





Chapter 1

Theoretical Analysis



1.1 The real world problem



Figure 1.1

UP students

The University of Pretoria (UP) considers itself a world class tertiary institution that has much to offer students not only academically, but provides life skills to survive in the global community on different levels of interaction with society. The University has an effective academic structure, as well as extra-curricular activities which are quite active given the number of clubs and societies available on the campus. In light of this, I found that the facilities put in place by the University for use by the students are not structured in a way that allows them to be used to their full potential.

The development structure, having a branding strategy as a foundation, is well suited to this stage of the University's life as it has recently celebrated its centenary and it would be most appropriate to allow for a revamp of the University's image by way of a "cosmetic and reconstructive surgery" on the hub of student activity to be the first echo of the development structure at hand

1.2 Project Brief

The University of Pretoria has reached its centenary year (2008). In the university's development framework the existing student centre has been earmarked for redevelopment.

The proposed new student centre should be an icon for the evolved image of the University of Pretoria. Moreover, it should be a place that students from all UP campuses can identify as their own. In the proposed solution existing tenants and services will be kept and integrated into the project, but most importantly, there is a need for innovative ideas that cause students to interact more with campus after lectures and after the business day is over.

1.3 Client Brief

The design intervention needs to provide a centrally managed 'student lifestyle brand' that houses all facilities and activities occurring in the proposed student centre, so as to allow it to be applied to the satellite campuses of the University of Pretoria. The result will be a brand exposure to students and potential stakeholders, which aligns itself with the existing University of Pretoria brand.

Existing tenants and facilities will be considered and allocated the necessary space in the proposed solution. The following components need to be addressed in the accommodation schedule:

- existing commercial contractors
- stationary shop
- ATM court





- vending court
- entrepreneurial student
- retail
- Wi-Fi centre
- 24hr internet facility
- 24hr study conference area
- fast food outlets
- multi-purpose entertainment centre

Innovative and creative solutions are to be designed bearing in mind the theoretical framework of urban planning principles, the brand and the ownership of place by its user groups.

1.4 Research goal or objective

The goal of this project is to reach a solution that incorporates the renovation of the student centre into the pilot project of a student orientated brand. The student centre will be a physical realisation of this brand that will appeal to the student as a place that gives the student a sense of ownership and identity with their University. It will also encourage a deeper interaction between the students and their campus. The brand will be a structure applicable to all UP campuses and will also be aligned with the University's marketing and branding strategy to encourage existing students, prospective students and any other interested parties to interact with UP student life.

1.5 Definition of Terms

Site - the existing student centre building, as well as the immediate surrounds such as the piazza and the rear delivery yard, bin yard and parking lot at the University of Pretoria, Hatfield campus.

Brand strategy - refers to the intangible proposals and ideas to be implemented into the site.

Stakeholders- any parties that stand to benefit from the development of the site.

Development framework- projects that have been identified and sites earmarked for development by the University of Pretoria. All necessary feasibility studies having been done and funding allocated.





1.6 Theoretical framework

Intervention on the student centre will express a new approach to the physical environment, as well as the metaphysical environment. The user groups interact with this space on these two levels concurrently, thus success of an intervention needs to be based on identifying approaches that encourage the physical and metaphysical environments to blend constantly. Theories have been identified that would direct such an intervention.

1.6.1Design Philosophy for Physical Intervention

The University is a micro-metropolis in its own right. It is noteworthy then that the inhabitants of the University will be operating within the boundaries of their campus in a similar manner as would the citizen of a city at a macro level.

Spaces that are designed to be inhabited by people need to take into consideration the typical human behaviour in public spaces, for example transit routes, waiting or resting spaces, security, and comfort. Jane Jacobs (1961:386) noted that cities are "...containers of human activity and places of social interaction" and that designing for such an environment "...should not be a work of art" but a design conceived by "selection from life."

In the early 20th century there are recognisable traditions in the designing of spaces in urban design. Echoes of these traditions can be seen throughout the campus' historic buildings. By understanding the evolution of these traditions from then to present day urban design leads to realising the ideas

that need to be applied to the redevelopment of the University of Pretoria's student centre and its surroundings.

Urban design principles are applicable in this instance because not only is the student centre in need of interior renovation, but also the surrounding spaces. Both are public spaces. Moreover, an interior and an exterior space have to relate to each other. Furthermore, the site has to automatically interact with the rest of the buildings in its vicinity.

