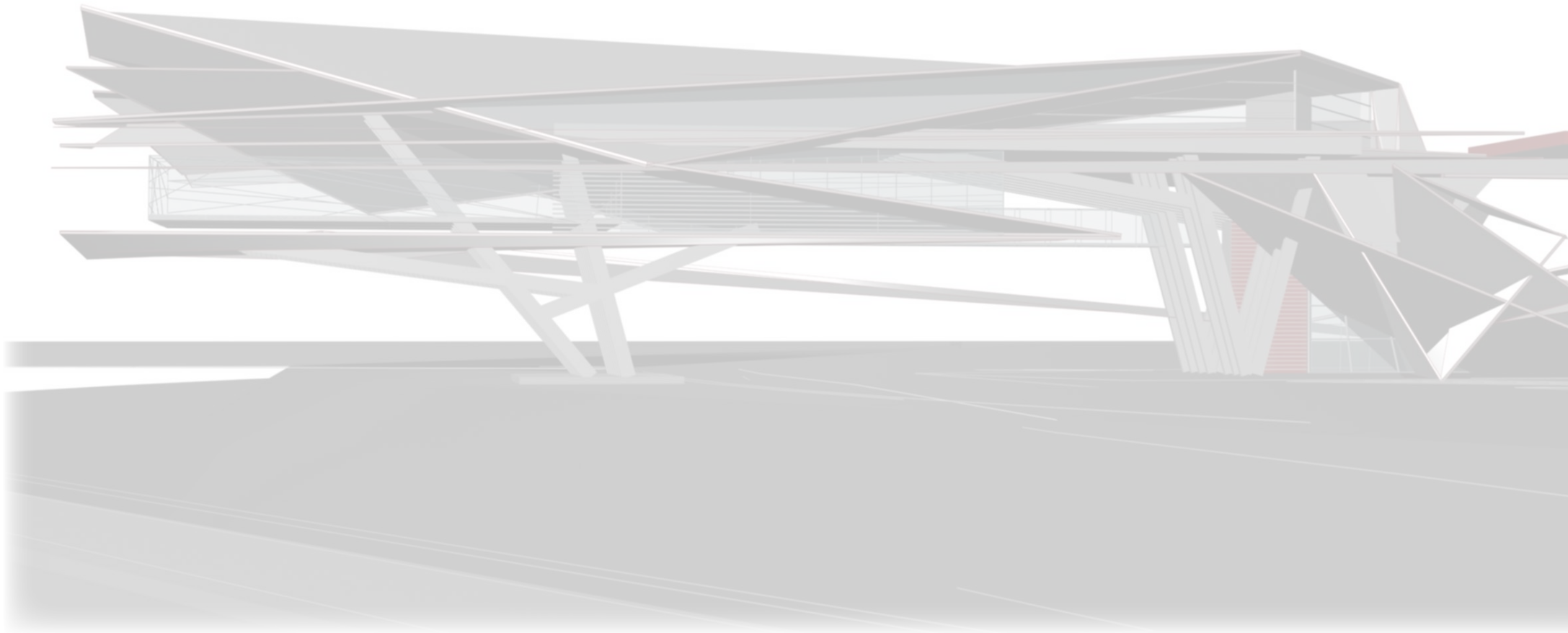*TO THE FIVE PEOPLE IN*
MY LIFE.
WITHOUT YOU, I NEVER
WOULD HAVE DONE IT.

THEME:
Desire: The Architecture of consumerism

PROJECT NAME:
H² (Heliport x Hotel)

LOCATION:
Menlyn, Pretoria

WRITTEN AND DESIGNED BY:
Rudolph van der Meulen

STUDENT NUMBER:
9910065

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
DEPARTMENT OF ARCHITECTURE

NOVEMBER 2004

Fig 1.

DESIRE

THE ARCHITECTURE OF CONSUMERISM

CONTENTS

CONTENTS

Global markets demand a predatory colonization of open space. *(Mao.2002:45)*

Fig. 2.

Fig 2 & 3: Times Square, New York.
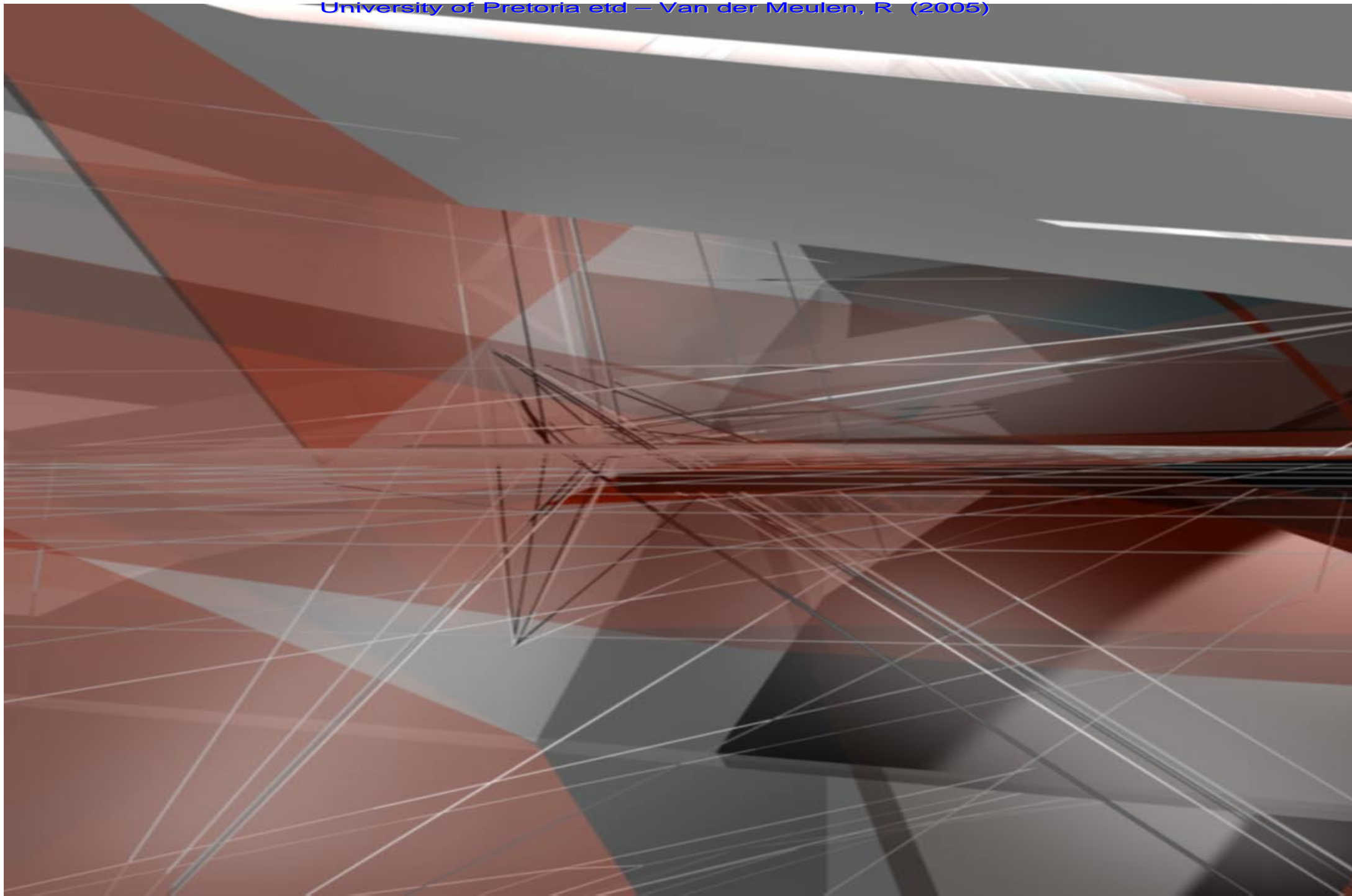
Fig.3.

