# UNIVERSITY OF JOHANNESBURG

TOWARDS AN INTEGRATED UNIVERSITY OF JOHANNESBURG
SPATIAL DEVELOPMENT FRAMEWORK

## STAGE 1 INCEPTION REPORT

October 2021




# Content

# 1. Introduction

## 1.1 Purpose of the report
## 1.2 Methodology & Approach

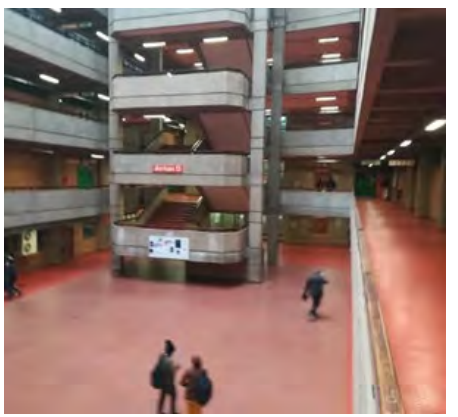
UNIVERSITY OF JOHANNESBURG

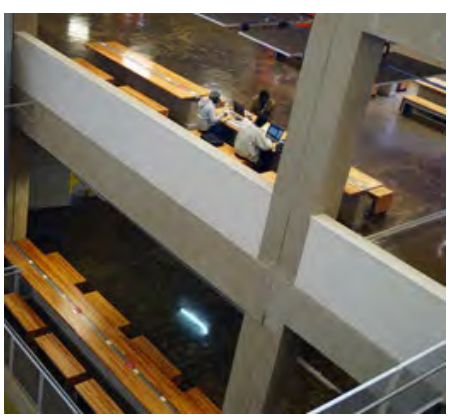
## 1.1 Introduction. Purpose of the Report

The University of Johannesburg Spatial Development Framework (SDF) is being developed over four stages, with input from urban designers, architects, bulk infrastructure engineers, sustainability consultants, cost controllers, and most importantly the client/university executive. This report forms the conclusion of *Work Stage 1 Inception*, of the process and outlines the priorities and objectives for *Work Stage 2 Concept and Viability.*

The purpose of the report is to inform and obtain further input and feedback from university stakeholders regarding:

- Methodology and approach followed in Work Stage 1 Inception
- Status quo analysis of the existing campus spatial configurations, infrastructure, documentation and records of infrastructure, and review of the 2013 Campus Mater Plan
- Design informants, that direct and drive the SDF
- Spatial principles, derived form the statues quo analysis and the design informants, that underpin the SDF and define the priority projects
- Way Forward, recommended next steps and priority projects, to initiate Work Stage 2 Concept and Viability.



## 1.2 Methodology & Approach
## Spatial Development Framework, Inquiry-by-Design

The Spatial Development Framework (SDF) defines the spatial, principles, opportunities, and constraints, for the enhancement, transformation, and development of the university's campuses.

The principles that form the foundation of the SDF define the type, nature, quality, and relationship of spaces in the university as opposed to simply defining the location of proposed future development, as is the case with a Campus Master Plan.

Thus, the "principle" foundation of the SDF makes it a robust and flexible decision-making tool, deliberately designed to respond to and direct the ever-changing spatial requirements of the university.

The UJ SDF is being developed through an 'Inquiry-by-Design' approach. The 'Inquiry-by-Design" approach followed for the inception stage of the development of UJ SDF incorporates the following interlinked processes:

- Identification of and alignment to institutional drivers, including the UJ mission, vision, strategic plan, and enrolment plan
- Assessment of recuring debates related to changes in the national and international context of university education
- Stakeholder engagements, with a wide range of people and groups within the university to ensure the SDF incorporates the needs and addresses the concerns and expectations of as many stakeholders as possible.
- Spatial mapping and recording of the Status Quo of the university's campuses; onsite investigations, studies of existing documentation and existing records of the campuses and infrastructure
- Studies of the urban context of each campus and the fragmented nature of the university within the city fabric of Johannesburg.
- Definition of SDF principles and priorities

The SDF is being developed through a broad range of inputs by an interdisciplinary and collaborative team, incorporating inputs from urban designers, architects, heritage architect, bulk service engineers, environmental consultants, stakeholder engagement specialists and town planners. Through this broad range of inputs, the SDF is being developed to be comprehensive incorporating all spatial and infrastructural aspects of the university.

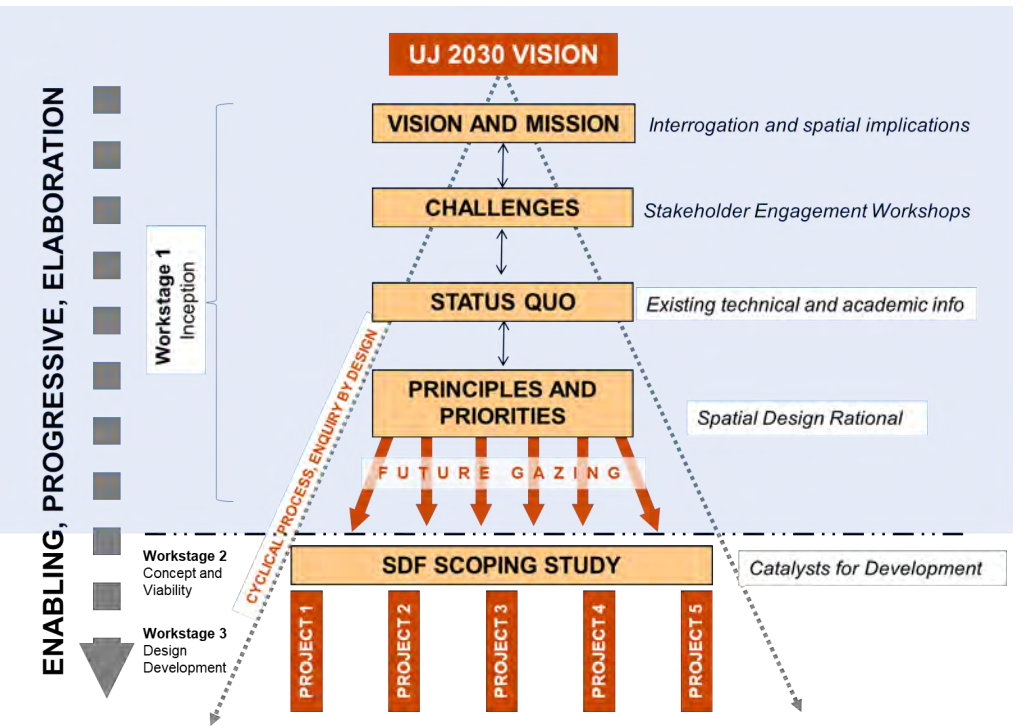



*Diagram of the Inquiry-by-Design process*

# THE **APPROACH**

Direction is derived from **three major sources**:

**INFORMANT 1**

The starting point for the argument is an interrogation of **the academic mission of the UJ.** The SDF is the enabler of the vision not its driver. Mission and spatial vision should be synergistic

**INFORMANT 2**

Identifying the **desirable performance qualities** which universities in South Africa in the 21st century should be seeking to achieve. Again, these performance qualities have spatial implications.
(equity/accessibility/integration/sustainability/quality)

**INFORMANT 3**

Establish a comprehensive understanding of the **contextual informants**. Input **from academic leaders and stakeholders.** Uncover insights to **best practice.**

# THE **APPROACH**

## Revision and Development of the 2013 Framework

- Comprehensive Spatial Development Framework Completed by GAPP, in 2013.

- This Study will build on the existing framework, identifying gaps, **opportunities and areas of change** that have arisen in the past 10 years.
  - E.g. Blended learning, Academic Consolidation, Security and Access, 3rd Stream Income

- Further Development of the Framework will identify **priority projects and areas of development**.

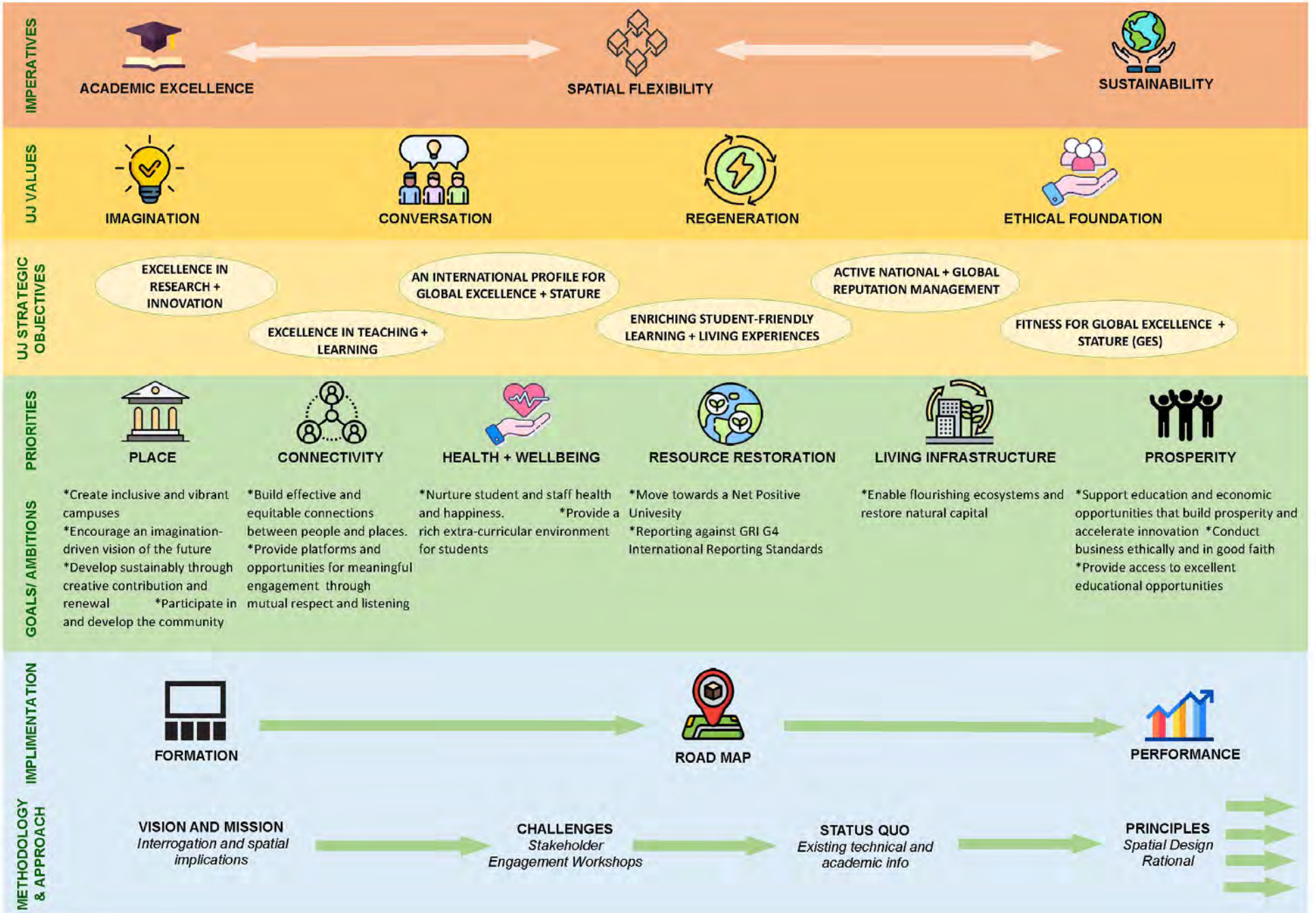
# 2. DESIGN INFORMANTS
## 2.1 University of Johannesburg – Visions, Mission, and Strategic Plan

Clearly, the academic and the spatial directions of the university should be complementary and synergistic. To this end UJ's vision, mission, and strategic plan have been integrated to identify the spatial implications and principles of the academic mission. These provide the highest order of direction to the SDF.

This assessment of spatial principles was undertaken through the main elements of spatial structure (green space movement of all modes, public facilities, communal open space, utility services) and the primary activities of the university - academic, housing, sport and so on. These activities all have different requirements in terms of their need for privacy or publicness (exposure). This recognition, in turn, provides a framework for evaluating locational relationships.

| IMAGINATION | CONVERSATION | REGENERATION | ETHICAL FOUNDATION |
|---|---|---|---|
| We encourage and inspire free, independent and critical thought aimed at developing a better future for UJ and society by: | Through facilitating open, respectful and meaningful dialogue, we encourage an inclusive environment that embraces diversity by: | We are dynamic, progressive, responsive and innovative in our endeavour to provide access to global academic excellence and to promote the common good in a sustainable way by: | We nurture and actively promote an ethos of honesty, transparency, accountability and fairness in all our endeavours by: |
| • Shaping the future by encouraging an imagination-driven vision of the future;<br>• Developing a cosmopolitan identity and a culture that embrace diversity;<br>• Exhibiting ambition and drive;<br>• Creating an environment conducive to free, independent and critical thought that inspires 'bright ideas' for the enhancement of our academic and community uplifting endeavours. | • Leading consultatively and constructively and making wise decisions collectively;<br>• Learning together from and through our diversity;<br>• Providing platforms and opportunities for meaningful engagement with one another and our stakeholders through mutual respect and listening;<br>• Creating an inclusive environment and nurturing the diversity of cultural expression through processes of mutual interaction, support and empowerment. | • Developing sustainably through creative contribution and renewal;<br>• Making positive change through innovating for the common good;<br>• Taking advantage of opportunities;<br>• Providing access to students to excellent educational opportunities across a wide range of fields and disciplines and at various levels;<br>• Constantly working to enhance the quality of our programmes and services;<br>• Providing a rich extra-curricular environment for students;<br>• Pushing boundaries, overcoming barriers with courage and surpassing expectations. | • Treasuring academic freedom;<br>• Seeking balance in the pursuit of knowledge;<br>• Earning trust through credible and principled conduct;<br>• Acting responsibly by being fair, consistent and transparent;<br>• Participating in and developing the community;<br>• Being truthful and trustworthy at all times;<br>• Conducting our business ethically, in good faith and to the best of our ability;<br>• Honouring our commitments;<br>• Honouring information that is private and confidential;<br>• Client Advocacy – we serve our clients with distinction. |

UNIVERSITY OF JOHANNESBURG


IMPERATIVES
ACADEMIC EXCELLENCE
SPATIAL FLEXIBILITY
SUSTAINABILITY
UJ VALUES
IMAGINATION
CONVERSATION
REGENERATION
ETHICAL FOUNDATION
UJ STRATEGIC OBJECTIVES
EXCELLENCE IN RESEARCH + INNOVATION
EXCELLENCE IN TEACHING + LEARNING
AN INTERNATIONAL PROFILE FOR GLOBAL EXCELLENCE + STATURE
ENRICHING STUDENT-FRIENDLY LEARNING + LIVING EXPERIENCES
ACTIVE NATIONAL + GLOBAL REPUTATION MANAGEMENT
FITNESS FOR GLOBAL EXCELLENCE + STATURE (GES)
PRIORITIES
PLACE
CONNECTIVITY
HEALTH + WELLBEING
RESOURCE RESTORATION
LIVING INFRASTRUCTURE
PROSPERITY
GOALS/ AMBITIONS
*Create inclusive and vibrant campuses *Encourage an imagination-driven vision of the future *Develop sustainably through creative contribution and renewal *Participate in and develop the community
*Build effective and equitable connections between people and places. *Provide platforms and opportunities for meaningful engagement through mutual respect and listening
*Nurture student and staff health and happiness. *Provide a rich extra-curricular environment for students
*Move towards a Net Positive Univesity *Reporting against GRI G4 International Reporting Standards
*Enable flourishing ecosystems and restore natural capital
*Support education and economic opportunities that build prosperity and accelerate innovation *Conduct business ethically and in good faith *Provide access to excellent educational opportunities
IMPLIMENTATION
FORMATION
ROAD MAP
PERFORMANCE
METHODOLOGY & APPROACH
VISION AND MISSION
Interrogation and spatial implications
CHALLENGES
Stakeholder Engagement Workshops
STATUS QUO
Existing technical and academic info
PRINCIPLES
Spatial Design Rational

# INFORMANTS

INFORMANT 1

## *ACADEMIC MISSION*


- **Vision**

An international University of choice, anchored in Africa, dynamically shaping the **future.**

- **Mission**

Inspiring its community to transform and serve humanity through innovation and the collaborative pursuit of knowledge.

- **Values**

Imagination
Conversation
Regeneration
Ethical Foundation.

## 2.2 Socio Economic Contextual Informants

### **RECURRING** DEBATE

- What is the **nature of the future university** in South Africa in terms of its spatial form and structure in relation to its academic and developmental prerogative?
- Does the **scarcity of resources** to fund the expanding needs of universities, **require greater collaboration** with other stakeholders for example through partnership between universities and their host city/community?
- What form should the provision of **student housing take to maximize the advance of the academic mission?**
- What is the nature of knowledge exchange within an environment of **greater access to information/data**, but with **restrictive proficiency for physical exchange**
- How can universities **improve use and efficiencies** of their existing infrastructure, buildings, spaces and amenities?

# CENTRAL POSITION

## Approach to an Integrated Spatial Strategy:

- The **only certainty about universities is uncertainty** - the university requires a **flexible spatial and development framework**
- **Collaboration is key**. Planning design and construction has become so institutionalised that technical professionals have captured the process, making participation by non-professionals difficult. It is not about ‘high architecture design’;
- **Campus as finely-tuned ecology**. Campus design is not unlike designing a **small town**. It reflects all dimensions of life – teaching, learning, research, recreation, sport, housing, ceremony, social life, etc.
- The planning process should not begin as blank sheet. Any responsible plan must be strongly **informed by the characteristics of the social historical context and natural landscape**. The central planning question is not where development should go but where it should not be allowed;
- Designing for universities requires a **flexible spatial framework**, not a comprehensive master plan.

# CENTRAL POSITION

- **Informal learning** is as important as formal educational processes. Places of **informal meeting, the public spaces**, are of paramount importance.
- Universities are like a **metabolism** − they have inputs, throughputs and outputs. Sustainability requires that inputs are drawn over as small an area as possible and, wherever possible, are renewable.
- Universal access and the use of **non-motorised transport** (NMT) should be promoted;
- **Equity of access.** Always plan and design for the lowest common denominator - the most vulnerable users;
- **Residences** play an important educational role. Central to student life. Places of learning, teaching and exchange. Common space is key;
- While maintaining their identity, universities should be closely **integrated with the city/settlement** in which they are located.
  - Sharing of sport and recreation
  - Out reach foyers fostering exchange

EVERWHERE LEARNING

LIFE-LONG LEARNING

# INFORMANTS

INFORMANT 2

## *PERFORMANCE QUALITIES*

**1. EQUITY OF ACCESS**

A concern with equity does not imply that everything should be the same, but that all people should have the opportunity to access a **broadly equivalent set of opportunities**.

**2. INTEGRATION**

The issue of promoting integration in a society historically obsessed with separation is one of the most important of this time. A number of kinds of integration are important;

**2a. Integration with the City to be of its place**.
**2b. Integration of Modes of Transport**
**2c. Campus Integration**
**2d. Social Integration**
**2e. Cultural Integration**
**2f. Integration and Sport**

**3. DIGNITY**

Embracing diversity requires that all students be able to meet in **dignified common and public spaces**, which are owned by all, regardless of personal circumstance.

# INFORMANTS

INFORMANT 2

## *PERFORMANCE QUALITIES*

**4. SAFETY AND SECURITY**

Unfortunately, issues of safety and security impact on all dimensions of life in South Africa today and the university is no exception to this.

**5. HERITAGE**

The university will be part of and bear responsibility for a number of buildings and places of heritage value.

**6. PLACE MAKING & IDENTITY**

Any plan for the university must take into account place making: the creation of a sense of spatial uniqueness and identity.

**7. SUSTAINABILITY**

The university should play a leadership role in demonstrating sustainable practices.

# INFORMANTS

INFORMANT 2

## *CONTEXTUAL INFORMANTS*

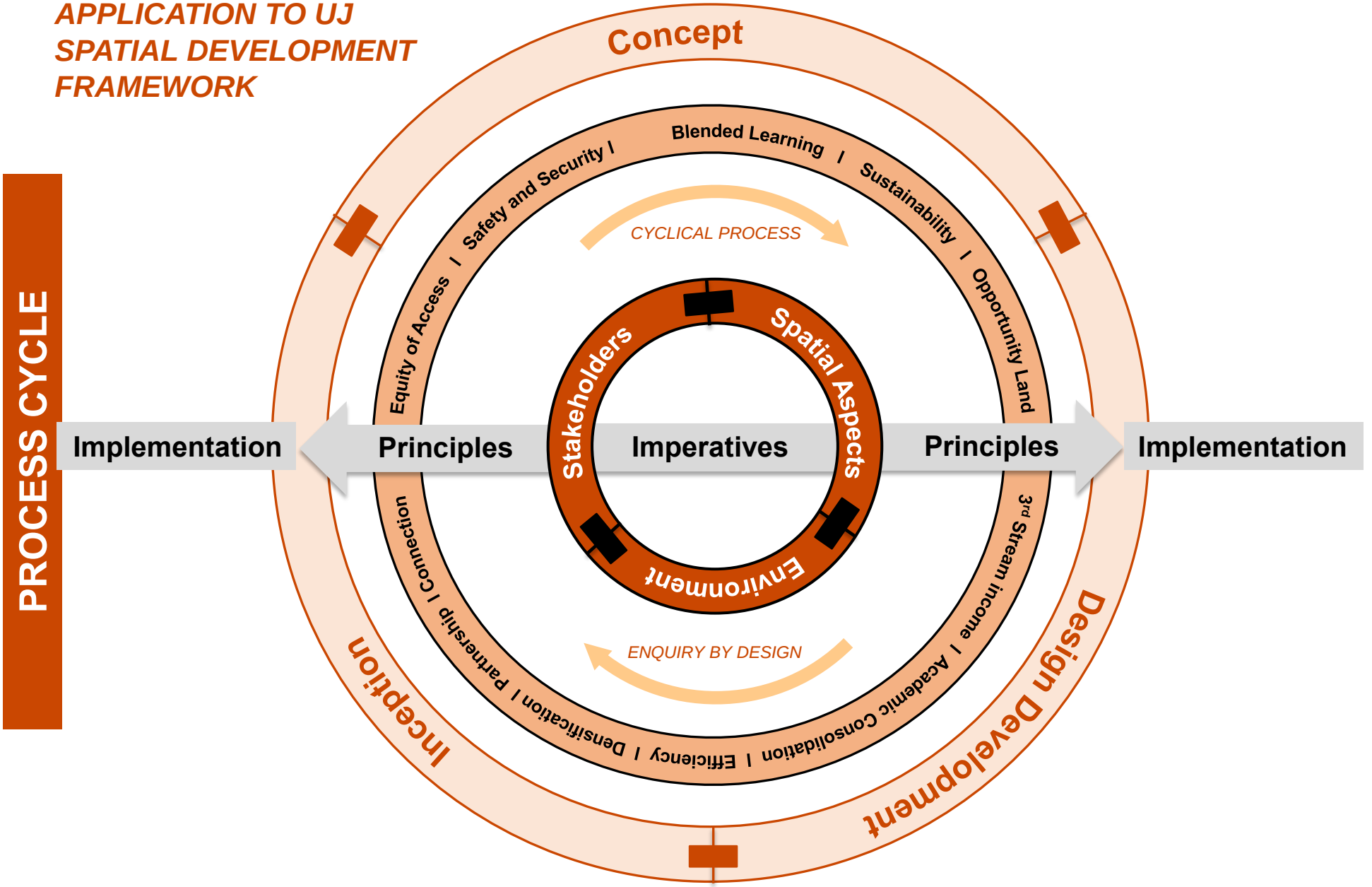
### STRATEGIC PLANNING

- **Comprehensive understanding** of the contextual informants: constant input from academic leaders, local authorities, stakeholders and spatial planning specialists.

- Assessment of the contextual character of the Campuses and how the University impacts as a **participant in its environment**.

- Campuses embody very different properties:
  - Unique cultural and environmental conditions
  - Not simply locality alone
  - Concrete things which have material substance, shape, topography, environmental character, climate, texture, as well as socio- economic features.

## *APPLICATION TO UJ SPATIAL DEVELOPMENT FRAMEWORK*



# 3. STAKEHOLDER ENGAGEMENT

# 3. Stakeholder Engagement Workshops

The SDF is being developed as a shared creation with the involvement of a wide range of UJ Stakeholders. On the 13th April 2021 a “Town Hall” meeting was held to introduce the SDF team to the broader university community. An outline of the process to be followed was presented.

Subsequent to the “Town Hall” meeting, Six(6) Stakeholder Groups were identified for inclusion in a Stage 1 Stakeholder Engagement process. The groups identified were:

- Academic Heads
- Support Executives
- Campus & Operations
- Sustainability
- MEC
- Reference Group (SRC, Suppliers, Alumni, Previous Project Teams & Donors)

After some debate with the client body, it was agreed that the Reference Group would be engaged in Stage 2 and that the team would present to the MEC in a workshop format at the conclusion of Stage 1. As a consequence Four(4) Stakeholder Workshops were held in Stage 1 with the groups:

- Academic Heads – 07.07.2021
- Support Executives – 29.06.2021
- Campus & Operations – 05.07.2021
- Sustainability – 15.06.2021

The preliminary Status Quo assessment and concept of an SDF was presented to the groups in order to create awareness of the process and achieve participation and buy-in.

The main objective for each engagement was to gain an understanding of the spatial requirements, concerns and expectations of each of the stakeholder groups.

The workshops took place online and a complete set of minutes are provided in annexure 1 of this report. A recording of each engagement is also available on request.

The format of the workshops included the following:

- Introductory packs issued to participants prior to the workshops
- An introductory presentation by the SDF team
- Focussed questions and subsequent discussion regarding current spatial successes, needs, and challenges
- Discussion regarding a future spatial vision, opportunities, and challenges.

The SDF team would like to thank all the participants for their inputs and insights, and we look forward to continuing the development of the SDF in the next work stages.

A summary of each of the workshops is provided on the subsequent pages of this report. Comments are recorded as they were made in the workshops, there may however be some internal debate or contestation regarding some points. Further input and debate regarding these matters is encouraged during the next stage.

Further to the stakeholder workshops the SDF team held a number of one-on-one meetings with UJ stakeholders responsible for:

- Town Planning
- Enrolment Planning
- Existing Campus and Infrastructure Documentation

## STAKEHOLDER FEEDBACK

**1 SUSTAINABILITY**

**Outcome Summary:** The university has ambitious Sustainability Goals and aims to be ranked in the top 20 of the QS Rankings for Sustainability by 2025. With a number of initiatives underway already, UJ has made a good start. However, a lot more needs to be done starting with the endorsement of the UJ Energy Resource Waste Sustainability Plan 2021-2025. Green Belts should to be preserved on campuses; new projects planning needs to keep this in mind.

- UJ committed to the **UN Sustainability Development Goals**
- Aiming to be in the QS rankings **top 20 world-wide for Sustainability** by 2025. Non-negotiable!
- **Campus Directors** are the best positioned to deal with sustainability issues: reduce water usage & electricity savings
- **Responsibility** for driving the UJ sustainability plan **lies with each individual**: raising awareness critical to success
- **Current initiatives:** Solar PV installations, LED & Sensor installations, water metering to all buildings, waste management; recycling 40-60%, electric bus pilot project mooted
- **Preserve Green Belt resources** and natural settings on campus – current SHIP proposals will impact this

**SESSION** | **SUMMARY**

## STAKEHOLDER FEEDBACK

**2 CAMPUS & OPERATIONS**

**Outcome Summary:** A number of challenges are hampering future development opportunities on the various campuses. These range from the lack of documented existing infrastructure, to a shortage of parking, to providing resilience against service delivery failure by the COJ. The participants were eager for the university to explore opportunities with neighbouring communities to improve safety and security on and around campuses. It was felt that student's living experience could be improved.

