

chapterfive

Contextual Response

Site

Climate

Temperature – Average maximum temperature: 24.3 degrees Celsius
 - Average minimum temperature: 10.3 degrees Celsius

Solstice - Summer: 41 degrees
 - Winter: 88 degrees
 - Equinox: 64.5 degrees

Rainfall - an average of 720mm precipitation per year
 (information obtained from: <http://www.climatetemp.info/south-africa/pretoria.html>)

Access

The site can currently be accessed by students from both the northern and the southern boundaries, but no public access is possible from either side. From the north, one has to travel through the Main Campus main gate in Lynnwood Road and access the site from the parking area adjacent to Boukunde (Fig 5.1). From the south, access is only possible from the entrance into South Campus, situated in University Road, west of the site. Pedestrian access from Lynnwood Road is possible for students with valid student cards.

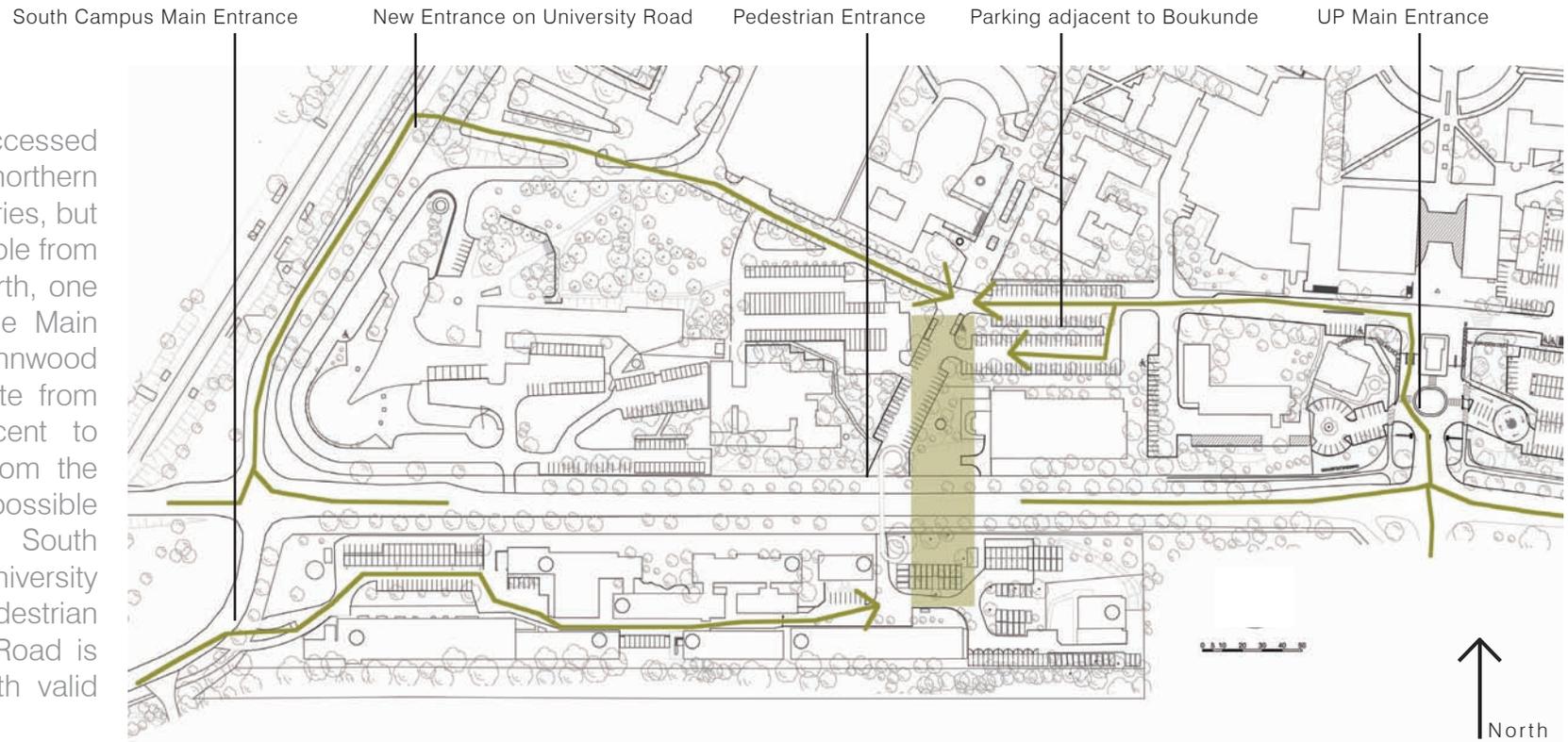


Figure 5.1 Existing site plan and access

Parking

Over the years parking has become an increasingly serious problem at UP. Formal and informal parking areas are indicated in Figure 5.2. The University recently completed a New Engineering Building, combined with a 4 level parking structure. In the framework by Holm Jordaan a new parking structure is recommended on the eastern end of South Campus.

The new parking structure is not yet in the planning phase, but this dissertation respects the possibility that a new parking structure could be constructed within the next 10 years. In the meantime the lawn that is currently in its position will be used as a recreational and social space.

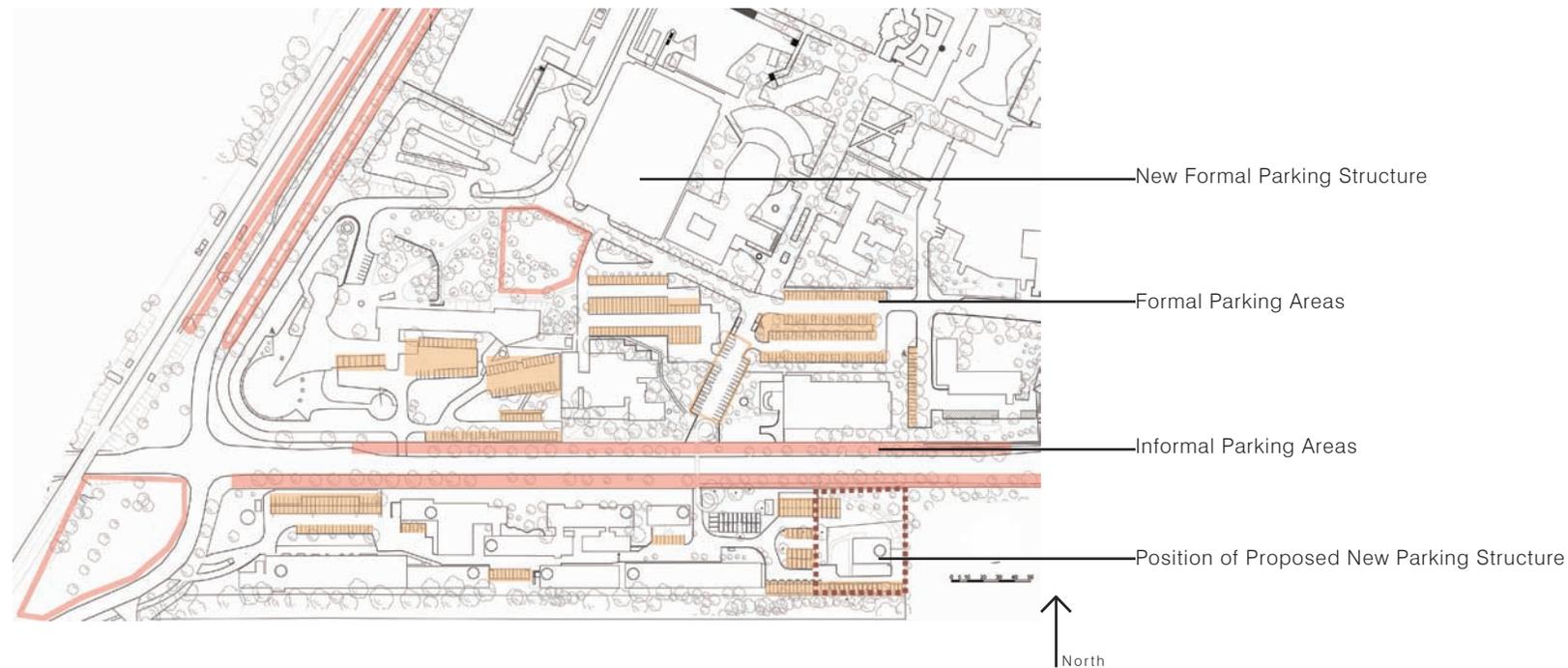


Figure 5.2 Parking at UP

Buildings

This chapter deals with the influence the BESC and its context have on each other and how this leads to a concept. The history of each building is mentioned and then the contextual response to the building is described. When a building is discussed the spaces around the building, entrances, aesthetics and its relationship to other existing structures are also implied. The buildings and spaces that influence the BESC most and that are most influenced by the BESC are: Boukunde, the Visual Arts Building, the Town and Regional Planning Building and the proposed new PCB (Fig 5.4). Each of the three existing buildings in its own right consist of architectural significance, therefore it is important to respect and respond to these structures in a non-intrusive way.

The conceptual approach is discussed in relation to the context as these are interdependent in this dissertation. The concept assists in the unification of the different buildings on the site, the two segregated campuses, the different departments in the Built Environment and, over all, theory and practice.

