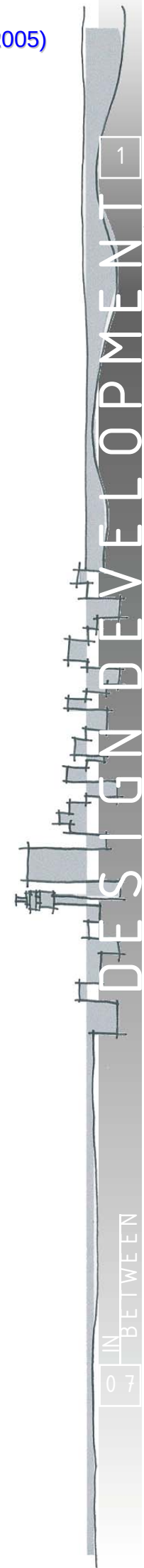


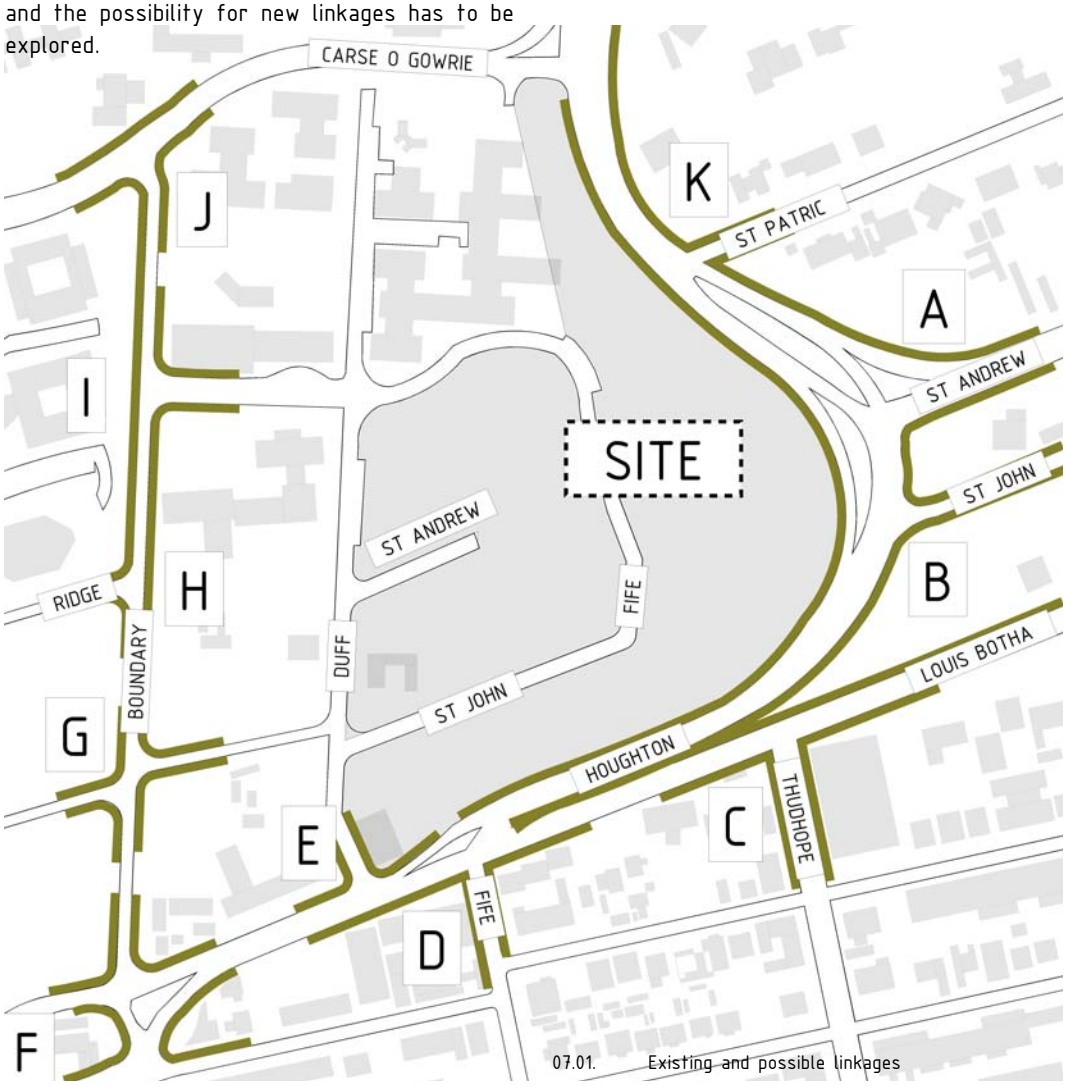
DESIGN AIMS

The development of such a large site so near the inner city will flame debate from both a commercial and an environmental point of view. The aim will be to create a responsive area that would support and enhance the existing functions in the area. Because the site is cut off from its surroundings, the proposal is to reintegrate it with the existing fabric and to create an environment that will draw in people from the very different and segregated surrounding spheres. The focus will be on the creation of platforms for 'accidental interaction' while nurturing the green character of the area. 'accidental interaction' is the creation of spaces and functions that promote exposure to activities which the user did not plan to do.

Looking at the site, one's first reaction would be to increase permeability to make the green space accessible to the surrounding communities. Therefore, existing linkages have to be analyzed and the possibility for new linkages has to be explored.

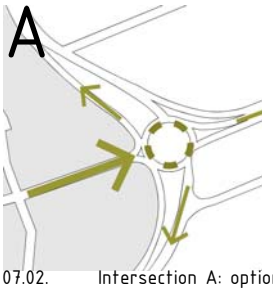
LINKS

The site is perceived as an island, and although accessibility should be increased, the character of the site should be conserved to retain the experience of an urban sanctuary.

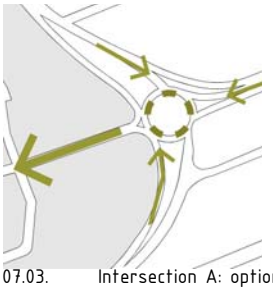


07.01. Existing and possible linkages

A

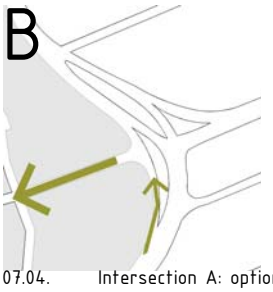


07.02. Intersection A: option 1

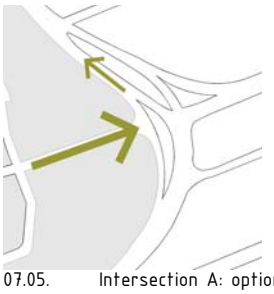


07.03. Intersection A: option 1

B

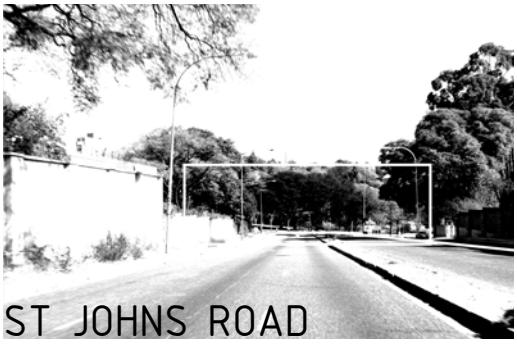


07.04. Intersection A: option 2



07.05. Intersection A: option 2

07.06. View of the site from St Johns Road



Linking Houghton Road with the site at this point would achieve optimum access to the site.

STRENGTHS: This link will give access from Houghton and St Andrews Street and slow down traffic on Houghton Drive.
WEAKNESSES: This link will diminish the existing tranquil, green-island character.
Because of the complexity of the existing intersection, two options were explored.

OPTION 1

Mr Louis Roodt (personal communication 2005), a traffic engineer at the University of Pretoria, suggested a traffic circle to link St. Andrew Street with the site (07.02. and 07.03.).
It would have the following advantages:

- The diversion from normal flow would slow speeding traffic.
- Linking the site with the existing road network through the use of a traffic circle allows for the best permeability and accessibility to the site.

Such a connection would create an elaborate gateway to the site which would have to be justified through the functions and density of the development.
Other considerations are the following:
Such a connection creates an elaborate gateway to the site, which would have to be justifiable through the functions and the density of the development.

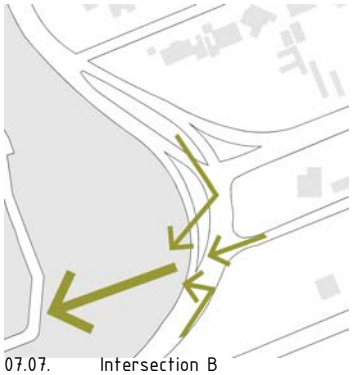
OPTION 2

This option is a connection that gives access only to traffic moving north on Houghton Drive(07.04. and 07.05.). It will create the least disruption to existing roads and traffic flow.

CONCLUSION

The site is a green retreat, a cut-off island, and this quality requires the intervention to be more sensitive to the character of the site. Although accessibility to the site should be increased to achieve the desired permeability from all sides, its character should be respected. Therefore, the brutalization of the site by the creation of inappropriate vehicular links is not the direction the project needs: in turn, such interventions require appropriate levels of commercial development to justify the links, thereby diminishing the character further. The investigation should therefore respect the site to find and reinforce its 'spirit of place'. For this reason, the site is kept as is on the eastern side to conserve the experience of an urban sanctuary.
Pedestrian flow along Houghton Drive will be diverted through the site and over the pedestrian bridge to Berea. Vehicular traffic will be directed by means of signage to vehicular access points.

B

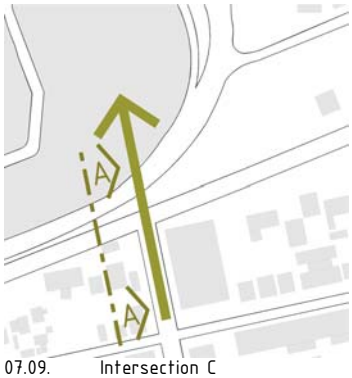


07.07. Intersection B

The conditions of this link is similar to those of intersection A. But St Johns Roads is a quiet residential road that is closed off for controlled access. Therefore a connection at his point would not be justified.

07.08. View of intersection B

C



07.09. Intersection C

Vehicular link impossible owing to topographical difficulty.

The topography allows for a pedestrian bridge to cross Houghton Drive easily, thereby linking Berea to the site. The existing traffic light will ease pedestrian flow.

07.10. Section AA

07.11. Louis Botha Stone retaining wall

D

07.12. Intersection D

Fife Street is a one-way street towards Berea.

At this point, Houghton Drive slips away from Louis Botha Avenue, and Mr Roodt (personal communication: 2005) remarked that such a connection would create too many traffic problems and should not be considered. The close proximity of existing traffic lights prevents the use of another set of lights at this point.

07.13. View from site down Fife Street

07.14.
Intersection E

At the moment only traffic driving east on Louis Botha Avenue can access Duff Road. Due to difficulty level of current intersection it will not be altered

07.15. View from Duff street towards Louis Botha

F

07.16.
Intersection F

At the moment only traffic driving east on Louis Botha Avenue can access Boundary Road. Therefore a traffic circle could give access to traffic driving west on Louis Botha and from Hillbrow as well.

07.17. View from boundary road towards Louis Botha

G

07.18.
Intersection G

This existing connection will be enhanced

07.19. View towards site

H

07.20.
Intersection H

Create a road linking Ridge Road with St. Andrews.

