Newtown Mining Museum

The existing museum is situated on the eastern wing of the hostel building.

The museum consists of the living quarters of the migrant workers. These living spaces have been unaltered during the past alterations allowing visitors to the site to see the poor living conditions that the workers were exposed to.

The existing museum is retained in the design proposal, with a few alterations

making it function better and bring in more visitors.

The workers rooms are connected by a central axis route that allows visitors to the museum to flow from room to room.

By continuously changing and bringing in fresh new films and ideas into the museum, a constant flow of users and visitors to the museum will visit the museum on a regular basis.

The short films are projected onto the existing windows that are covered with a adhesive film that allows films to be

projected onto the glass. Films are then visible from both sides, creating interest for the people walking past.

The projectors are positioned centrally along the central axis, suspended from the ceiling, and are in cages, to combat theft.

The doors leading into the Educational Garden will be locked, preventing people from wondering into a protected area, to ensure the learners safety.

The visitors to the museum will be able to view the garden and see the activities taking place within the facility but can only access the facility through the three main entrances into the site.

The museum will be easily accessed from the busy pedestrian route to the east of the building. The museum will be a journey that allows users to walk through the museum and out the other side, instead of just walking along the pathway.

The museum is not a place where one spends a couple of hours but is rather a quick journey through a space, where Johannesburg's history is quickly depicted through short films. The museum is a place that is visited when one is hanging around Newton and has a couple of minutes to spare.

## 7. DESIGN DEVELOPMENT

The museum allows visitors to climb onto the existing mezzanine levels, sit and view films on the existing concrete beds of the miners, allowing visitors to become a part of the museum, viewing it on a much more interactive level than other museums.

The museum will be opening during the day and partly through the evening, when the museum will be well lit, with security guards patrolling the area, ensuring the visitors safety.

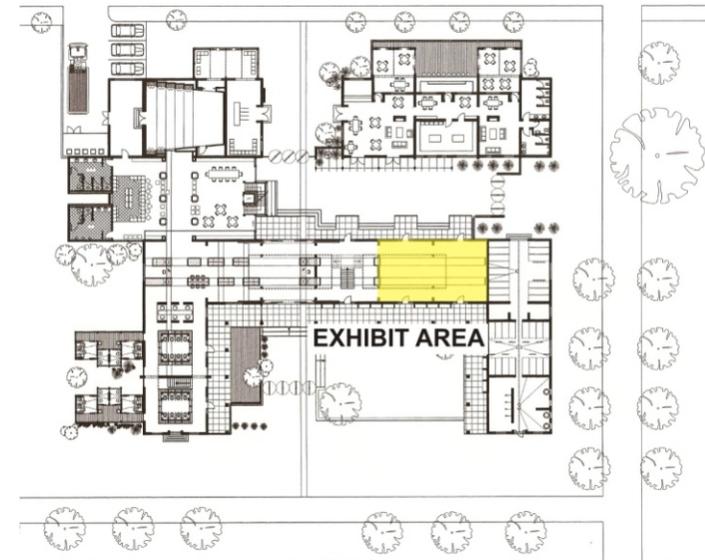
Each room deals with a part of the history relating to the mining industry in Johannesburg and Newtown.

The last room in the museum will depict Newtown in the present day. It will depict upcoming events, opening and closing times for the surrounding facilities in Newtown, what is showing at the Market theatre etc.

### 7.3.5. Multi-functional Exhibition Area:

The exhibition space is situated to the eastern side of the central area in the existing hostel, with its main access being via the reception area.

The exhibition area is an adjustable space that allows films of local individual's to be viewed by the public.



7.24. Multi-functional Exhibition Area

The exhibition area becomes a facility that allows all film director's, students or professionals, work to be seen. It becomes a platform for all aspiring film makers to reach new standards in South African film making.

The adjustable space is made up of sliding polycarbonate panels, on the Henderson Sliding Gear System, that allows the space to be opened up or closed depending on which films are being viewed and the numbers of film makers in the exhibition.

Suspended projectors, and adjustable lighting, are positioned centrally along the axis of the space. The films that are projected onto the polycarbonate can be viewed from both sides of the polycarbonate allowing them to be viewed from inside and outside, acting as a great advertisement encouraging all passersby to come into the space.

Sound domes are introduced into the exhibition space, allowing viewers to watch a film without being disrupted by other viewers.

Ottoman chairs can be adjusted to suit the individual exhibitions and allow the gallery to adapt with ease.

The exhibition area can be opened up and chairs brought in to allow the director to introduce and discuss the film being viewed. A stage with a portable lectern is included in the design.

The 'Ribbon' element is carried into the exhibition area by flowing onto the roof, forming the adjustable lighting, and onto the floor, forming stripes leading to the television display.

The 'Ribbon' ends, against the furthest wall, in the open area next to the mezzanine level, with it curling up acting as the support for the hanging television screens.

These televisions display past exhibitions held in the gallery, as well as showing forthcoming exhibitions. The information displayed allows viewers to obtain a more detailed knowledge of the specific film maker whose films are being exhibited.

The exhibition is positioned underneath the existing mezzanine level allowing the direct light from the clerestory windows to be blocked.

The mezzanine level allows the 'gallery' manager's and assistant's office to be positioned directly on top of the area,

allowing them to oversee all exhibitions and control the space with ease.

These open facilities have natural light pouring in through the clerestory windows above.

The exhibition space opens up into the internal courtyard, through the inclusion of doors in the hostel where windows used to be positioned. The exhibition space needs to open up and welcome people using the Café and Bar.

During the daytime the doors leading onto the Private Education Gardens are locked, keeping the garden purely for the learners and allowing for a safe, relaxing space.

During the evenings the doors are unlocked, allowing the gallery viewers to spread out into the garden. Clear views into the garden are, however, maintained during the day.

## 7. DESIGN DEVELOPMENT

### 7.4. COMMERCIAL COMPONENT:

The commercial facilities within the design need to be linked to the overall function of the site, which is primarily an educational facility.

The design needs to link the commercial with the educational facility physically, as well as linking them so their functions can feed off each other and encourage more visitors to the site.

The commercial aspects will be for the benefit of the public learners during the day time use of the site, and then for the commercial aspect during the evenings, allowing optimal utilization of the site.

The commercial facilities are positioned on the busier side of the site, i.e. the northern side, as these are the main vehicular and traffic movement areas around the site, thus creating interest and drawing people into the site.

The commercial spaces on the site are:

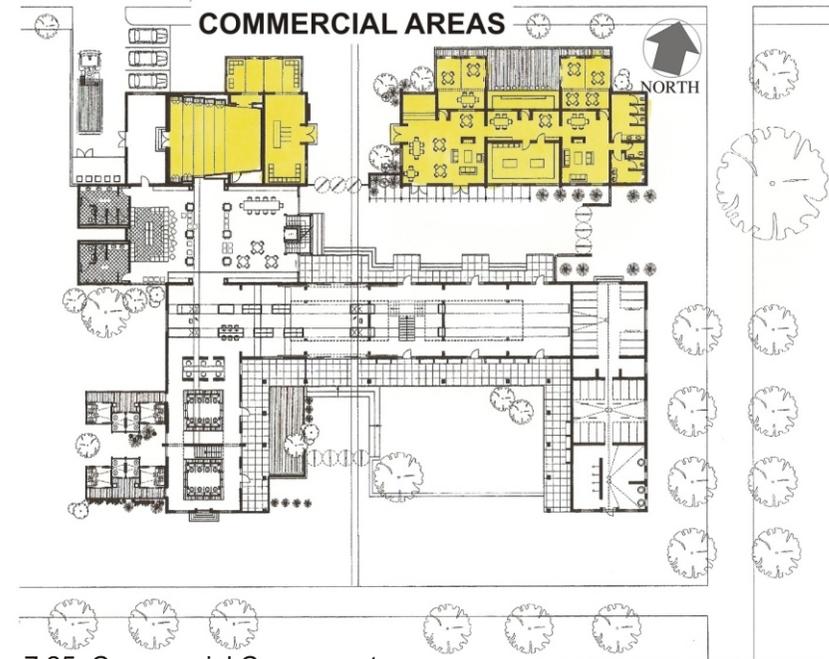
- the cinema
- the café

#### 7.4.1. The 'Art and Culture' Cinema

The auditorium space is designed so it can be used independently as an 'Art and Culture' cinema or from part of the educational facility, allowing optimal utilization of the space.

The 50 seater auditorium is situated within the existing Manager's house facing onto Mary Fitzgerald Square and will be entered into from the main entrance in the evenings, adjacent to the café.

The foyer of the space is positioned in-between the two existing bedroom walls of the Manager's house. A ticket station is centrally positioned with a central entrance being knocked into the existing wall which is closed on the eastern side of the house.



7.25. Commercial Components

This entrance to the cinema will only be open at night, with it being closed for the protection of the learners during the daytime.

The toilets in the educational facility will be accessed by the users of the cinema at night.

#### Art and Culture Films:

Art and culture films will be shown as opposed to the box-office commercial films shown in regular cinemas.



7.26. Cinema Layout

The position of the site, in the heart of the Newtown Cultural Precinct, is an ideal location for art and culture films.

*'Third world countries rely too heavily on western entertainment sources. The impact of TV programme is destroying the local film and TV industries. The structure of westernised films is very stylised 'problem following solution'. (Hadland 2006:45).*

'Art and Culture' films viewed from the auditorium will include community films. These films provide a substantial level of

interactivity. It allows local people to be trained using video to document their lives and their problems.

Digital technologies are also lowering the barriers of entry for video producers, enabling people to produce material at a good level of technical quality at the beginning of the production- transmission chain.