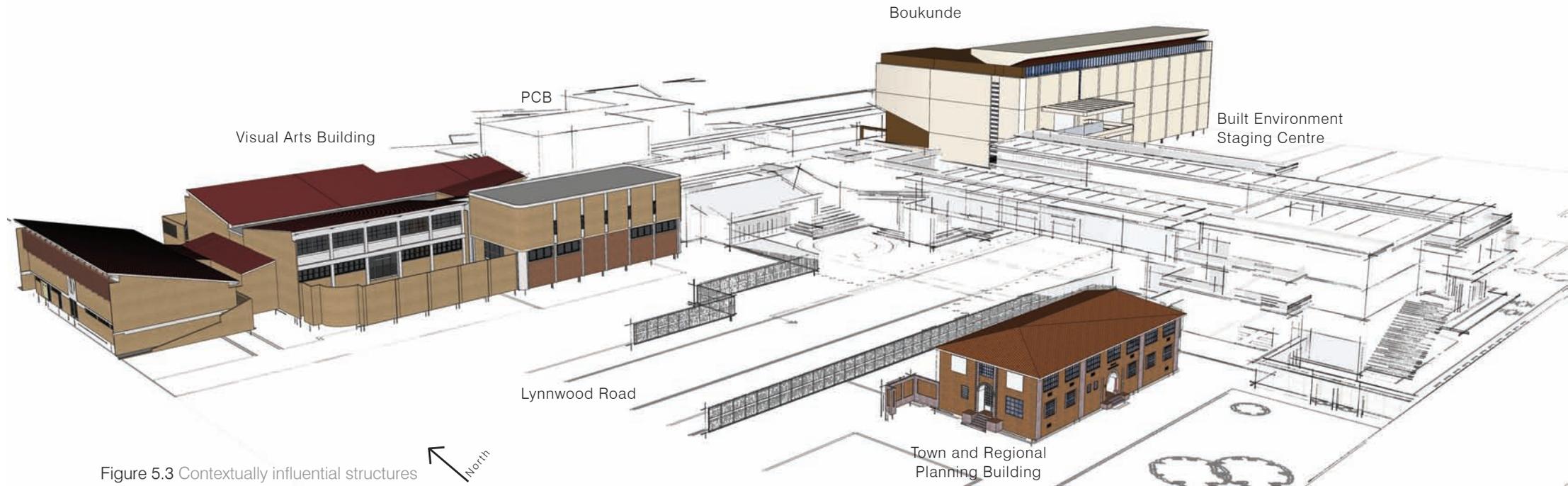


Figure 5.3 Contextually influential structures

Highlighted in Figure 5.4 are the buildings and elements that influence the architectural response on the existing site plan.

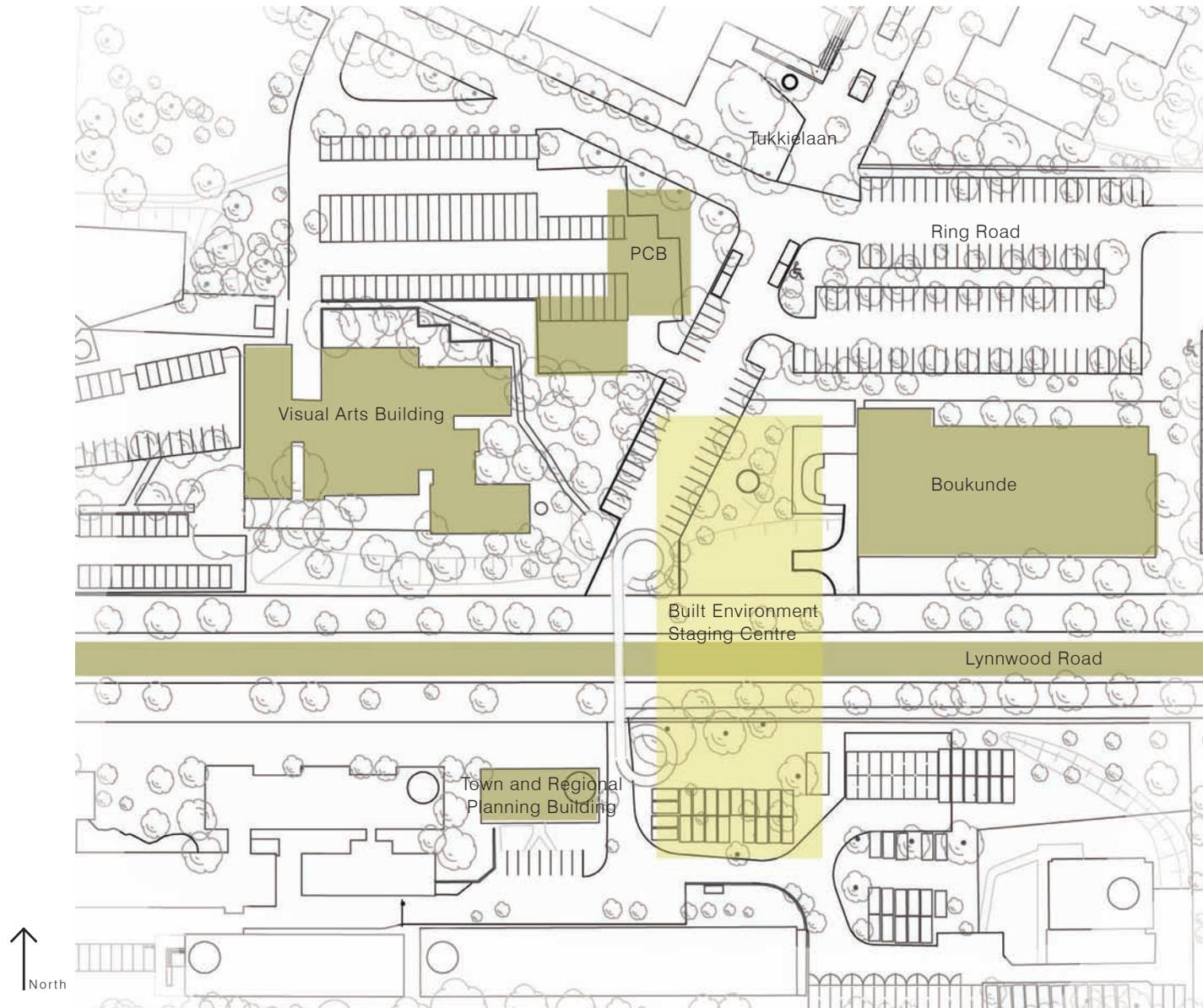


Figure 5.4 Important contextual design generators on existing site plan

Background

In 1929 the faculty of the Built Environment, then known as the University of Pretoria Architects and Quantity Surveyors Association (UPAQA), was established. 31 years later the department was in desperate need of their own facility at UP. After completion of the Boukunde building in 1960, UPAQA moved in. By the 1960s the Building Industry Foundation of South Africa (BIFSA) established a new course in Construction Management that fell under the same department as Quantity Surveying. Both of these courses were moved out of the Boukunde building because there was not enough space for both departments. In 1973 the Boukunde building was expanded to accommodate more students and the facilities were upgraded to be more suitable for the education of architecture (Gardiner, 2008: 12).

The separation of the students in the built profession had an effect that reverberated into the industry. Due to the nature of the building industry, good relationships between different members of the industry are crucial. An architect, quantity surveyor or construction manager cannot work alone, as the different professions are reliant on each other for success. The

interaction between these professions should be stimulated and encouraged at university level in order to create better relationships in the industry (Meiring, 1961: 10). When all the professionals in the built environment fully understand what the roles and importance of the other professionals are, it could, arguably, result in better projects.

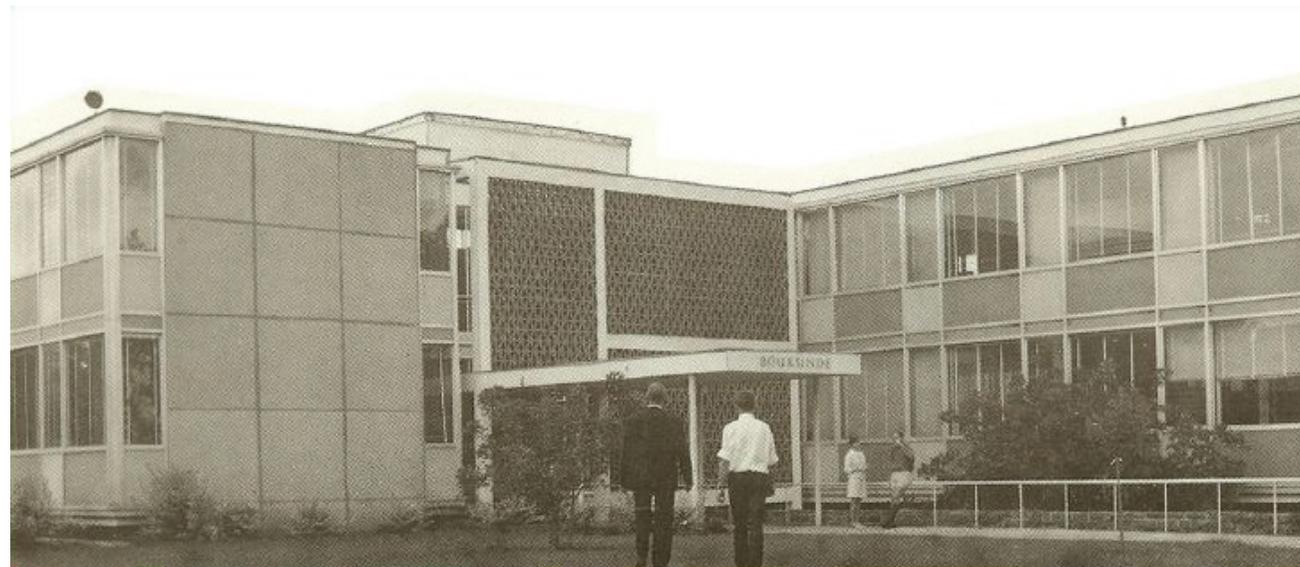


Figure 5.5 Boukunde building view from the north east, 1960.

