

CONTEXT STUDY

Macro Context

The study area is in Pretoria which falls under the City of Tshwane Metropolitan Municipality. Pretoria is the central business district (CBD) of Tshwane and also the administrative Capitol of South Africa.

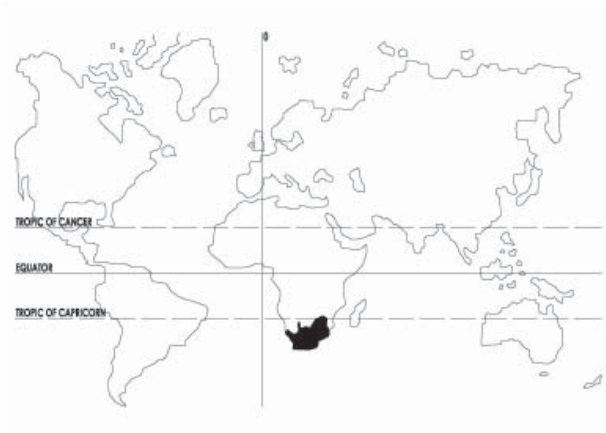


Figure 36: Map of the world.



Figure 37: Map of South Africa.



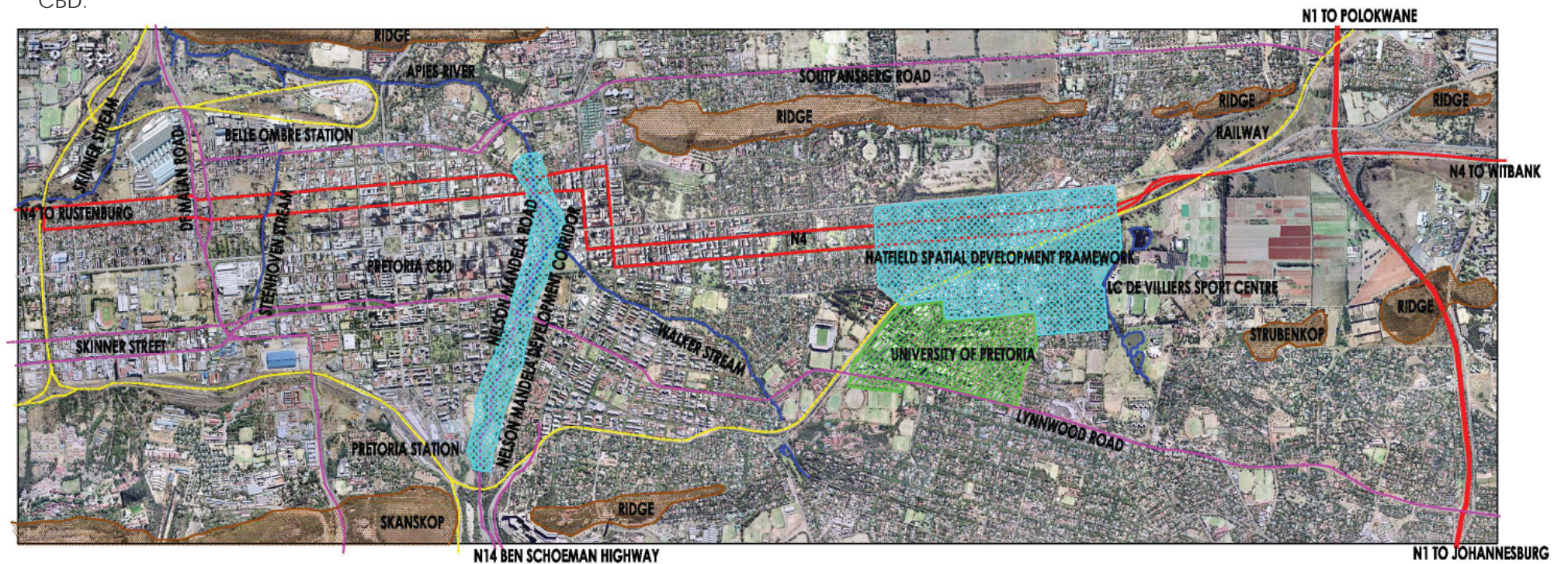
Figure 38: Map of Tshwane.

Meso Context

Spatial Development Framework

Pretoria

GAPP Architects designed the Nelson Mandela Development Corridor. This area along the Apies River is the division between the eastern suburbs and the CBD.



- PRIMARY ROADS
- SECONDARY ROADS
- RAILWAY LINE
- PRETORIA GRID
- RIVERS / STREAMS
- RIDGES
- EXISTING SPATIAL DEVELOPMENT FRAMEWORKS
- STUDY AREA: UNIVERSITY OF PRETORIA

Figure 39: Map of Pretoria.

Hatfield

The City of Tswane Metropolitan Municipality proposed a development framework for Hatfield, stretching from

Lynnwood Road to Church Street. The initiative is to intensify the density this area.