07.21.
Intersection I

Enhance existing connection

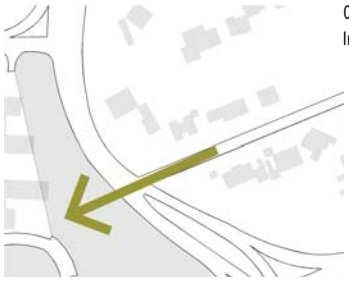
J

07.22.
Intersection J

Enhance existing connection to Parktown

07.23. The Isle of Houghton gatehouse

K



07.23.
Intersection K

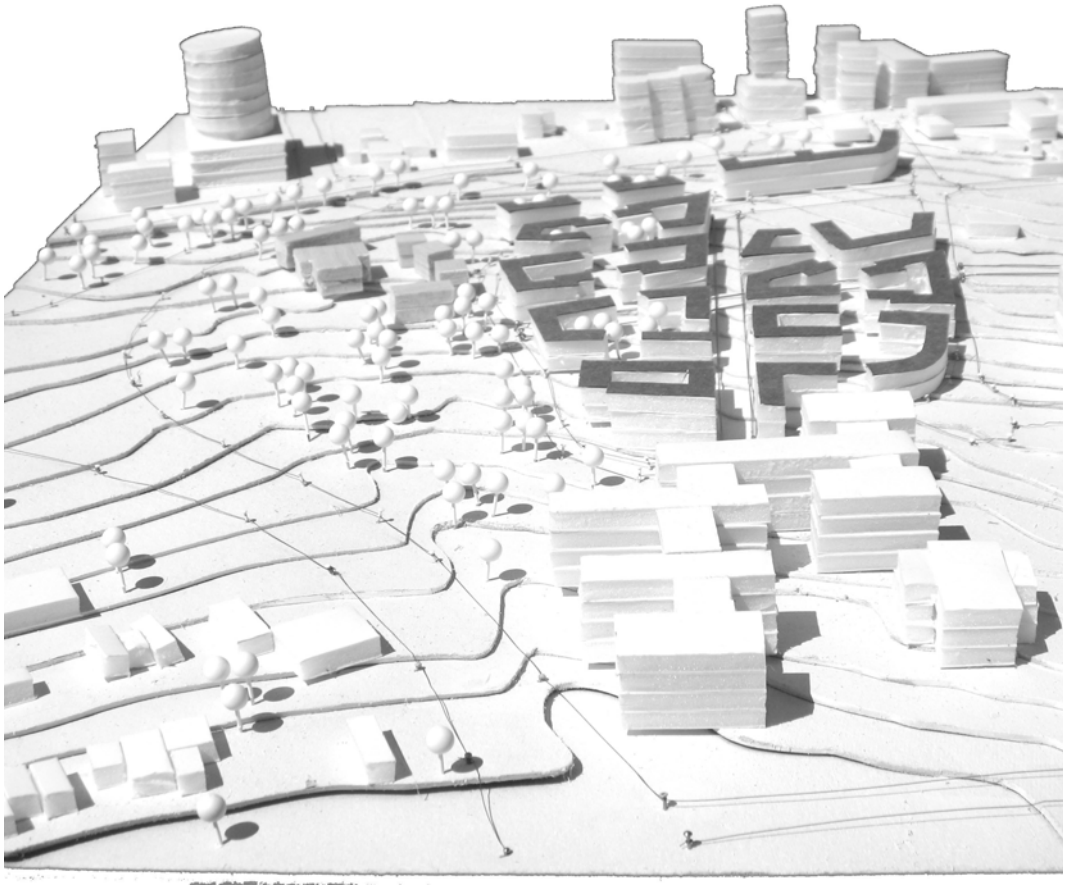
Topographical difficulty

07.24. View of intersection K

CONCLUSION

Because of its context and relationship with the segregated realms, the site presents the opportunity to be utilized to make the journey, both physically and emotionally, from urban to natural. This is evident in the way the site reaches from Berea and Hillbrow in the north towards The Wilds, a nature conservation zone, in the south. The proposed pedestrian link provides the opportunity to bridge the gap between inner-city living and outdoor recreation.

Therefore, the scale and density of the development on the eastern side should be appropriate to emphasize and celebrate the green link. The impact of the link should be intensified by upgrading the streetscape of Thudhope Avenue.



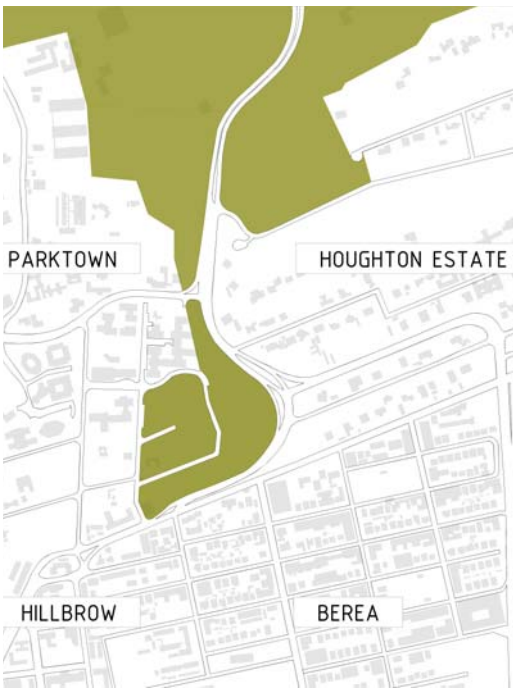
According to a recent SAPOA Office Vacancy Survey in the Killarney / Houghton there is 95,267m^2 of rentable 'A' grade office space, of which 8% is currently vacant, the trend is that the vacancy rate is continually decreasing. The median gross asking rental is R75.00 per m^2. This is an indication of a stable, up market office environment (Fernridge Consulting, 2005).

Because of the evident sufficient supply of offices and a need for housing for students and young working people, the development will focus on high-density housing and recreational facilities.

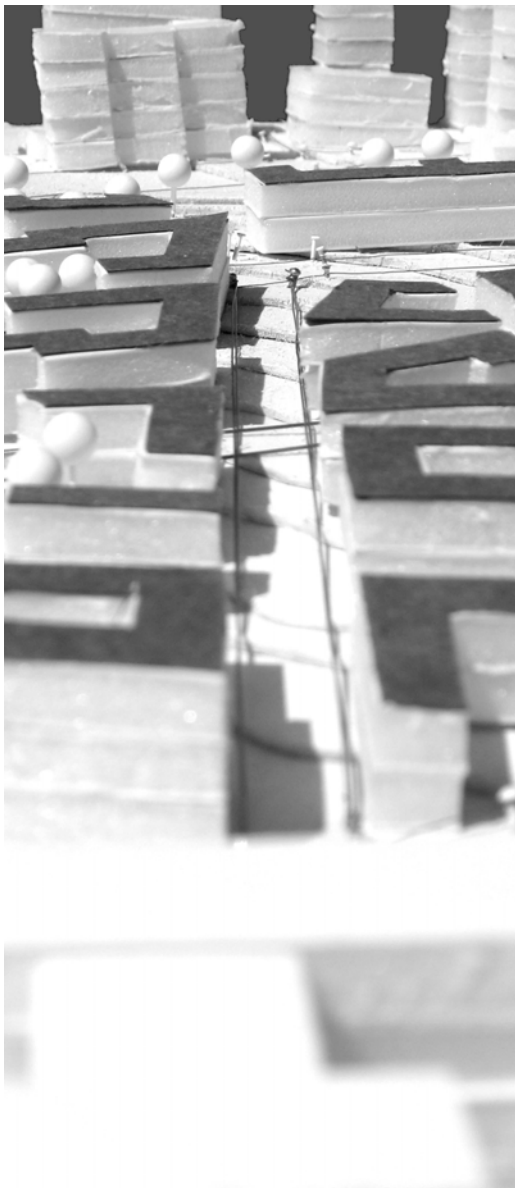
Figure 07.25 indicates current green and undeveloped areas. The aim is to render the western part of the site indicated in grey in figure 07.26 (the part of the project that is easily accessible by vehicles) appropriately dense to keep the western section (indicated in green) of the site's green park-like character and to reinforce pedestrian accessibility to the site. This accessible green space aims at linking the urban environment with The Wilds, a conserved ridge, to the north.

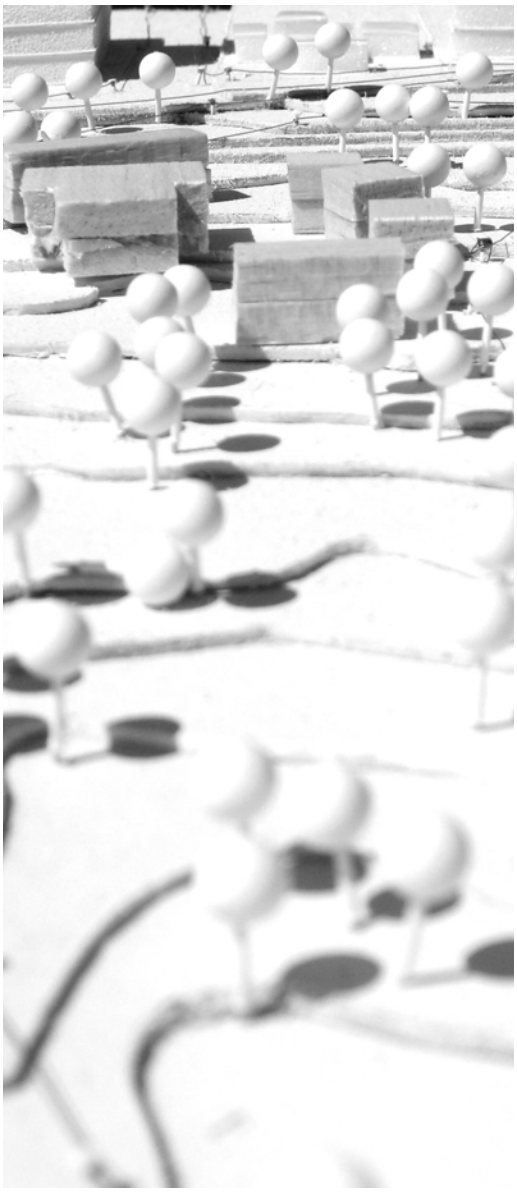
Within the public park section, the thesis project, a community facility aimed at youth and recreational activities, will be situated. The intensity of the development on the western side will, socially and financially, validate the development of public open space in the already lush eastern side.

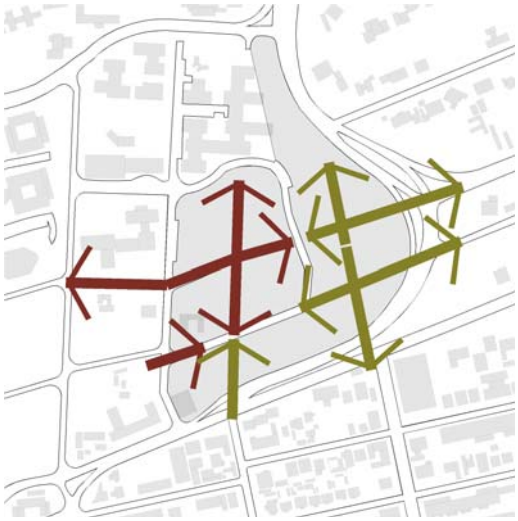
07.25. Green link towards the South



07.26. Develop Western side in order to preserve eastern side







07.27. Existing and possible linkages

PHYSICAL LINKS
VISUAL LINKS

07.28. Viewlines from development to preserved green link informs the pedestrian connections

HIGH DENSITY RESIDENTIAL BLOCKS
VIEW LINES

07.29. Proposed perimeter blocks

HIGH DENSITY RESIDENTIAL BLOCKS
VIEW LINES

07.30. Proposed development with connections to the green link

NEW PERIMETER BLOCKS

FROM URBAN TO NATURAL

The accessibility of the site is inhibited on account of the topographical difficulty of the area and the strong physical and emotional barrier between north and south created by Louis Botha Avenue. To increase accessibility, the barrier should be eradicated and rather serve as a threshold to the next. Therefore, a pedestrian link is proposed. Three options were explored:

1. A crossing on ground level

Although existing traffic light at the crossing of Louis Botha Avenue and Thudhope Road is fitting this option proved unattainable owing to the speed of traffic down the hill, and traffic engineer Louis Roodt (Personal communication: 2005) believes that another traffic light at this point would disrupt traffic flow too much.