Boukunde

The Boukunde building (Fig 5.6), that currently houses the Department of Architecture at UP, was designed and constructed in 1960 (Ad Destinatum, 1960: 67). The building is a modern iconic building that sits as an object in the landscape. The singularity of Boukunde should be respected.

The original Boukunde building was mainly a concrete structure with glass curtain walls (Fig 5.5). Increased vehicular activity on Lynnwood Road caused the studio spaces to be too noisy and the building was altered and changed into the structure it is today.

Originally the building had a southern entrance, on Lynnwood Road, with a public lecture room and kitchen. The intention was that this would become a space where

members of the built environment could interact (Meiring, 1961: 13).

For security reasons the University was fenced off and the southern entrance lost its functionality. The exterior spaces on ground floor are therefore currently under-utilised and neglected.

The connection between Boukunde and the BESC should therefore be designed to revitalise these spaces and in this way not take away any of the architectural significance of Boukunde, but rather re-establishing its original functions.

The Department of Architecture's projections are to have 140 first year students, 130 second year students, 100 third year students, 80 fourth year students and 60 fifth year students by 2015 (Gardiner,

2008: 16). That implies that the facility that currently houses approximately 400 students must be able to deal with 100 more students as well as the necessary staff within the next five years. The current facility is saturated and expansion is inevitable.

A building designed and located close to Boukunde should be

sensitive to its original identity. Un-intrusive connections into Boukunde are only possible in the middle of the facades, not affecting the corners, the ground floor or the roof line of the existing structure. In this way Boukunde can be connected to the BESC structure without affecting the modern identity of Boukunde.



Figure 5.6 Western corner of Boukunde building, 2011

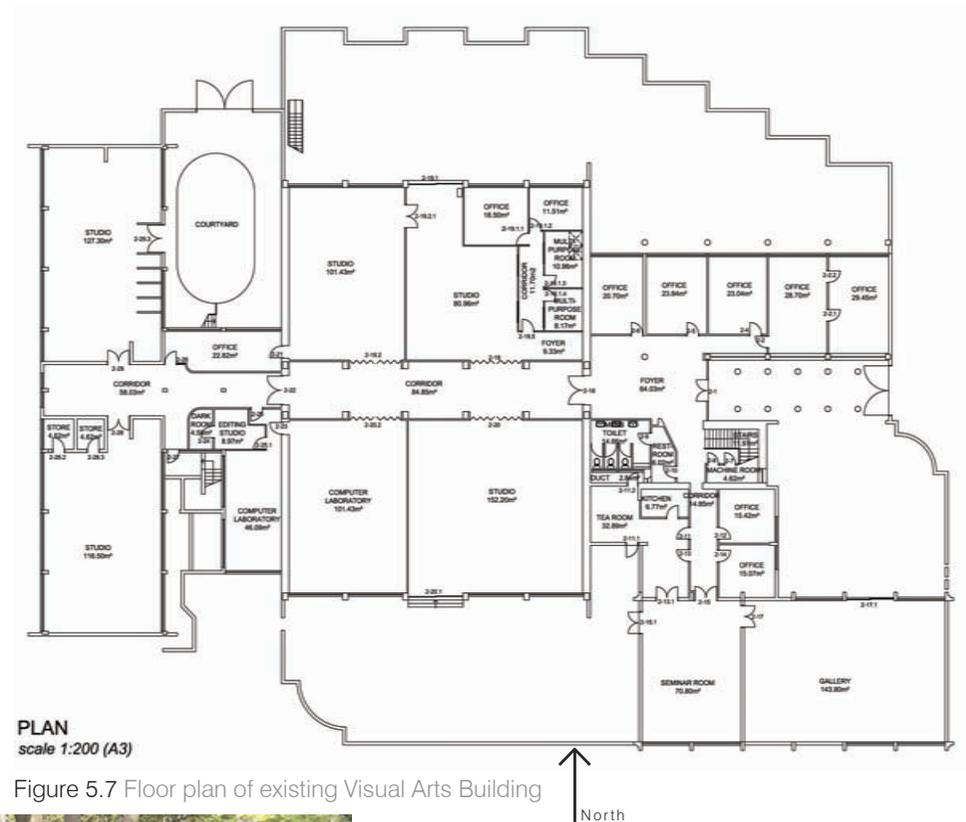
The Visual Arts Building

The Visual Arts Department has been described by the University as an “embarrassment” (Vosloo: 2011). This department has proven itself to be amongst the most influential art departments in the country, but its facilities reflect the opposite. The University of Pretoria is currently planning on re-developing the facility and adding an exhibition space that will not only serve the Visual Arts Department, but also host the University’s permanent art collection. The collection has an estimated value of R400 million, yet it is not easily accessible (The University of Pretoria, 2011). The new building is planned to be situated on the eastern side of the current Visual Arts Building. The client in this brief is the UP Facilities Management Department.

In a paper ‘Designing the University of the Future’ Rifca Hashimshony and Jacov Hain argue that “universities will undergo major organizational and physical changes as they adapt their activities to meet present and future needs” (2006: 5). The organisation of the integration of the members of the Built Environment, the Visual Arts Department and the public will result in a new building typology, not only at UP, but also in the country.



Figure 5.8 Existing entrance to Visual Arts Building



Connection between Boukunde and Visual Arts Building

The connection between Boukunde and the Visual Arts Building is currently divided by the southern end of Tukkielaan, a pedestrian walkway. Furthermore cars are also currently parking in this area, resulting in a very poor connection between the two facilities. The walkway towards the entrance of the Visual Arts Building is shown in Figure 5.9. The proposal is to establish a public space that encourages interaction between the architecture and art students, connecting the two facilities through social activity.

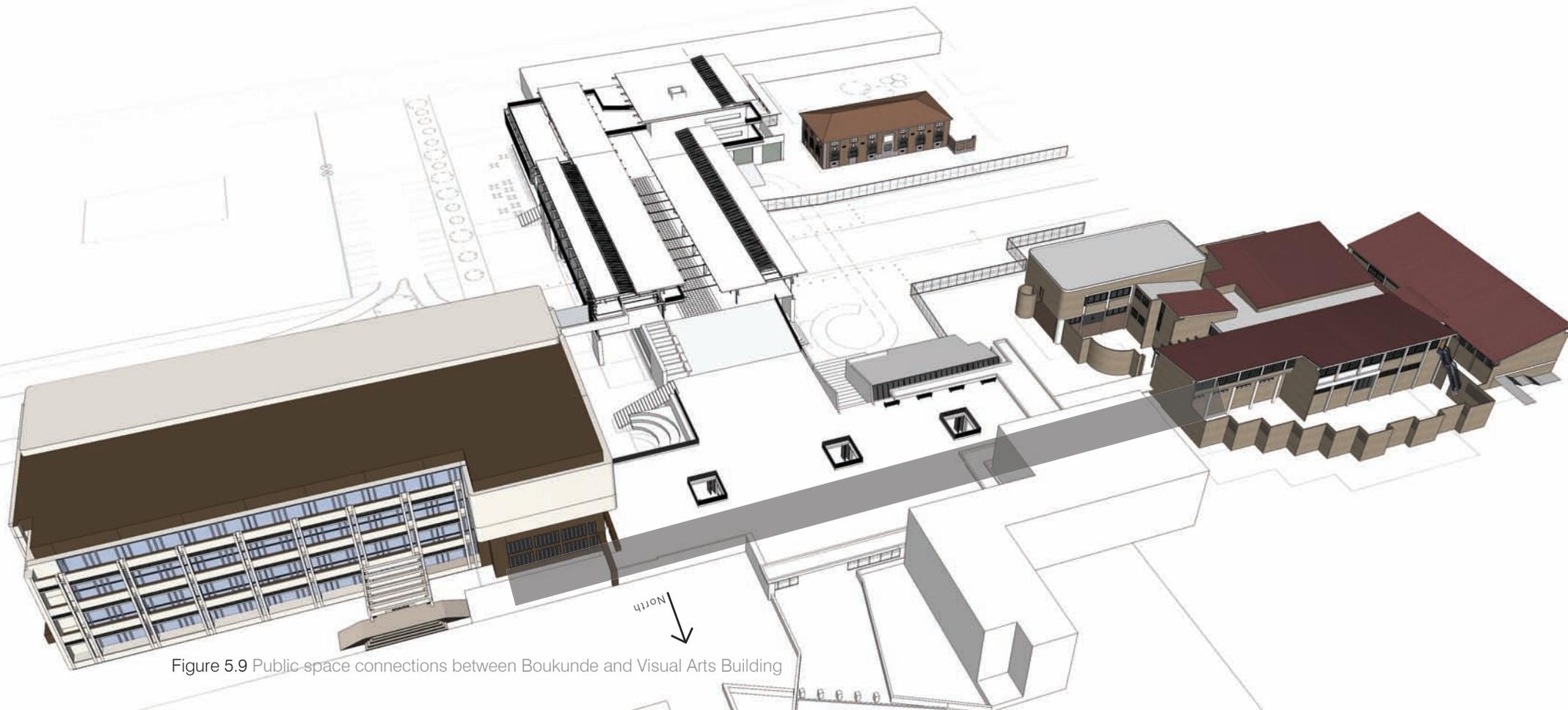


Figure 5.9 Public space connections between Boukunde and Visual Arts Building

Lynnwood Road

Elandspoor farm was obtained by James Mears in 1875. The farm was located between the current Burnett Street to the north, Rupert Street to the east, Pretoria Boys' High School to the south and University Road to the west (Fig 5.11). Originally the now known Lynnwood Road was an ox-wagon trail dividing the farm, Elandspoor, into two parts (University of Pretoria, 1960: 264). Today, UP Main Campus is on the northern side and South Campus on the southern side of this historic thoroughway.

