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## Appendices



## Appendix A - Backpacker Surveys

### Survey of local backpackers - Cape Town

#### General:

Accommodation Type: Backpackers  
Name: The Purple Turtle  
Location: Long Street, Cape Town  
Date: 17-05-2007

Person interviewed: bar lady (manager)  
Duration of existence: 10 years

#### Facilities:

No of Rooms: 4  
Room Type: dormitories  
Bathrooms: 1  
  
Restaurant on site: yes + 2 bars (open to public)  
Breakfast included: no  
Self-catering kitchen: no

#### Occupancy:

Current occupancy: 100%  
Busiest time of year: 95% of year

#### Client Profile:

Gender: mixed  
Age: mixed (many 20 year-olds)  
Place of Origin: Sweden, mixed  
Purpose of visit: tourism  
Dislikes: crime  
Likes: good location, convenient, culture  
Common sightseeing destinations: Green point  
Other destinations is SA: unknown

#### Other:

Transportation: meter taxi  
Success of backpackers: location

#### General:

Accommodation Type: Backpackers  
Name: Long Street Backpackers  
Location: Long Street, Cape Town  
Date: 17-05-2007

Person interviewed: barman (UK)  
Duration of existence: 14-15 years

#### Facilities:

No of Rooms: 14  
Room Type: double/ twin rooms and dormitories  
  
Restaurant on site: no (only a pub)  
Breakfast served: no  
Self-catering kitchen: yes

#### Occupancy:

Current occupancy: 85%  
Busiest time of year: weekends, summer

#### Client Profile:

Gender: mixed  
Age: 18-28 years  
Place of Origin: United Kingdom, Holland  
Purpose of visit: tourism  
Dislikes: -  
Likes: atmosphere  
Common sightseeing destinations: Cape Point, Table Mountain, Wine regions Shark Diving  
Other destinations is SA: East Coast (Johannesburg only as a point of departure)

#### Other:

Transportation: rikis, walking, taxis (public)  
Success of backpackers: location



## General:

Accommodation Type: Backpackers  
Name: Cat & Moose Backpackers  
Location: Long Street, Cape Town  
Date: 17-05-2007

Person interviewed: Manager (7 years)  
Duration of existence: 9 years

## Facilities:

No of Rooms: max capacity 35 people  
Room Type: mixed dormitories

Restaurant on site: no  
Breakfast served: no  
Self-catering kitchen: yes, two kitchens

## Occupancy:

Current occupancy: winter: 20-60%, summer 100%  
Busiest time of year: Summer

## Client Profile:

Gender: mixed  
Age: mixed  
Place of Origin: mixed  
Purpose of visit: mixed  
Dislikes: atm crime  
Likes: City of Cape Town  
Common sightseeing destinations: Stellenbosch, Table Mountain, V&A Waterfront  
Other destinations is SA: Garden Route, Kruger Park, Namibia

## Other:

Transportation: walk  
Success of backpackers: transportation & location

## General:

Accommodation Type: Backpackers  
Name: Carnival Court Backpackers  
Location: Long Street, Cape Town  
Date: 17-05-2007

Person interviewed: Manager  
Duration of existence: 6 Years

## Facilities:

No of Rooms: 27  
Room Type: mixed

Restaurant on site: no (only bar)  
Breakfast served: no  
Self-catering kitchen: yes

## Occupancy:

Current occupancy: 70%  
Busiest time of year: Dec-April

## Client Profile:

Gender: mixed  
Age: 22-30 years  
Place of Origin: Germany, United Kingdom, Holland  
Purpose of visit: tourism  
Dislikes: -  
Likes: location  
Common sightseeing destinations: Table Mountain, Cape Point  
Other destinations is SA: Garden Route

## Other:

Transportation: public taxi, tours, walk, hire a car  
Success of backpackers: location (change of paving of the street)



## Survey of local backpackers - Pretoria

### General:

Accommodation Type: Backpackers  
Name: North South Backpackers  
Location: Hatfield  
Date: 13-03-2007

Person interviewed: Manager  
Duration of existence: -

### Facilities:

No of Rooms: max capacity 35 guests (including camping)  
Room Type: coming, dorms & doubles

Restaurant on site: only a bar  
Breakfast served: on request only  
Self-catering kitchen: -

### Occupancy:

Current occupancy: 20%  
Busiest time of year: 65% capacity, slow during: 15 April-15 June  
and 15 December-15 January

### Client Profile:

Gender: mixed (no single females)  
Age: 26-41  
Place of Origin: Europe  
Purpose of visit: internships/ exchanges  
Dislikes: safety  
Likes: within walking distance of shops, clubs and  
bars (Hatfield), atmosphere  
Common sightseeing destinations: Soweto & Apartheid Museum

### Other:

Transportation: shuttle bus/ walking (very difficult)

### General:

Accommodation Type: Backpackers  
Name: Kia Ora Backpackers  
Location: Pretoria City Centre  
Date: 24-04-2007

Person interviewed: Receptionist  
Duration of existence: -

### Facilities:

No of Rooms: 7 (max 20 guests)  
Room Type: mixed

Restaurant on site: yes  
Breakfast served: no  
Self-catering kitchen: no

### Occupancy:

Current occupancy: low  
Busiest time of year: November

### Client Profile:

Gender: mixed  
Age: -  
Place of Origin: Australia, New Zealand, England and local  
Purpose of visit: -  
Dislikes: safety  
Likes: -  
Common sightseeing destinations: Victoria Falls, Kruger Park, Soweto, Union Buildings, Melrose House

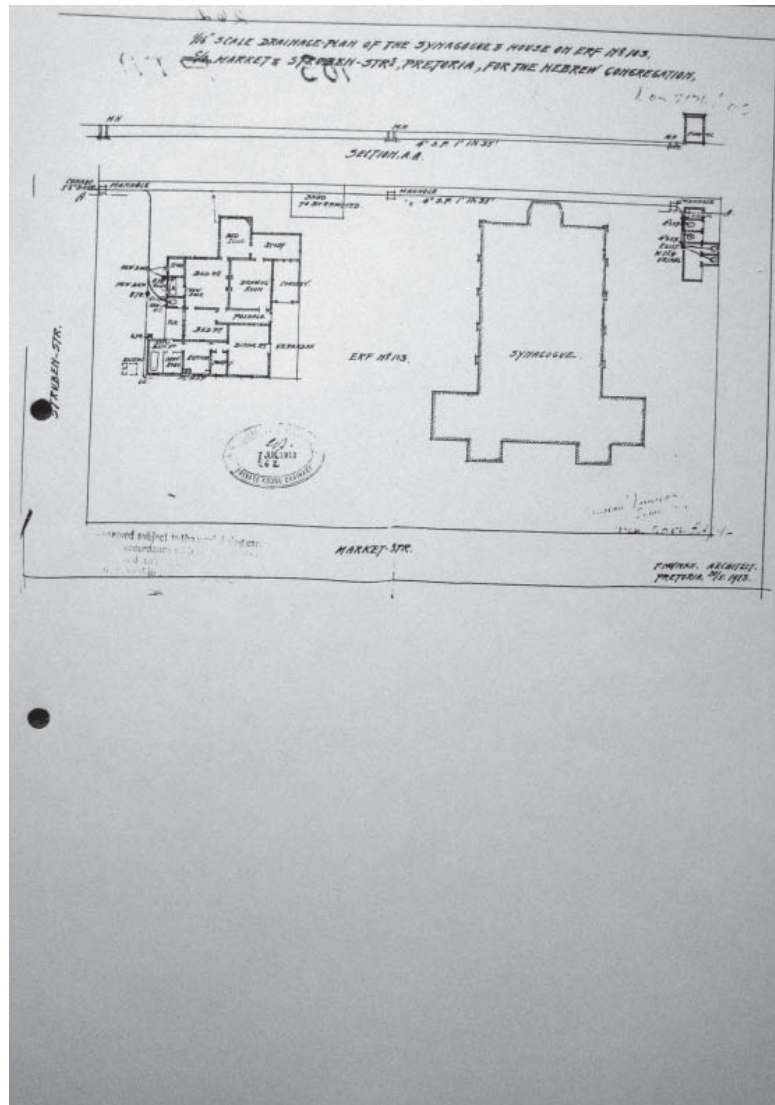
### Other:

Transportation: walk  
Success of backpackers: central location



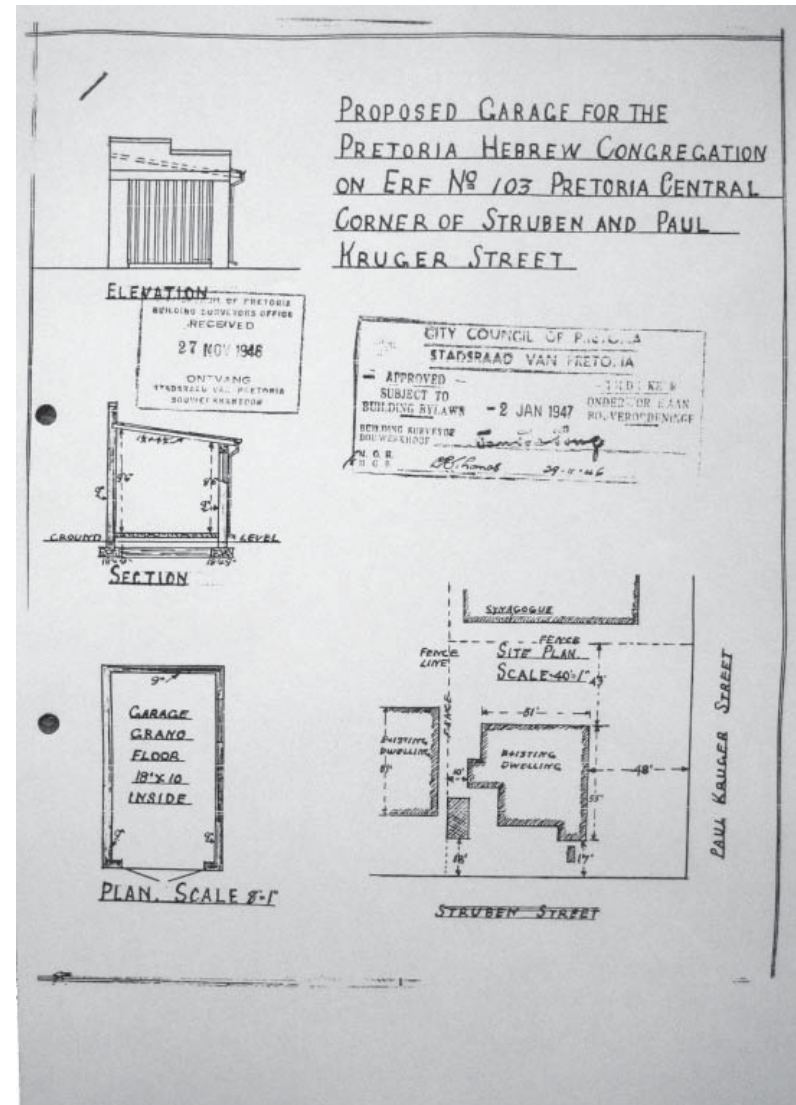
## Appendix B

## Drainage Plan of the Minister's House



## Appendix C

## Proposed Garage for the Hebrew Congregation







## Appendix D

### Proposals for the old Synagogue

#### Nigel Vos and Associates<sup>1</sup>

In 1995, the DPW commissioned an evaluation of the building. Nigel Vos and Associates completed the evaluation and presented the department with a proposed function for the building. The proposal included the reconstruction of the Old Synagogue, which was to function as a “theatre in the round”, with the addition of several functional buildings including an Apartheid museum located south of the synagogue.

#### Retha MC Basson's Dissertation<sup>2</sup>

A year later, Retha MC Basson proposed a Culture and Conservation Centre in fulfilment of her B (Architecture) at the University of Pretoria. Her proposal consists of training and educational facilities, a restaurant and coffee shop, in addition to a cultural museum to be housed in the original synagogue building. While the focus is on the proposed additional buildings, the restoration of the synagogue to its original state is central to the design. The proposal includes the documentation and subsequent removal of the additions made prior to its function as a ‘special’ Supreme Court.

#### DPW's Report on the Development Possibilities and Sustainable use of the ‘Old Synagogue’ in Paul Kruger Street<sup>3</sup>

According to Buntman, the DPW released a third proposal in 2000 titled Report on the Development Possibilities and Sustainable Use of the Old Synagogue in Paul Kruger Street which evaluated previous proposals and suggested that the synagogue should be converted into a museum with a “strong tourist orientation”. According to the DPW assessment, the building could become an attractive focal point in the city centre by “linking physical features to significant past events”. By restoring the building, one could create a new interest in its historic significance and enhance public awareness.

#### Charisse Levitz proposal for the SAJBOD<sup>4</sup>

A further proposal was commissioned by the SAJBOD between 2000 and 2003. According to Buntman, the proposal, undertaken by Charisse Levitz, consisted of a ‘modern museum’ which is to reflect on Jewish history in Pretoria within a greater South African context (Buntman 2006:9).

#### Estee Schütte's Dissertation<sup>5</sup>

Finally, while not directly addressing the Old Synagogue, in 2006, Estee Schütte, in fulfilment of her M (Architecture) at the University of Pretoria, proposed a boutique hotel on the site south of the synagogue. The proposal caters for recreational activities spilling out onto a public space situated between the proposed hotel and the Old Synagogue.

#### Alex Wapnick's personal Interests<sup>6</sup>

According to various sources, a Jewish property owner in Pretoria, Alex Wapnick is interested in donating a substantial amount towards the restoration of the synagogue, with the subsequent conversion of the building into a centre for the disadvantaged urban population. Buntman points out that the proposal includes a soup kitchen and facilities for disadvantaged children. This centre would be run by the Jewish community, which would work hand in hand with local government departments.

#### Barbara Buntman's “think tank”<sup>7</sup>

At this point in time, Barbara Buntman, along with a small team of people, has set up a ‘think tank’ to explore possible and suitable options for the Old Synagogue and the surrounding sites.

1. NIGEL VOS & ASSOCIATES ARCHITECTS. 1995. Department of Public Works: Restoration of Old Jewish Synagogue. Pretoria: Department of Public Works

2. BASSON, R.M.C. 1996. Culture & Conservation Centre. B (Architecture). Pretoria: University of Pretoria

3. Buntman 2006:9

4. LEVITZ, C. c2003. Proposal for the Development of the Old Synagogue, Paul Kruger Street, Pretoria. MA Anthropology. Johannesburg: Pretoria Council of the South African Jewish Board of Deputies





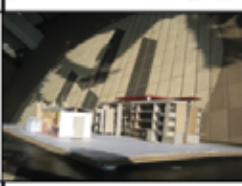

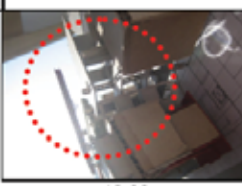











5. SCHÜTTE, E. 2006. Glass Roof Boutique Hotel: An urban Catalyst for the City of Tshwane. M Architecture Prof. Pretoria: University of Pretoria










6. including Buntman 2006:9













7. BUNTMAN 2007: personal interview







## Appendix E - Sun Study

### Technical Investigation





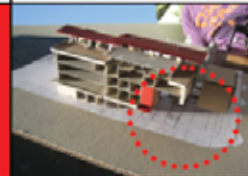









OPTION 01 = existing scenario					
Date	Time	Comment	Date	Time	Comment
21-Dec	8:00	MID SUMMER	21-Jul	8:00	MID WINTER
		morning sun penetrates into southern square (shined right through site onto panagos building (does not restrict lighting of other buildings))			minimal light penetration onto square
		staircase is illuminated			
		light shines through onto circulation bridges but does not penetrate further onto northern side of building			northern facade exposed to morning light
	12:00			12:00	PROBLEM SCENARIO
		minimal shading on eastern facade			minimal direct light on southern square (midday summer)
		partial shading on square			
		north-western corner: pleasantly shaded in midday in summer			northern facade has good exposure to northern light