The 'third cinema' is committed to political and cultural liberation of film which is what will be viewed in the auditorium.

Monthly themes will dictate the films to be viewed, allowing a variety of topics to suit everyone's preferences.

## 7. DESIGN DEVELOPMENT

### 7.4.2. The Café and Bar

The cafe is positioned on the northern side of the site, facing onto the Mary Fitzgerald Square. It is positioned within the artisan houses that are combined to form a single rectangular building.

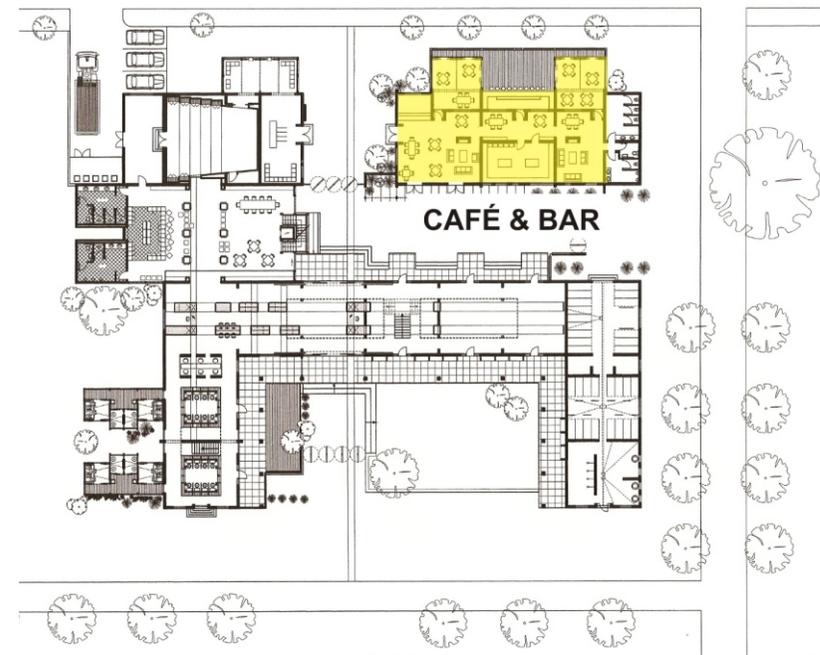
The artisan houses are ideally positioned looking onto the square, allowing the cafe to be clearly visible by all people using the Mary Fitzgerald Square.

The Cafe is positioned along a main pedestrian route and a vehicular route so will get the needed attention.

Each of the three houses that are joined to form one building are made up of small, intimate rooms that flow directly from a central space. There are no narrow passages but rather open spaces connected. The functions were able to fit easily into the existing buildings.

The artisan houses are small and the interior walls will have to be opened up to allow a bigger room that can function as a café.

Circulation needed to be introduced through the buildings to connect all three internally. This is easily done due to the fact the buildings were mirror images and all symmetrical, meaning that all their walls lined up perfectly, making the route through easy.



The small intimate spaces create a warm, homely feel, which is ideal for the restaurant to create a feel as if you are eating at home.

The three houses are divided up ideally to suit the needed requirements of the restaurant. The kitchen and bar area fill up one of the houses. Two additions of steel structure, polycarbonate walling are found on the front façade. These additional rooms of the restaurant show that a new function takes place within these existing houses.

The tables within the restaurant are equipped with electric plugs allowing the customers to work on their laptops in the restaurant which is a Wi-Fi hotspot. Some computers are positioned within the restaurant which is available to the customers to connect to the internet while in the restaurant.

The polycarbonate additions allow the people outside to see the activities in the building.

The existing building is visible through the polycarbonate.

7.29. Café and Bar

## 7. DESIGN DEVELOPMENT

### 7.4.2. The Café and Bar

The cafe is positioned on the northern side of the site, facing onto the Mary Fitzgerald Square. It is positioned within the artisan houses that are combined to form a single rectangular building.

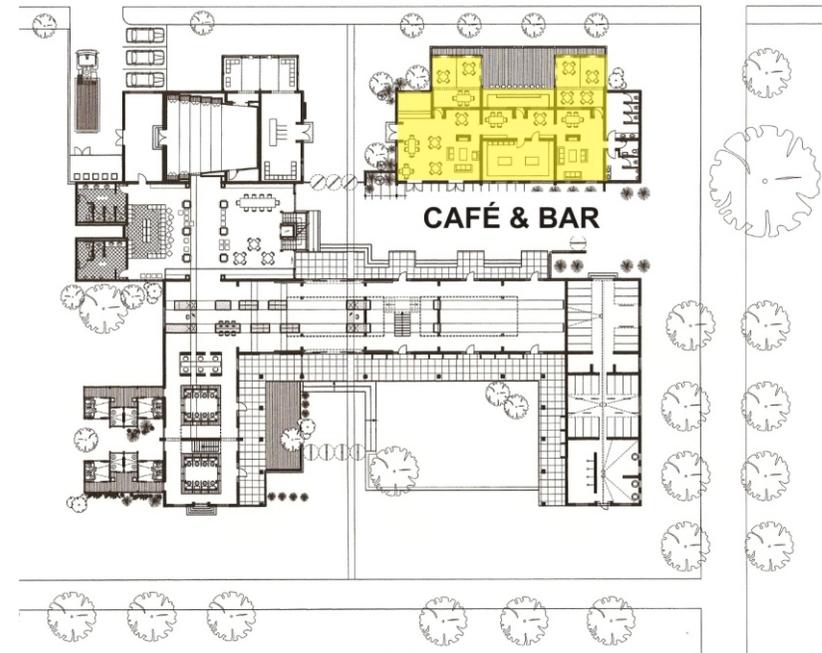
The artisan houses are ideally positioned looking onto the square, allowing the cafe to be clearly visible by all people using the Mary Fitzgerald Square.

The Cafe is positioned along a main pedestrian route and a vehicular route so will get the needed attention.

Each of the three houses that are joined to form one building are made up of small, intimate rooms that flow directly from a central space. There are no narrow passages but rather open spaces connected. The functions were able to fit easily into the existing buildings.

The artisan houses are small and the interior walls will have to be opened up to allow a bigger room that can function as a café.

Circulation needed to be introduced through the buildings to connect all three internally. This is easily done due to the fact the buildings were mirror images and all symmetrical, meaning that all their walls lined up perfectly, making the route through easy.



The small intimate spaces create a warm, homely feel, which is ideal for the restaurant to create a feel as if you are eating at home.

The three houses are divided up ideally to suit the needed requirements of the restaurant. The kitchen and bar area fill up one of the houses. Two additions of steel structure, polycarbonate walling are found on the front façade. These additional rooms of the restaurant show that a new function takes place within these existing houses.

The tables within the restaurant are equipped with electric plugs allowing the customers to work on their laptops in the restaurant which is a Wi-Fi hotspot. Some computers are positioned within the restaurant which is available to the customers to connect to the internet while in the restaurant.

The polycarbonate additions allow the people outside to see the activities in the building.

The existing building is visible through the polycarbonate.

## 7. DESIGN DEVELOPMENT

### 7.4.3. Look out Tower:

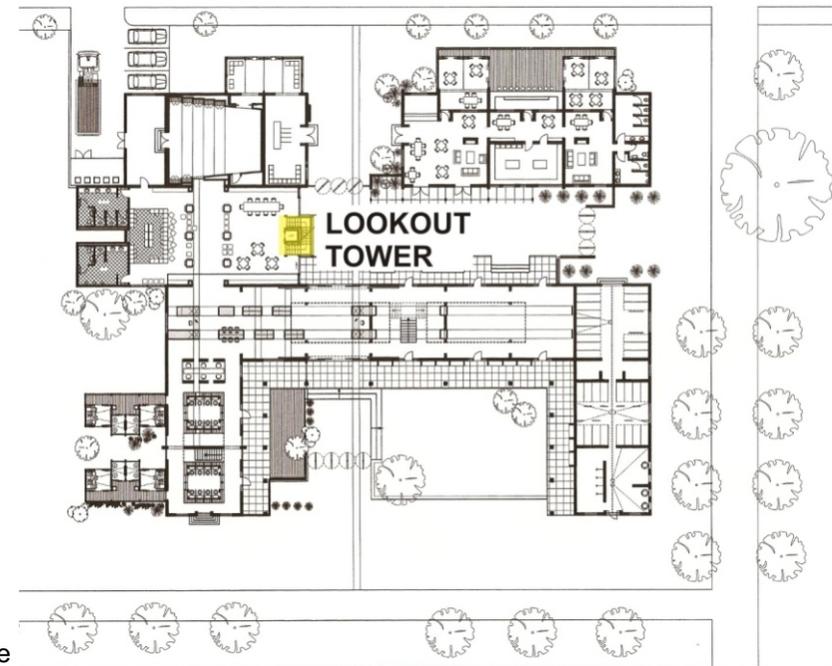
The lookout tower is centrally positioned within the site. It rises above the existing buildings on the site allowing it to be visible from the highway and the surrounding areas within Newtown.

The lookout tower allows a new function on the site to be visible. It acts as an advertisement to the sponsors of the equipment in the facility. The advertisement can be seen by many passersby and many people from the highway.

The tower consists of a lift and stair case that winds up three levels to a look out perch, where one can view Newtown.

The tower is made of steel and polycarbonate walling, which acts as the screen for the outdoor projection, which will draw a lot of attention from passersby. At night the tower is lit up, allowing it to be visible throughout Newtown and becoming a feature within the precinct.

The lift and staircase leads users vertically up to the open concrete roof of the 'connection' building. This open area can be rented out by companies for functions on the opened aired roof in Newtown.



This area can be used by the the facility during the day to get some fresh air in a safe area.