PREFACE

This book is a discourse about the impact that consumerism and globalism have on South African and global architecture. It is irrelevant whether the impact is negative or positive. Architecture has to deal with a reality that's rooted in a context informed by market driven decisions. As the growth and expansion of cities are uncontrollable, architects become interveners, not masterplanners.

The brief asked for a heliport and a boutique hotel. (aptly named H²). The site for H² is next to a major regional shopping center, and a national highway. The building will be adaptable, and transformable to cater for future growth and needs; and no urban masterplanning was done, as the building intervenes rather than dictates.

Much of the debate in this book revolves around the impact advertising has on our urban realm. The design of H² borrows from the principles and tactics employed by advertising companies to create desire in consumers. H² responds to the highway and to the consumer 'cathedral' next to it on a subconscious level, and like a advertisement, piece of music, or a film, aims to amplify the responses and emotions of visitors and passerby's alike.
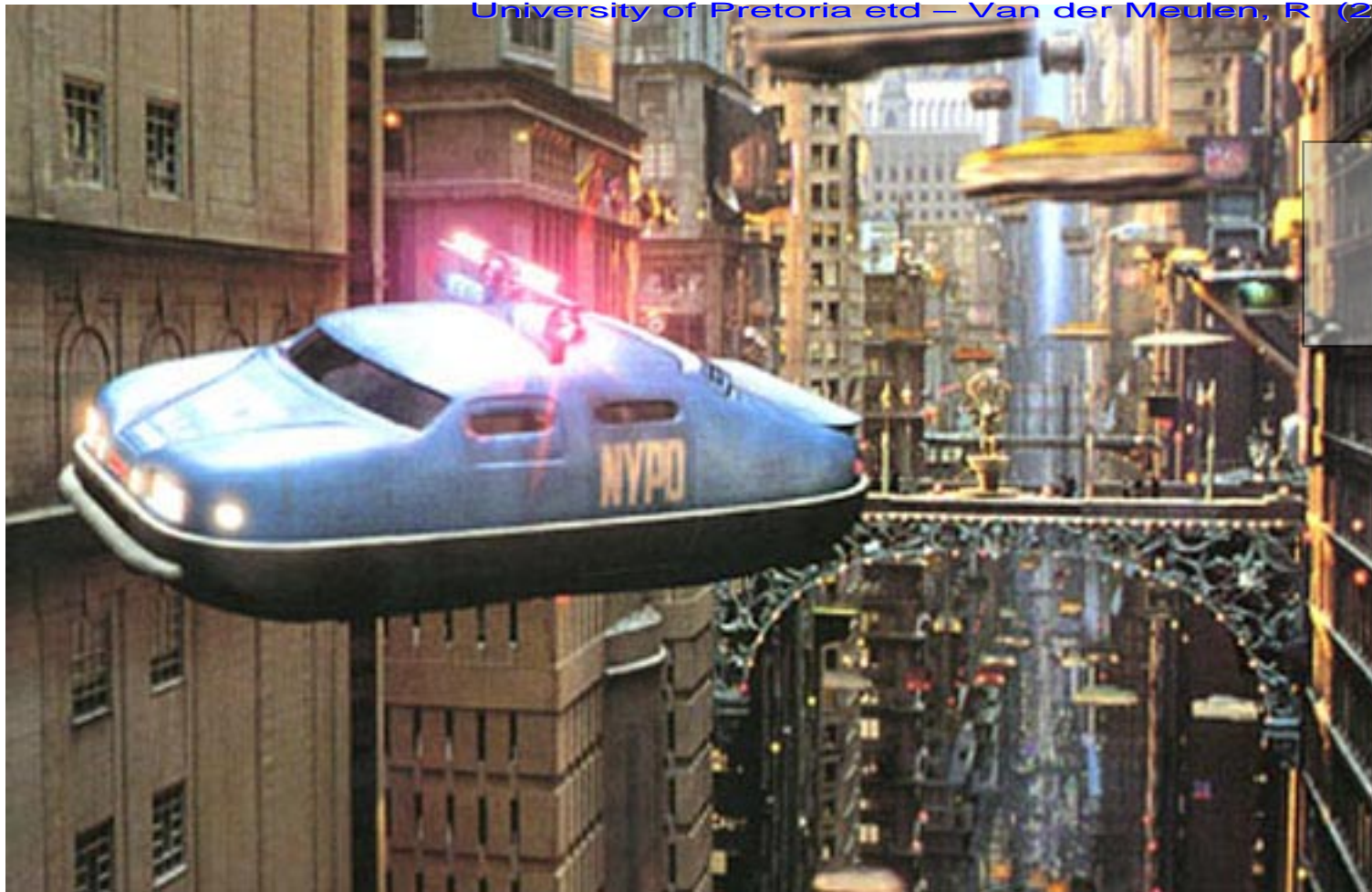
Enjoy!

DESIGN BRIEF

Fig.4

PROBLEM BACKGROUND.

In the Luc Basson film **The 5th element** Bruce Willis is cab driver who saves a beautiful young girl and eventually the world. Later in the 2002 film **Minority Report**, Tom Cruise plays a detective who finds himself in a bind and also saves a young girl and eventually the 'world'. What the above mentioned movies have in common is not only good looking actors and beautiful woman in the need of rescue. Both these movies are set in the sometime in the future, and in this future world people travel in **flying cars**. Humans, especially script writers and directors of big budget Hollywood movies, have had a fascination with flying cars for at least a half a century. It makes sense, as Americans started to experience serious traffic congestion for the first time around the late 1950's. The rationale went that if the roads are congested; why not travel in the seemingly unlimited space above the roads? Although NASA are currently testing a South African designed "flying car" ,up until recently the technology has not existed to make flying cars a reality.