16:00		16:00	
	southern square is partially shaded from western sun		no shadow cast on synagogue but square remains shaded
			exposed north-western façade with minimal light penetration into public square (some light penetrates into interior spaces)
	western restaurant/ shop requires shading (hot on late summer afternoon)		see above
18:00			
	Synagogue not shaded (highlighted by late afternoon sun (when square is in use))		
	Exposed western façade (but well shaded interior)		
	Late summer afternoon shading of square		

OPTION 02 = removal of first block on northern of facade					
Date	Time	Comment	Date	Time	Comment
21-Dec	8:00		21-Jul	8:00	
					more light on north-western corner of site
		no changes from scenario 01			eastern façade exposed to morning light but no light on southern square
					morning light penetrates deep into atrium (east west facing)
12:00			12:00		
		no changes from scenario 01			more exposed north-western corner in winter-midday (from option 01)
		good light penetration into atrium			
					










16:00			16:00		
					no direct light
		no changes from scenario 01			
		shaded interior			






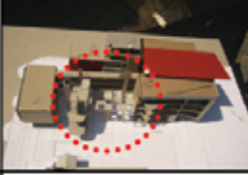
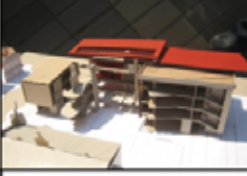













OPTION 03 removal of 2 blocks on northern façade					
Date	Time	Comment	Date	Time	Comment
21-Dec	8:00		21-Jul	8:00	
					minimal morning sunlight on public square
		no change from Scenario 01			morning light shines right through to Paul Kruger Street on north-western corner of site
					pedestrian view from Paul Kruger Street
12:00			12:00		
		no change from Scenario 01			no change from Scenario 01
		more light on north-western corner of site- poorer summer scenario than option 01			more light on north-western corner (afternoon sun penetrates deeper into interior but does not reach southern square
		minimal light penetration			no change from Scenario 01

	minimal light penetration		no change from Scenario 01
16.00		16.00	
			
	no change from Scenario 01		more light on north-western corner (afternoon sun penetrates deeper into interior but does not reach southern square)
	limited direct light on southern square- more afternoon light would be desirable		good afternoon light on circulation routes/ bridges



INVESTIGATION					
Date	Time	Comment	Date	Time	Comment
21-Jun	16:00				
					
removal of top floors					
		deeper light penetration into southern square			
removal of top floors + roof 01		deeper light penetration into southern square			
removal of top floors + roof 01 + staircase roof					

21-Dec	16.00				
					
					
					
					
Extended roof - SUMMER		no impact on public square in summer but deeper penetration into atrium and onto circulation bridges			
Extended roof - SUMMER					

Extended roof - WINTER		extended roof - minimal impact			
Extended and moved forward roof - WINTER 12:00		Maximum direct light on public square			
Extended and moved forward roof - WINTER 16:00					



## Appendix F

### Baseline Document

In fulfillment of the project, a baseline document was submitted in March 2007. The baseline document appears as it did at the time of submission.

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Table 15.04 Unit Comparison

## Introduction

The site is located in the Pretoria, north of Church Square on Paul Kruger Street directly adjacent to the Old Synagogue built in 1897. The project aims to address the lack of temporary accommodation in Pretoria by providing low-cost temporary accommodation mainly for travelers, researchers and others in need of affordable accommodation in the city centre. The building will include other functions such as varying degrees of more permanent accommodation (such as penthouse apartments) as well as income generation conference facilities and retail/ entertainment businesses.

The objective of the project is act as a catalyst for regeneration in the area by introducing activity to the site through increasing numbers of visitors to the site, users of the site and creating interest in the site through public art, heritage and architecture. This document sets out the performance criteria of the project in terms of building type standards for similar buildings.



## Performance Criteria

On Tuesday, 20 February 2007 at 19:00<sup>1</sup> the “2010 Imperative/ 2030 Challenge: Global Warming, Climate Change and the Built Environment” lecture was broadcast live worldwide. The speakers dealt with three different aspects of climate change and the impact that local buildings have on the global environment. Dr. James Hansen, Director of NASA Goddard Institute for Space Studies spoke on “A threat to the planet”, Edward Mazria AIA, senior principal of Mazria Inc and senior analyst for Southwest Climate Council presented the report titled “Resuscitating a Dying World: 2030 Challenge/ 2010 Imperative” while Chris Luebeckman, Director of the Global Foresight and Innovation Initiative and ARUP presented the inspiring lecture “Doing is Believing”.<sup>2</sup>

The presentations targeted specifically architects, engineers and others that are involved with decision-making in the construction industry with the objective of raising awareness of the problem while providing steps towards attaining the goals. The goals as set out in the 2030 °Challenge are as follows:<sup>3</sup>

The fossil fuel reduction standard for new building is reduced as follows:

- 60% in 2010
- 70% in 2015
- 80% in 2020
- 90% in 2025
- Carbon neutral in 2030

This goal suggests that by 2030 all buildings should be using no fossil-fuel, nor greenhouse gas emitting energy to operate. The focus therefore is on high-performance design.

Furthermore, steps were presented on how to begin working towards an achieving these goals:

- All new buildings, developments and major renovations should be designed to meet a fossil fuel, greenhouse gas (GHG) emitting, energy consumption performance standard of 50% of the regional (or country) average for that building type.

- At a minimum, an equal amount of existing building area be renovated annually to meet a fossil fuel, greenhouse gas (GHG)-emitting, energy-consumption performance standard of 50% of the regional (or country) average for that building type (50% of the regional average through innovative design strategies, the application of renewable technologies and/or the purchase - 20% maximum – of renewable energy).

The emphasis of the 2010 Imperative is on ecological literacy in design education. Design schools are encouraged to lead the way by converting their buildings to carbon neutral environments through sustainable design strategies, generating on-site renewable power and purchasing renewable power.

### Project performance aims

Architects have been placed in a position where they are able to address the growing environmental concerns. Buildings worldwide are major energy consumers due to the embodied energy of the materials specified right through to the running and maintenance of buildings. The objective is to reduce the consumption of energy of the building (using the SBAT tool) relative to other similar buildings by using passive systems wherever possible. While the presentation targeted wealthy first world countries, the principles are applicable in South Africa.

1. live webcast in room 3-3 of the Architectural Department at the University of Pretoria, in South Africa.

2. The 2010 Imperative Global Emergency 12-03-2007: [http://2010imperative.org/2010\\_imperative.html](http://2010imperative.org/2010_imperative.html)

3. The 2030 Challenge 12-03-2007: <http://2010imperative.org/2030challenge.html>



## The SBAT Evaluation Tool

The SBAT (Sustainable Building Assessment Tool) as designed by Jeremy Gibbert, allows for the evaluation of the performance of a building in terms of its sustainability. It covers social, economic and environmental aspects. The purpose of the baseline document is to set down performance criteria for the building to be designed. This initial application of the tool has been set out to identify performance goals and expectations. The tool will be tested against the final result.

