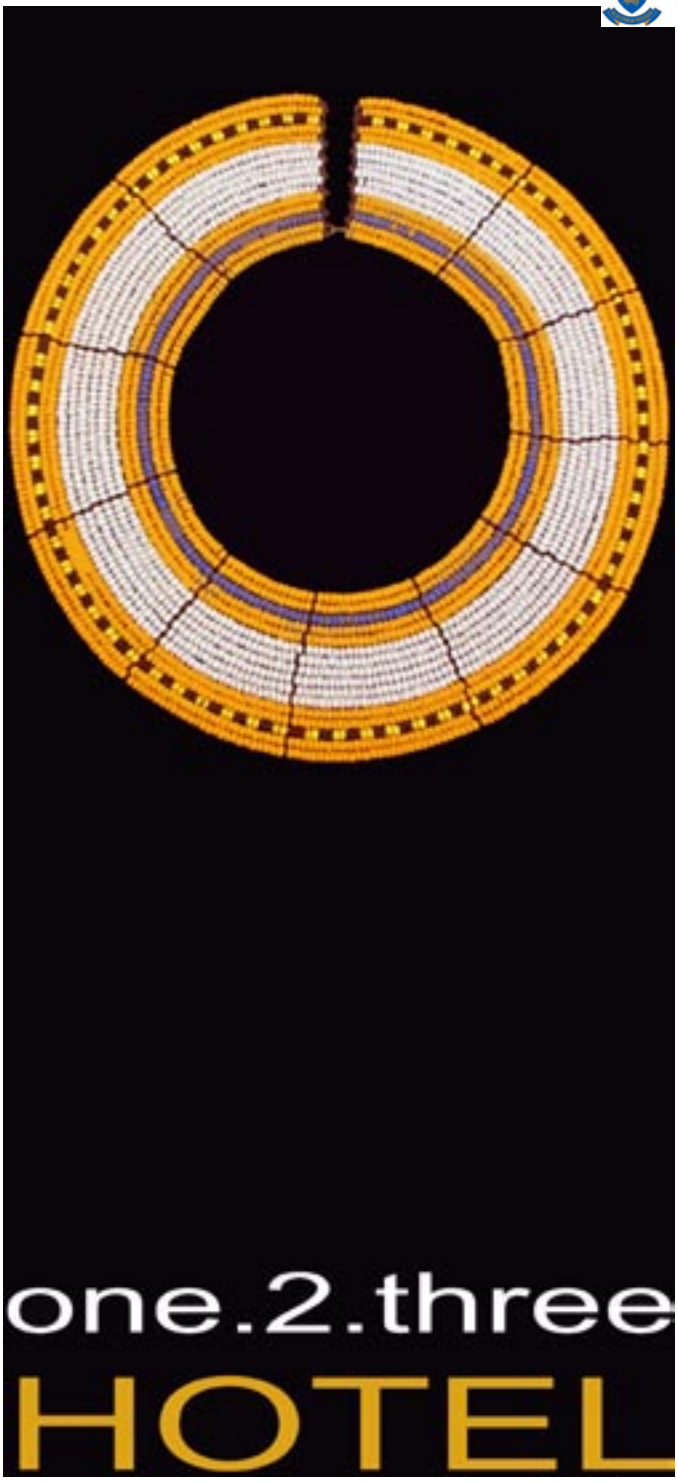
one.2.three
HOTEL

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

HOTEL ONE.2.THREE

Paul Kruger Street

By
Pieter-Ernst Maré
Mentor: Clinton Hindes

Fig.1 Movement 2

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

November 2007

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Design development and technical investigation

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EXECUTIVE SUMMARY

This discourse explores appropriate hotel design in Pretoria, Gauteng, South Africa. The hotel design will seek to provide accommodation that is both fashionable and affordable whilst taking cognisance of international trends towards boutique and specialist hotels. Further it will endeavour to create a local hotel with a variety of room layouts into a multi star graded hotel.

This study is also an investigation into hotel systems to develop a model based on an open building approach, which is useful in accommodating a variety of uses and facilities that could adapt to changing trends. Three models where investigated, firstly a central service shaft was used into which prefabricated rooms plug. In the second model, multiple service shafts were arranged onto a square grid layout providing a greater variety of room layouts. In the third model, multiple service shafts were arranged onto a linear base building with five different room layouts and amenities. The last model proved most suitable to achieve the desired effect.

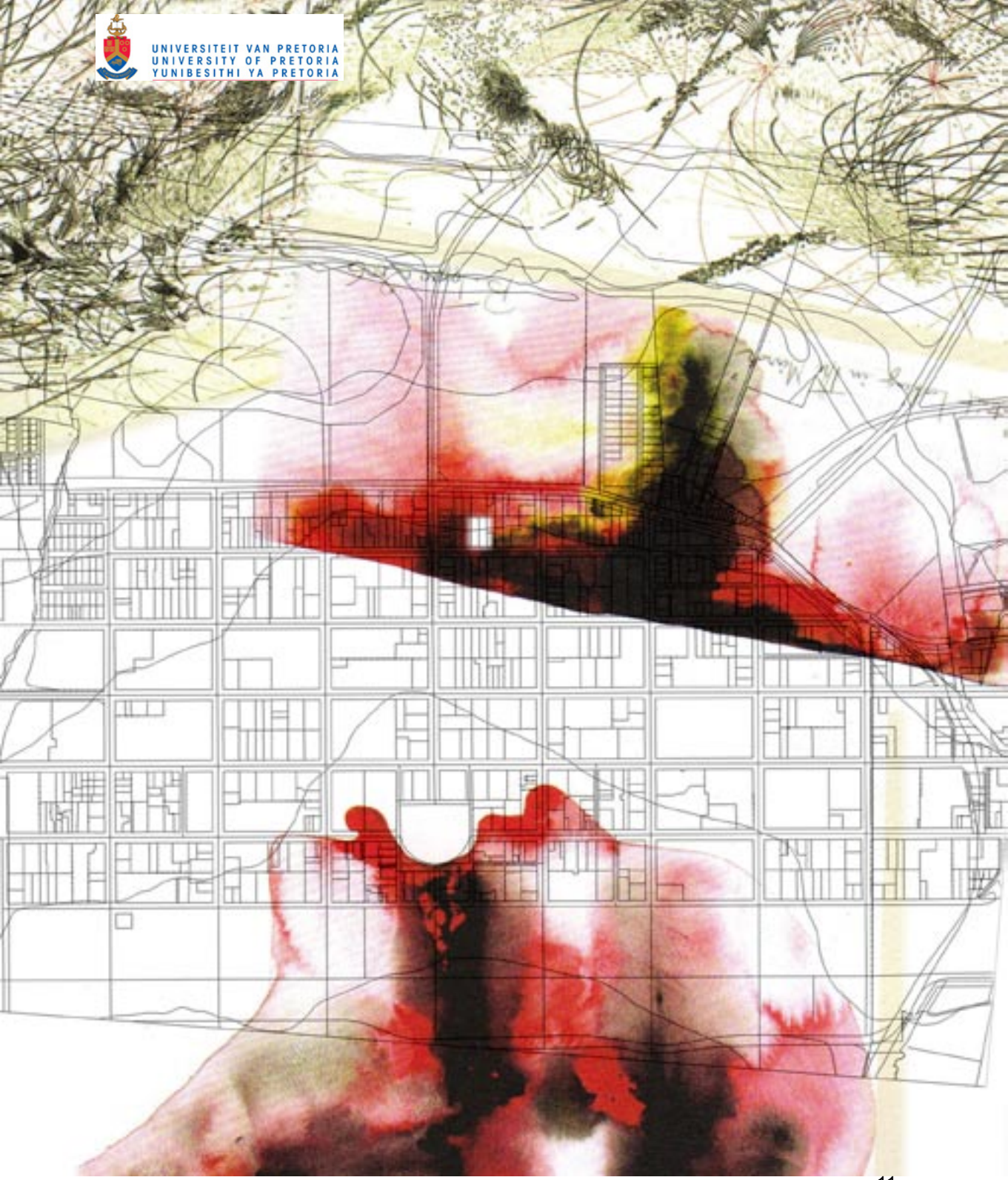
The proposed hotel will provide rentable rooms with or without meals, to transient guests for a continuous period of more than eight (8) hours and less than thirty (30) days. The hotel is located on Paul Kruger Street and forms part of a gateway development in the study area where public squares are linked with pedestrian promenades.

Disability is only a word.
To my family and friends8, thank you.

CHAPTER ONE

Hotel market analyses in South Africa

Fig.2 Nature meets city



1.1 REAL WORLD PROBLEM

According to the current statistics (refer to appendix one), more than 60% of tourists prefer to stay in hotels when travelling in South Africa. Moreover, more than 60% of tourists to South Africa visit Gauteng. In the Pretoria Central Business District (CBD) there are only eight graded hotels ranging from 2, 3 and 5 star accommodation. Thus, in Pretoria CBD there is a lack of mixed income hotels coupled with high luxury chain (franchise) hotels, that is, 1, 2 and 4 star hotels. This discourse investigates the possibility of accommodating various star ratings in the room design to make the same hotel accessible to guests from more than one income group whilst being able adapt to changing trends. These are aspects not usually combined in hotels in Pretoria.

Fig.3 African texture

1.2 SOUTH AFRICAN TRENDS IN TRAVEL AND TOURISM

The World Travel and Tourism Council (WTTC) is the business leaders' forum for travel and tourism. The data used represent the latest research done by the WTTC for the South African Department of Environmental Affairs and Tourism in 2002.
This is the Council's second report; the first was published in 1998.

The report is an update of the historical results, estimates and the current performance of South Africa's Travel and Tourism and it provides a forecast based on national and international data sources. According to the report, "South Africa has the potential to become one of the world's great new tourism destinations following its transition to democracy and entry into mainstream economical and political circles." (WTTC, 2002:3)

These statistics (refer to appendix one), show the current trend towards hotel accommodation and a need to respond to this in a design proposal. This could be because hotels offer clients a sense of privacy in comparison to traditional bed and breakfast guesthouses where more social interaction with the hosts occurs and thus, personal privacy is reduced. A more formal approach to services in a hotel affords guests the freedom to arrive and depart at any time to do business to the city. Hotels also provide more services to the guests at a lower price. It is thus clear from this statistic that hotel design in South Africa will be financially feasible.

Fig.4 African texture

CHAPTER 2
Precedent studies

Fig.5 Hotel fantasy

2.1 CURRENT TRENDS IN HOTEL ACCOMMODATION DESIGN

According to Todd and Mather (1995:7), a hotel can be defined as follows:
'Hotels and similar establishments...are typified as being arranged in rooms, in number exceeding a specified minimum; as coming under a common management; as providing certain services, including room service, daily bed-making and cleaning of sanitary facilities; as grouped in classes and categories according to the facility and services provided.'

In understanding the difference between a boutique hotel and a specialist hotel, case studies were investigated to determine the relationship between these hotel types and other forms of hotel types that are currently trends in hotel accommodation. Case studies are based on a summary of a report by C.H Gillespie, the Scottish Hotel School, University Strathclyde, Glasgow, entitled: *International current trends in hotel accommodation design*. Boutique hotels and specialist hotels currently dominate the hotel industry and architects, interior designers and artists are employed to create unique identities for these hotels to distinguish them from the well-know international franchise hotels. This investigation of current trends provides the direction for the design.

Fig.6 Hotel Puerta America

2.1.1 Boutique hotels

These are niche-market hotels which promote their uniqueness as being currently fashionable. These hotels are cost efficient because they dispose of costly non-essentials and concentrate on budget and operational expenses. Their success over competitors lies in their presentation of tactical promotion techniques. These include the hotel as lifestyle product, which allows guests to buy into and add layers of micro feeling to their stay in the hotel. Boutique hotels could be part of a hotel franchise.

Case study
Lute Suites
Location: Amsterdam, Netherlands
Hotel type: Boutique Hotel
Designer: Marcel Wanders
Completion: 2006

Lute Suites is a combination of a visionary hotel and a restaurant. Commended as one of Europe's most acclaimed young designers, Marcel Wanders was so inspired by chef Peter Lute's restaurant in the village of Ouderkerk (near Amsterdam) that he designed a hotel around it on the site of an 18th-century gunpowder factory. The resulting complex is seven freestanding structures: three-level gabled cottages, each with kitchenette and living room, all facing the Amstel River. The Lute Suites are individually decorated with signature touches from the designer, including his famous "knotted chair", on display at New York's MOMA.

Guests to the hotel experience Wander's goal for the complex: 'to surprise, to delight, and to elicit a strong emotional response'. The design is elegant and provides a guest with all the amenities needed.

Case study
Ten Bompas Hotel
Location: Johannesburg, South Africa
Hotel type: Boutique Hotel

Originally a private home of Ten Bompas, the building was converted into an exclusive city hotel with 10 suites and a contemporary restaurant. Three buildings were added to the old house, all connected by a footbridge. Each suite has been individually decorated by a different interior designer, using his or her interpretation of African artefacts. Each suite has its own name indicating its style and furnishing.

This hotel provides an interior exploration of the identity of a contemporary African hotel. It is decorating at its best and does not reflect a particular school of architecture. This hotel forms part of three hotels recognised by Design Hotel TM franchise as international boutique hotels. However, the classification of a hotel type in South Africa is not clear and, according to opinion, this hotel could just as well have been a bed and breakfast guest house. It is clear, however, that most international guests expect an expression of African style in the décor of a hotel to enhance the hotel's identity in its context.

Fig.7 Lute Suites

Fig.8 Ten Bompas Hotel

2.1.2 Specialist hotels

The specialist hotel is a key concept of the owners and not of a hotel franchise.

Specialist hotels provide one-off hotels which are non-corporate. These hotels grasp the imagery of the icon and utilise symbolism and metaphors to create a strong positive memory and experience for the guests. Signature designers are used in the design.

Case study

Hotel Fox

Location: Copenhagen

Hotel type: Specialist hotel

Architect: Jarmers Plads 3

Completion: 2005

For the launch of the new Volkswagen Fox, twenty-one international artists from the fields of graphic design, urban art and illustration turned Hotel Fox into one of Copenhagen's most individual hotels with sixty-one (61) rooms. Each room houses an individual piece of art ranging from whacky comical styles to strict graphic design, fantastic street art and Japanese Manga to simply spaced out fantasies. The marketing promise is that each room is unique and provides guests with the opportunity to stay in a room that will suit their personality. Although this is a specialist hotel, practical hotel functions and facilities were addressed in the rooms. General styling in the room is largely restricted to the images that engulf the surface of the walls and bed. Thus, the functionality of the room is not compromised.

Fig.9 Hotel FOX

Daddy Long Legs Hotel
Location: Long Street, Cape Town, South Africa
|Hotel type: Specialist hotel
Architect: Scott Johnston Architects
Completion: 2006

This specialist hotel is a remodelling of a residential block of flats in Long Street, Cape Town. Thirteen South African artists were commissioned to design and decorate the thirteen rooms of the hotel. Artists on the project received R10 000 for art and building material and R7 000 for labour to complete a room. The owner of the hotel, Jody Aufrichtig, wanted a hotel that fell between impersonal hotels and backpacker lodgings. Rooms in the hotel had to be 'funky and affordable'. On arrival guests are taken on a tour of the rooms and he or she can choose which room he or she would like to stay in. This hotel caters for a specific niche market, and is not universal to a wide range of guests. The themed hotel rooms are artistic installations and do not address the practicality of traditional hotel rooms and services. It is questionable whether a business guest would stay for longer than two days in a particular room. Another concern is how long the theme rooms will stay fashionable and if it is possible to change the rooms annually without disruption.

Fig.10 Daddy Long Legs Hotel

2.1.3 The lower and mid-share of the international hotel market

These budget hotels are standardised to accommodate families, where cost reductions are crucial to charging reduced room rates. The guest rooms represent 85% of the total built area of the hotel. Combined hotel and timeshare properties are new concepts in this market intended to make good design, redesign and interior design affordable in this market.

2.1.4 Luxury chain hotels

These hotels provide guests with status, escapism and fantasy. The hotel provides multifunctional facilities to satisfy the need for leisure and business travel.
The rooms of luxury hotels are bigger and the guests have more venues to explore within the hotel (clubs, shops etc.) Quality and quantity of services are more important than an architectural success story. High standards at competitive rates are a demand. Marketing of luxury hotels is more important than in specialist and boutique hotels.

2.2 Hotel classification

The star classification system is common for rating hotels. Higher star ratings often indicate hotels with higher levels of luxury. Traditional systems rest heavily on the facilities provided, which is often disadvantageous to smaller hotels whose quality of accommodation could fall into a certain class but the lack of a particular item, such as an elevator, prevents it from acquiring a higher categorisation

There have been attempts to unify the classification system internationally so that it becomes a reliable standard. However, large differences exist in the quality of the accommodation and the food within one category of hotel. In South Africa the Tourism Grading Council of South Africa is responsible for the grading of hotels. The minimum requirements set out in the grading document (refer to appendix) are vague and open to interpretation, for example:

‘The size of a bedroom should allow for guests to move easily, with free access to all furniture and fittings in the room. All doors, windows, cupboards and draws should open with ease.’ (How big must the bedroom be? What furniture is required for a certain star?)

In contrast, the German and American classification is much more detailed and a room is graded according to its size and amenities as summarised in Tables 2.1 and 2.2.

Table 2.1 German Hotel Classification Criteria

Category	1 star	2 stars	3 stars	4 stars	5 stars
Double room Surface(m2)	12	13	16	20	25 or more
Bathroom Surface(m2)	4	4	5	6	7 or more
Room width	3.15m to 3.30m	3.15m to 3.50m	3.15m to 3.80m	3.15m to 4.50m	4.50m or more
Corridor width	0.85m to 1.00m	0.90m to 1.00m	1.00m to 1.20m	1.20m to 1.50m	1.40m to 2.00m
Equipment	CW & HW	CW & HW	CW & HW	CW & HW	CW & HW
	1 BT or SH for 25 beds	30% of rooms with WC and BT or SH	75% of rooms with WC and BT or SH	100% of rooms with WC and BT or SH	100% of rooms with WC and BT or SH

Table 2.2 United States of America Hotel Classification Criteria

Category	1 star	2 stars	3 stars	4 stars	5 stars
Double room Surface(m2)	12	16	18	22	26
	Accommodation for simple needs	Accommodation for moderate needs	Accommodation for greater needs	Accommodation for high demands	Accommodation for the highest demands
Equipment	CW & HW	CW & HW	CW & HW	CW & HW	CW & HW
	WC and BT or SH	WC and BT or SH	WC and BT or SH	WC and BT and SH	WC and BT and SH

BT: Bath Tub
CW: Cold Water
HW: Hot water
S: Sink
SH: Shower
WC: Toilet Bowl

2.3 PRECEDENT STUDY CONCLUSION

This project thus proposes from the statistics and the case studies the following form generators:

(1) The project is a response to the need of hotel design in South Africa, where

(2) star classification is based on room size and amenities in the room. This will provide a hotel with a multiple star classification to make the building accessible to a range of guests and their needs, whilst

(3) creating an identify reflecting the African context with out compromising the functionality of the room in

(4) a model based on open building design principles where there is a possibility of change to the hotel to keep it fashionable ~~to~~ for the current market.