The context in which the design response is achieved should show its success in the macro level, (showing the student centre as a successfully functional building in the greater university context) and at the micro level, applying principles that make the student centre a success as far as the University inhabitants' interaction with it is concerned. There must be a link between the micro level response and the macro level response.

Traditional thoughts in urban design have had, among others, three core thoughts, as identified in the text *Public Places Urban Spaces, The Dimension of Urban Design* by Matthew Carmona, Tim Heath, Tanner Oc and Steven Tiesdell. (2004: pg 6-9). These thoughts are as follows:

1. The visual artistic tradition- this tradition was visible at a time when there was a narrow understanding of the relationship between architecture and urban design. The focus of design in these realms was product orientated. The solution had to be aesthetically pleasing and a visual experience rather than a solution that would have been derived from the consideration of factors such as the social, economic





and even the political processes that need to be explored to inform an architectural or urban design response.

- 2. The social usage tradition- this approach focuses on the way in which people "use and colonise space" (Carmona,Heath,Oc & Tiesdell, 2003:pg 6). This approach to urban design was well supported in the urban design field. The key proponent of this tradition was Kevin Lynch. His intention was to encourage a paradigm shift that proposed:
- (i) The appreciation of the urban environment- dispelling the notion that urban design is an exclusive and elitist concern. Lynch believed that the environment was to be designed so as to be appreciated and experienced by everyone.
- (ii) That which is relative to the object of study Lynch suggested the examination of people's perceptions and mental images.

Lynch was well supported by Jane Jacobs, as well as Christopher Alexander in his work *A City is Not a Tree*,(1965), and *A Pattern Language*, (1965). In essence, the support that Lynch receives is related to the notion that spaces should be designed bearing in mind that numerous activities can take place in the spaces, thus design must permit a merging and cross interaction of the activities and the places in which they occur. Socio-functional aspects, such as green spaces and transit zones, must be able to communicate with the designed space whether it is an interior and or an exterior space.

3. The making place tradition- this thought is a result of the merger of the first two traditions, as well as the infusion of the argument by Peter

Buchanan that urban design is "essentially about place making, where places are not just a specific space, but all the activities and events that make it possible" (Carmona, Heath, Oc & Tiesdell, 2003:pg 7).)

The "making places" tradition is in favour of the interaction and management of buildings and the spaces around them with the activities that occur in those spaces. The harmony created results in a successful urban place. The building becomes the private realm and the spaces are the public realm, in other words, the frontage of the building and the public spaces that surround it.

As an application to the project, the core of the campus is the student centre and the piazza. The result will be a linking of the buildings and the spaces created between and around them. The design will endeavour to make the combination of building and spaces become the hub of student activity. Urban design principles and frameworks are feasible approaches to use as tools to inform the need to rejuvenate the students' interaction with the area designed in order to provide the services they would need outside of the lecture halls.

The frameworks of urban design would, at a micro level, inform how the piazza (macro scale square) should be interacting with the transition zones (macro scale streets and walkways) within the building, as well as the surrounding buildings and amphitheatre.

A definite link needs to be established between the student centre and its immediate exterior. Then a relationship between the piazza and the amphitheatre should be established, connecting the piazza to the building in a harmony that allows for smooth movement throughout the area as would the movement of people and activities from a square to a sidewalk then into a building.





Figure 1.2

Lynch (1981:118-19) has identified 5 major criteria for the 'making places' tradition. These criteria are a set of performance dimensions of successful urban design:

- Vitality- the degree to which the form of places supports the functions, biological requirements and capabilities of humans.
- 2. Sense- the degree to which places can be clearly perceived and structured in time and space by users.
- 3. Fit- the degree to which the form and capacity of spaces matches the pattern of behaviours that people engage in or want to engage in.
- Access- the ability to reach other persons, activities, resources, services, information, or places, including the quantity and diversity of elements that can be reached.
- 5. Control- the degree to which those who work or reside in places can create and manage access to spaces and activities.

These criteria will inform the design response that allows for the redesigning and restructuring of the site, so as to have successful interdependencies between the building of the open spaces and the transition spaces. 1.6.2 Design Philosophy for Metaphysical Intervention



Who am I

Identity *noun*: 1: The fact of being whom or what a person or thing is.2. A close similarity or feeling of understanding.

Identify verb: 1. Prove or recognize that someone or something is specified person or thing.