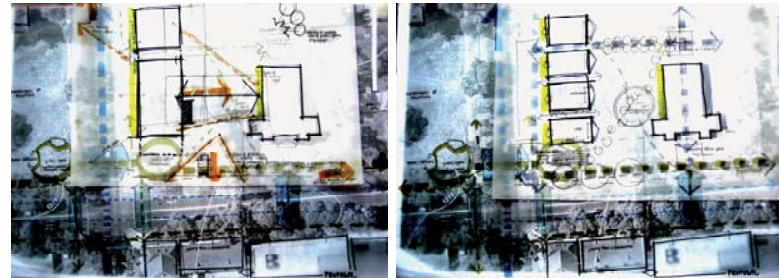


Figure 15.1 & 15.2 Sketch: Site Analysis

### Social Issues:

#### Occupant Comfort

- Lighting: exploitation of northern façade for natural lighting while avoiding unnecessary heat gain (although thermal gain is desirable in winter) and glare in the building. Southern façade maximises views of the Old Synagogue and allows for indirect natural light (large windows)
- Ventilation: Natural as far as possible
- Noise: 40bd sound insulation from traffic on Struben Street. Avoid noise transmission from inside the building (stairways, service ducts etc)
- Views: South: onto public square and Old Synagogue  
North: Jacarandas on Struben Street and future developments on open land  
West: View of Panangos Building
- Access to green: public space (soft landscaping) and increasing green courtyards and balconies with increasing height in building

## Inclusive Environments

- Pubic Transport: South Africa has a serious lack of public transport with the bulk of it linking the townships and the city in the form of railways lines and a network of taxis. Currently, taxis operate on Struben and Paul Kruger Streets but usage thereof is limited to one population group. The vision for the city in terms of the urban framework<sup>4</sup> is to 'pedestrianise' Paul Kruger Street while discouraging the use of private transportation. The framework suggests the introduction of a tram system and the widespread use of bicycles. The intersection of Struben and Paul Kruger Street becomes a tram interchange node.
- Routes/ changes in level/ edges: inclusive design in terms of NBR
- Access:<sup>5</sup>

### Current

- lack of public toilets in Pretoria north. Provision of accessible public toilets on public square.
- lack of Public space in Pretoria. Provision of public space
- Lack of access and acknowledgment of SA heritage: most heritage buildings are inaccessible to the public. Provision of access and education of heritage with regard to the Old Synagogue. Allow for experience of heritage and a sense of place.
- Post office: Head office on church square
- Retail: Church Street, Van der Walt Street and Sammy Marks Square are essentially shopping boulevards and squares
- Childcare: There are several schools located in the area
- Banking: Bank branches on Vermeulen Street and Church Street
- Telephone facilities: informal telephone facilities on Church Square and at the post office
- Email/ photocopying: none
- Residential: sparsely scattered throughout the city

4. refer to p15 for more information regarding the proposed group framework

5. Adler (1999: Part 35)

### Proposed

- Entrance path gateways minimum 850 mm clear width
- Dropped kerbs where main paths meet roads and drives
- Dwelling approaches level or gently sloping
- Lifts, where provided, to be sized for wheelchair access
- Main paths minimum 900 mm wide, with firm, even surface
- Level area at access point, at threshold level
- Entrance door flush threshold (i.e. max. 15 mm upstand)
- Entrance door minimum clear opening width 800 mm
- Internal doors minimum clear opening width 750 mm
- Corridors at entrance level wide enough for wheelchair access
- Staircase suitable for future stair-lift (in some areas), and
- entrance-level WC and basins in units smaller than 5 persons

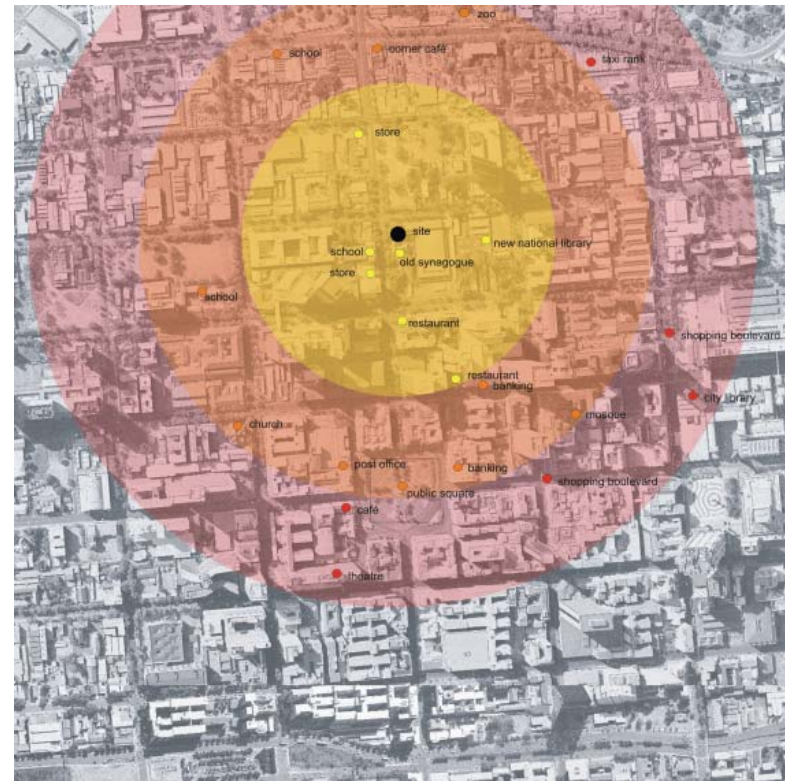


Figure 15.3: Current facilities within walking distance of site

## Participation and Control

- Environmental Control: Users can easily adjust the interior environment (ventilation, lighting etc) aided by passive shading which allows thermal gain in winter.
- User Adaptation: furniture and fittings are based on modular dimensions to allow for maximum flexibility of space
- Social Spaces: communal facilities (kitchens, balconies, courtyards and public space) allow for easy informal interaction between guests
- Layers of space usage:

Public- high movement along main pedestrian routes (limited interaction- destination orientated traffic)

Public- ground floor retail and public recreational space (high interaction)

Semi-public- Interior spaces for all building users (including restaurant guests)

Semi-private- courtyards, balconies and recreational spaces on individual floors catering for a limited number of people

Private: individual rooms

Furthermore, the building provides access to retail including services, conference facilities and leisure and public recreational facilities

- Community involvement: Due to the nature of the process of urban regeneration, the building process has to accommodate community involvement in order to successfully integrate the building and the introduced functions into the urban environment. Due to the nature of the building and current lack of community in the area, it is impossible to allow user-participation with exception of the building owner, apartment owners and management teams.

- Collaborative partnership: with SAHRA to encourage access, education and integration of South Africa's political and architectural heritage into the urban environment

## Education, Health and Safety:

- Education: access to support facilities and access to the Old Synagogue (interactive education through experience)
- Health: access to first aid equipment; designated smoking areas away from air intakes
- Security: clear visual links, safe approach to building, exterior lighting Implementation of crime prevention principles:<sup>6</sup>

- surveillance and visibility
- territoriality
- access and escape routes
- image and aesthetics
- target hardening

## Economic Issues

### Sources

The economy of an area can be stimulated by building that use and develop social skills.

- Local contractors: 80% of construction to be carried out by contractors within 40km of the project
- Local materials: 80% of materials to be sourced within 200km of the site
- Local component manufacture: 80% to be manufactured within 200km of the site
- Outsource opportunities: catering, cleaning, and small retail opportunities to be carried out by small emerging companies (this could create opportunities for BEE operators in line with government policies)
- Tenant restrictions: encourage local emerging businesses and promote a sense of place through local commercial activities (no franchises)
- Repairs and maintenance: carried out by contractors within 200km of the site

6. Kruger et al (2001:33)

### Efficiency Use

- Usable Space: WCs, circulation and plant rooms etc not more than 20% of building

- Occupancy goals

Good space management and 'hot-desking' operation of facilities allows greater occupancy of building. Facilities should be available for extended working hours to accommodate a greater degree of functions which simultaneously contributes to on-site activity

- a Penthouse Apartments: 100% occupancy (5% vacancy)- annual contract
- b Temporary Residency: 100% occupancy (15% vacancy)- annual contracts
- c Temporary Accommodation: 100% occupancy (15% vacancy-seasonal)
- d Other facilities (conference room etc): 30h/week for all living/working units (allows for flexible use)

### Adaptability and Flexibility

Building must be able to accommodate change in a sustainable manner (easy to retrofit, and accommodate and new function)

- Vertical dimension: minimum 3m floor to ceiling height
- Internal partitions: non-load bearing to accommodate change (units designed according to open building principles to accommodate change in unit size easily)
- Services: easy access to electrical, telephonic and internet connections (wireless throughout building- and use of suspended floors/ ceilings where necessary)

### Ongoing Costs

- Maintenance: easy access for cleaning (i.e. no cherry pickers to clean windows) and repairs (light bulbs)
- Cleaning: hard wearing in high traffic areas
- Security: limit requirement and cost of security through design
- Disruption and downtime: limited effect on user