-The financiers of the hotel project will be the Design Hotel Group formed by Clause Sendlinger. This organisation provides desirable designed accommodation that is economically based.

-Identification of which hotel market segment to serve
Mid price and economy

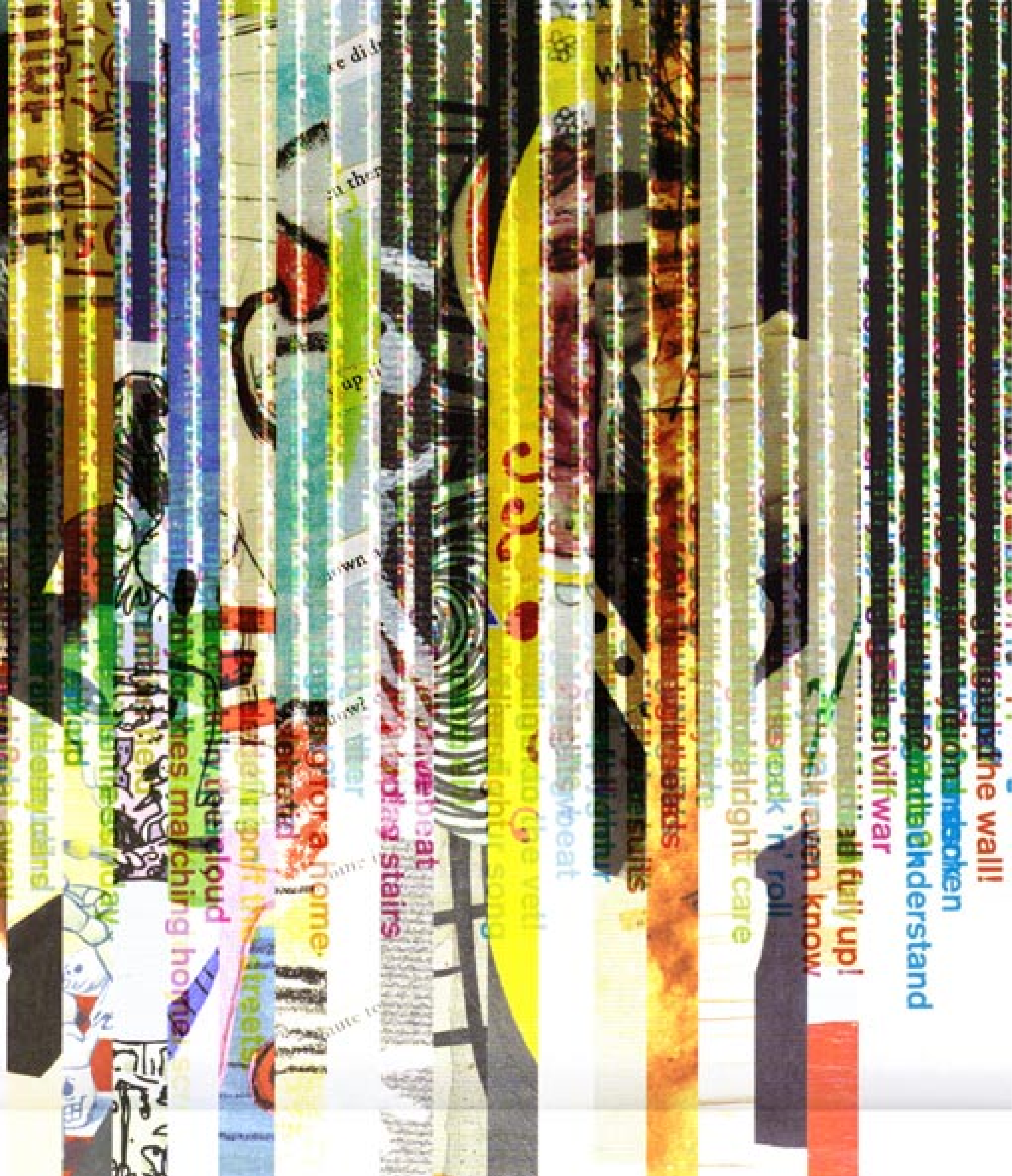
-Selection of appropriate hotel design
Mid-rise
Boutique classification in mid-rise

-Selection of appropriate hotel brand
Independent with strategic market affiliation

-Marketing recommendation
Marketing for international and domestic tourists focusing thus on affordable rates by using the Internet to market hotel (Virtual space)

CHAPTER THREE
Context study

Fig.11 Energy of the city


he wall!
understand
civil war
up!
know
care
stairs

3.1 PRETORIA: CAPITAL AND CULTURAL CITY OF SOUTH AFRICA

The following discourse is based in Pretoria, Tshwane in Gauteng, South Africa. It seeks to contribute to the future proposals of the Tshwane Inner City Development and Regeneration Strategy of Pretoria. According to this Strategy, Pretoria is to become the 'Capital and Cultural City of South Africa' and 'the leading African City' (Tshwane City Vision).

Pretoria is the legislative capital of South Africa and forms one of a trio of capital cities: Bloemfontein, the judicial capital and Cape Town, the parliamentary capital. Geographically Tshwane is located in Gauteng province which is the smallest area with the greatest population in the nine provinces. Traditionally Pretoria was the capital of the Afrikaner. Named after the Voortekker leader, Andries Pretorius, in 1855 the town received city status in 1931. Pretoria became the administrative seat of the apartheid government. Consequently, the city was planned according to the urban model based on apartheid principles, in which the CBD and residential suburbs were buffered from the townships situated on the periphery of the city close to industrial areas.

The grid form of the historic CBD is within the steeping gradient towards the northern and southern mountain ridges and stretches in an easterly and a westerly direction with Church Square as the main activity node in the city.

The Apies River to the east and the mountain ridges to the north and south break the grid form giving the city an organic layout towards the suburbs surrounding the CBD. Currently the former policies of segregation are slowly starting to disappear after the democratic elections of 1994. The city is being redefined and people once cut off from the Western planning grid of the city, are now re-writing and redefining the city as to reflect a true model of an African city within a Western planning grid.

Understanding the African use of urban space in a historical Western urban layout will provide the city with a true African cityscape that is a more heterogeneous.Thus, Pretoria could become the 'Capital and Cultural City of South Africa' reflecting the cultural landscape. If a city is stripped from its physical parameters (a grid with streets, buildings, bridges, a river and mountain ranges), it is left with social space. Social space is made up of less tangible spaces that are constructed out of social interaction. These are set within, and actively link to, the wider networks of social relations which make up the city, thus contributing to its identity.

3.2 ANALYSING THE CITY

'An authentically migrant perspective would, perhaps, be based on an institution that the opposition between here and there is itself a cultural construction, a consequence of thinking in terms of fixed entities and defining them oppositionally. It might be by regarding movement not as an awkward interval between fixed points of departure and arrival, but as a mode of being in the world. The question would be, then, not how to arrive, but how to move, how to identify convergent and divergent movements; and the challenge would be how to notate such events, how to give them a historical and social value.' (Carter, 1992, p.101)

Analysing the city parallel with the traditional methods, a graphical documentation of the social activities and movement was done. This was done to understand, from a human perspective, how the city works on a two-dimensional grid form and what defines the social spaces. The most useful of these studies was the shadow map that became an indication of the movement of the users in the city. Similar to the shadows the people that create, a social space is not restricted by urban parameters and social spaces tend to move with the shadows, time and mapping. This is what makes Pretoria a dynamic city which is not confined to space or the routine events of week days. The streets change from day to day depending on the functions. On Sundays it appears empty, yet on Saturday nights there is a buzz which differs from Monday's business activities. These changes can only be experienced once one becomes part of the social space.

Fig.12 Pretoria grid

Fig.13 Shadow map

A photo collage was made using random selected pictures taken on the same day in each of the public squares in Pretoria. This gave extra information about the energy during a specific time period and the use of the public or social spaces in the city. As one moves from south to north in the grid of the CBD of Pretoria, it becomes clear how the energy and usage changes. The landscaping and architecture change from a very restricted, grey human dominated space to a much more free, colourful and dynamic space

Fig.14 Public squares in Pretoria

The study area is located on the northern edge of Pretoria where the National Zoological Gardens of South Africa (Pretoria Zoo) and the Department of Arts of the Tshwane University of Technology (T.U.T) are located. Government buildings are located on the edge of the study area and taxi ranks facilitate the flux of commuters to and from the city. Paul Kruger Street acts as a northern gateway into the city with Boom Street acting as the perimeter edge of the city, creating a buffer between the natural area to the north and the CBD to the south.

The study area has become a vibrant location with commuters, visitors and workers arriving and leaving the city. Informal traders and restaurants between the street and taxi ranks create an interesting African cultural mix of people and activities. Due to the nomadic use of space, the sector reflects a true African use of urban space where function and usage of space differs daily. Formal town planning zoning is disregarded, for example, if a stall is moved, the usage of the street front changes.

The hotel should reflect this in its use of space and the interaction of the building and the street front. The hotel building will not only host the hotel schedule but will also host other function (commercial and rentable office space) to create public interaction in the mix use development. The façade should reflect the colours and the changing dynamics that is seen on the street, as to become an expression of the context

Fig.15 Arial photograph of study area

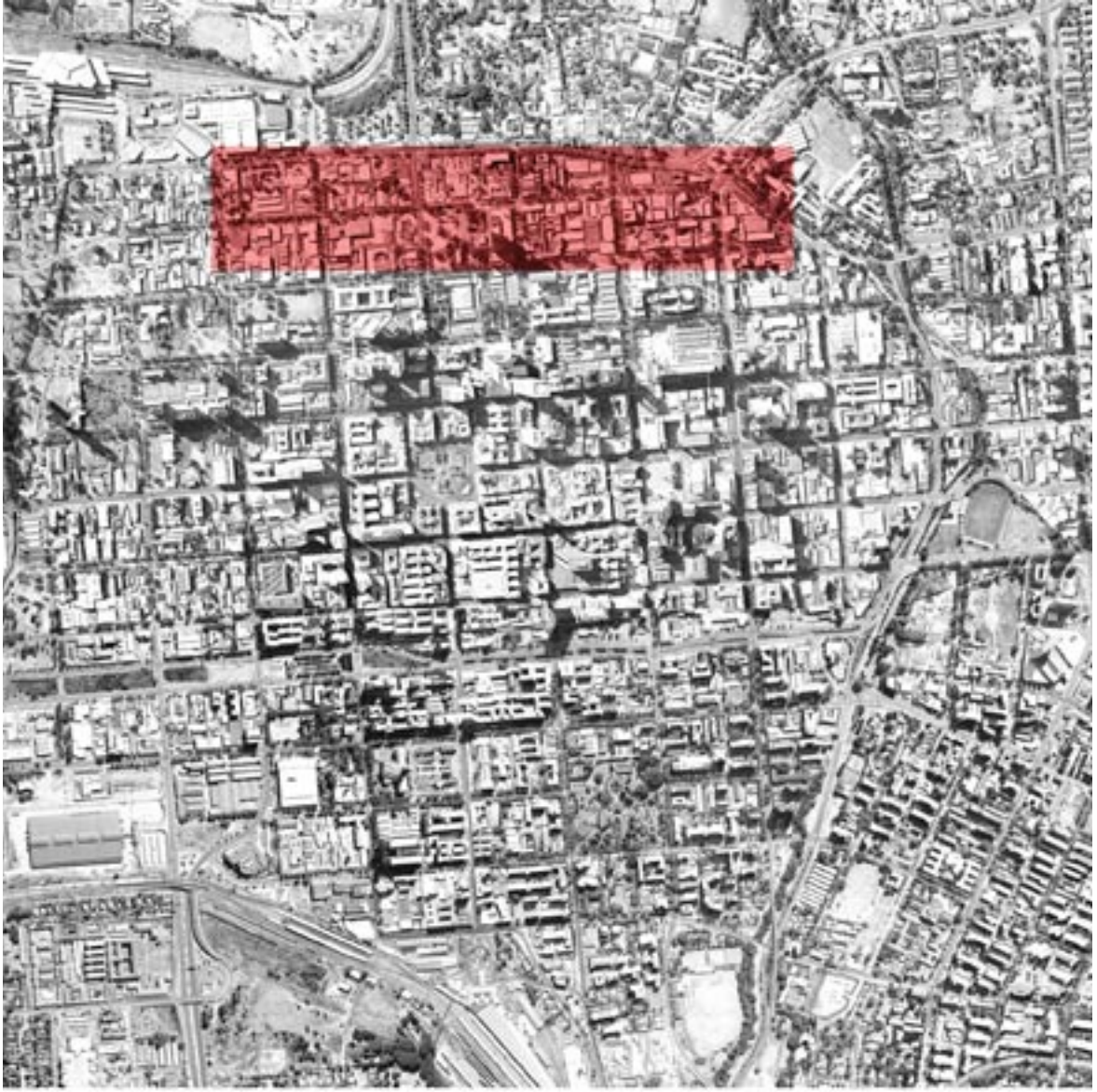


Fig.16 Location of study area in Pretoria

Fig.17 Tourist attraction in Pretoria

Fig.18 Green spaces in Pretoria

Fig. 19 Infrastructure

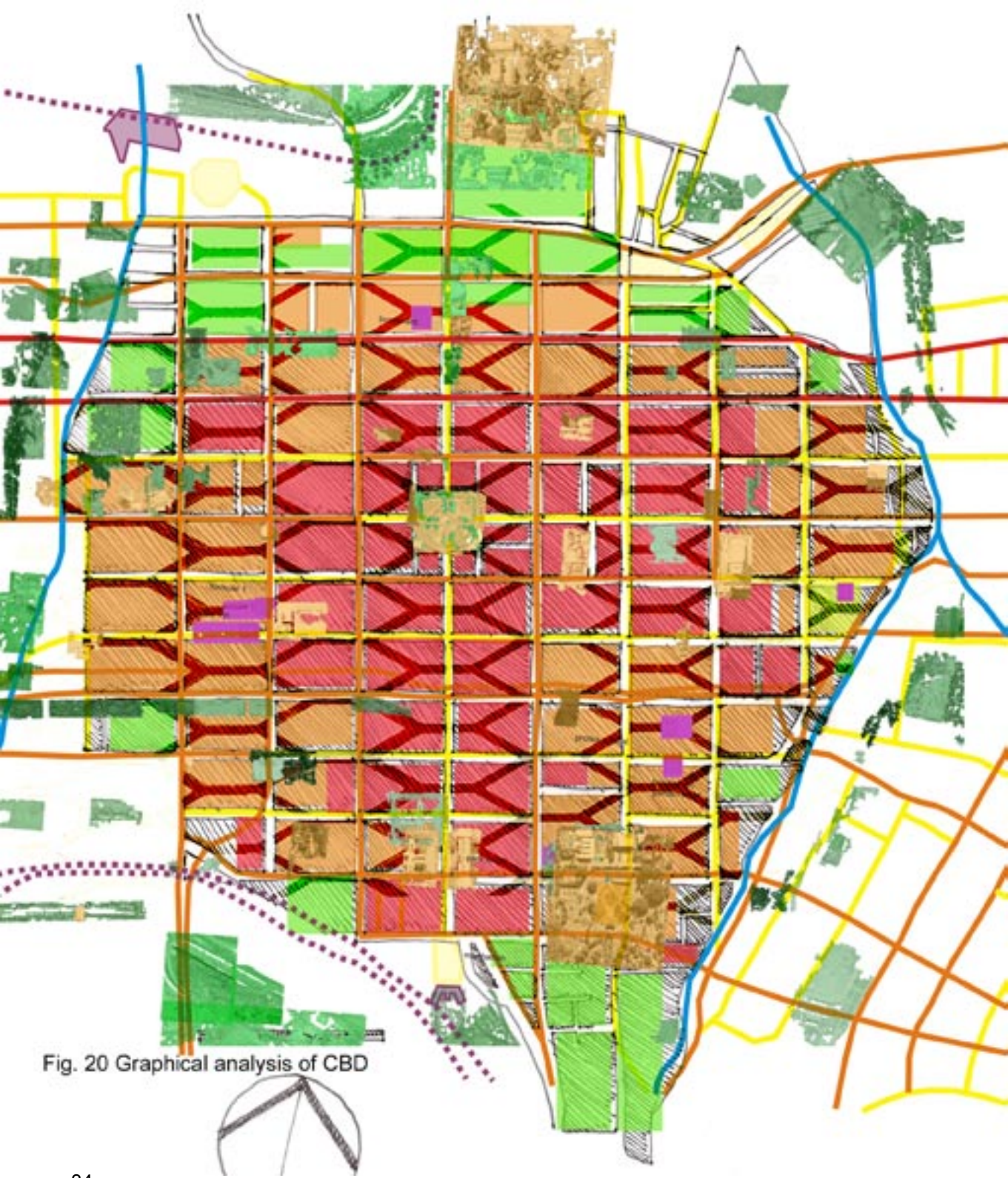


Fig. 20 Graphical analysis of CBD

3.3 FEASIBILITY POTENTIAL OF A HOTEL IN PRETORIA

Pretoria is a progressive city that has a rich historical blend of traditional African culture and European traditions. This lively metropolis combines these dynamics to create a unique cosmopolitan lifestyle, reflecting the possibilities of a dynamic African city.

3.3.1 The competitors in the area

Table 3.1 summarises established hotels in Pretoria that have been graded and are advertised to international and local hotel guests on the Internet. From this it is clear that there is a lack of lower (1star) and higher (4star) accommodation in Pretoria.

Table 3.1 Established hotels in Pretoria

Hotel	Star
Protea Hotel Capital 390 Van Der Walt Street	3
Arcadia Hotel 515 Proes Street, Arcadia	3
Court Classique Suite Hotel Schoeman Street Arcadia	3
Chancellors Court 797 Park Street	2
Sheraton Pretoria Hotel 643 Cnr Church & Wessels St	5
Holiday Inn Pretoria Church & Beatrix Streets	N/A
Courtyard Suite Pretoria Park Street, Arcadia	2

3.3.2 Tourist attractions in study area (CBD)

Appendix two list the tourist attractions close to the study area, which will be potentially utilised and visited by guests to the proposed hotel.