- Bulk Infrastructure challenges: **Lack of technical information** in general and specifically on DFC (electrical and water). Potential Urgent Project: Mapping and recording existing building/campus information?
- **Parking is a real problem during events** especially on SOWETO Campus and at APK Sport Stadium. How can this be solved?
- **Handshakes with the city:** Consider communities & stakeholders surroundings the campuses: The CID initiative at DFC is showing good results. What more can be done?
- **Inequality:** There is a perception that APK is well resourced and DFC is not as well resourced.
- **Student living experience on each campus:** How do we complete the Work, Live, Play experience?
- **Service Delivery to SWC campus** more of a challenge because of isolation and distance from other campuses. Additional buildings will add to this challenge.
- **Resilience:** How do the campuses continue to operate in the event of a calamity or a shortage?

**SESSION** **SUMMARY**

## STAKEHOLDER FEEDBACK

**3 SUPPORT EXECUTIVES**

**Outcome Summary:**
Online learning, which has been accelerated by the Covid -19 pandemic, has changed the way the university's support spaces are being used. New types of spaces; VR Spaces, Knowledge Commons & Maker Spaces are being considered in the libraries. 3rd Stream Income opportunities with a focus on short online courses will expand in the adult learning and entrepreneurial sector. The Technology Transfer Office is expanding and requires more space.

- How does your role **support the academic mission** and in **the future of blended learning** how do you see your department's role changing?
- There is **a need for different "new types" of spaces:** E.g. Virtual Reality Spaces, Maker Spaces, Knowledge Commons, etc
- **Repurposing:** Spaces are being freed up within the current libraries for the "new types" of space rather than requiring space in new buildings. The libraries are becoming more integrated.
- **Human Resources:** Employee life cycle from attraction, development and training through to departure: **Training facilities could be upgraded.** Blended learning model can be adopted
- **3rd Stream Income Opportunities:** Current & new - Coffee Shops, Visitors Centre on the Soweto Campus, Adult Learning - Short Learning Programmes to build entrepreneurial skills (moving online)
- **Research & Innovation:** Technology Transfer Office supports innovation, incubation and commercialisation and Starts Ups Research Groups: **Spatial Implication requirements** need to be interrogated: Future Project?

**SESSION** | **SUMMARY**

## STAKEHOLDER FEEDBACK

**4 ACADEMIC HEADS**

**Outcome Summary:** The Academic Heads expressed the requirement to improve ICS infrastructure to accommodate the increased use of online teaching & learning platforms. Large module lectures will still have their place for undergraduate teaching but offices and smaller, reimagine venues in repurposed, existing space will be the norm in Post Graduate and Post Doctoral environments. Development should follow "Green Design" principles; with consolidation of faculties & facilities onto particular campuses. Upgrades to existing facilities needs to be ongoing.

- College of Business & Economics: focus is on growing post graduate numbers. Space requirements getting less but the need for **improved IT systems** in line with 4IR
- Faculty of Education: Improve ITC infrastructure and **smaller venues** for discussions where students can interact more informally
- Faculty of Law: Balance between remote and physical learning. **Large Module lectures still have their place** – minimize lecturer numbers. Up to 3 lecturers teaching a large 1st year module
- **Reimagined smaller venues:** sliding wall panels, moving desks, pods, technology-driven group work, connectivity
- Shift focus from students to staff: **Reintroduce social spaces for staff to engage**
- Faculty of Science: urgent need for **more laboratory space**
- Business School: **24 hour safe access to campuses required.** Future designs to reflect 4IR. Integrate with the city. **University "Green Design"** sets the benchmark for society

**SESSION** | **SUMMARY**

## STAKEHOLDER FEEDBACK

**4**
**ACADEMIC HEADS**

- Faculty of Humanities: **Hybrid model** – some students in the classroom and some accessing online.
- **Post Grads & Post Docs require sophisticated infrastructure** to enable research to thrive. CBE:Shift focus from students to staff: require more and better equipped spaces for staff to meet formally and informally
- FEBE: Biggest Challenge - **not enough offices for staff.** Require a large space for doctoral students to work and share ideas. Space for Research Groups is critical
- **Accommodation:** Possibly located on Bunting Road Campus between the library & the last block of offices? This could be short term accommodation for PDRFs or visiting academic staff / visiting professors?
- Integrate accommodation into campuses. **Provide seminar space within residences** with good connectivity
- **Consolidation is key:** Use existing land resources rather than purchase new: opportunities within the campuses to repurpose or reuse buildings and other spaces.
- **Upgrade of toilet facilities** and facilities for students and staff with disabilities.

**SESSION** | **SUMMARY**

# 4. STATUS QUO & SPATIAL PRINCIPLES

# 4. STATUS QUO ANALYSIS & SPATIAL PRINCIPLES

In this chapter we present an analysis of the status quo of the four campuses, and the urban context of UJ. The assessment and analysis are based on site visits to each campus, our experience of working on some of the campuses, UJ drawings and documentation, documentation form the city of Johannesburg, and google earth.

The following items are reviewed on each campus:

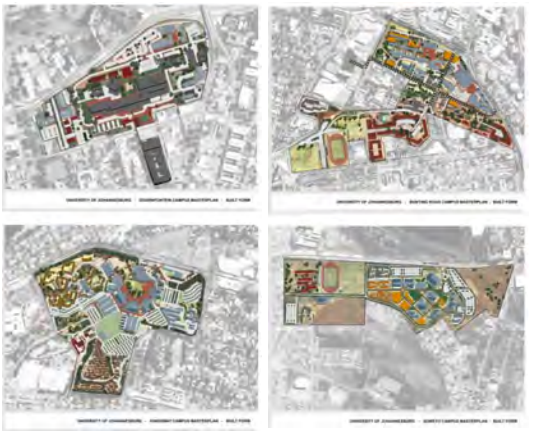
- Campus history
- 2013 Campus Master Plan review
- Student population
- Analysis through the SDF principles

The purpose of analysis through the SF principles is twofold, firstly to evaluate the current strengths and weaknesses of each campus in relation to the principles. Secondly to showcase applied example of the SDF principles, to build a common understanding of the meaning of the principles.

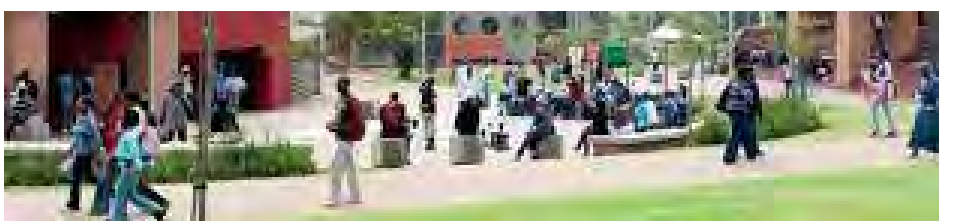
The principle are by and large qualitative in nature, as such the measurement of good and bad is not objective. The opinions expressed in our analysis are based on our professional experience and training and we aim for them to be collectively subjective. As such there may be individuals or groups who have diverging opinions. Observational studies or stakeholder engagements may be required to drill deeper into specific items as the SDF is developed.

It must be noted that the campuses were locked down during our visits, with much of the university's teaching still taking place online.

*APK under construction*



*2013 CMP*



*UJ students on SWC*

## SDF Design Principles:

The principles that form the foundation of the SDF define the type, nature, quality, and relationship of spaces desired in the university.

The principles provide a framework and weighting for decision making to guide and direct the development of the campus in a context where the university's needs and requirements are changing rapidly, and the potential solutions to these needs are also changing.

The principles have emerged from an interrogation of the UJ strategic plan, mission, vision, stakeholder engagements, global and local context of tertiary education, and the status quo of the campuses. They provide six overlapping lenses through which to (re)view future planning decisions on the campuses

The principles are summarised in the matrix on the following page.

## UJ STRATEGIC OBJECTIVES

- Excellence in Research and Innovation
- Excellence in Teaching and Learning
- An International Profile for Global Excellence and Stature
- Enriching Student Friendly Learning and Living Experiences
- Active National and Global Reputation Management
- Fitness for Global Excellence and Stature (GES)

**PLACE**

**CONNECTIVITY**

**HEALTH AND WELLBEING**

**RESOURCE REGENERATION**

**LIVING INFRASTRUCTURE**

**PROSPERITY**

**VISION**

**PRINCIPLE 01**
### CONSOLIDATION
Separate Free-standing, independent Campuses
Faculty and academic consolidation
UJ and individual Campus Identity

**PRINCIPLE 02**
### INTEGRATION WITH HOST CITY
Integrated movement, transport, sport, recreation
Community outreach: Amenities, WIL, education programs
Thresholds and reception foyers
PPP partnerships and 3rd stream incomes

**PRINCIPLE 03**
### EQUITY and DIGNITY
Space where students, staff and community can learn and engage with pride, security and dignity
Common and Shared Spaces as driver
Quality academic, multi-use and residences
Equal access to facilities and amenities

**PRINCIPLE 04**
### QUALITY OF STUDENT AND STAFF LIFE
Focal areas for improved student life
Holistic environments: strong links between residential, recreation, academic and sports facilities
Home from home – quality shared and common space

**PRINCIPLE 05**
### SUSTAINABILITY AND REGENERATION
Promote urban biodiversity and productive landscapes
Alternative water and electricity sources – energy net zero
Flexibility, versatility & robustness of buildings & services
Spatial memory

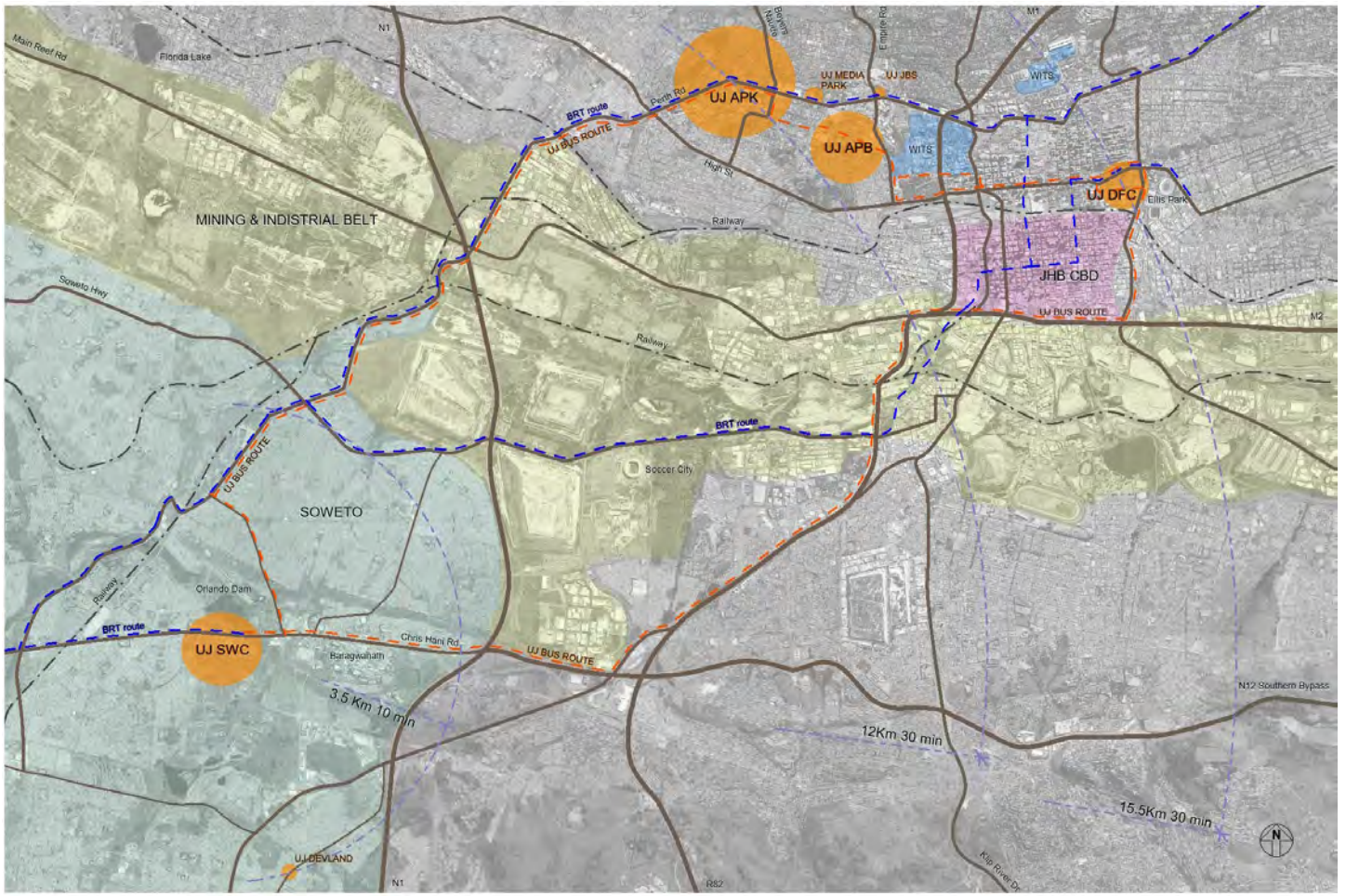
**PRINCIPLE 06**
### DIVERSE LEARNING ENVIRONMENTS
Transition to blended learning models
Gradation of teaching spaces from public to private
Variety of quality learning environments
Resources Centers

## 4.1 Status Quo Metropolitan Context

The formation of the University of Johannesburg out of three previous institutions, Vista, TWR, and RAU, with four campuses scattered across the city, created a fragmented campus footprint. This historic amalgamation presents a number of challenges and opportunities.

The fragmented footprint connects UJ to the city in a number of diverse places, while presenting operational and academic challenges. Operationally many services are duplicated on each of the campuses, UJ also operates a significant bus service, transporting staff and students between campuses.

The 2013 CMP indicated the historic and proposed on-going redistribution of academic programs. To achieve best fit between facilities and academic programs while minimising academic duplication between campuses.




This reshuffling of academic programs has stabilised and the academic heads who engaged in the stakeholder process did not see the need for any further significant relocation of programs.

Blended learning may present new opportunities to provide some academic programs in a less place-bound format, this may in turn result in a rethinking around the distribution of programs across the campuses.

*Mapping of UJ Campuses at the metropolitan scale*

The campuses inherited by UJ were not at all equal with the quality and type of facilities on the four campuses at the time of amalgamation differed greatly. UJ has expended much effort and achieved a great deal in redressing the historic imbalance and inequality in the facilities inherited on the four campuses.

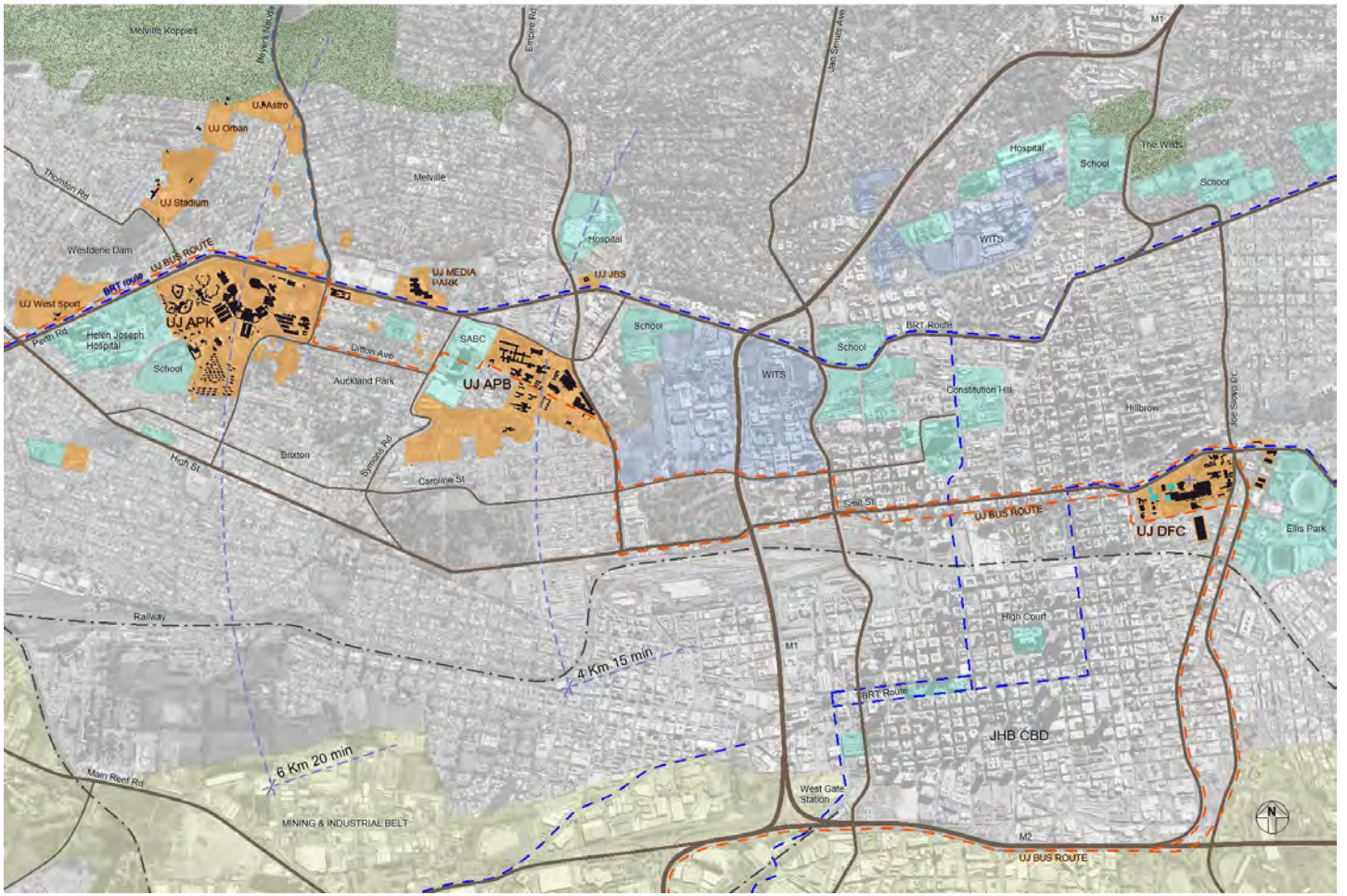
While the individual facilities across the campuses are now certainly more equitable than before. There are aspects of the spatial organisation, connectivity of movement routes and quality of communal spaces that are not yet equitable across the four campuses. In this regard the intention of the SDF is not for the four campuses to be the same, they should and do all have their own character. However, the basic quality of campus space and life should be similar, with unique facilities of excellence on each campus.

UJ has many institutional neighbours are shown in turquoise on the attached maps and include:

DFC – Johannesburg & Ellis Park stadiums, and The Central Johannesburg College, and POSA residences in the area

APB – Wits, SABC, AFDA, Netcare Rehabilitation Hospital, and POSA residences in the area

APK – Helen Joseph Hospital and Nursing Collage, and POSA residences in the area




Relationships have been established with a number of these neighbours, however the potential of many of these relationships is still to be explored and developed, spatially and institutionally.

A number of POSA residences in Braamfontein accommodate both Wits and UJ. The potential overlap of services provided to students in POSA residences by the two universities should be explored.

## Transportation and Connectivity:

The four UJ campuses are well serviced by a range of transport modes, including private vehicles, Mini bus Taxis, BRT Busses, and UJ buses.

There is an overlap between the UJ bus routes and the BRT bus routes, however (based on desktop studies) the BRT busses take approximately three times longer per trip than the UJ buses. The DFC campus is in close proximity to the Doornfontein station.

The introduction of online learning has significantly reduced the pressure on campus parking facilities for staff and student vehicles. Prior to the Covid-19 pandemic the demand for parking represented one of the most significant land uses on all four campuses, as a large proportion of staff and students remain dependant on private vehicles to access campus. The future demand for parking will be influenced by the development of blended learning, and the long-term development of effective and efficient public transport.

The land opportunity cost of parking is proportionately high and as such efficient and effective alternatives to private vehicle transport should be seriously considered in the long term. In addition to the land cost private vehicles also have a relatively high environmental impact.

On DFC the existing parking capacity can not support any further development, based on the city council's parking ratios requirements. As such any future development on DFC will need to be accompanied by the development of additional parking, given the existing town planning constraints. Since there is little to no available land on DFC for on grade parking, the required parking will need to be provided by way of a structured multi storey parking. Alternately, non private vehicle transportations systems will need to be expanded, and relaxations of the council's parking requirements be approved.

A bicycle lane has been established in Auckland Park, by the city, between APK and APB, however the extent of the network is limited and the continuity of the lane is sub optimal. The further development of the bicycle lane and the functional design of the lane could be taken up as part of the Auckland Park CID.

*Parking areas dominate the open space at DFC*


*UJ are set to pilot electric busses on their campus bus routes*

*Safe, extensive, and continuous bicycle routes to be promoted in campus CID's*

## 4.2 Status Quo - Student Residence

The graph on this page indicates the number of UJ student beds currently provided, the proportion of UJ beds to total student population and the current occupancy rate of the UJ residences. Student affairs have provided the following reasons for the below capacity occupancy rates:

1. Old residences facilities, equipment

2. Private accommodation providing better facilities and are more lenient

3. Others have moved back home due to online learning

4. The university rules which include no visitation in residences due to Covid-19

5. Students do not want to be sharing rooms

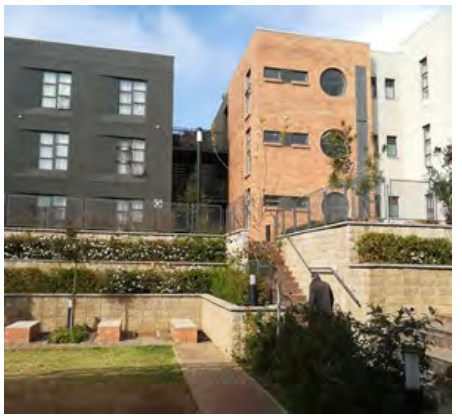
Contrary to our expectations, there are a number of reasons for the current levels of low occupancy other than the negative impact of the Covid -19 pandemic. This assertion is supported by the 2019 occupancy rate which was recorded at 87% and now stands at 82%.

The provision of student housing at public universities is governed by the DHET's 2015 THE POLICY ON THE MINIMUM NORMS AND STANDARDS FOR STUDENT HOUSING AT PUBLIC UNIVERSITIES. This policy document has been revised in recent years. The revised version, however, exists only in draft form and has not yet been gazetted.

Both versions are largely quantitative in their prescripts and do not and cannot be expected to describe the qualitive aspects required to create real "home away from home" environments that promote everywhere learning.

### Student Residence Figures

| Campus | SWC | DFC | APB | APK | TOTAL |
|---|---|---|---|---|---|
| Student Population | 5180 | 11548 | 5633 | 26720 | **49081** |
| Residence Beds | 1606 | 1624 | 1295 | 2732 | **7257** |
| % Beds to Population | 30% | 14% | 20% | 9,50% | **14,70%** |
| Occupancy | 1268 | 992 | 1142 | 2552 | **5954** |
| Unoccupied Beds | 338 | 632 | 153 | 180 | **1303** |
| % Occupancy | 79% | 61% | 88% | 93% | **82%** |



*Marked difference in quality of communal spaces in residences*

Further to this we have noted a large variance in the type and quality of communal spaces within UJ current residences, all of which comply with the DHET minimum norms and standards. To create residences of a more consistent spatial quality, that realise the principles and objectives of the SDF, we propose that Architectural Guidelines be established to form part of a briefing document issued to professional teams at the start of any new student residence project; this in addition to the DHET minimum norms and standards.

The university is not the only provider of accommodation for students attending the institution. A large proportion of the accommodation is provided by private developers and property owners, off-campus, in the surrounding neighbourhoods. These private residences must also comply with the DHET minimum norms and standards, if they wish to lease rooms to NSFAS funded students. UJ has a register of these accredited, private residences located near its campuses. They should be inspected and accredited annually. The register of accredited residences is referred to as the Privately Owned Student Accommodation or POSA list. We have been provided with the 2017 version of the POSA list. We recommend that the POSA list be updated, as soon as possible, to reflect the current Covid -19 circumstance.

The POSA list provides the address, contact details, and capacity of each accredited residence. In total, 289 residences are listed with a capacity ranging from 6 to 744 beds. The list does not, however, provide details as to how many UJ students are accommodated in a particular POSA residence. Because many of the private residences are located in large high-rise buildings in Braamfontein, one has to assume that students from other institutions, like Wits University, are also accommodated in these UJ accredited residences. Furthermore, the POSA list does not provide information on the rental amounts charged by the various residences, and whether or not these are charged out at private or NSFAS rates. As a final point, a number of large, private residences in the Auckland Park area have not been accredited by UJ and as a result are not recorded on POSA list. It may be that these residences were completed after 2017 when the list was last updated.

The 2013 CPM reported that, The Ministerial Committee for the Review of the Provision of Student Housing at SA Universities (September 2011) recommended that UJ aim to provide residence accommodation for 50% of the student population at the APB, APK, and Doornfontein campuses and 80% at Soweto campus. This implied that UJ needed to provide an additional 18 837 student residence beds. However, of the 7257 beds UJ currently operate 1 303 are unoccupied.

*1047 bed private residence opening in Doornfontein*

*POSA residence in Bertrams*


*Advertisement by South Point a POSA Residence provider*

*Private residence in Auckland Park, not listed on the current POSA list*

Further to this, basic quantitative information regarding the, capacity, occupancy, and rental bracket, of private residences is not currently available. We recommend that this information be gathered and assessed together with a detailed evaluation of reasons for the “occupancy gap” w.r.t on-campus residences as well as a study of the impact of blended learning on the demand for student housing prior to committing further investment to student housing projects.