### Capital Costs

- Consultant fees
- Build-ability
- Construction
- Shared costs
- Shared arrangements

### Environmental Issues

#### Water

- Rainwater (including stormwater): harvested, stored and used
- Water-use: efficient devices used throughout the building
- Grey Water: recycled where possible
- Surface materials: absorbent outdoor surfaces (soft landscaping) to reduce stormwater run-off and watering requirements
- Planting: maintain existing trees and plant only indigenous tree

#### Energy

- Location: within 400m of public transport (the only form of public transport is taxis; vision incorporates a public transport network<sup>7</sup>)
- Ventilation: Passive ventilation (mechanical only in limited parts of the building e.g. conference centre)
- Heating and cooling: passive (through orientation and shading devices)
- Appliances and fittings: energy efficient lighting and appliances (80% of light fittings to be energy efficient- i.e. fluorescent)
- Use energy generated from renewable sources wherever possible (solar-panels)
- Key tag activated master switches in guestrooms to save energy
- The use of bicycles and walking is encouraged to reduce carbon emissions of private vehicles
- Locally grown food served in restaurants
- Paper is recycled and used for stationary (on sale at site)

7. refer to p15 for more information on the proposed public transport network of the proposed group framework

## Renewable energy

- Toxic waste: safe disposal of printer toners and other toxic waste
- Inorganic waste: sorted
- Organic waste: composted (on site if possible)
- Sewerage: operates on city system
- Construction waste: minimised and re-used on site (damaged bricks and tiles)

## Site

- Brownfield site: yes
- Neighbouring site: prevent shading of other building (Synagogue must have northern light to shine through stain glass windows and possible opened façade)
- Vegetation: extensive use of vegetated courtyards, window boxes & roof gardens
- Landscape inputs: avoid artificial inputs (e.g. fertilizers)

## Materials and Components

- Embodied Energy: 80% of building made from low embodied energy components (e.g. concrete structure)- difficult to measure
- Materials: 80% made from renewable resources
- Manufacturing processes: avoid processes that release greenhouse gases- difficult to monitor
- Recycled components: 10% of materials and components from recycled resources
- Construction processes:<sup>7</sup> minimally impact the environment (protect roots from existing trees during construction; avoid drainage of toxic fluids etc).

## Design Factors

### Location

- Location on major envisioned pedestrian route
- Situated on historical north south axis of the city
- Addresses lack of public space, public facilities and lack of accommodation in Pretoria city centre

### Urban Regeneration

- Project promotes urban regeneration on the site (catalytic effect on surrounding areas) by activating the site and creating interest in the site

### Heritage

- Project should promote awareness of architectural and political heritage
- Project allows for education and appreciation of local heritage

## Factors to consider<sup>9</sup>

### a Is the building physically right for the location?

The building is located north of church square, the north being the more neglected portion of the city. The site is on the threshold between active functioning part of the city (closer to Church Square) and the northern more neglected part. It is at this point that the building heights change from single storey in the north to multi-storey. Currently this point functions as a gateway into the city from the north. It is located in close proximity to the physical city centre, forms part of the inner city and would fulfil functions currently lacking in the north.

### b Does the building address the amount and timing of visitors to the site?

Currently there is little activity on site beside Struben Street Motors that displays second hand cars on the corner portion of the site. The project seeks to attract activity to the site through urban regeneration by means of public art etc. The project seeks to promote Pretoria as a tourist destination (as well as a starting point for longer-distance tours in and around

8. Sorvig & Thompson (2000: 29-195)

9. Questions taken from: Factors to consider in a development proposal 12-03-2007: [http://www.twinshare.crctourism.com.au/factors\\_to\\_consider.htm](http://www.twinshare.crctourism.com.au/factors_to_consider.htm)

southern Africa. It aligns itself with the Tshwane Tourism Awards Programme for 2006/7. Current figures of tourists passing through Pretoria are unknown.

c Is this a good use of the site or building as opposed to other possible uses?

Currently Struben Street Motors is looking at purchasing a portion of the site to display second hand vehicles. The city council is proposing a large L-shaped public square to surround the Synagogue. The objective of the project is to propose a better suited function to the site while simultaneously allowing for public space.

d How will the character of the site be preserved?

The Synagogue's minister's house, previously located on the site as well as the religious, political and architectural heritage of the site is to be preserved and emphasised as a method of attracting activity to the site and creating a place-specific experience for the visitor to the site.

e What is the potential value to the local community in terms of employment and increased spending?

While the project provides inner city housing and work opportunities on a very small scale, it addresses current lack of facilities in the city and acts as a catalyst for other activities (housing, retail etc opportunities) by introducing people to the site beyond standard working hours (increasing safety by introducing activity).

f Is the proposal part of a longer term development plan?

The project is a catalyst for the area and promotes pedestrian activity in the area. The goal is to encourage urban-regeneration in the northern part of the city.

g What is the likely demand for the facility and what recreational value will it offer visitors?

The demand for inner city housing, accommodation and the lack of public facilities will all be addressed on a small scale. The project focuses on providing temporary accommodation. It has a high recreational value for

both visitors and residents of Pretoria.

h Do the local people support the proposal and will they be able to make use of the facility?

There is currently not much support as this part of the city is increasingly neglected as one moves further north. Local people (including schools, businesses etc) are encouraged to make use of the facilities.

i What plans have been made for subsequent management and maintenance of the site?

To be confirmed

j Will local materials and skills and expertise be used?

Yes

k Does the design reflect the character of the area- is it compatible with the local climate, topography and materials?

Yes

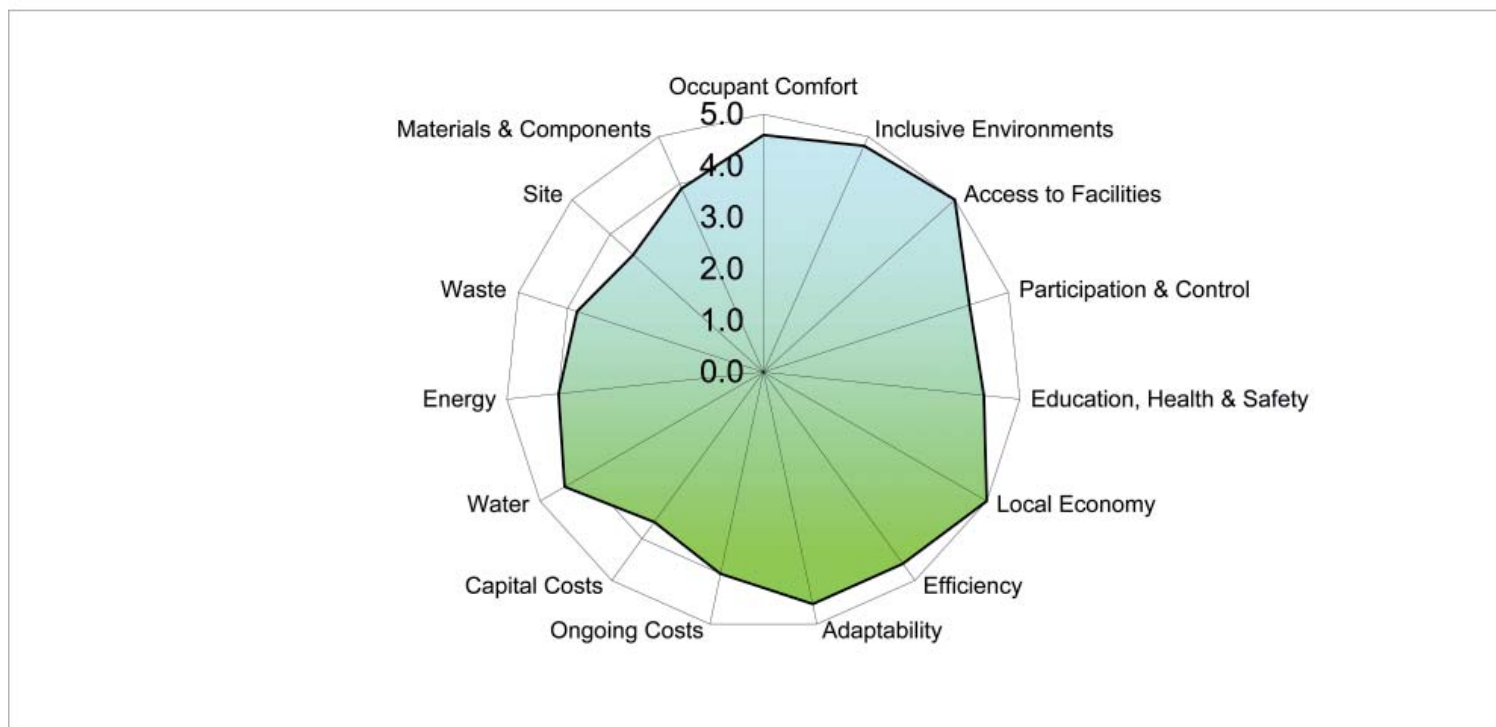
l Is provision made for people with disabilities?