Two modes of air travel available to man at present are airplanes and helicopters. The airplane is not a viable option, as it needs a long take-off and landing strip. In urban environments, where space (land) is at a premium, these landing strips would take up to much space. In other words, an airplane cannot land where it wants to. Helicopters on the other hand can land virtually anywhere, making it the closest vehicle to a flying car yet. So why has everybody not traded their Toyotas for helicopters yet?

Fig.5

The main reason is cost. Helicopters range in price from R 750 000 for a very basic 2 seater, to R50 000 000+ for a state-of-the-art 10 seater (similar to the one Donald Trump owns). Helicopters are notoriously difficult to pilot. This caused the demand for helicopters to stay low, and pushed the price up. The relative low demand never justified mass production which would have meant lower prices. It follows then that if cars were not so easy to drive, few people would own cars at present.

Fig 4: The flying cars seen in futuristic movies are still far in the future.

Another reason for the low demand of helicopters is accessability to take- off and landing facilities (helipads). Air travel's main benefit in an urban environment is cutting down on time lost in traffic. To take full advantage of this benefit, helipads must be close to the user's place of work / home / recreational activity. Currently most helipads in the Johannesburg-Tshwane metropolis are positioned at or around regional airports. This is totally illogical. If a helicopter can land anywhere, why place its landing pads on the same property as airplanes which, as we already established, cannot land anywhere? To spend an hour in traffic to get to a helipad negates the main benefit of traveling by helicopter.
To reap the full benefit of helicopters, helipads have to be positioned close to its users, and other amenities.

Fig 5: Traffic congestion will only get worse as time passes.

No transport facility can exist in isolation. For the heliport to work it has to be part of a network of heliports in the PWV region and beyond. The average helicopter has a range of between 500 and 700 km placing eight of South Africa's nine provinces in reach of a heliport located in
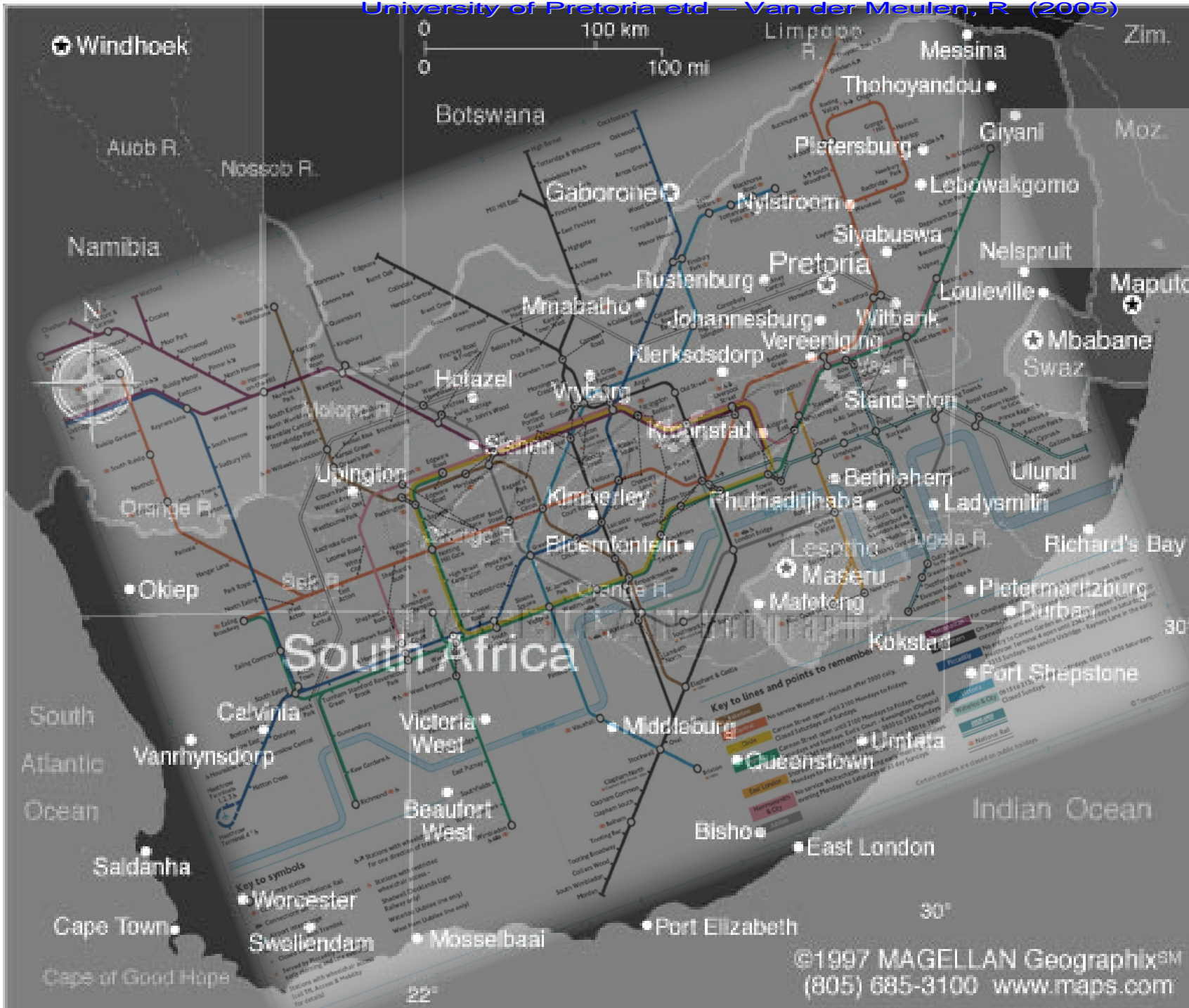
BRIEF

Fig.6 & 7

*Pretoria. (The location of **H²**) This is particularly important for servicing the lucrative tourist market.*
Other locations for heliports include: the William Nicol off-ramp on the N1, Sandton CBD (a helipad already exist on Sandton City Office tower's roof), and Johannesburg CBD. Existing airports (excluding Johannesburg International) have helipads with service and storage facilities for helicopters, but for how long the bigger airports will allow this remains to be seen. Airports make the most money from international and long haul (Cape Town) flights; and compete against each other to provide berths to the different airlines. For major airlines to even consider berthing at an airport, safety must be of a very high standard. Helicopters are seen as slow moving hazards and are therefor undesirable at an airport wanting Boeing and Airbus airplanes to frequent it. The answer to this problem is obvious: a heliport network.
Air-taxis or shuttles will transport passengers between heliports, thus creating a greater demand which will bring traveling costs down, and as passenger numbers grow, the heliports become not only transport-, but also commercial-hubs in the urban fabric.