## 4.3 Status Quo Soweto Campus (SWC

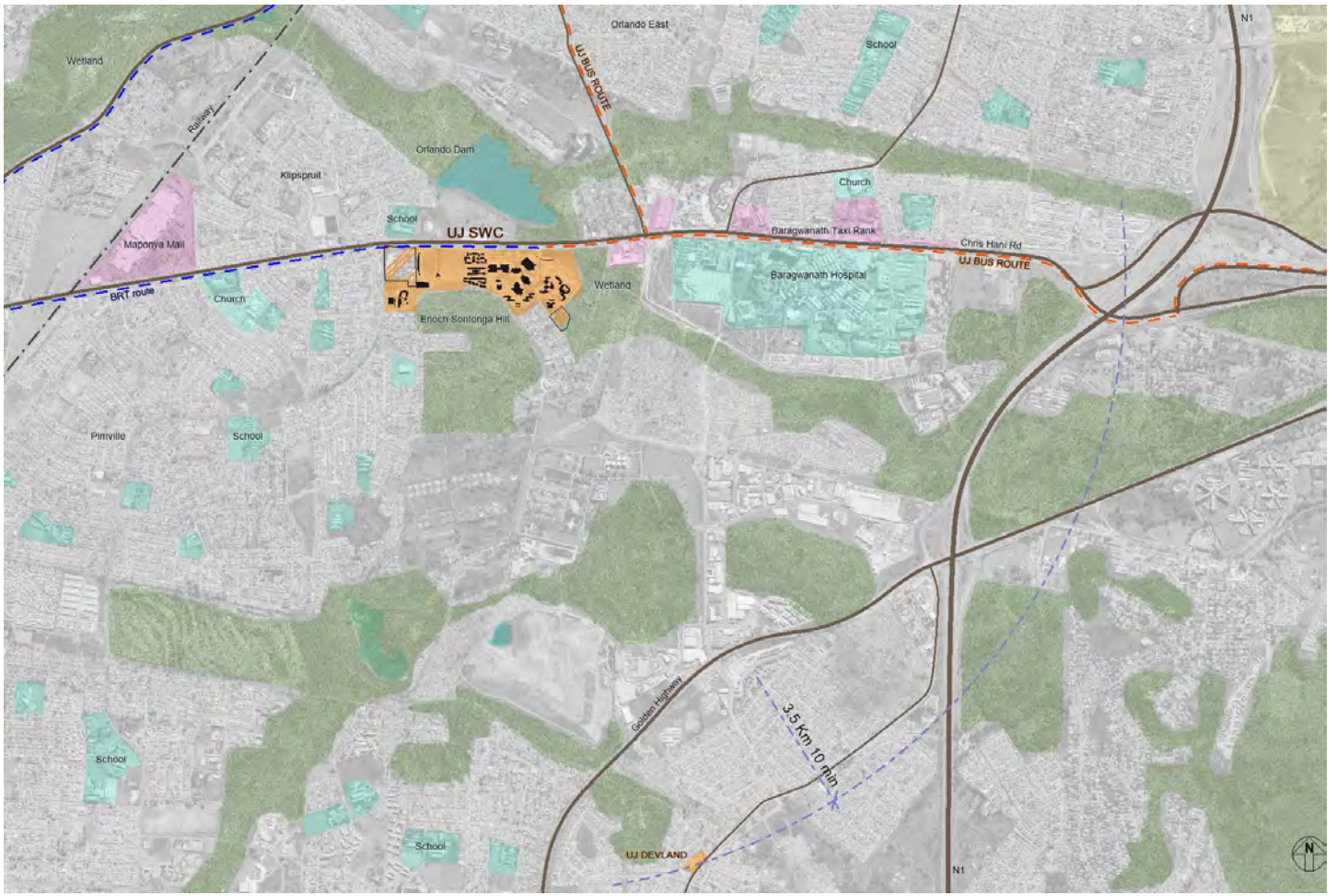
### Campus History:

The Soweto Campus was originally developed in the 1980's, as the VISTA Soweto Campus. VISTA Soweto was merged with RAU to form UJ in 2005. At the time of amalgamation, the campus comprised of a series of double and single storey face brick buildings with asbestos shingle roofs.

Subsequent to the amalgamation UJ has developed a significant number of buildings and facilities on the site including; creating new facades to the existing vista buildings, enhancement of the campus landscape and circulation routes, four student residences, library, The Braam Fisher and Robert Sobukwe academic buildings, and sports facilities

### SWC Urban Context:

The SWC campus has many institutional neighbours – Baragwanath Hospital & taxi rank, several churches & schools, and POSA residences in the area




*UJ SWC urban context plan*

The campus is located on Chris Hani Road one of the main arterial roads in Soweto, with the Orlando Dam and cooling towers to the North and the Enoch Sontongo hill to the south.

The dam, hill, and cooling towers form distinct landmarks visible form most parts of the campus, helping orientate one on campus and create a distinct local context.

The dam, related wetlands, and hill form part of an environmental corridor network that are environmentally significant.

Chris Hani Road is not particularly pleasant and the university's presence and identify onto the road is typified by an unwelcoming concrete palisade fence.

There are a number of significant institutional and commercial facilities in close proximity to the campus including, Baragwanath Hospital and taxi rank, schools churches and malls.

## SWC 2013 Campus Master Plan

A number of the proposals of the 2013 CMP have been implemented on the SWC campus, these include; student residence two and three with a combined capacity of 792 bed, and the student centre.

A number of items proposed in the 2013 CMP have not been implemented including; parking on the east of the campus, additional academic buildings on the central southern portion of the campus. The 2013 CMP indicated erf 41/389-IQ and 107/318-IQ, to the east and west of the campus respectively, to be part of the campus, however these erfs are in fact not part of the campus and are not owned by UJ.

Additionally, a number of projects not contemplated in the 2013 CMP have been implemented on the SWC campus including; the photo voltaic array over the northern parking lot, and student's residence 4 to the east of the campus disconnected form the residence precinct


*UJ SWC Projects Completed Since 2013 Plan*

### SWC Student Population

The 2013 CMP recorded the student population on SWC as 4709 and recommended the reduction of the student numbers to 3313 by 2020. This recommendation was made in light of the calculated 30% under provision of academic facilities at SWC, in terms of the HEMIS space norms. However there appears to be some disconnect between the recommendations of the 2013 CPM, and the UJ enrolment plan.

The student population has in fact increased to 5180 an increase of 471 students, as opposed to the decrease of 1406 as recommended by the 2013 CMP, and no new academic buildings were added at SWC over this time. The alignment of these plans and policies requires further discussion and investigation.

## SWC Student Population 2021

| Faculty | No. students |
|---|---|
| CBE | 3746 |
| EDU | 1216 |
| HUM | 215 |
| **TOTAL** | **5180** |

### 2021 SWC Student Residence capacity

| | |
|---|---|
| Capacity | 1 105 |
| Occupancy | 873 |

The 2021 residence occupancy rate on SWC is 79%.

In 2022 an additional 501 bed becoming available with the occupation of SWC residence 4, increasing the total residence capacity on SWC to 1606, as such 30% of the current student population can be accommodated in on campus residences on SWC. This is the highest bed to student ratio of the four UJ campuses.


*SWC Open Space & Circulation Plan*

## SWC Status Quo Analysis through SDF Principles

### Consolidation

The SWC on the slopes of the Enoch Sontongo Hill and views of the Orlando cooling towers and dam, and open lawns between buildings has a distinct spatial quality and identity. However, many of the buildings have been placed in the centre of available space rather than to the edge of spaces so as to hold public space. As such there are many dead edges and back sides to buildings.

Many buildings have also been built on large cut platforms creating further dead edges and negative space.

Two portions of land currently owned by the Johannesburg Property Company (JPC) the land holding arm of the municipality, have been allocated for transfer to UJ. However, the legal processes related to these transfers are protracted.

These properties would be of great benefit to the future development of the campus, and we recommend that the legal processes be managed closely, to achieve the transfers in a defined and finite timeframe.

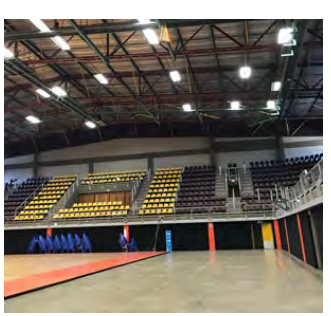
## Integration with Host City:

The SWC sports fields and the Imbizo hall are often utilized by the broader community and provide desirable interaction and contact between UJ and the community. These community events do however present challenges that need to be considered in the development of the SDF. Often the on-campus parking capacity is insufficient for community events and protection services have a challenge to contain crowds with in isolated areas of campus.

The physical face of the campus along Chris Hani Road is not very welcoming to the community and does not communicate a positive identity. The arrivals forecourt between the main gate and the second pedestrian gate is disorientating and unwelcoming.


*SWC Space Use Plan*

*SWC, Imbizo hall, arrival forecourt, sports fields, concrete palisade fence*



## Equity, Dignity, and Quality of Student Life

The are fine buildings and public space on the SWC campus including; the library, The Braam Fisher and Robert Sobukwe academic buildings, Imbewu residence, the landscaping to the north and west of the library, and the sports facilities. These facilities create an environment where students can learn with pride, security and dignity, with access to a fairly wide range of amenities and activities.

However, the many dead building edges and profusion of fences between parts of the campus detract from the dignity and interactivity of the campus.

## Sustainability, Regeneration, and Infrastructure:

A large grid tied PV array has been installed over the main parking area to the north of the Braam Fisher and Robert Sobukwe academic buildings, providing a significant portion of renewable power to the campus.

Solid waste is recycled on campus.

The intention of the environmental corridor on the south and east boundary of the campus, is to allow wildlife to transit between the Orlando wet land and the Enoch Sontongo Hill. However, the corridor is currently degraded in some areas, and needs to be restored and better protected in future.

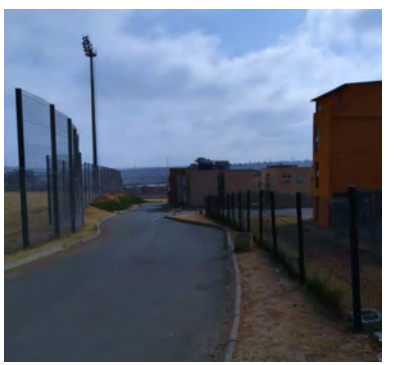
Back up water storage is not adequate to all facilities and several academic and administrative functions are disrupted in the event of municipal water cuts.

The original VISTA buildings were poorly detailed and incorporate asbestos material, these buildings require significant maintenance. Further more a number of items were noted on our site visit that do not comply with building regulation including, fire safety, mechanical ventilation requirements, balustrades and edge protection. We recommend that a full audit be conducted with regards to regulatory compliance

*Library lawns, diverse learning*

*Dead building edge*

*Imbewu Res: positive urban edge*



*Barriers to connection*

Further more there is insufficient water pressure in the fire supply line at the Funda UJabule school.

## Diverse Learning Environments

The library and wifi pods on the lawns around the library are examples of a rich and diverse learning environment on the campus. The Braam Fisher and Robert Sobukwe buildings also provide a good range of teaching spaces with some marginally successful interactive informal learning spaces in the lobby.

The Enoch Sontongo, and TW Khambule buildings provide a narrow range of teaching spaces with arrival and lobby spaces that do not invite and facilitate informal interaction and learning.

## SWC SDF Informants:

The development of the SDF should consider, address, and or build on the following characteristics of the site:

- Need for more and better integrated communal spaces and recreational spaces, with greater spatial connection required between dislocated nodes on Campus
- Opportunity to enhance a community outreach at Imbizo and sports facilities. To be integrated with the security compartmentalisation of the campus and the clarification and rationalisation of the pedestrian movement routes. With a transportation or parking solution for large public events. With an improved campus identity facing Chris Hani Road.
- The spatial plan is to embrace and celebrate the unique character of the site, the slope, and local land marks.
- Sustainability, all future developments to align with and contribute to UJ sustainability objectives.
- Blended learning may change the mix of spaces required on campus, this may place a focus on the redevelopment of existing buildings rather than the development of new structures. With the possibility of redeveloping and densifying the original VISTA campus buildings

*SWC good quality communal space with strong link to academic buildings, this spatial character is to be enhanced and extended throughout the campus.*

## 4.4 Status Quo
## Doornfontein Campus (DFC

### Urban Context:

The campus is located in a high density urban environment, significantly degraded in many areas, with significant security problems.

Saratoga Avenue on the north and Joe Slovo Drive to the east of campus are busy arterial streets that are not pedestrian friendly. Beit Street to the south is more pedestrian friendly.

The four UJ owned off site residences to the east across Joe Slovo Drive has a capacity for 1025 students, accounting for 63% of the UJ owned student residence beds at the DFC campus. In addition to the UJ residences there are several private student residences in close proximity to the campus. As such, student life on the DFC campus is significantly integrated into the surrounding urban context. This suggests that a broader view of what constitutes the campus beyond the perimeter fence is necessary to develop a working spatial frame work for DFC.

The Johannesburg Stadium is 800m to the east of the DFC campus, and students have access to this facility for formal sport.

UJ protection services have started City Improvement District (CID program on the periphery of the campus, this is showing significant improvements in the quality and safety of these areas. Further work and development are planned for the CID. We recommend that the work being undertaken by UJ Protection Services be integrated with and into the development of the spatial frame work.

### Campus History:

The John Orr building completed in 1984 to house the Technicon Witwatersrand (TWR was designed by VDK (later BSSC architects. The austere design philosophy of Daan Kesting is strongly evident in the John Orr building.

*CNR Jo Slovo & Saratoga Ave*

*JHB Stadium & Akanani UJ*

*Kopano House UJ off campus res*

*Route between campus and res*

The building is also a manifestation of the “building as a campus” typology.

Today however the campus is comprised of an assemblage of buildings including pre-existing homes, apartment buildings, warehouse spaces, and purpose built academic and residential buildings. Including almost all of the land between, Saratoga Avenue to the north, Joe Slovo Drive to the east, Beit Street to the south and End Street to the west.

TWR merged with RAU and Vista in 2005 to form UJ.

## 2013 Campus Master Plan (CMP:

The adaptation and refurbishment of the Qoboza Klaaste (QK building as proposed in the 2013 CMP has been implemented. The building provides laboratories, lecture venues, seminar rooms, and study spaces for FEBE.

A number of items proposed in the 2013 CMP have not been implemented including; three new academic buildings on the north of the campus and the upgrading and rerouting of the internal road network and the parking areas.

Additionally, a number of projects not contemplated in the 2013 CMP are underway on the DFC campus including; The new science and engineering laboratories on the west of campus, and the Rescue Disaster Simulation Centre to the north west of the John Orr building.


*DFC Projects Completed Since 2013 Plan*

Regarding student residences the 2013 CMP states that “There is no space on the existing Campus for residences”, in our view this not correct. The CMP goes on to propose the develop of new student residences on UJ owned land to the east of Robin Crest and the potential to purchase more land to the north or south of the campus. To accommodate the academic expansion associated with the development of the QK building.

The 2013 CMP however does not integrate the (then existing) off campus UJ owned student residences into the plan, this is in our view, a significant oversight.

Two off campus UJ owned residences, Habitat, and Kopano House, have been refurbished since 2013.

## DFC Student Population:

The 2013 CMP recorded the student population on DFC at 7072, thus the student population on DFC has grown by 39% in the past 8 years. All the faculties have contributed to this growth, with the greatest percentage of change occurring in the Science faculty, and the greatest quantity of growth in FEBE.

Based on the current figures, 14% of the DFC student population can be accommodated in UJ owned residences, 63% of the UJ owned residence bed are off campus, and occupancy rate is 61%.

## SWC Status Quo Analysis through SDF Principles

## Consolidation:

A significant proportion of the buildings on the DFC campus are dense multi story buildings, including the student residences, the John Orr building and the QK building.

As such the effective campus land area per student on DFC is very efficient at 14m$^2$ per student. The total area of the campus including, QK, and the off campus residences is 16,3 ha.

*SWC Open Space & Circulation Plan*

### DFC Student Population 2013 - 2021

| Faculty | 2013 | 2021 Student count |
|---|---|---|
| FEBE | 3819 | 6456 |
| HSC | 2809 | 3773 |
| HUM | 67 | 125 |
| SCI | 376 | 1196 |
| **TOTAL** | **7072** | **11548** |

### 2021 DFC UJ Owned Student Residence capacity

| | Capacity | Occupied |
|---|---|---|
| On Campus | 1025 | 599 |
| Off Campus | 599 | 393 |
| **Total** | **1624** | **992** |

Current 14% of the DFC student population can be accommodated in UJ owned residences. With 63% of the UJ owned residence bed located off campus, with a total occupancy rate is 61%. DFC has the lowest residence occupancy rate of the four campuses.

## Consolidation:

The new laboratory building under construction on the west of the campus is contributing to the consolidation of DFC as a free-standing campus. Previously students had to travel from DFC to APK to utilise the laboratories. In future the DFC students will have access to laboratories on the DFC campus.

The off site residences and the routes connecting between the residences and campus need to be considered in the design of the SDF. With these areas consolidated into the safe campus precinct through the CID and safety through environmental design.


*SWC Space Use Plan*

## Integration with Host City:

A number of facilities are provided on DFC accessible to members of the public, including the following clinics; optometry, chiropractic, biokinetic, and podiatry (shown in salmon colour in the attached plan). These are a positive connection with the local community. However, the arrival space and navigation to these various clinics in not welcoming and is difficult to navigate.

The campus' face to the city is dominated by a mash up of various security barriers. While these security barriers are obviously necessary, they are unwelcoming and in spite of being painted orange do not create a positive identity for the campus

The campus' face to the city is dominated by a mash up of various security barriers. While these security barriers are obviously necessary, they are unwelcoming and in spite of being painted orange do not create a positive identity for the campus.

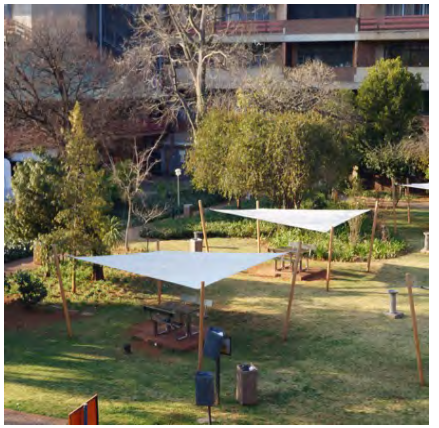
The off campus UJ residences create real and meaningful connection between the university and the city. There are however some negative dimensions to this relationship, specifically related to student safety. This has resulted in UJ Protection Services initiating City Improvement District (CID) to reach outside of the campus boundaries and proactively improve the quality and safety of the surrounding areas.

The current initiative focuses primarily on cleaning streets in the surrounding urban area, this has already resulted in a decrease in crime in the area. There is much further scope and many more improvements to be made in the CID. The SDF aims to integrate with the work of the CID to promote safety through environmental design around the campus and specifically between the campus and the off site UJ residences.

## Equality and Dignity:

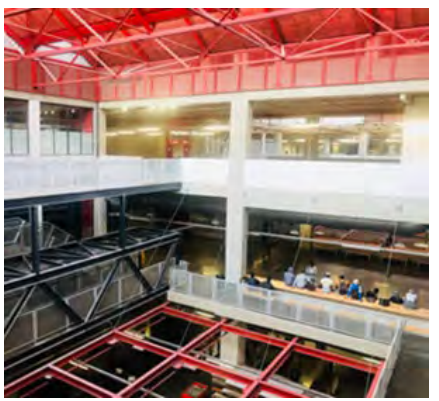
As noted above, strides are being made to improve student safety in the urban context around the campus and this will improve the dignity of student life on DFC. Furthermore, with the recent addition of the QK building, the soon to be complete laboratories, and upgrades to the library, the academic facilities at DFC are highly specialised and equitable to the other UJ campuses.

Students do have some access to sports facilities at the Johannesburg Stadium to the east of campus. However, students at DFC do not have equal access to sporting and recreational facilities compared to the other campuses. Some plans are underway to improve this with the planned construction of a multi-purpose outdoor court on the existing parking lot located in the north corner of campus.



*Garden space*

*Open space dominated by parking*



*QK interactive common space*

*Precarious access to res*

## Quality of Student Life:

In addition to points, noted above, relating to safe access to and from the off campus residences and limited access to sports and recreations facilities, there are a number of spatial attributes that impair the quality of student life on DFC. A large proportion of the outdoor space is taken up by parking, with a very small proportion of outdoor garden and gathering spaces, for informal gathering and interaction. The QK building does however, provide good indoor informal interaction spaces.

As the campus has expanded to the west it has incorporated a number of previously separate properties on Davie and Sherwell Streets. As yet these separate properties have not been spatially integrated and connected into the campus.

Furthermore a number of buildings constructed at the end of the TWR era have very blank backs with negative building edges that do not encourage the use of the space between buildings and do not promote informal interaction and gathering.

## Sustainability, Regeneration, and Infrastructure:

The QK building is located on top of a natural spring, at present this water is being pumped out of the building into the cities storm water system. This water could be harvested, and filtered for use on campus.

Solid waste is recycled on campus.

The documentation of the bulk infrastructure on large portions of the site are inadequate making management of the infrastructure difficult.

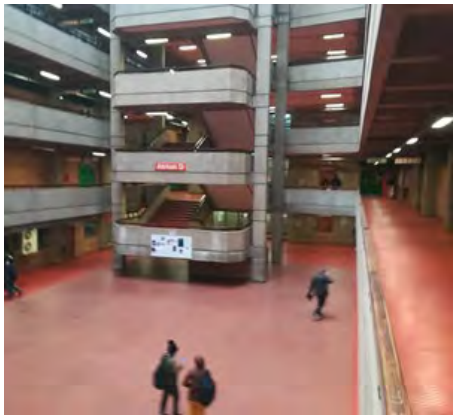
Furthermore, a number of items were noted on our site visit that do not comply with building regulation including, fire safety, balustrades and edge protection. We recommend that a full audit be conducted with regards to regulatory compliance.

The plain trees on campus are infected with shot hole borer beetle and if left untreated this will soon kill off the trees.

## Diverse Learning Environments:

DFC has a number of laboratories, clinics, and specialist training spaces alongside the recently refurbished library, lecture venues and tutorial venues. The QK building also provides a number of informal study and interactive spaces.

*DFC Library*



*John Orr Atrium*

The weakness of the learning environment of the DFC campus is the stark quality of the atrium of the John Orr building and the relatively small provision of informal outdoor learning spaces.

The student centre is removed and disconnected from the main campus buildings, this diminishes the level of informal interaction, where a chance meeting at the coffee shop turn into an academic debate.

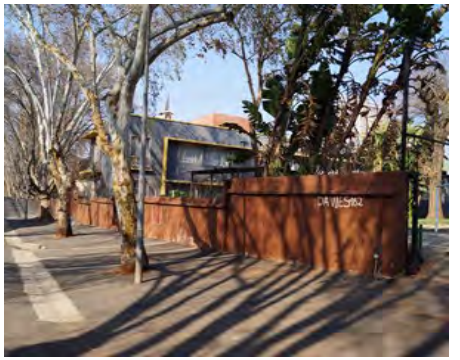
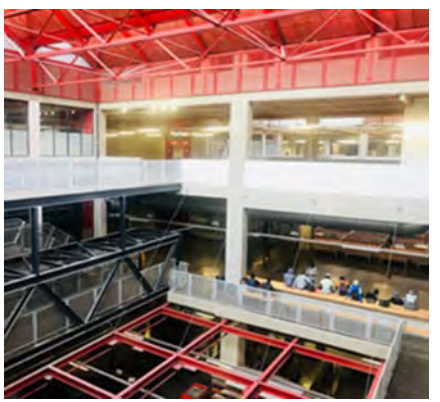
The fragmentation of the student residences and the security risks moving between campus and residences, creates a disconnect in the learning environment.

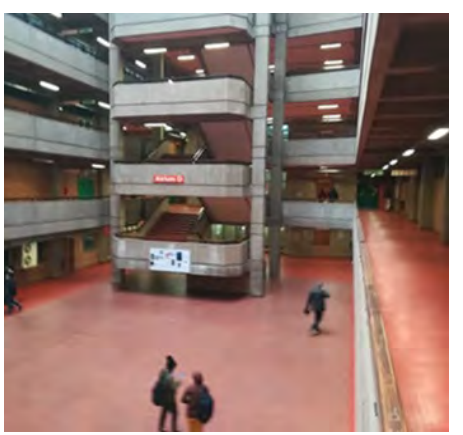
The total mix and proportion of various types of teaching spaces is however based on pre-blended learning requirements. This needs to be assessed and redeveloped as the optimal blended learning pedagogy is explored.

## DFC SDF Informants:

The development of the SDF should consider, address, and build on the following characteristics of the site:

- Need to integrate the off campus student residence precinct with the core of the campus. With potential relationship with the Central Johannesburg College. And possible parking area east of Robin Crest residence.
- Need for east to west pedestrian circulation route with universal access, and enhancement of communal space and redressing of negative edges.
- Proposed new pedestrian entrance on the north of the campus, to connect to BRT station and POSA residences on the north of Saratoga Avenue.
- Need for more and better integrated communal spaces and recreational spaces, between buildings and within the John Orr building.
- Opportunity to create a community outreach node serviced by the various clinics. To be integrated with the security compartmentalisation of the campus and the clarification and rationalisation of the pedestrian movement routes.
- Consolidation of residences on the west of the core campus with infill residence projects.
- Additional structured parking required to comply with the city councils parking ratio requirements. Or alternative transport and town planning solutions to be developed.
- Blended Learning may change the mix of spaces required on campus, this may place a focus on the redevelopment of existing buildings rather than the development of new structures
- Sustainability: all future developments to align with and contribute to UJ sustainability objectives.

## 4.5 Auckland Park Campuses Urban Context

In addition to the APK and APB campuses UJ owns or leases a multitude of properties in the Auckland Park – Westdene area. Including facilities such as the UJ Stadium, Orban sports fields, Media Park, JBS Tower, Sophiatown residence, and many smaller properties. This fragmented footprint presents many opportunities and challenges. Below we analyze this property configuration through the principles of consolidation and integration with the host city.

This fragmented footprint provides many, diverse opportunities for interaction and contact with the local community and surrounding institutions. The surrounding community also provides a number of amenities that are of value to UJ; for example, social and commercial amenities in Brixton, Melville and Westdene, along with many private student residences.


*Mapping of the combined Auckland Park Context*

The sports facilities in Westdene can accommodate large public events while not impacting on access control on campus as the sports facilities are separate from the main campus. This is an operational advantage.

The fragmentation of facilities does however present a number of operational challenges. Services such as, ITC, security, and maintenance need to be provided to each site. In the case of smaller sites, the relative cost and effort of providing these services is high compared to providing the same services in a centralised setting.

## Auckland Park 2013 Campus Master Plan Review:

The 2013 CMP proposed to address the APK and APB campus cluster through the creating of a 'University Corridor'. To be created through the acquisition of properties along Twickenham and Richmond Avenues. The need to improve the efficiency, safety and quality of the connection between the two campuses is clear. However, the strategy of acquiring and developing the land between the two campuses has proven to be sub-optimal for a number of reasons.

The macroeconomic context has changed significantly and funding to acquire and develop new properties has become less accessible.

The plan for a large institution such as UJ to acquire properties in a specific location has created a localised imbalance in the supply and demand, escalating property prices locally.

There is significant unrealised development potential on property already owned by UJ and as such the acquisition of more additional properties could be considered to be an inefficient deployment of resources.

In our view the enhancement of the corridor between the two campuses could be achieved through partnerships with the city and other stakeholders through a CIB type initiative, at a lower cost.

*Twickenham Road*

## 4.5.1 Auckland Park Bunting Road Campus (APB)

### Campus History:

The Bunting Road campus was previously the Goudstadse Onderwyserskollege (GOK). Many of the campus buildings and facilities were built between 1965 and 1970. GOK closed in 1992, and in 2005 the campus was part of TWR, when the Technikon merged with RAU to become UJ.

### 2013 Campus Master Plan (CMP):

Since the 2013 CMP two projects have been undertaken on the APB campus namely, the upgrading and refurbishment of the library interior, and the construction of an indoor therapy pool for the biokinetics department.

The 2013 CPM proposed two options for the APB campus, as outlined below.


*APB Projects Completed Since 2013 Plan*

Option A, proposed:

- No new academic buildings be developed
- Capping the number of students at 5677 for the campus, and transferring 679 FETS students from APK to APB
- New student residences be developed, surrounding the existing Kilimanjaro Res and on the sports fields to the west.

Option B, proposed:

- Consolidation of Faculty of Management on to APB, with corresponding increase in total student numbers on campus to 17511
- Construct 18 264m2 of additional academic buildings
- New student residences be developed, surrounding the existing Kilimanjaro res.

Option A has been implemented in part, in that there have been no new academic buildings built on APB since 2013, and the student population is approximately at the figure proposed as the cap for the existing facilities on campus. However, the number of CBE students on APB has not increased and no new student residences have been constructed.

Further to the above it should be noted that many of the sites proposed for new student residences, in the 2013 CMP, surrounding the existing Kilimanjaro res are extremely steep and are in our view not viable as sites for student residences.