3.3.3 Proximity to where potential guests live, travel and work

As previously mentioned, the study area is located on the northern edge of Pretoria. The Pretoria Zoo (National Zoological Gardens of South Africa) and the Department of Arts of the Tshwane University of Technology (T.U.T) are both located in the study area. This area attracts a lot of tourists to the Pretoria Zoo and the Union Buildings.

Various government departments, embassies, foreign missions, trade delegations, consulates and international bodies are located close to the study area

3.3.4 Accessibility to study area

Paul Kruger Street acts as a northern gateway to Pretoria.
Paul Kruger Street will be a link with the Gautrein station.
Boom Street has several taxi ranks, providing local city links and provincial links.
Propend tram station provide easy axis to site

3.3.5 Master area development plan

The gateway development to the city will formalised according to the concentration of government headquarters in Paul Kruger Street creating a welcoming boulevard where public squares are linked with a pedestrian movement axis.

The gateway development consists of:

-A basement parking: block proposal.
-Hotel and orientation building becoming land marks into the city.
-Orientation building and African market with public squares connected with a pedestrian promenade.
-Proposed developments around the square will be multi-functional buildings: uses will range from general residential and commercial to civic buildings.
-Semi-private infill residential development coupled with commercial buildings

3.4 SITE FOR PROPOSED HOTEL

Currently the area is zoned as light industrial and residential. The respective block on which the hotel development will take place is covered with car ports of a second-hand car dealership. The block to the east of the proposed hotel development is currently under demolition, where the new taxi rank mall is being built. The taxi rank mall does not acknowledge this node as a gateway into the city. For this discourse of the hotel development, the proposed orientation building and accompanied public square that acknowledge this node as a gateway will be regarded and responded to in the urban context versus the taxi rank mall.

The following streets frame the block:
North: Boom Street
East: Paul Kruger Street
South: Bloed Street
West: Bosman Street

Heritage buildings on block:

199 Boom Street c/o Paul Kruger
Erf no: 841/R
Second-hand car dealership
Zoned Residential
Single storey Late Victorian residence, Plastered Brickwork, corrugated roof sheeting

177 Boom Street
Erf no: 3134
Sabat Battery centre
Zoned Light industrial
Single storey workshop with arched high level windows, Plastered Brickwork, corrugated roof sheeting

Erf numbers of the proposed development:
r/2/841
3/814
6/817

3.5 URBAN DESIGN

The following are guidelines set for urban design development and gateway development by the students who have design proposal in the study area.

-Unified street furniture and landscaping
-Similar paving design throughout
-No boundary walls
-Vernacular architectural language
-Each building to contribute positively to urban space (pedestrian side walk) by:
    -defined strong street edge
    -activity on street front
    -balconies on upper levels encouraged
    -mixed use development

Infrastructure

The intersection of Paul Kruger Street and Boom Street (which both have four traffic lanes respectively) is treated as a public square. The surface of the road will be paved to slow down traffic in this respective square. Edges of the square are demarcated with bollards.

The entrance of the basements to the hotel and to the other proposed designs east of the hotel is located in Paul Kruger Street. This will slow down traffic for pedestrian crossing.

Public squares are linked with a pedestrian promenade. This pedestrian axis links the different blocks in the study area providing an urban texture and allowing a stimulating environment to orientate the pedestrians. The pedestrian axis becomes an interactive edge for trade.

Structure
A bridge connecting the orientation building (proposed building east of hotel in Paul Kruger Street) and the hotel across Paul Kruger Street will form a visual gateway into the city. It will also act as a pedestrian gateway to the respective public squares and semi-private infill development

Spatial organisation

The hotel becomes a linear building that acts as a buffer to the proposed semi-private space to the west of the building. Pedestrians are redirected through the commercial ground floor of the hotel to the edge of the block where another public square is proposed around the existing heritage building.

Quality aspect of space

The ground floor level is treated with the same paved material used in the gateway development. Landscaping is done according to each proposed development to the square for block orientation. Paul Kruger Street is formalised with a tree boulevard to strengthen the formal entrance to the city. The commercial space opens onto a public square, creating a more vibrant street atmosphere.

West infill (semi-private) proposal

To the west of the hotel the proposed infill of commercial units is coupled with residential units. The quality of space in this area is more intimate and less monumental to define the semi-private space. Smaller squares are created according to the needs of the residents to this area.

Phase one

-Pedestrian introduction to centre of block, 10m clear pedestrian promenade
-Similar paving design throughout
-No boundary walls

Phase two

-Three to five storey infill built to 5m from centreline of pedestrian promenade
-Vernacular architectural language
-Balconies on upper levels encouraged
-Maximum five storey, mixed use, buildings with retail at the street level, office on the first floor and residential or office above

Hotel and orientation building

Semi-private infill

The gateway development

Government headquarters

Public squares connected with a pedestrian promenade.

Pedestrian movement

Fig. 21 Urban design concept and analysis

Fig. 22 Urban design plan

CHAPTER FOUR

Design development and technical investigation

Fig. 23 Design development

4.1 INTRODUCTION

The hotel industry is extremely competitive. Occupancy rates, profitability and financial margins are the key business issues for this industry. Earnings are largely dependent on the highly personal way in which guests experience their stay and whether it met with their expectations for the price they paid. Every hotel guest has numerous hotel choices. Therefore, the identity of a hotel is important to distinguish it from its competitors as per normative position.

Hotels are complex facilities requiring building control and security solutions that accommodate a wide range of needs during fluctuations in occupancy rates.
Hotels traditionally have very high operational costs due to the various environmental and security requirements necessary for operation. The traditional hotel in South Africa does not address change or adaptability in the design of the building. Most hotels are traditionally built to a specific theme with a life span of thirty years or less. Change to the building to suit current trends and technology means costly addition or rebuilding of the structure to facilitate change. A design approach to open building as a model on which to base a hotel could address this issue of changeability, without incurring the major cost of remodelling the building.

This discourse investigates hotel systems as a model that is based on an open building approach where the design can be classified in two parts: the service shell or base building and the infill.

A. The service shell or base building
This is the design tied to the site and is the permanent part of the whole building. The completed structure should be energy efficient and provide accommodation capacity for a range of interior layouts over a period of time.

B. The infill: This is the changeable part of the building. This includes fixtures, finishes, cabinets, interior partitions, consumer electronics and IT systems. Generally the infill is the technology that changes in a cycle of five to twenty years.

An open building approach means that the interdependencies between the two major subsystems - shell and infill - are reduced to a minimum and those that remain are well organised with open positioning and interface standards. But this principle also addresses interfaces between parts in the shell and in the infill. Thus, a change of one part will cause fewer disturbances than in a conventional building, where, because of excessive interdependencies, change in one part requires changes to many other parts.

Notably, this discourse investigated this systems approach to 'open buildings' specifically with regard to a hotel design to create a choice of hotel system models which accomodated a variety of room layouts in one base building. The investigation did not explore the possibility of the open building models with the aim of becoming an office building or a residential building. It is assumed that it will be possible for the model to accommodate these types of interior layouts.

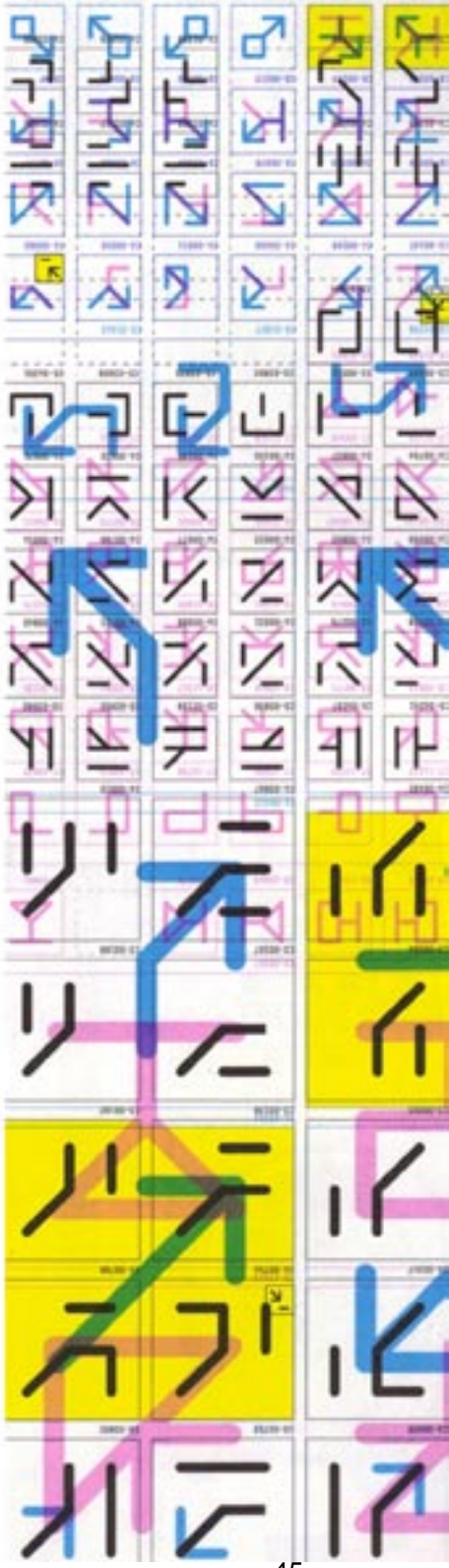


Fig. 24 Change

4.1 NORMATIVE POSITION

Creating a hotel's identity

Hotels evoke certain nostalgia and memories in the guest from past experiences, both pleasant and unpleasant. Yet no two hotels are similar. In general they are similar to urban parks as noted by the Spanish artist, Jean Munoz: 'They become spaces of transition, of passage, to be used and than abandoned, no-one stays for longer than they need to. No-one seems to own then, there is no sense of responsibility for them, no desire to make them more then they are'.(Munoz, 2002: 57)

To generate an identity of an urban hotel in order to personalise it as to capture and retain customers through a unique identity, it should reflect the immediate context where it is located, while also acknowledging the needs of the guest. Guests to an urban hotel do not expect the same hotel identity as that of a leisure or resort hotel. Leisure and resort hotels reflect the nature of their core business: to create a themed indulgence as a form of mental relaxation coupled with external activities.

To understand how a guest would interpret a space in order to formulate an identity for the hotel the study of hermeneutics was investigated. Hermeneutics in general refers to the philosophical study of interpretation. It consists of three working assumptions: situational interpretation, the primacy of perception and the 'happening' of tradition.

Originally hermeneutics was the field of biblical interpretation, but has become the study of the interpretation of not only texts but also human existence. The word originates from the Greek god, Hermes, who was the mediator between the gods and mortals. Friedrich Schleiermacher and Wilhelm Dilthey were important forerunners of contemporary hermeneutics and some important contemporary hermeneutic thinkers include Paul Ricoeur and Hans-Georg Gadamer. Essentially, hermeneutics involves cultivating the ability to understand things from somebody else's point of view and to appreciate the cultural and social forces that may have influenced his or her outlook.

Interpretation

According to hermeneutics, each individual interprets a space by using his or her own frame of historical reference based on experience and his or her 'library' of visuals. Creating an identity for a hotel where the client's historical frame of reference is interpreted in the architecture is challenging, virtually impossible.

Perception

Hotels should not seek to become temporary homes where the core identity of the hotel changes constantly to suit the guest's personal identity or perception of contextual identity but should rather facilitate his or her current frame of reference to become a metaphor of experience. Immediate personalisation of the hotel could be achieved in a variety of rooms, where the space and the amenities address the needs of a guest. Architectural elements could be introduced which form part of the hotel but can be manually manipulated or adjusted by the guest. If there are changeable elements, the guest participates in generating an identity of the hotel that is truly a once-off for the individual.

Fig. 25 A search for comfort

Tradition

The hotel's identity should be unique but not static. Themed hotel identity becomes static as the remodelling cost is very high. An urban hotel must create multiple experiences in keeping with the current trends as well as with that which could become and reflect traditions. By doing this the hotel keeps up what is taking place and the creation of contemporary culture. But it should be possible to introduce change at minimal cost to keep up with current trends hence the use of open building approach.

The hotel should evoke a belief in the spirit of the place (context) within the social constraints by remaining true to its core function of providing a service to a guest who should leave the hotel with a new experience to add to his or her frame of reference. A hotel and its articulation of walls, steps and spaces in the urban context become an element of memory giving the urban landscape an orientation of the culture and in doing so creating a unique hotel identity.

Fig. 26 Guests identity

4.2 HOTEL, MODEL ONE

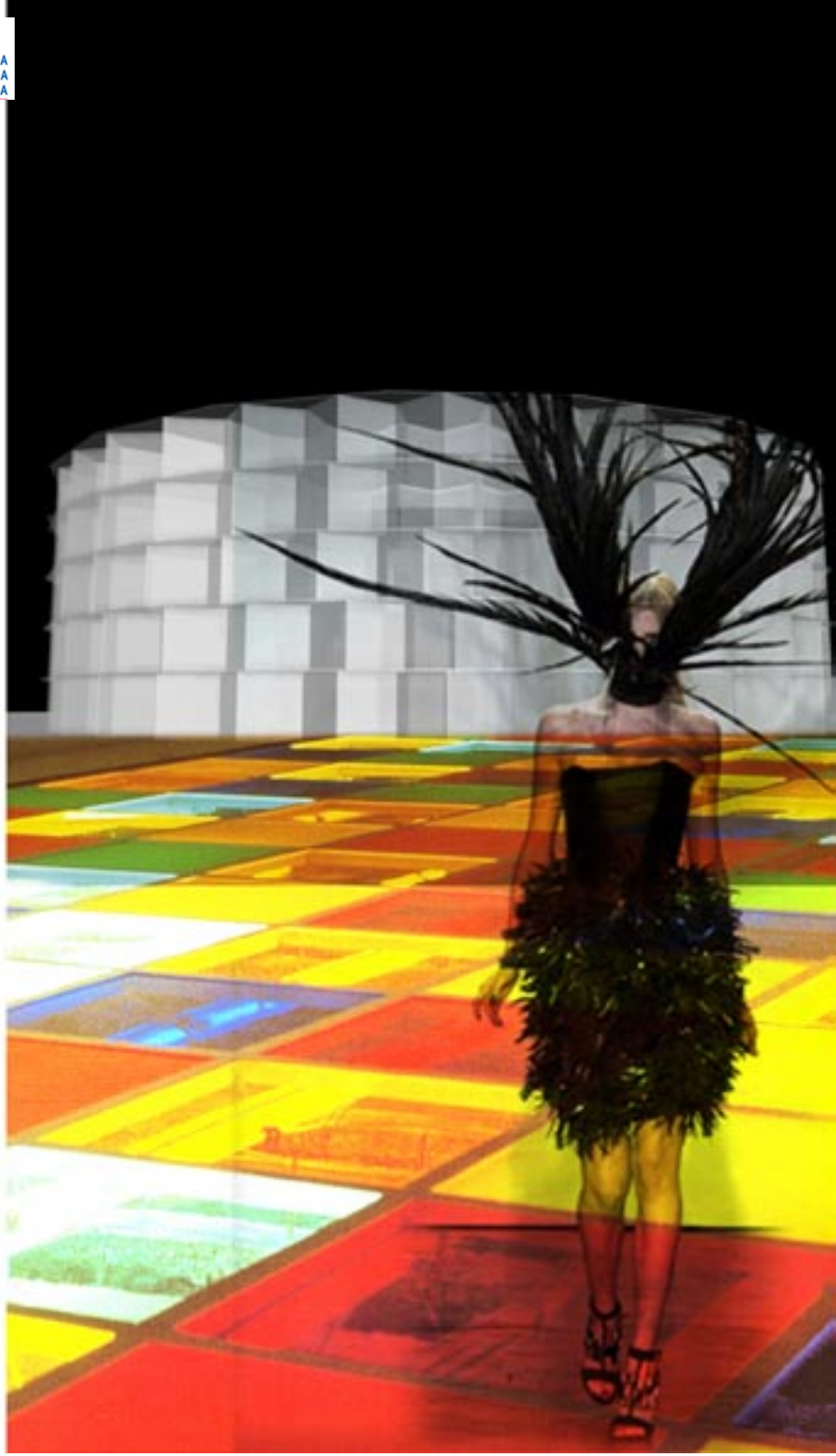


Fig. 27 Hotel, model one

This model investigated a circular service shell or base building with a central service shaft into which prefabricated rooms plug. A similar building constructed internationally is a proposed spinning skyscraper in Dubai (Name not published). A central service core would be constructed using traditional building techniques, but the components of each floor would be factory-created in the manner of prefabricated homes and then assembled like building blocks on the core.

This building model proved not to be feasible in a South African context due to the following reasons:

-The double floor which will host the services is an expensive construction system and is not feasible for a seven-storey building. To be cost effective, the building would have to be more than fifty stories as the building proposed in Dubai. Urban design parameters prevent the building from being more than fifteen stories high in the current context.

-The circular form of the design provides a limited room variety to slot into the base building. The prefabricated rooms should be assembled on site; the question is what would constitute a comfortable room layout which also provides the necessary facilities that could be prefabricated and comfortable enough to suit the South African market.

Fig. 28 A spinning skyscraper in Dubai

A similar hotel made from prefabricated rooms is the Capsule Hotel in Japan. Guest space is reduced in size to a modular plastic or fibreglass block roughly 2 m by 1 m by 1.25 m, providing room to sleep in and little more, although facilities usually include a television and other electronic entertainment. These capsules are grouped and stacked, two units high. Luggage is usually stored in a locker away from the capsule. Privacy is maintained by a curtain at the open end of the capsule but noise pollution can be high. This style of hotel accommodation was developed in Japan and has not gained popularity outside of the country, although Western variants with larger accommodations are being introduced (such as the Yotel and the Pod Hotel in London and New York respectively). Capsule or prefabricated hotels will not work in an African context, as most people are used to bigger sleeping units in hotels.

- Circulation and ventilation proved to be challenging due to the circular design of the building. With a central core that hosts the main circulation lifts and fire escapes, security became problematic. It must be noted that for the open building model to work effectively more than one function should theoretically be accommodated in the building. This model proposes a commercial usage and office space on the lower levels and hotel accommodation on the upper levels. This implies more than one user to the building, thus making the distinction of a variety of schedules, circulation and security problematic.