This corrugated iron wall is comprised of sleeping rooms. It is punctuated by public facilities, the church the latrines, a gateway to the hospital court and the detention building. Large areas of enclosure are screened by a wire ceiling intended to prevent inmates from throwing diamonds to

the gate, make enclosure and isolation total.

A look out tower was used to allow a view of all uncovered space, where the cooking was done, open fires, and where people ate their meals outside. The outside was the circulation space for all activities.

## 8. TECHNICAL DEVELOPMENT

### 8.1 Technical Design

A meeting was held with Technical Consultants from Omega, in August 2007, to discuss the technical aspects of the design.

The whole educational facility will be run from a Main Computer Server that will be positioned at the librarian station. 25 VGA computer feeds will link the screens within the facility.

The librarian will have to load the chosen film into the system at her desk, allowing the librarian to have control over what is watched by the learners.

The learners will be directed to a viewing station where the film will be ready when they arrive.

An automated lighting system will control the central lighting.

#### Group Viewing Stations:

The learners will have Windows Based Remote Control Panels in the individual viewing stations allowing the volume, lighting dimmer and play, pause stop etc. to be controlled by the user.

The projector screen is to be positioned 1500mm off the ground at eye level of viewer.

The group viewing stations have a ceiling mounted projector system situated above the last viewer in the room.

The projector screens size is calculated through the 3:4:5 ratios. The 1000 (w) x 600 (h) projector screen, found in the group viewing booths are in fixed frames.

#### Individual Viewing Stations:

32 inch LCD screens are positioned at 1500 mm height at eye level of viewer.

An audio feed is connected to the screen with a jack that connects the sound dome to the feed.

#### The Auditorium:

A fixed lectern with a laptop fixed remote will be positioned in the front of the auditorium.

Two separate lighting systems will be positioned in the auditorium. One positioned in the front, near the speaker and the rest spread throughout the seating area.

A ceiling mounted projector system is centrally situated in the auditorium. This can run a computer service, a video, DSTV or the laptop.

### 8.2. Acoustic Design:

A meeting was held with Ivan Lynn, an acoustic specialist from Pro-Acoustic

Consortium in September 2007, to discuss the acoustic requirements of the design.

In preventing noise from entering or escaping the auditorium a double wall with a 100mm void is built into the existing building.

This prevents the sound waves from travelling out of the room and affecting the other function within the site. It also blocks out unwanted sound from the busy surrounding areas from entering into the auditorium and disturbing the users.

The walls are slanted at a 5 degree angle which is the best angle for the acoustic purposes. The symmetry of the auditorium is an important feature in acoustic design.

Acoustic wall paneling covers the brick walls inside the auditorium. These panels are made up of fibre wool that is covered with a perforated stretch fabric, onto which images are printed by Alyos Technology - an advanced ceiling and wall system, which print on a stretchable high-tech fabric that is imported from Germany. The entry system is only 10mm thick.

Carpeted floors within the auditorium are used with solid flooring underneath preventing the lower frequency sound waves from traveling through the flooring.

Windows allow sound to escape, as well as allowing light into the space so an A/C unit is to be installed for ventilation.

A projector is suspended from the ceiling, projecting onto the projector screen positioned in the front, at a height of 1500mm from ground level.

A projection room to the south of the auditorium allows the laptop and needed equipment, to be stored in a safe, lockable room.

The sound system in the auditorium is the 5.1 surround sound that consists of one speaker behind the projector screen, one to the left and one to the right of the projector screen, one in the back left corner of the room and one to the back right.

A sound room is positioned at the commercial entrance to the auditorium, preventing the unwanted noise from directly entering into the room when the acoustic doors are opened, while the film is running

### 8.3. Makrolon Polycarbonate Sheeting:

The 10mm thick Multiwall polycarbonate glazing system was chosen due to its many properties.

The properties that were needed for the design were:

- a material that is lightweight
- a material that is translucent
- a material that is stronger than glass
- a material that has some form of insulation properties
- a material that is easy to install with minimal impact on the heritage site
- a material that can handle outdoor conditions.
- A material that can be placed next to electrical sockets, televisions, lighting etc.

*'The multiwall polycarbonate glazing systems create diffused daylight, minimizes glare and heat gain for vertical walls in exterior and interior applications.'* (Cabot Corp: 2006:1)

*'The high performance polycarbonates are easily cold-formed and weigh one-sixth as much as glass, yet provide 200 times the impact strength, enabling architects to work with wider spans, lighter supports and unparalleled design flexibility in thickness, texture, colour and framing.'* (Cabot Corp. 2006:2)

- Multiwall polycarbonate – ie. Makrolon Excellent resistance to breakage over a broad range of temperatures

- Its excellent impact strength and resistance to breakage are exploited for glazing wherever people and property have to be protected from injury and damage.
- Good weather resistance with a the Special Makrolon® UV-absorber concentrates can be co-extruded during the sheet extrusion process to enhance weatherability
- Freedom in design Makrolon® sheet offers a high level of freedom in design on account of its suitability for hot and cold forming.
- **Low inherent weight** Makrolon® sheet is used, among other things, for glazing on lightweight.
- **UV Protection.** Makrolon® Multiwall prevents the transmission of more than 99.9% of harmful UV radiation measured to the standard ISO 9050:2003.
- **Wind Load.** Makrolon® Multiwall is suitable for use in high wind load areas, and is tested to wind code AS/NZS 1170.2/2002.
- **Fire Performance** Makrolon® Multiwall is suitable for use in bushfire prone areas with CSIRO appraisal. It's also self extinguishing, stopping the spread of flames and has excellent fire resistant properties.

## 8. TECHNICAL DEVELOPMENT

Information regarding the installation requirements and instructions of the multi-wall system is found in the appendix

### 8.4. The Baseline Document:

The baseline document serves as a guide for design decisions and technical decisions. It allows for resolutions by prioritizing certain qualities of the design.

The design is based on the following criteria, set up with regards to the context of the project and a sustainable approach according to Jeremy Gibbert's Sustainable Building Assessment Tool (SBAT).

Different layers of the building are used to perform the needed functions of:

- 1) Social criteria
- 2) Environmental criteria
- 3) Economic criteria

#### 8.4.1. Social Criteria:

##### Occupant Comfort

Human productivity varies according to the conditions in the person's immediate environment. As this is an educational facility learner's comfort is of great importance. Therefore, the more comfortable the learner, the more productive they will be, allowing the centre, therefore, to be more of a success.

##### Noise

There are two types of noise that affect the occupants:

- 1) Unwanted sound - annoyance with loud noise.
- 2) The sound that is generated from within the building itself.

The different facilities within the building, depending on their functions, have been positioned with the noise level and the required privacy being considered. The intimacy gradient ranges from the noisy busy side of the site, Mary Fitzgerald Square, and the quiet more private side, Newtown Park.

The noise from the Mary Fitzgerald Square façade, i.e. unwanted sound, will have to be dealt with, to allow for the facilities near that area to operate efficiently without the noise affecting their functionality.

The centre must provide efficient learning areas where the learners can concentrate but at the same time not be isolated and form part of the facilities activities.

This must be achieved, according to their position, acoustically through the introduction of sound domes and earphones. The auditorium will be designed with the necessary acoustic requirements needed in acoustic design.

##### Thermal Comfort

The Centres' temperature must be comfortable for the users. It is found that thermal comfort should be between 22 degrees and 24 degrees Celsius.

In order to reach the required temperatures passive design will be introduced whenever possible within the design.

##### Ventilation:

The design allows the learners to adapt their spaces according to their individual needs. Sliding panels allow the user to control the amount of air flowing through their booths. The booths are designed to face onto open land surrounding the building so learners can adjust their booths to accommodate as much nature into their space as needed.

Openings found throughout the existing building allow for cross ventilation to occur throughout the building. This can be adjusted according to the weather.

Mechanical ventilation will be required in certain areas of the building as the auditorium cannot have the light or the sound from outdoors pouring in. Due to the needs of all the televisions and associated equipment, mechanical ventilation may be required.

##### Inclusive Design

The building should be accessible and comfortable to all users ranging from the elderly, to the youth or disabled, at all times of the day and night. The Centre will adhere to the regulations found in SABS 0246.

### **Changes in Levels:**

According to the SABS 0246, ramps must have 1:12 fall. Balustrades must be on both sides of the ramp. Lifts must be used where ever needed.

Non-slip material must cover the ramp floor. The changes in level will be visible through the omission of patterned flooring that is found in the entrance axis. Inside the building the different floor levels will be made visible through changes in colour of the flooring material for the sight impaired users.

Balustrades will be used to indicate changes in direction.

### **Openings:**

The SABS 0246 states that the minimum clearing opening of all doorways for use of disabled individuals is 750mm. These measurements will be used in the facility.

### **Toilets:**

Disabled toilets in the existing buildings alteration of 1996 will be torn down to return the buildings grass courtyard to resemble it's original state. The required disabled toilets will therefore be positioned with the other toilets within the facility, to avoid discrimination. In the restaurant it is a unisex disabled toilet, and in the education facility one is found in each bathroom.

### **Counters:**

Counters throughout the education facility are positioned at different heights meeting the needs of children to adults, and the disabled.

The ribbon countertops flow from one height to the next so there will be a search station to suite everyone's needs.

Both group and individual viewing booths will accommodate the needs of wheelchair users.

Counter tops will be made adjustable in the viewing booths so that they can be lowered or raised to suite all users.

### **Signage:**

The signage throughout the Centre needs to be clearly readable for sight impaired users. The signage also needs to be understandable, by all users, regardless of language.

Lighting needs to be incorporated into the design allowing it to be more visible.