## APB Student Population:

The 2013 CMP recorded the student population on APB at 5345, thus the student population on APB has seen a growth of 5% in the past 8 years.

*APB Open Space & Circulation*

### APB Student Population 2013 - 2021

| Faculty | 2013 | 2021 Student count |
|---|---|---|
| CBE | 4052 (FEFS+MAN) | 3706 |
| FADA | 1011 | 1391 |
| FEFS | 1385 | merged into CBE |
| HUM | 283 | 536 |
| MAN | 2667 | merged into CBE |
| **TOTAL** | **5345** | **5633** |

### 2021 APB UJ Owned Student Residence capacity

| | Capacity | Occupied |
|---|---|---|
| On Campus | 1295 | 1142 |

A notable change related to the distribution of the various faculties across the campuses was the formation of the College of Business and Economics in 2017, by the combining of previous Faculty of Economic and Financial Sciences, and Faculty of Management. The total number of CBE students on APB has declined by 346 students.

Currently 20% of the APB student population can be accommodated in UJ owned residences. The 2021 residence occupancy rate on APB is 88%.

## APB Status Quo Analysis through SDF Principles:

### Consolidation:

APB is the second largest of the UJ campuses with a land area of 42,7 ha, with a student population of just 5 633, APB is by far the least dense of the campuses with a land area to student ration of 76m2 per student. This low density can be attributed to three primary factors.


*APB Space Use Plan*

The proportion of the site with steep slopes that are not viable for development, the low-rise character of the academic buildings, and the incorporation of a large sports complex in the campus. However, if the all Westdene sports fields are included in the calculation for APB a ratio of 37m2 of land per student results.

The significance of this is to be aware of the potential development capacity of the APB campus in the university's long term planning, as and when significant development capacity may be required.

## Integration with Host City:

The services provided by the hospitality school and Netcare Biokinetics Rehabilitation Centre are accessible to the community and provide opportunity for positive contact with the community. The main vehicular entrance onto Campus and Bunting Road are neat and orderly and the outreach facilities are easily accessible from Bunting Road.

The Netcare Rehabilitation Centre and a private property at the top of Falcon Road (erf 159 – 169) are accessed from Bunting Road inside of the UJ gate. This relationship with Netcare is positive, however the relationship with the private property is problematic.

APB is less than 400m from the Wits University Sturrock Park, and the AFDA Film School, presenting opportunity for partnerships in these areas.

The School of Tourism and Hospitality, FADA, and the library have a prominent presence onto Annet Road.

## Equity and Dignity:

The APB campus provides a comprehensive set of facilities including academic, sports, student residence, and recreational amenities in close proximity to the campus. The safety on campus is however compromised by the long and permeable southern boundary, and criminal incidents effecting staff and students have been reported in the urban areas close to campus.

## Quality of Student and Staff Life:

The slope of the campus creates a unique experience and identity to the campus, with vast views from the sports fields and student residences.

*Coherent communal space*

*Insecure southern boundary*

*Unique views from sports fields*

*Dislocated space*

The slope does however create some fragmentation and separation between the various precincts on the campus; academic, residence, and sport.

The old Goudstad portion of the campus has a coherent spatial order with positive spaces for interaction and circulation between buildings. The FADA and STH buildings however do not connect positively with the greater campus and do not promote interaction and connection with the campus as a whole.

## Sustainability, Regeneration, and Infrastructure:

The academic buildings on APB run parallel to the slope at the bottom of the hill, this is a sensible architectural configuration. However, these buildings form a barrier to the stormwater coming down the slope from the upper part of the campus. The bulk storm water infrastructure appears aged and inadequate to deal with substantial heavy rains on site. Please refer to the bulk services engineers report for further detail in this regard.

The bulk services on site including municipal services passing through the site are aged and failing in places. Work is underway to attend to specific problems, however in time a more systematic replacement of services may be required.

Furthermore, a number of items were noted on our site visit that do not comply with building regulation including, fire safety, balustrades and edge protection. We recommend that a full audit be conducted with regards to regulatory compliance.

Solid waste recycling is taking place on site.

## Diverse Learning environments:

APB has a range of learning environments from lecture venues to specialist facilities and the recently refurbished library. Some interactive and informal learning spaces are also provided such as the Ontdekking building, although the quality of this space is rather dark and worn.

The total mix and proportion of various types of teaching spaces is however based on pre blended learning requirements, this needs to be assessed and redeveloped. As the optimal blended learning pedagogy is explored.

*Ontdekking building*

*Aging bulk services*

## APB SDF Informants:

The development of the SDF should consider, address, and or build on the following characteristics of the site:

- The campus is a urban precinct and not simply the area enclosed by the fence around the core campus. Safe integrated movement required to adjacent UJ facilities and communal facilities used by students
- Significant site slopes, constrains areas of development, spatial plan to embrace and celebrate the unique character of the slope
- Greater spatial connection required between dislocated nodes on Campus
- Existing development potential of the large and underdeveloped site
- Close proximity to Wits, potential relationships and synergies with Wits
- Blended Learning may change the mix of spaces required on campus. This may place a focus on the redevelopment of existing buildings rather than the development of new structures
- Sustainability, all future developments to align with and contribute to UJ sustainability objectives.

## 4.5.2 Auckland Park Kingsway Campus (APK)

### Campus History:

The original buildings on the APK campus were designed and built in the creating of the Rand Afrikaans University (RAU). The architects were commissioned in 1967 and the project was completed in 1975, at a cost of R 41 million. Incorporating the most sophisticated construction techniques and building systems of the time. The architects were Wilhelm O Meyer and Partners in association with Jan van Wijk and Partners.

The original master plan for the campus included a number of future buildings arranged as a series of radial arms. The full extent of the original master plan was not constructed in the 1970's and the full development potential of this mater plan is still yet to be realised.

Given the formal strength of the original buildings and the order of the master plan, future masterplans should acknowledge and respond to or build on these ordering structures.


*APK Projects Completed Since 2013 Plan*

### 2013 Campus Master Plan (CMP):

A number of projects proposed in the 2013 CMP have been completed. These are the upgrading of the library, the addition of the Les A auditoriums, and the addition of the Akanya and Intellilab laboratories.

The 2013 CPM also proposed new student residences in the green belt to the north of the existing Cornerstone and Karibu Jamii residences.

In our view this green belt is an critical space of greenery and relief on campus. The composition of the green belt includes the lawn in front of the residences and the bank of trees on the edge on campus. The green belt has importance as a space and not just a hedge.

Furthermore, the original master plan, and the various design iterations of the design incorporate this green belt a component of the design, and edge and a space onto which the bulk of the campus' radial arms overlook. The original master plan and the strong spatial logic of the existing buildings propose further development of the radial arms to the south and south west of the main ring, this development potential has as yet not been utilised. In our view these development opportunities should be explored before open space is devalued to simply being available for development.

## APK Student Population:

The 2013 CMP recorded the student population on APK at 20 148, thus the student population on APK has seen a growth of 24.5% in the past 8 years. A notable change related to the distribution of the various faculties across the campuses was the formation of the College of Business and Economics in 2017, by the combining of previous Faculty of Economic and Financial Sciences, and Faculty of Management.


*APK Open Space & Circulation*

### APK Student Population 2013 - 2021

| Faculty | 2013 | 2021 Student count |
|---|---|---|
| CBE | 8434 (FEFS+MAN) | 10754 |
| EDU | 2425 | 2550 |
| FEBE | 1114 | 2539 |
| FEFS | 5797 | merged into CBE |
| HUM | 4824 | 4993 |
| LAW | 1385 | 1867 |
| MAN | 2637 | merged into CBE |
| SCI | 1966 | 3890 |
| **TOTAL** | **20148** | **26720** |

### 2021 APK UJ Owned Student Residence capacity

| | Capacity | Occupied |
|---|---|---|
| On Campus | 2732 | 2552 |

Currently 9,5% of the APK student population can be accommodated in UJ owned residences, the 2021 residence occupancy rate on APK is 93%.

## APK Status Quo Analysis through SDF Principles:

### Consolidations:

The APK campus was historically design and constructed as an independent free-standing campus, the large brutalist buildings and strong spatial order give the campus a distinct identity. The APK campus precinct include a number of adjacent facilities including, the sports fields in Westdene, Sophiatown residence, the parking terrain to the north of Kingsway Road, a number of residential properties in Brixton Melville and Auckland Park, and a number of un developed properties.

Further to the development potential of the adjacent properties in the campus precinct, there is still much unrealised development potential on the APK campus itself.

Through the principle of consolidation, the SDF seeks to assess, optimise and utilise the potential of existing facilities and land, rather than acquiring more land or developing new structure.


*APK Space Use Plan*

### Integration with Host City:

The Westdene spots facilities and the UJ theatre are high quality facilities that host community events.

The dislocation of the sports fields from the main campus allows for the public to attend events at the sport fields with out coming onto campus, this makes large public event easier to manage.

The scale of the campus may be overwhelming for visitors, if visitors need to engage with staff or students in the heart of the campus.

## Equity and Dignity:

Historically the APK campus is the most comprehensive of all the UJ campuses, with many of the best quality facilities. Much development has been undertaken over the course of the past 16 years on the other three UJ campuses to create more parity. In spite of these developments on the other three campuses it is anecdotally, reported that the perception of APK as the “flag ship” campus still persists.

This perception may, in part, be based on the quality of the public space on the APK campus compared to the other campuses. Of the four UJ campuses,the APK campus has the strongest and most coherent spatial order, with a range of communal spaces and a well-established well-maintained landscape.

As noted above the campus is not an isolated island but incorporated into a precinct of facilities, in which staff and students move in and out of spaces controlled by UJ Protection Services. As such, the SDF must give consideration to the entire precinct, and prioritise safe movement and connection through the precinct.

## Quality of Student and Staff Life

The APK campus provides a wide range of facilities including: specialist laboratory spaces, a recently refurbished library, a range of academic teaching spaces, student residences, and formal and informal sports and recreational facilities.

Further more there is a range of recreational and retail facilities in close proximity to the campus.

## Sustainability, Regeneration, and Infrastructure

A large grid-tied PV array has been installed over the main parking area to the east of A Ring, providing a significant portion of renewable power to the campus.

Solid waste is recycled on campus.

*Recreational sports field*

*Dense established landscape*

*Ring informal interaction*

*PV installation over parking*

The centralised service district with accessible ring mains has the potential to be converted into a highly efficient renewable service zone.

The multistorey buildings on campus accommodate a high density of use while also providing a significant proportion of open space between buildings. Much of this open space is planted with well-established indigenous landscaping. These landscapes provide a habitat that supports biodiversity and sequestrates carbon.

Furthermore, a number of items were noted on our site visit that do not comply with building regulation including, fire safety, balustrades and edge protection. We recommend that a full audit be conducted with regards to regulatory compliance.

## Diverse Learning Environments:

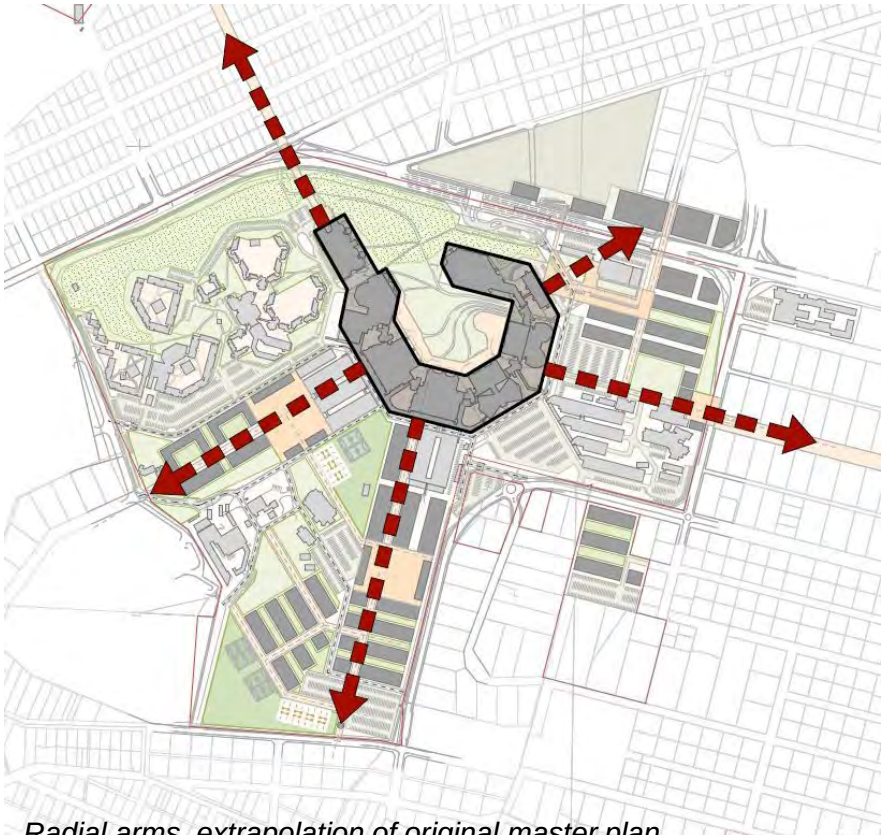
The APK campus boasts a wide range of teaching environments including laboratories, lecture venues, tutorial venues, and the library. The recently refurbished library offers a range of quiet and interactive learning spaces. The circulation ring of the main building creates a concentration of users, promoting interaction. The ring provides some informal breakaway and interactive spaces to support the density of people within the circulation space. However, the space is ridged in nature and our reading is that the interaction in the space will be brief, rather than informal working discussion type interaction.

The total mix and proportion of various types of teaching spaces is based on pre-blended learning requirements. This needs to be assessed and redeveloped as the optimal blended learning pedagogy is explored.

## APK SDF Informants:

The development of the SDF should consider, address, and build on the following characteristics of the site:

- The campus is a urban precinct and not simply the area enclosed by the fence around the core campus. Safe integrated movement required to adjacent UJ facilities and communal facilities used by students
- The rational, strength and order of the original master plan. New developments should integrate with this order in a contemporary manner, including the utilization of land currently occupied by single or double story low density buildings
- Protection and enhancement of green belts and landscaping
- Existing development potential to be consolidated rather than acquiring more land



*Radial arms, extrapolation of original master plan*

- Additional structured parking may be required when existing parking areas are developed for academic or residence reasons. In addition alternative forms of transport are to be developed
- Blended Learning may change the mix of spaces required on campus. This may place a focus on the redevelopment of existing buildings rather than the development of new structures
- Sustainability: all future developments to align with and contribute to UJ sustainability objectives.

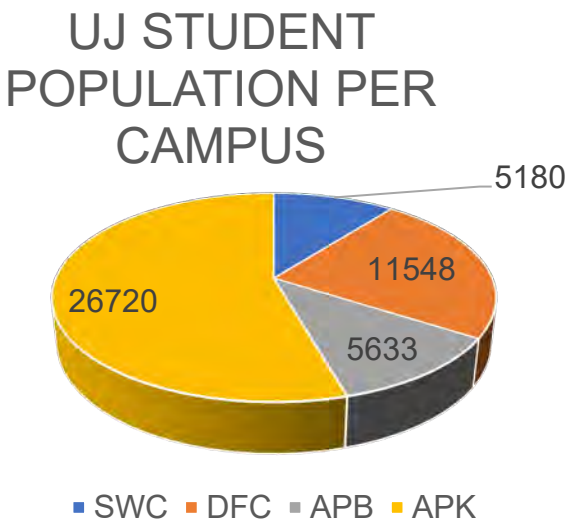
# 5. ELABORATION of SPATIAL PRINCIPLES

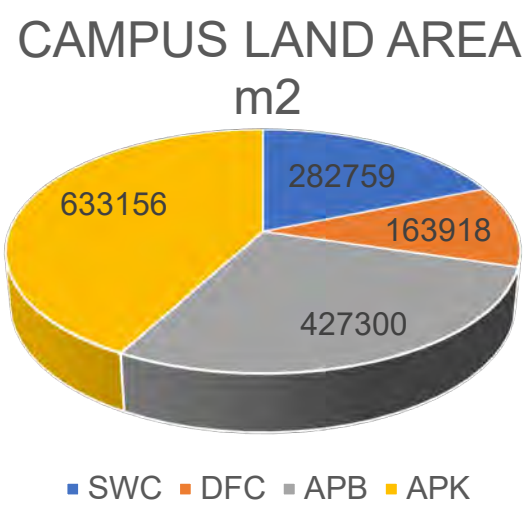
**STATUS QUO**
# CONSOLIDATION

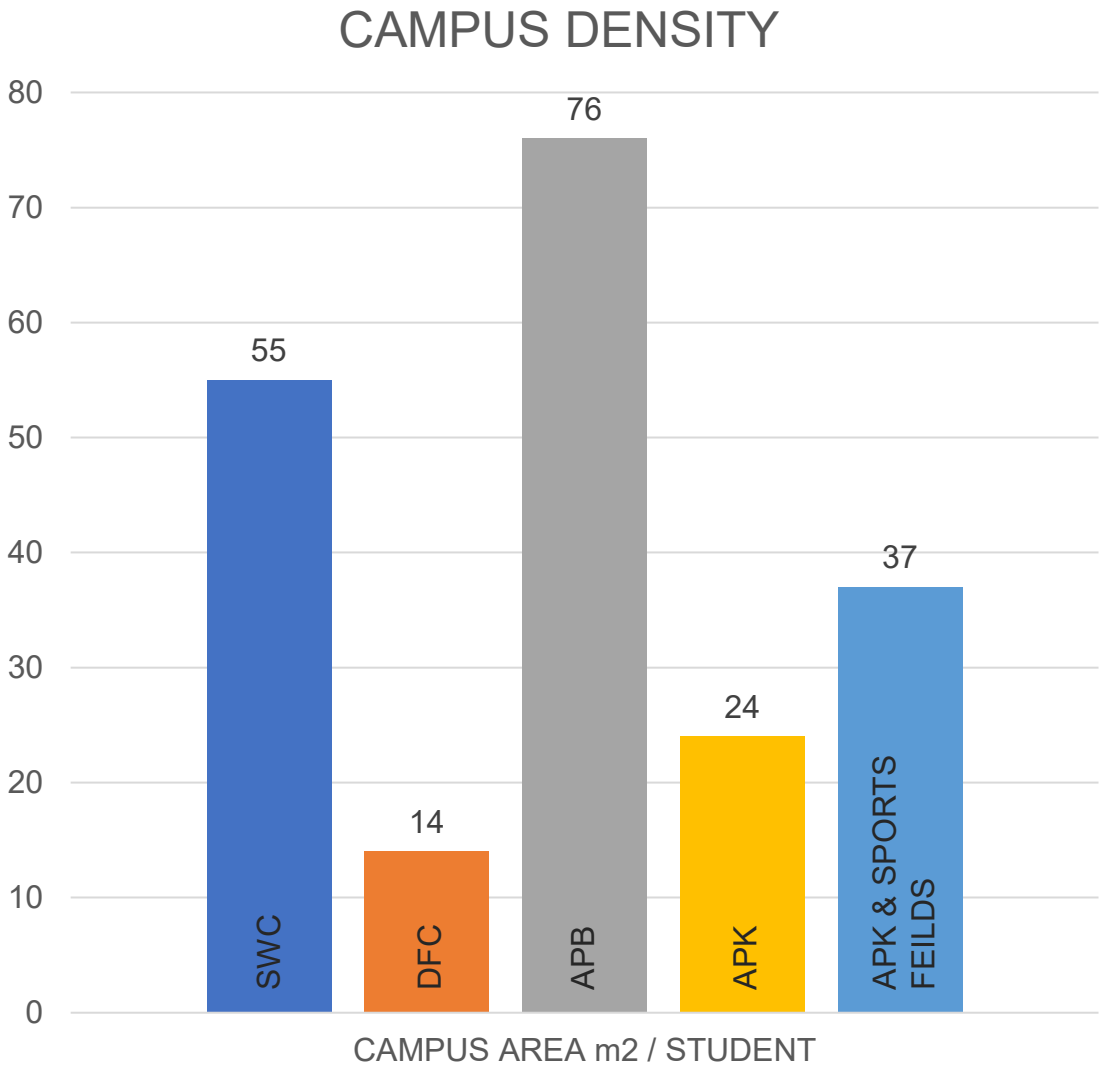
Zooming into Auckland Park, we once again see a dispersed foot print.
The principle of consolidation is to be applied at all scales of the SDF.

## STATUS QUO
## CONSOLIDATION

Comparative land utilization, shows a significant difference in the campus area per student across the 4 campuses. This emphasises the importance of optimising land utilisation, and the significant expansion capacity of the existing campuses. The principle of consolidation aims to harness this available capacity rather than purchasing more property.



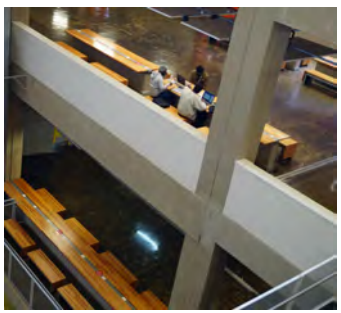

DFC land area includes the sites of off campus UJ owned residences.
APK land area includes the parking to the north of Kingsway and the Sophiatown residence.

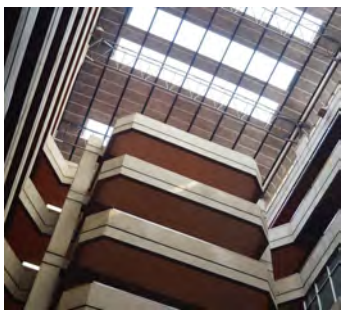
## STATUS QUO
# CONSOLIDATION

A comparison between DFC and APB shows a significant difference in the campus area per student on the two campuses. At the building scale, the principle of consolidation favours the development of multi story buildings.

**APB**
5633 students
427 300m2 campus area
Sprawling low rise facilities
Underutilized land


**DFC**
11 548 students
163 918 m2 campus area
Compact multi story facilities



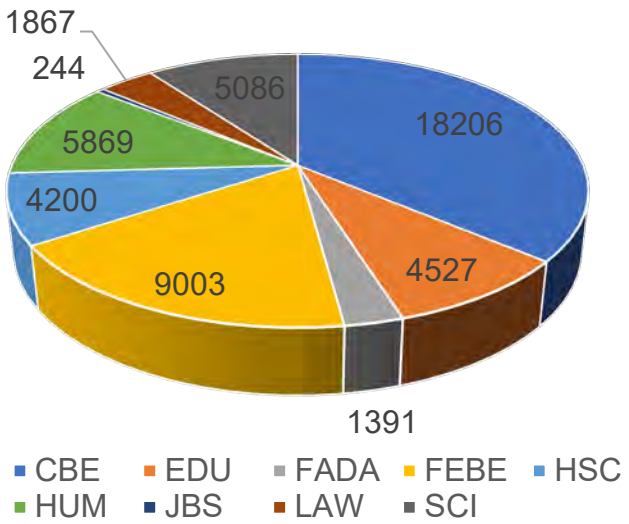


The campus plans are at the same scale

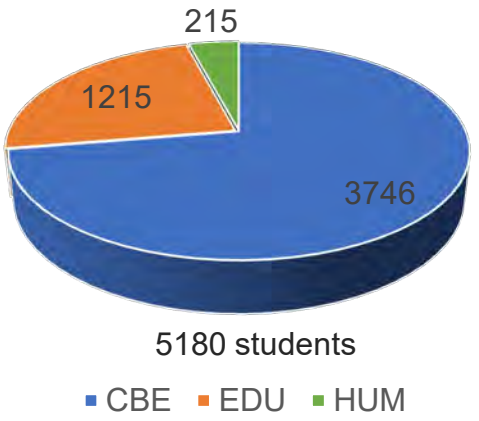
**STATUS QUO**
# CONSOLIDATION

The distribution of students per faculty per campus is presented to contribute to a discussion regarding academic consolidation. The aim of academic consolidation being to avoid duplication, and for each campus to operate independently.

## UJ FACULTIES TOTAL



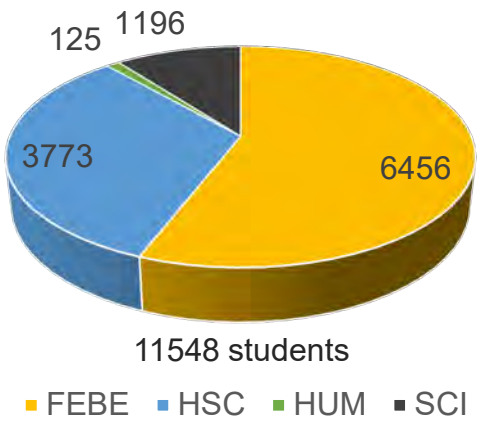

## SWC FACULTIES



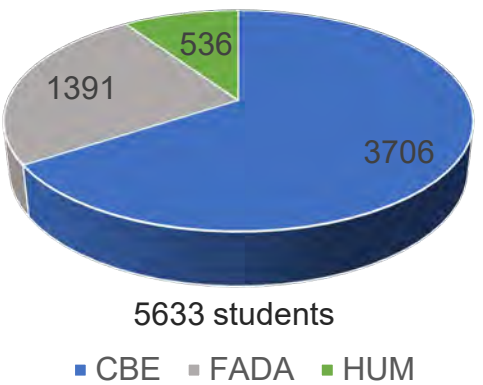

## SDF SCOPING STUDIES

- Finer grain assessment of academic duplication, and review of options for academic consolidation

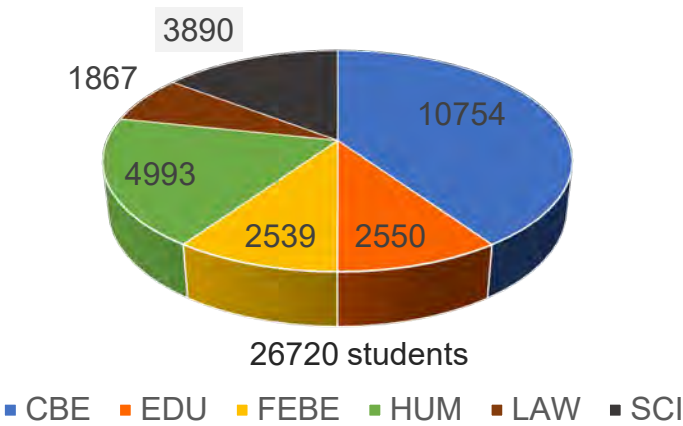
## DFC FACULTIES




## APB FACULTIES




## APK FACULTIES



# Principle 01: CONSOLIDATION

*Defined Boundaries and No-go Zones (i.e. Green Belts)*

- Land is one of the University's most **valuable assets**. It must be used efficiently from the outset.
- **Respect the topography** and the natural beauty of the campus.
- University is the **custodian of the open spaces**, which should not be developed before filling in open spaces within the campus.
- It is important **to strengthen the visual identity and presence** of the university
- Expansion of the footprint should **follow existing infrastructure provisions**.