- 2. Recognize as being worthy of attention,
- 3. (Identify with) feel or understand that you share the feelings of.
- 4: (Identify someone /thing with) associate someone or something closely with.

(Oxford Dictionary, 2007: pg 452)



UP Hatfield Campus

The student centre is meant to be the hub of student activity on campus outside of the lecture halls. However, there is currently nothing about its design that gives the impression that it is designed for students as the primary user group. A space designed for students should allow the students to identify the space as their own, as well as identify with the space, giving a sense of ownership. Moreover, students should feel like they are a part of the greater campus community, resulting in the notion of the space being owned by different people at different times. The re-designed student centre will become the medium to allow students to be expressive in an environment designed for the fusion of subcultures that are present in each individual's identity.

As shown by the third definition of the verb "identify," the student centre should allow for a sharing of space and experience. The environment should break away stigmas of homophily which is a prevalent occurrence in practically every educational institution. Homophily is a widespread human trait that has been well-documented for race, religion and ethnic identification, as well as in other characteristics (Tajfel, Billig, Bundy & Flament, 1971:pg:149-77.). An empirical survey of work in this area reported:

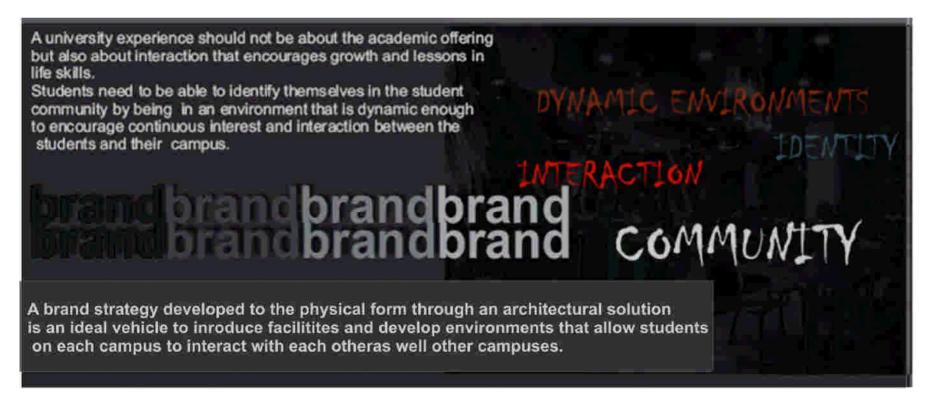
We find strong homophily on race and ethnicity in a wide range of relationships, ranging from the most intimate bonds of marriage and confiding, to the more limited ties of schoolmate friendship and work relations, to the limited networks of discussion about a particular topic, to the mere fact of appearing in public or 'knowing about' someone else... Homophily limits peoples' social worlds in a way that has powerful implications for the information they receive, the attitudes they form, and the interactions they experience. (McPherson, Smith-Lovin & Cook, 2001 in Loury 2007:pg: 415,420)

The new student centre should be an intervention that is designed to merge spaces in which people would have normally congregated in their homophilic groups. The interaction would be a subtle encouragement to the building users to cross social barriers they normally would not have crossed; the result would be simply their feeling of belonging. The consequence is a large group of students being able to identify with a location, a time and events in their student life and, more importantly, other people with whom the experiences are shared.





1.7 Design Approach



Concept Banner

Figure 1.4





1.7.1 Design Framework

An interior architect looks to solve problems within the interior environment, as well as the intimate environment of the user (IFI General Assembly, 1983). Solving such problems cannot occur independently of the exterior environment, which also has to be designed to be in context with its surrounding.

By bearing in mind the design philosophies for a physical and meta-physical intervention, a vehicle suited to amalgamate the theory with architecture would be a student lifestyle brand that not only addresses student lifestyle holistically on campus, but more importantly manifests itself physically through architecture.

This type of architectural solution would be one that addresses the metaphysical context and thus answers user questions such as:

What does it mean to me to be a student at the University of Pretoria?

What else is there to do besides go to lectures if I am on campus?

Are my non-academic needs being met?

Who can I go if I have a good idea I would like to share with my fellow students?

Is there a place I can be myself and still feel part of the student community?

In addressing the physical context, the architecture must impact the campus in a manner that defines the building as being designed for students. The brand

orientated exterior and interior must be designed in such a way that it is both an extension of student life, as well as communicates the vibrancy of being a student. The environments in the building need to be dynamic.