### **Safety and Fire Protection: Security Guards**

Many security guards are found throughout Newtown, either on foot or on motor bikes monitoring the main pedestrian routes. Although Newtown is regarded as being one of the safest areas within Johannesburg, learners needs to feel safe while walking to, being inside and leaving

the facility in order for it have optimal utilisation in the day and night.

Security guards need to be situated at all entrances to the facility, twenty four hours a day-everyday including watching the pathways linking the parking to the facility.

Children will be using the facility mostly, therefore the children's safety is very important to this facility. Children, and their parents, need to feel safe at all times.

Seeing that the centre will be utilised at nighttime as well, the users must be protected along the pathway from the facility to their destination. Lighting leading from the centre to the main gathering points around Newtown will aid the users and will be included into the design.

The quieter spaces in and around the facility must be overlooked by the more crowded spaces in order for the learners to feel secure. There must also be a clear visual link between the spaces for the learners' protection.

Transparency within the booths allows the viewers to be seen by all.

Doors and windows throughout the facility must be able to be locked properly to protect to the equipment that is housed inside.

## 8. TECHNICAL DEVELOPMENT

Timber shutters found in the facility allow users to open the polycarbonate sheeting up to get natural ventilation but still maintaining a safe environment without them being completely exposed. The use of multiwall polycarbonate is used as it is more difficult to break through compared to the single polycarbonate sheeting.

### **Fee**

A system needs to be implemented whereby only learners interested in the upliftment of their education use this facility.

By forcing the learner to keep and regularly update a performance record, completed by themselves, their parents/ guardians/ teacher and the staff then the facility will be able to keep an eye on learners' progress.

### **Fire Equipment:**

Fire equipment needs to be clearly signed according to SABS 1186. Fire hose reels need to be installed with accordance to SABS 543.

Fire escape doors need to open in the direction of the escape routes and must be at least 800mm wide. No travel distance to the exit must be more than 45m.

The emergency exits need to have artificial lighting. The public part of the building must have a fire detection system.

### **Natural Lighting**

The use of natural lighting will be used wherever possible throughout the facility be it with direct or diffused lighting.

This will be encouraged through the use of the already existing clerestory windows.

Natural light will be entered into the building to allow learners the feeling of learning in nature as apposed to being in an isolated box.

A limited amount of natural lighting can be in a room with projection screens due to the latest technology screens that are available.

### **Access to the Facility**

The facility is close to many educational facilities and in walking distance of all of them within Newtown. Pedestrian movements are therefore encouraged to the facility and around Newtown as a whole.

Newtown is easily accessed from the N1 connecting it to all areas of inner Johannesburg as well as surrounding areas for vehicular access. The facility is close to the Metro Mall which allows access to minibuses and buses.

### **Communication**

The facility concentrates mainly on the media film, although computers are positioned within certain parts of the

facility, allowing film to be viewed on them, or the users to gain access to the internet.

The entire centre will be a wi- fi hotspot, including the restaurant. Power connections will be positioned into the countertops found in the communal areas of the facility encouraging users to bring their own laptops and work from the facility.

### **Views and Access to Green Spaces**

The buildings in the facility must be connected to the outside and not be a facility that functions independently in an isolated box.

Viewing booths are connected to the outside open areas through the use of sliding panels of translucent polycarbonate sheeting. The users are able to open up the booths completely or leave the wooden shuttering closed to block out unwanted light or feel more protected. Trees planted next to the booths also provide a protection against the weather conditions.

Circulation areas will have an access to views of the outside through existing windows and additional glass panels that have been incorporated to allow a view through the building.

Learners have access to the green spaces of the library gardens that are adjacent to the education facility. This garden is protected from the commercial side of the

facility and is used only by the users of the education facility so it is a protected garden for the learners to have a break from the screens or eat their lunch, or have an outdoor classroom lesson under the trees within the garden.

At night the gallery will unlock the doors and the viewers of the gallery can spill out into the library garden but during the daytime the gallery access doors are locked and the only access to the garden and from the garden is through the main access doors past the reception desk.

The interior courtyard that is positioned on the commercial side of the site is open to the restaurant users and at night to the outdoor cinema viewers.

Tree-lined streets will allow for cool comfortable pedestrian routes with sufficient rest areas along the route to and from the facility.

### 8.4.2. Environmental Criteria:

#### Energy

There are five main design factors that influence the energy consumption in a building:

- Function
- Climate
- Occupancy
- Design
- Services

In the facility, users will have reasonable control over their environmental conditions by including sliding doors and louvers to adjust the internal climate of the buildings to reach certain comfort levels.

A media centre is not a sustainable building due to the vast amounts of energy used. All the equipment uses large amounts of valuable energy to operate. The air conditioner system needs to cool down the equipment and this contributes to energy usage.

#### Lighting

Daylight conditions are determined by the latitude, the time of the year, the air pollution levels, humidity, landscaping and the nearby buildings.

As the facility will be operating at night artificial lighting will be required. The choice of lamps needs to be considered according to what lighting type is best for learning. Glare must be avoided on the computer or television screens.

Lights that have a long life span minimise the cost and maintenance of the facility and use less energy; therefore, they will be used wherever possible. These artificial lamps must be low energy lamps.

#### Passive Ventilation

Passive systems work with nature and not against it.

Passive ventilation will decrease the energy use of the facility and will be used wherever possible by allowing the cooling down of a building to be done through natural cross-ventilation.

Airconditioners, however, will be needed to cool down the equipment in the facility. The need for air conditioners throughout the entire building will be minimised by reducing the east and west facing windows.

#### Cooking

By bringing in already prepared meals, i.e. meals that are prepared off site, the coffee shop will reduce the use of energy. Refrigerators and 'heating up equipment' will however still be needed.

#### Waste Management and Deliveries

Waste that is generated from the coffee shop needs to be sorted. Organic waste needs to be sold or donated to a farmer. The collection from the site will be funded by the farmer in return for the waste sold free of charge. Glass, paper and tin needs to be sorted and recycled.

The delivery area will be in the parking lot right next to the facility. The delivery area needs to be clearly sign posted so as not to disturb the facility. The driveway must not be obstructed by sign boards or cars etc.

## 8. TECHNICAL DEVELOPMENT

### Recycling and Reuse of Materials

The buildings ecological footprint can be reduced by making use of recyclable materials. Materials will be chosen that can be reused or recycled and have low embodied energy

The facility will be occupying an already existing structure that will be altered only where necessary thereby reducing the amount of energy that would be wasted if the structure were to be pulled down and reconstructed.

All additions to the building are able to be easily pulled down without having an impact on the existing building.

### Different layers

The facility will be made up of different 'skins' in the building from the exterior skin through to the amenities. All these 'layers' need to be replaced at different time periods as some have a longer life span than others.

The facility needs to be designed so these layers can easily be accessed and either fixed or replaced without having too much of an effect on the other layers. Through the separation of these layers large amounts of energy and materials will be saved.

### Transportation

Newtown is aimed at being a pedestrianised area. The facility is in

walking distance of the public transport facilities found in the Metro Mall. Users walking on the main roads that surround the Centre will be able to catch minibuses.

A minibus will be owned by the facility which will be sponsored by one of the educational companies. The minibus will ensure the safe collection and drop-off of some of the children using the facility.

At specific times throughout the day and evening the minibus will transport the learners to specific main nodes in the surrounding areas.

### Insulation

The existing structure does not have insulation therefore it is uncomfortable to use at certain times throughout the year. Insulation reduces the heat gain and the heat loss in a building. Insulation will be installed in the building.

### 8.4.3. Economic Criteria:

#### Local Economy

##### Local Materials

The use of scarce materials will not be used in the construction of the facility's additions. The materials that will be used in the alteration of the structure will be low embodied energy materials that are produced or supplied locally. This supports the local economy.

### Local labour

Local labour must be used for construction, shop-fitting and product manufacturing as much as possible. However, by training locals for the construction of the facility the project can become expensive due to the amount of time that is lost on the actual training and must be weighed up to see whether it is a feasible option.

Employment and training of local workers for catering and the maintenance of the facility will be encouraged wherever possible.

Newtown is known to exhibit the artworks of many local artists with them being commissioned to advertise major events within the area. Local film makers works will be viewed within the facility in the gallery.

This will lead to an awareness of the local industries high standards and skills in the film industry as well as showing South Africa's forward thinking ideas in education. All this will benefit the local economy.

Film premiers of local directors will be screened within the facility so it will act as a platform for the directors to be noticed.

Locally produced educational films will be supported in the education facility and will be available to all learners interested.

### **Adaptability and Flexibility:**

By the building being designed to accommodate change the facility will support sustainability.

By reoccupying an already existing building the new function is able to expand the life span of the structure which reduces energy costs.

Furniture and fittings in the facility must be adaptable to suite a range of functions and users. Tables and chairs must be able to be rearranged by the users, if needed, allowing the rooms to become multifunctional.

Outdoor gathering spaces must be able to be adapted into an outdoor classroom or a function other than relaxation.

### **Life Span of the Building**

Large investments by a variety of private bodies into the facility will be made, therefore it is not likely that the building will change its structure or function within the next five years.

The building serves a needed function between now and 2013 so it will perform the same function until that date. After that date the facility may be altered to perform an additional function with another facility joining on the educational facility or will be successful and be kept as connection.

### **Installations and Fittings**

Installations and fittings need to be flexible and easy to assemble, remove and reuse which will save energy and costs.

The equipment needs to be adjusted easily to upgrade the technology, keeping the facility up to date with rapid technological changes and future innovations. The systems need to be easily accessed without affecting other 'layers' of the facility when they are upgraded.