2. A tunnel

People live in small, crowded flats and move through dark, dirty alleyways. Natural sunlight is blocked out by multi-storey buildings. A tunnel does not really improve the environment and could become a dangerous, depressing, stale, uninviting and dirty space. In relation to the theory of the 'in-between', a tunnel does not physically personify the bridging of the gap.

3. A bridge

A bridge is a recognisable landmark that dims physical and psychological barriers and embodies the convergence of diverse societies. The physical bridge supports the theoretical approach of searching for the in-between. It increases visibility and surveillance of the area and the park by the movement of people across the site. The bridge provides the opportunity to provide look-out points, which could frame the surroundings, to make people more aware of their environment.

on ground level

07.31.

a tunnel

07.32.

a bridge

07.33.

07.34. View from St Johns - Roedean pedestrian bridge

07.35. The Wilds pedestrian bridge

07.36. St Johns - Roedean pedestrian bridge

A bridge entails design difficulty (or opportunity) on account of the use of ramps to manage an all-inclusive environment; this challenge is further complicated by the steep fall of the site. However, this option was chosen because the opportunities outweighed the problems. The pedestrian bridge element is contextually used twice to link the east and west across Houghton drive. The one bridge links the ridges of The Wilds, the other, more recent structure links St. Johns College with Roedean High school.

The pedestrian bridge connects the urban to the natural environment through the site. The journey between the linear angularity of Berea and Hillbrow to the flowing organic nature of Parktown, Houghton and The Wilds is depicted in the way the bends of the ramp start fanning out at increasing angles, while pause or stop spaces are more detailed and emphasized towards the park. This design increasingly promotes rest and interaction. The route links with pedestrian routes that pass the site to invite pedestrians and cyclists into the site and through the park.

This pedestrian and cycle route is intertwined with the structures. Thereby, the boundaries between static and active, private and public, observer and observed, and inside and outside are blurred. The route moves over, through, next to, and under some of the functions, while maintaining a good visual of interior and exterior functions. The passer-by becomes part of the activities and of the energy exerted, but is still just a by-passer, an observer. The arrangement of functions supports the transition from urban to natural by placing the more physically active and noisy functions closer to the south and filtering the noise and activity levels in phases towards the north.

07.37. View of the Hillbrow telecommunications tower from Constitution Hill

The public route is incorporated into the design with the intention of increasing the safety and security of such an open-park development. By increasing and extending energy throughout the park, passive surveillance is achieved. The elevated position of the ramp gives users a clear view of the whole facility and of the park. In this way, building users passively survey the route while route users survey the park. Numerous exits from the elevated route give users escape routes. The provision of such a route through a park facilitates the need for adequate lighting, thereby increasing visibility and use at night.

The route, which consists of a series of move, pause and stop spaces in the form of ramps, platforms and stairs, is a sensory-enticing experience, which blurs the boundaries between interior and exterior, static and moving, and private and public. The route consciously directs the user from urban to natural.

On the northern side of Louis Botha Avenue, users are directed through hard-edged linear streets. Pedestrian spaces are either completely shaded by residential blocks towering over one another or are exposed to the African sun. Streets buzz with activity and noise, and taxis hoot while racing past. A mixture of smells of vehicle gasses, garbage dumps and dinners prepared in flats fill the air. Pedestrians are directed towards the pedestrian bridge across Houghton Drive, where they swiftly move over the busy road. The pedestrian bridge culminates in a view point from where the vast openness of the sky and the contours of the landscape can be appreciated. From this point the user is lead across a series of ramps descending down into the green retreat.

07.38. View of from st johns pedestrian bridge to johannesburg general hospital

07.39. View of hillbrow and berea landmarks from houghton

PASSIVE EDUCATION

The users are passively educated about the area, local landmarks (such as the Ponte City tower, Johannesburg General Hospital, The Wilds, and the Hillbrow Telecommunications Tower), and facts about the area and Johannesburg, bringing history and context to the wider community to invest a sense of ownership and pride in the area in which they live.

People know very little about their surroundings and its history; their attributes are often mentioned at tourist attractions only. Inspector Naidoo (personal communication: 2005) relates that such an ignorance is especially pertinent in this context towing to the transient quality of the area. People are not emotionally grounded in the area; it is perceived as a temporary stop. The aim here is to emphasise the landmarks, special features and qualities of the area by framing the view and noting features from viewing platforms on the ramp, where seating is provided next to the movement zone. Hereby, the man on the street, which has neither the time nor the interest in the attributes of his community, is (accidentally) exposed to and informed about the area. People are accidentally educated and made aware of their surroundings. The context specific information is intended to harvests a sense of being part of a greater community and history.

TEMPORARY EXHIBITION

The temporary exhibition includes the work of local Johannesburg artists and also pieces produced within the centre itself. The exhibition will be housed in the exhibition foyer and will be a space where people will be accidentally exposed to the work.

07.40. View of from the St Johns pedestrian bridge towards The Wilds

Being integrated into the development, the public route needs to be divided into areas depicting different movement and interaction patterns.

DYNAMIC SPACE (fast moving)

Movement through space creates a continuity of experiences derived from the nature and form through which the movement occurs' (Bacon 1975). Dynamic spaces create barriers needing some effort to cross, and little interaction occurs.

PAUSE SPACE (Slow moving)

'The social intercourse created when people rub shoulders in public is one of the most essential kinds of social "glue" in society' (Alexander 1977). Pause spaces enhance the experience of a space as people are given a chance to interact with each other and to interact with the space itself. Such spaces are inferred by the provision of niches and spaces where people can regress from a dynamic movement zone and sit on a bench or look at the merchandise of traders. The introduction of pause spaces slows down movement, resulting in increased interaction. Sheltered spaces, either natural or manmade, provide shaded gathering points.

STATIC SPACE (Non-moving)

'Together these two elements, the architecture of movement and the architecture of repose make up the city as a work of art, and this is the people's art' (Bacon 1975).
Static spaces create an opportunity for visitors to appreciate the space over time. These are spaces for contemplation and interaction; they are inferred by the creation of sheltered and shaded spaces with a degree of privacy and isolation, while remaining part of an active space. These spaces are differentiated from dynamic ones by means of changes in materials and textures, while increased detailing makes them spaces of interest.

The journey is perceived as a sensory experience in which one is made intently aware of the progression made from urban to natural and one is able to orientate oneself through senses other than sight.

The route supports a great deal of activities that should attract users with different athletic and mental abilities or interests. It should encourage jogging, cycling, skateboarding and roller-skating and other activities to take place along the route.

SENSES	URBAN	INTERVENTION	NATURAL
SEE	Cars, high-rise buildings, street vendors	Pedestrians, children playing	People strolling, picnicking, resting, playing
HEAR	Vehicle engines Taxis hooting	Music from the dance studios and music training rooms Children in play areas Teens shouting while playing basketball Differentiate between the sound of small and big wheels (bicycles and skateboards) on the surface	Birds Wind through the trees
FEEL	Cold smooth concrete Hot tar surface Hot exhaust fumes from vehicles Interplay between hot, full exposure to the sun and completely shaded, cool areas	Textured wood Sheltered spaces with a soft, filtering effect, providing cool spaces like those experienced under trees where warm rays filter through the dense leaves	The use of smooth textured materials such as concrete accentuating the paths and benches within the natural environment.
SMELL	Exhaust fumes	Trees, grass, food and refreshments served in the café, mealies braaied by vendors for people returning from work.	Trees, grass

07.41. View of the intersection of Houghton drive and Louis Botha Avenue

07.42. View of from st johns pedestrian bridge to johannesburg general hospital

07.43. View of the Hillbrow telecommunications tower from Constitution Hill

07.44. View of from the St Johns pedestrian bridge towards The Wilds

PHYSICAL JOURNEY

CROSSING THE BRIDGE

Dynamic space: space that provides an unobstructed continuation of movement.
Pause: An informal retail space gives an opportunity to pause.
Static space: Static space is provided by the proposed café, where people can sit.

FIRST VIEWING PLATFORM

Dynamic space: space that provides an uninterrupted movement towards the ramp.
Static space: space to stand or sit at the edge towards the vast openness to the south. The view entails the green character of Houghton, the profile of the ridges of The Wilds and the open sky. The position clears the treetops by a few metres; therefore, it as an uninterrupted view towards the vast openness.

SECOND VIEWING PLATFORM

Dynamic space: space that provides an unobstructed continuation of movement down the ramp.
Pause: significant elements in the area are framed or pointed at while supporting information can be read on a notice board.
Static space: space that provides seating and an unobstructed view.

The platform points towards the west; therefore, the south-western side of the static space is dedicated to Parktown and the north-western side to Hillbrow

THIRD VIEWING PLATFORM

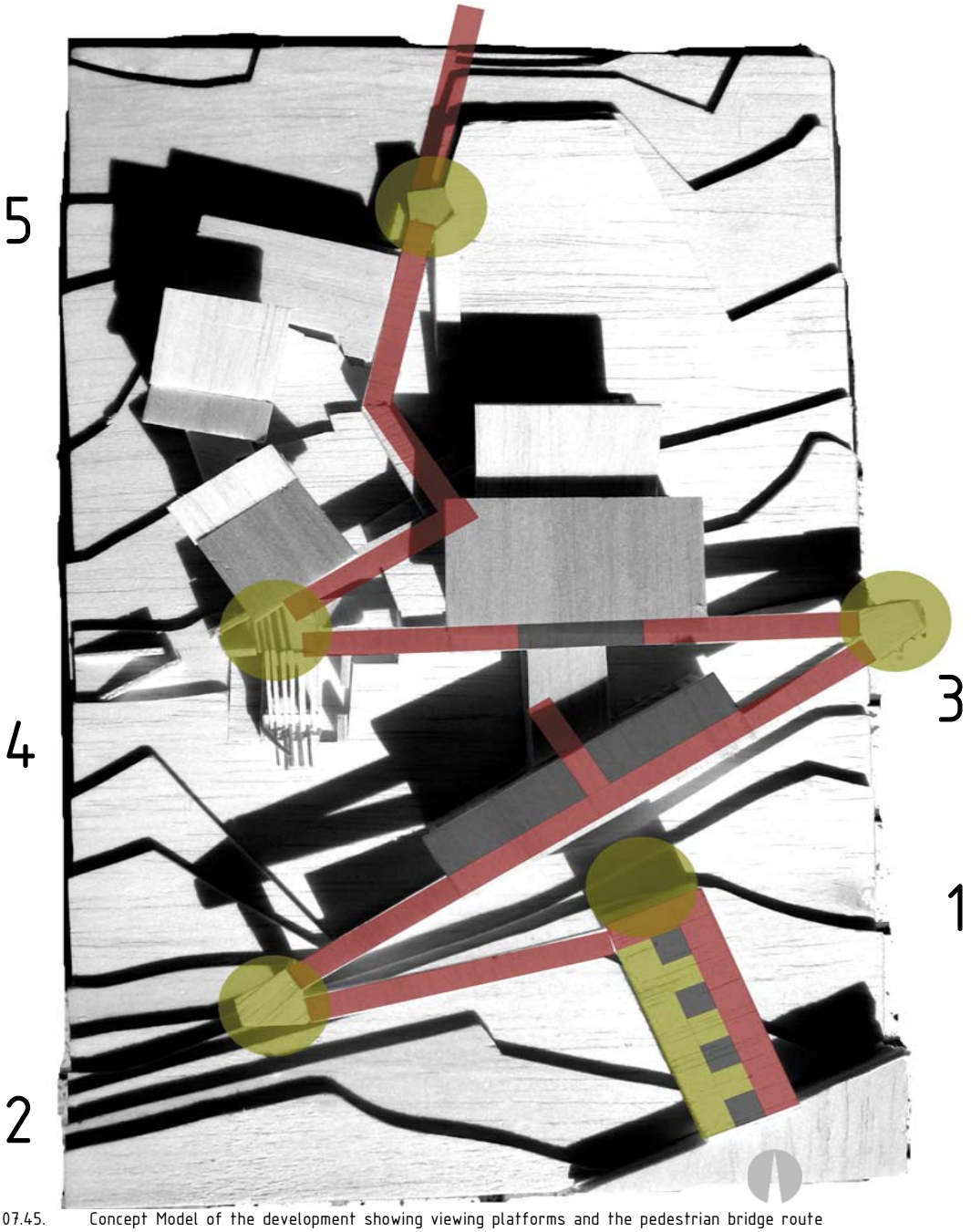
Dynamic space: space that provides an unobstructed continuation of movement down the ramp.
Pause: significant elements in the area are framed or pointed at while supporting information can be read on a notice board.
Static space: space that provides seating and an unobstructed view.