The original ox-wagon trail divided the site in the early 1900s and its effects are still evident today. The trail developed into a four lane vehicular street that separates South Campus from Main Campus. In order to address this separation it is important to respect the current activities happening on Lynnwood

Road and use them to the benefit of the project. The energy, i.e. the amount of vehicular and pedestrian movement generated by Lynnwood Road - will be embraced and the design will be structured around it to enhance the quality of the spaces and the area through the creation of a link between the two campuses.

Lynnwood Road is an arterial road connecting the N1 national highway with Pretoria CBD. Traffic intensity can reach a high of 3000 cars per hour (Lotz, 2008: 45).

Lynnwood Road has been identified as an Activity Street in the urban framework. The implementation of the adapted TOD and BRT systems are applied in Lynnwood Road, in order to make the BESC a pedestrian friendly and accessible building.

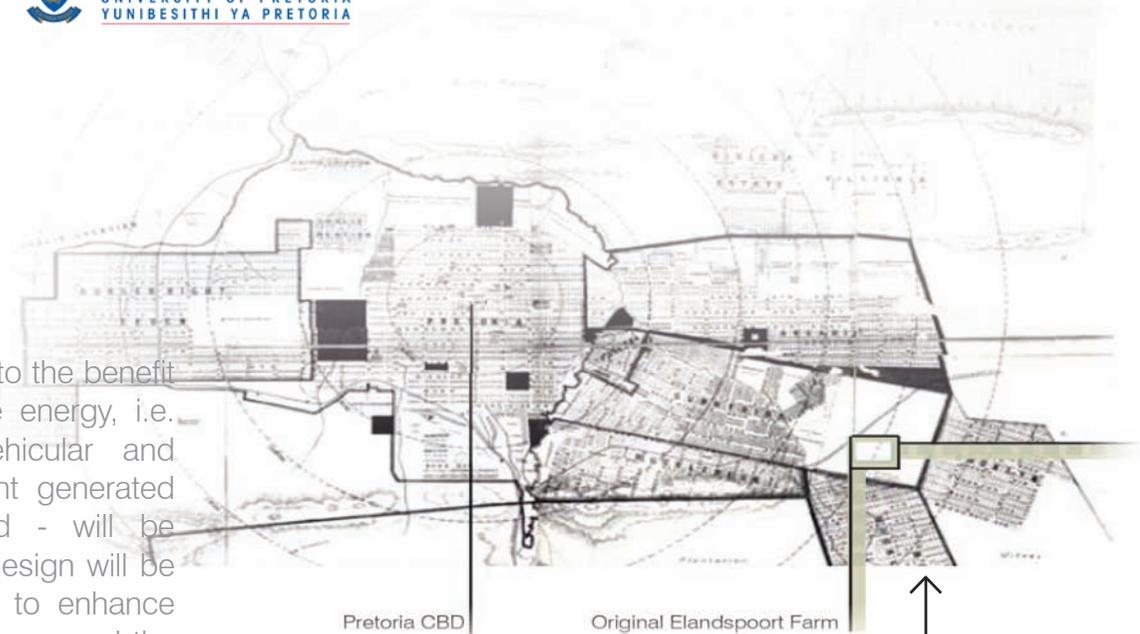


Figure 5.10 Location of Elandspoor Farm in relation to Pretoria CBD

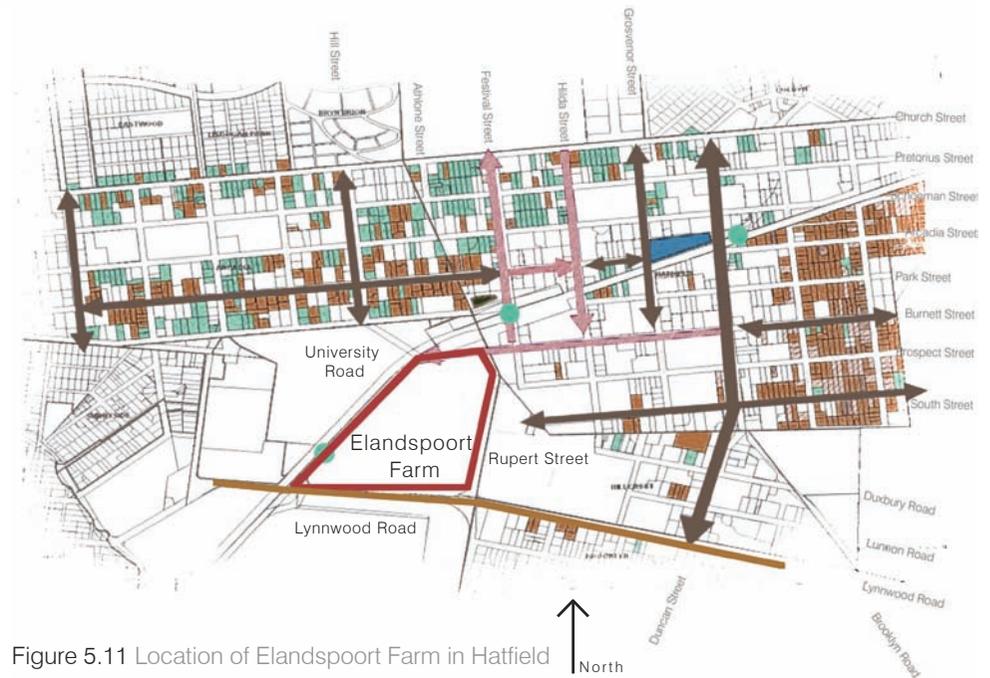


Figure 5.11 Location of Elandspoor Farm in Hatfield

Town and Regional Planning Building

The first buildings along Lynnwood Road were constructed in 1933; these were facilities for the Fuel Research Institute. Continuous development took place until 1980 when the Council for Scientific and Industrial Research (CSIR) obtained control over the area now known as South Campus, even though the grounds and the buildings were government property. In 1990 UP obtained ownership of the area under the conditions that it is used for educational facilities and the University was responsible for the moving of all CSIR property. The facilities were

renovated to accommodate numerous functions (University of Pretoria, 1996: 501).

Constructed in 1933, the Town and Regional Planning Building was one of the first buildings on South Campus. The building is therefore protected by the Heritage Resources Act of 1997 and any additions or alterations to the building are subject to legislative approval.

Instead of physically linking the BESC with the Town and Regional

Planning Building, a link could be established with the exterior spaces around the buildings. These exterior spaces are currently under-used and could be re-used; to allow the building to be experienced from all sides, recognising its heritage and architectural significance.