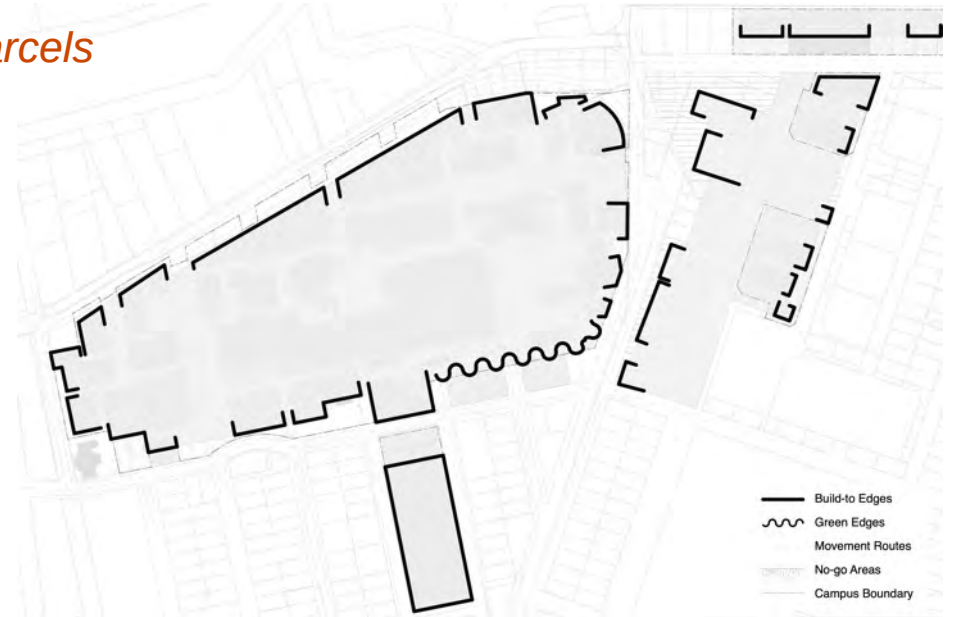
*UJ APB Campus - Green Belt.*

*UJ APB Campus – Natural Green Areas.*

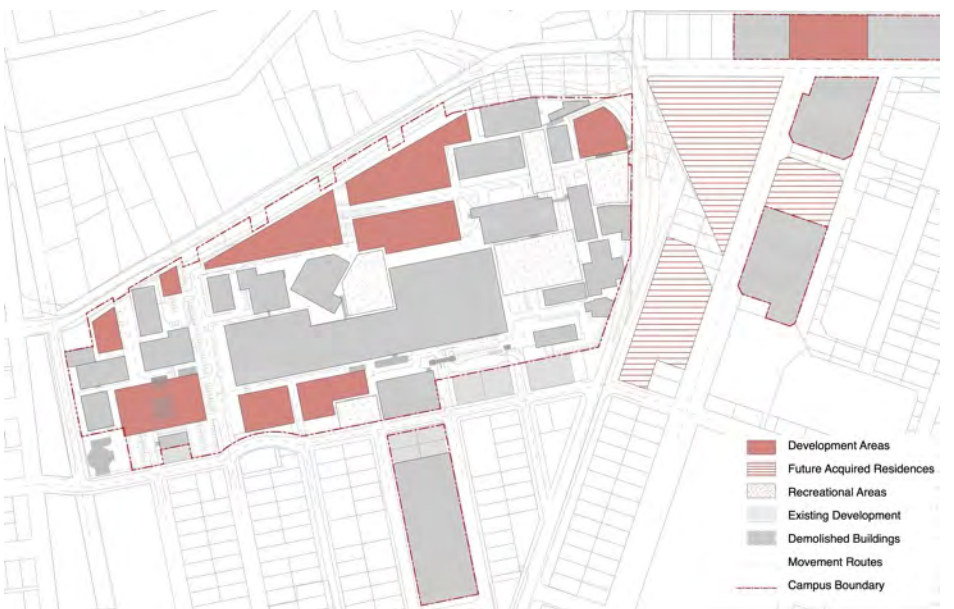
# Principle 01: CONSOLIDATION

*Edge Consolidation and Defined Development Parcels*

- Underutilised **land** portions available for development and expansion-of within the campus.
- Existing buildings in poor condition or low density could be **demolished** to make way for new development
- Infill rather than new expansion of campus footprint.
- Contain development **around existing infrastructure.**
- Buildings placed on the site or street edge must draw a clear distinction between the public and private realm.
- New buildings must act in a **civic manner, and engage and help define the public environment** –not withdraw themselves, and sit behind fences – the building is the 'fence-line'



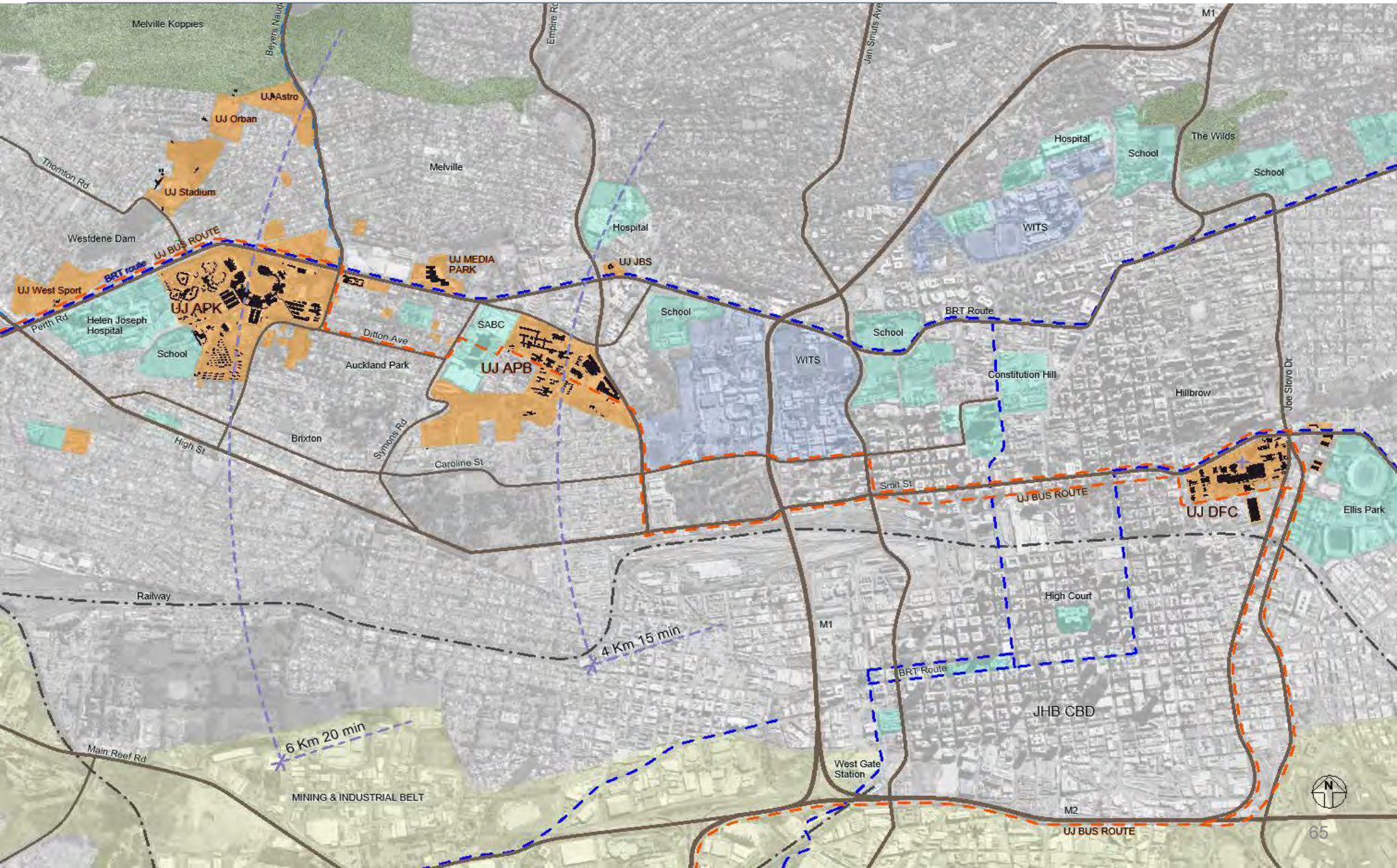

*UJ DFC Campus - Edge Consolidation.*




*UJ DFC Campus - Development Opportunities.*

## STATUS QUO
# INTEGRATION WITH HOST CITY

The map shows UJ's dispersed foot print, and the numerous institutions adjacent to UJ along the Brixton to Hillbrow ridge. Major movement routes, including the UJ and BRT bus routes are also shown.
The principal of, integration with the city, aims to find and optimize share interests and infrastructure, and promote a positive and efficient relationship between UJ and communities and institutions in the city

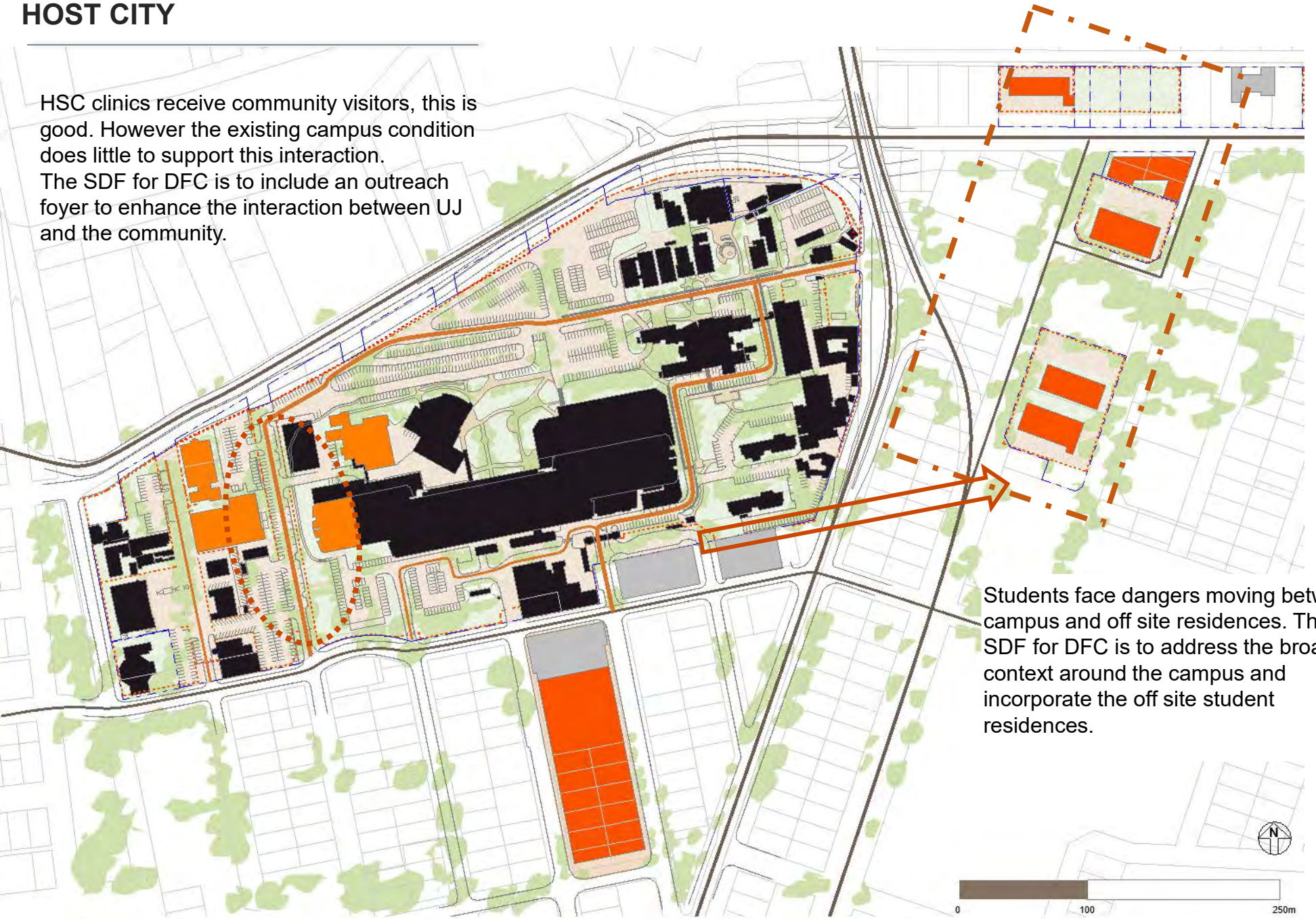


**STATUS QUO**

# INTEGRATION WITH HOST CITY

Examples of opportunities and needs to integrate with the city on DFC.

HSC clinics receive community visitors, this is good. However the existing campus condition does little to support this interaction.
The SDF for DFC is to include an outreach foyer to enhance the interaction between UJ and the community.

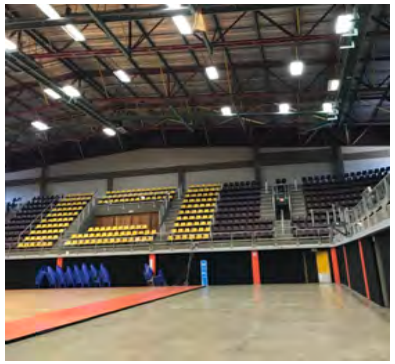



Students face dangers moving between campus and off site residences. The SDF for DFC is to address the broader context around the campus and incorporate the off site student residences.

STATUS QUO

# INTEGRATION WITH HOST CITY

The images below provide a sample of spaces, on the right are examples of good community outreach and integration. While on the left are spaces that fall short of these qualities



SWC Imbizo – community events

APB Bunting Rd gate

DFC fence defines urban edge

DFC entrance to clinics poor

APK Theater – cultural events

APK Sports Stadium

APB fence defines urban edge

DFC off campus res, unsafe campus link

DFC Clinics

Braamfontein POSA integration opportunity

DFC excessive “branding” not identity

SWC Entrance stark & disorientating

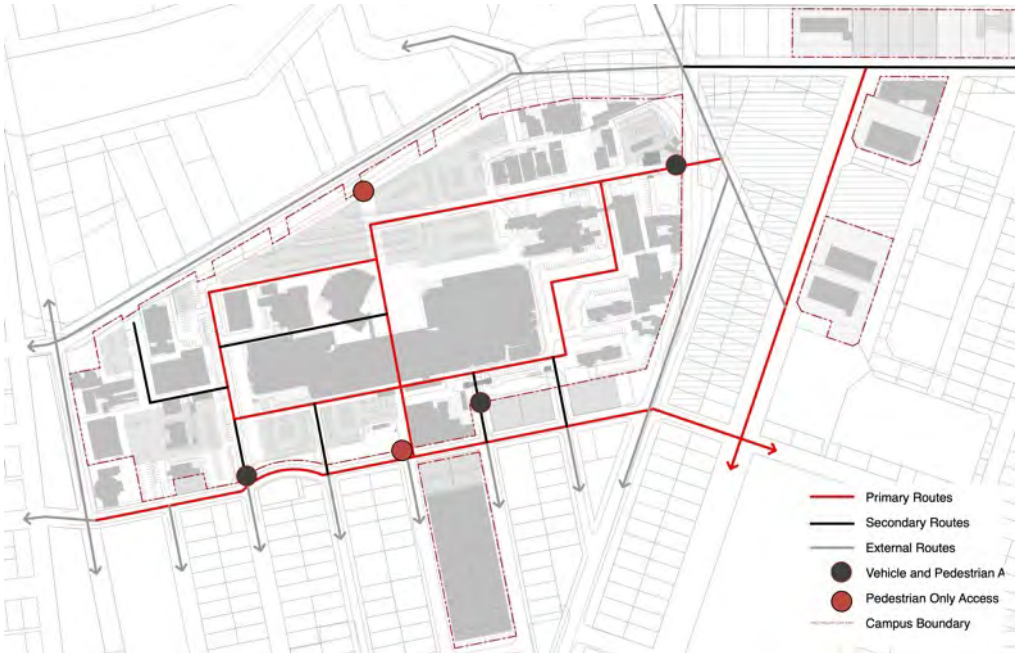
GOOD FAIR NOT GOOD

## SDF SCOPING STUDIES

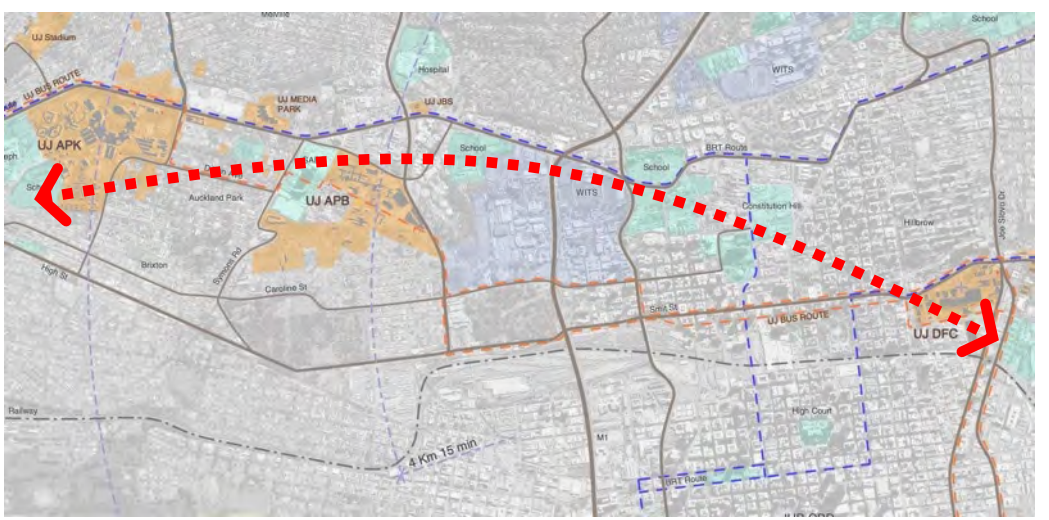
- Engagement with external stakeholders, to determine existing and potential relationships and their spatial opportunities
- CID’s to be designed and established around each campus

*Relationship with the Host City and Community*

- Integration of **movement networks**. What are the intensely used movement routes to and from campus, and how do we make them safe?
- Integration of **transport facilities**. Reduce need for movement between campuses through consolidation. Reduction of dependence on private transport.
- **Institutional links**: i.e. common spaces with Wits. Integration of sport and recreation facilities. With clusters of excellence.
- Integration of **sport and recreation** facilities - with clusters of excellence.
- Integration with the **external residences** and ensuring safe routes between them and the Campus.



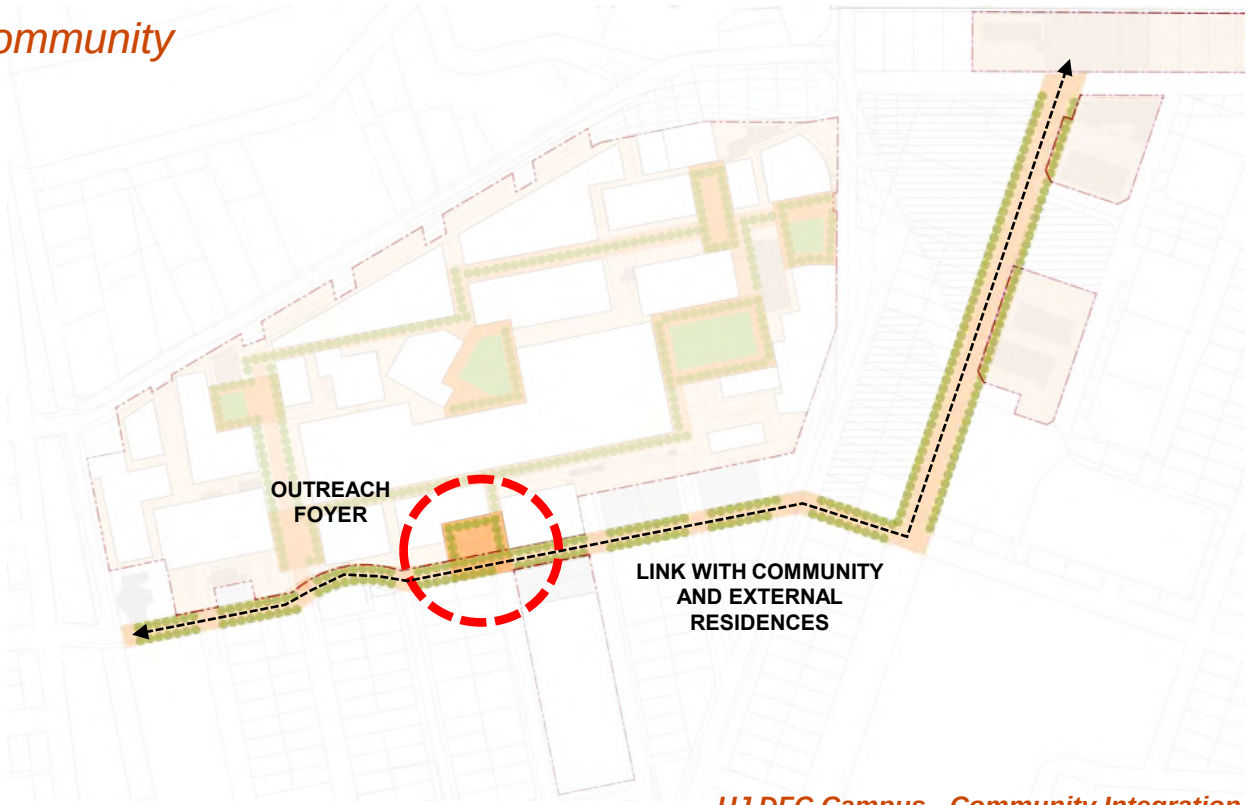

*UJ DFC Campus - Movement Network.*




*Institutional Integration.*

*Relationship with the Host City and Community*

- **Community Outreach**. (Include amenities close to clustering of off campus residences)
- **Threshold condition** between the Campus and community. Also defining identity.
- Drop-off and waiting areas, reception foyers, shared common and learning spaces. This establishes a **hierarchy of entrances**.
- Address **safety** on the routes and links beyond the boundary of the Campus.
- PPP Partnerships and 3rd stream incomes, **commercial use of land**.
- **WIL** - work integrated learning & continued education programs

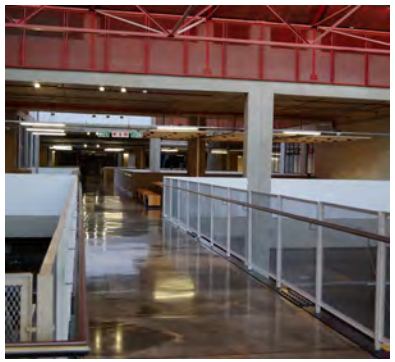



*UJ DFC Campus - Community Integration.*


*UJ DFC Campus - Beit Street External movement route.*

## STATUS QUO
# EQUITY and DIGNITY

The images below provide a sample of spaces, on the right are quality shared spaces where staff and students can learn and engage with pride, security and dignity. While on the left are spaces that fall short of these qualities. While each campus has some good spaces the overall quality of space and shared facilities is not equitable across the four campuses.


QK building DFC, interactive space


SWC library to open space positive


DFC poor spatial integration to west


DFC insufficient recreational space


SWC dignified residence urban edge

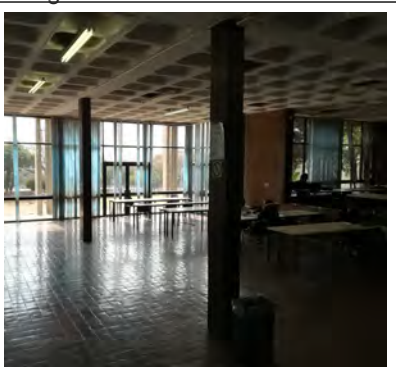

APB pleasant common space


Bunting Rd divides APK north from south


Negative space on SWC


APK recreational space on campus


APK interactive common space


APB space type good, but quality poor


Unsecure perimeter APB

**GOOD** **FAIR** **NOT GOOD**

## SDF SCOPING STUDIES

- Staff and student engagements
- Detailed qualitive assent of campus quality, identifying – strengths, opportunities and shortfalls.
- Determine minimum campus facility standards
- Student residence design and briefing guidelines

# Principle 03: EQUITY AND DIGNITY

*What does it mean to be an equitable University?*

- The creation of good open and common spaces for **shared interaction** on campus.
- Common spaces to be a **primary structuring element** of the campus spatial arrangement.
- Each Campus to have an **equal position of rank** within the University.
- Every Campus to have **equivalent facilities and amenities**.
- Ensure that all students have **equal access to quality facilities and amenities** (quiet spaces to learn, Wi-Fi access etc.)

*UJ DFC*

*UJ APK*

*UJ APB*

*UJ SWC*

*UJ Existing Shared Facilities.*

# Principle 03: EQUITY AND DIGNITY

*What does it mean to be an equitable University?*

- A fundamental part of the university is the creation of **common spaces for students and residents to gather**.
- A **variety of shared spaces** are proposed, which represents the primary informal gathering or meeting spaces for students, staff and residents alike.
- The common spaces needs to be places of surprises and wonder, places of amazement, and that **spark the imagination.**
- **Legibility and a sense of orientation** is further enhanced by placing landmark buildings, memorials or celebratory traffic circles and structures at the entrance to the campuses.