The platform points towards the east; therefore, the south-eastern side of the static space is dedicated to Houghton and the north-eastern side to Berea and Yeoville
The ramp cuts through the multi-use hall; spaces are provided next to the dynamic zone where people can sit and watch performances or games within the space

FOURTH VIEWING PLATFORM

The platform also serves as a landmark element signifying the entrance foyer, while the ramp itself demarcates perimeter of the foyer
Dynamic space: space providing an unobstructed continuation of movement down the ramp and stairs.
Pause: A notice board informs about events and happenings.
The open-volume foyer space is used as an exhibition space. With this arrangement, the wider public is 'accidentally' exposed to the arts.
Static space: space that provides seating and a view of people entering structure.

The route supports a great deal of activities that should attract users with different athletic and mental abilities or interests. It should encourage jogging, cycling, skateboarding and roller-skating and other activities to take place along the route.



07.45. Concept Model of the development showing viewing platforms and the pedestrian bridge route

According to Van der Ryn (1986: xiii), common (threshold) spaces are very important in buildings because of their role in the buildings' energy systems. They are the interface between outside and inside; therefore, they are a source of light; a buffer zone between inside and outside temperatures; and thermal storage zones.

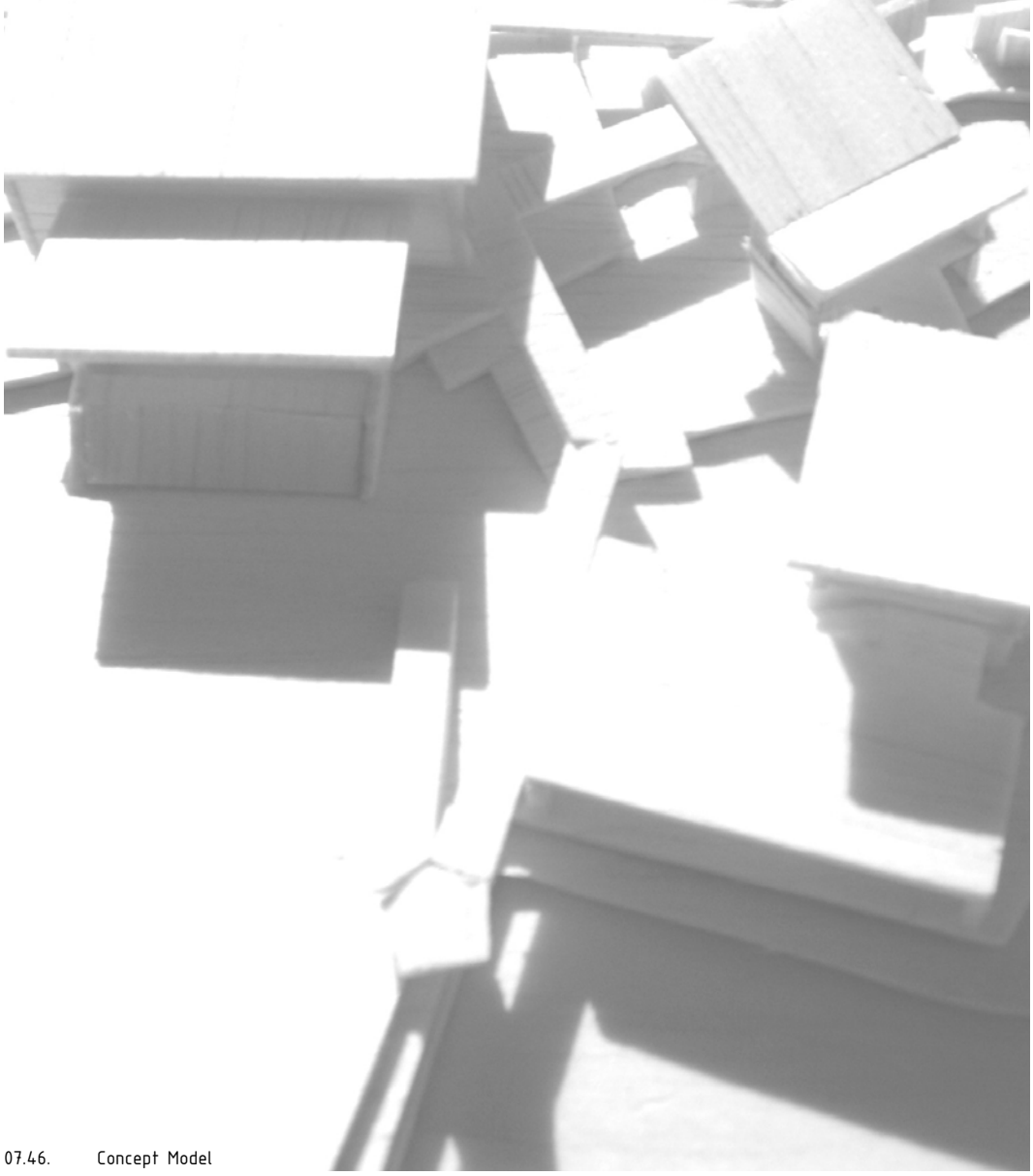
Physical thresholds are emphasized because they are the spaces where transformations between architecture and landscape; public and private; and inside and outside occur. According to Berrizbeitia (2003:82), these spaces are resistant to closure in terms of meaning of space.

The following elements can be distinguished:

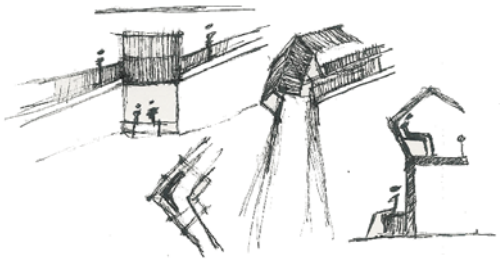
- The use of cantilever roofs increases the depth of the threshold.
- Stoeps are the threshold point where spaces are neither outside nor inside.
- Ramps are floating.

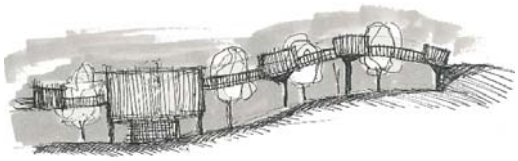
Flowing space: being outside while inside
Western solid facades need to have window penetrations to make it solid yet penetrated

'Contradictory levels of meaning and use in architecture involve the paradoxal contrast implied by the conjunctive "yet"' (Venturi 1977: 23).

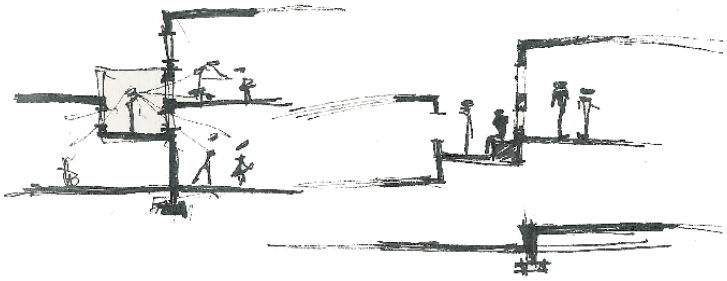


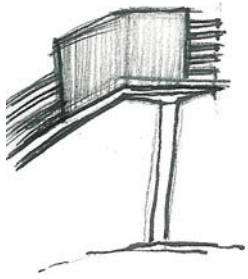
07.46. Concept Model



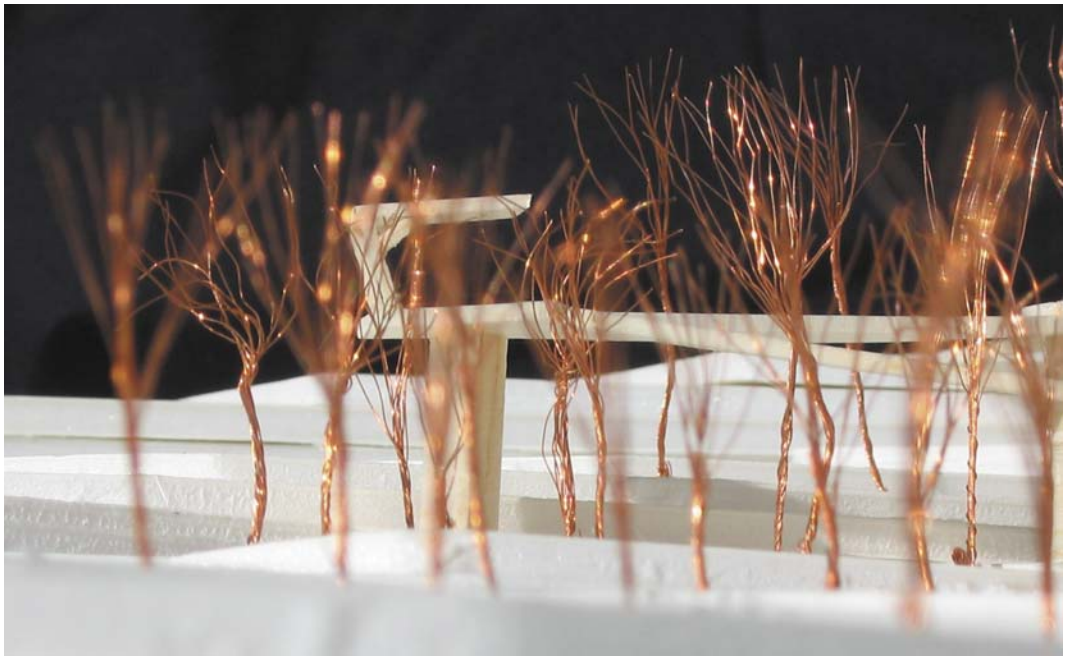


07.47. – 50. Concept development of the pedestrian bridge and its interaction with the structures





"EITHER – OR"		"BOTH – AND"
Security division	YET	Sunscreen
Roof	YET	Ramp
Public	YET	Private
Support	YET	Enclosure
Solid	YET	Penetrated
Inside	YET	Outside
Active	YET	Static



DESIGN PROPOSITIONS

The following ideas formed the basis of the design of the building.

The building is designed to accommodate a number of different functions, supporting recreational, educational and social activities. The selection of functions will attract different users and ensure the accidental interaction between these user groups.

01_ SITE

The site is densely vegetated and slopes from the north to the south. The building is positioned on the northern edge of the site in order to integrate the pedestrian bridge over Houghton drive with the development. This allows for a swift transition from urban to natural, and leaves a large section of the site preserved for the park. Although a reasonable amount of trees will have to be removed for the centre, the character of the rest of the site will be respected and enhanced.

St. Johns Road culminates in an avenue of Pine trees that will be preserved because of its cultural and spatial value it adds to the site. These trees become an integral part of the entrance and legibility of the development; at the same time they protect the exhibition foyer from harsh western light.