Figure 5.12 Northern facade of Town and Regional Planning Building

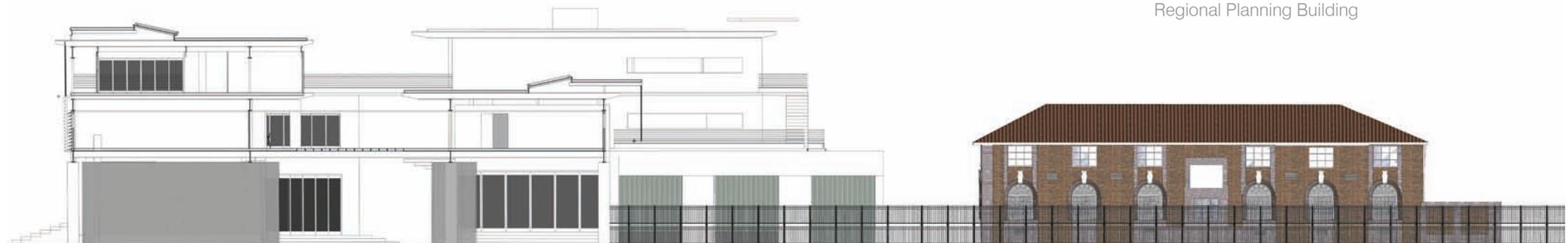
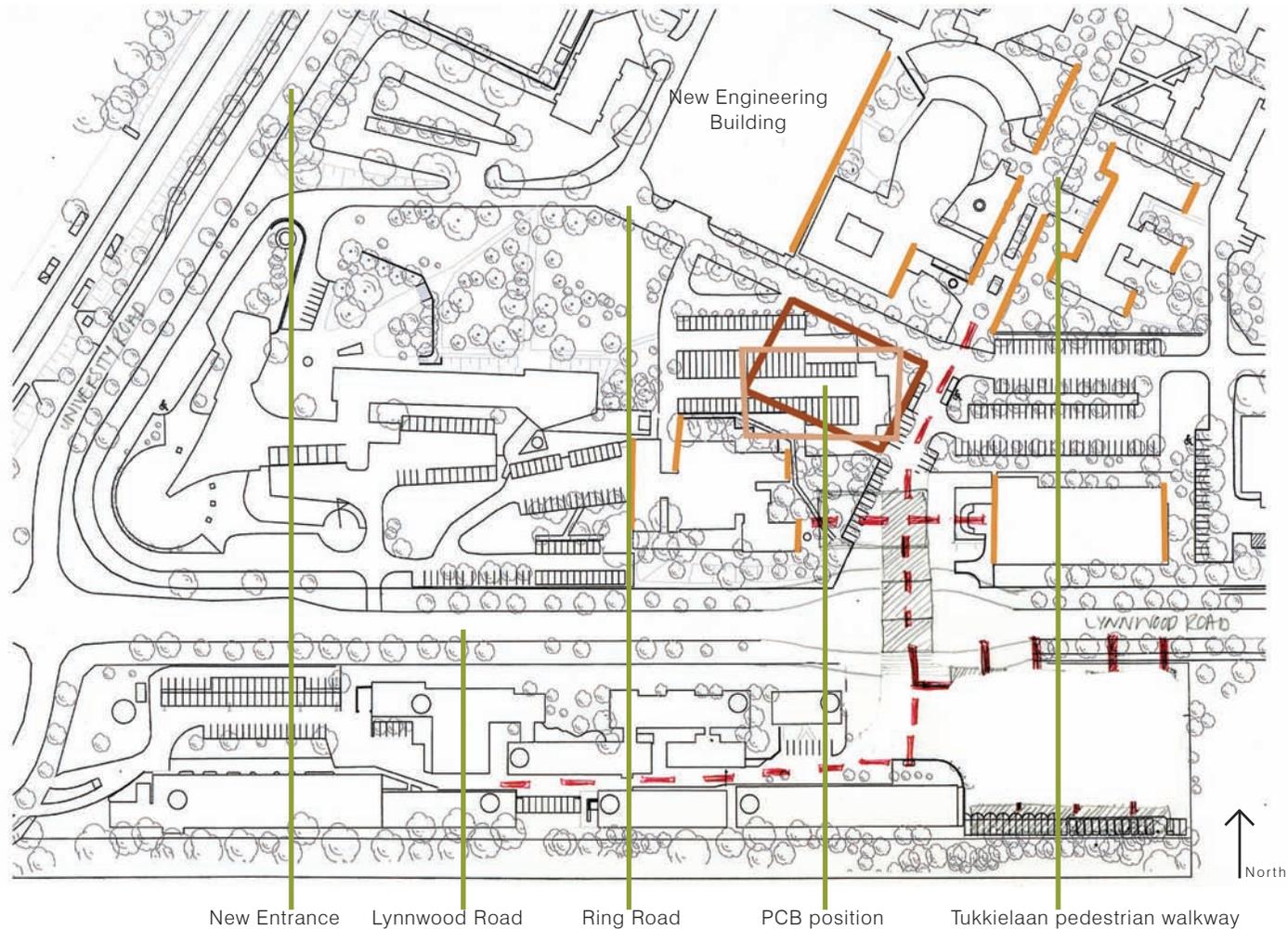


Figure 5.13 Spatial relationship between BESC and Town and Regional Planning Building

The proposed new Permanent collection Building (PCB)

This building forms part of the NVABES project. This dissertation suggests a footprint of the building as indicated in Figure 5.4. Access to the building is important from the inside of Main Campus as well as the outside. Therefore, the location of this new development is on the corner of the Ring Road and Tukkielaan (Fig 5.14), allowing access to the students from inside campus and to the public from outside campus, on Lynnwood Road. The design of the PCB does not form part of this dissertation.

The PCB frames the entrance to the BESC from the northern side. A change in axis happens at this exact point: the change from the Tukkielaan axis to the Lynnwood Road axis. This building should also relate to the new entrance into UP from University Road (Fig 5.14) and the new Engineering building, both completed in 2011.



Tukkielaan

Tukkielaan, as mentioned previously, is a pedestrian walkway that runs from north to south through Main Campus (Fig 5.15). Before the expansion of campus, Tukkielaan was a vehicular route with an entrance into Boukunde. After the University was fenced off, this entrance became only a pedestrian entrance for students. The current pedestrian bridge linking South Campus to Main Campus is situated at the southern end of Tukkielaan.

In terms of its heritage, Tukkielaan should be respected and rejuvenated. The current pedestrian entrance linking Tukkielaan and Lynnwood Road is not successful.

In this dissertation the proposal is to give Tukkielaan a destination; by changing the axis and extending the pedestrian walkway over to South Campus.

Storm water channel

A storm water channel is situated south of South Campus (Fig 5.15), separating South Campus from Pretoria Boys' High School. The water in this channel is an accumulation of the run-off from the neighbourhoods in the vicinity. The channel is part of the network that transport run-off into the Apies River, west of the University.

This open space is neglected and under-utilised. Many trees and grass around the channel present the opportunity to use the adjoining space as a recreational area.