Yes (accessibility as required in NBR)



## SUSTAINABLE BUILDING ASSESSMENT TOOL (SBAT- P) V1

PROJECT	ASSESSMENT
Project title:	Date:
Location:	Undertaken by:
Building type (specify): Residential/Community/Commercial	Company / organisation:
Internal area (m2):	Telephone: Fax:
Number of users:	Email:
Building life cycle stage (specify): Design/Construction/Operation	



Social	4.6	Economic	4.4	Environmental	3.9
Overall		4.3			

Figure 15.04 Sustainable Building Assessment Tool Results Page



## Building Performance - Social

Criteria	Indicative performance measure	Measured	Points
<b>SO 1 Occupant Comfort</b>		<b>Explanatory notes</b>	<b>4.6</b>
SO 1.1 Daylighting	% of occupied spaces that are within distance 2H from window, where H is the height of the window or where there is good daylight from skylights	80	0.8
SO 1.2 Ventilation	% of occupied spaces have equivalent of opening window area equivalent to 10% of floor area or adequate mechanical system, with unpolluted air source	100	1.0
SO 1.3 Noise	% of occupied spaces where external/internal/reverberation noise does not impinge on normal conversation (50dbA)	80	0.8
SO 1.5 Thermal comfort	Temperature of occupied space does not exceed 28 or go below 19°C for less than 5 days per year (100%)	100	1.0
SO 1.5 Views	% of occupied space that is 6m from an external window (not a skylight) with a view	100	1.0
<b>SO 2 Inclusive Environment</b>		<b>Explanatory notes</b>	<b>4.8</b>
SO 2.1 Public Transport	% of building (s) within 400m of disabled accessible (20%) and affordable (80%) public transport	100	1.0
SO 2.2 Information	Comprehensive signage provided (50%), Signage high contrast, clear print signage in appropriate locations and language(s) / use of understandable symbols / manned reception at all entrances (50%)	100	1.0
SO 2.3 Space	% of occupied spaces that are accessible to ambulant disabled / wheelchair users	80	0.8
SO 2.4 Toilets	% of occupied space with fully accessible toilets within 50m along easily accessible route	100	1.0
SO 2.5 Fittings & Furniture	% of commonly used furniture and fittings (reception desk, kitchenette, auditorium) fully accessible	100	1.0
<b>SO 3 Access to Facilities</b>		<b>Explanatory notes</b>	<b>5.0</b>
SO 3.1 Children	All users can walk (100%) / use public transport (50%) to get to their childrens' schools and creches	100	1.0
SO 3.2 Banking	All users can walk (100%) / use public transport (50%) to get to banking facilities	100	1.0
SO 3.3 Retail	All users can walk (100%) / use public transport (50%) to get to food retail	100	1.0
SO 3.4 Communication	All users can walk (100%) / use public transport (50%) to get to communication facilities (post/telephone/internet)	100	1.0
SO 3.5 Exercise	All users can walk (100%) / use public transport (50%) to get to recreation/exercise facilities	100	1.0
<b>SO 4 Participation &amp; Control</b>		<b>Explanatory notes</b>	<b>4.2</b>
SO 4.1 Environmental control	% of occupied space able to control their thermal environment (adjacent to openable windows/thermal controls)	100	1.0
SO 4.2 Lighting control	% of occupied space able to control their light (adjacent to controllable blinds etc/local lighting control)	100	1.0
SO 4.3 Social spaces	Social informal meeting spaces (parks / staff canteens / cafes) provided locally (within 400m) (100%)	100	1.0
SO 4.4 Sharing facilities	5% or more of facilities shared with other users / organisations on a weekly basis (100%)	70	0.7
SO 4.5 User group	Users actively involved in the design process (50%) / Active and representative management user group (50%)	50	0.5
<b>SO 5 Education, Health &amp; Safety</b>		<b>Explanatory notes</b>	<b>4.3</b>
SO 5.1 Education	Two percent or more space/facilities available for education (seminar rooms / reading / libraries) per occupied space (75%). Construction training provided on site (25%)	80	0.8
SO 5.2 Safety	All well used routes in and around building well lit (25%), all routes in and around buildings visually supervised (25%), secure perimeter and access control (50%), No crime (100%)	80	0.8
SO 5.3 Awareness	% of users who can access information on health & safety issues (ie HIV/AIDS), training and employment opportunities easily (posters/personnel/intranet site)	70	0.7
SO 5.4 Materials	All materials/components used have no negative effects on indoor air quality (100%)	100	1.0
SO 5.5 Accidents	Process in place for recording all occupational accidents and diseases and addressing these	100	1.0

Table 15.01 Social Building Performance

## Building Performance - Economic

	Criteria	Indicative performance measure	Measured	Points
<b>EC 1</b>	<b>Local economy</b>		<i>Explanatory notes</i>	<b>5.0</b>
EC 1.1	Local contractors	% value of the building constructed by local (within 50km) small (employees<20) contractors	100	1.0
EC 1.2	Local materials	% of materials (sand, bricks, blocks, roofing material) sourced from within 50km	100	1.0
EC 1.3	Local components	% of components (windows, doors etc) made locally (in the country)	100	1.0
EC 1.4	Local furniture/fitings	% of furniture and fittings made locally (in the country)	100	1.0
EC 1.5	Maintenance	% of maintenance and repairs by value that can, and are undertaken, by local contractors (within 50km)	100	1.0
<b>EC 2</b>	<b>Efficiency</b>		<i>Explanatory notes</i>	<b>4.6</b>
EC 2.1	Capacity	% capacity of building used on a daily basis (actual number of users / number of users at full capacity*100)	80	0.8
EC 2.2	Occupancy	% of time building is occupied and used (actual average number of hours used / all potential hours building could be used (24) *100)	80	0.8
EC 2.3	Space per occupant	Space provision per user not more than 10% above national average for building type (100%)	100	1.0
EC 2.4	Communication	Site/building has access to internet and telephone (100%), telephone only (50%)	100	1.0
EC 2.5	Material & Components	Building design coordinated with material / component sizes in order to minimise wastage. Walls (50%), Roof and floors (50%)	100	1.0
<b>EC 3</b>	<b>Adaptability</b>		<i>Explanatory notes</i>	<b>3.9</b>
EC 3.1	Vertical heights	% of spaces that have a floor to ceiling height of 3000mm or more	80	0.8
EC 3.2	External space	Design facilitates flexible external space use (100%)	80	0.8
EC 3.3	Internal partition	Non loadbearing internal partitions that can be easily adapted (loose partitioning (100%), studwall (50%), masonry (25%))	50	0.5
EC 3.4	Modular planning	Building with modular stucture, envelope (fenestration) & services allowing easy internal adaptaptation (100%)	80	0.8
EC 3.5	Furniture	Modular, limited variety furniture - can be easily configured for different uses (100%)	100	1.0
<b>EC 4</b>	<b>Ongoing costs</b>		<i>Explanatory notes</i>	<b>4.0</b>
EC 4.1	Induction	All new users receive induction training on building systems (50%), Detailed building user manual (50%)	100	1.0
EC4.2	Consumption & waste	% of users exposed on a monthly basis to building performance figures (water (25%), electricity (25%), waste (25%), accidents (25%))	30	0.3
EC 4.2	Metering	Easily monitored localised metering system for water (50%) and energy (50%)	100	1.0
EC4.3	Maintenance & Cleaning	% of building that can be cleaned and maintained easily and safely using simple equipment and local non-hazardous materials	100	1.0
SO 4.5	Procurement	% of value of all materials/equipment used in the building on a daily basis supplied by local (within the country) manufacturers	70	0.7
<b>EC 5</b>	<b>Capital Costs</b>		<i>Explanatory notes</i>	<b>3.6</b>
EC 5.1	Local need	Five percent capital cost allocated to address urgent local issues (employment, training etc) during construction process (100%)	100	1.0
EC5.2	Procurement	Tender / construction packaged to ensure involvement of small local contractors/manufacturers (100%)	100	1.0
EC 5.3	Building costs	Capital cost not more than fifteen % above national average building costs for the building type (100%)	100	1.0
EC5.4	Technology	3% or more of capital costs allocated to new sustainable/indigenous technology (100%)	60	0.6
EC 5.5	Existing Buildings	Existing buildings reused (100%)	0	0.0