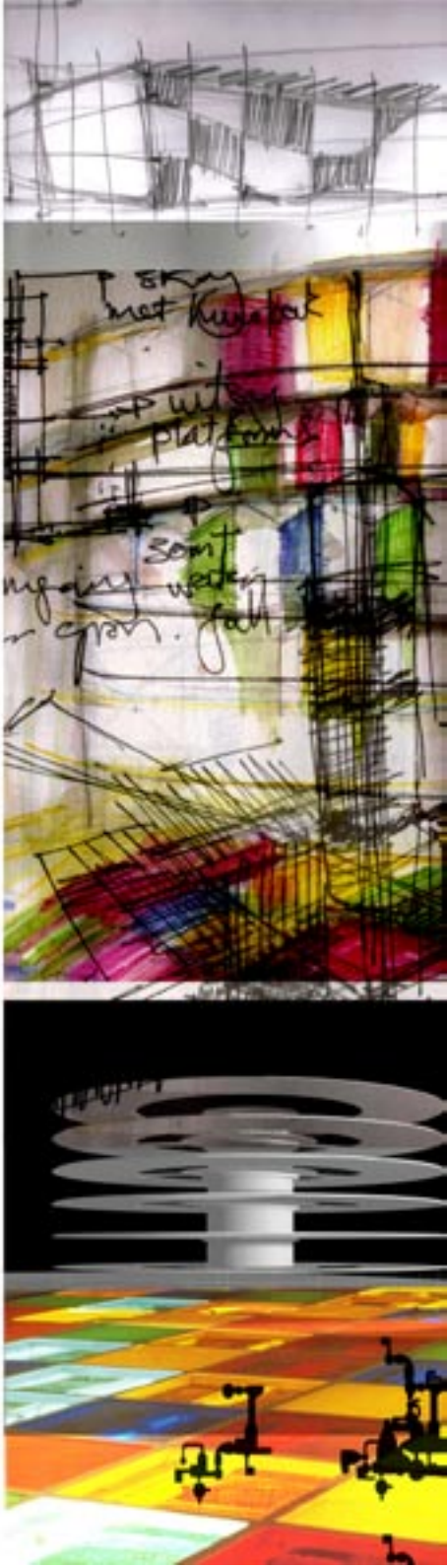


Fig. 29 Design development, model one

4.3 HOTEL, MODEL TWO

Fig. 30 Hotel, model two

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From the first model where only a single service shaft was proposed in the base building the second model utilises additional service shafts. Multiple service shafts were organised on a square grid to organise the base building. This proves to be more feasible as the multiple service shafts gave a bigger distinction in the variety of room layouts in the base building where the wet core of each room is adapted into the respective service shaft.

The building had the same proposed multifunctional use of space where commercial use was concentrated on the ground level and rentable office space was introduced on the first and second floor. The hotel functions were situated from the third floor upwards. In this model the hotel utilised the commercial ground facility (restaurant and takeaways) to cater for the needs of the guests. In doing this a restaurant facility was omitted of the programme schedule of the hotel.

Fig. 31 Multiple service shafts

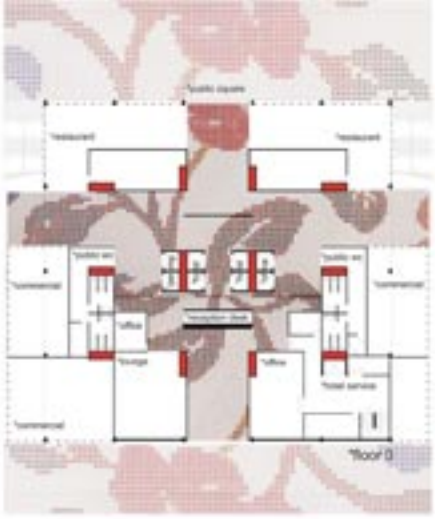
The even side square design proved not feasible due to the following reasons:

- It became clear in a multifunctional building that there are problems with the definition of the hotel's entrance and security with regard to the other functions, while utilising the same circulation lifts and staircases.

- Circulation space in the building became uneconomical with small rentable space and larger open space due to:

  - Ventilation, as the rooms were located on the edge of the base building. These rooms were designed to the maximal depth that allows natural ventilation into the room. Ventilation to the core of the building became problematic.

From this model it was clear that the specific programme (hotel, office, commercial) had to be able to function separately from the other building schedules to have a feasible security and circulation system.



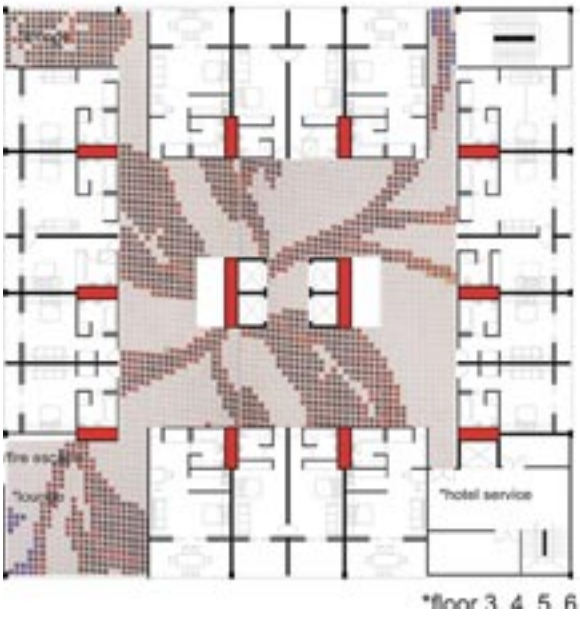


Fig. 32 Plan development of model two

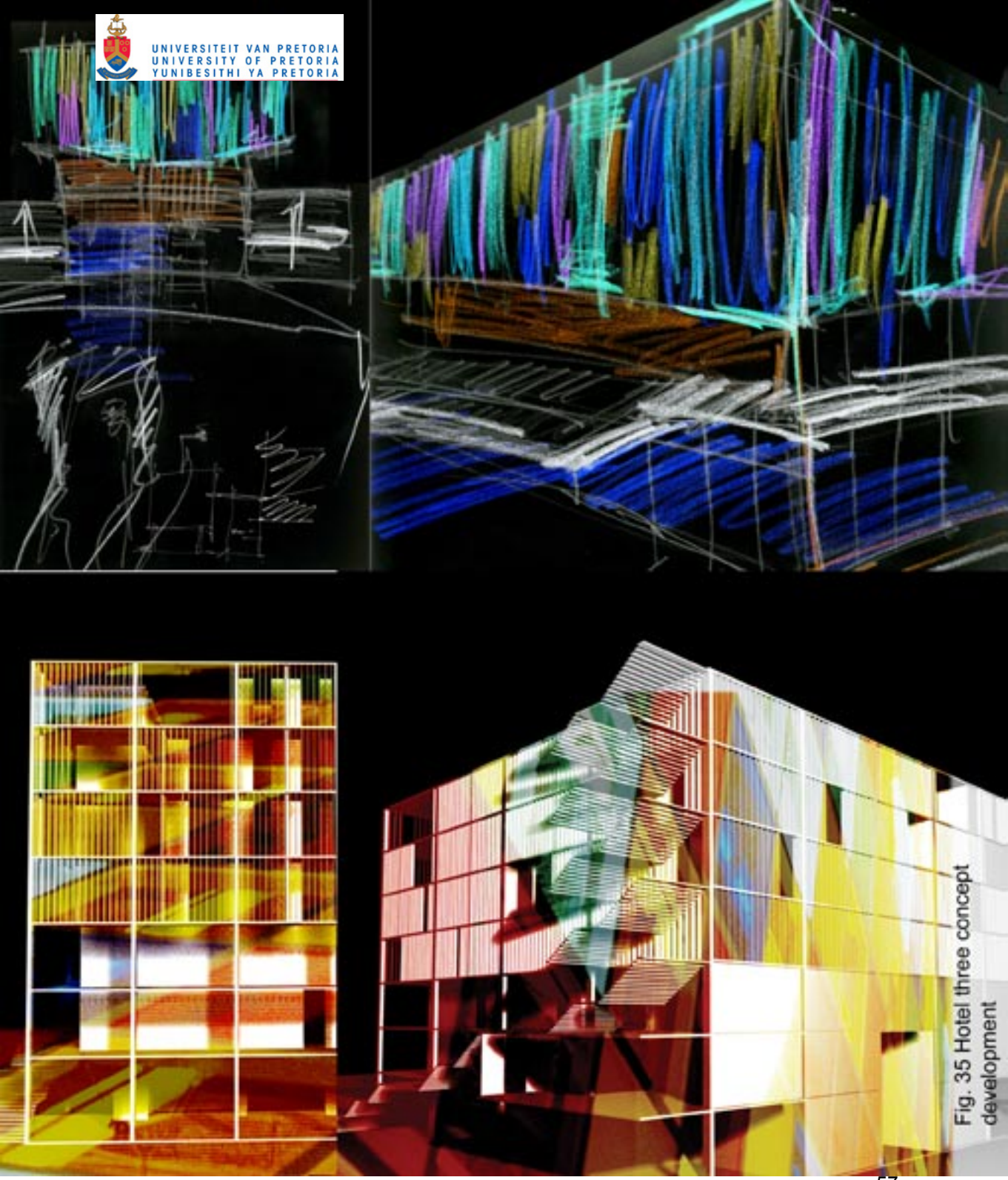


Fig. 35 Hotel three concept development

4.4 HOTEL, MODEL THREE

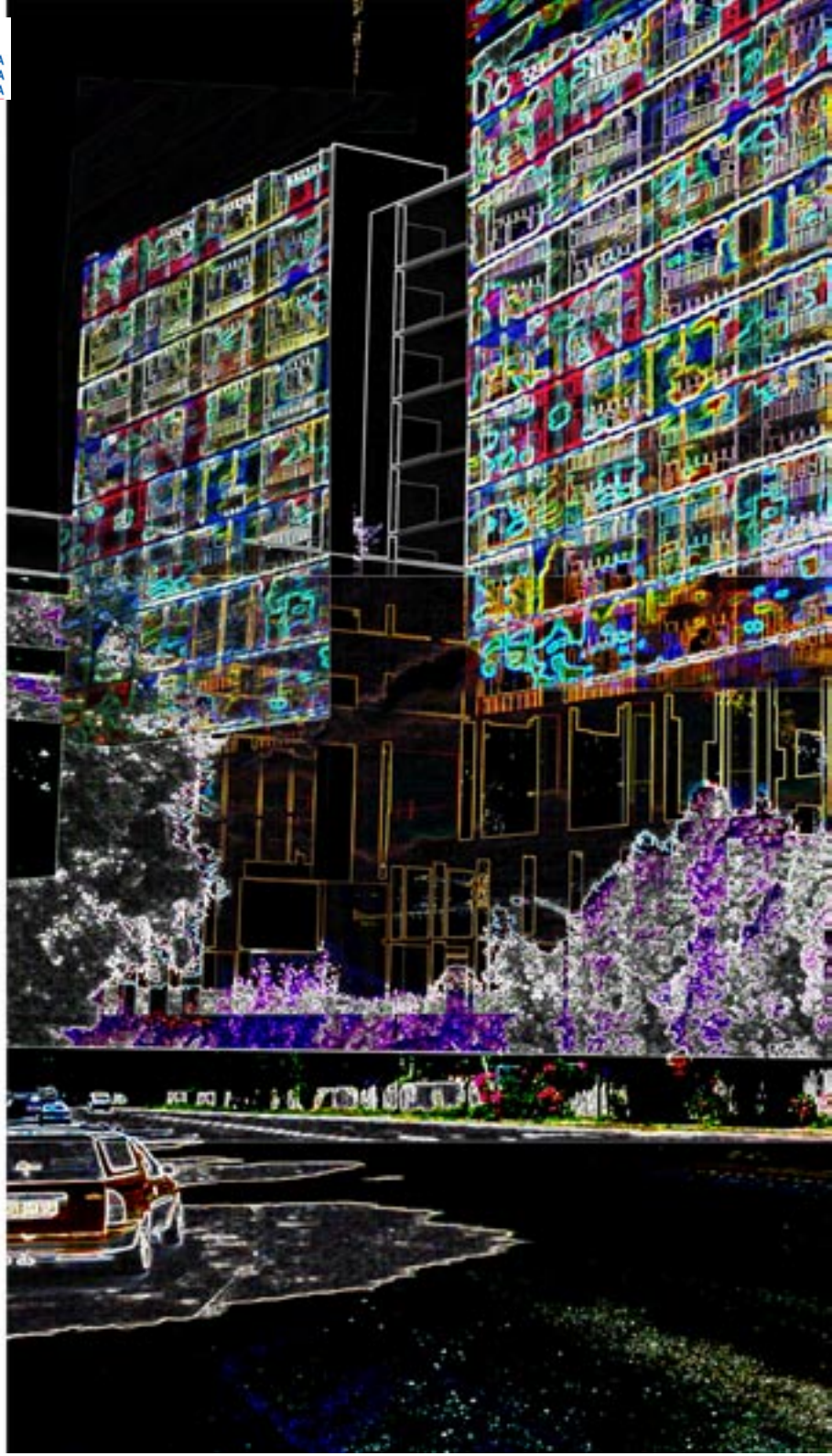


Fig. 34 Hotel, model three

This model is a combination of both previously mentioned models where several room layouts and infill functions are organised in a set base building. As illustrated before, traditional hotels are less capable of adaptability due to formalised architecture. One would be tempted to propose a hotel that is similar to those seen in Dubai where glass towers dominate the landscape but this will not be feasible in the immediate context. With the development of the design, it became clear that a simplified approach adapts more easily to more variety whilst adhering to the urban design parameters set. The building seeks to be true to its immediate context, use of material and capability to facilitate service functions. All materials proposed for the hotel construction are locally available, determined by the skills available.

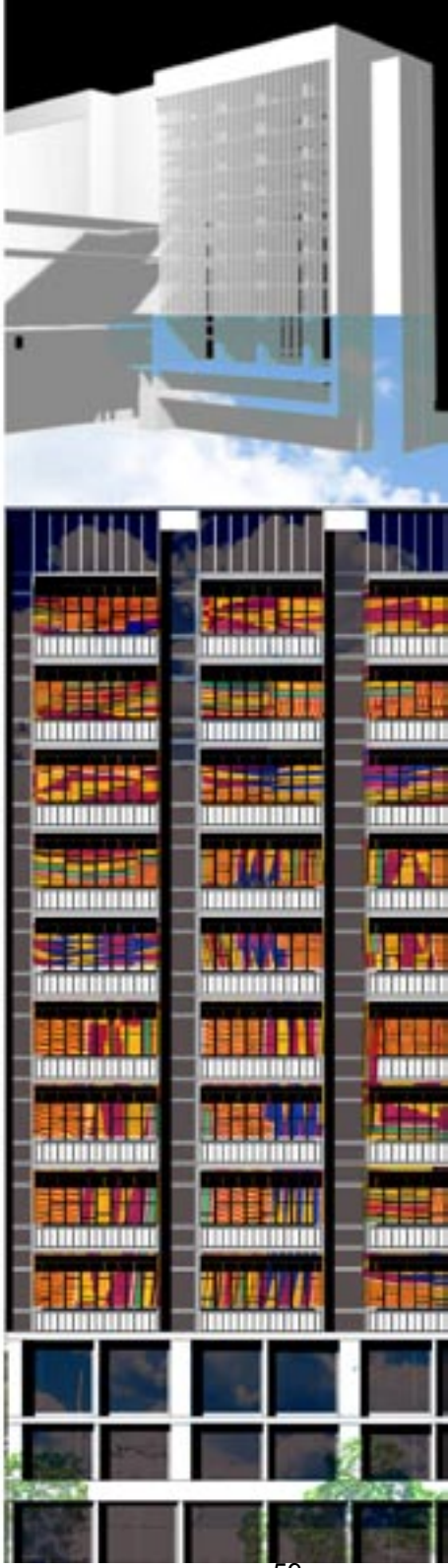


Fig. 35 Hotel three concept development

Fig. 36 Hotel three, Eastern perspective

Fig. 37 East elevation (not to scale)

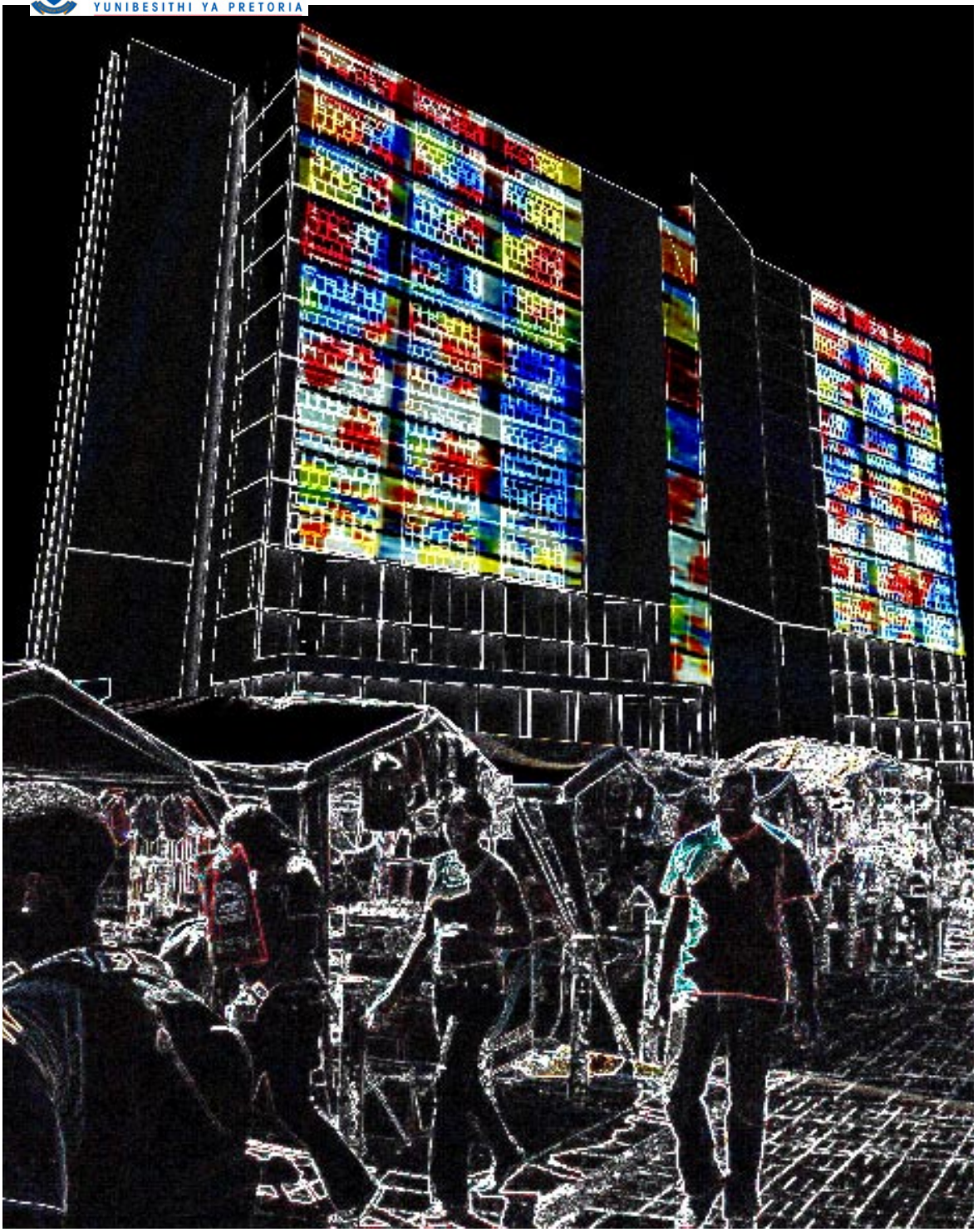


Fig. 38 Hotel three, Western perspective

Fig. 39 North elevation (not to scale)

Fig. 40 Perspective North(top), West (bottom)

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Fig. 41 Ground floor indicating Orientation building

Base building

The base building consists of the following elements:
-Basement
-Service shafts:
-Structural system
-Precast concrete floor slabs
-Roof

Basement

Fig. 42 Hotel basement

The basement design forms part of the proposed block basement. The entrance of the basement is in Paul Kruger Street. Responsibility for the hotel section of the basement becomes that of the hotel management.