THE SOVEREIGN INDIVIDUAL
In the book "The Sovereign Individual" the authors (DAVIDSON, J. & REES-MOGG. 1997.)make the case for a future where individuals will live free from all the constraints that contemporary life imposes on them. These constraints include governments, taxes, national boundaries, citizenship, corporate employment and confined spaces as places of work. Through the use of current and future technology these sovereign individuals

will work for who they want to, where they want to, when they want to. They'll live in countries or regions with the lowest taxes (as golfers, race car drivers and actors already do), conduct their business over the Internet or cellular phone, and impress others by the network of contacts they've built up, not the amount of people working for them.

This future scenario is already here for some , as more and more people can now do their work anywhere from their laptops and cellular phones. Technology like Bluetooth allows individuals the ability to connect to the Internet from virtually anywhere, and the concept of office space needs a serious rethink. Business meetings are conducted in neutral spaces like airport lounges and restaurants, rather than boardrooms (The Apprentice is all fiction).

The idea of 'hot desking' is taking of worldwide, as companies start to realize that their employees spend very little time at their assigned desks. 'Hot desking' and 'working from everywhere' gives new meaning to the cliche' of 'the company is its people' as the people are not at 'work' anymore, but working all the same. 'Hot desking' is fine for a company with a substantial work force, but not for mobile professionals who use their BMW's as offices. There is a definite need for 'hot office space' that can be leased for hours, in convenient locations around the city.

Fig 6 & 7: The London underground map superimposed on a map of South Africa, is a visual metaphor for a future heliport network.
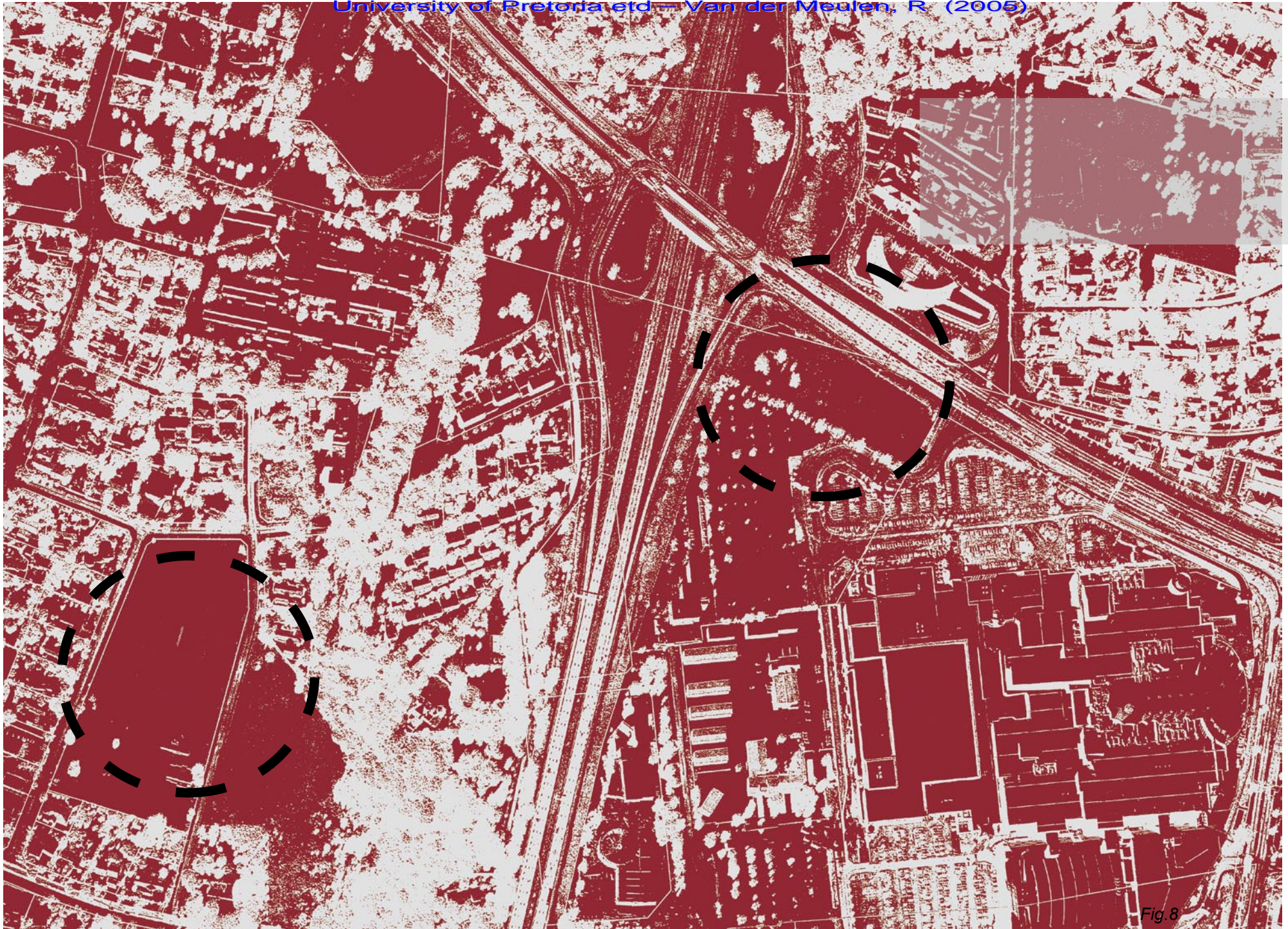
BRIEF

Fig.8

SITE CRITERIA + MOTIVATION

Pretoria, as the administrative capital of South Africa, with the highest disposable income per capita in South Africa, is the natural choice for a heliport. Many embassies are located in Pretoria, and Pretoria is close to many tourist attractions like Limpopo province (Sun City and numerous private game resorts in the Waterberg region), and destinations in and around the Kruger National Park. The site for a heliport must, as previously mentioned, be easily accessible by its users. In Tswane the target market for such a facility live and work in the suburbs east of the CBD. Most embassies are located in the suburbs of Arcadia, Brooklyn, Waterkloof and Waterkloof Ridge. High wealth individuals also live in these suburbs and in the newer suburbs further to the east (Silver Lakes, Woodhill etc.) Lastly, big business also tends to be east of the CBD.