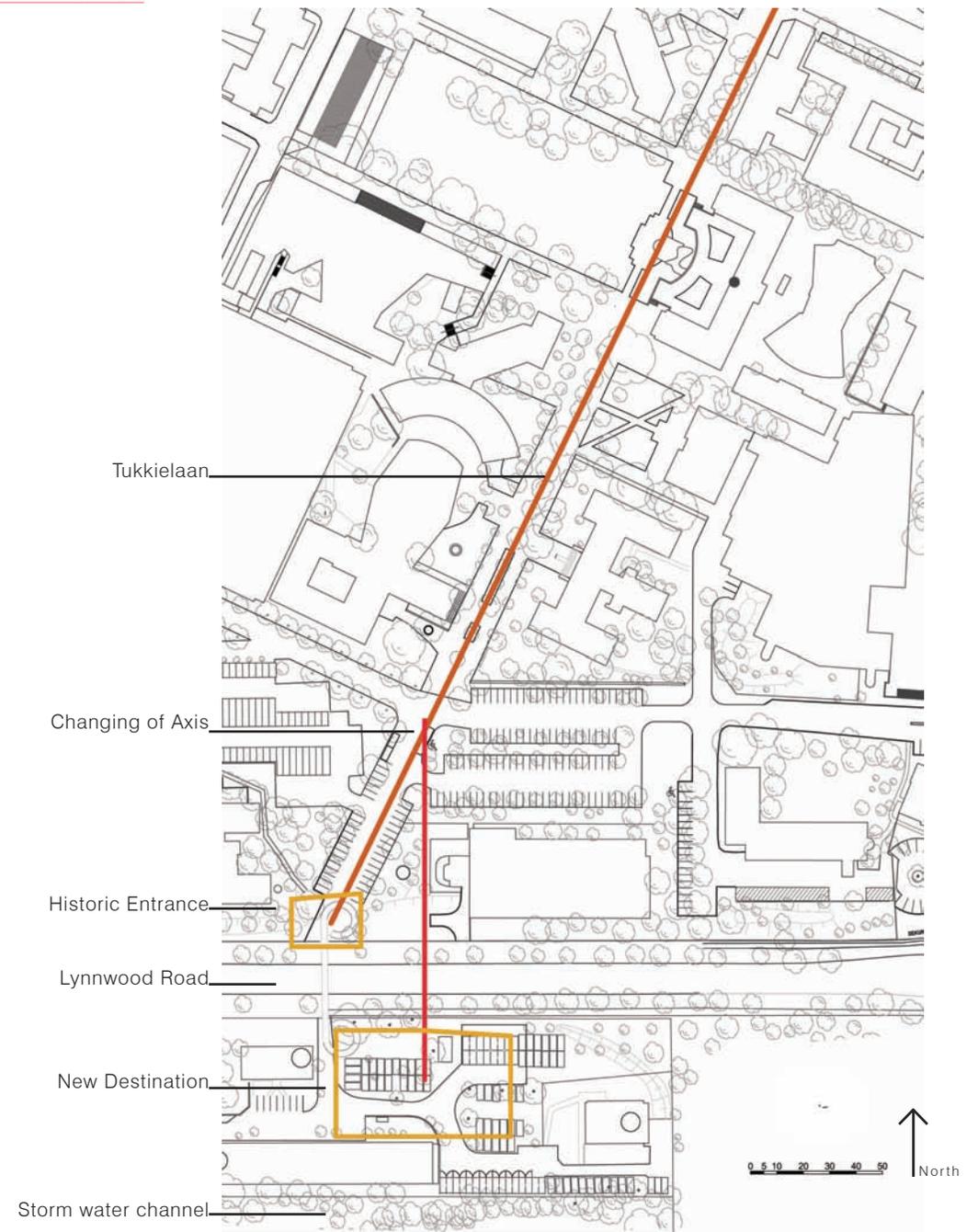


Figure 5.15 Tukkielaan and storm water channel

Concept development in context

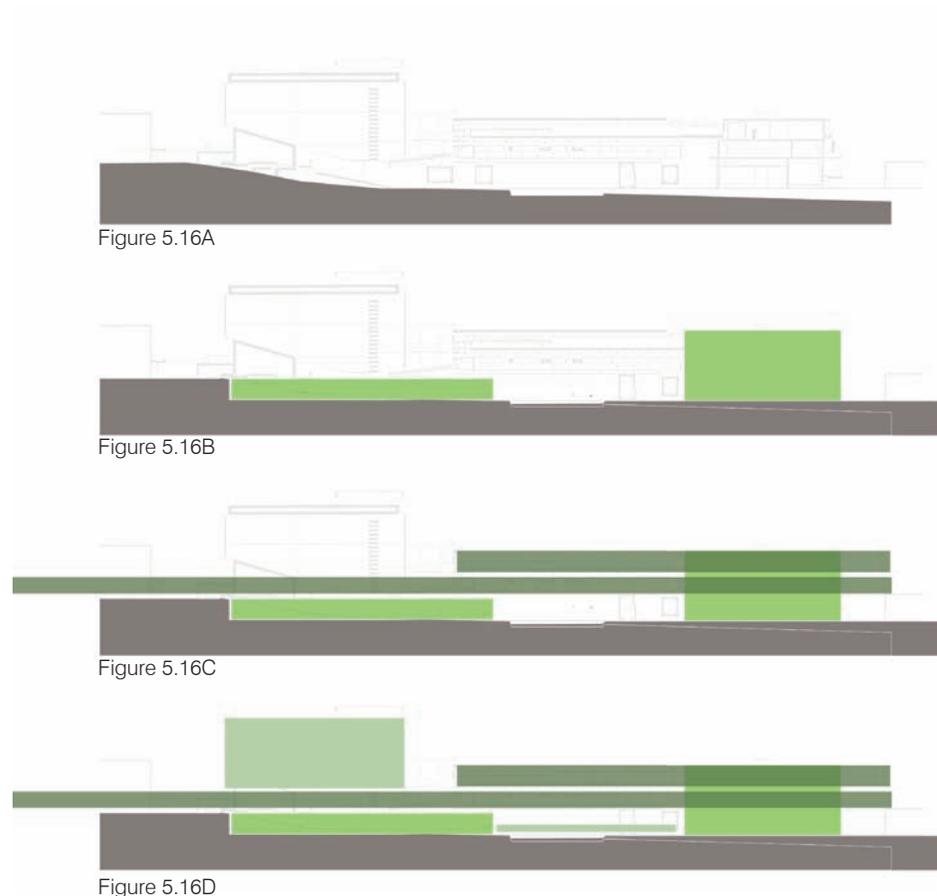


Figure 5.16 Diagrams explaining the concept: linking

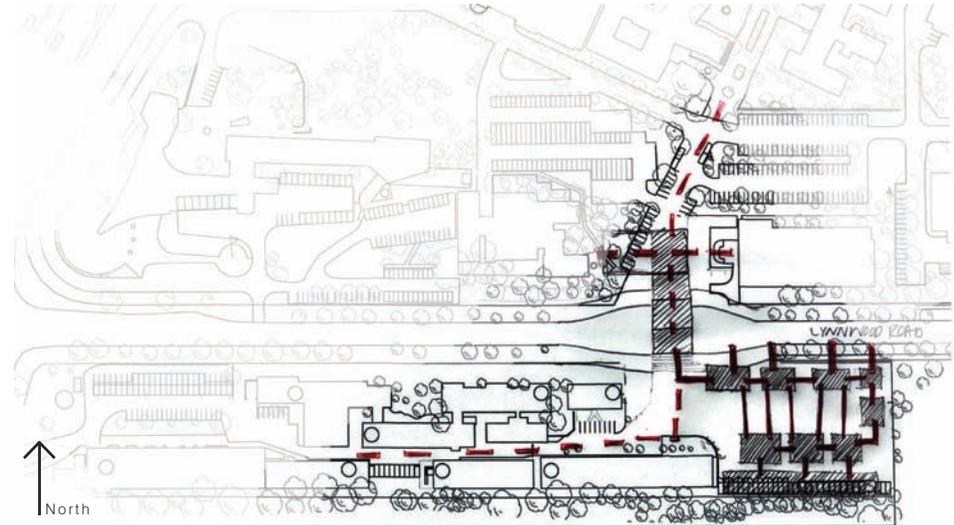


Figure 5.17 First concept drawing: linking

The primary concept is to establish a link between architectural theory and practice, South Campus and Main Campus, the different departments of the Built Environment and the University and the public. The concept was developed as a result of the research questions. The concept is to unite many different segregated entities through the creation of one facility spanning over Lynnwood Road.

In Figure 5.16 the concept of linking is explained: The context plays an integral role in the

establishment of the concept; the elevation of pedestrians, due to the natural slope (Fig 5.16A), is used to create a better pedestrian link between Main Campus and South Campus, over Lynnwood Road. The pedestrian bridge is used to link programmes that are situated on either side of Lynnwood Road (Fig 5.16B). The facade of the structure is then used as a further link between Up and its community, through a new interface (Fig 5.16C). The linking of the facilities around the bridge gives the concept context and relevance (Fig 5.16D).

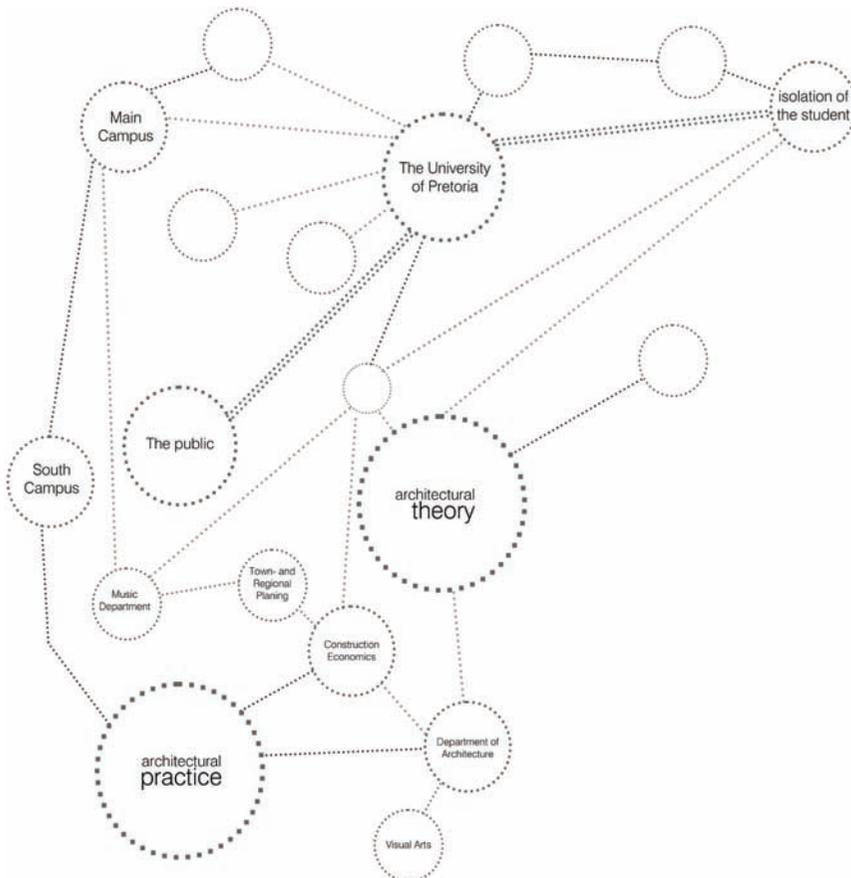
Concept: Foyers

Foyer [foi-er]
-noun

A hall, lobby or anteroom, used for reception and as a meeting place, as in a hotel, theatre, cinema, etc.

A centre providing accommodation and employment training, etc. for homeless young people (<http://dictionary.reference.com/browse/foyer>).

A space that links spaces with similar intentions but different functions (author)



The concept is to develop a series of foyers that act as the linking elements between the previously mentioned segregated entities (Fig 5.18). The concept of foyers is comprehensive in its inclusion of all scales.

A foyer is a place of social gathering, an introduction, a preparation and threshold into another space; it is a space where different functions meet and interact.

Foyers can have many different characteristics on many different

scales. The scale of the foyers can range from an entire street edge to a change in pavement pattern, introducing another space. The whole BESS can be seen as an urban foyer, acting as a threshold between the University and the public.

The establishment of the foyers on an urban level is indicated in Figure 5.19. Two large urban foyers, one on each side of Lynnwood Road, were defined and the programme development and design was structured around these.

Figure 5.18 Diagrammatic demonstration of unification of segregated entities

The new urban foyers are situated between Boukunde and the Visual Arts Building, north of Lynnwood Road and on the lawn next to the Town and Regional Planning Building, south of Lynnwood Road. The link between the two foyers becomes another foyer, between the urban foyers, adding the second layer of foyers to the concept.

intervention would have on the direct environment forms an integral part of the concept development.