The basement will be constructed with a concrete cavity retaining walls system secured with rock anchors to engineer specifications where the concrete columns support the piers. The basement will be mechanically ventilated.

The layering system of the basement is as follows:

- Dorken Dimple Sheeting water proofing system
- 200mm reinforced concrete slab
- 75mm screed
- Drainage to sumps with steel grill covers
- Concrete columns to engineering specifications
- Column foundation to be reinforced by pad foundation to carry load of piers to engineering specifications

-Foundation
Reinforced pad foundation according to engineering specification

-Service shafts
From model 2, multiple service shafts were organised on a linear grid form where similar variety in interior room layouts is possible.
The service shafts (3 000 mm X 1 000mm) are made from off shutter concrete to comply with SABS standards regarding 'design of structural systems' (SABS 0160) and structural concrete (SABS 0100). The service shafts accommodate all electrical, mechanical and plumbing system services as needed. They are accessible for maintenance by doors.

-Structural system
Shutter concrete walls and service shaft are the primary structural system.
Steel construction is to be used as a secondary system, supporting the concrete floor slabs and the maintenance roof. All primary elements are to be hot rolled H profiles and must to grade 300 W to comply with SABS 1431. Steel structure geometry and sizing must comply to SANS 10160 for loads and SANS 10162 for steel structure. Structural steel needs must comply with SABS 1200H or 12004 and SABS 0162 (Wegelin:1998:59) All surfaces must be primed by brushing and blast cleaning according to SABS 064 and painted with two coats of zinc phosphate primer to comply with SABS 1319.

-Pre cast concrete floor slabs

200m Post tension flat slabs with steel reinforcing to be 20-30 MPa to comply with SABS 1024 requirements.

-Roof
The roof consists of steel I beam as supporting elements and steel c-sections purlins to be used with steel cleats. Steel IBR profile sheeting to be fixed with hook bolts and spaced no more than 1.5 meter.

Infill structure

This is the changeable part of the building. Generally the infill is the technology that changes on a cycle of five to twenty years. The infill of the building has to be adaptable while accommodating the necessary amenities of the rooms. The material or system has to provide acoustic qualities, be fire resistant and provide thermal comfort to the rooms.

The infill consists of the following elements:

-Skin
-Spatial organisation
-Interior walls
-Electrical components
-Drainage
-Safety and security

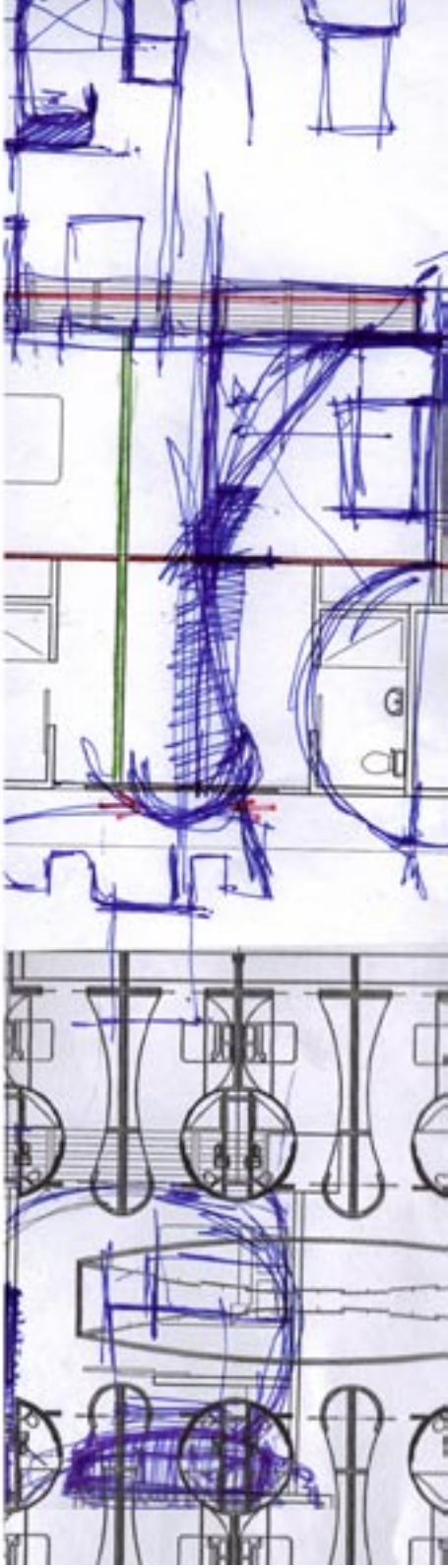


Fig. 43 Infill design development

-Skin

The skin or envelope of the building is designed to facilitate climate control in the building. These optimal solutions are essentially theoretical. The proposed hotel is a multi storey building where mechanical climate control is coupled with natural climate control systems that are introduced to lower the operational cost.

For8 the proposed hotel, several climate control interventions are introduced to reduce the cost of mechanical ventilation systems in the building. These are:

-Louver system attached to facade
-Natural ventilation
-Stack ventilation
-Mechanical ventilation

Climatic condition of Pretoria

Temperature
For the months of November to March the temperature falls within the thermal comfort zone that ranges from 16 degrees C to 32 degrees C with an optimum temperature being around 22 degrees C (Holm, 1996, p 69).

Wind
In summer the wind direction is from east-north-easterly and east-south-easterly and in winter it is mainly south-easterly (Holm, 1996, p 69).

Fig. 44 Visual case study for façade system

Sunshine

Pretoria receives a very high sunshine percentage with annual maximum of 80% and minimum of 67%. This reads as 4.5 Whr/m2/Day in mid-winter and 8Whr/m2/day in mid-summer. Much of this is radiation. More diffused radiation takes place in the morning than in the afternoon, due to clouds and pollution.
(AAL 310, 2002, p19)

-Louver system attached to facade

To prevent excessive heating and glare to the building from the sun, louvers on the east and west façade control the daylight levels. During the day the angle of the louvers can be manually manipulated by the guest to the preferred infill of sunlight into the rooms. The louvers also act as 'light shelves', reflecting light off their surface into the room. This reduces the amount of artificial light that is needed in the rooms. The louvers will prevent overheating, avoid thermal discomfort and prevent glare.

The visual case studies indicated that most louver systems attached to the façade are static systems. In the proposed hotel design a static louver system will limit the immediate changeability to adapt to the needs of the client. The proposed louver system (refer to detail) can be, as noted, manipulated by the guest. In doing so, the facade of the hotel becomes an interactive membrane between the client and the building's street front. Prior to the louver system, other facade systems were investigated as to achieve this interactive membrane. There were other facade systems that could be applied, but in keeping with the building's goals of changeability, the louver system proved more feasible. It must be noted that the louver system can be removed to make the building more adaptable in future.

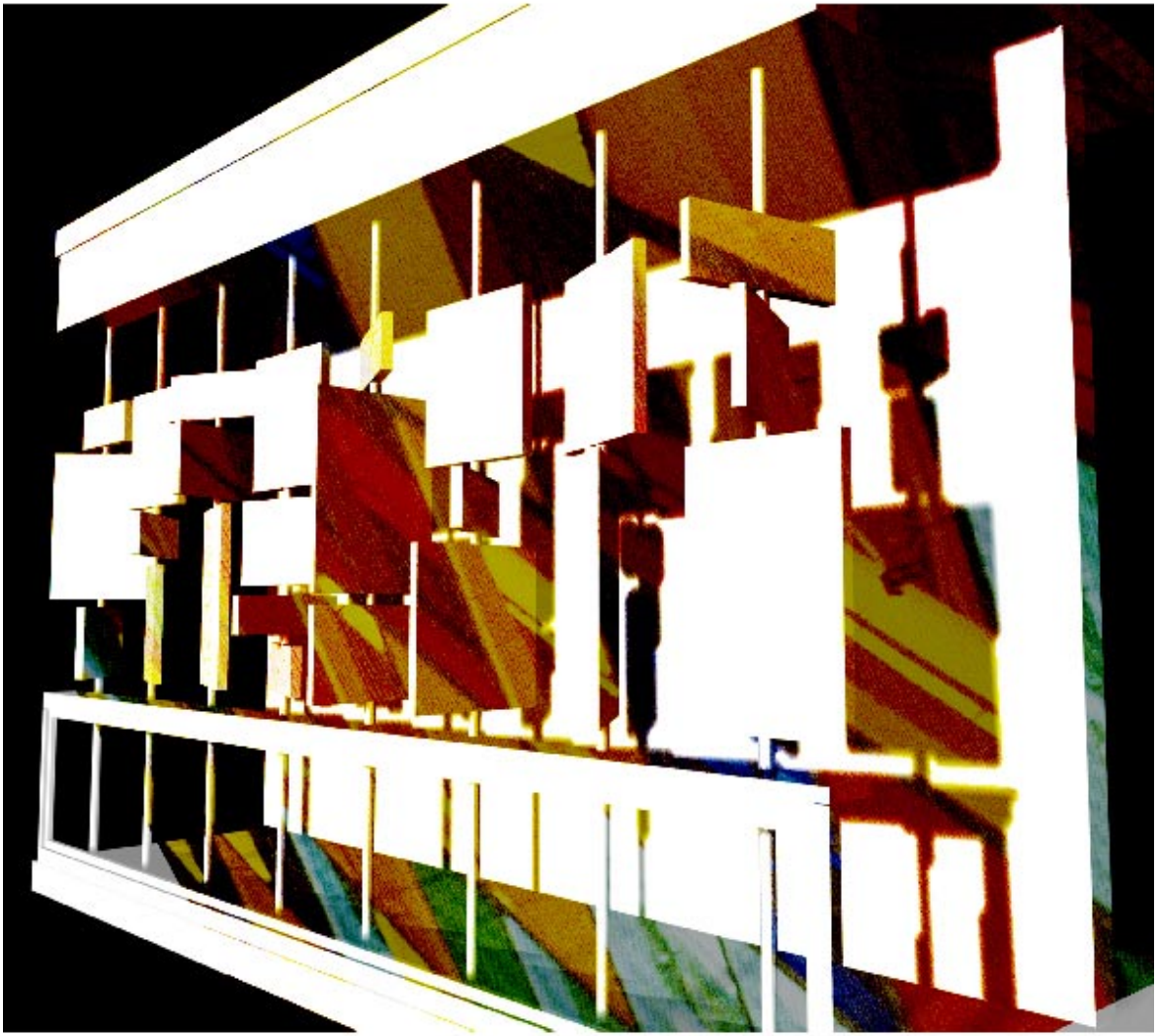


Fig. 46 Balustrade perspective

Natural ventilation

The word “ventilate” is defined as “to let fresh air into (a room or building)” and a “ventilator” is defined as “an opening or device, such as a fan, used to let fresh air into a room or building.

A room or building needs ventilation for one or more of the following reasons:

-Trapped air accumulates heat.
-Trapped air becomes contaminated with toxic fumes, particles and odours .
-Trapped air becomes saturated with water vapour.
-Trapped air becomes depleted of oxygen, causing stuffiness.
-Smoke and fumes from fire choke inhabitants and cause the fire to spread.

The hotel has doors that open onto balconies facilitating thermodynamic forces in a building to draw in fresh air and discharge waste air. Air inlet systems are positioned at floor level to maximise the stack height and provide incoming air at the level of the building’s occupants.

Stack ventilation

Glass chimneys are located on the east and the west facade of the hotel. Temperature differences between the inside of the chimney (heated from the sun) and indoor room temperature cause air density differences. This creates pressure differences that draw the hot air out of the room into the chimney. The rate at which this air rises in the chimney depends firstly on the temperature difference between the rising column of warmer air and the surroundings’ cooler air and secondly, on the height of the chimney.
Hot air is exhausted through the vent at the top of the stack taking into consideration that the wind predominantly comes from the east. Detailing will prevent back drafting that would cancel the effect of stack ventilation.

The following case study is one of a few high rise buildings that uses a natural ventilating system. This model informed some of the detail design.

Gemeinnützige Siedlungs-und Wohnbaugenossenschaft mBH (GSW)
Headquarters Location: Germany
System: Double-skin façade
Architect: Hutton Architekten

This 11-m wide office building allows for cross ventilation. The east façade consists of automatically and manually-operated triple-glazed windows with between-pane blinds. Louvered metal panels also occur on the east façade to admit fresh air independently from the windows. The west façade consists of a double-skin facade with interior double pane windows that are operated both manually and automatically and a sealed 10-mm exterior glazing layer. Wide, vertical, perforated aluminium louvers located in this interstitial space are also automatically deployed and manually adjustable. The louvers can be fully extended to shade the entire west façade.

Outside air admitted from the east facade provides cross ventilation to the opposing west facade. The prevailing window direction is from the east. The west facade acts as a 20-storey high shaft inducing vertical airflow through stack effect and thermal buoyancy. During the heating season, the air cavity between multi-layer facade acts as a thermal buffer when all operable windows are closed. Warm air is returned to the central plant via risers for heat recovery.

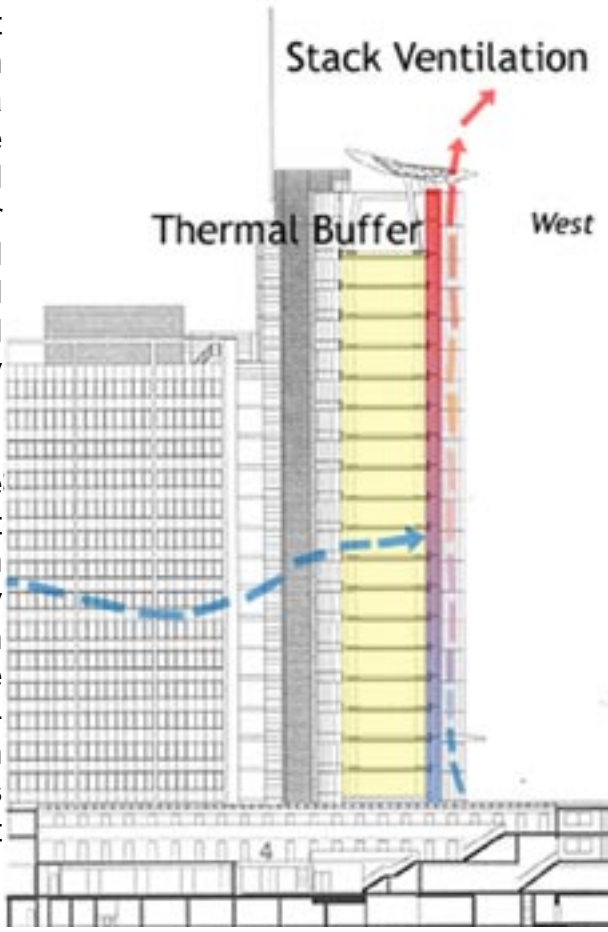
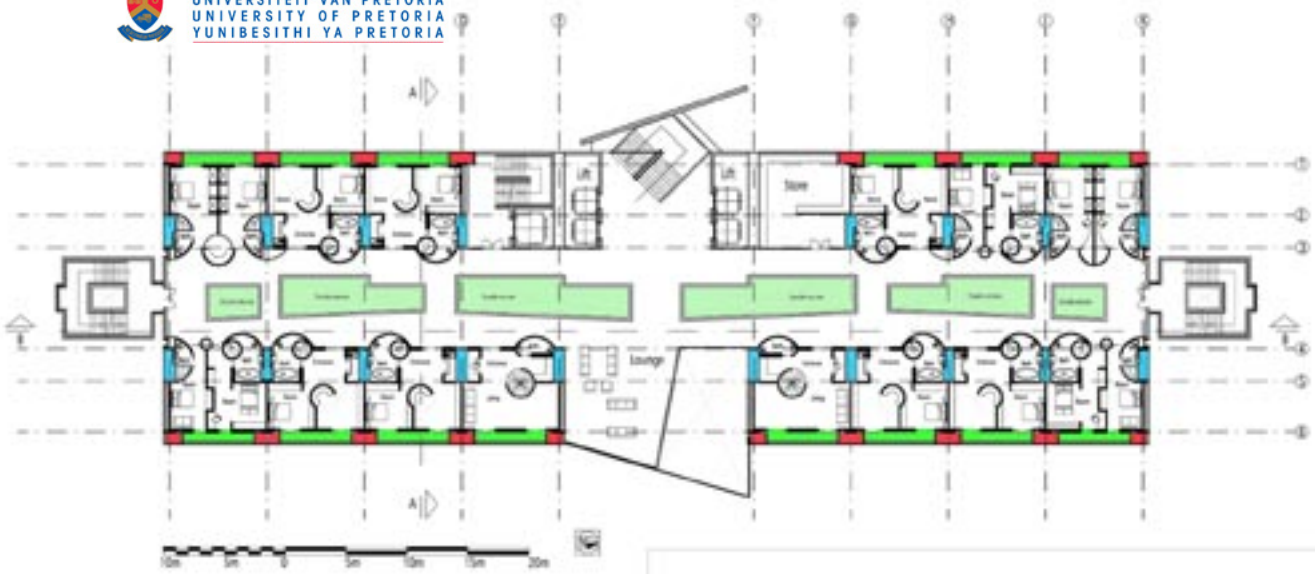