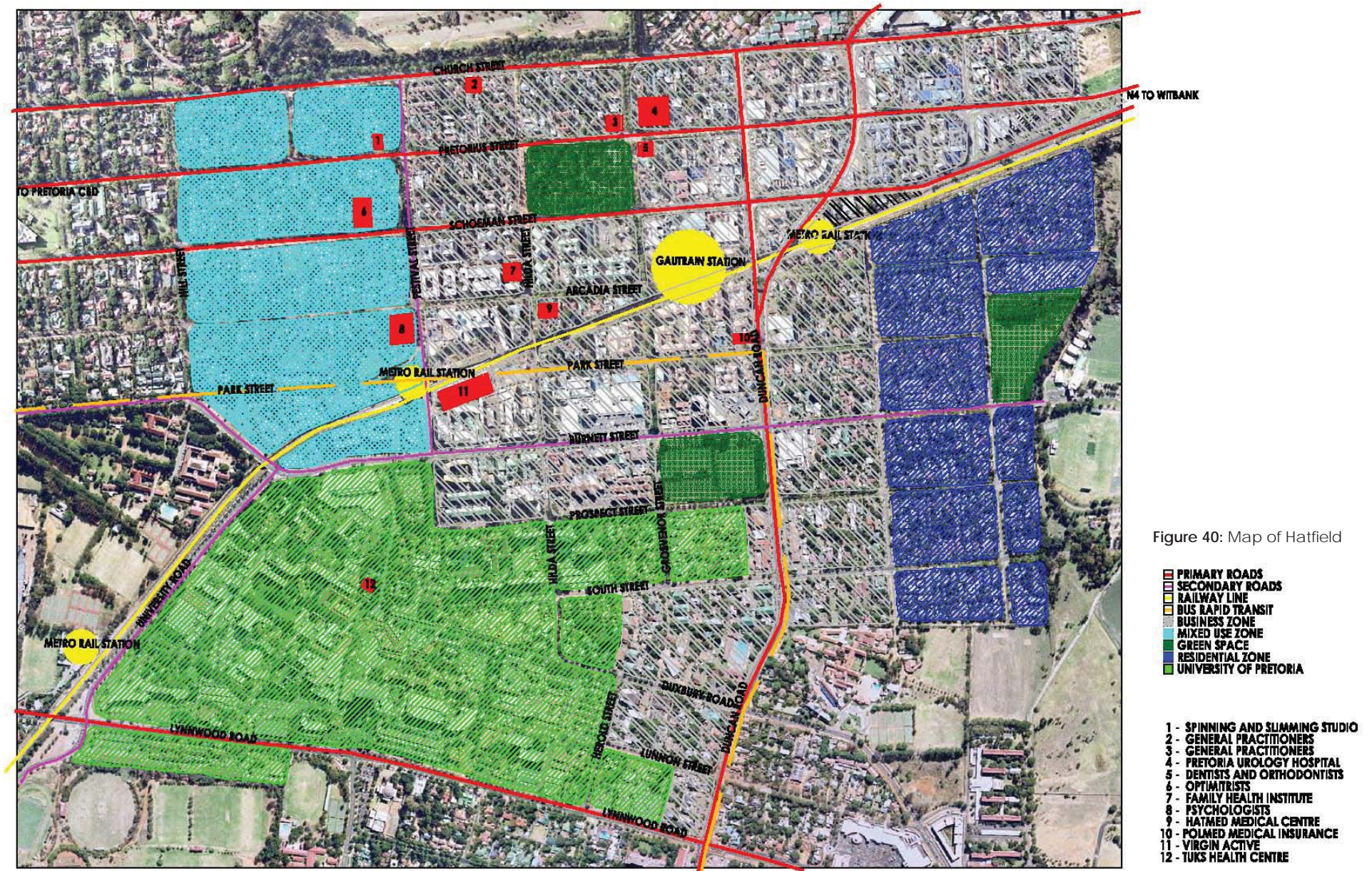


Figure 40: Map of Hatfield

Site analysis

The study area under investigation is bordered by Duncan Road on the east side, Lynnwood road on the south side and Burnett Street on the north side. These roads are also the main arteries feeding the CBD from the eastern suburbs.

The University of Pretoria was founded in 1908, after Jan Smuts proposed a split from the Transvaal University College in Johannesburg. At the time of the founding, Transvaal was a colony of the British Empire. British architects, like Herbert Baker, who worked for the Department of Public Works had great influence on the architecture of the campus. (Fischer 1996:33)

In 1930 the university became an Afrikaans-language institution, after much protest from the staff and students. From then the campus buildings were designed by architects, like Gerhard Moerdyk, who maintained an Afrikaner culture and identity. (Fischer 1996:33)

The university is currently holding more than 50 000 students. The acronym TUC came from its first name Transvaal University College, and therefore a student from this university would be called a 'tukkie'. (www.up.ac.za)

Spatial Development Framework

University of Pretoria Hatfield Campus

Holm Jordaan Group designed a development framework for the main campus.

Geomorphology

Gravel, with a clay and silt covering, is mainly found in the Pretoria region.

Hydrology

The Apies River is the main river of Pretoria and flows northwards past the east side of the CBD. Other streams include Walker and Skinner Streams as branches of the Apies River.

Ecology

Tswane forms part of the Highveld ecological region. It is identified by grasslands and thorn trees. Pretoria is known for its Jacaranda trees, covering the streets with purple flowers during October. These trees dominate the campus.

Topography

Pretoria is geographical situated on the 25°44'S and 28°11'E. It is 1330m above sea level and is nestled between the Magaliesberg, Daspoortridge, Skanskop and Klapperkop. These ridges all run parallel to each other.

Climate

Pretoria falls in the Highveld climatic region. It mainly has dry mild winters and wet warm summers with afternoon thunderstorms during December to February. It has an average of 700mm rainfall per year.

The average daily temperature for winter (March to August) is at a maximum of 22 °C and a minimum of 11 °C and for summer (September to February) a maximum of 27 °C and minimum of 18 °C. Pretoria has east-north-easterly to east-south-easterly winds in the summer and southwest to northeast winds in the winter. The average annual humidity is 59%.

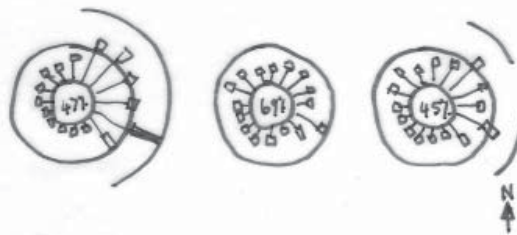


Figure 41: Wind rose indicating wind direction in the Pretoria region.

The solar incidence in Pretoria is 80% maximum sunshine in the summer and 67% minimum sunshine in the winter.

The vertical sun angle at summer solstice (21 March – 23 September) is 64.24° and at winter solstice (22 June) is 40.73°. (Holm 1996)

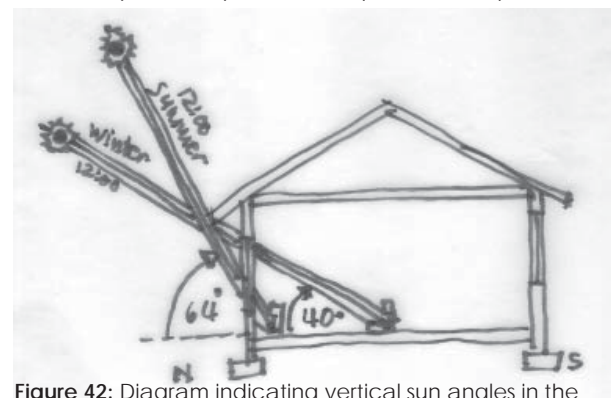


Figure 42: Diagram indicating vertical sun angles in the Pretoria region.