Having established that the heliport should be somewhere in the eastern suburbs, other criteria for a suitable site are as follows:

< *Proximity to existing commercial nodes*
< *Proximity to future mass transit facilities (Gautrain)*
< *Noise impact must be minimized - the site must not be to close to residential environs*
< *Proximity to highways and main thoroughfares*
< *Size - there must be enough space for buildings, helipads and parking*
< *To avoid having to place helipads many stories above ground, the site must not be in close proximity to tall buildings (helicopters need a 1:8 approach)*
< *Visual impact - as the building will have to sell itself and its function, the chosen site must be in an environ where an iconic , large scale building is not out of context*

Site 01 : Pro Arte sport grounds
The first site selected for the heliport seemed ideal at first: Loads of space, close to an existing commercial node and the N1 highway, with the possibility of future expansion. On the downside it was too close to existing residential suburbs (it was in an existing suburb), large trees obstructed the aerial approach, and although close to main roads the traffic impact would have been unacceptable. Furthermore, by developing a heliport on this site would have compromised This site is located about 1.5 km from the eventual site.

Other sites
After abandoning Site 01 other sites were investigated including the Innovation Hub development bordering the N1 and the N4 east of the University of Pretoria sports grounds. Although the site offered many opportunities, not all of the above mentioned criteria could be met. The Innovation Hub development also lacks a strong image and prestige. Although image and prestige are not criteria points per se, it is often the difference between a successful development or not.

Fig 8: The circle on the left indicates site 01, and the one on the right the site for the final proposal.
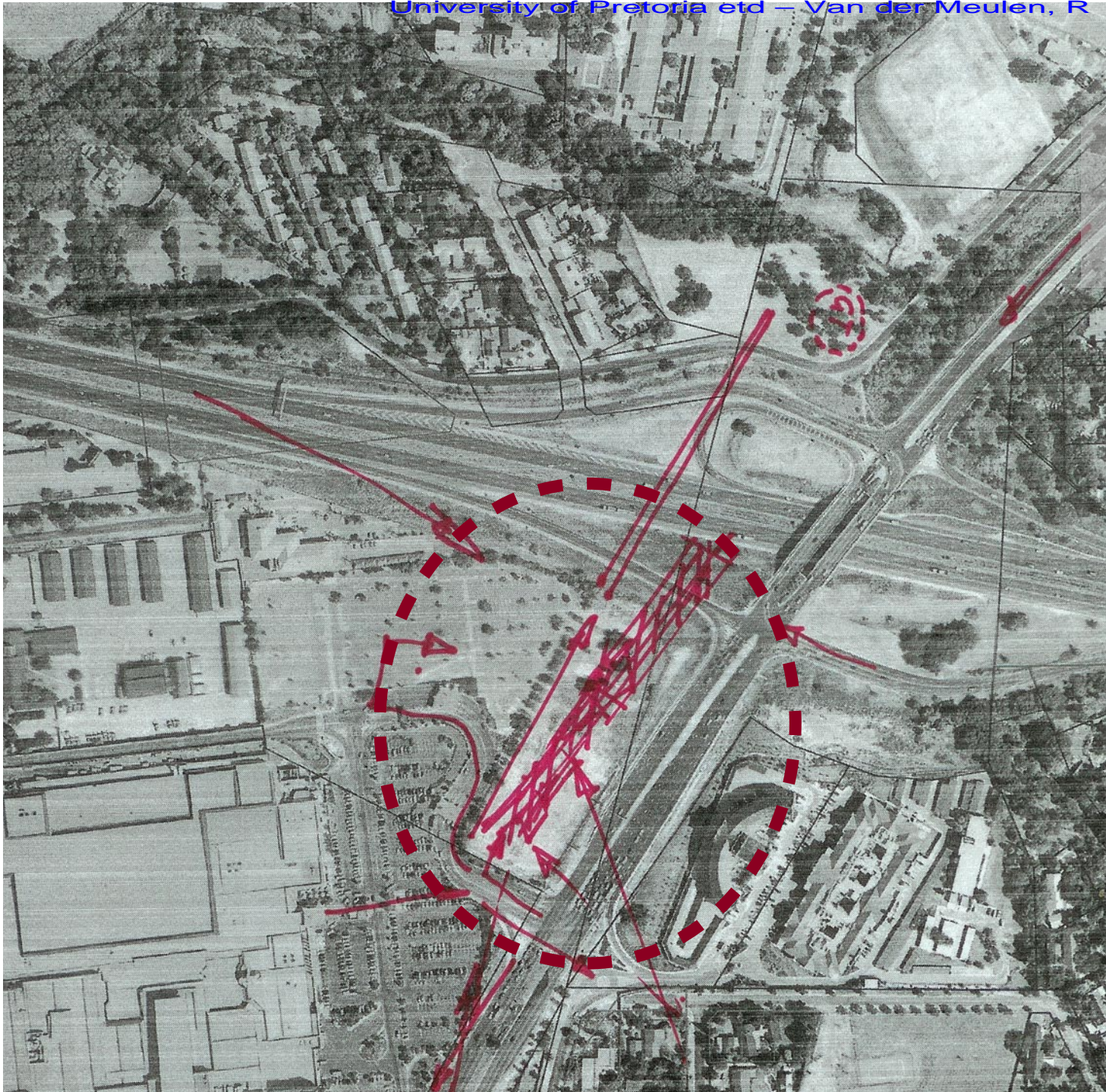
BRIEF

Fig.9

The site: Atterbury road, Menlyn Park
The site chosen for the heliport met all of the above criteria and more. The site is a piece of underutilized land next to the N1 highway and Atterbury road in a recently developed commercial district.
Existing buildings in the immediate vicinity of the site include office buildings, showrooms, and Menlyn Park shopping center. The site has excellent exposure and visibility, and is located next to a national highway and to one of Tswane's main regional roads.

The site has the following strategic advantages that could be exploited:
< *the site is close to a major retail and commercial node (Menlyn)*
< *the site is centrally located - close to new and old city*
< *the site's closeness to many embassies*
< *the existing access to the N1 highway is excellent, and the opportunity exists to create direct access to and from the highway*
< *the site is walking distance from a proposed satellite Gautrain station*
< *the immediate surroundings are currently being developed, but no masterplan exists to guide the development*
< *the site is fairly flat, so no major earth works are required*
< *helicopters can fly along the highway, so noise pollution will be minimized*

< *adequate parking already exists adjacent to the site.*
< *an opportunity exists to improve pedestrian circulation around the Menlyn park shopping center.*

Fig 9: The site shares access with Menlyn Park shopping center.

A detail site analysis will be provided in the context study.