The development respects the slope of the site in the way distinct functions are placed on different levels.

02_ DESIGN STRATEGY AND ORDER

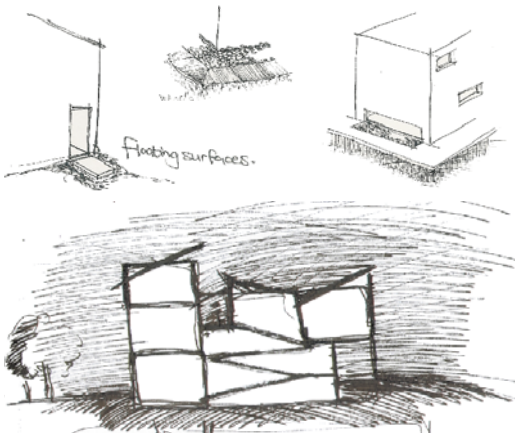
The elevated ramp system is used as an ordering device; it visually and physically binds the segregated functions. The route serves as a conduit that draw people through, past or into the building. Exits from the route occur by means of penetrations and stairs at designated points.

The ramp system runs through the development, and only then it touches the ground. From here users are dispersed towards the youth centre, the sports facilities, and the park or through the park towards the north, the M1 and Killarney Mall.

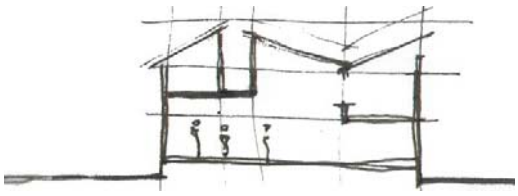
Functions are placed according to their anticipated noise and activity levels. The

07.51. Concept development: surfaces and textures at Constitution hill

07.52. Concept development: thresholds



07.53. – 54. Concept development: linkage between different functions and the roof structure



louder more active functions are placed on the northern edge and more quite contemplative functions flow into the park in the south.

The order of the structural steel grid is maintained throughout the building.

03_ EXTERNAL TREATMENT
The external façades of the buildings are treated in response to site, climate, daylight, views, use and acoustics.

The northern and southern façades are visually transparent to allow the landscape and exterior functions to become apart of the interior. These façades are permeable, transparent and sheltered from the sun by means of roof overhangs and sunscreens.

The ramp system running along, over or under structures acts as a transitional space between the structure and the landscape. It is a movement zone, which encourage the occurrence of accidental or informal social happenings.

Western and eastern elevations are more solid surfaces.

By off setting functions the building façade is broken up into penetrable sections which open up to the surroundings.

04_ SECTIONAL TREATMENT
The section comprises of a double storey structure on the southern side to a sunken single storey on the northern side

05_ NATURAL LIGHTING
The elevated floating roofs allow ample natural light to enter interiors, because 'the best light for a room is light form above: top light illuminates a room evenly and brings light from above like nature does' (Noero 1996: 21). Therefore the provision of daylighting from above fades the boundaries between inside and outside.

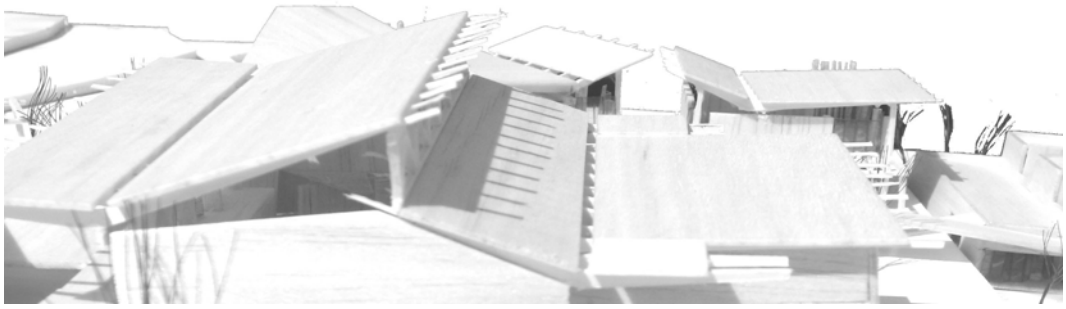
06_ SUN CONTROL AND VENTILATION
The fragmentation of functions, allows for the scattered placement and orientation of buildings. This allows for the ample natural ventilation and lighting.

07_ ARCHITECTURAL TREATMENT OF SPACES
The different functional spaces have different volumetric quality light intensity and materials are different to reflect.

08_ ROOF FORM
Roofs pitch towards the north and south in order to allow day lighting of altering light intensities into the interior. The roof form allows for easy harvesting of water towards a central gutter and storage unit. Boabab Toll plaza by Peter Mathews Architects.
The floating roof allows for visual connection to interior functions from the elevated ramp system, and reduce the appearance of large corrugated roof areas. The levitating roof plane enforce the perception of *INbetweenness* by not being bound to a solid structure to the ground.

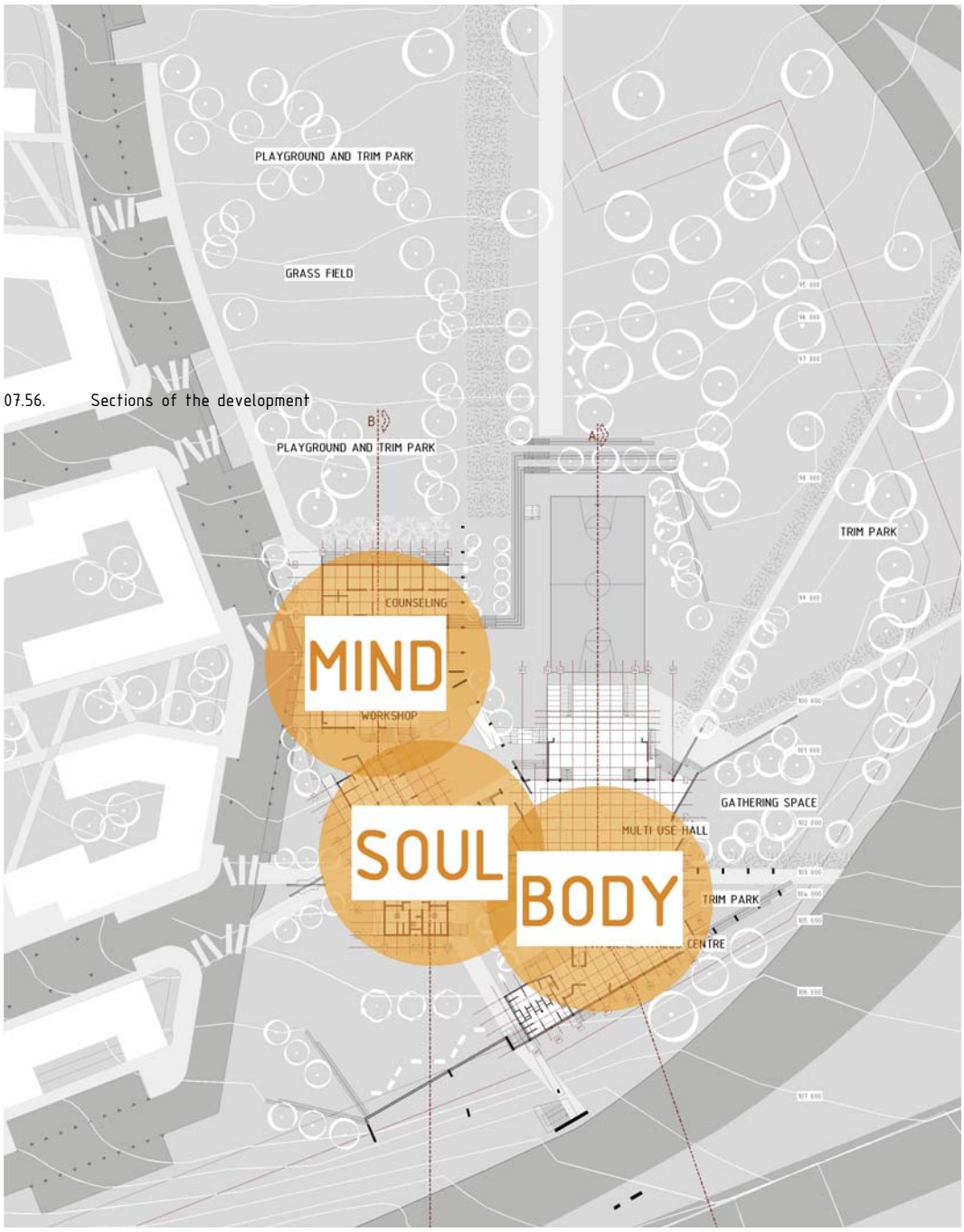
09_ MATERIAL USE AND DETAILING
Detailing should the current level of building skills. Therefore a robust approach to detailing accommodates the limited skill resources available to the construction industry at present. Materials are steel, brick, timber and concrete and left unfinished where possible.

Materials are expressed independent of the structural frame either as infill or freestanding form separate from the framing system. All structural steel connections are bolted.



Spaces are moulded around activities, and they are activated through the provision of opportunity and choice. Therefore multi-functionality within the development is a mayor design generator. As an exploration of the theoretical approach, the conventional arrangement of function and usage of spaces is drawn in question. The structure is fragmented in order to create positive exterior spaces. Functional boundaries are blurred by means of visual connection between different functions and user groups. In addition the over lapping of functions is explored, where spaces which attract sporadic use are placed in relation to more vibrant activities in order to activate the space.

In order to provide suitable amenities for an environment aimed at 'accidental interaction' the programme necessitates a diverse scope of facilities. Such a facility is complex in purpose in order to express the ambiguities of the experience. Although program functions seem to be divided into separate pavilions these pavilions flow out into ambiguous threshold spaces between specific functions. The centre is divided into three parts: body, soul and mind.



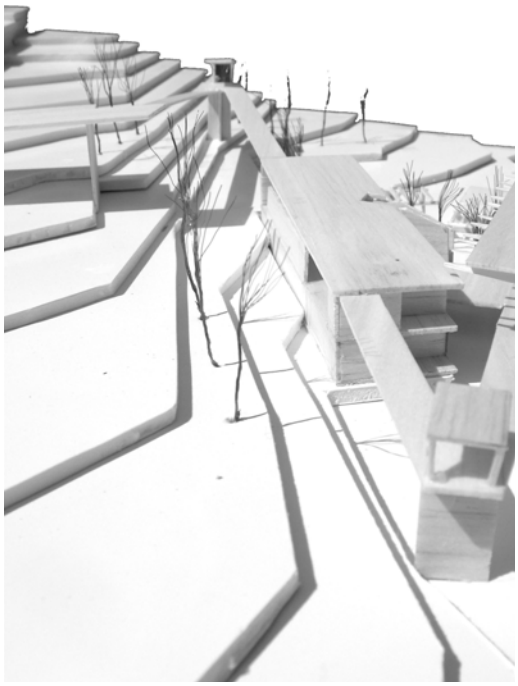
07.56. Sections of the development

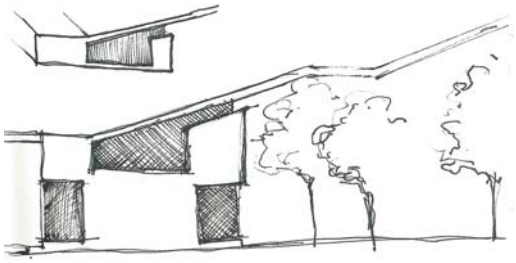
PHYSICAL FITNESS CENTRE

The physical fitness centre is removed from the multi use hall to accommodate the pedestrian ramp system and the topography. The building cuts into the slope therefore increased contact with the earth helps to achieve a constant average temperature within the structure. High placed southern windows allows for ample day lighting, and reserves wall space for mirrors and storing of training equipment.