*UJ DFC Campus - Public Space as a structuring element of the Campus.*

*UJ DFC Campus – Existing Common and Shared Space.*

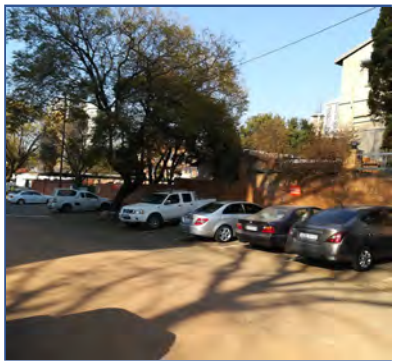
## STATUS QUO
# QUALITY OF STUDENT AND STAFF LIFE

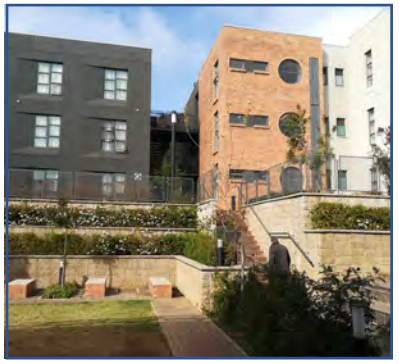
The images below provide a sample of spaces, on the right are spaces that provide a good quality of campus life. While on the left are spaces that fall short of these qualities. Desired qualities -Holistic environments: strong links between residential, recreation, academic and sports facilities. Home from home – quality shared and common space

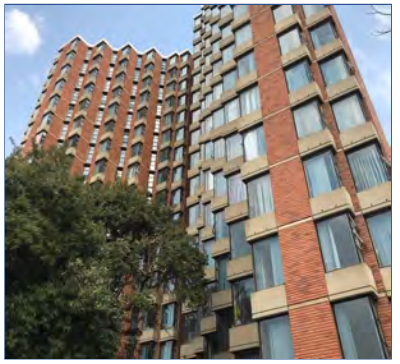

APK out door gathering space

UJ SOWETO Campus


UJ APK Campus Post Grad Res


DFC poor linkage to west of campus


SWC res 3 inviting common space


UJ APK Residence


UJ APB Campus Student Centre


SWC res 4 not homeley


APB Quality Urban Space


APB


UJ DFC Campus Existing houses


UJ DFC Habitat Residence

**GOOD** **FAIR** **NOT GOOD**

## SDF SCOPING STUDIES

- Staff and student engagements
- Detailed qualitive assent of campus life, identifying – strengths, opportunities and shortfalls.
- Determine minimum campus life standards

# Principle 04: QUALITY OF STUDENT AND STAFF LIFE

*Quality Shared and Common Spaces*

- **Focal areas** for improved student life (i.e. makers spaces etc.).
- Well defined and **safe pedestrian movement routes**.
- On-Campus experience based on **diversity and a rich student life experience** – sport, recreation, societies, clubs, food and student centers
- **Identity**: Gateways, landmarks etc.
- Catalyst for **regeneration**

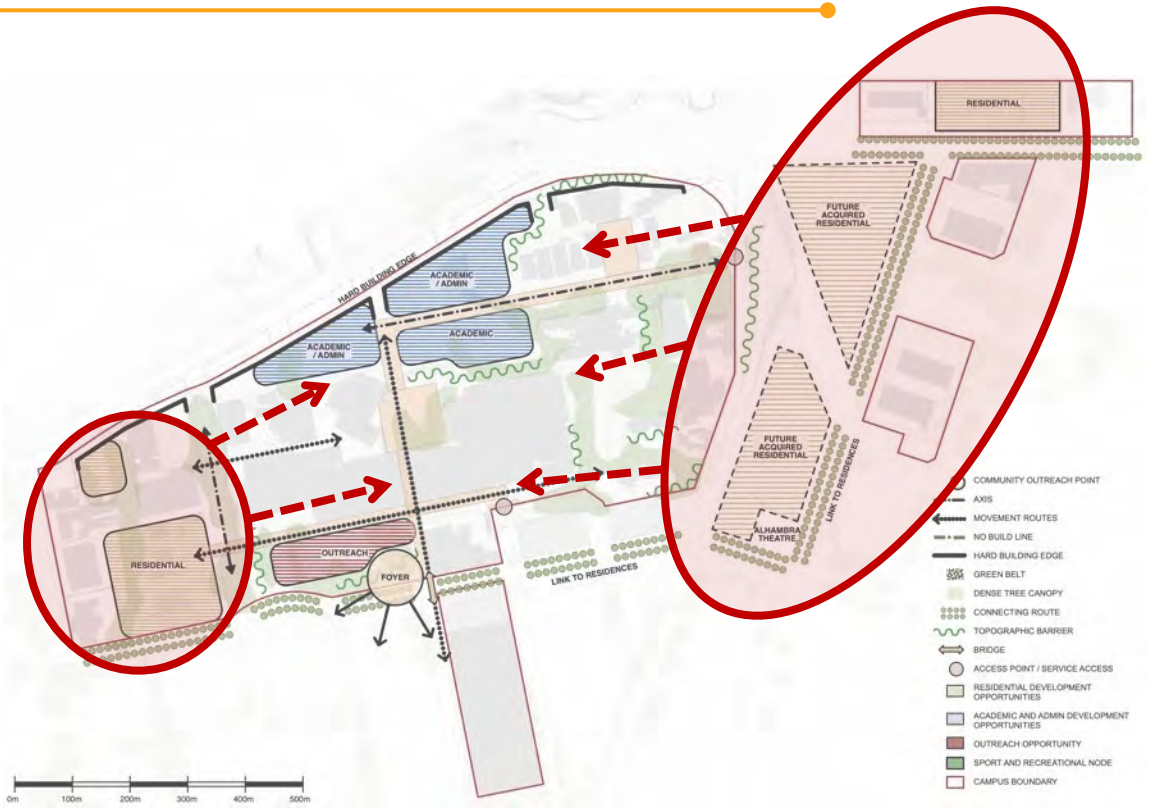
*UJ DFC Campus - Variety and quality shared and common spaces.*

*UJ DFC Campus - Well-defined pedestrian movement routes.*

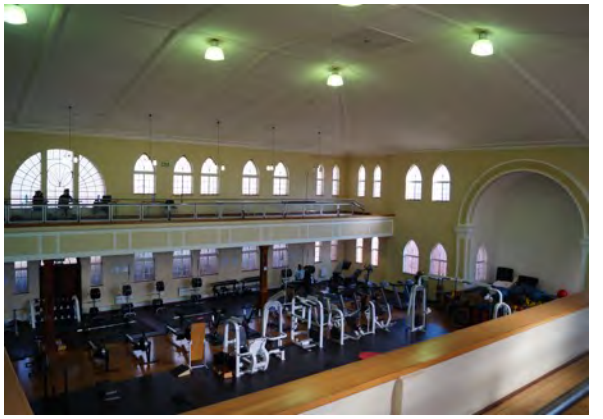
# Principle 04: QUALITY OF STUDENT AND STAFF LIFE

*Quality Student Residences*

- Reinforcing layer of **campus student life.**
- Strong links to **recreation and sport** facilities.
- Residences as **living and learning** hubs.
- Facilities for **blended learning** – teaching spaces, seminar rooms, makers spaces etc.)
- **Holistic environments.**
- International student facilities
- **Home from home**, community




*UJ DFC Campus – Links between residences and recreation facilities.*

*UJ DFC Campus – Sport and Recreation Facilities.*

## 1303 unoccupied beds – Wholistic understanding Required

The reasons provided by residence management for the current level of occupancy state COVID as only one of many reasons:

1. Old residences Facilities, equipment
2. Private accommodation providing better facilities and are more lenient
3. Others have moved back home due to online learning
4. The university rules which include no visitation in residences due to COVID
5. Students do not want to be sharing rooms

## Student residences need to be more than just a bed.

Holistic environments: strong links between residential, recreation, academic and sports facilities
Home from home – quality shared and common space

Further more, knowledge of POSA residences is thin.

### SDF SCOPING STUDIES

- Student residence, comprehensive supply and demand study, including POSA
- Student residence design and briefing guidelines

STATUS QUO

# SUSTAINABILITY AND REGENERATION

Promote urban biodiversity and productive landscapes
Alternative water and electricity sources – energy net zero
Flexibility, versatility & robustness of buildings & services
Spatial memory

On campus waste recycling


SWC accessible services


SWC asbestos roof tiles


Infrastructure past design life

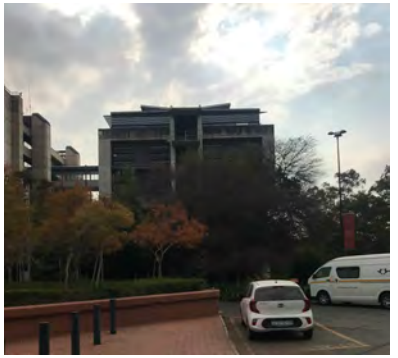

UJ staff & students


Centralized services potential efficacy

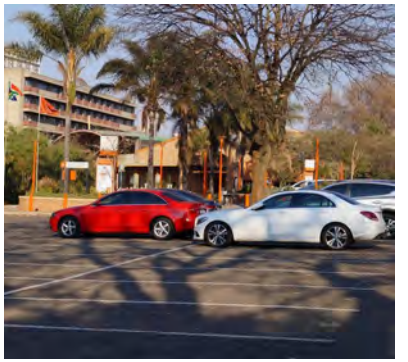

APK ring building inflexible form


SWC disturbance of enviro corridor


PV arrays on APB, APK, & SWC


APK extensive indigenous landscaping


Energy hungry building systems


Dependance on private vehicles

GOOD — FAIR — NOT GOOD

## SDF SCOPING STUDIES

- Infrastructure data base – documentation, condition, capacity – living labs project
- Infrastructure enhancement and replacement – determine opportunities and needs – toward regenerative infrastructure
- Public safety and accessibility – create guidelines, & audit
- Parking and transport
- Define performance targets and integrate into all aspects of SDF

# Principle 05: SUSTAINABILITY AND REGENERATION

*Touching the environment lightly*

- Promote **urban biodiversity** and **productive landscapes**.
- Energy and water **demand reduction** and metering.
- **Alternative sources** of water and electricity. Becoming **energy net zero.**
- Alternative **transport** methods.
- Waste **reduction and recycling**.
- **Life cycle costing**, long life and robustness.

*UJ APB Campus – Existing productive landscapes*

*UJ SWC Campus – Consider alternative passive cooling methods.*


*UJ APB Campus – Recycling Station*

# Principle 05: SUSTAINABILITY AND REGENERATION

*Robustness*

- Flexibility (& versatility) and robustness of buildings and services to ensure **long term relevance**.
- **Transition and conversion** of existing buildings and guidelines for new buildings.
- **Efficiency, infill and densification**.
- **Spatial memory**: building onto and layering of ideas over time, and reimagination.
- Highly serviced **versatile spaces**, ITC, AV, power


*UJ DFC Campus - Mix of Use.*

*UJ DFC Campus – Space for densification.*

STATUS QUO

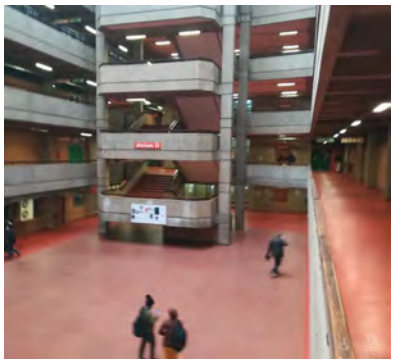
# DIVERSE LEARNING ENVIRONMENTS

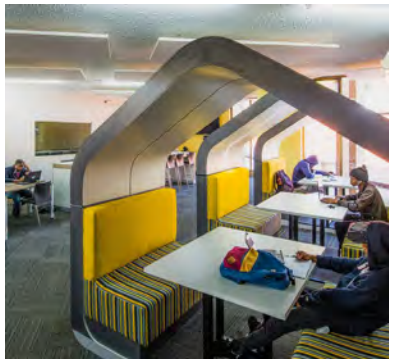
Transition to blended learning models
Gradation of teaching spaces from public to private
Variety of quality learning environments
Resources Centers, & specialized facilities


SWC out door interaction & learning

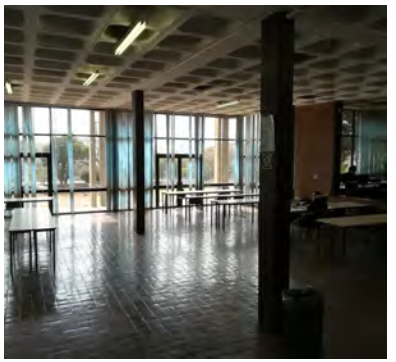

APK labs, specialized & highly serviced

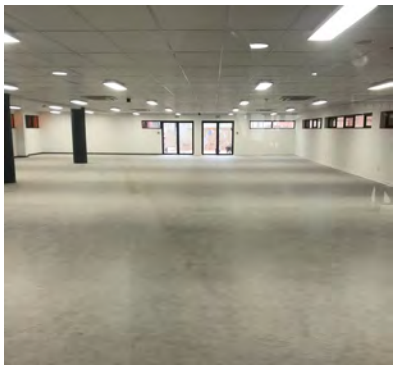

Mono function, Future demand question

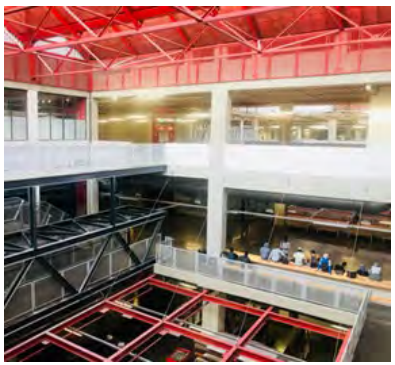

DFC functional, but stark

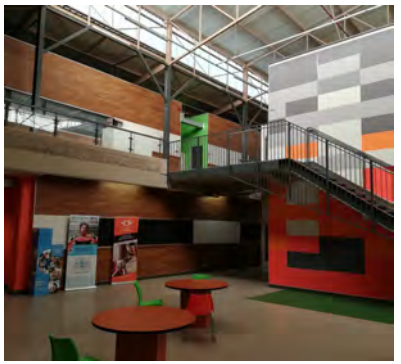

APB Library semi private study Pods


Residences – learning, integration


APB Ontdekking, gloomy


Poor - connection, proportion, daylight


QK interactive common space


DFC ophthalmology, interactive


SWC common space uninviting


UJ DFC Classroom-poor acoustics

## SDF SCOPING STUDIES

- Evaluation of existing space type mix and gradation
- Space adaptation pilot project
- Define space quality standards
- Identification need and opportunity for specialist spaces

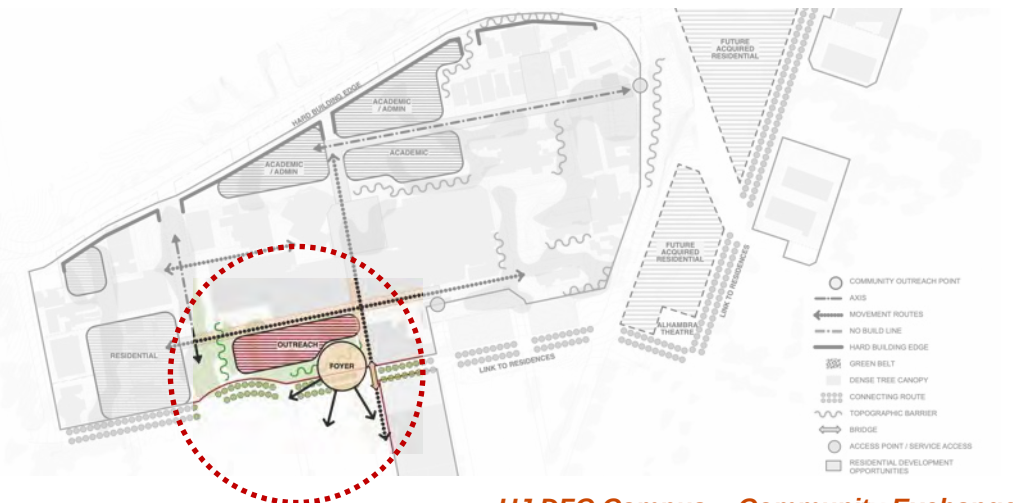
**GOOD** **FAIR** **NOT GOOD**

# Principle 06: DIVERSE LEARNING ENVIRONMENTS

*Blended Learning*

- Transition to **new learning models**. Possibility for library to transcend physical foot print of current libraries.
- Teaching spaces as a **public function** and exchange with the community.
- **Gradation** of teaching spaces from public (community) to private (labs).
- **Variety of quality learning opportunities** – seminar rooms, online, traditional, etc. interactive spaces, and enhancing common link spaces.
- **Resource centres**.
- Specialised and collaborative **research spaces.**
- Commercialisation of **innovation facilities.**


*UJ DFC Campus - Public private gradation.*




*UJ DFC Campus - Community Exchange.*

# Principle 06: DIVERSE LEARNING & LIVING ENVIRONMENT

**Societal Connectivity**

Community Connected Education
Enriching Education and Society
**Lifelong Students**

**Shared + Interconnecting Learning Spaces**

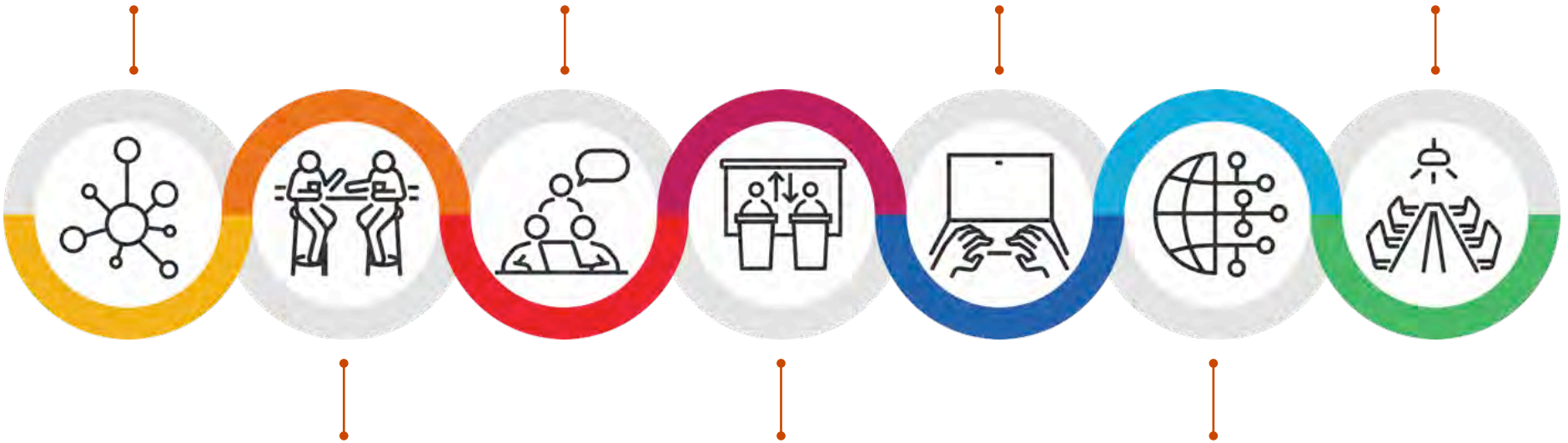
Interdisciplinary Research
Co-creation
Collaborative
Hot-desking

**'In The Field' Expansion of Education**

Integration of University and Business
Employer Input

**Specialised Spaces**

Focused Study
Laboratories



**Quality of Student and Campus Life**

Further Student Reach

**Interchangeable Spaces**

Flexible
Developing Greater Creativity

**Anywhere Learning**

Technologies
Entrepreneurship

## COMPACTNESS, INTERACTIVE, VARIATY, WHOLENESS, QUALITY

# 7 INCEPTION DESIGN RATIONAL DRAWINGS

## 7.1 SWC INCEPTION DESIGN RATIONAL DRAWINGS


LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

actiVate
high performance architecture

**University of Johannesburg** Soweto Campus
Aerial
2021/11/04
Scale - 1:3000 @A3

Development Areas

Potential Future Residential Development

Public Squares and Open Space

Existing Development

Demolished Buildings

Movement Routes

Campus Boundary

0 50 100 150 200 250

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

actiVate
high performance architecture

**University of Johannesburg** Soweto Campus
Development Opportunities
2021/11/04
Scale - 1:3000 @A3

Primary Routes

Secondary Routes

External Routes

Vehicle and Pedestrian Access

Pedestrian Only Access

Campus Boundary

0 50 100 150 200 250

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high performance architecture

**University of Johannesburg** Soweto Campus
Hierarchy of Movement
2021/11/04
Scale - 1:3000 @A3

Public Square

Pathway

Public Green Space

Building Edge

Campus Boundary

0 50 100 150 200 250

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate
high performance architecture

**University of Johannesburg** Soweto Campus
Public Open Space Network
2021/11/04
Scale - 1:3000 @A3

Academic
Admin
Academic Support
Residences
Student Shared Facilities
Multi-Purpose
Sport

0 50 100 150 200 250

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

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high performance architecture

**University of Johannesburg** Soweto Campus
Building Use
2021/11/04
Scale - 1:3000 @A3

Build-to Edges
Green Edges
Movement Routes
No-go Areas
Campus Boundary

0 50 100 150 200 250

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate
high performance architecture

**University of Johannesburg** Soweto Campus
Edge Consolidation
2021/11/04
Scale - 1:3000 @A3

Secure Campus Area

Secure Off-Campus Area

Temporary Secure Edge for Public Events and Functions

Campus Secure Edge

Primary Access Point

Secondary Access point

0 50 100 150 200 250

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high performance architecture

**University of Johannesburg** Soweto Campus
Secure Campus Edge
2021/11/04
Scale - 1:3000 @A3

Public: Foyers and Adjacent Streets

Semi Public: Community Outreach and Facilities

Semi Public: Squares and Shared Amenities

Semi Private: Admin and Academic

Private: Residential and Services

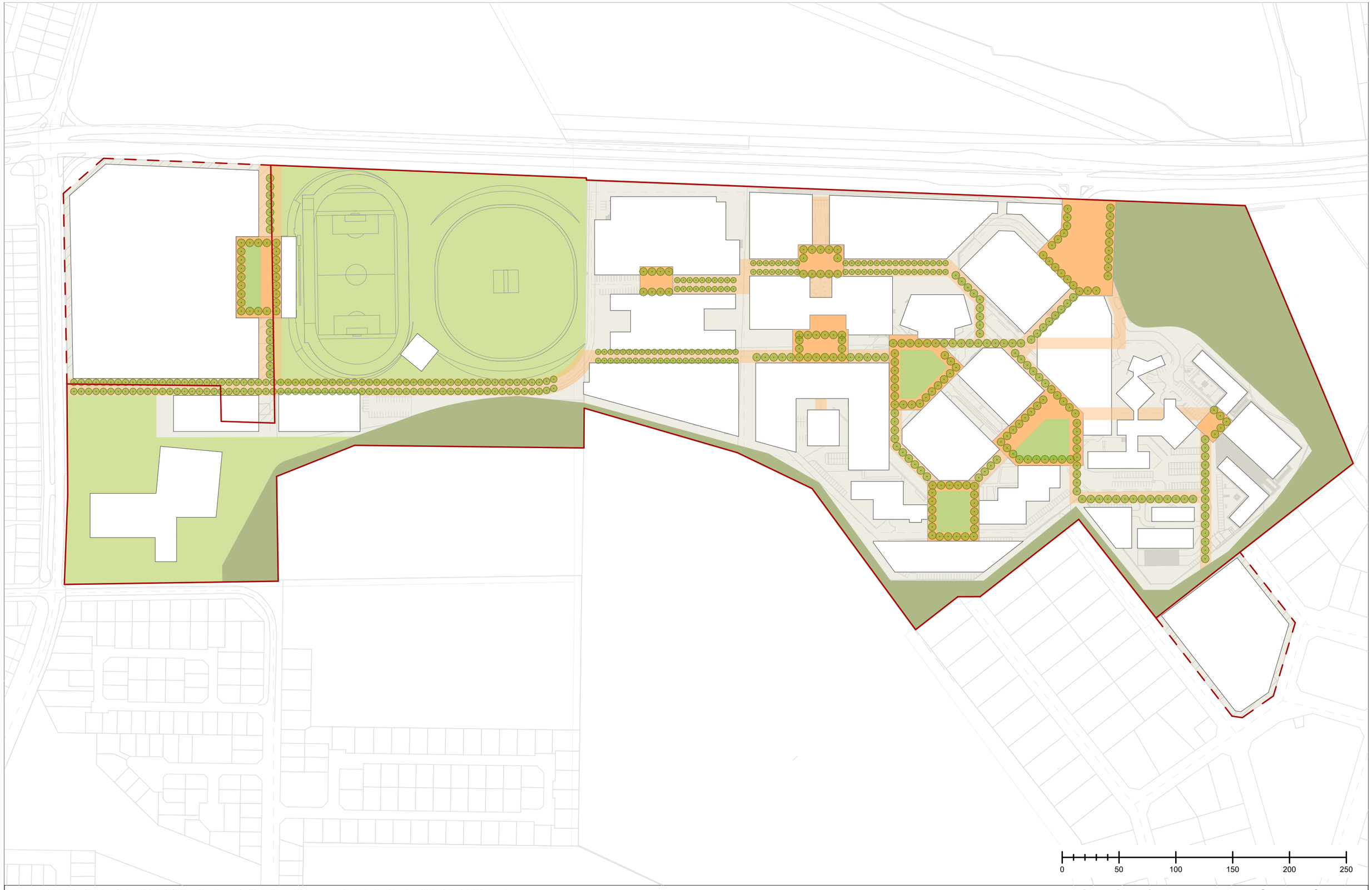
Campus Boundary

0 50 100 150 200 250

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate
high performance architecture

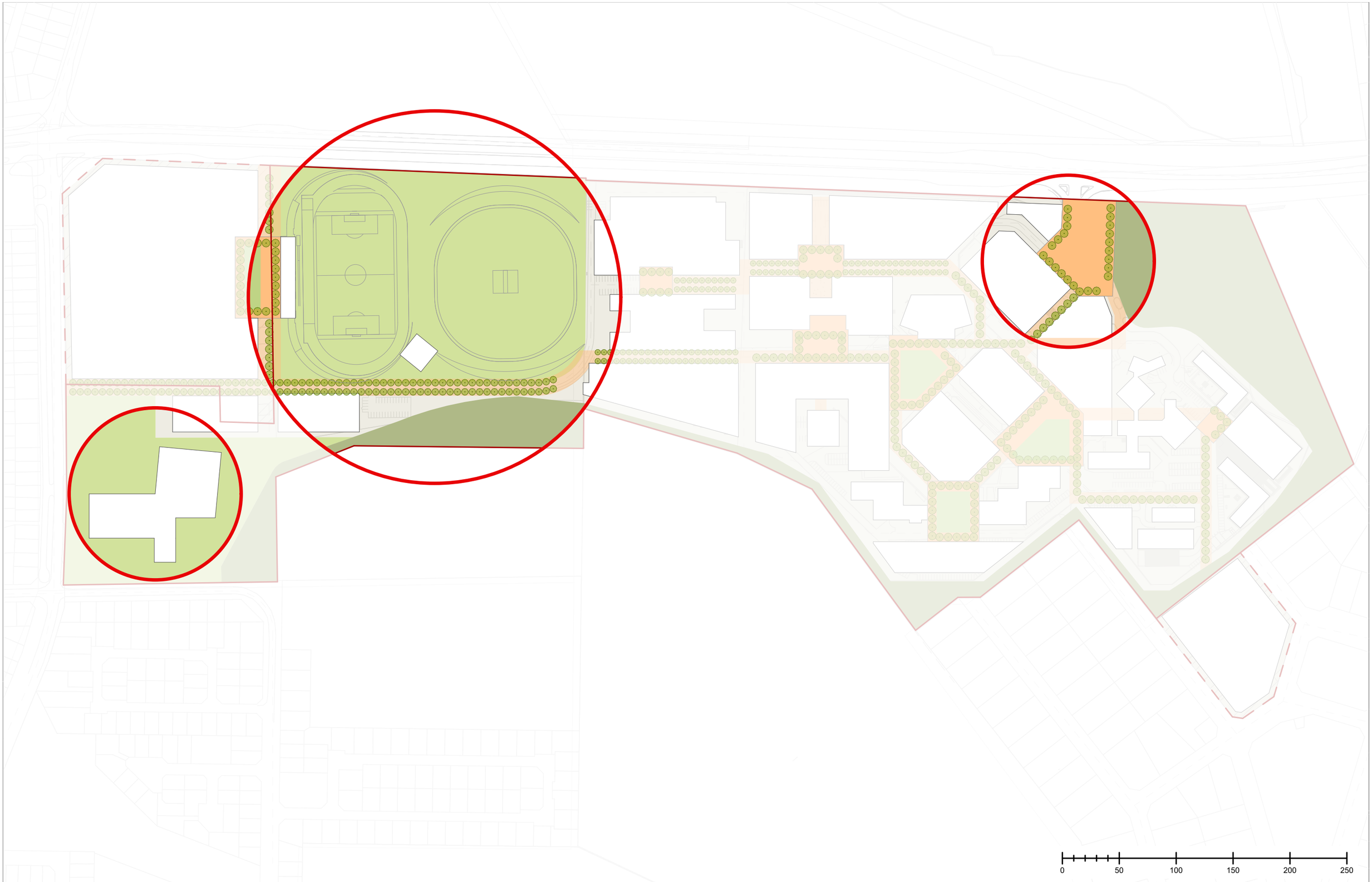
**University of Johannesburg** Soweto Campus
Public Private Gradation
2021/11/04
Scale - 1:3000 @A3




LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

actiVate
high performance architecture

**University of Johannesburg** Soweto Campus
Open Space
2021/11/04
Scale - 1:3000 @A3

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actiVate
high performance architecture

**University of Johannesburg** Soweto Campus
Community Exchange Opportunities
2021/11/04
Scale - 1:3000 @A3

# 7.2 DFC INCEPTION DESIGN RATIONAL DRAWINGS


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actiVate
high performance architecture