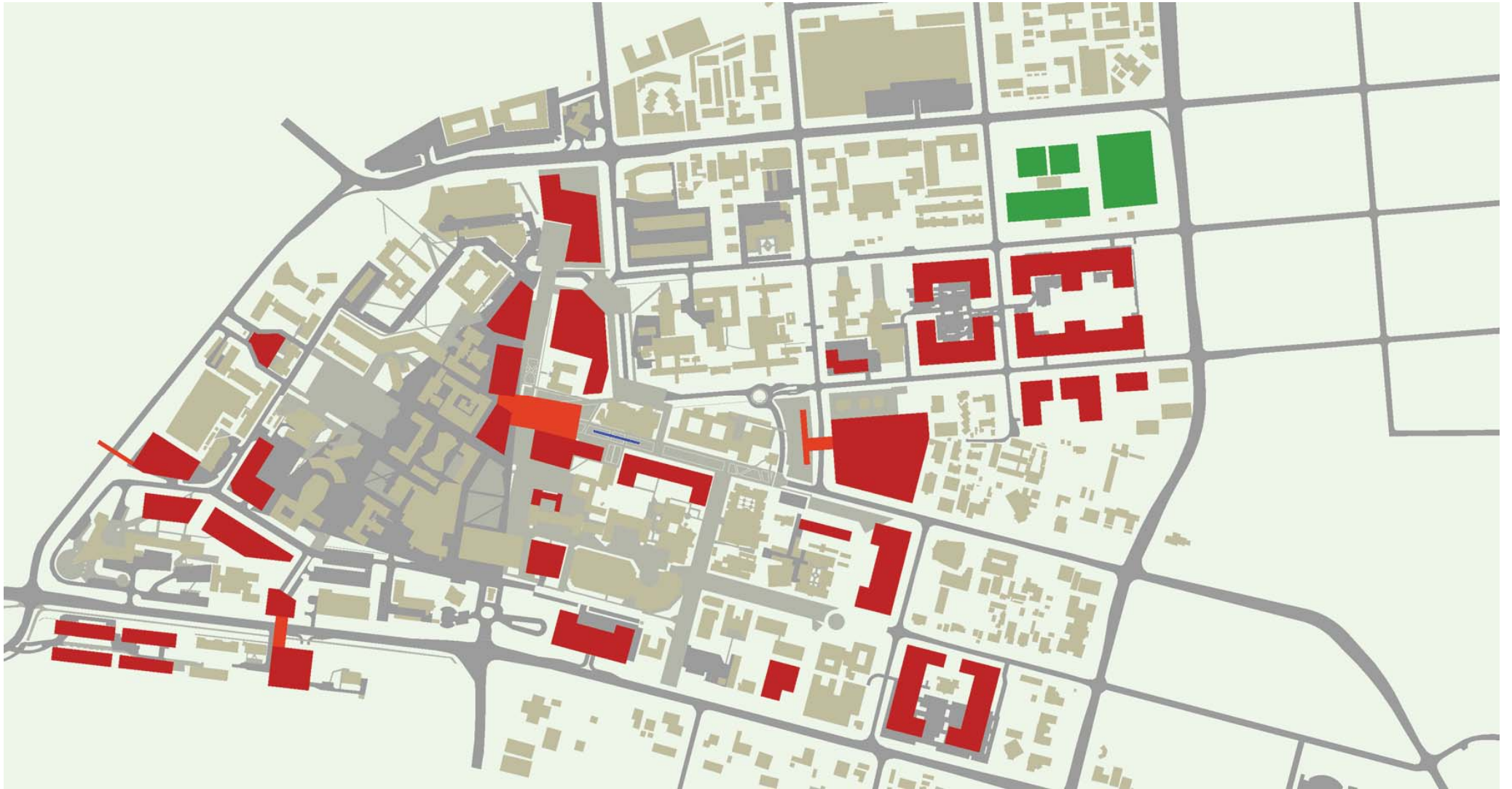


Figure 43: Map of the campus indicating proposed framework by Holm Jordaan Group. Red building represent new additions to campus.

Infrastructure

Buildings and Historical aspects

Figure 44: Map of the campus indicating buildings and building uses.

LIST OF BUILDINGS

OFFICE BUILDINGS

- 001 - ADMINISTRATION
- 002 - ENGINEERING TOWER
- 003 - AGRICULTURE
- 004 - HOUSE HARTMAN
- 005 - LOOS

STUDENT AMENITIES

- 006 - AULA
- 007 - CLUB HALL
- 008 - OLD MERENSKY
- 009 - NEW MERENSKY LIBRARY
- 010 - KAYA ROSA
- 011 - STUDENTE CENTRE
- 012 - TUKKIEWERF
- 013 - CHAPEL
- 014 - CLOISTER HALL
- 015 - HUIS-EN-HAARD

SOUTH CAMPUS

- 016 - BUILDING 1
- 017 - BUILDING 2
- 018 - BUILDING 3
- 019 - BUILDING 4
- 020 - BUILDING 5
- 021 - BUILDING 6
- 022 - BUILDING 7
- 023 - BUILDING 8
- 024 - BUILDING 9

EDUCATIONAL BUILDINGS

- 025 - VISUAL ARTS
- 026 - BUILDING SCIENCE
- 027 - SPEECH THERAPY
- 028 - DRAMA
- 029 - BOK en LIER
- 030 - AGRICULTURE GLASS HOUSE
- 031 - AGRICULTURE LIBRARY
- 032 - MASKER THEATER
- 033 - THERON LECTURE HALL
- 034 - INFORMATION TECHNOLOGY
- 035 - HUMANITY SCIENCES
- 036 - THEOLOGY
- 037 - TONE MUSIC
- 038 - MUSAION AND AMPITHEATER
- 039 - MICRO ELECTRONICS
- 040 - STORE / TOILETTE
- 041 - HEAVY MACHINE LABORATORIUM A
- 042 - HEAVY MACHINE LABORATORIUM B
- 043 - ELECTRICAL ENGINEERING
- 044 - OLD LITERATURE
- 045 - CHANCELLOR'S BUILDING
- 046 - MARKETING SERVICES
- 047 - OLD CHEMISTRY
- 048 - ECONOMIC & MANAGEMENT SCIENCES
- 049 - CONFERENCE CENTRE
- 050 - TOURISM HOUSE
- 051 - PLANT BIOLOGY CENTRE
- 052 - NEW LAW FACULTY