### **Ongoing Costs**

#### **Maintenance**

Regular inspections of fixtures and services will be made by the building manager of the facility. Through the correct maintenance and control of the building's lighting, sound and computer systems, repairs are minimized and the ongoing costs are lowered.

The materials chosen will determine the cleaning costs of the facility. All fabric must have a maintenance cycle of at least two years.

#### **Water Saving**

Water saving components will be incorporated into the design. Flushing toilets and taps must be equipped with water saving devices.

Using indigenous trees in the green spaces within the facility will allow for the sprinkler systems costs to be minimized.

### **Efficiency of Use**

The spaces within the facility will be used as efficiently as possible and the occupancy level will be raised to the maximum. A high occupancy must be maintained and non-useable spaces kept to a minimum.

The facility must be divided up between continuous use and intermitted use (shops etc). The facilities spaces will be diverse in times of utilization.

## 9. Accommodation Schedule

	Type of Area	Name of Area
9.1.	Public Area	9.1 Information Desk 9.2 Café and Bar 9.3 The Newtown Mining Museum 9.4 Search Area 9.5 Multifunctional Exhibition Area 9.6 Librarian Station
9.3.	Semi- Private	9.7 Auditorium/ 'Art and Culture Cinema' 9.8 Classrooms/ reading rooms 9.9 Locker Room 9.1 Library Garden 9.11 Group Interaction Area 9.12 Toilets 9.13 Outdoor Classroom Area 9.14 Staff Room
9.4.	Private Area	9.15 Individual Viewing Stations 9.16 Group Viewing Stations 9.17 Exhibition managers office

### 9.1.1. Information Station

<b>Description</b>	The Information Station is found at the centre of the facility. All access routes are led to the Information Station A visibally clear route through the Information Station
<b>Function</b>	Centrally located, in the axis pathway through the site It welcomes the visitor to the site and indicates what facilities are available From this point on the site, visitors have access to the Public Visual Information Centre, and the Multifunctional Exhibition Space
<b>Area</b>	58m2
<b>Lighting</b>	Downlighters positioned centrally along the Information area Downlighters positioned above the Information Station desk
<b>Glass Sliding Doors</b>	Potential to open up north and south walls to include a glass sliding door system Open during the day to allow for clear visual access
<b>Security Sliding Panels</b>	Wooden sliding panels positioned infront of glass sliding doors for protection. Open during the day to allow for clear visual access
<b>Information Station Desk Requirements</b>	Positioned to the eastern side of the information space to allow for clear visible access through the site Accommodates all users height requirements with the desk accommodating standing, seating and wheelchairs
<b>Standing Countertop</b>	Standing Requirements - 850mm height countertop (Adler.1999: 2-6) Place for information brochures for forthcoming events
<b>Receptionist Countertop</b>	Receptionist Requirements - 710mm height (Adler 1999. 2-7) stationery and cupboard space under the countertop
<b>Wheelchair countertop</b>	Wheelchair/ Children /Seating Countertop Requirements - 690mm height (Adler 1999. 2-20)
<b>Signage</b>	Information signage directing users to the Public Visural Information Centre and the Multifunctional Exhibition Space
<b>Typical Materials</b>	
<b>Application</b>	Material
<b>Floor</b>	White Pigmented Cemcrete PG Bison Laminates in stripes
<b>Information desk</b>	Polycarbonate Multiwalling sheeting in an aluminium frame. Pg Bison wood veneer countertop
<b>Standing Countertop</b>	PG Bison MDF Board with PG Bison Laminates in stripes over the counter

## 9.1.4 Search Area

### Description

The search stations are the first step when using the Public Visual Information Centre. The 'Ribbon' leads the users through to these stations, which form part of the 'Ribbon' itself.

### Function

The search stations allow users of the Public Visual Information Centre to research what topics are available on film in the facility . The chosen topics are automatically emailed to the librarian station.

### Area

56m

### Lighting

Downlighters positioned centrally through the area, continuing along the 'Ribbon' from the Information Area spotlights should be aimed at the individual search stations

### Facilities Required

#### Standing Countertop

Standing Requirements - 850mm height countertop (Adler.1999: 2-6)

#### Wheelchair/ seating countertop

Wheelchair/ Children /Seating Countertop Requirements - 690mm height (Adler 1999. 2-20)

Loose ottoman chairs, positioned under the countertop, can be pushed in and out to adjust to the users requirements.

#### Standing Countertop - higher

Standing Requirements - 1100mm height countertop (Adler.1999: 2-6)

#### LCD Monitor

LG model : L1718S 17" slim bezel LCD monitor

(w) 418 (d) 180 (h) 414

#### Interactive Screens

U-Touch" touch screen overlay placed onto the screen for an interactive screen

#### LCD Monitor table mount

: ErgoMounts EMISZB desk mount

#### Typical Materials

#### Application

#### Floor

Material

White Pigmented Cemcrete

PG Bison Laminates in stripes

#### Countertop

PG Bison MDF Board with PG Bison Laminates in stripes over the counter

### 9.1.5. Multifunctional Exhibition Space

<b>Description</b>	The exhibition area needs to be flexible and easily adjustable depending on the needs of the current display The area needs to accommodate presentations by the film directors as well as accommodating films being viewed in the same exhibition room.
<b>Function</b>	The exhibition space allows film makers an opportunity to display their work in a public facility Monthly themes will determine the film topic exhibited
<b>Area</b>	113m <sup>2</sup>
<b>Lighting</b>	The lighting system needs to be adjustable to meet the requirements of each exhibition. The lighting system needs to be on two different circuits to allow the space to be flexible. The spot light system must be positioned on a track system running through the centre of the exhibition room
<b>Facilities Required</b>	
<b>Sliding Panels</b>	10mm thick Multiwall Polycarbonate sheeting in an aluminium frame is attached to the upper mezzanine level through the Henderson Sliding Door Gear -Straight Sliding Pacer Glass tophung system
<b>Glass- Vu Film</b>	Glass Vu3 GV3F adhesive film attaches to the inside of the Polycarbonate sheeting turning the panel into a display device.
<b>Projectors</b>	Rear projectors attached to a track system attached to a track system on the ceiling
<b>Lecturn</b>	Moveable lecturn with Windows Based Remote Control Panel that controls the lighting and sound from Laptop
<b>Wall mounted LCD screens</b>	LCD Monitor L3000A 30" TFT 697x431x50.9
<b>Sound Domes</b>	20" Diameter Sound Dome Model 7052 with 514mm PETG clear polymer dome
<b>Seating</b>	Comfort Creations Ottomans that are moveable Folding/stacking chairs for presentations
<b>Typical Materials</b>	
<b>Application</b>	Materials
<b>Floor</b>	White Pigmented Cemcrete PG Bison Laminates on MDF Board

<b>9.2.1. Auditorium</b>	
<b>Description</b>	The auditorium needs to be an adjustable area that can function both in the day and nighttime It has two entrances into the space with two foyer areas.
<b>Function</b>	The auditorium functions as part of the Public Visual Information Centre in the daytime and as as 'Art and Culture' Cinema at nighttime.
<b>Area</b>	229m <sup>2</sup>
<b>Lighting</b>	The lighting system needs to be on two circuits An A/C unit needs to be installed for the acoustics of the spaces to work effectively.
<b>Facilities Required</b>	
<b>Entrance Foyer</b>	
<b>Standing Countertop - higher</b>	Standing Requirements - 850mm height countertop (Adler.1999: 2-6)
<b>Wheelchair countertop</b>	Wheelchair Countertop Requirements - 690mm height (Adler 1999. 2-20)
<b>Waiting Benches</b>	Ottomans that can be pushed together in different arrangements
<b>Plasmas</b>	42" LCD 'Monitor LGRT-42LC2RR
<b>Private Foyer</b>	
<b>Seating</b>	Moveable benches for waiting area.
<b>Fold up counter</b>	Fold up catering counter stored in Storage Room in Auditorium for serving snacks at company functions
<b>Projector</b>	Rear projectors attached to a track system attached to a track system on the ceiling
<b>Glass- Vu Film</b>	Glass Vu3 GV3F adhesive film attaches to the inside of the Polycarbonate sheeting turning the panel into a display device. The film displayed can be visible from the outside of the polycarbonate sheeting.
<b>Entrance Room (sound)</b>	Two acoustic sliding doors opening into the auditorium space. Prevents unwanted sound from travelling directly into the acoustic protected space. Alyos Technology wall systems with acoustic material surrounding walls
<b>Storage Cupboards</b>	Small cupboards for storage of the Ribbon lapdesks. Easily opened and closed. Large shelving space to allow for Lapdesks to be stacked in smaller piles to prevent them from unbalancing and falling out. Alyos Technology wall systems with acoustic material on doors.
<b>Storage Room</b>	Storage area for extra seating for outdoor cinema at night and other requirements for facility
<b>Technical Equipment Room</b>	Storage of tables for function area on first floor. Enough room to walk in and collect the needed equipment. Storage shelves that are easily accessible. Lockable room.
<b>Fire Escape</b>	Clearly marked escape route. Door opening outwards.
<b>Acoustic Panels</b>	Alyos Technology wall systems with acoustic material surrounding walls
<b>Seating</b>	Carpetted stairs in bigger station in Milliken Carpet 755. 170. Classic Grey
<b>Sound System</b>	5.1 Surround Sound Speakers. Two positioned at back, three in front
<b>Projector</b>	Suspended from the ceiling in centre of the auditorium. Controlled by Laptop on lecturn in the front.
<b>Lecturn</b>	Moveable lecturn with Windows Based Remote Control Panel that controls the lighting, sound and films from Laptop

**9.2.5. Group Interaction Area  
Description**

The space needs to encourage interaction therefore needs to be flexible to suit users needs.  
More noisy area than the rest of the facility

**Function**

New construction that connects the two existing buildings together.