**University of Johannesburg** Doornfontein Campus
Aerial
2021/11/04
Scale - 1:2500 @A3

Development Areas

Potential Future Residential Development

Public Squares and Open Space

Existing Development

Demolished Buildings

Movement Routes

Campus Boundary

0 50 100 150 200 250

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

actiVate
high performance architecture

**University of Johannesburg** Doornfontein Campus
Development Opportunities
2021/11/04
Scale - 1:2500 @A3

Primary Routes

Secondary Routes

External Routes

Vehicle and Pedestrian Access

Pedestrian Only Access

Campus Boundary

0 50 100 150 200 250

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

actiVate
high performance architecture

**University of Johannesburg** Doornfontein Campus
Hierarchy of Movement
2021/11/04
Scale - 1:2500 @A3

Public Square

Pathway

Public Green Space

Building Edge

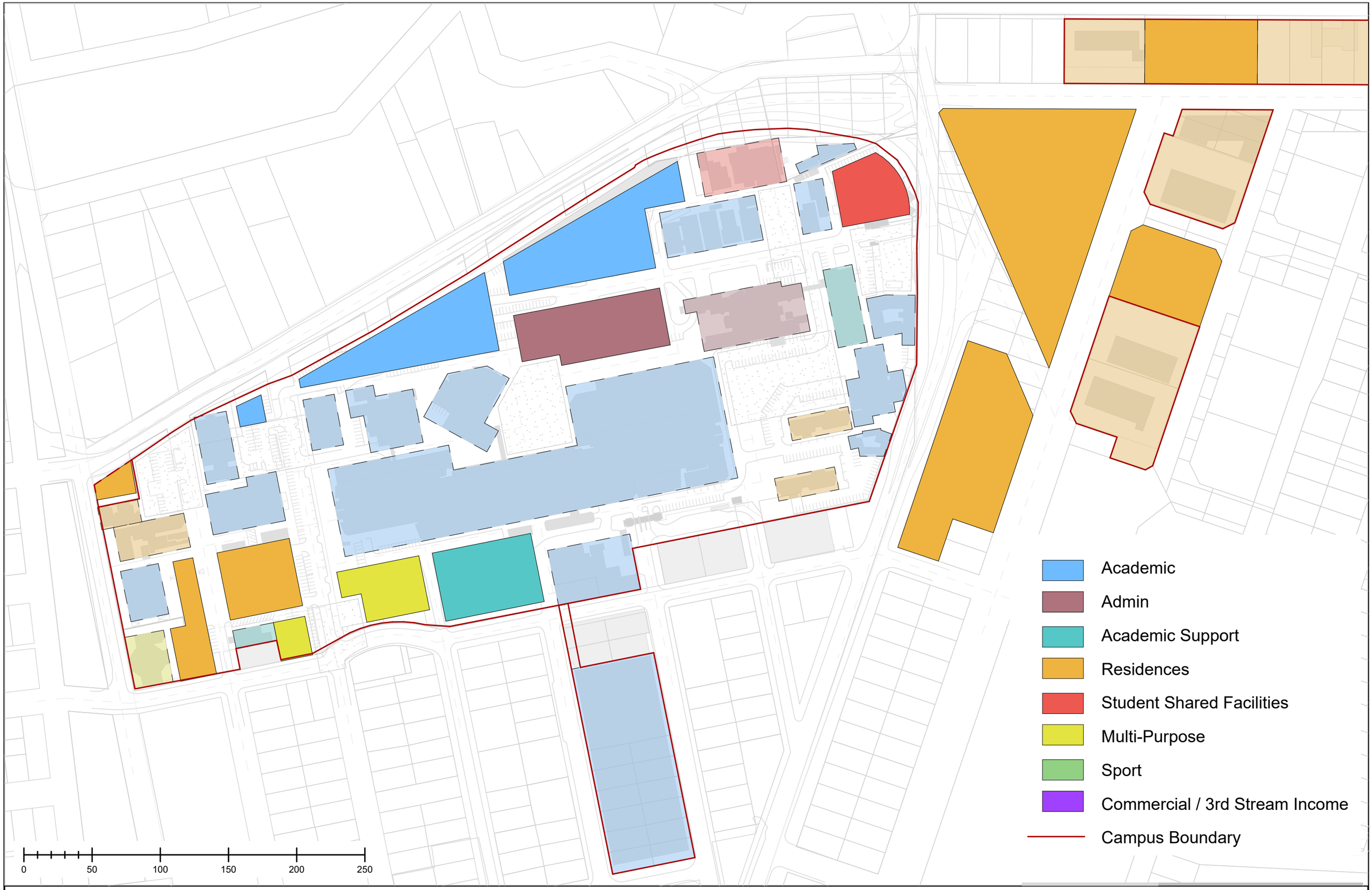
Campus Boundary

0 50 100 150 200 250

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate
high performance architecture

**University of Johannesburg** Doornfontein Campus
POS Network
2021/11/04
Scale - 1:2500 @A3




LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate
high performance architecture

**University of Johannesburg** Doornfontein Campus
Building Use
2021/11/04
Scale - 1:2500 @A3


LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate
high performance architecture

**University of Johannesburg** Doornfontein Campus
Edge Consolidation
2021/11/04
Scale - 1:2500 @A3

Secure Campus Area

Secure Off-Campus Area

Campus Secure Edge

Primary Access Point

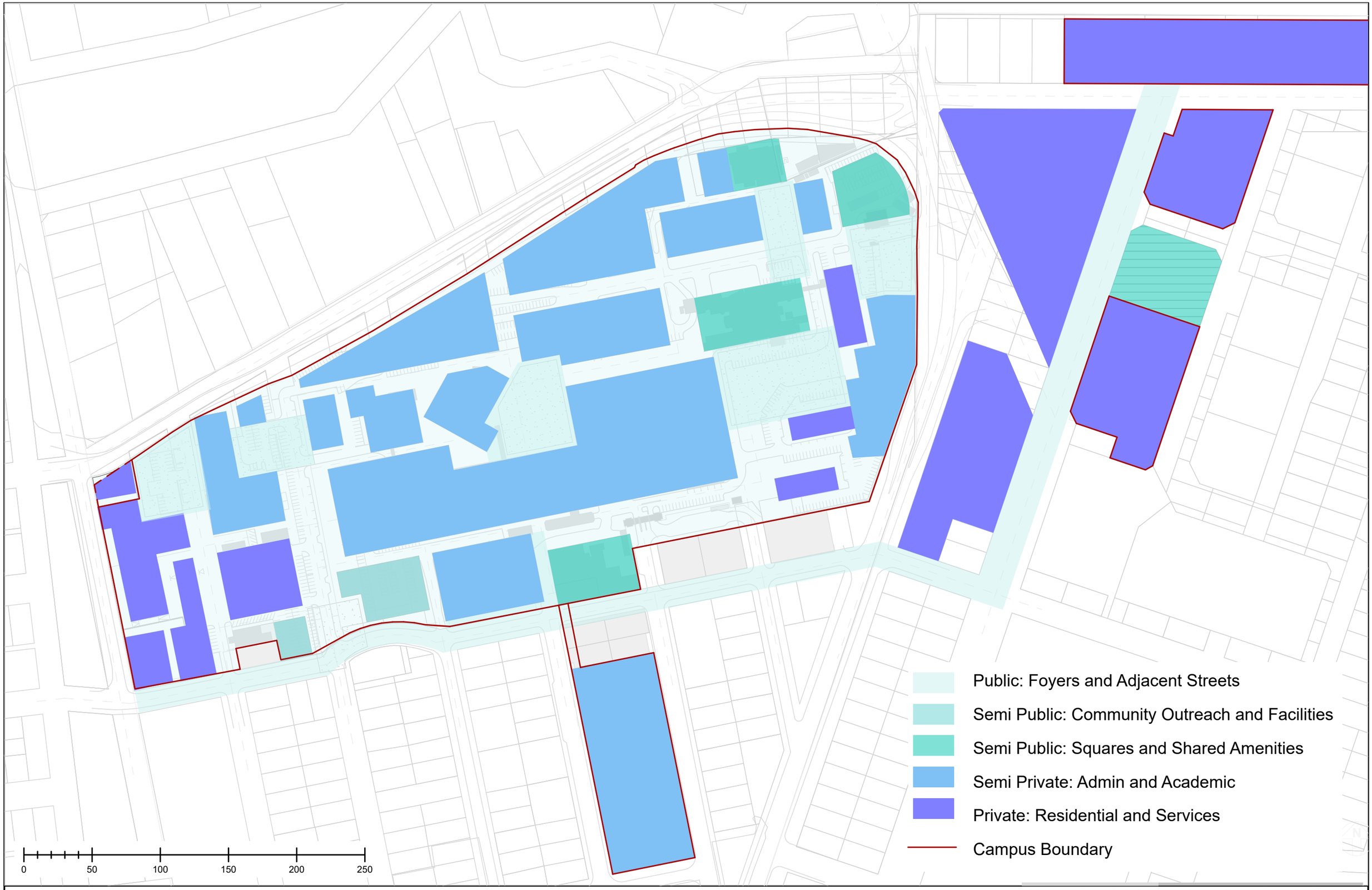
Secondary Access point

0 50 100 150 200 250

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate
high performance architecture

**University of Johannesburg** Doornfontein Campus
Secure Campus Edge
2021/11/04
Scale - 1:2500 @A3




LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate
high performance architecture

**University of Johannesburg** Doornfontein Campus
Public Private Gradation
2021/11/04
Scale - 1:2500 @A3

0 50 100 150 200 250

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate
high performance architecture

**University of Johannesburg** Doornfontein Campus
Open Space
2021/11/04
Scale - 1:2500 @A3

A

B

C

Surface Parking

Parkade

A BRT Station

B UJ Campus Bus Drop-off / Pick-up

C Drop-off / Pick-Up Area

Campus Boundary

0 50 100 150 200 250

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate high performance architecture

**University of Johannesburg** Doornfontein Campus
Parking and Transport
2021/11/04
Scale - 1:2500 @A3

# 7.4 APB INCEPTION DESIGN RATIONAL DRAWINGS

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

**University of Johannesburg** Auckland Park Bunting Road Campus
Aerial
2021/10/18
Scale - 1:5000 @A3


LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

**University of Johannesburg** Auckland Park Bunting Road Campus
Development Opportunities
2021/10/18
Scale - 1:5000 @A3

Primary Routes

Secondary Routes

External Routes

Vehicle and Pedestrian Access

Pedestrian Only Access

Campus Boundary

0 100 200 300 400 500

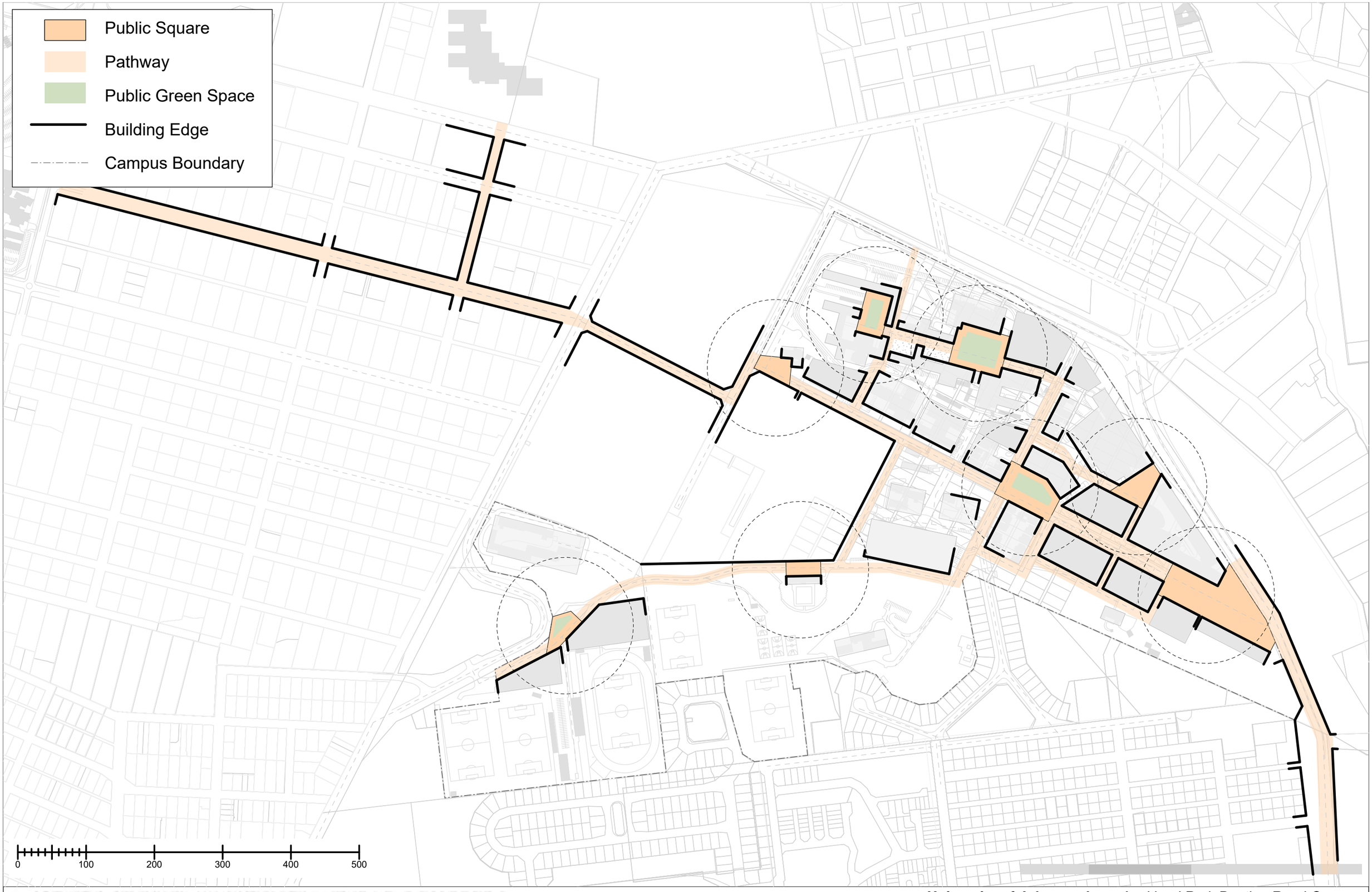
LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

**University of Johannesburg** Auckland Park Bunting Road Campus

Hierarchy of Movement

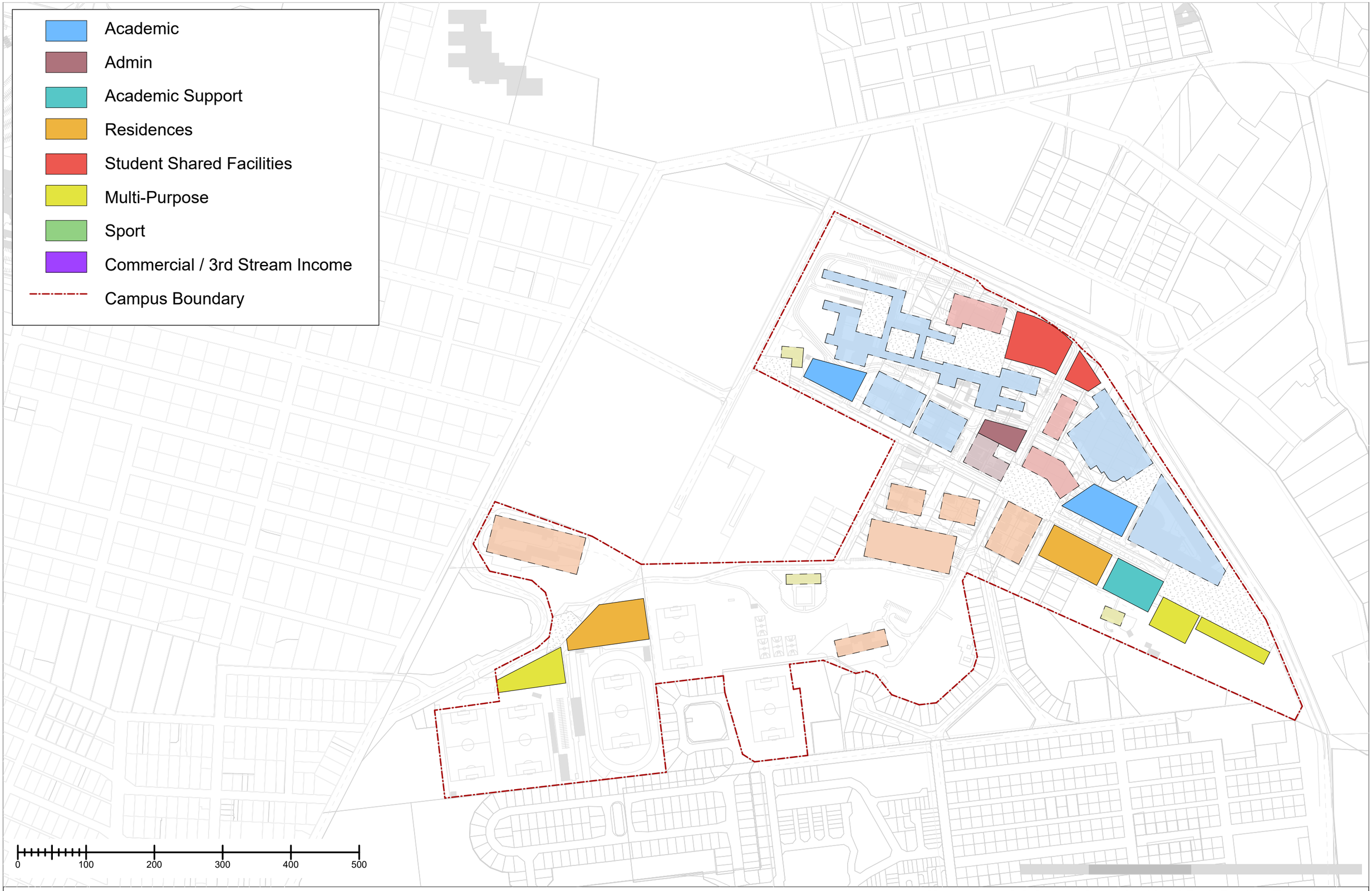
2021/10/18

Scale - 1:5000 @A3




LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

**University of Johannesburg** Auckland Park Bunting Road Campus
Public Open Space Network
2021/10/18
Scale - 1:5000 @A3




LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

**University of Johannesburg** Auckland Park Bunting Road Campus
Building Use
2021/10/18
Scale - 1:5000 @A3

Build-to Edges

Green Edges

Movement Routes

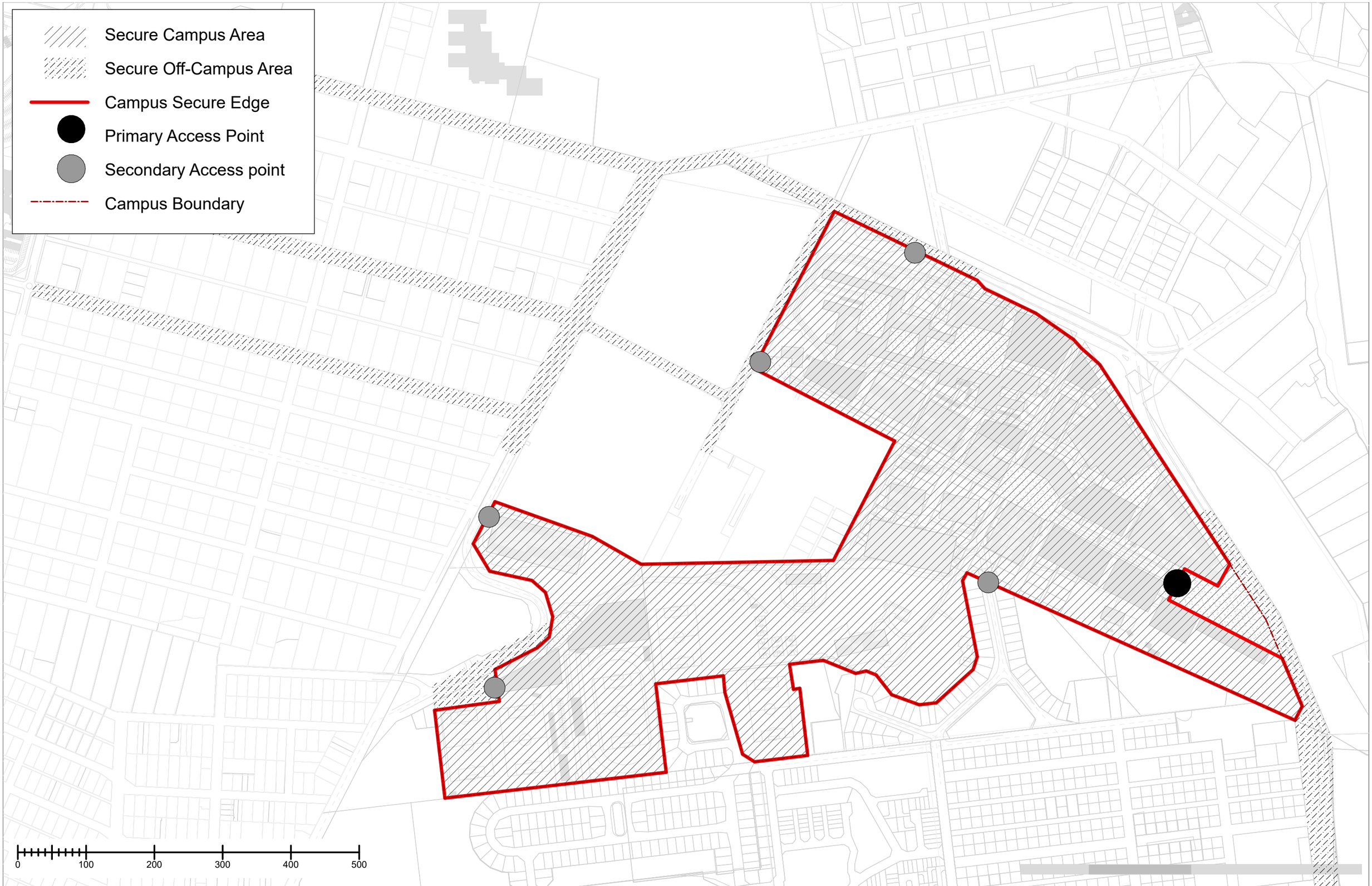
No-go Areas

Campus Boundary

0 100 200 300 400 500

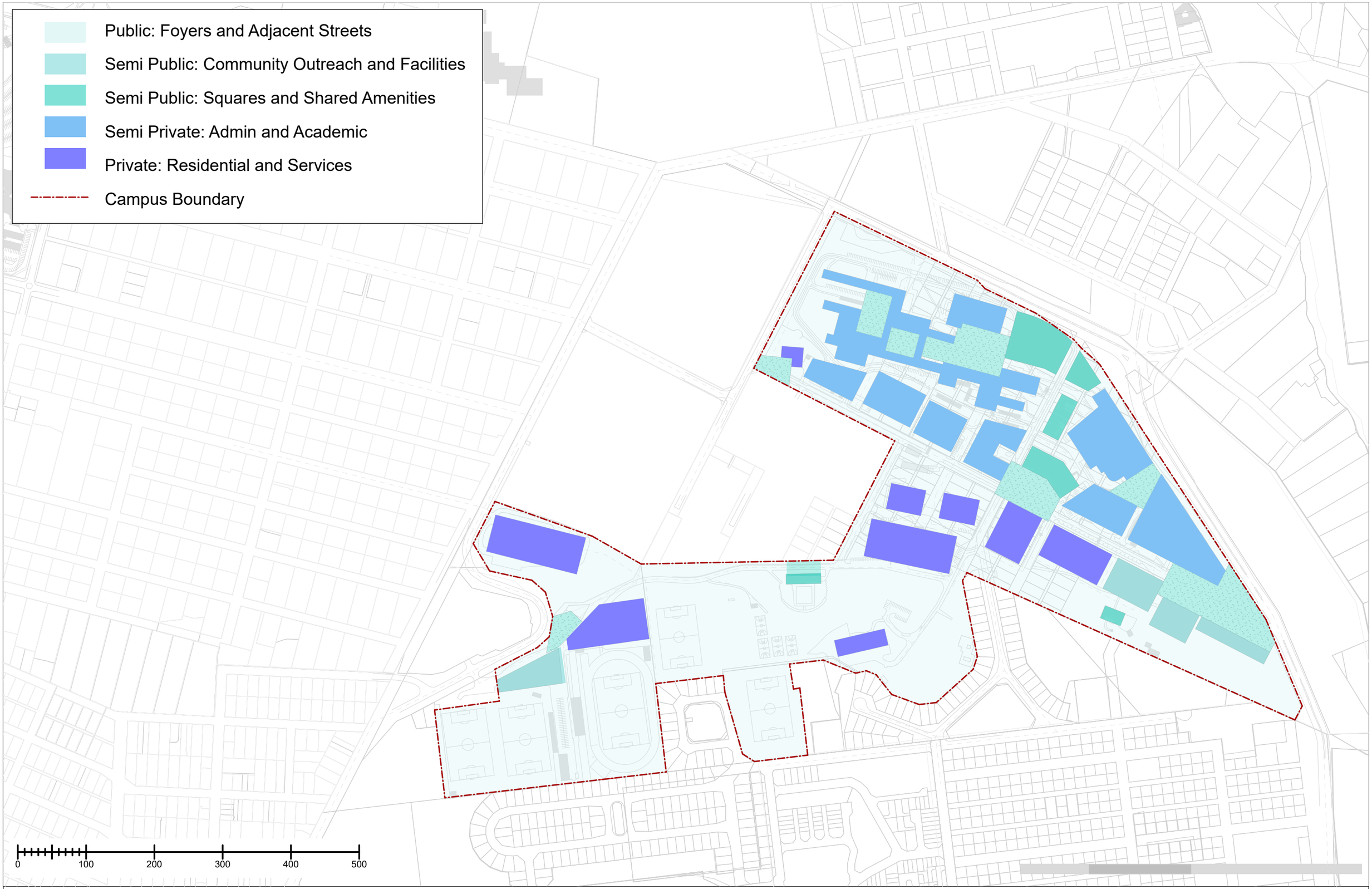
LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