- 053 - NEW LECTURE HALLS
- 054 - ZOOLOGY
- 055 - GEOGRAPHY
- 056 - STUDENT SERVICES
- 057 - NATURAL SCIENCES 2
- 058 - MINERAL SCIENCES
- 059 - NATURAL SCIENCES 1
- 060 - CHEMISTRY
- 061 - CHEMISTRY STORE
- 062 - STUDENT HEALTH SERVICES
- 063 - HOME ECONOMICS
- 064 - TECHNICAL SERVICES
- 065 - MATHEMATICS
- 066 - BOTANY GLASS HOUSE
- 067 - BOTAN
- 068 - BATEMAN
- 069 - VETMANS
- 070 - STONEMAN
- 071 - AE DU TOIT
- 072 - VAN DER GRAAFVERSNELLER

RESIDENTIAL BUILDINGS

- 073 - JAKARANDA
- 074 - ROOSMARYN
- 075 - ERIKA
- 076 - VERGEET-MY-NIE
- 077 - ASTERHOF
- 078 - KLARADYN
- 079 - JASMYN
- 080 - MADELIEF
- 081 - MAGRIETJIE
- 082 - KINDERGARTEN
- 083 - TUKKIELAND
- 084 - PROTEA
- 085 - CUM LAUDE
- 086 - THE WERF FLATS
- 087 - NERINA
- 088 - GLASS KAS
- 089 - NERINA HALL
- 090 - PASTORIE

- 091 - TUKSDORP HOUSE 1
- 092 - TUKSDORP HOUSE 2
- 093 - TUKSDORP HOUSE 3
- 094 - TUKSDORP HOUSE 4
- 095 - TUKSDORP HOUSE 5
- 096 - TUKSDORP HOUSE 6
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- 099 - TUKSDORP HOUSE 9
- 100 - TUKSDORP HOUSE 10
- 101 - TUKSDORP HOUSE 11
- 102 - TUKSDORP HOUSE 12
- 103 - TUKSDORP HOUSE 13
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- 115 - TUKSDORP HOUSE 25
- 116 - TUKSDORP HOUSE 26
- 117 - TUKSDORP HOUSE 27
- 118 - TUKSDORP HOUSE 28

- EDUCATIONAL
- OFFICES
- STUDENT AMENITIES
- UP RESIDENCES
- NON-UNIVERSITY
- GREEN SPACES



001 The Administration building was designed by Brian Sandrock and completed in 1968 in the Brazil Modernism style. The nick name of this building is the "skip", because of the distinctive prow-like projection. **Figure 45**



002 The Engineering tower was designed by Brian Sandrock and completed in 1975 in the Neo-Brutalism style. **Figure 46**



003 Agriculture. **Figure 47**



007 The Club Hall was designed by Gerard Moerdyk and completed in 1930 in the Neo-Romanesque style. **Figure 48**



006 The Aula was designed by Karel Jooste (Philip Nel Architects) and completed in 1958 in the Brazil Modernism style. The use of concrete was exploratory for its time. This building was the major venue for operas, ballets and dramas in the city until the State Theatre was completed in 1980. **Figure 49**



008 The Old Merensky Library was designed by Gerard Moerdyk and completed in 1938 in the so-called Boere Deco (Art Deco period) style. The building has many symbols, empowering the Afrikaner Volk. The name derives from the biggest donor of the project, Hans Merensky, a mining and forestry magnate at the time. **Figure 50**



009 The New Merensky Library (currently called the Academic Information Services) was designed by Louw Marais (Marquard & Kuhn Architects) and completed in 1975 in the Neo-Brutalism style. **Figure 51**



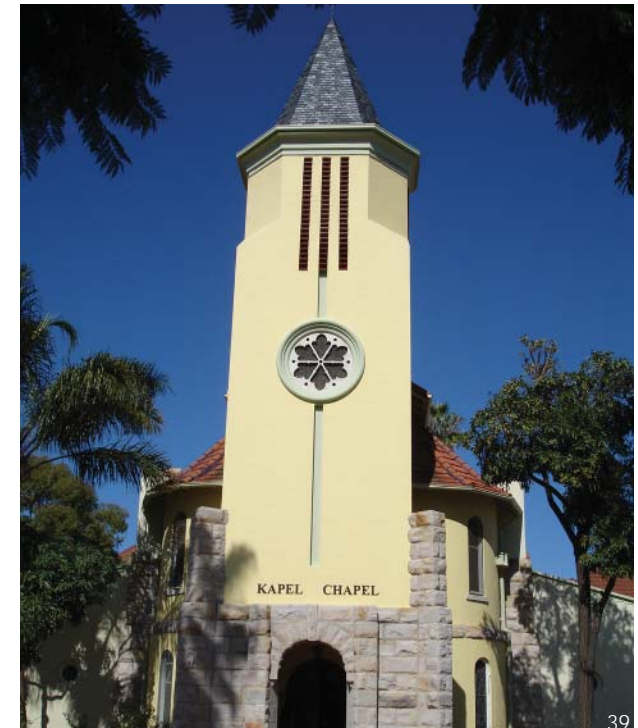
010 Kaya Rosa was the first building on the campus. It is designed in a Victorian/ European Eclecticism style. **Figure 52**



011 Student Centre. **Figure 53**



013 The Chapel was completed in 1925 in the Baker School style (Herbert Baker style). The architect of this building is unknown. **Figure 56**



012 Tukkiewerf was completed in 1925 in the Baker School style (Herbert Baker style). The architect of this building is unknown. **Figure 54**



014 The Cloister Hall was designed by Gerald JC Bernhard and built by WL Jones and completed in 1944. **Figure 55**



015 Huis en Haard.

Figure 57



025 The Visual Arts building (Old L.O. building) was designed by Burg-Lodge and Burg Architects and completed in 1974 in the Pretoria Regionalism style. Figure 58



026 The Building Science building was designed by A.L. Meiring and completed in 1960 in the International Style. In 1973 D.S. De Beer made alterations to the building in a Neo-Brutalism style. Figure 59



027 The Speech Therapy building (Old Weather Buro Building) was designed by W.F. Fleischman (Department of Public Works) and completed in the 1930's in the Bauhaus / International Style. This is one of the campus buildings representing Pretoria's brick architecture.