BRIEF

Fig.10

Fig 10: Night traffic in Singapore

The project vision is to create a highly visual iconic building that will serve as a gateway to one of the fastest growing urban areas in South Africa. The building will be a expression of contemporary lifestyle and the freedom it entails.
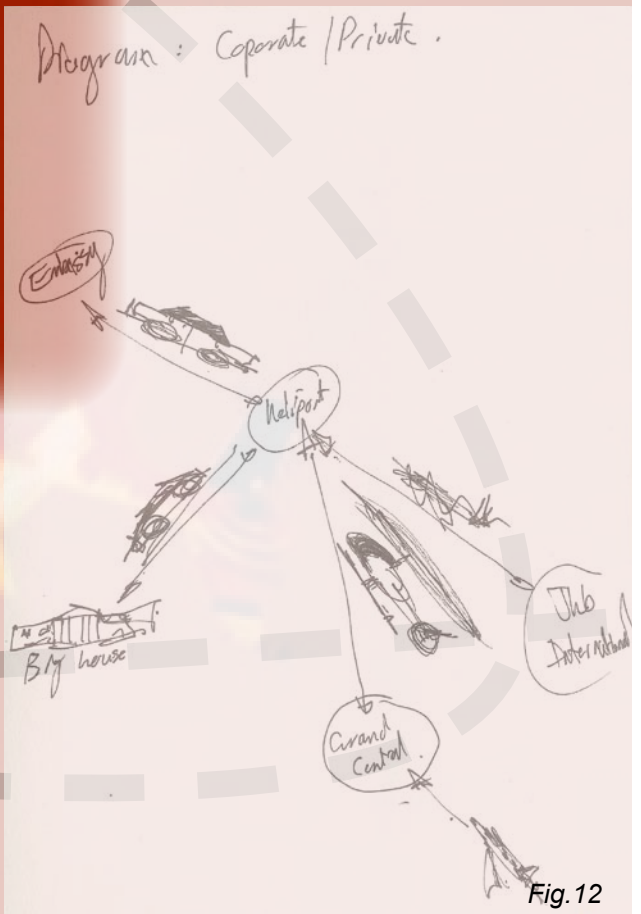
Fig.11

Program : Coporate /Private.

Embassy

Heliport

Big house

Jhb International

Grand Central

Fig.12

PROBLEM STATEMENTS

REAL WORLD PROBLEM : primary

At present no helicopter facilities for private and non-governmental institutions are available close to Pretoria CBD. Foreign diplomatic staff, high wealth individuals and high ranking corporate executives, all people who can well afford to pay for helicopter services between Pretoria and other destinations, have to drive to airports outside of the city. No facility like the Wall Street heliport in New York city exists at present.

Should a person or entity require helicopter services between Pretoria and an international airport, the closest helipad for private use would probably be at the same airport where the person wanted to be in the first place.

REAL WORLD PROBLEM : secondary #01

Short term, high turnover (space rented by the hour) office space is extremely scarce if not non-existent in the Tswane metropolis. Although conference facilities exist (mostly in hotels), these facilities are often out of the way, are outdated, and cater only for large groups (20+). A real need for 'hot' office space exist in a contemporary environment where users can rent space without booking ahead, and without paying the preposterous rates charged for conventional conference facilities.

REAL WORLD PROBLEM : secondary #02

The choice of upper class hotels in the eastern suburbs of Pretoria are truly limited. No boutique hotels that cater for wealthy travelers exist at present, and businessmen in the upper bracket stay in hotels in Johannesburg even when they need to be in Tswane. The four star Sheraton hotel cater for such visitors, but its out of location in the suburb of Arcadia.

Visitors would much rather be staying in the eastern suburbs. A small luxury hotel catering for a upmarket clientele is needed east of the CBD.

THE CLIENT

Client profile:

The client in this instance would be a private or institutional property investor. As such a development would demand a large capital outlay, the client would probably be a financial or insurance related institution. Government funding will not be forthcoming for a development that caterers exclusively for the rich. Names that immediately come to mind include:

<   Nedbank
<   Old Mutual
<   Investec
<   JCI

These companies have taken part in similar developments in the past and as Old Mutual already owns the land, and the billion rand Menlyn Park Shopping center next to the proposed site, it would be a fair assumption that they (Old Mutual) would be interested in such a development. The developer will only invest in the venture if a above average return on investment can be expected, and if the overall image and vision of the development is in alignment with their own.

Fig 11 & 12: The heliport will provide businessmen, diplomats and tourists with a transport hub close to their work, residences and places of recreation.

BRIEF

Fig.13

The various buildings or facilities will be managed by independent companies, normally with experience in similar developments elsewhere. These management companies will lease the buildings from the developer and profit from the day to day running of the relevant facilities. Two distinct management companies will exist in this development, with secondary companies managing micro functions:

The Airport Company of South Africa

The Airport Company of South Africa (ACSA) run all the major airports in South Africa and have vast experience in the day to day running of air passenger facilities. As a management company for the Heliport facility ACSA will be a logical and probably the only choice.

General needs & requirements (ACSA):
< A safe environment for passengers
< Restricted access to various areas in the building
< Commercial & retail space to recover the costs of leasing the building
< A pleasant environment where visitors will spend time (and money)
< Adequate circulation space for visitors
< Long and short term parking
< Easy access to the facility
< A recognizable building that advertizes its function without explicate signs.
< Adaptability
< • 5 Helipads (each min. 20m x 20m)

W Hotel Group

W Hotels has come to the foreground as the hotel group with some of the best designed hotels on the planet. W hotels are known for their innovative off interiors and world class facilities. With hotels in locations such as Time Square in New York City, Tokyo, Sidney and Los Angeles, the W hotel group are experts in operating hotels in fast growing urban environments, especially in "New World", non-European environments.