1.7.1.1 Trends



Trends in architecture

Materials to be used must be able to be manipulated to suit present day trends. Present day trends in design express diversity in the use of palettes of material. There is creative blending of styles in architecture with technology. The lines that define archetypal design are blurred yet architectural solutions are clear. In interior architecture, the architect is no longer restricted to laws that govern any given style. Design has become a lot more about pushing boundaries and designers strive to be trendsetters.

The materials used in a student centre must be able to withstand the heavy traffic, be abrasion resistant and easy to clean. The design of elements such as structure, as well as finishes and accessories must be solved with green design considerations yet be aesthetically pleasing.





1.7.1.3 Colour Psychology



Red is appropriate for this design as it stands out from the monotone building colours in its immediate context and would give the new student centre an energetic atmosphere.

Orange

Serious consideration has to be made as to what colours are to be used in which spaces. Without applying this knowledge, the student community can be affected in numerous negative ways such as mood, concentration and anxiety but to mention a few.

When colour is used in a space its purpose must be to enhance the function of the space through its effect on the users. In this design appropriate colours are described as follows: Orange is believed to increase oxygen supply to the brain, encourages appetite and stimulates mental activity. Among other things, orange represents creativity, happiness, encouragement, joy, enthusiasm and success. Orange is a colour that encourages factors that contribute to social interaction, thus would be vital to the new student centre.

Red

Red is associated with danger, passion, energy, strength, power, determination and, more popularly, love. It stimulates metabolism, increases respiration rate, perspiration, appetite and raises blood pressure.

The visual effect of red is that it can make objects appear closer and larger. Dark shades of red tend to represent power, rage, anger and courage. Lighter shades of red represent joy, sexuality, passion and sensitivity.

Brown

Brown is usually associated with nature and earth colours. Brown suggests friendship, outdoors, tranquillity, comfort, masculinity, nurturing, sensuality and generosity.

Beiges and tans imply sophistication and neatness, while coffee browns also imply sophistication, but more so richness, robustness and flamboyance.





The use of brown would have to be accompanied by other colours so as not to make the space seem overly formal and designed for exclusivity. Brown would be ideal for use in a student lounge to create a mood that hints at a slowing down of the buzz of the student centre.

Yellow

Yellow is a colour that is most visible to the human eye. It attracts attention, also stimulates mental activity, such as orange, and builds muscle activity.

It has been proven in numerous studies that students with yellow as a wall colour have studied and performed better at their academics.

Yellow would be an ideal colour to use sparingly in a study centre, or any environment that requires mental stimulation. It has to be used sparingly because while it is the most visible it is also the most fatiguing to the eye. Silver

Silver is a reflecting colour that is often associated with high-tech finishes. It is representative of modernity, technology, glamour and sophisticated sleek detail. It catches the eye very easily and should thus be used sparingly.

Silver would be ideal for small, but well thought out detailing of fixtures or fittings to amplify attention to detail.

1.7.1.3 Sustainability

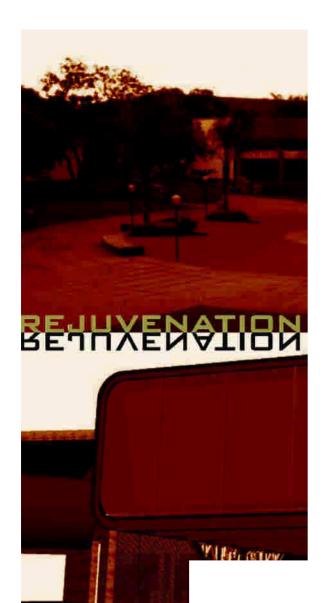
Considerations concerning the use of ecologically friendly design decisions need to be made regarding:

- lighting quality
- ventilation
- types of artificial lighting sources
- materials to use in and custom designed movable furniture, fixed and none fixed elements
- environments that encourage users to be sustainability conscious

Finally, the design approach must be conscious of the existing building and note its positive and negative characteristics. The conclusions deduced from analysing the existing building should begin to plot the course for an interior architectural intervention that will incorporate the interior, as well as the exterior of the student centre into the physical and meta-physical contexts of the university.







Chapter 2

Context Study

2.1 Introduction

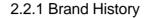


Figure 2.1

University of Pretoria, Hatfield campus Student Centre piazza

The University of Pretoria (UP) instituted and completed the design and construction of a students' centre and piazza on the University Main Campus in Hatfield, Pretoria. Construction of the centre was completed in 1995. The student centre's purpose was to provide a central location for services to the students of the campus. It was also to function as a place where students can interact and relax, as well as stage events in the piazza.