Figure 60



028 The Drama building is designed in the Baker School style (Herbert Baker style). Figure 61



029 Bok en Lier.

Figure 62



031 Agriculture Library. Figure 63



032 Masker Theatre. Figure 64



033 Theron Lecture Hall. Figure 65



035 The Humanity Sciences building was designed by Brian Sandrock and completed in 1977 in the Neo-Brutalism style. This was the first Neo-Brutalist building on campus. The nick name for this building is the 'konsertina'. Figure 67



034 The Information Technology building (Old Education – Law) was designed by Louw Marais (Marquard & Kuhn Architects) and completed in 1973 in the Neo-Brutalism style. Figure 66



036 The Theology building (Old Literature 2) was designed by Burg-Lodge and Burg Architects in the Academic Revivalism style. This building also represents Pretoria's brick architecture. Figure 68



038 The Musaion & Amphitheatre was designed by Brian Sandrock and completed in 1961 in the Brazil Modernism style. **Figure 69**



039 Micro Electronics. **Figure 70**



043 The Electrical Engineering building was designed by Steyn & Viljoen in the Neo-Brutalism style. **Figure 71**



044 The Old Arts building was designed by J.S. Cleland and P. Eagle (Department of Public Works) and completed in 1911 in the Baker School style (Herbert Baker Style). **Figure 72**



045 Chancellor's Building. **Figure 73**



047 The Old Chemistry building was designed by J.S. Cleland and P. Eagle (Department of Public Works) and completed in 1911 in the Baker School style (Herbert Baker style). **Figure 74**



048 The Economic & Management Sciences building was designed by Samuel Pauw and completed in the 1980's in the Post-Modernism style. This building also represents Pretoria's brick architecture and was the first Post-Modern building on campus. This building brought the scale of the Humanities building down to a more appropriate campus feeling.

Figure 75



049 The Conference Centre was designed by Samuel Pauw in the Post-Modernism style.

Figure 76



052 New Law Faculty was designed by Kruger Roos Architects and completed in 2002. The building has won numerous national architectural prizes.

Figure 77



053 New Lecture Halls was designed by Earthworld Architects and is currently under construction.

Figure 78



054 The Zoology building was designed in the Baker school style (Herbert Baker style).

Figure 79



055 The Geography building was designed by Brian Sandrock in the Dutch Modernism style (brick building). **Figure 80**



056 The Student services building (Old Kollege Residence) was designed by the Department of Public Works and completed in 1915 in the Neo-Romanesque style. **Figure 81**



057 The first Natural Sciences building was designed by Steyn & Viljoen Architects in the Neo-Brutalism style. **Figure 82**



059 The second Natural Sciences was designed by A.L. Meiring & P.R. Nel and completed in 1955 in the Brazil Modernism style. **Figure 83**



058 The Mineral Sciences building was designed by A.L. Meiring and P.R. Nel and completed in 1955 in the Brazil Modernism style. **Figure 84**



060 The Chemistry building was designed by Moerdyk & Watson Architects and completed in 1943 in the Dutch Modernism style. This building also represents Pretoria's brick architecture. **Figure 85**



062 Student Health Services. Figure 86



063 The Home Economics building (Old Agriculture) was designed by J.B. Dey (Department of Public Works) and completed in 1920 in the Baker School and Cape Dutch Revival styles. This was the first brick building that represented Pretoria's brick architecture. Figure 87



064 The Technical Services building was designed by Tectura and completed in 1975 in the Neo-Brutalism style. Figure 88



065 The Mathematics buildings (Old Administration) was designed by Gordon Leith and completed in 1931 in the Mannered Neo-Classicism style. Figure 89 (Fischer 1996)



Vehicular and pedestrian routes

The campus aims to be pedestrian friendly, by minimising vehicular traffic. All students have to park outside the campus, but this tends to be a security issue. A number of proposed car parks will solve this problem. A series of taxi and bus stops surrounds the campus, making it easier for students and staff to travel. A shuttle service from the residences to the campus has also been put into place and is used to its full potential. A rapid bus service between the eastern suburbs and the CBD also gives opportunity for trouble-free commuting.

The Gautrain Rapid Rail station in Hatfield, currently under construction, will give accessibility to the campus for students travelling from Johannesburg.

Legal Regulations

The UP campus has a permissible floor area ratio of 2.5 and a height restriction of 6 storeys (+/- 18m).