Through the development of the site framework many layers of foyers are identified. The interaction, dependency and connections between these foyers are so integrated that they can no longer be separated.

The unification of the foyers assists in the unification of the segregated entities as indicated in Figure 5.18.

In Figure 5.20 pedestrian movement is indicated and a conceptual framework is developed for the site. The context and the influence the

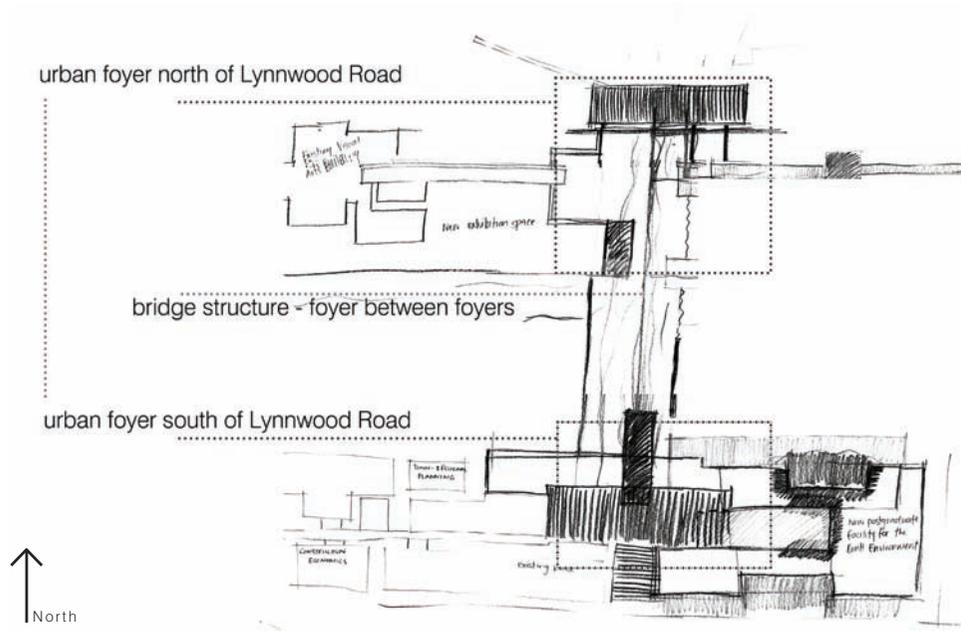
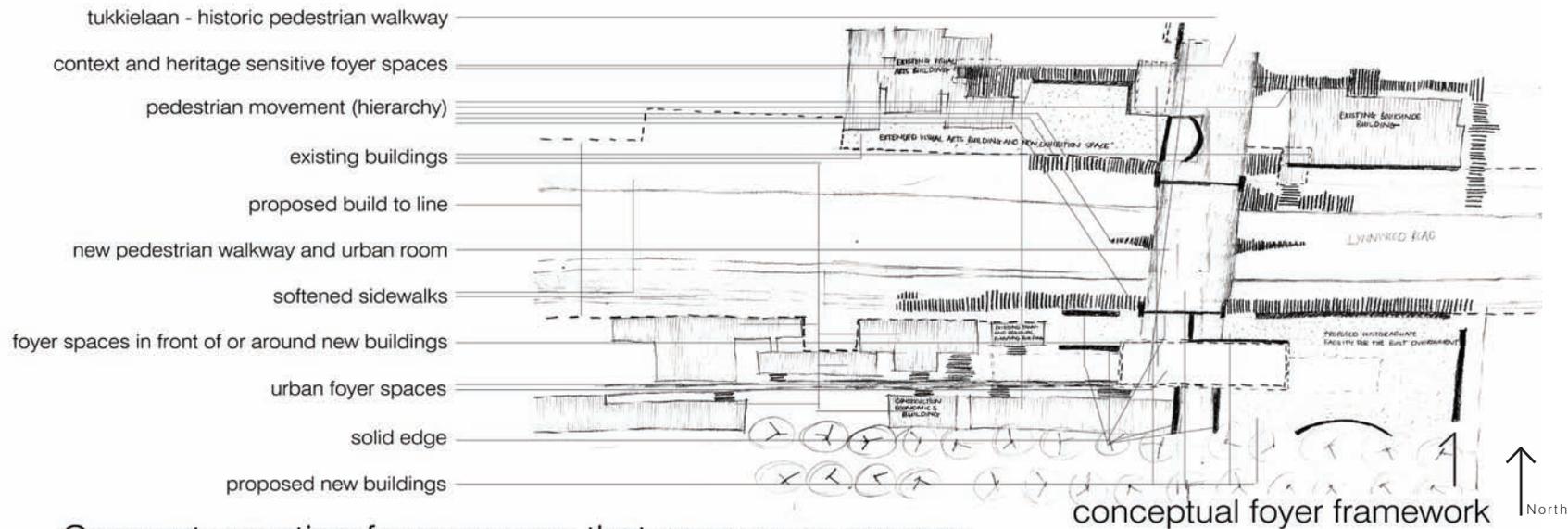


Figure 5.19 Initial urban foyer identification



Concept: creating foyer spaces that encourage synergy

Figure 5.20 Diagram summarising the concept of foyers, within context

All the spaces in the final design can be divided into different foyer spaces. These spaces are defined by the type of interaction that will predominantly take place in them and not necessarily by its physical attributes. The type of interaction is divided into social, intellectual and practical interaction.

Figure 5.21 illustrated how the various foyers interact and link up with each other. Even though the foyers seem defined and predetermined, the interaction between the users will change the reality of the foyers on a daily basis.

The various programmes of the building aid in the definition of the various foyers. The synergy between the foyers and its dependency upon the existence of the other create another series of foyers, at a larger scale. This process of grouping the various foyers into larger foyers can continue until the whole BESC can ultimately be seen as a social, intellectual and practical foyer into the University.

foyer interaction social, intellectual and practical

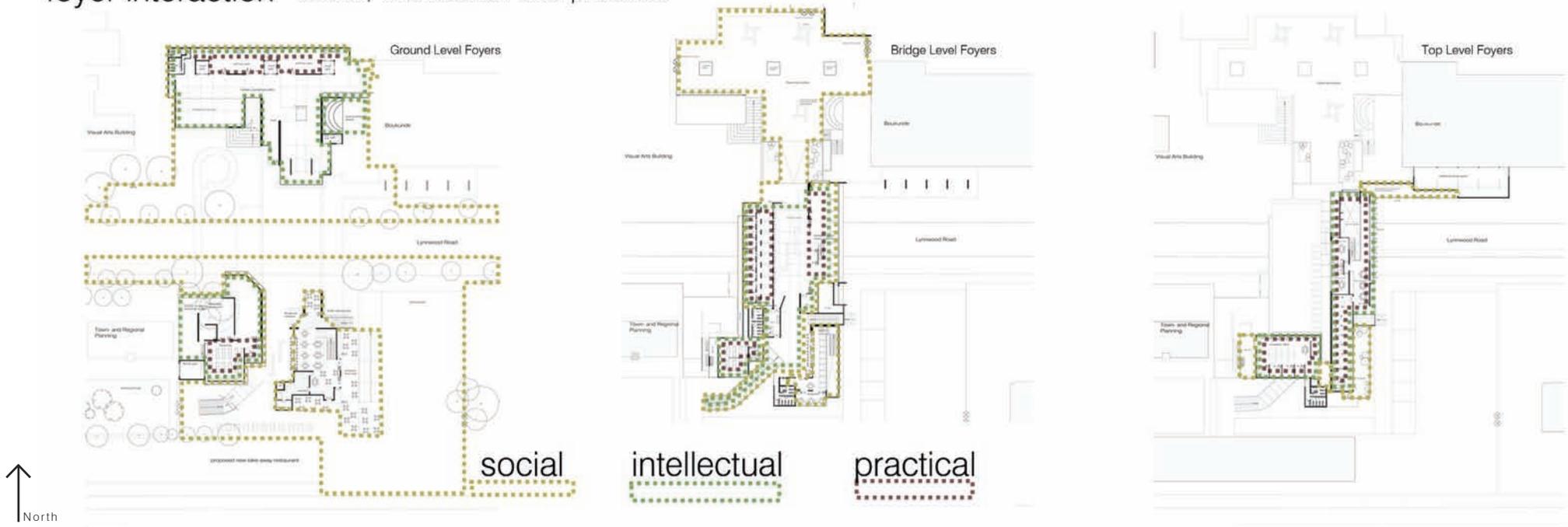


Figure 5.21 Diagram illustrating the synergy between the foyers

Architectural intent

The architectural intent is to develop an inhabited bridge that can accommodate many functions, such as exhibitions, a restaurant, lecture rooms and public spaces, to enable segregated entities to interact and unite in a sustainable manner.

The inhabited bridge should read as a light-weight, non-intrusive element that complements its context and adds value to it. The horizontality of the structure will communicate its function as a linking, urban foyer that acts as the new interface between UP and the public.

After the contextual analysis and establishment of the programme a diagrammatic exploration was done to evaluate what the priorities are in the design of the BESC. The following images are a summary of the design principles that were identified and implemented in the design.