2.2 University of Pretoria Brand



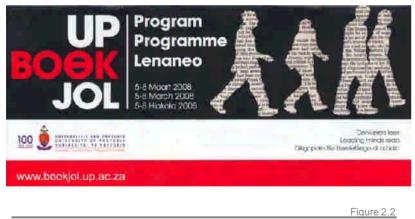
Since the opening of the university as the Pretoria branch of the Transvaal University College in 1908, there has never been a brand that has been specifically designed with the student campus lifestyle in mind. The university has its corporate brand portfolio which is a combination of strategies associated with the university's corporate image on all campuses, in comparison to and in competition with the other universities locally and internationally.

The university's brand has sub-brand portfolios for each faculty in the university (Figure 2.3), such as TuksRes which is the university residences brand identity, as well as TuksSport which is the university's main sport brand identity. There are associated brands that exist, such as the High Performance Centre (HPC), a brand identity that is associated with TuksSport. Smaller brand identities also exist on campus and are active from time to time, for example, Junior Tukkies, TuksRag and UP Boek Jol (Figure2.2). Most of the smaller brand identities on campus touch on student campus lifestyle, but almost seem to be independent of the university's main brand identity. There are some brand identities that are bourne due to events that may organised by the University Alumni, for example, film festivals and concerts.





The corporate brand identity has changed with the university's coat of arms over the years (Figure 2.4, 2.5, & 2.6) At milestone years there is an associated logo that gets introduced to commemorate the year. The use of the university coat of arms and the colours (blue, gold and red) is consistent. A variation of this approach is when an official university event occurs and the ceremonial coat of arms is used. The strategy is effective in blanketing many facets of the university in a main identity. It is not so effective though in representing the stakeholders that make the university an educational institution that not only teaches academia, but also life skills formally and informally.



University of Pretoria Associated brand – UP BOeK JOL



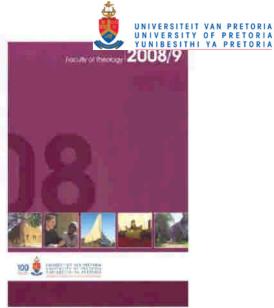






Figure 2.3

University of Pretoria Associated brand – Faculties and Centenary



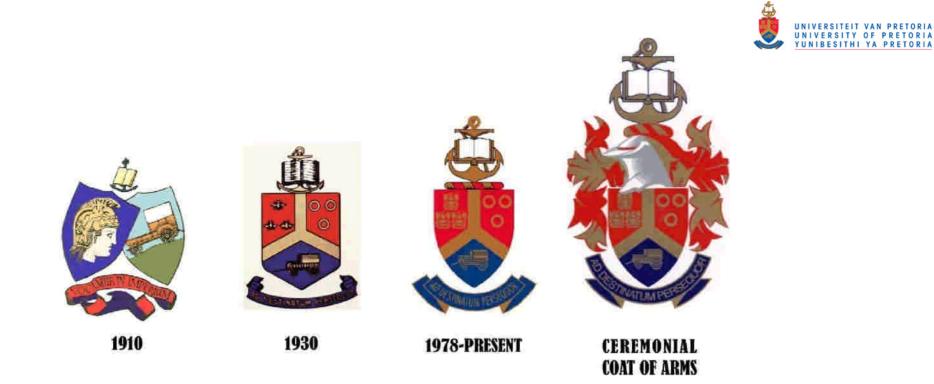


Figure 2.4

Figure 2.6

UNIVERSITEIT VAN PRETORIA

University of Pretoria Coat of Arms Development from 1910 to present and Ceremonial Coat of Arms



University of Pretoria Associated corporate identity 1978-2007



University of Pretoria Associated corporate identity 1978-2007





2.3 Site: University of Pretoria Student Centre



University of Pretoria Student Centre context aerial view

2.3.1 History

The site to be developed is the student centre which was designed by Steyn and Viljoen Architects. It was completed and officially opened on 17th August 1995. It cost R13,2 million to complete the building with all finishes included, as well as the piazza.

Facilities housed in the building at the time included a coffee bar, book and stationery shop, newspaper room, Tuks Fm, automated teller machines (ATMs), the SRC offices and the cafeteria, which was redesigned in 2000 to allow for individual contractors to operate in their own spaces.