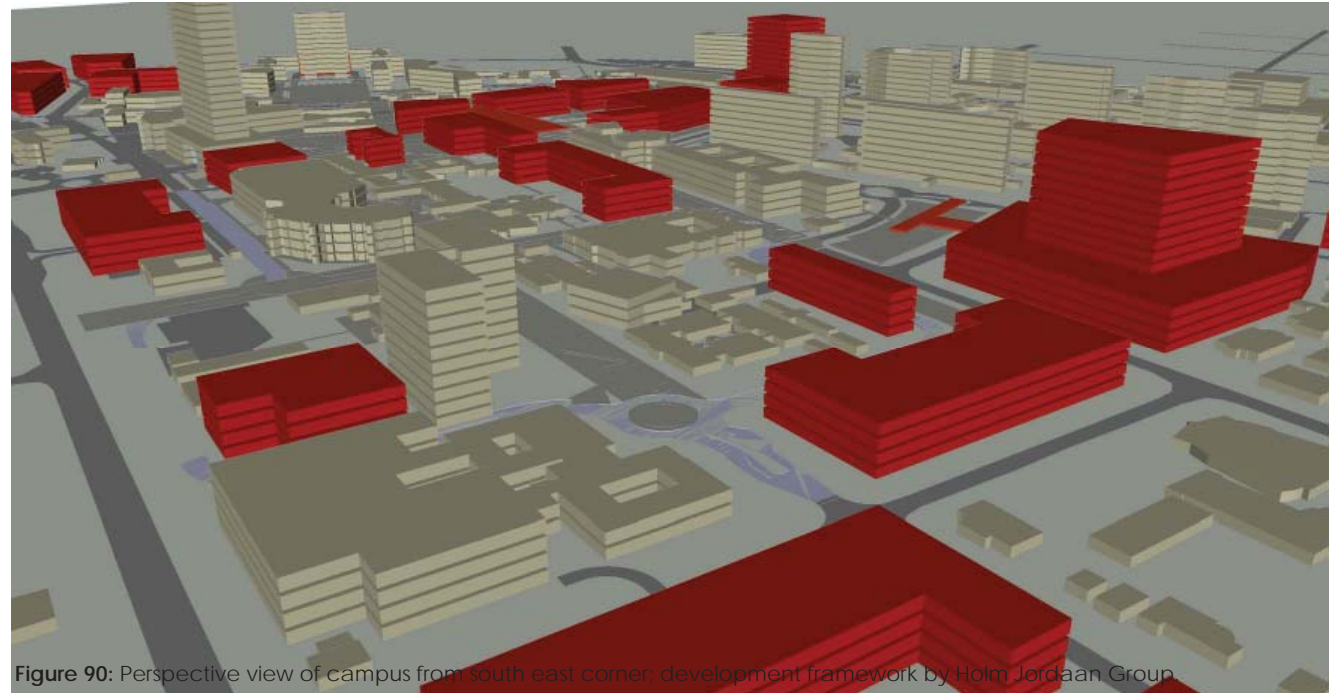


Figure 90: Perspective view of campus from south east corner, development framework by Holm Jordaan Group.

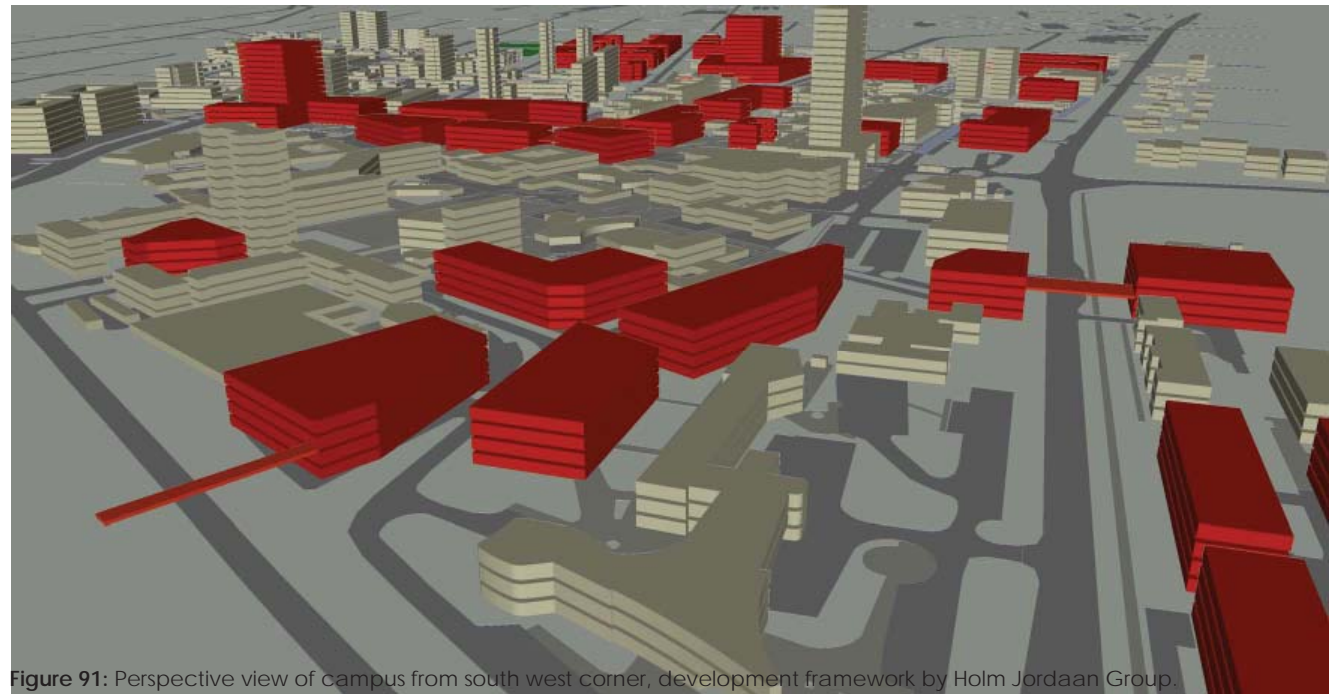


Figure 91: Perspective view of campus from south west corner, development framework by Holm Jordaan Group.