**Area**

The area is the more informal area within the facility that houses the group discussion area, and the needed amenities in the facility.

**Lighting**

241mm<sup>2</sup>

Downlighters are found throughout the area

Adjustable spot lights are positioned above the tables for the users comfort.

**Group Tables**

Area for groups to discuss their studies together and feed off eachothers knowledge.

Tables moveable and can join together in different layouts

Countertops have electric plugpoints for laptops to be plugged in

**Toilet area**

Male and Female Toilets with a disabled toilet in each

Accessible for the users of the facility during the day as well as the cinema viewers at night

**Bookshelves**

Area where the hardcopy summary of the topics available on film are stored.

Constructed out of Supawood with PG Bison Laminates.

Steel mesh doors that are locked at night when doors form courtyard are unlocked.

**Sliding Doors**

Multiwall Polycarbonate sheeting with aluminium frames the Henderson Sliding Door Gear -Straight Sliding Pacer

Glass tophung system

**Lift**

Kone' Lift. Stainless Steel Lift with glazing. Suspended in a steel structure

Wheelchair accessible

**Locker Room**

Lockers made of Supawood with PG Bison Laminates with steel mesh doors to allow for transparency.

**Foyer Area**

**Televisons**

Suspended 32" LCD Monitors LG20LC1R

**Ottomans**

Moveable ottomans allows the space to function as a group disscussion area or as a waiting area for the auditorium

### 9.3.1. Individual Viewing Stations

#### Description

The space needs to allow privacy for the viewer without isolating them from the facility  
The space needs to be adjustable to suit the individuals needs.

#### Function

The viewing station allows the user to research their chosen topic through the watching of films. The station allows the user to make notes while watching using the play, rewind etc.

#### Area

40.5m<sup>2</sup> in total

#### Lighting

Each station controls own lighting through the Windows Based Control Panel on the wall  
Downlighters controlled by the librarian situated along the central axis of the two facilities

#### Facilities Required

##### LCD

32" LCD Monitors LG20LC1R

##### Wall Mount

Attached to steel structure with Ergo Mounts EMX100 LCD wall mount

##### Sound Domes

20" Diameter Sound Dome Model 7052 with 514mm PETG white polymer dome

##### Control Panel

9" Windows based Control Panel Touch Screen allows user to control stop/start/rewind etc. as well as the dimmer lighting system. Attached to steel structure under the LCD screen

#### Walling

Makrolon Multiwall 10mm system in 'Opal'

Sheeting in an aluminium framing supported by steel structure of the mezzanine structure

#### Sliding Screens

Sliding Door covered in Milliken Carpet 162. Orange Blaze on the Henderson Sliding Door Gear -Straight Sliding Pacer (tophung system

#### Countertop

Adjustable countertop level at two demarkated heights

Wheelchair/ Children Countertop Requirements - 690mm height (Adler 1999. 2-20)

Higher countertop Requirements - 710mm height (Adler 1999. 2-7)

Adjustable countertop lightweight and easily removed in and out of support

PG Bison MDF Board with PG Bison Laminates in stripes over the counter

**9.3.2. Group Viewing Booths Description**

The space allows for a varying amount of viewers to view films together and discuss the related topics in a more private area

**Function**

Group viewing stations allow groups of two to eight viewers in a station

**Area**

6m<sup>2</sup> in total

**Lighting**

Each station controls own lighting through the Windows Based Control Panel on the wall  
Downlighters controlled by the librarian situated along the central axis of the two facilities

**Facilities Required**

**Projectors**

Rear projectors attached to the ceiling

**Glass- Vu Film**

Glass Vu3 GV3F adhesive film attaches to the inside of the Polycarbonate sheeting turning the panel into a display device.

**Seating**

Carpetted stairs in bigger station in Milliken Carpet 162. Orange Blaze  
Comfort Creations chairs in smaller stations  
Wooden Benches outside for quick waiting area. Needs to handle outdoor conditions

**Sound**

Earphones positioned in convenient area for up to listeners. Earphones physically attached to station to avoid theft.

**Sliding Screens**

10mm thick Multiwall Polycarbonate sheeting in 'Steel' in an aluminium frame is attached to the upper mezzanine level through the Henderson Sliding Door Gear -Straight Sliding Pacer Glass tophung system

**Wooden Sliding Screens**

Luxalon Sun Louvre System: type sliding screens

([www.luxalon.com](http://www.luxalon.com))

For privacy and security

Provided with a locking mechanism

**Control Panel**

9" Windows based Control Panel Touch Screen allows user to control stop/start/rewind etc. as well as the dimmer lighting system. Attached to steel structure

**Flooring**

Timber decking with slite gaps between for rainwater outside area

Timber Flooring inside

**9.1.3. The Newtown Mining Museum  
Description**

Walk through museum that displays the history related to mining in Johannesburg and Newtown through film. Directors given an opportunity to have their work displayed to the public  
The museum is left as it is allowing users to experience the hostels as they were in the past, excepting for the inclusion of the needed technology to display the films

**Function**

Allows viewers a quick educational journey while en-route to another facility within Newtown

**Area**

210m<sup>2</sup>

**Lighting and Ventilation**

The museum is left as it is allowing users to experience the hostels as they were in the past.

**Facilities Required**

**Projectors**

Rear projectors attached to the ceiling

**Glass- Vu Film**

Glass Vu3 GV3F adhesive film attaches to the inside of the Polycarbonate sheeting that is hung from the truss system turning the wall into a display device.

**Sound Domes**

30" Diameter Sound Dome Model 7052 with 514mm PETG Translucent polymer dome

### 9.3.3. Exhibition Managers Office Space

#### Description

Open office area situated on the one side of the existing mezzanine deck

Mezzanine level is divided up into three spaces

#### Function

Open area to allow manager to form part of exhibition and have control over the activities below

Office space for the manager of the multifunctional exhibition space

Three spaces allow for the open offices of the manager, the receptionist and a storage space inbetween the two office spaces

#### Area

38.7m<sup>2</sup>

#### Lighting and Ventilation

Pendant lighting is suspended from the existing truss system over the desks

#### Facilities Required

#### Furniture

Storage facility for filing in the form of a filing cabinet

Office furniture desks for both the receptionist and the managers open office

Countertop Requirements - 710mm height (Adler 1999. 2-7)

Electric Connection points in the countertop for laptops to plug into

Comfortable chairs for the receptionist and the manager from Comfort Creations

#### Office Dividers

Makrolon CS UV Profiled Polycarbonat Sheet in Knyser Green.

Greca Profile

Sheeting in aluminium Framing

Allows privacy while not being isolated from the exhibition area

#### Staff area

#### Description

Open space acting as a relaxation room for the use of the staff.

Can function as a meeting room for the librarian and teachers discussing class outings and required topics