Fig. 47 GSW Headquarters



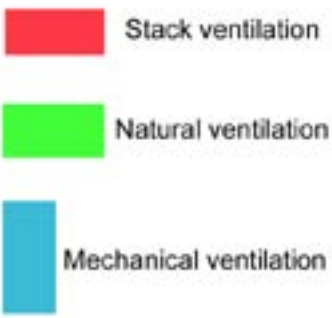


Fig. 48 Ventilation systems in hotel

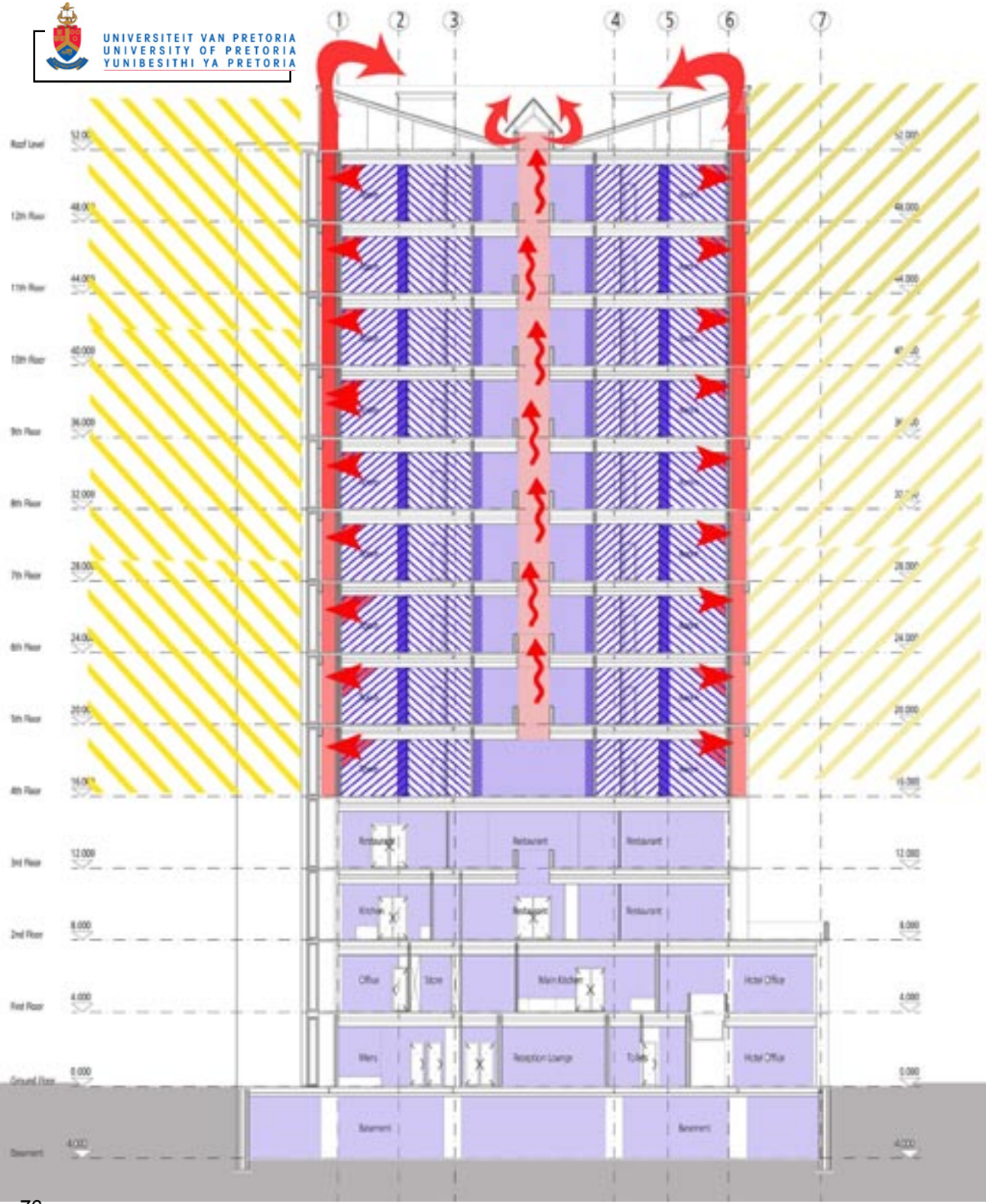


Fig. 49 Stack ventilation

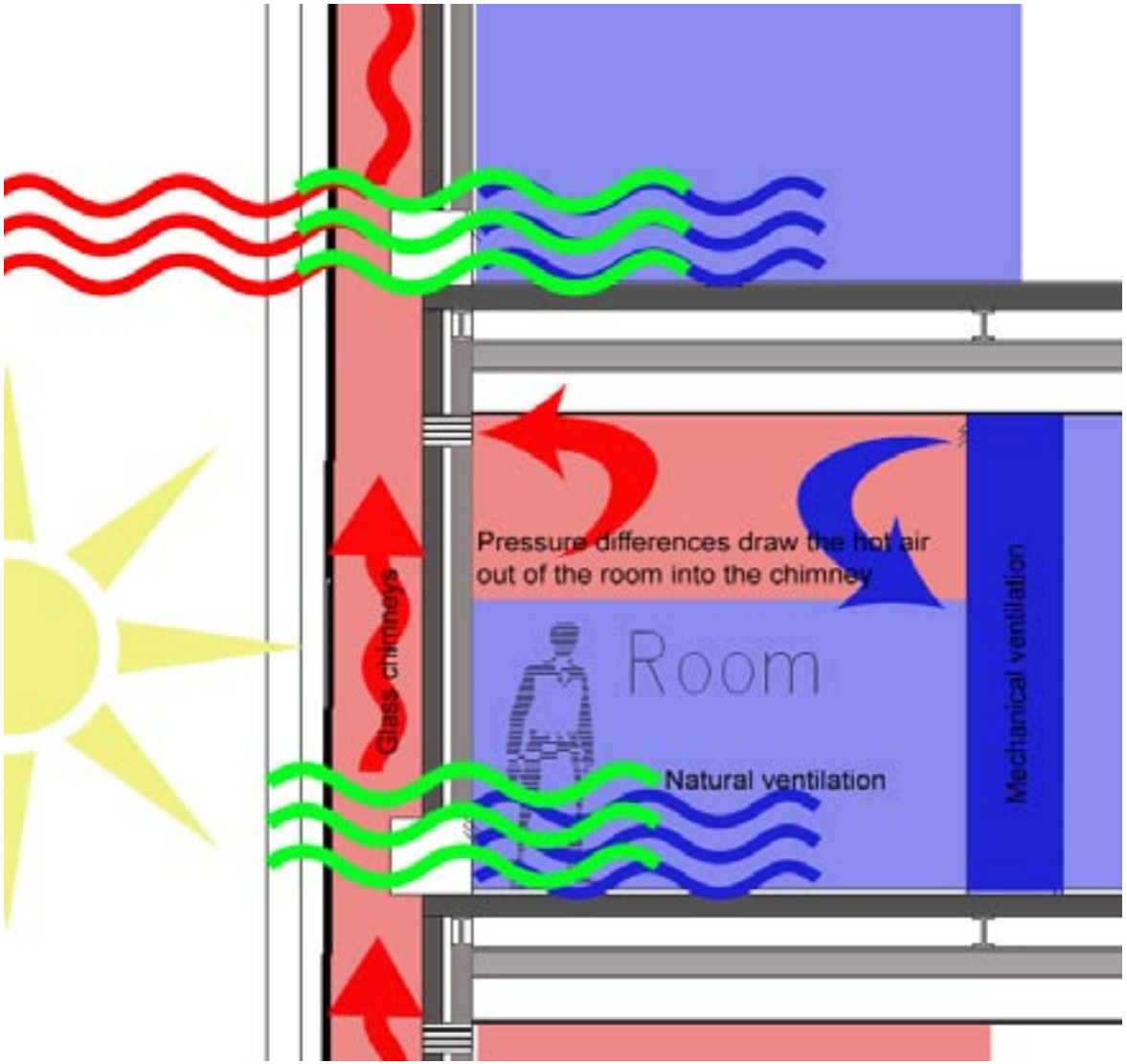


Fig. 50 Stack ventilation system as per room

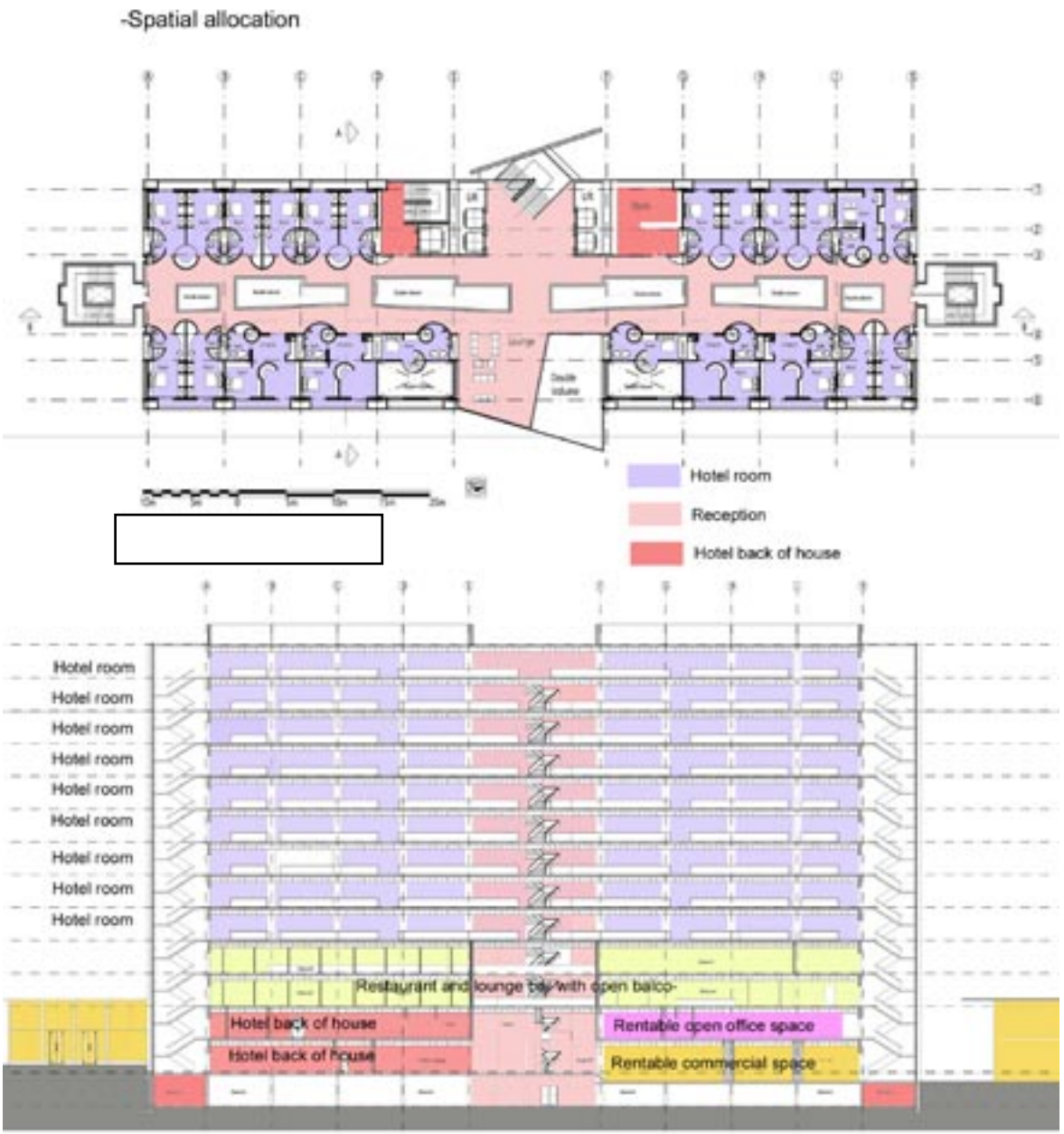


Fig. 51 Spatial allocation

Fig. 52 Ground floor

Fig. 53 First floor

Fig. 54 Second floor

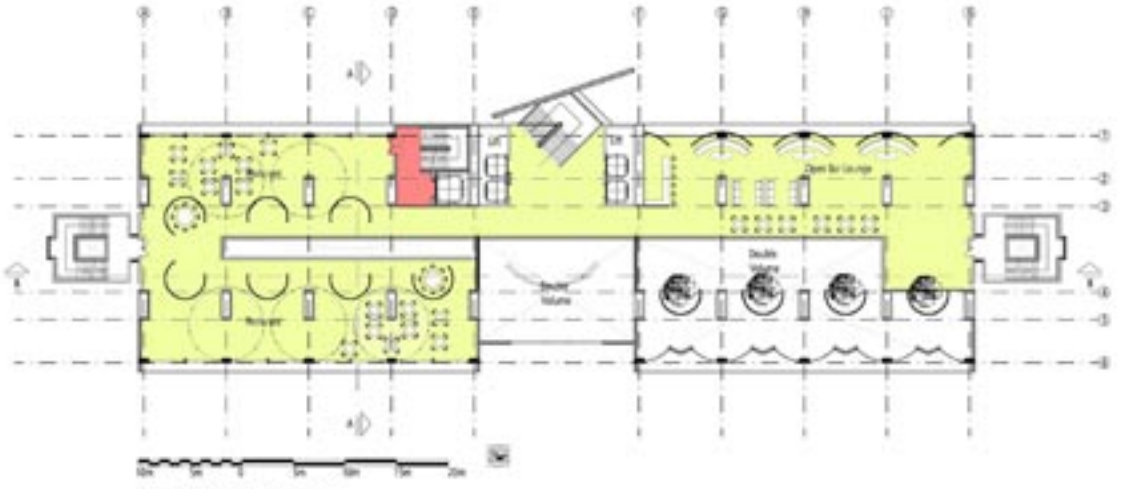


Fig. 55 Third floor

Floors four to thirteen are Hotel room with various floor layouts.

Unit A, STAR 1/2
Two rooms with dividing door that open onto a central kitchen. Market as single room or as double room. Each room with a bathroom that has shower, hand wash basin and toilet.

Unit B STAR 2
Two rooms with built in desk, a bathroom that has a shower, hand wash basin and toilet.

Unit C STAR 1 and 3
One room with a bathroom that has a shower, hand wash basin and toilet.
One room with a study, bathroom that has a shower, bath, double hand wash basin and toilet.

Unit D STAR 3
One room with lounge, built in kitchen and a bathroom that has a shower, bath, double hand wash basin and toilet.

Unit D STAR 4
One room on mezzanine level with double volume lounge, study, guest bathroom, built in kitchen and a bathroom that has a shower, bath, double hand wash basin and toilet.

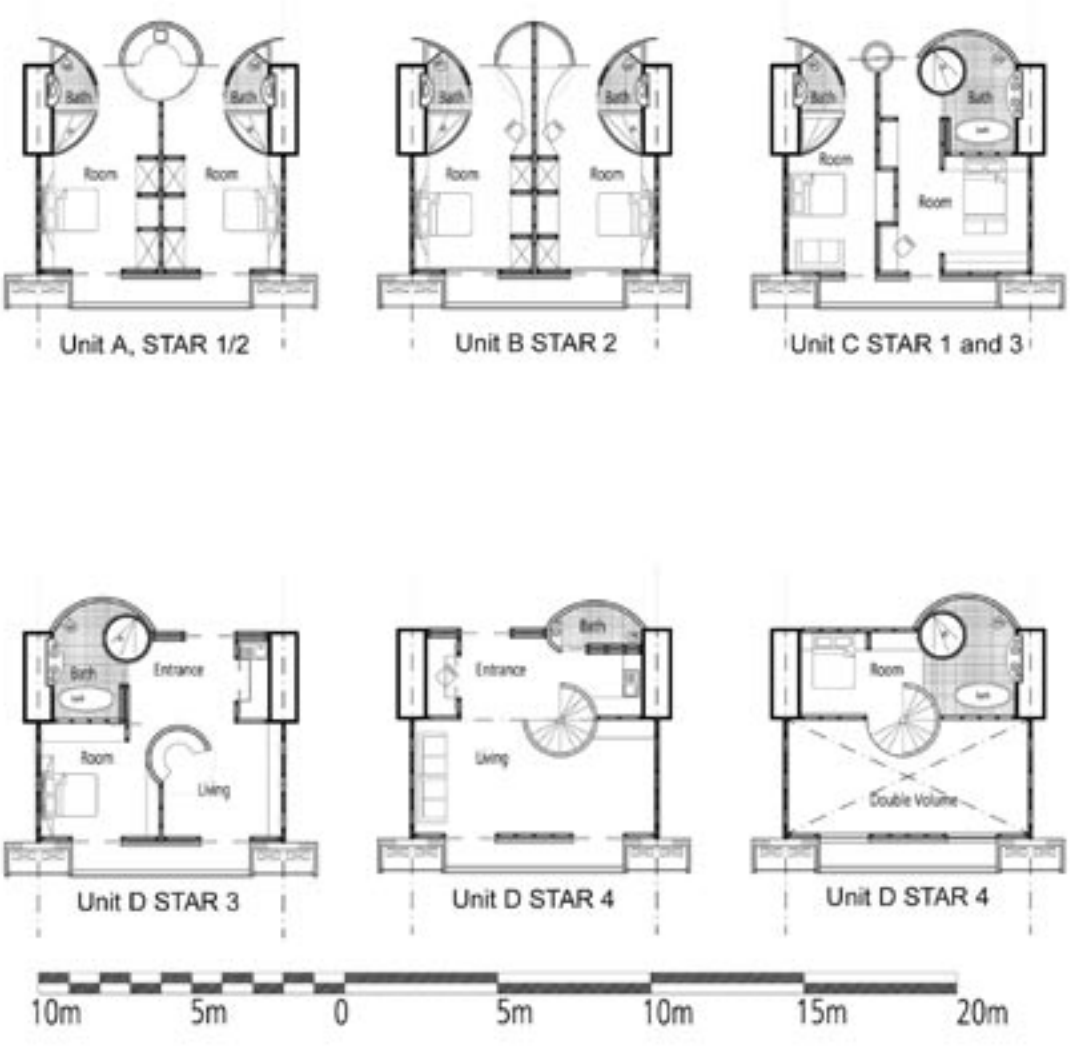


Fig. 56 Room Layouts

Interior walls' wall.

Rhinowall™ HiStrength™ System will be used for the interior infill of the rooms.

Acoustic Installation: >43db
Fire Rating: 60 minutes
Approximate mass: 30kg/m2

The wall system consists of the following construction:
- 58mm Ultrasteel™ Drywall steel studs inserted at 600mm centres in 58mm Ultrasteel™ Drywall track.
-Sound Seal™ is inserted under tracks and wall studs for enhanced acoustic and moisture insulation.
-Clading on both sides of frame with a single layer of Rhinoboard™ branded 15mm Firestop™ taper edge board.
-Inner and outer joints to be staggered.
-Rhinoboard™ is fixed at 220mm centres using 25mm Rhino Drywall screws.
-Jointing is to be done with RhinoTape™ and RhinoGlide™ jointing plaster.