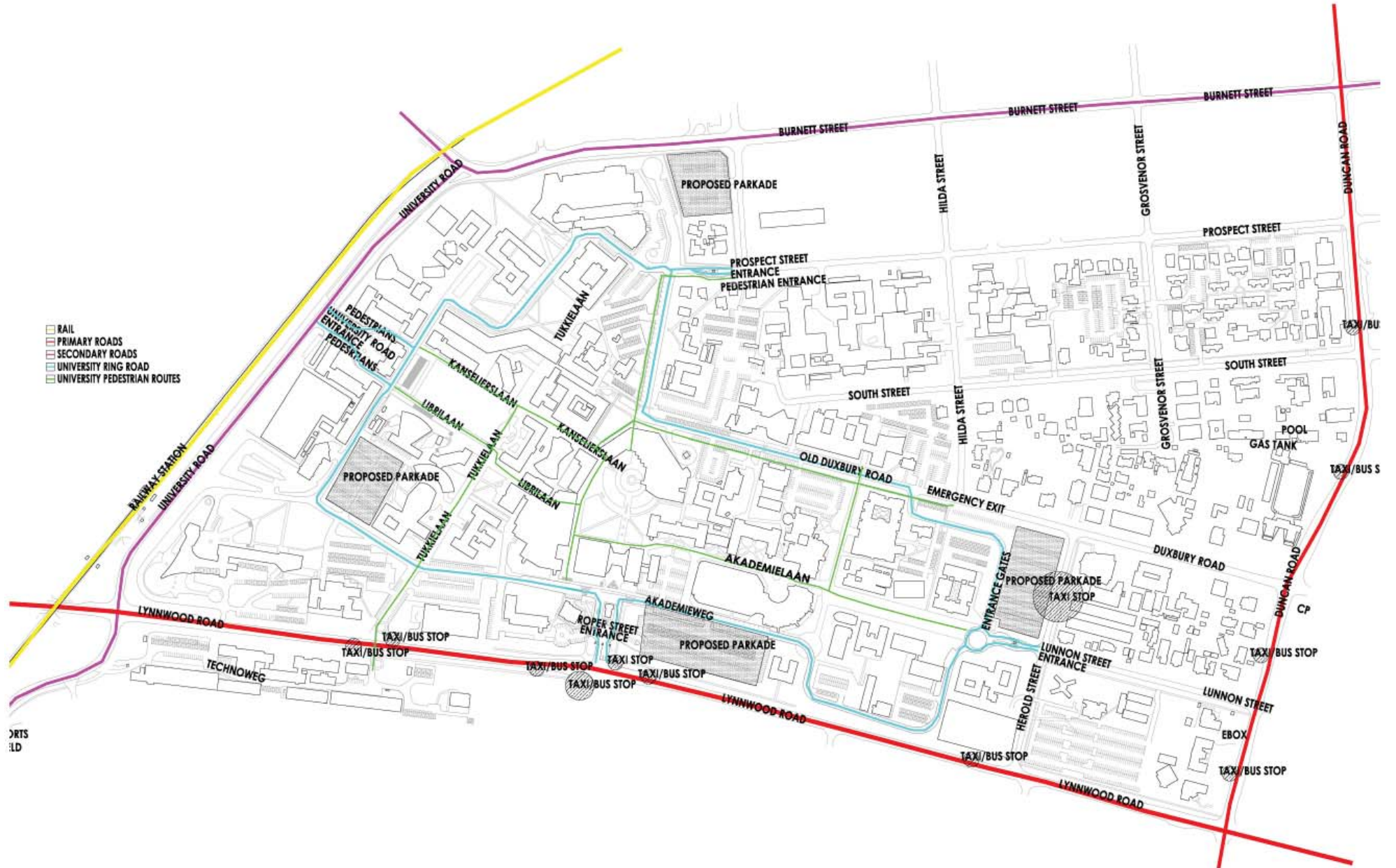


Figure 92: Map of campus showing pedestrian and vehicular routes.

Site analysis

The proposed site under investigation is located on the northern edge of the campus ring road. This section of road used to be part of Duxbury road, connecting the student centre with Duncan road with a vehicular access road. The road has been closed since then, for security reasons, but is still used by students walking or cycling from the university residences. It is one of the main pedestrian arteries feeding the campus from Hatfield.

The site is surrounded by a collection of old and new buildings, some currently under construction. The cloister complex (consisting of the chapel, Tukswerv building and the cloister hall), student centre and new lecture halls.

The Student Centre, being the western border of the site, serves as the main gateway to student activities. Unfortunately this building has proven not to respond to the context or student requirements. Students even have to walk past the delivery yard to enter the centre. A new student centre as thesis project (2008) is proposed by Francois Malan.

The function of the cloister complex has changed to a mini-student centre since 1984. It accommodates the Student Council, the Central Rag Committee, the Bureau for Student Development and the Perdeby (the Rag news paper). The chapel is used for student weddings

and probation sermons by prospective ministers. The cloister hall is used for socials, performances by the drama students and partially as a cafeteria. (Clarke 2008) The functions held in these buildings compliment and give motivation for the proposed health and wellness centre.

The new lecture halls, currently under construction, across the road on the northern edge of the campus, creates a square between itself, the chapel and the cloister hall; introducing the walkway leading towards the south, anew.

From this analysis a language for the proposed building has been derived. Brick buildings and Brazil Modernism dominates the campus and can be used in an appropriate contemporary way, as can be seen from the new Law faculty and in-the-making lecture halls.

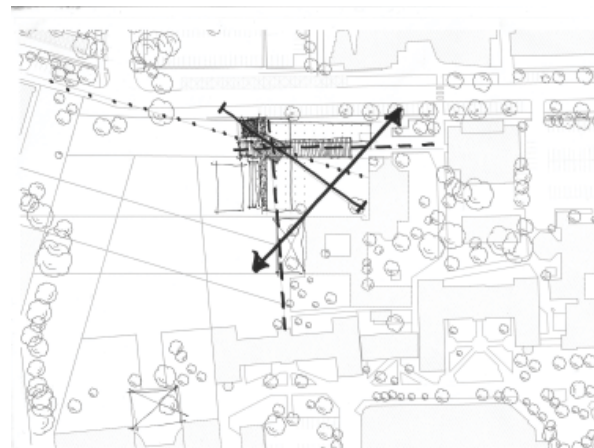


Figure 93: Identifying existing routes on proposed site.

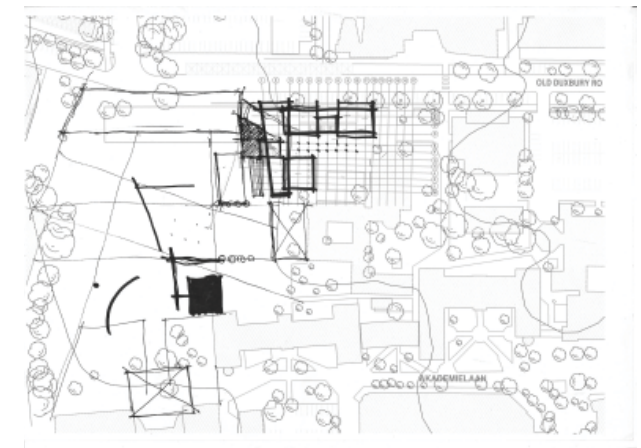


Figure 94: Identifying possible form and volume for proposed building.

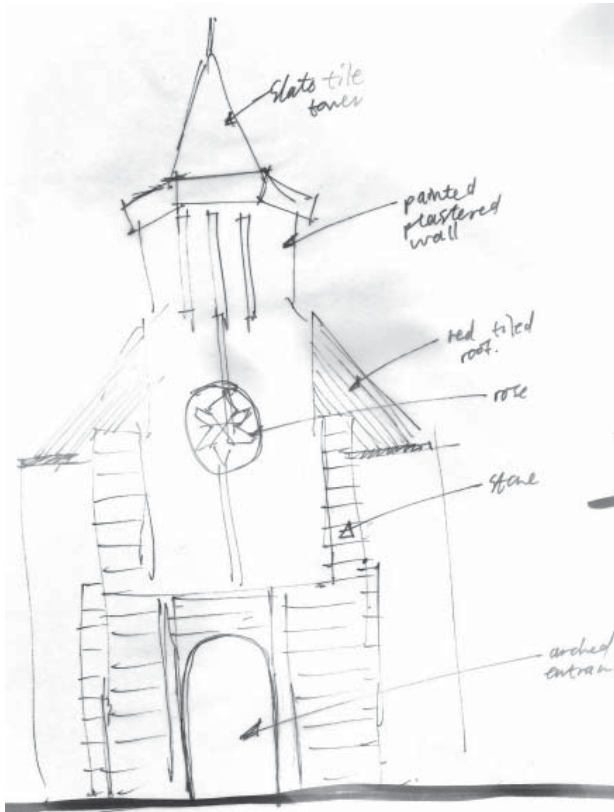


Figure 95: North elevation of the chapel.