2.3.2 User groups



User groups

Students

Most students on the Hatfield campus use the student centre, whether it is for the cafeteria or the travel agency or even just passing through, there is daily interaction with the student centre.

University staff

University staff also use the facilities provided at the existing student centre. This allows for interaction between all members of the university community

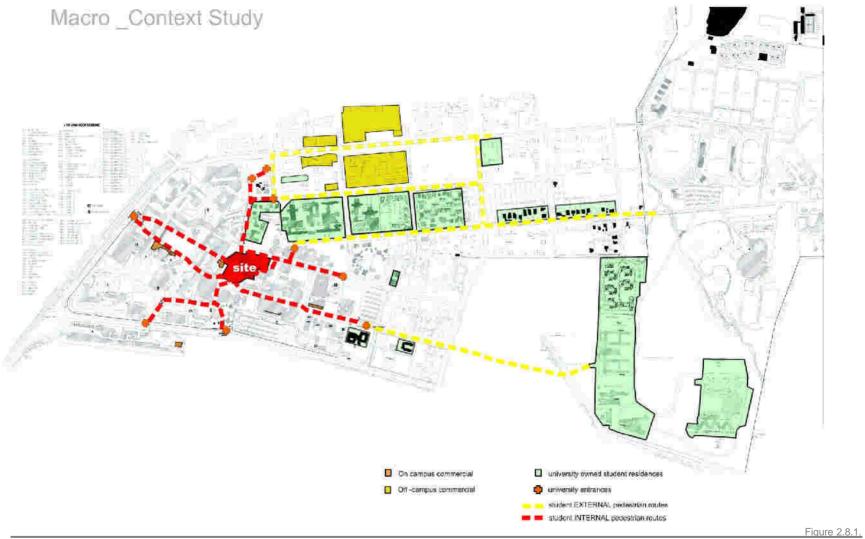
Visitors

Visitors to the university visit the student centre because of facilities provided, such as the ATMs and the eating places. Just being at the student centre allows for the visitor to experience a major part of student social life.





2.4 Context Study



Map showing site in Hatfield, Pretoria context



2.4 Macro Context Study

The macro context study map (Figure 2.8) shows elements that influence the level of interaction between users and the student centre. Firstly, identifying the proximity and density of where students live relative to the centre gives an idea of the number of users most likely to use the centre frequently enough to make a redevelopment feasible. Transition routes show current movements of the users of the student centre and how they move in and around campus. Many of the routes terminate or emanate from the student centre yet there is no way of immediately knowing the possible functions of the student centre until one is inside. There is a need for a defining element to mark the location of the student centre. Commercial activity on the campus is sparse along the major routes that lead to the student centre.

Commercial activity off campus is highly concentrated on Burnett Street between the Festival Road intersection and the Grosvenor Road intersection. Services provided on this commercial corridor serve the students and the rest of the community.

Figure.4 shows the public transport routes in the Pretoria context and Figure.5 shows the residential densities in which the University is well located.