Fig. 57 Interior room perspective

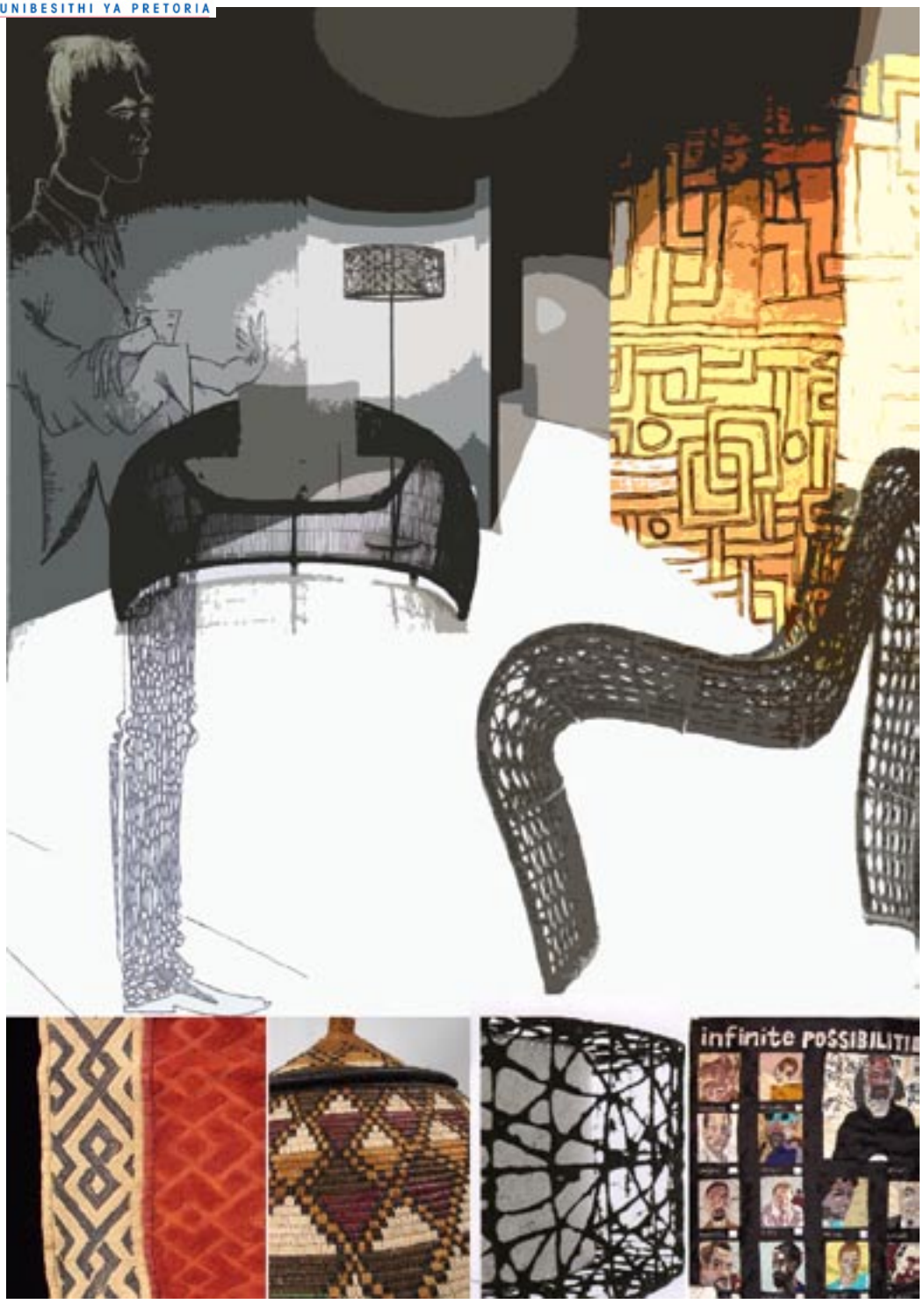


Fig. 58 Interior room perspective

-Safety and security
Separate entrance to different function in building, as per example: hotel with separate entrance from basement that opens into reception.
Integration of surveillance cameras, door locks and entrance controls, reservation and financial systems.

-Electrical
To maintain the electrical, mechanical and plumbing system and equipment of the engineering department, a periodic performance monitoring and measurement of the system is required. This benchmark tool will thus provide a system in place, thereby the hotel can monitor their resources (energy, water) consumption, wastewater generation, Green House Gas (GHG) emission and their financial performance.

The following is the percentage break-up of energy consumption by various utility areas:

- Lighting 30 – 40%
- Kitchen 10 – 15%
- Lobby 10 – 15%
- Elevators 02 – 04%
- Others 10 – 25%

-Lighting

Guest lighting accounts for 30% to 40% percent of hotel electricity consumption. Energy-efficient lighting can save 20% to 75% percent in energy use by using:
-Occupancy-controlled lighting in one area, daylight-controlled in another.
-Occupancy-controlled lighting connected to an alarm system or access control.

-Power supply
External transformer
Three phase power supply
Distribution boards
Db maintenance room
Emergency back up generator

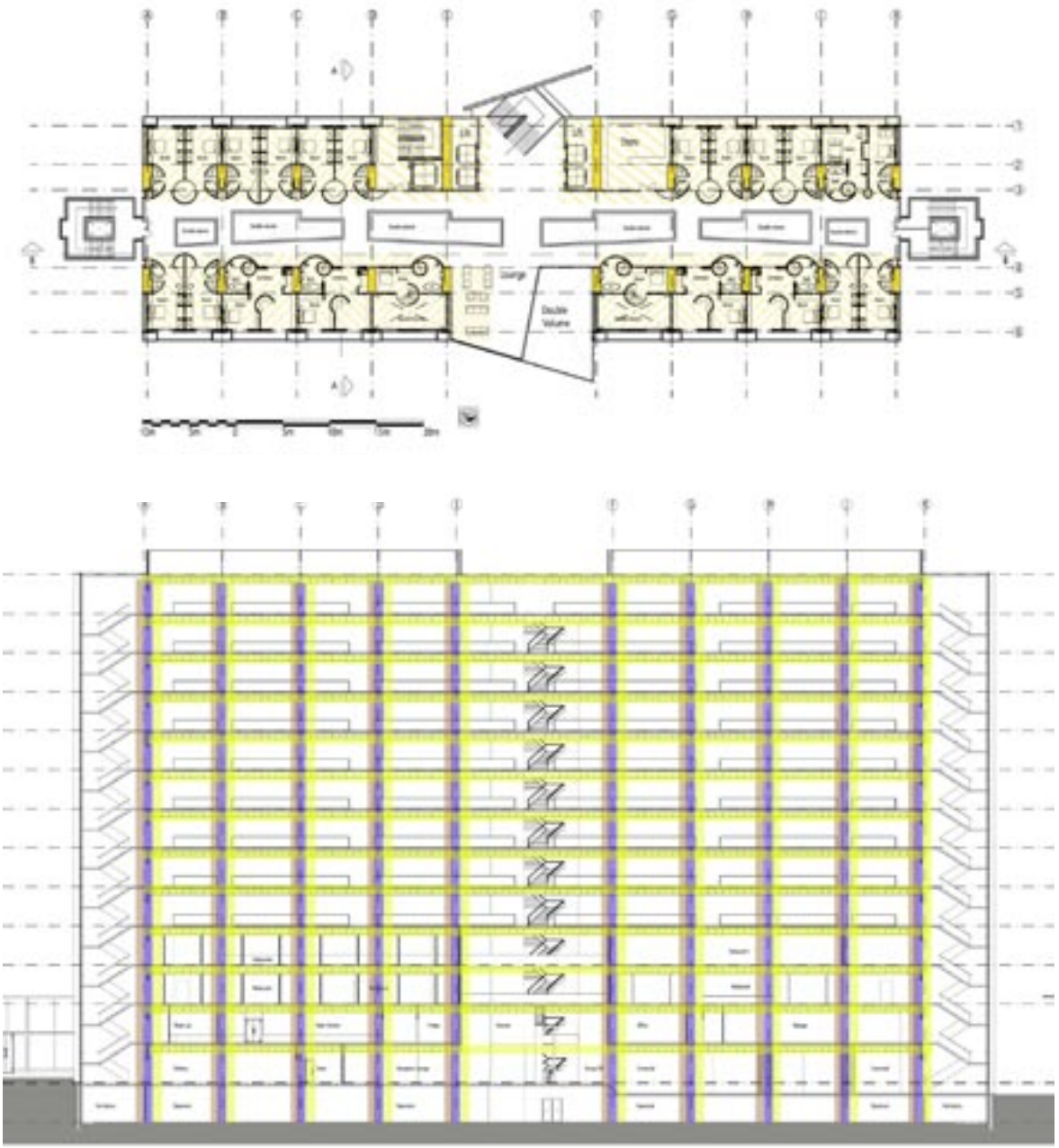


Fig. 59 Electrical layout

-Drainage
All waste and soil pipes are located in service shaft which drain into municipal drain system.
Storm water pipe connects to municipal storm water system.

-Fire protection

All steel is to be finished in intumescent paint as to create insulating foam during a fire. A coating of 1mm gives fire protection of approximately 60 minutes.
Escape routes are via stairways as per national building regulations and follow general circulation routes that exit at street front. Signage will be as per national regulation and direct people to exit and to indicate location of fire hose and extinguisher.

Two 30 meter hose reels and four 4.5 kg fire extinguishers will be located on each floor. All fire protection equipment to be sealed of in locked glassed cases with keys located in recessed glass fronted boxes to be broken in case of emergency.

Sustainability program

-Establish recycling programs in common areas, guest rooms, and administrative areas.
-Incorporate food scrap and yard waste composting programs where cost effective.
-Participate in donation programmes for food, surplus furniture, electronics, and other items.
- Install energy and water efficient fixtures, lighting, and other equipment.
-Minimise use of disposable items.
-Use nontoxic (or less toxic) alternatives for cleaning supplies, paints, etc.
-Adopt an environmental purchasing policy for preferable products such as recycled-content office paper, tissue and napkins.
-Develop annual environmental improvement goals.