#### Function

Meeting room for exhibition manager with artists in forthcoming exhibitions

Meeting room for exhibition manager with artists in forthcoming exhibitions

Furniture must be moveable to accommodate the all meetings requirements

#### Area

38.7m<sup>2</sup>

#### Lighting

Pendant lighting over the countertop shelving area

#### faciliteise Required

Informal loungers for relaxation

Group meeting tables that can be placed together for larger meetings

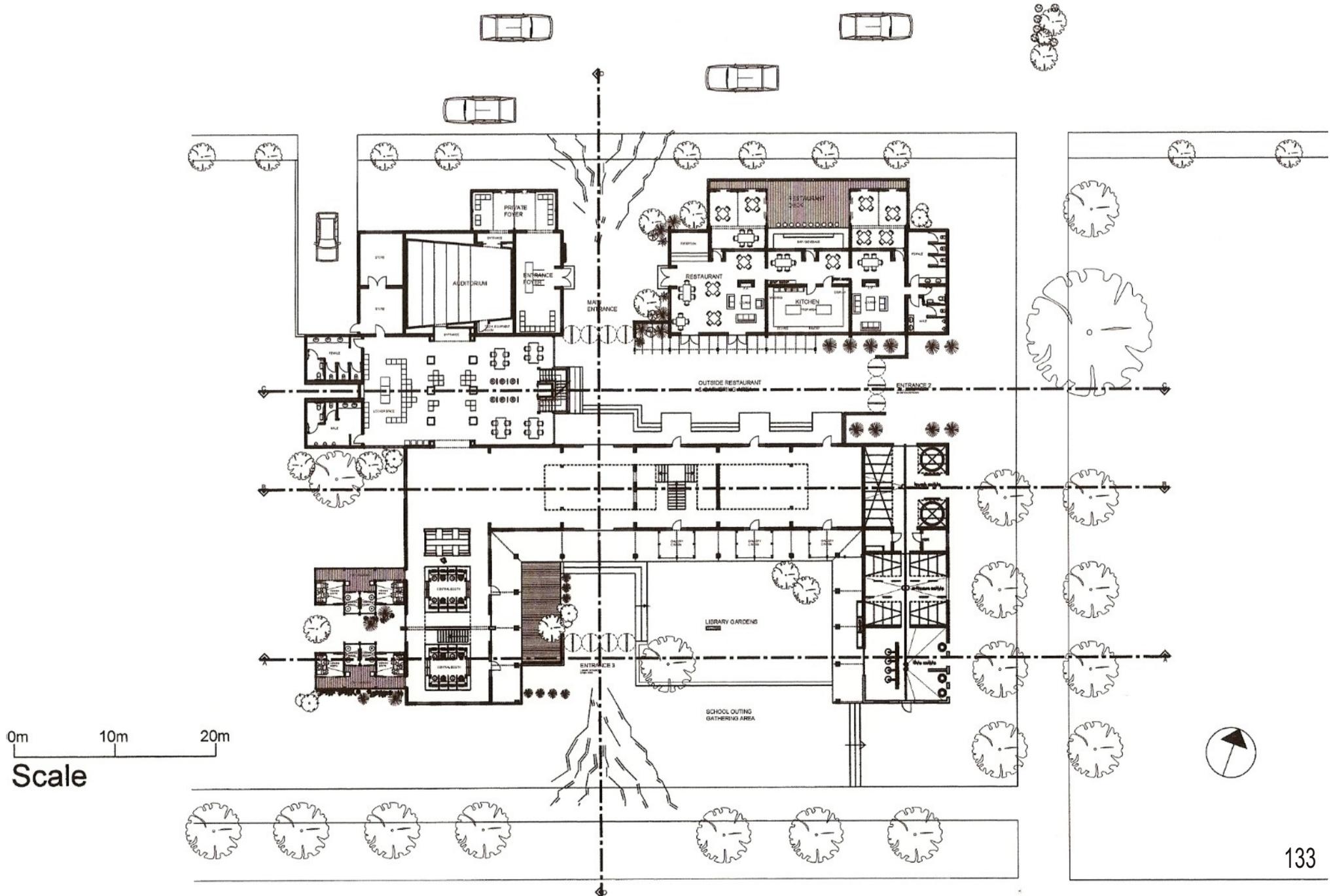
Stackable chairs

Countertop used as serving counter

PG Bison Marine MDF Board with PG Bison Laminates in stripes over the counter

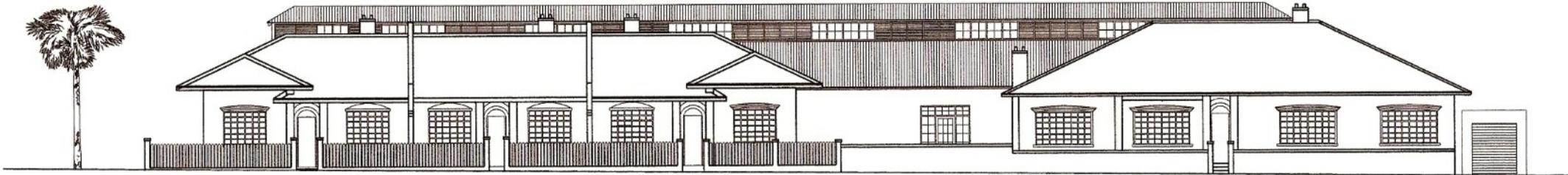
<b>9.1.2. Café and Bar Description</b>	Commercial aspect on the site drawing in clients onto the site Can function independently Facilities are used to serve the needs of the facility in providing needed refreshments/snacks for staff and meetings etc
<b>Function</b>	Café during the day Bar area at night Can be rented out by companies for functions
<b>Area</b>	49.23m <sup>2</sup>
<b>Lighting and Ventilation</b>	Pendant Lighting over the Reception countertop and Bar countertop Downlighters found throughout the rest of the area
<b>Facilities</b>	
<b>Kitchen</b>	Food is not prepared on site therefore needed areas within the kitchen are washing area, fridges, stove area, pantry and display area
<b>Toilets</b>	Male and Female Toilets requirements for the users of the space are three W/C's in the female bathroom one W/C in the male bathroom with two Urinals One disabled toilet is used for both sexes
<b>Bar area</b>	
<b>Sliding Screens</b>	Luxalon Sun Louvre System: type sliding screens Provided with a locking mechanism Moveable bar stools that can handle outdoor conditions
<b>Additional rooms</b>	
<b>Projectors</b>	Rear projectors attached to a track system attached to a track system on the ceiling
<b>Glass- Vu Film</b>	Glass Vu3 GV3F adhesive film attaches to the inside of the Polycarbonate sheeting turning the panel into a display device.
<b>Sliding Screens</b>	Multiwall Polycarbonate sheeting in 'Opal' with aluminium frames the Henderson Sliding Door Gear -Straight Sliding Pac Glass tophung system
<b>Furniture</b>	Tables and chairs moveable to suit the users requirements. Chairs from Sean Williams Outside tables and chairs to be able to handle outdoor conditions Large Umbrellas that are easily opened up and closed to be able to handle outdoor conditions
<b>Receptionist Countertop</b>	Receptionist Requirements - 710mm height (Adler 1999. 2-7) PG Bison MDF Board Plywood with PG Bison Laminates in stripes over the counter

# 10. TECHNICAL DRAWINGS





### 3. TECHNICAL DRAWINGS



NORTH ELEVATION  
(OLD)

0m 10m  
SCALE

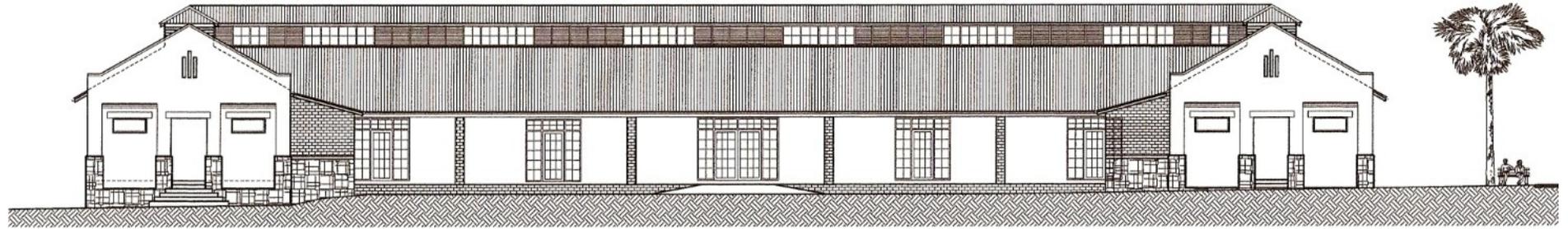


NORTH ELEVATION  
(NEW)

0m 10m  
SCALE

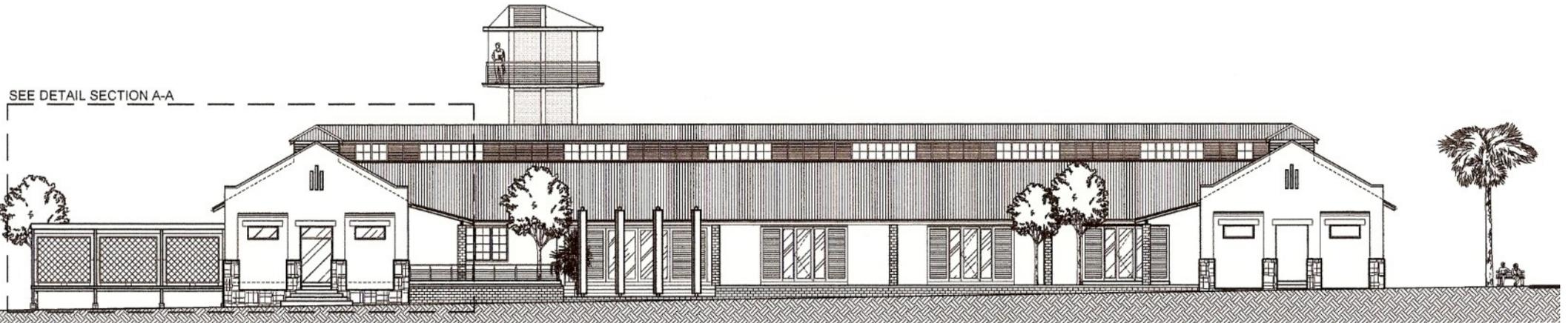


# 10. TECHNICAL DRAWINGS



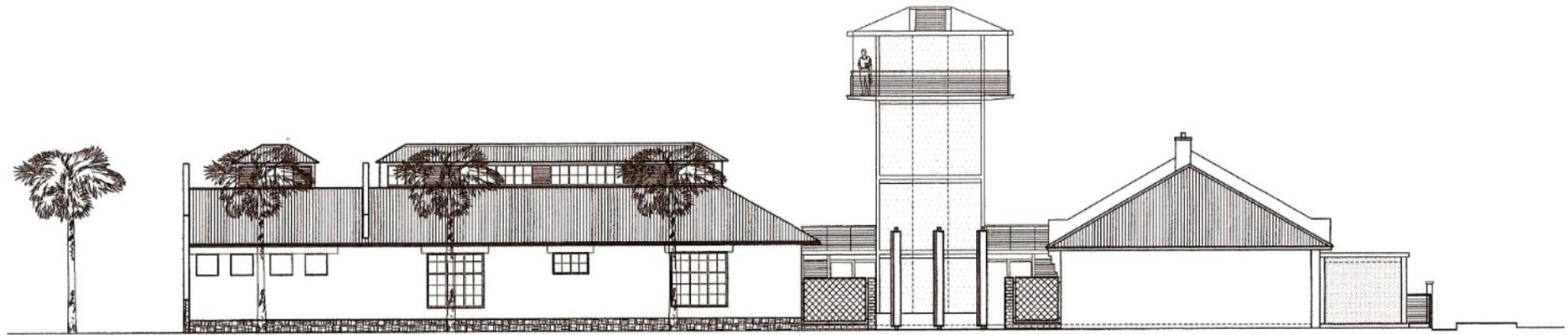
SOUTH ELEVATION  
(OLD)

0m 10m  
SCALE



SOUTH ELEVATION  
(NEW)