Hatfield and surrounding areas transport routes

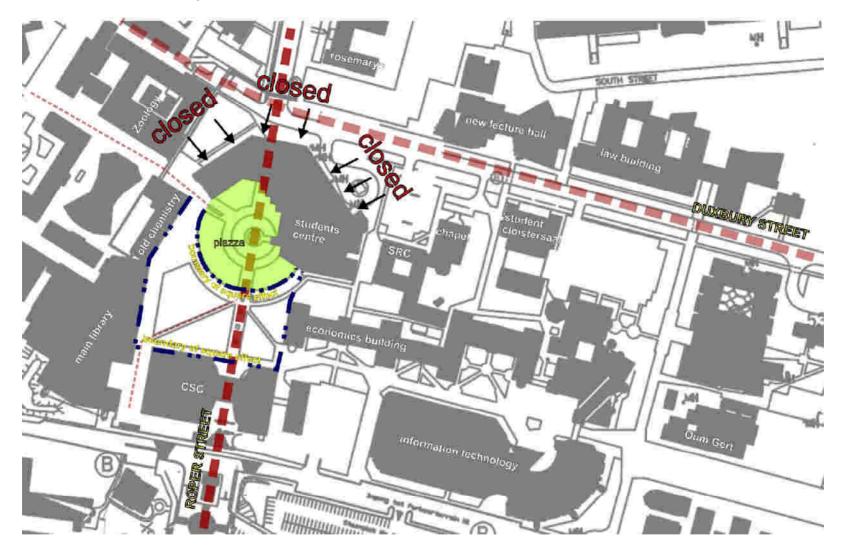


Hatfield and surrounding areas transport routes





2.5 Micro Context Study



University of Pretoria campus map- Micro Context Study

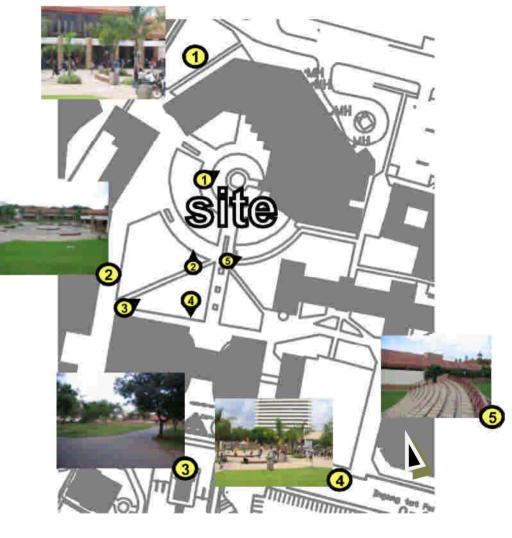




2.5.1 Response to surrounds

The major transition routes that cross, as well as border the site are Roper Street and Duxbury Road. Internal major transition routes are indicated in the (Figure 2.11) as the routes between the Client Services Centre (CSC), and the route between the Academic Information Centre (AIC) and the Zoology building. The existing student centre's positioning, in the context of the buildings surrounding, shows that there was an intention to design a type of large square between the buildings, then a smaller square/courtyard by bordering the piazza with a wall and raked seating. The boundaries of these squares are shown in Figure. 2.11 and in camera angle 5 (Figure 2.12) and camera angle 8 (Figure 2.13).

The student centre is designed mostly to respond to activity in the piazza, the centre stage of the piazza being the focal point. The main entrance into the site is along the Roper Street axis into the piazza. The building is closed off on the northern facade, only having an opening onto Roper Street to connect to the northern area of the site. The eastern facade is also closed off to the new Law Building and new lecture halls where much of student traffic has since resulted well after completion of the existing student centre. With a proposal of a new student centre, an opportunity arises to address new movement routes that students need to access the east side of campus. The closest entrance on the east facade has a dark tunnel-like walkway, as shown by camera angle 7 (Figure 2.13). The south-east and the north-west facades face the piazza. All entrances to the shops' services and cafeteria are on this face, almost as if to address the main entrance, CSC and AIC to make the piazza become an enclosure.



Site camera angles









Figure 2.13





Figure 2.13A



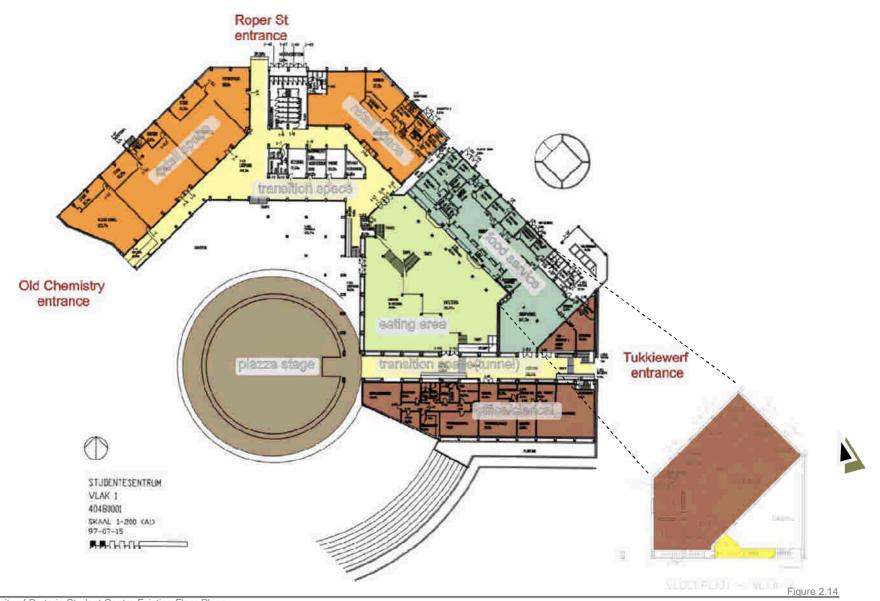
Figure 2.13B



Figure 2.13C

Site camera angles





University of Pretoria Student Centre Existing Floor Plans





В

The green spaces in the greater square created become interludes along the transition routes to the student centre. They are effective, informal meeting spaces yet they do not provide visual continuity as spaces that are supposed to be related to movement. One can see where one came from, but not necessarily where one will end up, even though the route that the green space one is on would be one that ends or starts at the centre of the piazza, camera angle 3 (Figure 2.12)