The physical fitness centre is divided into three sections which can operate independent or in conjunction with each other.

1. The cardio, weight training and circuit section is located on ground floor and access is regulated at the reception desk.
2. The dance and aerobics studios are located on the first level. Large glass facades to Houghton drive allows for natural day lighting and the visibility of function from the road.
3. The centre is connected to the multi use hall via an open multi functional space, which operates as stretching area and space where boxing bags are hung.



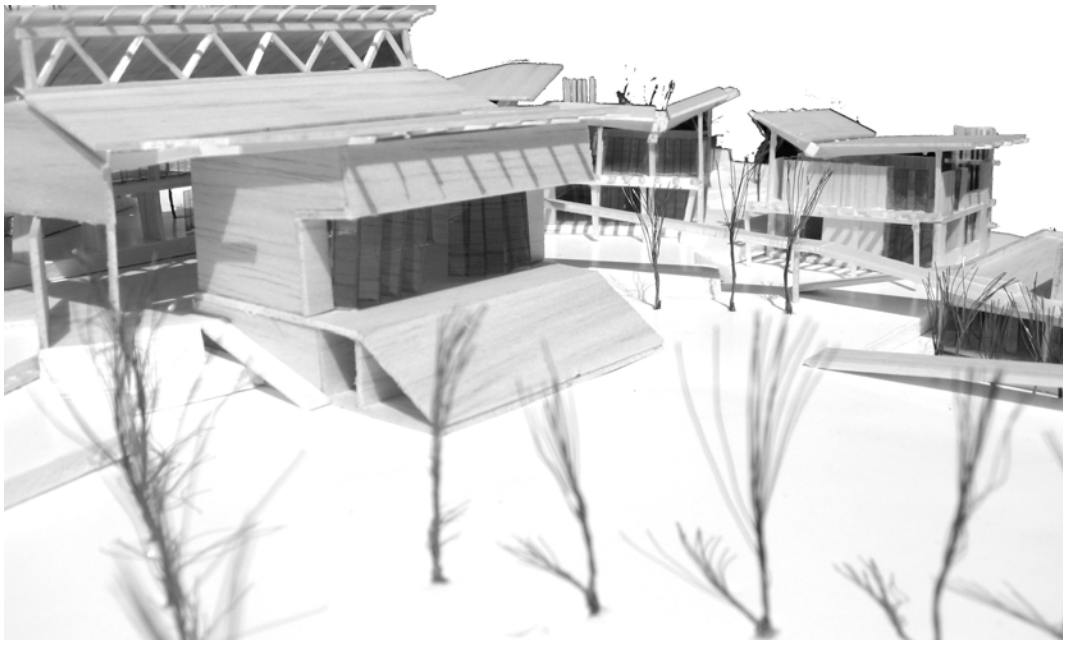


07.57. Concept sketch: the ramp becomes a roof for one of the structures

PHYSICAL FITNESS CENTRE	
Area	160 m^2
Projected use	Cardio, weight training, circuit training
Lighting	50-100 lux (SABS 0114: Part I – 1973)
Classification of occupancy	A2
Facilities	Control desk, consultation rooms, weight training, circuit training and cardio equipment, stretching and floor exercises, aerobics studio
Critical aspects	Disabled access Adequate ventilation Easy and direct access to changing rooms Minimum height 3.0m For optimum double row arrangement: >6m wide For clear supervision: <15m (Tutt & Adler: 1992)

DANCE STUDIO	
Area	160 m^2
Projected use	Dance, drama, aerobics
Lighting ventilation	250 lux (estimated)
Classification of occupancy	A2
Population	35
Critical aspects	Sprung floor 4250 m minimum head room adequate ventilation Visual exposure to Houghton Drive and pedestrian ramps for exhibition of function disabled access seating provided on ramp landing for viewing purposes

CHANGING ROOMS, TOILETS AND SHOWERS		
Area	68 m^2	
Projected users	Gym, dance studios, open spaces,	
Lighting	160 lux (SABS 0114)	
Ventilation	Ventilation required is 20 l/s per shower, wc pan, urinal or 600mm urinal space (SABS 0400 1990:112) part 007(b) of National Building Regulations	
Facilities required	Males	Females
WC	1	3
HWB	2	2
Showers	2	3
Urinals	4	
Disabled	Non (facilities provided within 25m)	
Critical aspects	Serves physical fitness centre, but should also operate separate from fitness centre for use by studio and skate park users without interference with gym security system.	



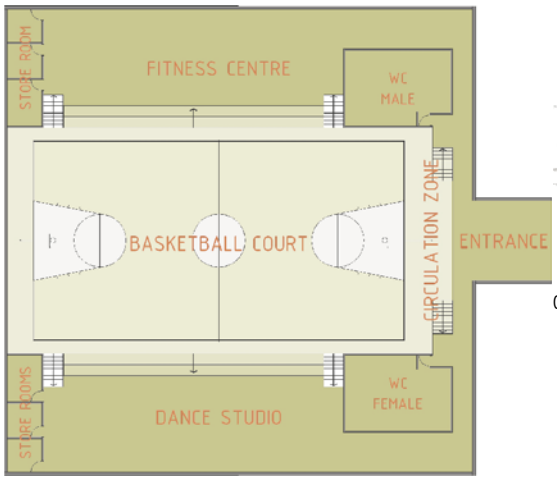
MULTI-USE HALL

On reassessment of proposal A, the realization was that contrary to the theoretical approach, the structure was still very conventional in its arrangement of functions and usage of spaces. The attempt to increase visual contact does not achieve satisfactory fading of boundaries between the discussed contradictions.

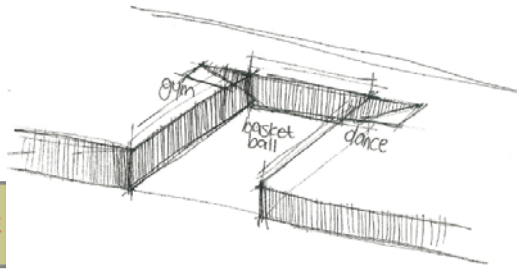
A larger multi-use area is needed for sport, performance and recreational activities. It should accommodate easy usage by small groups and larger gatherings. Owing to its size (on the basis of sizes of indoor basketball courts) such a space could seem too imposing and isolated for the use of small gatherings. Therefore, optimal use is not achieved. To prevent such a occurrence different activities are clustered in and around such a facilities, thereby increasing usage and interaction with the space.

From this viewpoint, the concept of the multi-use hall was drawn into question. How could such a space satisfy the need for dance, indoor sports and theatre performances, whilst maintaining activity levels and use the rest of the time? A potential solution is to make it approachable for smaller groups and activities by not segregating function-specific spaces from ambiguous spaces. Therefore, the proposal is to combine this large space with smaller, more specific spaces, such as a fitness centre and dance/aerobics studios. The multi-use hall is scaled to accommodate a recreational-sized basketball court.

The substantial level difference between the basketball court and the dance studio and fitness centre clearly defines the designated areas without completely segregating it from other functions. The advantage of such a division of functions in a space is that energy-exerted in one area spills over to other areas not used at the time; this benefit can be in the form of music playing in the gymnasium or studio, or the shouts of people playing basketball, or even the sound of the cleaner sweeping the floor, which gives life to a space. This arrangement encourage interaction between boys playing basketball and girls dancing or having an aerobics class, which would have been lost

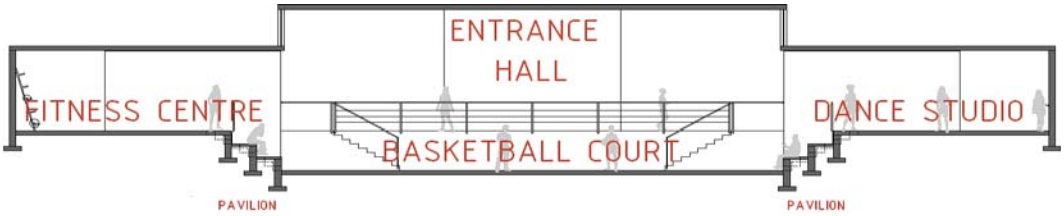


07.58. Concept plan: the integration of a basketball court with a dance studio and fitness centre



07.60. Concept sketch of integrated functions

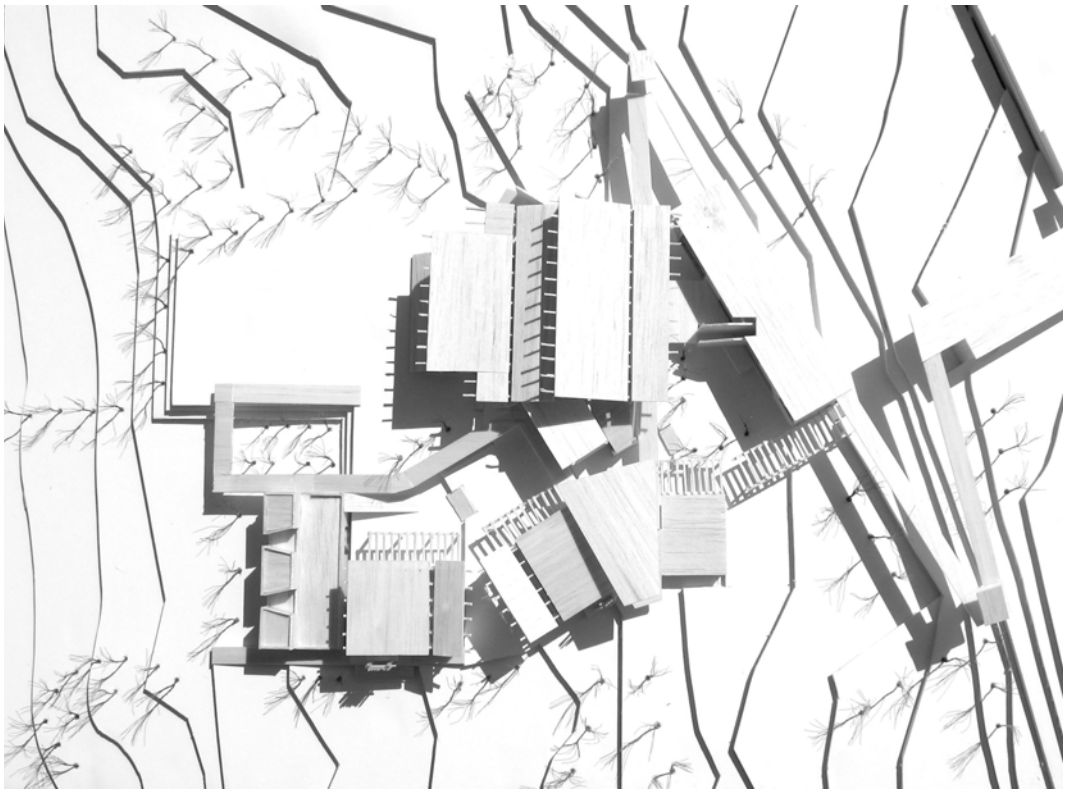
07.59. Concept section: the different functions are separated from each other via level difference



if these functions were separate.

Combining this layout with the site proves to be problematic on account of the scale of such a structure and the topography of the site and the integrated pedestrian bridge. Therefore, it is decided to segregate the functions somewhat more. This setting apart implies that the physical fitness centre is moved back into the slope and the space opened up is applied as an open, transitional space used for stretching.

Name of area	Multi use hall	
Area	370 m^2	
Projected use	LIVE PERFORMANCES:	Variety
	SCREEN PROJECTIONS:	
	SOCIAL EVENTS:	Dances, dinners
	PUBLIC GATHERING:	Meetings
	INDOOR SPORTS:	Gymnastics, basketball, boxing
Lighting and ventilation	250lux SABS 0114:npart I – 1973	
Classification of occupancy	A2	
Population	200	
Critical aspects	Disabled access Control able access Storage for props, chairs Allow for lockable individual storage space for different groups. Acoustics should accommodate large and small gatherings. Stage provided to the north. Pavilion seating on the southern side of the multi use space.	