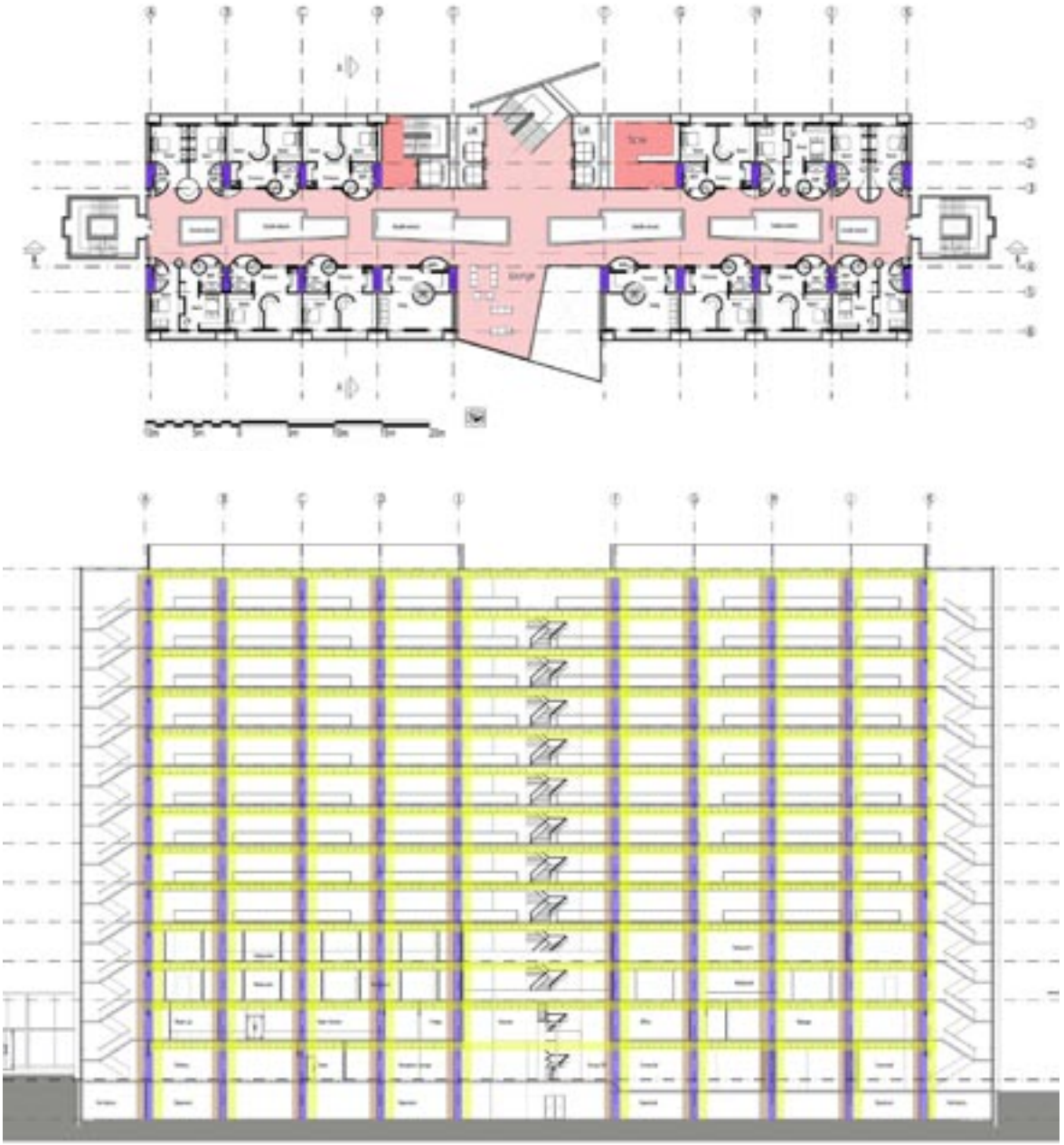


Fig. 60 Water

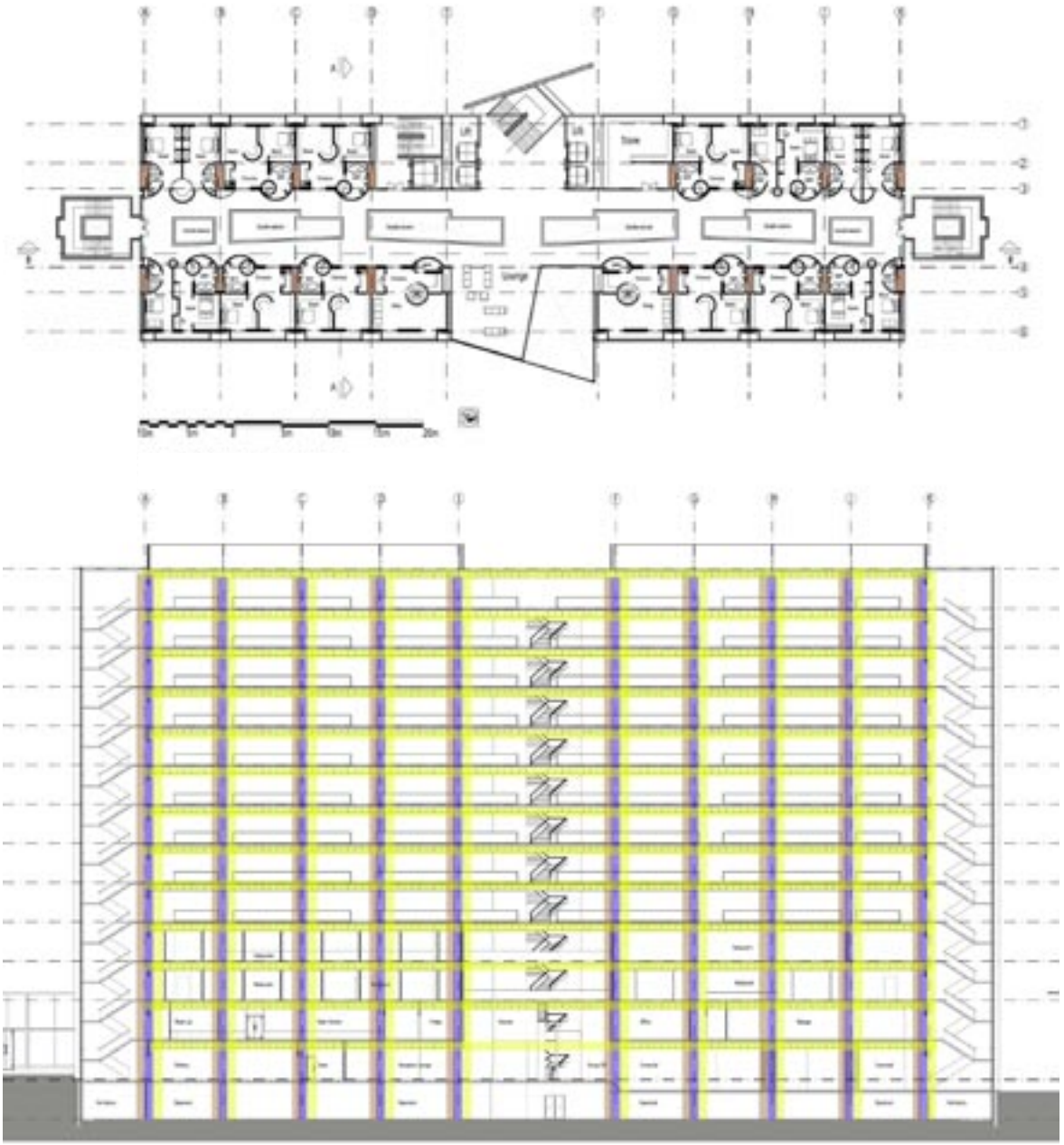


Fig. 61 Brown water

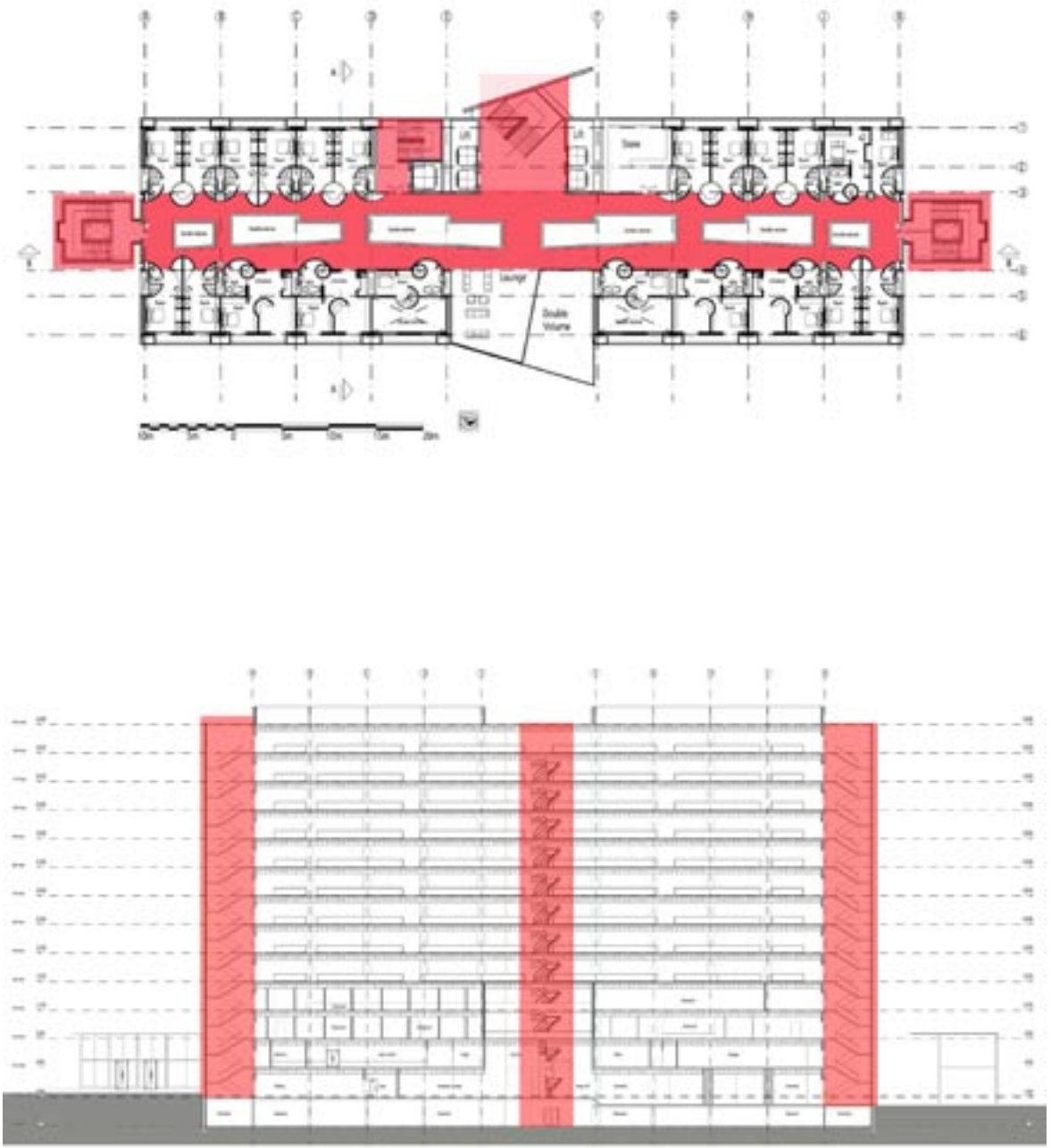


Fig. 62 Fire escape routes

4.5 CONCLUSION AND REFLECTION

This discourse investigated a hotel system for the possibility of multiple room stars in one building whilst reflecting the immediate identity of the context. The third model with multiple service shafts on a linear grid form did provide the possibility of a range of room layouts, making the building adaptable to future change.

It is a feasible model that could be utilised in hotel design in South Africa because it is easily adaptable to facilitate current hotel trends (local and international). It is thus not a reflection of a certain time period (style or theme) that could become static and expensive to remodel in order to accommodate a future market. The model also proves that it is possible to have more than one star classification in the room design if the international grading guidelines are utilised. South African hotel grading standards should be more specific in their grading methodology, by so doing the international and national guests know precisely what to expect when they book into a hotel.

The design resolution became programmatically orientated, to accommodate the rigorous service demands. This limited the possibility of an investigation in to a unique identity because the focus was placed on the facilitation of services and the operation of the hotel. The external identity became the façade system, which is an interaction between the guest and the building. It was further successfully expressed in the infill of the building, where room layouts become individual designs. For this specific hotel, emphasis was placed on five different room layouts that could randomly slot into the base building. It is assumed that only one of the room layouts would provide a successful hotel with one singular star grading. The identity of the hotel model is thus dictated by the context and the need set by the hotel development. This means that model three could possible have a different identity in Cape Town, where the brief for the infill could be for that of a specialist hotel where 16 artists work on the room layouts of each floor. If the base building is successfully designed, the infill could adapt to any particular need or style.

Although the open building approach was successful in the room layout-design, it proved to be problematic in other areas. With multiple functions (hotel, commercial and rentable office space) security and circulation systems in the building had to be defined. It was not successful to have one entrance accommodating the strict hotel schedule and those of other functions. It would be advisable to treat the hotel schedule as a primary function and the other schedules as secondary. For example, delivery zoning should be different to that of the commercial delivery, as this will eliminate confusion at delivery whilst keeping the delivered goods safe.

For this building model to be feasible it had to have more than seven stories. The chosen model has fourteen stories, which means that the construction is more feasible, and makes adaptability to other functions possible. Ventilation systems however become more challenging but the current model has a system that is the optimal design resolution where natural and mechanical systems are combined.

It is clear that for a hotel to be truly adaptable, the design and the identity of the hotel has to be simplified so as to create the possibility of future change and to accommodate more than one function in the building. If this is not the desired result, the hotel system should not consist out of more than one function, and should be designed according to traditional standards and themes of the past.

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APPENDIX ONE

Table 1.1 Growth of South Africa's Travel and Tourism industry estimate for 2012

5.1%	R84.8 billion R194.3 billion	Travel and Tourism GDP Travel And Tourism Economy overall (direct (indirect and indirect expenditure)
3.3%	679.200 jobs 1.555.300 jobs	Travel and Tourism Employment Travel And Tourism Economy overall (direct (indirect and indirect)
4.8%	R288.5 billion	Travel And Tourism Demand
4.7%	R86.2 billion	Visitor Exports
5.2%	R47.0 billion	Capital investment increase
1.6%	R1.8 billion	Government Expenditure

Source: WTTC (2002)

Table 1.2 Visitors' arrivals by major source region, 1996-2000

	1996	1997	1998	1999	2000	Growth %
Overseas	1 172	1 274	1428	1 491	1 532	7.4
Europe	771	846	950	998	1023	7.9
USA	137	158	194	193	202	10.3
Australia	62	63	69	69	70	3.1
Asia	118	111	109	122	122	1.2
India/Indian Ocean Islands	27	31	34	38	40	9.9
Africa	3 607	3 527	4 184	4 272	4 222	5.1
Others	221	241	192	198	193	2.0
Total	4 944	4 976	5 732	5 891	5 872	5.5

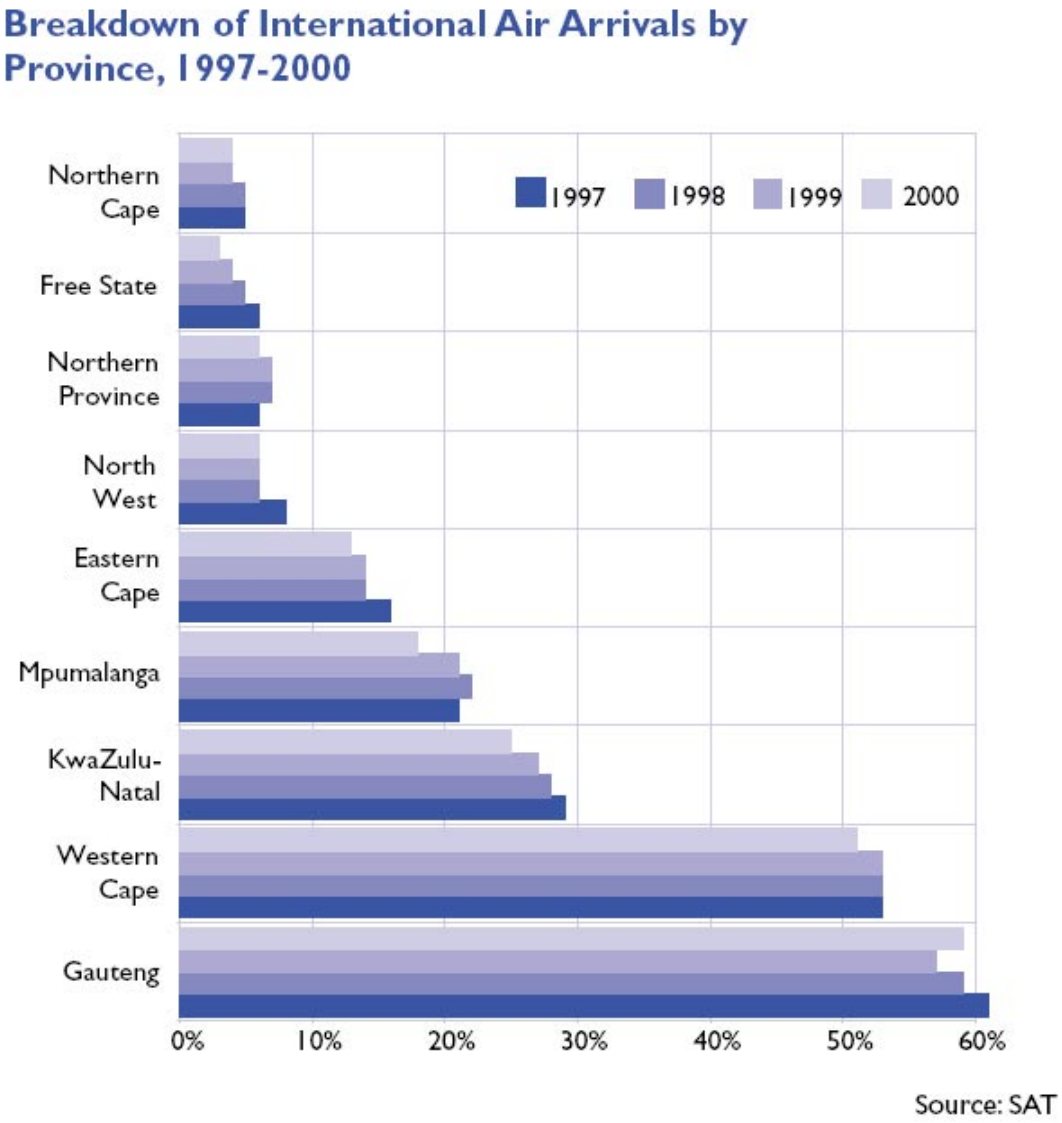
Source: Statistics South Africa

Table 1.3 Purpose of visits by long-haul source markets (%)

Source market	Leisure	Visit to friends or relations	Business	Other
UK	45	36	16	3
Germany	63	26	8	3
Netherlands	66	21	10	3
Australia	40	27	18	15
Japan	85	3	4	9

Source: Statistics South Africa

Table 1.4 Breakdown of international air arrivals by province, 1997-200



Source: Statistics South Africa

Table 1.5 Destinations visited by South Africa's domestic tourists, 2000

Province	Percentage (%)
Gauteng	19.6
KwaZulu Natal	19.0
Northern Province	12.9
Eastern Cape	12.8
Western Cape	12.5
North West	7.9
Free State	6.7
Mpumalanga	5.7
Northern Cape	2.7

Source: South African Domestic Tourism Survey (2001)

Table 1.6 South Africa's tourist accommodation capacity

Type	No. of establishments	No. of rooms
Youth hostel/ Backpackers	70	500
Executive Apartments	34	2 000
National And Provincial Parks	95	2 900
Timeshare	1 67	6 100
Hunting/ Lodge	745	12 600
Bed And breakfast	3 700	13 000
Guesthouses	3 300	23 100
Self-Catering	1 950	48 500
Hotels	1 000	60 000
Total	11 061	168 700

Source: Grant Thornton Kessel Feinstein (2002)

Table 1.7 Hotel room occupancies and average room rates, 1995-2002

Occupancy (%)	1995	1996	1997	1998	1999	2000	2001
South Africa	56	56	54	51	51	51	53
Cape Town	72	72	71	65	57	60	59
Johannesburg	44	45	40	41	41	51	50
Durban	66	66	60	62	67	67	70
Average room rate (R)							
South Africa	166	207	233	249	263	279	293
Cape Town	206	239	287	295	304	342	362
Johannesburg	147	194	247	237	267	337	343
Durban	166	198	204	220	250	256	273

Source: Statistic South Africa, Hotel Trading Statistics (2002)

Table 1.8 Tourist accommodation statistics from December 2005 to December 2006

Hotel	Dec 05	Jan 06	Feb 06	Mar 06	Apr 06	May 06	June 06	July 06	Aug 06	Sept 06	Oct 06	Nov 06	Dec 06
Stay unites available('000)	42.8	42.6	42.7	42.9	42.6	42.4	42.4	42.7	42.7	42.6	42.6	42.6	42.1
Stay unites nights sold ('000)	809.3	783.3	871.2	935.9	811.5	826.1	773.3	815.3	826.5	946.4	948.0	984.2	822.8
Occupancy Rate(%)	61.0	59.3	72.8	70.3	63.5	62.8	60.8	61.6	65.6	73.9	71.8	77.0	63.0
Average income per stay unite night sold (R)	553.5	579.2	572.9	554.6	519.3	513.6	528.3	526.1	500.9	536.8	570.7	636.5	638.9
Income from accommodation (R million)	448.0	453.7	499.1	519.1	421.1	424.3	408.5	428.9	432.0	508.0	541.0	626.4	526.5
Income from restaurants and bar sales (R million)	206.8	165.1	195.4	205.7	167.6	176.3	176.0	192.8	202.4	226.8	232.9	254.4	240.5
Other Income (R million)	52.5	54.7	64.8	64.6	49.8	48.4	49.5	41.0	42.0	51.5	54.5	58.6	52.1
Total Income (R million)	707.2	673.5	759.2	789.4	638.8	649.0	634.0	662.7	676.4	786.3	828.4	939.4	819.1

Source: Statistics South Africa, Hotel Trading Statistic (2006)

APPENDIX TWO

Table 2.2 Tourist attractions

Performing arts	Rendezvous Theatre State Theatre, cnr Prinsloo &and Church Street
	State Theatre Cnr Prinsloo &and Church Street
Art galleries and exhibitions	The Academy Gallery at the State Theatre 320 Pretorius Street
	Akha Moma Fort West Urban Village, Van den Berg Street (west of the CBD)
	Klaus Wasserthal 88 Celliers Street, Sunnyside
	Marina Louw Studio Gallery 994 Arcadia Street, Arcadia
	Pretoria Art Museum Cnr Schoeman &and Wessels Streets, Arcadia Park, Arcadia
	Susan Smuts Art Studio 301 Arcadia Park Galleries, cnr Park &and Wessels Streets, Arcadia
	The African Window 149 Visagie Street, CBD
Nature	National Zoological Gardens of South Africa 232 Boom Street, CBD
Sports facilities	Loftus Versfeld
Shopping centres	Sunnypark

Conventions and trade show

The city, as the hub for science and technology, knowledge and industry, receives a large high number of national and international delegations and hosts various conferences and conventions related to these sectors. The various conference facilities of international standing, such as the CSIR (International Convention Centre) facilitates different types of events of many different types, according to the nature of the widely different scientific and technological disciplines active in the city.

The presence of various government departments, embassies, foreign missions, trade delegations, consulates and international bodies, such as the Red Cross, make Tshwane an ideal place to host conferences and conventions.

International events such as Aerospace and the International Pretoria Show with its world renowned agricultural components, take place annually

Sporting Events

The City of Tshwane plays host to numerous local, national and international sporting events. Sports- related conferences, workshops and clinics are held throughout the year because of the ideal weather conditions and height above sea level.

Leisure travel in Pretoria (Tshawane)

The following are leisure heritage routes as summarised by the City of Tshwane Tourism Board:

'Setšo Route (City of Tshwane's soul)

The best way to discover the soul of Tshwane is to follow the Setšo Route, which is specially designed to reveal the many facets of the city. Encapsulating its unique atmosphere, this is one of the most comprehensive routes available, along which 60 places of interest in the city that can be visited. Among them are the city's oldest bridge, the Volkstem Building, the Old Raadsaal and Kruger House.

Garden City Route

Tshwane's garden city route includes the classical gardens of the Union Buildings on Meintjeskop, offering dramatic and panoramic views of the cityscape. This route includes visits to a formal Victorian garden in Burgers Park, Melrose House, Church Square and the Old Cemetery. The next stop on the route brings one to Atteridgeville's Moroe Park and Ga-Mothakga Park. Other places of interest visited include the Botanical Gardens, Magnolia Dell and parks in Arcadia and Hatfield. The city prides itself in having won the prestigious Nation's in Bloom Award in 1996.

Park Heritage Route (Culture on foot)

This route was established as an urban stroll to introduce visitors to Tshwane's rich and diverse cultural and natural heritage. From a mere cluster of dwellings, Tshwane has grown from humble beginnings to being the gateway of Africa today. Highlights on this route include the Melrose House Museum, Transvaal Museum and Burgers Park, - one of the finest examples of a Victorian park in the country.

Struggle and Freedom Route (War and peace)

This route stretches from the Union Buildings to the graves of the Irene concentration camp and the house of the world -famous statesman, General Jan Smuts. Highlights include a stop in Mamelodi, where several remnants of the apartheid struggle are on the itinerary.

The Freedom Park Trust identified a 52ha area on Salvokop in Tshwane for the site of Freedom Park, a one-stop heritage site that serves as a monument to freedom - a place of celebration of the achievement of democracy and a beacon of hope and inspiration for the future. It will include a monument, a museum and a garden of remembrance.

Knowledge and Industry Route (Academic powerhouse)

The City of Tshwane is officially recogniszed as the academic, scientific and technological hub of the country. On this route, visitors will experience the pulse of creativity, taking them past the universities, government research institutes, museums and industrial estates.

Conservation City Route (Protected natural environment)

Tshwane's mountains, ridges, valleys and plains are a mosaic of natural and cultural features, ranging from granite rocks that are 2 000 million years old to the 220 000-year-old Tswaing meteorite crater. Many of these elements are protected through a system of conservation areas.

Visitors wanting to experience the Conservation City Route can choose between three day-routes, each in different parts of Tshwane, whichand offering between three and four conservation areas per route.

Union Buildings and Mahlamba-Ndlopfu (Headquarters of government)

Set in an attractive terraced garden with magnificent views of the city, the Union Buildings were designed by the British architect, Sir Herbert Baker, to accommodate the offices of the then Prime Minister, his ministers and departments, and were completed in 1913. The Union Buildings are the administrative headquarters of the Government and still house the offices of the President. They are visible from many vantage points in the city and are visited by large numbers of visitors and tourists. Mahlamba-Ndlopfu ('Where the elephant dwells stays') is the President's residence in the capital city. Built in 1940, the residence was designed in the dignified old Cape Dutch style by Gerard Moerdijk.