Structure

The existing structure is primarily concrete block columns and reinforced coffer slabs. The structure is rigid and does not accommodate flexibility of use. The roof is made of pigmented concrete profiled roof panels. The internal structure is comprised of 110mm dry-wall, as well as non-load bearing walls and glass, depending on the space being defined. Galvanised steel grilles are fixed between the roof panels and coffer slabs for air circulation and evaporation of moisture between the insulated glass panel shop-fronts.

The walkway outside of the retail shops has a low ceiling height. It seems to have been designed to allow natural light into the adjacent spaces from fanlights on the wall at a height above the slab.

The high volumes of space present an opportunity for further development. The existing column grid allows for vertical and lateral development with opportunity for flexible design.



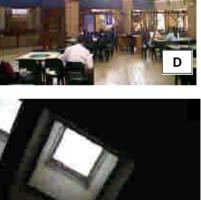


Figure 2.15

Analvsis views





Services

Services, such as the ablution block, electrical circuit boards and gas tank storage, are located on the north-eastern perimeter of the building. Storage and service rooms are also on the same facade. The services are designed to be accessed from the service yard in order to access the main facilities to the north-east of the building. The facilities in the central part of the building, as well as in the rest of the building are serviced through ducts along the pedestrian walkways.



The lighting in the student centre is predominantly artificial lighting. Natural lighting is observable mostly in the large, double volume cafeteria/eating area (Figure 2.15 C and D) where there are large windows facing the piazza, thus letting in south-western light. There are skylights in the coffers of the slab of the lighting well along the transition areas. The deep passages on the north-east transition route result in a dark tunnel from entrance. The large glazing for the eating area facing this tunnel is ineffective because the natural light it would have let in is blocked by the solid walls of the clerical area shown on the Figure 2.14 which houses RAG and The Perdeby offices.



ATM queue congestion



Low ceiling and artificial lighting

Figure 2.17





Circulation

There is congestion at the ATMs because of the queues for the machines. There are also, at certain times of the year, students seeking accommodation at the service providers adjacent to the ATMs.

The point of convergence of the passage from the Roper Street entrance, Old Chemistry entrance and the cafeteria entrance is a deep space that, on observance, is a dead space. Students generally walk around it yet it is an empty space. It is mostly crossed by students coming from the piazza going into the Minolta.

In the passage that leads from the Roper Street entrance to Coffee Buzz, congestion is caused by the seating area. This seating area seems to be a last minute addition to the narrow passage. The congestion occurs because it is a transition zone, as well as a route to the toilets for students.

Inside the cafeteria there is a disruption of the traffic from the serveries to the seating areas. Routes to the staircase need to be defined. Freestanding furniture allows for constant redesigning of floor layouts. However, the freestanding furniture is too easily moveable; students move it to their convenience though it may become disruptive to the designated circulation routes, for example, by blocking the staircases as shown in Figure 2.18.



Interior of cafeteria eating area in Student Centre





Fixtures

There are few fixtures that have been installed to serve a specific function or to enhance the aesthetic of the building. Notably, an effort to enhance the aesthetic is presented by the ceiling grid shown in the main eating hall of the student centre.

This fixture allows for lighting to be fitted within the cells created by the grid. Light-boxes for the signage of the different fast food outlets renting the spaces are present, but not as effective as it could be.



Interior Fixture

Exterior Finishes

The dominant exterior finishes are the coarse pigmented concrete blocks, glass facades and rust brown coloured, powder coated, aluminium shopfronts. The concrete blocks frame smooth finished and painted 15mm plaster with a raked joint painted. This is seen on the southern and western facades where there is a masonry meeting structure. An off-white acrylic PVA paint is used to paint the plaster. The north-western facade is predominantly aluminium shopfront with tinted glass for solar control. The northern facade has no glazing.



Exterior Finishes



[28]