STUDIO / STAGE

The studio, connected to the multi use hall is perceived as an exhibition box; from its elevated position, it is visible throughout the park. Openings and screens make the complete opening up or closing off of the space possible.

The studio is perceived as a generic space that is easily converted into a stage. This performance space should not turn out to be another dark stage that is only used during performances. Therefore, acoustic dividers are used to separate the performance space from the back stage during performances. These dividers are moved away after the show to provide an unobstructed dance studio.

The seating pavilions to the sides of the interior basketball court are ideal for choir performances. The development needs to accommodate large outside functions such as music festivals. Such activities need open space for spectators and a secure platform for performers and electrical equipment. Therefore, it is proposed that the multi-hall stage operate in both directions.

The combination of the elevated position of the stage and the fall of the site creates a space under the stage that is ideal for changing facilities with easy access to the stage/studio/interior and exterior basketball courts.

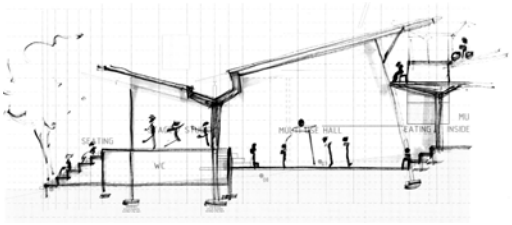
STAGE	
Area	130 m^2
Projected use	Stage performances
	Studio for dancing, aerobics, drama
Lighting	250lux (estimated)
Classification of occupancy	A2
Population	30 – 40
Critical aspects	Storage for props Adequate vertical dimension 4000 minimum Natural lighting Stage serves as exhibition box towards the exterior sports fields and towards the hall Sprung floor

CHANGING ROOMS, TOILETS AND SHOWERS		
Area	100 m^2	
Projected users	Changing room on lowest level of development to serve the outside activities, public park, basketball courts, resource centre, workshops, stage performers and public moving across route	
Lighting	160 lux (SABS 0114)	
Ventilation	Ventilation required is 20l/s per shower, wc pan, urinal or 600mm urinal space (SABS 0400 1990:112) part 007(b) of National Building Regulations	
Fire regulations	Class A1. 30 min. fire resistance for structural elements (SABS 0400: TT37.4) 1 portable fire fighter 4,5kg for 200 m^2 (SABS 0400:TT37.5) 2 escape routes (>25 people)	
Facilities required	Males	Females
WC	2	4
Hand wash basin	4	4
Showers	5	5

Urinals	3	
Disabled	1 disabled WC provided. According to SABS 0400 SS 5.1 (c) within 200m of facilities SS 5.2 (b) minimum area: 2,9 m^2; minimum plan dimension: 1,6m^2	
Critical aspects	Easy access to stage area Direct access to basketball playing area	

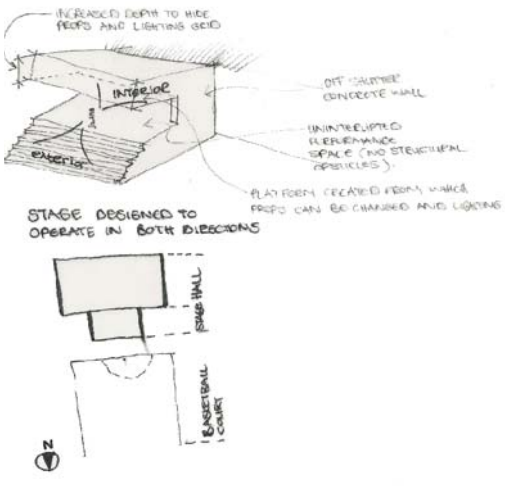
Changing facilities are located within a void formed due to the raising of the stage and the fall of the site. These facilities will serve users of the stage, Public Park, basketball fields and the resource centre. For that reason it has easy access from the park and from the sports field, and direct access from the stage is provided for its usage by performers. During performances visitors will be directed to the entrance foyer ablution facilities.

The roof slope of the multi use hall and stage / studio allows for easy rainwater harvesting. The stored water will be used in WC flushing systems.



07.61. Concept sketch of the integration of different functions in the multi purpose hall

07.62. Concept sketch: usage of the stage in both directions to insure greater usage of the space

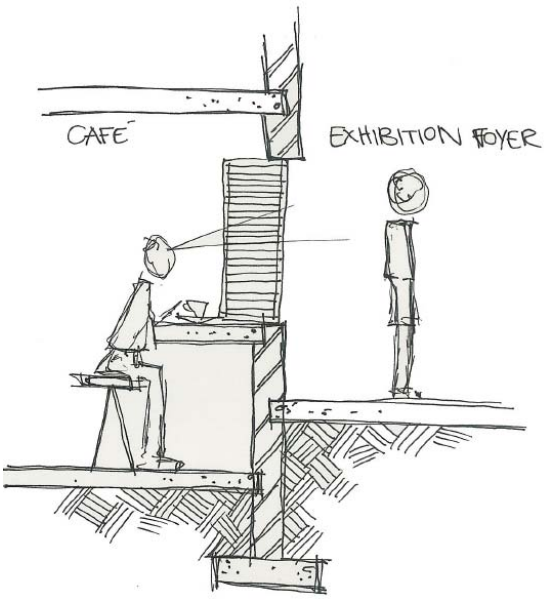


SOUL

EXHIBITION FOYER

This arrival and distribution zone serves as threshold to the facility and structures. This space will serve as exhibition zone, since passing public and users are guided through the open exhibition foyer, this will provide the opportunity for accidental interaction with art work of local artists or users of the facility. The interaction is either, directly, by moving across the space or from an elevated level.

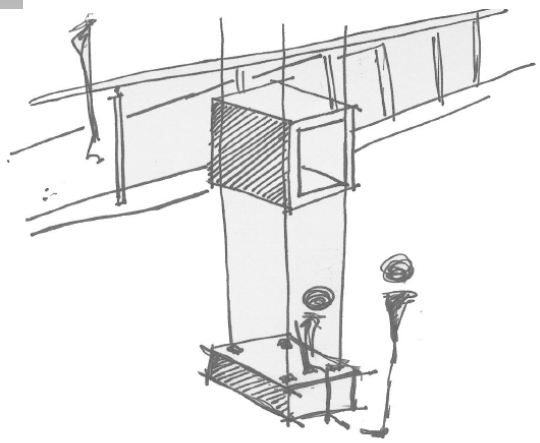
The exhibition foyer can be divided into two sections:



07.63. Concept sketch: threshold between inside of the cafe and the public exhibition foyer

A double volume covered space, which serves as threshold and circulation zone to the development. Its perimeter is demarcated by the elevated ramp. The space will have elevated exhibition boxes at different levels. These boxes will exhibit functions of the building, art work produced by users, they will also serve as information pods, onto which information and notices can be latched and hoisted to the desired level. The space is intended to expose users of the public route to the workings and functions of the facility.

07.64. Concept sketch: interaction between ramp and exhibition foyer with height adjustable exhibibion boxes



A circumscribed as apposed to closed off space which serves as entrance foyer the multi use hall. The space serves as a deepening of the level of threshold towards the multi use hall. This foyer is designed to be completely opened in order for people to walk through the interior space without deviating from their intended outside route. It can be completely closed off from the outside exhibition space by means of large swivel doors. These doors demarcate the interior space of the foyer, it directs flow of users when opened and serve as barriers when closed.

Area	50 m^2 interior exhibition space 200 m^2 exterior exhibition space
Projected use	Arrival and distribution zone with latched on exhibitions
Lighting and ventilation	50-100 lux (SABS 0114: Part I – 1973)
Classification of occupancy	A1
Critical aspects	Grandeur and grandeur Flexibility Disabled access Storage for exhibition boxes Exhibition boxes

CAFÉ AND GAMES ROOM

The café is placed next to the exhibition foyer – the source from which energy is distributed through the development. The café is envisioned as a vibrant place where people meet for a drink or a game of pool. The café becomes a club after dark, where local band perform.

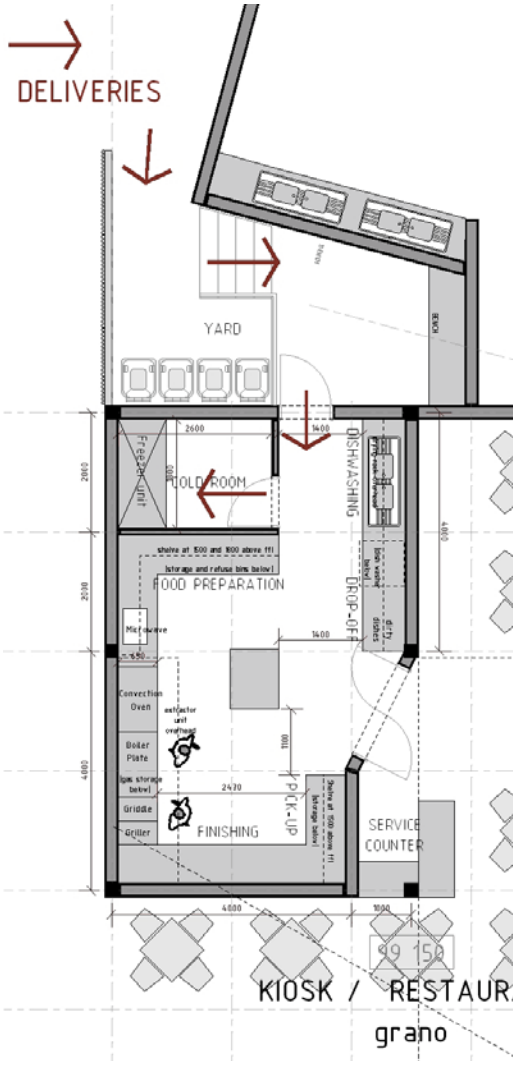
A counter and seating is provided at the threshold between the café and the exterior foyer. Single users at the counter have a view of the circulation of people on the ramp and through the foyer space.

The café overflows onto a raised terrace demarcated by the structure on the western side and the elevated ramp on the eastern side. From this position users are exposed to a view of the park and the studio / stage.

On the mezzanine level a games room / lounge area is located, this space flows to the south into an open games area on top of the ablution facilities and into the resource centre to the north. This ensures the exposure of the resource centre and the use thereof.