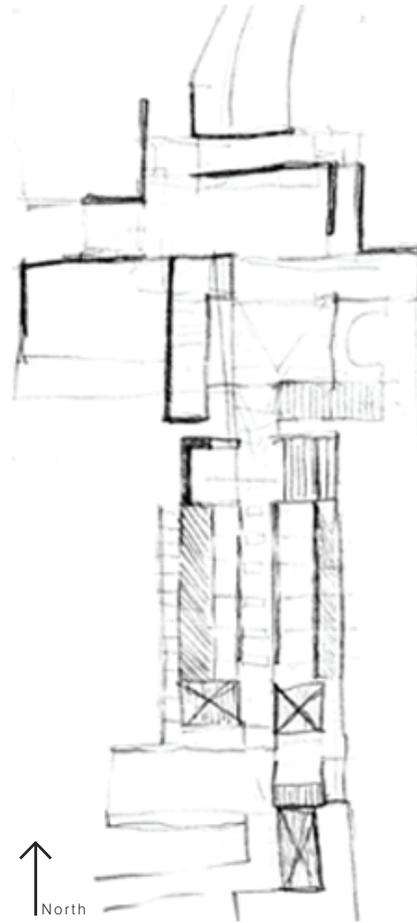


Figure 5.22 Conceptual diagram exploring the linear logic of the bridge level plan

Key:

————— identified opportunities
 rejected considerations

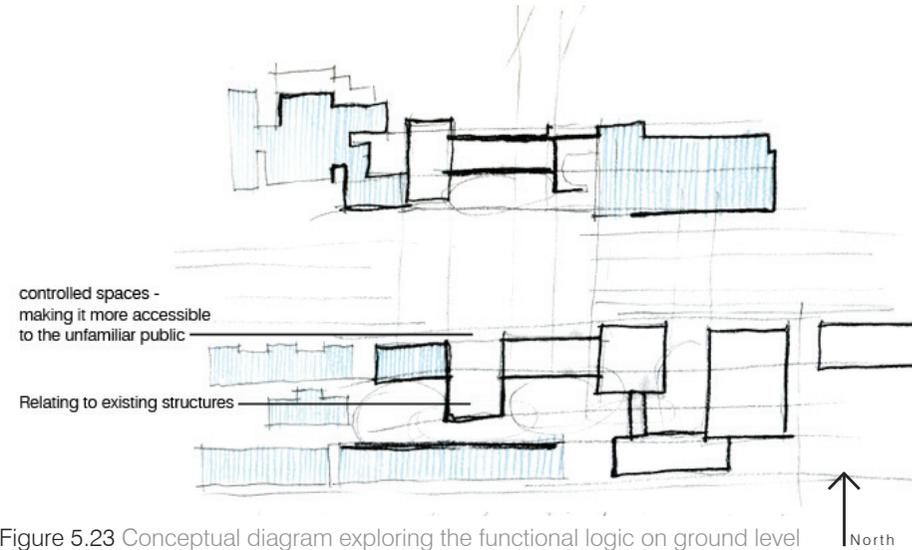


Figure 5.23 Conceptual diagram exploring the functional logic on ground level

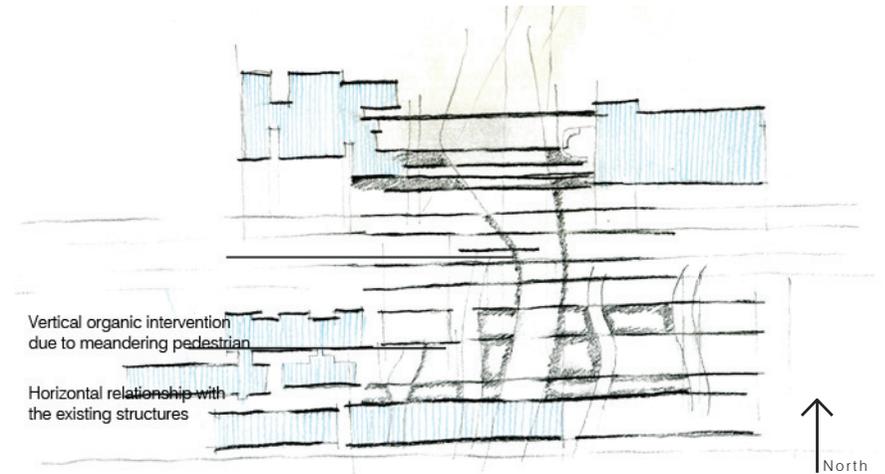


Figure 5.24 Conceptual diagram exploring horizontal order versus vertical organic lines

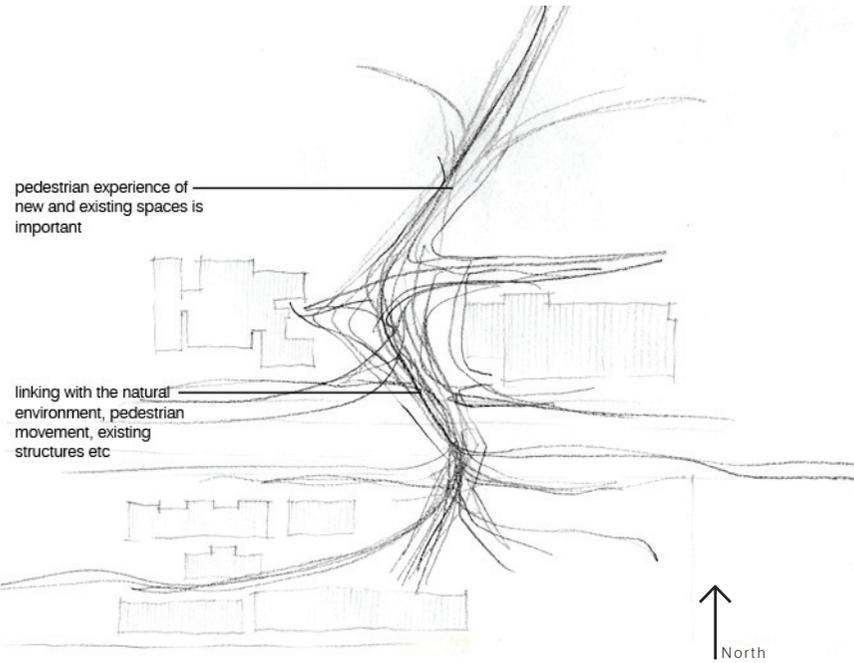


Figure 5.25 Conceptual diagram exploring less rigid movement pattern



Figure 5.27 Conceptual diagram exploring the hierarchy of the urban foyers

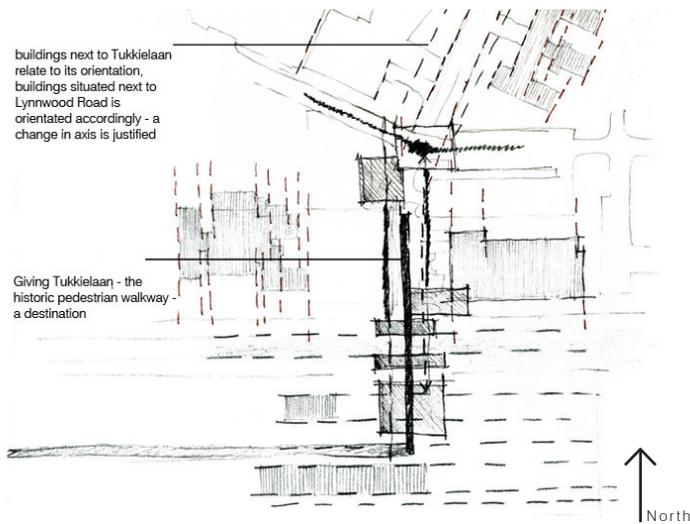


Figure 5.26 Conceptual diagram exploring the changing of existing axis

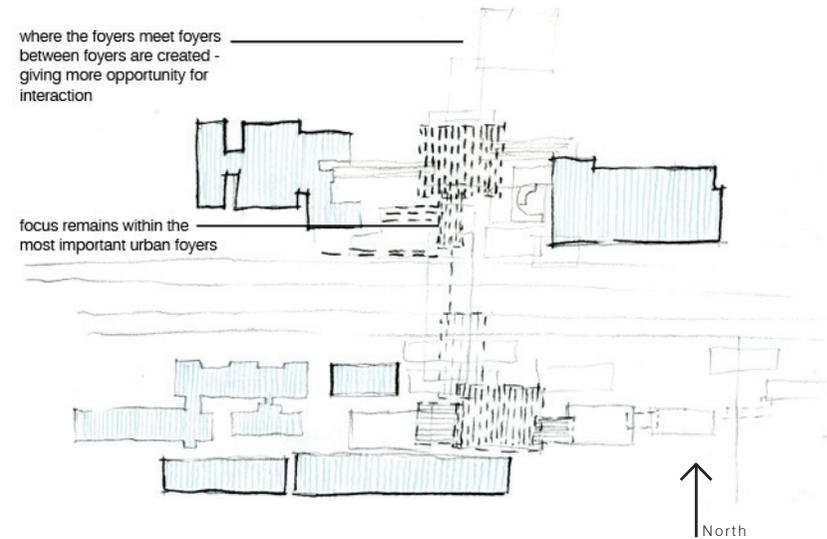


Figure 5.28 Conceptual diagram exploring the hierarchy of the foyers between the foyers