General needs & requirements (W Hotel Group):
< A Location in an area that normally serve the affluent
< Security
< The main circulation spaces must also be income producing space (Lobby/reception/lounge/bar)
< A rational layout where public and service spaces are clustered together
< Visually impressive interior spaces
< Utilization of the views on offer
< Luxurious, but low maintenance materials & finishes
< Adaptability

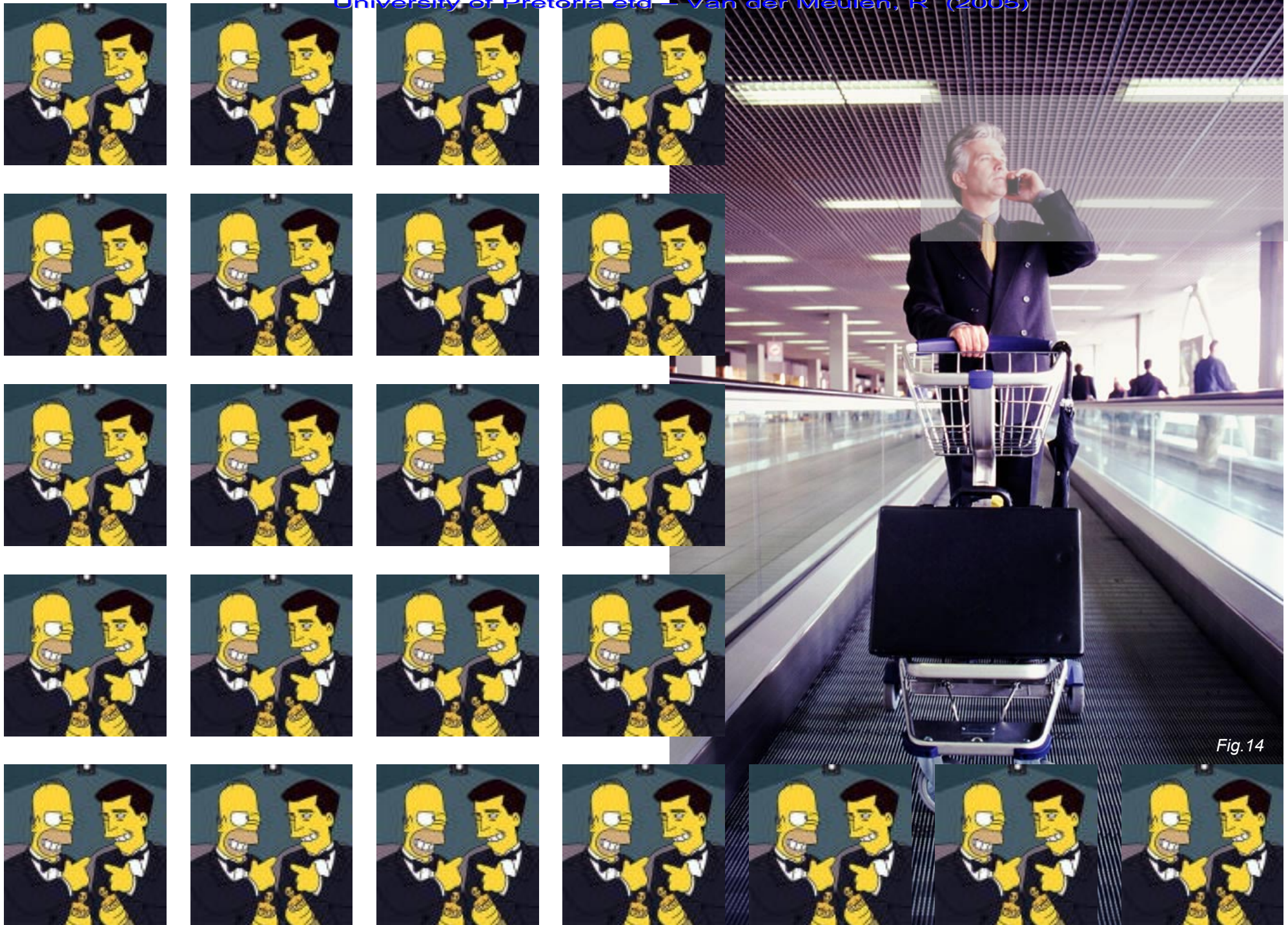Fig 10 : The foyer of W Hotel Los Angeles. W Hotels have set a new standard in contemporary hotel design.

BRIEF

Fig.14

User profiles:

There will eventually be four types of regular users / visitors of the building. The design must cater specifically for the needs of these users and generally for users that do not fall under these categories. The four types or categories of
users are:

< The air passenger
< The businessman /woman
< The recreational visitor (Diners & bar patrons)
< The tourist

The fifth type of user will obviously be a combination of any of the above types. (An air passenger might have a quick meeting in one of the offices before take -off and so on.)

<u>The air passenger</u>
The air passenger will visit the building primary for boarding a helicopter. This person will only shop or make use of the amenities if he/she is early, bored, or if their flight is delayed. Any income above the landing fee that the facility earn from this visitor is seen as a bonus. The reason why passengers have to be at airports two hours before take off is not only security related. The airport want to earn extra money from the passengers while they wait.

Fig.15

General and specific needs and requirements:
< A direct and hassle free route from the car to the airport lounge and air transport
< A ticket counter or pay area
< Adequate seating
< Televisions to keep in touch with what's happening
< Internet facilities (Bluetooth)
< Adequate ablution facilities
< Cafeteria or coffee shop for refreshments
< Long term / short term parking facilities

Fig 14: Networking and who you know are more important in the global village than the location and size of your office premises.

<u>The businessman / woman</u>
The businessman will visit the building mainly to meet others or for the use of the business center. This user will expect world class technology, a safe comfortable environment and luxurious surroundings to conduct business in.

General and specific needs and requirements:
< Short term (rentable per hour) office and meeting spaces
< Private and quiet environments
< Views and natural light
< An array of communication options (Satellite, Internet, fax, post ect.)
< Televisions to keep in touch with what's happening
< Internet facilities via personal laptops (Bluetooth)
< Adequate ablution facilities
< Cafeteria or coffee shop for refreshments
< Access to retail facilities

Fig 15 : The contemporary businessman does business wherever there's cellphone reception.

BRIEF

Fig.16

<   Long term / short term parking facilities

The recreational visitor

These visitors will frequent the restaurant and bar areas of the building, and must not interfere with the port and business functions of the building. Recreational visitors are important for the 24 hour life cycle of the buildings, and adequate provision must be made for them. Unfortunately recreational visitors can be noisy and pose a security risk for the building.

When planning the interior circulation the designer must take into account that not all visitors will be air passengers.

General and specific needs and requirements:

< Views towards the highway
< Waiting areas for restaurant patrons
< Sufficient acoustics and privacy (to avoid disturbing other users of the building)
< Safe parking and access to the building
< Smoker areas
< Contemporary interior design
< Separate entrance.
< Adequate ablution facilities
< A dining area
< A Bar area

The tourist:

The tourist will stay over in the hotel before moving on to other tourist destinations elsewhere. Tourists will often be without personal transport and will be dependent on public transport or traveling by foot. As Menlyn Park will be undoubtably be an attraction for foreign visitors staying at the hotel, security between the hotel and the shopping center must be excellent.

The hotel will have the "boutique" label attached to it, and visitors will expect the typical amenities associated with such a facility

General and specific needs and requirements:

< A high level of luxury
< A world class restaurant and bar on site
< Access to the usual amenities (transport, retail, banks, communication facilities)
< Rooms to have separate lounge areas
< Some recreational facilities (a swimming pool , exercise facilities)

Fig 16: Like carnival grounds of the past, urban space in today's city aim to astonish and entertain.