Table 15.02 Economic Building Performance



### Building Performance - Environmental

Criteria	Indicative performance measure	Measured	Points
<b>EN 1 Water</b>		<i>Explanatory notes</i>	<b>4.5</b>
EN 1.1 Rainwater	% of water consumed sourced from rainwater harvested on site	80	0.8
EN 1.2 Water use	% of equipment (taps, washing machines, urinals showerheads) that are water efficient	100	1.0
EN 1.3 Runoff	% of carparking, paths, roads and roofs that have absorbant/semi absorbant/permeable surfaces (grassed/thatched/looselaid paving/ absorbant materials)	65	0.7
EN 1.4 Greywater	% of water from washing/relatively clean processes recycled and reused	100	1.0
EN 1.5 Planting	% of planting (other than food gardens) on site with low / appropriate water requirements	100	1.0
<b>EN 2 Energy</b>		<i>Explanatory notes</i>	<b>4.0</b>
EN 2.1 Location	% of users who walk / cycle / use public transport to commute to the building	100	1.0
EN 2.2 Ventilation	% of building ventilation requirements met through natural / passive ventilation	80	0.8
EN 2.3 Heating & Cooling	% of occupied space which relies solely on passive environmental control (no or minimal energy consumption)	80	0.8
EN 2.4 Appliances & fittings	% of appliances / lighting fixtures that are classed as highly energy efficient ( ie energy star rating)	70	0.7
EN 2.5 Renewable energy	% of building energy requirements met from renewable sources	70	0.7
<b>EN 3 Waste</b>		<i>Explanatory notes</i>	<b>3.8</b>
EN 3.1 Toxic waste	% of toxic waste (batteries, ink cartridges, flourescent lamps) recycled	100	1.0
EN 3.2 Organic waste	% of organic waste recycled	100	1.0
EN 3.3 Inorganic waste	% of inorganic waste recycled.	100	1.0
EN 3.4 Sewerage	% of sewerage recycled on site	0	0.0
EN 3.5 Construction waste	% of damaged building materials / waste developed in construction recycled on site	80	0.8
<b>EN 4 Site</b>		<i>Explanatory notes</i>	<b>3.4</b>
EN 4.1 Brownfield site	% of proposed site already disturbed / brownfield (previously developed)	100	1.0
EN 4.2 Neighbouring buildings	No neighbouring buildings negatively affected (access to sunlight, daylight, ventilation) (100%)	100	1.0
EN 4.3 Vegetation	% of area of area covered in vegetation (include green roofs, internal planting) relative to whole site	50	0.5
EN 4.4 Food gardens	Food gardens on site (100%)	0	0.0
EN 4.5 Landscape inputs	% of landscape that does not require mechanical equipment (ie lawn cutting) and or artificial inputs such as weed killers and pesticides	90	0.9
<b>EN 5 Materials &amp; Componen</b>		<i>Explanatory notes</i>	<b>3.9</b>
EN 5.1 Embodied energy	Materials with high embodied energy (aluminium,plastics) make up less than 1% of weight of building (100%)	80	0.8
EN 5.2 Material sources	% of materials and components by volume from grown sources (animal/plant)	80	0.8
EN 5.3 Ozone depletion	No materials and components used requiring ozone depleting processes (100%)	80	0.8
EN 5.4 Recycled / reuse	% of materials and components (by weight) reused / from recycled sources	50	0.5
EN 5.5 Construction process	Volume / area of site disturbed during construction less than 2X volume/area of new building (100%)	100	1.0

Table 15.03 Environmental Building Performance

## Heritage

According to the National Resources Heritage Act No 25 of 1999:

“Our heritage celebrates our achievements and contributes to redressing past inequities. It educates, it deepens our understanding of society and encourages us to empathise with the experience of others. It facilitates healing and material and symbolic restitution and it promotes new previously neglected research into our rich oral traditions and customs.”

The NHRA No 25 of 1999 (1) (3) determines when a place or object is culturally significant:

“A place or object is considered part of the national estate if it has cultural significance because of its importance to the community, or pattern of South Africa’s history, its possession of rare aspects of South Africa’s natural or cultural heritage, its strong or special association with a particular cultural group for social, cultural or spiritual reasons.”

In terms of the NHRA No 25 of 1999 the building is culturally significant for several reasons:

- Architecturally, the building is typical of synagogues built world-wide during the 1800s<sup>10</sup>
- The building is the first Synagogue to be built in Pretoria and tells of the strong Jewish community in Pretoria at that time
- Sammy Marx, a leading figure in Pretoria’s history at the time assisted the construction of the building.
- The Old Synagogue is on Paul Kruger Street (previously Market Street), which along with Church Street determines the inner city grid
- In 1952 the building was expropriated by the national government and converted into a supreme court designated to deal specifically with rising black opposition movements. It is here that in the 1950/60s Nelson Mandela and several co-accused were sentenced to imprisonment
- In the 1970s the inquest into the death of Steve Biko, leader of the Black Consciousness Movement, was held at the Old Synagogue
- Today the building is empty, symbolically bearing the wrath of South Africa’s violent undemocratic past

Project is to fall within guidelines for the interpretation and presentation of cultural heritage as described by the ICOMOS Charter.

<sup>10</sup>. Tzonis (2004:24)



## Urban Regeneration

In his article *Evolution, Definition and Purpose of Urban Regeneration*, Roberts<sup>11</sup> defines urban regeneration as:

“comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, social and environmental condition of an area that has been subject to change.”<sup>11</sup>

the site to address the heritage aspect and encourage activation of the space. Public art and architecture (both being design disciplines that deal with spatial and human interaction) will be investigated as a means of achieving this.

In essence, urban regeneration can be seen as:

- “An interventionist activity
- An activity which straddles the public, private and community sectors
- An activity which is likely to experience considerable changes in its institutional structures over time in response to changing economic social, environmental and political circumstances
- A means of mobilizing collective effort and providing the basis for the negotiation of appropriate solutions
- A means of determining policies and actions designed to improve the condition of urban areas and developing institutional structures necessary to support the preparation of specific proposals”<sup>12</sup>

Proposal

From this summary it becomes clear that urban regeneration is a process that by nature requires team input. It also is clear that urban regeneration requires the modification and adjustment of current and future policies to suit individual situations. It is not a set formula that can be applied to cities world wide let alone cities within one country.

Due to the nature of this theoretical project it is impossible to have the degree of participation and input as is necessary for urban regeneration projects. Therefore the project will focus on physical and environmental regeneration and will from a lesser degree (hypothetically) address social and community issues as well as the economic and financial aspects of the process. Existing policies and the adaptation thereof during the process will not be addressed. (addressed indirectly) It is important due to current needs in the area, the political and architectural significance of

11. Roberts (2005:17)

12. Roberts (2005:22)



## Survey Evaluation

The data of the evaluation has been emitted at this point in the baseline document as it has been included as an independant appendix within this dissertation. Refer to Appendix A for the results of the survey.