0m 10m  
SCALE

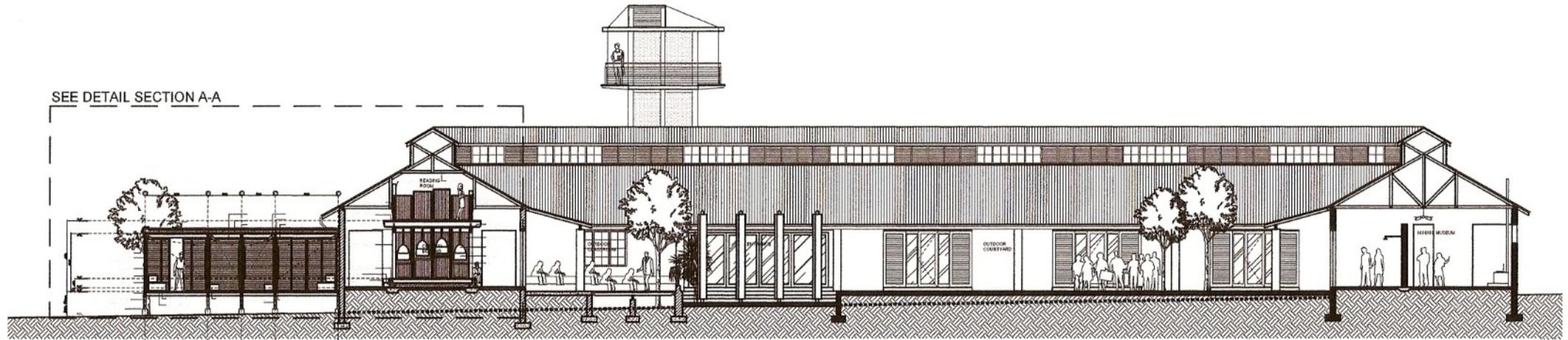


EAST ELEVATION  
(NEW)

0m 10m  
SCALE

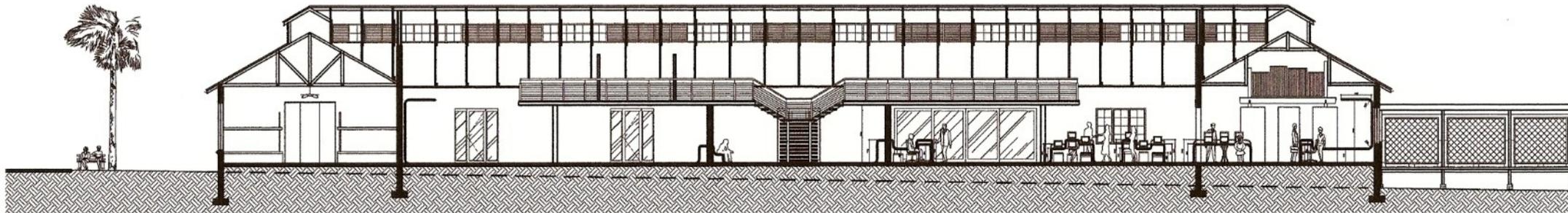


# 10. TECHNICAL DRAWINGS



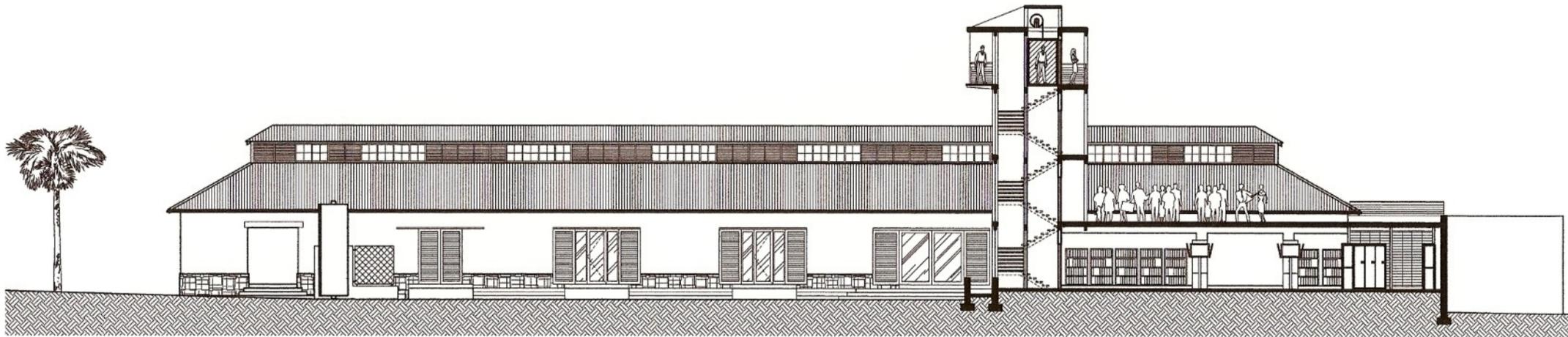
SECTION A-A

0m 10m  
SCALE



SECTION B-B

0m 10m  
SCALE



SECTION C-C

0m 10m  
SCALE

### 13. Reference

- Hadland, A. (2006). Re-visioning Television. Cape Town : HSRC Press.
- Sardar, Z. (2006). Introducing Media Studies . UK: Icon Books.
- Lipman, A. (2003). Architecture on my mind: critical readings in design. Pretoria: Unisa Press.
- Riley, T. (2003). Light Construction. London: Thames & Hudson Ltd.
- Stahl, J. (2005). Dish- International Design for the Home. Priceton Architectural Press: New York.
- Arquine & RM. (2007). Bibioteca Vasconcelos Library. Artes Grafica Palermo: Spain.
- Goldstone, DR C. (2004). Children in Johannesburg. (Electronic version).
- National Government: 1994. State of Education in South Africa. Available from: [www.education.gov.za](http://www.education.gov.za) (Accessed 2 April 2007)
- Vienna Memorandum  
ICOMOS. Available from: [www.international.icomos.org](http://www.international.icomos.org) (Accessed March 2007)
- Outcomes Based Education – Teachers Manual website. 2001. Available from: [www.mml.co.za](http://www.mml.co.za) (Accessed 24 May 2007)
- National Education Statistics. 2005. Available from: [www.education.gov.za](http://www.education.gov.za) (Accessed May 2007)
- Tilley, Les. (2002). Investment Agencies - Blue IQ invests in mega-projects.
- The Johannesburg Development Agency Business Report 2006. Available from: [www.jda.co.za](http://www.jda.co.za) (Accessed March 2007).
- The Greater Newtown Development Business Plan: 2004. Available from: [www.jda.co.za](http://www.jda.co.za) (Accessed March 2007).
- Pallasmaa's, J. (2000). The Architecture of Image: Existential Space in Cinema. Rakennustieto: Helsinki.
- Cooke, (June 2007) History of Migrant Hostels. Architecture Journal of South African Institute of Architects.
- Architecture SA, (Jan & Feb 1996).
- Family Maths. Available from: [www.familymaths.org.nz](http://www.familymaths.org.nz) (Accessed July 2007).
- Parson, H. ( 17 April 2007). Interview with Headmaster of Scotborough High School.
- Lamont (2003). Newtown. Citichat . Available from: [www.joburg.org.za/citichat](http://www.joburg.org.za/citichat) (Accessed April 2007).
- Slessor C 1995  
Masondo state of the nation address
- Trafalgar Property and Financial Services Survey 2003. Available from [www.joburg.org.za/2003](http://www.joburg.org.za/2003) (Accessed July 2007).
- Khanya College Newspaper. (1998) Available from [www.khanyacollege.org.za](http://www.khanyacollege.org.za) (Accessed April 2007).
- Apartheid Museum Homepage. Available from [www.apartheidmuseum.org](http://www.apartheidmuseum.org). (Accessed September 2007).
- Dean, A (2002) Rural Studio – Samuel Mockbee and an Architecture of Decency. Priceton Architectural Press:New York
- Grobbelarr, A. (1992). Building Construction and Graphic Standards. South Africa: Andre Grobbelaar and the Editors.
- Barry, R. (1999). The Construction of Buildings 3 – Single storey frames, shells and lightweight coverings. Blackwell Science Ltd: Oxford.
- Makrolon CS UV (2006). Profile Polycarbonate Sheet. (Brochure)

Henderson Sliding Gear System. Available from [www.pchenderson.com](http://www.pchenderson.com) (Accessed September 2007).

Alyos Technology – advanced ceiling and wall system. Available from [www.alyos.eu](http://www.alyos.eu) (Accessed September 2007).

Cabot Corp. (2006). The new multi-wall polycarbonate daylighting systems.

Duo-guard. Available from [www.duo-gard.com](http://www.duo-gard.com) (Accessed September 2007).

Laserlite. Available from [www.laserlite.com.au](http://www.laserlite.com.au) (Accessed September 2007).

Polycarbonate walling. Available from [www.gallinausa.com](http://www.gallinausa.com) (Accessed June 2007).

Coate, N. (2004). Collidoscope- New Interior Design. Laurence King Publishing Ltd: UK

Mathews, P.J. (2003). Architecture. Visual Books: RSA.

Exhibition Design (2006) Loft publications: Spain.

Glass Vu Available from [www.independentproducts.co.uk](http://www.independentproducts.co.uk) (accessed July 2007)

Industrial Chic- Reverting Spaces (2006). Edizioni Gribaudo: Italy

Ashby, M. & Johnson, K. (2003) Materials and Design – The Art and Science of Material Selection in Product Design. Butterworth Heinemann: UK

Journeys In Film Available from [www.journeysinfilm.org](http://www.journeysinfilm.org) (accessed August 2007).

Hitchen, A (1994) Tele-learning. Penguin. USA

Viljoen, B. (2006). Light on a Hill, Building the Constitutional Court of South Africa . David Krut South Africa

Palladio, A. (2006). Carlo Scarpa: Architecture and Design Rizzoli, USA

Adler, D. (1999). Metric Handbook Planning and Design Data Architectural Press Oxford