BRIEF

Space description / Function	Area	Additional information
Departure lounge	150	Access to helipads, Views NB, Access to all other facilities,
Coffee shop	30	Adjacent to departure lounge. Separate small kitchen. Counter seating
Retail facilities	60	Service providers, bookshop, currency converters, travel agents etc.
Office space	250	Short term office space, heliport administration, views NB
Control room	30	Private, out of public sight, security NB
Ablution facilities x 2	150	1 facility for departure lounge, 1 facility for restaurant, uni-sex possible
Help desk (s)	20	Close to primary vertical circulation, counter to help 3 persons min. at a time
Internet café	50	Adjacent to Office space, Individual privacy NB
Restaurant	440	Separate access, Views to highway NB, Noise and Smells might be an issue for non-dining users.
Bar	200	Adjacent to restaurant, Views NB, Noise an issue
Kitchen	90	Two separate area's: Public viewing area & Non-public "messy" area
Plant room	200	Air intakes to be above NGL to avoid pollution, centrally located
Street café	100	Positioned to cater for rail commuters and building visitors
Entrance foyer	50	Security NB

Fig.17

BUILDING PROGRAM: Heliport

HELICOPTERS: Specific and general requirements.

A minimum of four landing pads must be provided for. Two of these pads will function as pick-up and drop-off zones, while the other two will function as parking space. The pick-up and drop-off pads will have turn around times of 15 minutes. In line with local legislation, access to the pads must be controlled. The parking spaces will be rented out for a maximum period of four hours, and these pads does not necessarily be accessible to passengers. The control room must have a dedicated radio channel, and if it does not have unobstructed views of the helipads and the building's surroundings, video cameras have to be installed. Specific requirements:

< Minimum of 4 Helipads
< Helipads to be a minimum of 20m x20m
< Safety nets surrounding the helipads if it is not at ground level
< Access to the helipads to be limited
< Helicopters have a 1:8 approach angle, and should obstructions exist, the helipads must be above ground level.
< A wind sock.

ISSUES:

MULTI-FUNCTIONALITY

Port, station and air terminal buildings all have one thing in common: passengers. Airports are places where people

arrive (land) - wait - depart (air) or (air) arrive - depart (land). Normally these spaces are not for lingering and designed around efficient circulation routes of people and vehicles. Retail and food facilities alleviate boredom during waiting periods, and provide a welcome cash flow to the building owners.

In this instance the volume of passengers will not justify the size and cost of the building, and additional functions must be added to improve the 24 hour life cycle of the building. Facilities like a high class restaurant, conference rooms / short term office space and limited retail space will all improve the viability of the building.
Retail or commercial space might even exist at ground floor level to engage passing pedestrians.

CIRCULATION

Circulation inside the building is an important issue.
In a multi-functional building different users will have different agendas. The users must be able to navigate the building with ease. Vertical circulation must be inclusive. As escalators take up lots of space and cannot cater for wheelchair users, lifts are the logical choice.

SUSTAINABILITY

The building must adhere to sustainable development principles. Social, economic and environmental sustainability must be achieved in the short and long term. Effort must be made to create jobs, save energy, and to use renewable resources where possible.

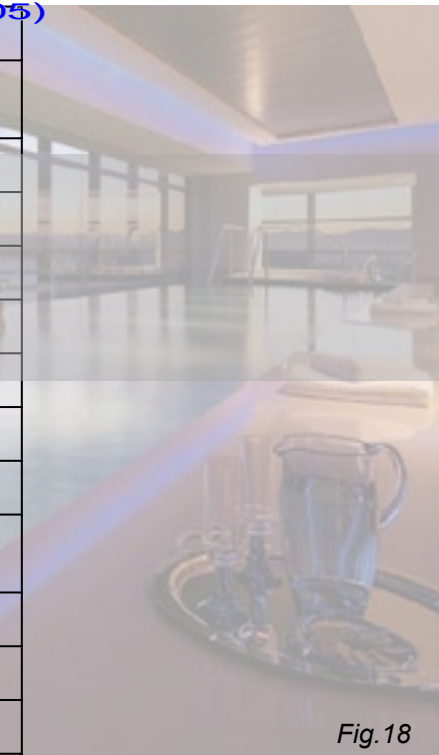*Fig 17: The program originated from functions and issues surrounding the heliport function of the building.*

BRIEF

8

BOUTIQUE HOTELS

The main function off hotels are to provide a place to stay for travelers. During the last 50 years most hotels, bar a few exceptions, have developed a certain aesthetic that can only be described as the "hotel aesthetic". This aesthetic is best experienced from the interior of the hotels:

< *Light or dark laminated wood paneling*
< *Heavy carpets and curtains,*
< *Predominantly beige interior colors with maroon offsets*
< *Patterned upholstery*
< *Brass signs almost everywhere*
< *Ridiculous looking staff uniforms*

Visionary developers and talented designers have caused a turnaround in hotel design in the last decade. Although large hotels have joined the party recently, the change in hotel design started with smaller hotels. These so-called boutique hotels set themselves apart through highly innovative and 'fresh' interior and sometimes exterior design. The "Boutique" label was borrowed from the fashion world where boutiques were normally associated with small expensive shops that cater for a few select clients. Boutique hotels provide a similar function in the hospitality industry:

< *They are normally small, seldom more than 50 rooms*
< *They are always expensive*
< *The interior design is cutting edge*

< *The facilities are world class*
< *Boutique hotels are close to most amenities*
< *Normally all rooms have a separate lounge area*
< *There is no "honey moon suites" - In other words forget the traditional idea of hotel.*

One of the main issues of urban hotels is claustrophobia. In unpleasant micro climates, where mechanical ventilation are used, rooms seldom have openable windows. The windows in rooms are also small, allowing limited natural light into the interiors. Ample natural daylight should reach the interiors of the hotel.

To improve the financial feasibility of the hotel, facilities like the gym, bar, and conference rooms; should be accessible to non-residents without interfering with the day-to-day running of the hotel. (Visitors to these facilities should not have to walk through the lounge ect.)

Other issues that the design should address include:

< *Noise (helicopters & traffic)*
< *Minimizing circulation space*
< *Glare*
< *Visual connection with the heliport function*
< *Sustainability*
< *Security*

Fig 18: The indoor swimming pool will become the main focal point of the hotel interior space.

Fig 19: Visitors will spend most of their time inside the hotel. Therefore interior design and detail becomes crucial in the total design package.

BRIEF