An informal survey of the two 'Backpacker' hostels in Pretoria was conducted by the author to establish what existing facilities in travel hostels are, what facilities are provided and positive and negative aspects from a management, location and tourism perspective. The results have been summarised in the following table.

The intention is to conduct the same survey with three 'Backpacker' hostels on Long Street in Cape Town. The youth hostels are said to have functioned as catalysts to Long Street by introducing activity which in turn attracted further investment. Long Street today is a vibrant and unique part of Cape Town, with many small businesses, bars and restaurants operating in the vicinity. This phenomenon offers a unique experience to the traveler and local resident in Cape Town.



## Schedule of Accommodation

The schedule of accommodation has been emitted at this point in the baseline document as it has been included as an independent chapter within this dissertation.

### Performance Criteria

In South Africa travel hostels, such as the Backpackers, are found in all cities and at all major holiday and tourist destinations across the country. In most cases the Backpackers are located within walking distances of natural and historical attractions (e.g. along beaches in the Eastern Cape; next to the Melrose House in Pretoria etc). Due to the nature of the accommodation provided, guests are usually budget travellers or young people seeking temporary accommodation during internships, study exchanges or other education related activities. Generally, the age range of Backpacker guests is between 18 and 35 years old. As cost is an issue, Backpacker and other hostels seldom are new builds. Often old residences, old houses and other buildings are converted for the new function which adds to the character of the place. For this reason it is difficult to make a comparison of the building type. Therefore, the comparison will fall somewhere between the guidelines set out for student residences and those for hotels, which most closely relates to the Backpacker accommodation.

### User Profile

- **Luxury Penthouse Apartments**

Single/ married young professionals located close to work opportunities in city centre

- **Temporary Residential Accommodation**

NGOs and other commercial organisations and businesses can rent out small apartments within the building for visiting guests, researchers, trainees, etc that may be in Pretoria for an extended but temporary period of time. Lease agreements should range from 1 week - 3 months (renewable). Universities, technikons and other education-based organisations

would be encouraged to make use of this facility especially for exchange students, visiting lecturers and researchers where the cost of accommodation is a concern. All rooms will be equipped with a study area specifically for this purpose. The location of the building allows for easy accessibility to research and education facilities (such as the New National Library- currently under construction). This facility will also cater for families that may need accommodation for short periods of time.

- **Temporary Accommodation**

Short-term budget travellers (focus on tourism)

- **Other facilities**

To be used by local businesses and educational institutions in the area for conferences and exhibitions.

### Retail and Recreational Facilities

Facilities Located on ground floor relating to main pedestrian movement and public space. This facility will include public toilets on the public square.

- **Below grade parking**

Access to parking from Struben Street as the vision for the city is to pedestrianise Paul Kruger Street. Parking will be available for guests as well as businesses in the area and visitors to the site. The vision includes the operation of a tram system along Paul Kruger street minimising the need for private transportation. Due to the existing nature of our cities, there will always be a demand for vehicular parking.

The building should be designed in such as way as to not limit accessibility. (i.e. all disabilities: visual, mobile and auditory)



## Requirements<sup>6</sup>

### Concerns and Deciding Factors

- Cost of accommodation (this may exclude penthouse apartments)
- Safety and security
- Access to facilities (academic, tourist and recreational)
- Comfort on a basic level (neat, natural light, hot water, clean communal facilities)
- Reasonable room size
- Self-catering Facilities
- Private bathrooms (especially for long-term guests and people that may be attending conference)
- Low noise level (work and study)

### Characteristic of Building Type

According to the 'Oxbridge model', student accommodation functions best when social units of 5-6 students can be created. This size group functions best socially and reduces management problems. As the building is not student accommodation, these figures may not apply. Usually one staircase accommodates 4-10 students. Communal dining areas should allow for all students in one unit to eat at the same time. Spatial provision should be made for guests. Kitchens become the point for social interaction for students- more so than recreational spaces.

Security is a factor due to irregular hours kept by students (this may be similar for students and travellers).

#### • Kitchens (communal)

- a 1 sink (two bowls) and 1 cooker (with 4 rings) serves max 5 Students (3 persons is preferable)
- b Storage: 0.13m<sup>2</sup> refrigerator space/person  
0.3m<sup>2</sup> of dry goods/ person (i.e. 1 shelf pp)
- c Lockable cupboard/ person
- d Task and general lighting
- e Min 3 sockets for appliances
- f Minimum total length of work surface including cooker 3600mm
- g Circulation space between units: 1200mm
- h Duplication may be necessary to accommodate the disabled

#### • Bathrooms (communal)

- a 1 WC, 1WHB and 1 bath/shower per 5 students (3 persons is preferable)
- b WC should be separate from bathroom (if only one WC)
- c If WHB in individual rooms, WC and other amenities not more than 1 floor or 30m away

#### • Room Areas

- a Bedroom (1 person): min 6.5m<sup>2</sup>; (2 persons): min 10.2m<sup>2</sup>
- b Min width of room: 2.5m<sup>2</sup> (this allows for a full turning circle for wheelchair users: diameter 1500mm)
- c Kitchen and dining area (if in individual unit): min 6.5m<sup>2</sup>
- d Spaces must be flexible to accommodate different functions
- e En-suite bathrooms: min 2.5m<sup>2</sup>
- f Sound insulation: 40dB is appropriate (avoid noise from inside and outside e.g. stairways and service ducts)

#### • Hotel Room Areas

- a \*\* : 20-22m<sup>2</sup>
- b \*\*\*: 25-27m<sup>2</sup>
- c \*\*\*\*: 30-34m<sup>2</sup>
- d \*\*\*\*\*: min 36m<sup>2</sup>

13. Adler (1999: Part 36)

• Standard Furniture

- a Bed: 900x2000mm (doubles as sofa) ; bedside table (optional)
- b Desk 700x1800)
- c Drawers 800mm wide
- d Wardrobe: full height hanging space min 600x900mm with lockable space
- e Shelving: 300x3600mm (total run)
- f Easy chair (reading)
- g Desk chair
- h Washbasin (in cupboard)
- i All bathrooms to have shaver point (unisex), mirrors and task lighting

• Disabled considerations

- a Accommodate full turning circle 1500mm
- b Desk height 760mm
- c Shelving 700-1300mm above floor level
- d Sockets, switches and ironmongery at 1000mm
- e Sinks to clear 760mm above floor level
- f Bold colours for partially sighted
- g Door openings min 900mm

Unit Comparison

	Hostels	Hotels	Flats
Kitchens:	Fully equipped and communal, if provided	-	Dining kitchen: 1-3 persons: 8-10m <sup>2</sup> Galley kitchen: 1-3 persons 5.5-6.5m <sup>2</sup>
Living area	Communal living area with TV	Hotel lobby and lounge area within hotel room (size dependant on rating)	With dining kitchen: 1-3 persons: 11-13m <sup>2</sup> With galley kitchen: 1-3 persons: 13-16m <sup>2</sup>
Main Bedroom	Dormitories (range in size and no of guests Double rooms usually available at a higher cost)	2 Star: 20-22m <sup>2</sup>	1-3 persons: 9-12m <sup>2</sup>
Double Bedroom		3 Star: 25-27m <sup>2</sup>	Only for >4 persons
Single Bedroom		4 Star: 30-34m <sup>2</sup> 5 Star: min 36m <sup>2</sup> (single rooms uncommon)	1-2 persons: 8-9m <sup>2</sup>
Bathrooms	Communal (often unisex) Often en-suite bathrooms with double rooms (at additional cost)	En-suite	1-3 persons: 1 x WC (may be in bathroom) 4-5 persons: 1 x WC (must have separate compartment)
Storage	To store backpack (often under bed or locker)	Built-in full hanging height cupboard (valuables safe common in room)	
Linen	Usually provided (guests own sleeping bags sometime required)	Fully services	1-3 persons: 0.4m <sup>3</sup> 4 persons: 0.6m <sup>3</sup>
Walk-in general store	Often communal room with lockers for guests	-	1/ unit
Service:	basic	Fully serviced (extent of service dependant on rating)	self

Table 15.04 Unit Comparison

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