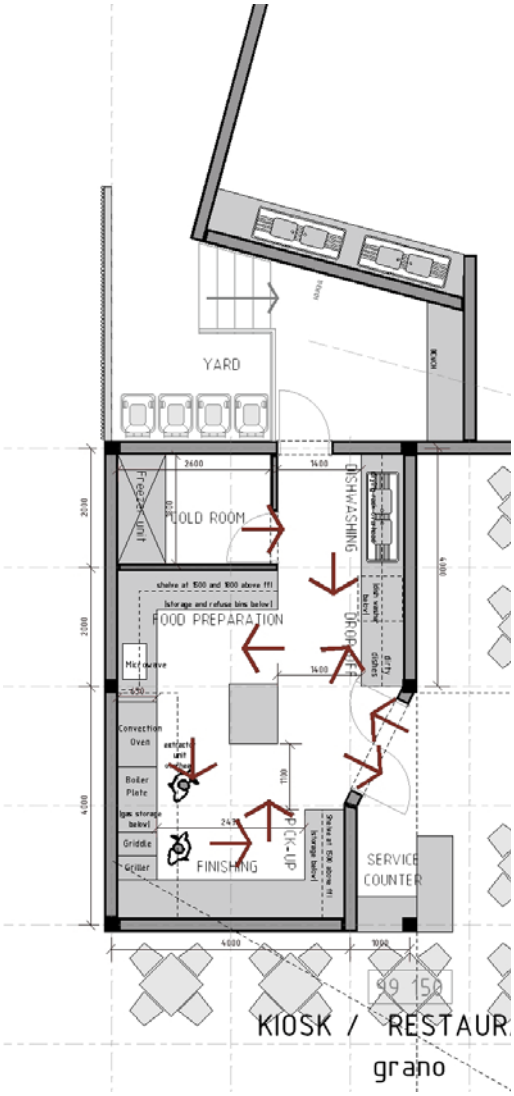
CAFÉ	
Area	85 m^2 indoor, 160 m^2 overflow
Projected use	Dining
Lighting	50lux (SABS 0114: Part I – 1973)
Ventilation	5.0 l /sec / person (SABS 0400)
Population	Indoors: 85m m^2 @ 1.5 m^2 pp = 56 Overflow: 160 m^2 @ 2 m^2 pp = 80
Fire regulations	Class A1. 30 min. fire resistance for structural elements (SABS 0400: TT37.4) 1 portable fire fighter 4,5kg for Kitchen and café (SABS 0400:TT37.5) 2 escape routes (>25 people)
Critical aspects	No smoking indoors Overflow onto outdoor terrace

KITCHEN	
Area	38 m^2 Kitchen 17 m^2 Yard and refuse area Based on the requirements for 75 meals served during main meal period (Lawson 1981) __deep freeze 1,9 m^2 __cold room 2,25 m^2 __dishwashing 3m (65 deep) m^2 __dry store 7,6m of shelving __griller 0,2 m^2 __griddle 0,25 m^2 __convection oven 0,135 m^2 __boiling table 0,7 m^2 worktop and sink height 900mm worktop depth 650mm easy access for refuse removal and deliveries
Projected use	Storage, preparation and serving of food
Lighting	200lux (SABS 0114: Part I – 1973)
Ventilation	7.5 l / sec / person (SABS 0400)
Fire regulations	Class G1. 30 min. fire resistance for structural elements (SABS 0400: TT37.4) 1 portable fire fighter 4,5kg for Kitchen and café (SABS 0400:TT37.5)
Critical aspects	Adequate ventilation Ergonomics Hygiene Kitchen used during events and meetings in multi use hall
Notes	No separate WC facilities are provided to café users and staff due to the proximity of public facilities.



KITCHEN LAYOUT.
Not to scale

07.65. Detail drawing: deliverage of goods to the kitchen



KITCHEN LAYOUT.
Not to scale

07.66. Detail drawing: movement patterns within kitchen

As implemented in the precedent, the Chatsworth Youth Centre, resource facilities are designed to latch onto more lively and exciting functions. Hereby, people using the recreational facility are 'accidentally' informed about workshops and courses given at the resource centre. This supports the facility's function as a lively, active, noisy environment that people freely use. Because recreational and social activities flow into educational activities, the boundaries between education and fun are blurred.

Having physical and visual connection between different functions such as the resource centre and the recreational activities would imply subsequent interaction and usage. This connection is challenging since such an environment would require an isolated and compact inward-looking structure and the setting requires an unfolding, dispersed arrangement; therefore, the result is the scattering and segregation of functions.

COMPUTER LAB / READING / LIBRARY

Area	125 m^2
Projected use	Access to internet, research and reading
Lighting	400 lux (SABS 0114)
Ventilation	5.0 l / sec / person (SABS 0400)
Fire regulations	Class A1. 30 min. fire resistance for structural elements (SABS 0400: TT37.4) 1 portable fire fighter 4,5kg for Kitchen and café (SABS 0400:TT37.5) 2 escape routes (>25 people)
Facilities required	Computer tables and chairs, computers, storage for computer parts and programs
Critical aspects	Needs controllable access and secure lockage.

LECTURE HALL / WORKSHOP / ART STUDIO

Area	125 m^2 sub-dividable into two 62,5 m^2 lecture spaces	
Projected use	Entrepreneurial workshops	
	Art and crafts workshops	Painting, clay modelling, pottery,
	Fine crafts	Clothes making
	Lectures	
Lighting	250 lux SABS 0114: Part I – 1973	
Fire regulations	Class A1. 30 min. fire resistance for structural elements (SABS 0400: TT37.4) 1 portable fire fighter 4,5kg for Kitchen and café (SABS 0400: TT37.5) 2 escape routes (> 25 people)	
Facilities required	Storage	Several secure storage spaces provided for separate institutions
	Sink	75mm diam outlet with same sized trap
Critical aspects	Acoustic screen to divide space. Overflow of activities onto outside courtyard. Visual exposure for exhibition of function	

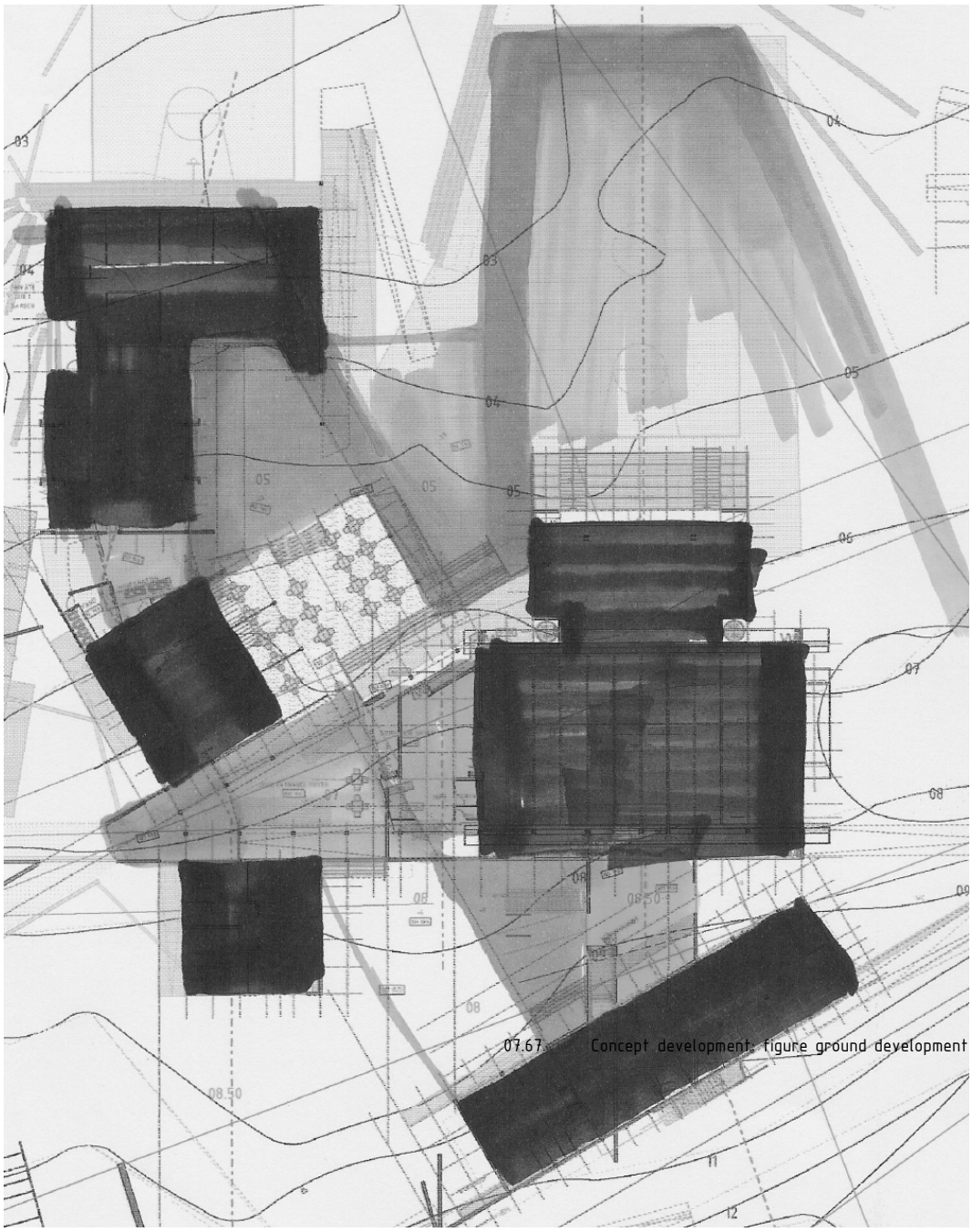
COUNSELLING FACILITIES / ADMINITRATIVE OFFICES

Keep visual contact with the facility, but blur the contact

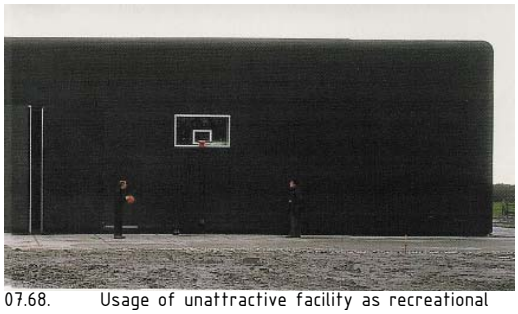
ADMINISTRATIVE OFFICES / COUNSELLING FACILITIES	
Area	210 m^2
Projected use	Office area from which management of the centre and different NGO's will operate.
Lighting	200 lux (SABS 0114: n part I – 1973)
Ventilation	5.0 l / sec (SABS 0400)
Classification of occupancy	Class G1. 30 min. fire resistance for structural elements (SABS 0400: TT37.4) 1 portable fire fighter 4,5kg for Kitchen and café (SABS 0400: TT37.5) 2 escape routes (> 25 people)
Facilities required	Kitchenette with sink WC and wash hand basin Wash hand basin with in the nurses consultation room
Critical aspects	Views of the park Natural lighting Prevention of glare on computers Disabled access

STUDY AREA

Area	m^2
Projected use	Quiet area for study or reading
Lighting	400 – 500 lux (SABS 0114)
Ventilation	5.0 l / sec / person (SABS 0400)
Fire regulations	Class A1. 30 min. fire resistance for structural elements (SABS 0400: TT37.4) 1 portable fire fighter 4,5kg for Kitchen and café (SABS 0400: TT37.5) 2 escape routes (> 25 people)
Facilities required	Tables and chairs Partitioning for different spaces: min 500 mm high
Critical aspects	Space should be accessible 24 hours / day, and be used separate from more secure spaces such as the computer labs. Placement does not require being completely separate from other activities, but there should be a psychological threshold which separates it as a more serious and quiet space.

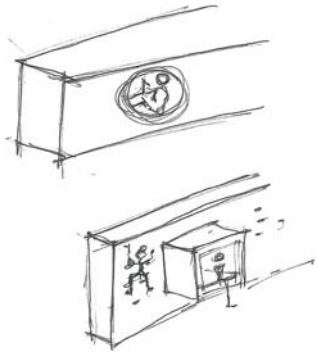


07.67 Concept development: figure ground development



07.68. Usage of unattractive facility as recreational space with different activities

07.69. The climbing wall



07.70. Concept sketches: usage of structural walls for recreational activities

RECREATIONAL ACTIVITIES

A climbing wall could be potentially dangerous if its use is unsupervised, but the aim of activities such as this is to attract people of different abilities. Therefore, the climbing wall, available to all, will have grips only to a height of 2,5 m,. thereby reducing the chance of users' sustaining serious injuries.

Basketball hoops placed at random spots encourage single or group play integrated with other activities.

The ramps and route of the skate park is integrated with the ramp and development, thereby increasing spectator value and surveillance.

The fitness centre opens towards a hard-surfaced gathering space to the west; it supports activities such as using basketball hoops and skateboarding.

The fitness centre opens up towards the east and develops into a fitness trail laid out throughout the park. This trail will have facilities and equipment for use at anytime and by anyone. Facilities include benches for sit-ups, bars for pull-ups, and punchbags suspended from the ramp.

PARK

Benches placed along routes
Park-facilitated activities such as picnicking and games