Figure 98: Three dimensional sketch of the chapel.

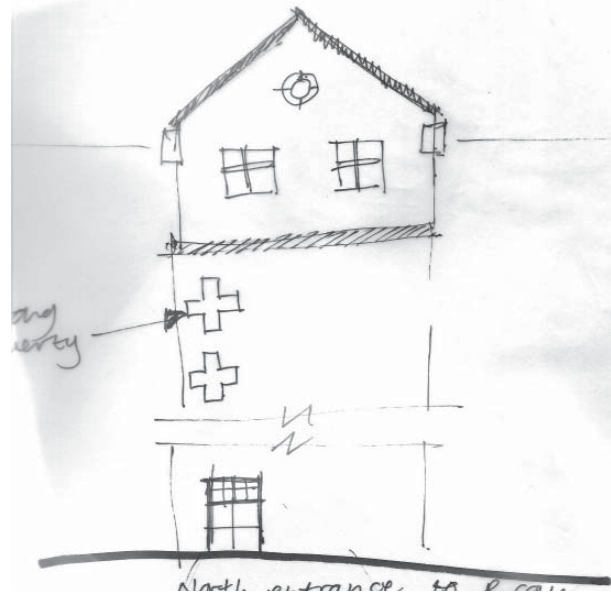


Figure 96: North entrance to Economic and Management Sciences building.

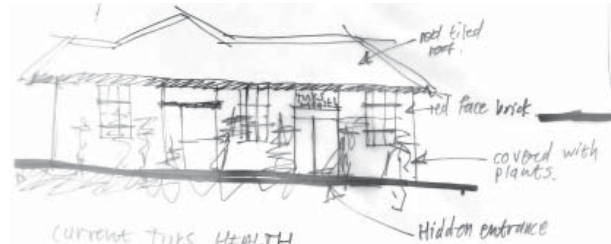


Figure 99: Front elevation of TUKS health.

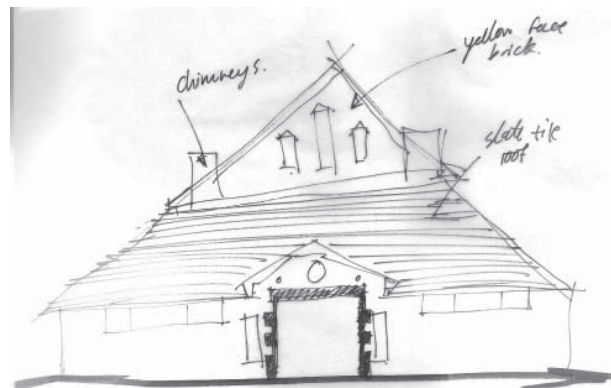


Figure 101: West elevation and entrance to cloister hall.

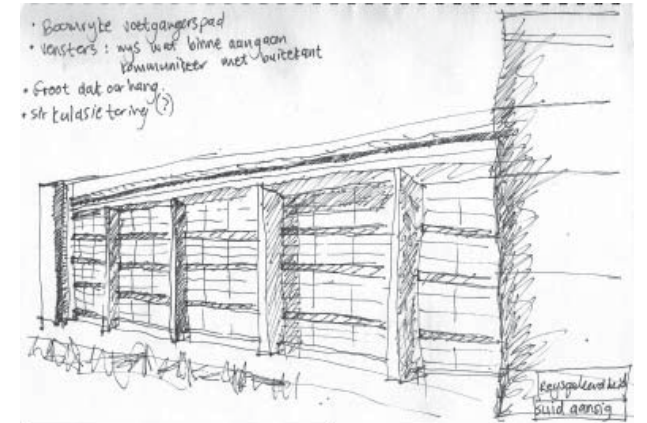


Figure 97: Perspective of the new Law faculty.

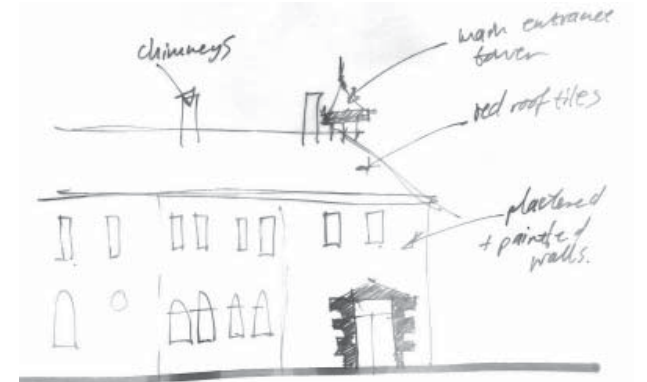


Figure 100: North elevation of TUKSwerf.

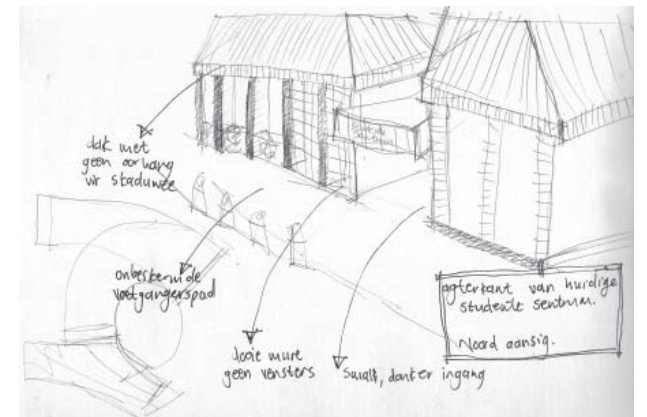


Figure 102: Perspective of existing student centre.