**University of Johannesburg** Auckland Park Bunting Road Campus
Edge Consolidation
2021/10/18
Scale - 1:5000 @A3




LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

**University of Johannesburg** Auckland Park Bunting Road Campus
Secure Campus Edge
2021/10/18
Scale - 1:5000 @A3




LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

**University of Johannesburg** Auckland Park Bunting Road Campus
Public Private Gradation
2021/10/18
Scale - 1:5000 @A3

0 100 200 300 400 500

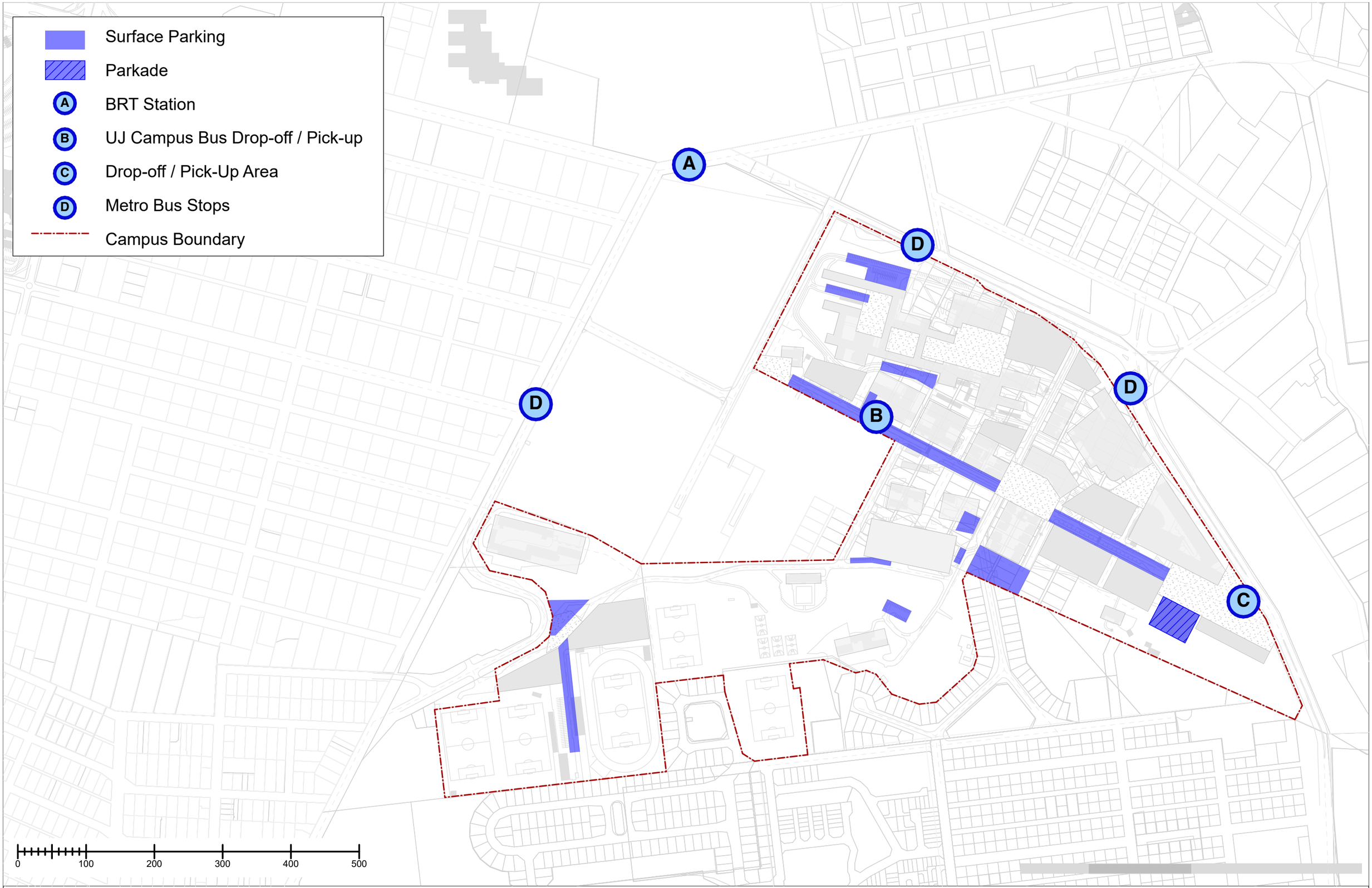
LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

**University of Johannesburg** Auckland Park Bunting Road Campus
Open Space
2021/10/18
Scale - 1:5000 @A3

0 100 200 300 400 500

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

**University of Johannesburg** Auckland Park Bunting Road Campus
Community Exchange Opportunities
2021/10/18
Scale - 1:5000 @A3




LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

**University of Johannesburg** Auckland Park Bunting Road Campus
Parking and Transport
2021/10/18
Scale - 1:5000 @A3

# 7.5 APK INCEPTION DESIGN RATIONAL DRAWINGS


LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

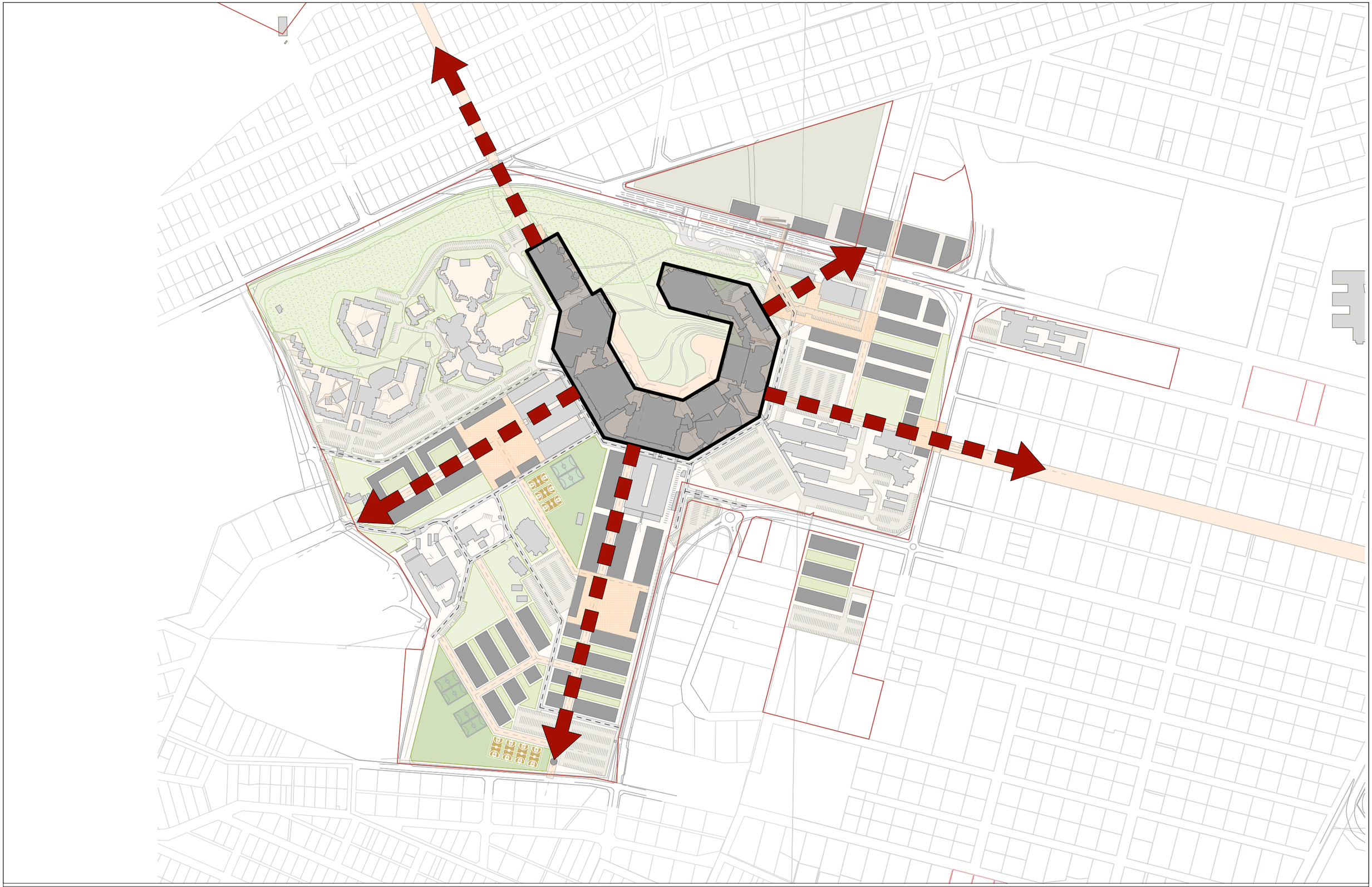
actiVate
high performance architecture

**University of Johannesburg** Auckland Park Kingsway Campus
Aerial
2021/11/04
Scale - 1:5000 @A3

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate
high performance architecture

**University of Johannesburg** Auckland Park Kingsway Campus
Vision Plan (DRAFT)
2021/11/04
Scale - 1:5000 @A3



LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

actiVate
high performance architecture

**University of Johannesburg** Auckland Park Kingsway Campus
Radial Arms
2021/11/04
Scale - 1:5000 @A3

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

actiVate
high performance architecture

**University of Johannesburg** Auckland Park Kingsway Campus
Satellite Public Squares
2021/11/04
Scale - 1:5000 @A3

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

actiVate
high performance architecture

**University of Johannesburg** Auckland Park Kingsway Campus
Public Open Space Network
2021/11/04
Scale - 1:5000 @A3

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

actiVate
high performance architecture

**University of Johannesburg** Auckland Park Kingsway Campus
Community and City Outreach
2021/11/04
Scale - 1:5000 @A3

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate
high performance architecture

**University of Johannesburg** Auckland Park Kingsway Campus
Green Structure
2021/11/04
Scale - 1:5000 @A3

LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

actiVate
high performance architecture

**University of Johannesburg** Auckland Park Kingsway Campus
New Student Residences
2021/11/04
Scale - 1:5000 @A3

Academic
Admin
Academic Support
Residences
Student Shared Facilities
Multi-Purpose
Sport
Commercial / 3rd Stream Income
Campus Boundary

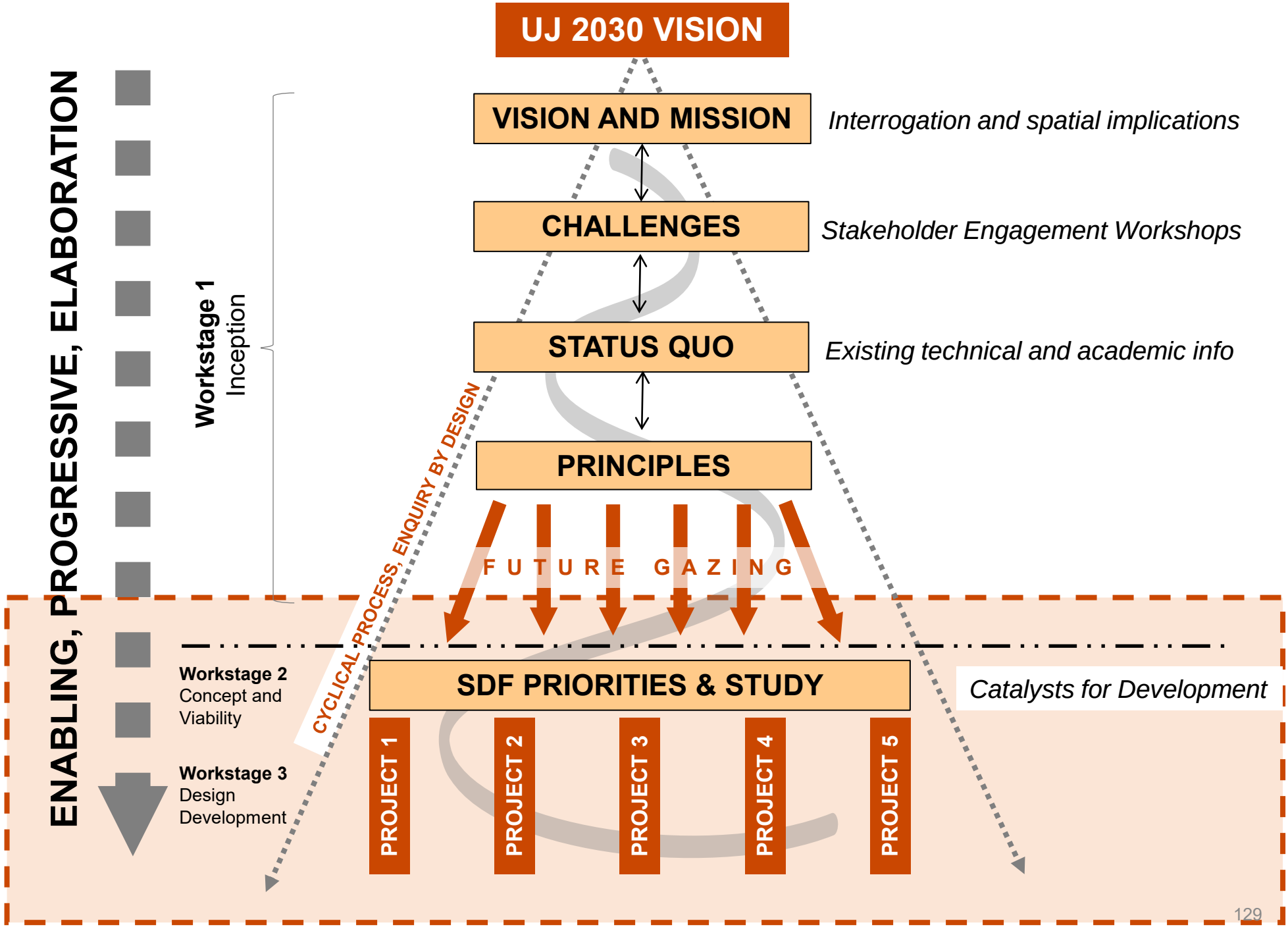
LUDWIG HANSEN ARCHITECTS + URBAN DESIGNERS

activate
high performance architecture

**University of Johannesburg** Auckland Park Kingsway Campus
Building Use
2021/11/04
Scale - 1:5000 @A3

# 6. PRIORITIES & WAY FORWARD

***"A collaboration between our team and the university: to formulate a starting point and develop a brief for the next stage"***


UJ 2030 VISION
VISION AND MISSION
Interrogation and spatial implications
CHALLENGES
Stakeholder Engagement Workshops
STATUS QUO
Existing technical and academic info
PRINCIPLES
FUTURE GAZING
CYCLICAL PROCESS, ENQUIRY BY DESIGN
SDF PRIORITIES & STUDY
Catalysts for Development
PROJECT 1
PROJECT 2
PROJECT 3
PROJECT 4
PROJECT 5
Workstage 1
Inception
Workstage 2
Concept and
Viability
Workstage 3
Design
Development
ENABLING, PROGRESSIVE, ELABORATION

## UJ PRIORITY PROJETS

**CONSOLIDATION**

**INTEGRATION WITH HOST CITY**

EQUITY and DIGNITY

QUALITY of STUDENT and STAFF LIFE

SUSTAINABILITY & REGENERATION

DIVERSE LEARNING ENVIRONMANTS

### CONSOLIDATION

1. Each Campus to operate independently, containing all of the necessary facilities to do so. **Assessment of campus facilities**
2. **Faculty and academic consolidation.** Clustering of excellence amenities.
3. **Assessment of off-campus landholdings** to determine long term viability of external properties
4. **Strengthen the visual identity and presence** of the university

### URBAN INTEGRATION

1. **Engagement with external stakeholders** to determine existing and potential relationships and spatial opportunities
2. **CID's** to be designed and established around each campus
3. **Integration of transport facilities.** Reduce need for movement between campuses through consolidation. Reduction of dependence on private transport. **Assessment of existing parking and communal transport opportunities**
4. **Institutional links**: i.e. common spaces with Wits. Integration of sport and recreation facilities. With clusters of excellence. **Viability study**

## UJ PRIORITY PROJETS

CONSOLIDATION

INTEGRATION WITH HOST CITY

**EQUITY and DIGNITY**

**QUALITY of STUDENT and STAFF LIFE**

SUSTAINABILITY & REGENERATION

DIVERSE LEARNING ENVIRONMANTS

**EQUITY and DIGINITY: QUALITY of STUDENT and STAFF LIFE**

1. **Staff and student engagements**
2. **Qualitive assessment of campus life quality** identifying – strengths, opportunities and shortfalls.
3. **Determine minimum campus life standards**
4. Student residence: **comprehensive supply and demand study**
5. Student residence: **design and briefing guidelines**

## UJ PRIORITY PROJETS

CONSOLIDATION

INTEGRATION WITH HOST CITY

EQUITY and DIGNITY

QUALITY of STUDENT and STAFF LIFE

**SUSTAINABILITY & REGENERATION**

DIVERSE LEARNING ENVIRONMANTS

### INFRASTRUCTURE REGENERATION

1. **Infrastructure data base: documentation of existing** – position, condition, capacity – potential "living labs" project
2. **Infrastructure enhancement and replacement:** determine opportunities and needs – toward regenerative infrastructure
3. Public safety and accessibility: **create guidelines & audit**
4. Parking assessment

### SETTING SUSTAINABILITY OBJECTIVES

1. **Define performance targets** and integrate into all aspects of SDF

**PRINCIPLES**

**SPATIAL DEVELOPMENT FRAMEWORK DESIGN**

## UJ PRIORITY PROJETS

CONSOLIDATION

INTEGRATION WITH HOST CITY

EQUITY and DIGNITY

QUALITY of STUDENT and STAFF LIFE

SUSTAINABILITY & REGENERATION

**DIVERSE LEARNING ENVIRONMANTS**

**TRANSITION TO BLENDED LEARNING**

1. **Evaluation** of existing space: type, mix and gradation
2. **Space adaptation pilot project**
3. **Define space quality standards**
4. **Identification of need and opportunity** for specialist spaces

# 8. INTERDISCIPLINARY INPUTS

# 8.1 Sustainability

In Workstage 2 and 3 more detailed assessment around the proposed assessment matrix framework is requirements. The sustainability team proposes that at least one focussed session is undertaken to provide a more detailed overview of the EcoDistrict Protocol to frame the process. This will be linked to the UJ Strategic Objectives Vision and associated principles identified (see page 25 of main report).

Using this initial framework, the sustainability team proposes to work with relevant stakeholder to identify specific priorities and measurable indicators that can be used to track performance. This will be linked to the GRI G4 reporting guidelines where practicable (and relevant), and a matrix will be developed to guide project identification to facilitate impact tracking in each of the UJ vision components.

In sub-sequent Work stages, it is envisioned that sustainability will remain the golden thread that moves through all the design- and investigative components and which could create a concrete link to academia, reporting guidelines and future visioning processes, and it is proposed that this link is further nurtured and expanded as the project progresses.

## 8.2 Town Planning

The following was undertaken as part of the town planning investigation in Phase 1, which was done separately for the four campuses of Auckland Park, Doornfontein, Cottesloe and Soweto:

1. The extent of each campus was identified through the property listings and aerial photography obtained from the City Planning GIS

2. The GIS system was used to examine the current zoning of all the land within the demarcated areas of each campus, and the zoning parameters included

• Zoning, Land Uses permitted, Height controls, coverage and Floor area ratios

3. The Title Deeds were perused where available, to determine any unusual conditions

4. Conclusions were drawn as to whether the campuses were properly zoned, and where anomalies existed, these were reported.

5. An aerial evaluation was also undertaken and any discrepancies or anomalies were identified. Part of this exercise also identified a number of properties owned by the University but which are not inside the actual campus areas. These were noted with the applicable zoning of each

6. There has been no assessment made of the actual available potential on each campus, as this will depend on what is proposed in the future vs the current actual existing land uses.

## 8.3 Bulk Services Engineering

The following tasks and reporting were undertaken as part of the civil and structural engineering investigation in Phase 1 of this assignment. We studied the provided database for each campus, prepared for the individual site visits, undertook the visits with the project team, generated summaries and notes after each one, cross studied team reports regularly and summarized the work in various reports, namely:

1. We read through the database provided to the project team, summarized the information report by report, categorized and referenced each one to an easily accessed internal code, then prepared a spreadsheet categorizing our reference code, the type of document, the subject matter, the author or authors, the date of the report and then commented and noted features of each one.

The reports were listed by a summary name for each campus, APK, APB, SOWETO, DOORNFONTEIN, and also differentiating subject matter. These subject matters were traffic, parking and transportation; Bulk engineering services; and electrical services.

We also compiled a document register for our discipline for quick reference, listing a subject matter, a descriptive comment or heading, and then an index of the campuses, and with our reference code. The matrix is presently expanded to cover a broad range of subject and discipline matters and is intended to form one of the backbones of data capture for subsequent phases of the assignment.

2. We compiled a report of the assignment thus far, comprising a description of the database; cataloguing the information; an introduction to the Phase 1 assignment; the site visits themselves, described one by one and commented on; a discussion of the main aspects observed; and notes about stormwater management, water and sewer services, and aspects of the condition of the complexes and campuses.

We discuss some ideas towards expanding the databases, offering a possible mechanism of co-opting the student resource in the task whilst adding to their curriculum at the same time. We summarize our report, noting the need for a broader range of information such as specialized reporting, OHSA Construction Regulation reports, condition, outline service, audit reports as well as more accurate and more technical drawings. We note the size of the campuses drawing on the work we have done on larger schemes needing as much background technical information as possible, so that future work can be more accurate the more the data provided is detailed, recent and relevant.

3. We have studied the DBSA/SHIP report and comment on same as well insofar as could be done for the Phase of the assignment. This would be revisited in more detail the next stage of project work as well.

4. We have developed our work in as much detail as possible and in formats shaped towards future work, and aim to build on and expand same in the next phase of work, focusing on the greater detail envisaged.

## 8.4 Architectural Heritage

Based on an assessment of information provide by UJ the heritage architect has the following findings and recommendations.

The report compiled by Khensani for the Doornfontein Campus is helpful. On p15 it has a section from a previous report compiled by Henry Paine that lists the buildings on the campus. It details building that are more than 60 years old, as well as buildings that have had previous heritage studies compiled and then also buildings that are national monuments - now Provincial Heriage Resources (no buildings on the campus are identified in this category).

The further list of buildings from UJ categorises the buildings as “heritage” or “not Heriage” this is a strange categorisation, since it lists any building more than 60 years old as “heritage” which is not necessarily correct. It should rather categorise buildings “more than 60 years old and protected in terms of the NHRA” and “less than 60 years old and not protected”. Many buildings that are more than 60 are not necessarily heritage, they are just offered blanket protection in terms of the Act. The list is a bit difficult to navigate, since it lists the buildings and their stand number, but not the address of the buildings. The list will be helpful in compiling registers for each campus though, since it identifies the dates of construction of each building. So one could do a desktop assessment, identifying the buildings on each campus and cross referencing them to the already compiled list, to produce campus heritage plans, similar to the ones in the Khensani report.

Way forward.

Step 1:

I would suggest that an initial heritage plan/map is compiled for each campus. This would identify buildings on the campus, categorised as;

• Buildings under 60 years old

• Buildings over 60 years old

• Potentially significant buildings

• Buildings gazetted as National Monuments / Provincial Heriage Resources

Additional to the Heritage Plan would be a recommendation on the necessary application requirements for work on the above mentioned building categories.

Step 2:

I would suggest that, a Heriage Management Plan should be compiled for each of the UJ campuses, identifying significant buildings and heritage aspects on each site and then setting up guidelines in conjunction with the Urban Design Framework, to mange, preserve and enhance these heritage resources. This Heritage Management Plan would be submitted to PHRAG for their approval.

Step 3:

Applications to PHRAG would then be made for subsequent projects, in line with the recommendations and guidelines contained in the Heritage Management Plan

# 9. ANNEXURES

## 9.1 Stakeholder Engagement Meeting Minutes

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# UJ: SPATIAL DEVELOPMENT FRAMEWORK
## CONTRACT NO – UJ 19/2020

## CONTRACT DESCRIPTION – Spatial Development Framework for the University of Johannesburg

# STAKEHOLDER: GROUP 2 - ACADEMIC HEADS: MEETING FEEDBACK

**ATTENDANCE REGISTER FOR MEETING THE HELD-ON MICROSOFT TEAMS ON WEDNESDAY 07th JULY 2021 AT 13H30**

**Present:**

Prof Daneel Van Lill - College for Business & Economics
Ms Amanda Breytenbach (Acting) - Faculty of Art, Design & Architecture
Prof Saartjie Gravett -Faculty of Education
Prof Daniel Mashao - Faculty of engineering & the Built Environment
Prof Sehaam Khan -Health Sciences
Prof Kammila Naidoo -Faculty of Humanities
Prof Wesahl Domingo -Faculty of Law
Prof Debra Meyer -Faculty of Science
Prof Amanda Dempsey -School of Accounting
Dr Randall Carolissen - Johannesburg Business School
Prof Annah Moteetee -Post Graduate School
Prof Ina Wagenaar -Vice Dean Faculty of Sciences
Prof Bettine Jansen van Vuuren - Strategic Initiatives & Administration
Prof Thea de Wet - Centre for Academic Technologies (CAT)
Dr Tinus van Zyl - Central Academic Administration (CAA)
Anna Marie Meyer -Academic Planning
Dr Kirti Menon - Academic Planning, Quality Promotion & Professional Academic Staff Development
Dr Denyse Webbstock - Institutional Planning, Evaluation & Monitoring
Prof Ylva Rodny- Gumede - Internationalisation
Louis Steyn - HEMIS
Prof Andre Nel - Operations
Yonela Mfeya - Operations
Greg James – Central Technical Services
Nellie Carmen Van der Byl - Central Technical Services
Edward Brooks - Activate
Reon van der Wiel - Activate
Ludwig Hansen – LHA + UD

**ACTION**

1.1 **ATTENDANCE AND APOLOGIES**

1.1.1 The attendance and apologies are reflected on the front page of these minutes. **ALL**

1.2 **PREVIOUS MINUTES**

1.2.1. No Previous Minutes **ALL**

**ACTION**

1.3 **INTRODUCTION**

I. Edward welcomed everyone to the meeting and presented some initial slides, providing background for the UJ Spatial Development Framework (SDF) project and outlining an agenda for the upcoming 60-minute interaction.

II. The aim of the meeting is to try and understand the current spatial context from the Academic Faculty Heads themselves as well as their immediate, medium- and long-term spatial needs in the context of the UJ Enrolment and Strategic Plans and the challenges they are facing in the current and post Covid "Blended Learning" environment.

III. The slides included:

- A diagram showing the steps and process to be followed for Workstage 1: Interrogating the UJ Vision and Mission and the spatial implications of this; the holding of stakeholder engagement meetings, the sourcing of status quo technical and academic information and the formulation of principles and priorities to provide a Spatial Design Rationale
- A Matrix, graphically illustrating the UJ values and strategic objectives layered over the project imperatives of Academic Excellence, Spatial Flexibility and Sustainability
- The three informants that drive the direction of the SDF: Academic Mission, Performance Qualities and Normative Principles and Context
- The makeup of the professional team which includes: Architect and Urban Designer, Bulk Services Engineers, Town Planner, Environmental Consultant, Stakeholder Engagement Specialist and Cost Controller

1.4 **STAKEHOLDER ENGAGEMENT - DISSCUSION**

I. Some initial questions were posed to the meeting: What are the most and least successful characteristics of the university as a teaching and learning environment? and Are there growth trends in specific departments and what are the needs of these departments?

II. Prof Daneel van Lill (College of Business & Economics) responded and made the following points:

- The CBE undergraduate numbers had stabilised at about 16000 students making the CBE the largest faculty
- Their focus is on growing Post Graduate numbers, which are mostly drawn from Full-time employees
- The CBE sees its space requirements getting less but with the need for better infrastructure with improved IT systems in line with 4IR principles and agility
- There is a need for opportunities to rapidly access populations for research, tapping into the nodes around the campuses
- The CBE would like to have a Post Graduate Space where PG students could come together for 6 months providing more interaction in an interdisciplinary exchange of ideas; this could be partly online. However, the online format is not ideal for the, often, informal

exploration of new ideas and is sometimes a bit forced. It is hard to replace that human factor. Post Grad online sometimes a bit forced.

III. Prof Sarah Gravett (Faculty of Education) responded and made the following points:

- Even in the blended learning environment, the university still needs spaces for students to work on Campus.
- Improve ITC infrastructure
- Some of these can be smaller venues for discussions where students can interact more informally while there is still the need for some bigger venues but less than previous.

IV. Prof Wesahl Domingo (Faculty of Law) New Dean joined in March responded and made the following points:

- Balance blended learning. May be still the need for large classes. One lecturer teaching one large class with some students joining online. This will limit the need for many lecturers giving the same class.
- Smaller venues are the future but reimagined: movement of desks and tables, slide doors open to make bigger venues
- No sitting at desks: Students may want to sit in pods, write on walls, work in groups in ways which are technology driven/connected
- Get connectivity right, laptops for lecturers, support structure the foundation

V. Prof Daneel van Lill made the following further points:

- Large Module Issue: The CBE has 1000-5000 course enrolments per semester. Lock down has taught us that you get better results with slightly smaller groups; Say up to 3 lecturers teaching a big module, especially at 1st year level where students need more encouragement and support.
- Flexibility of space is important so flat venues are better than arena/raked. Raked venues are good for exams.
- Shift the focus for a moment from Students to Staff: Over the past decade: Social amenity spaces have been replaced by offices. This has a social impact. Now with options for more rotational staff complement, so less staff on campus, some of these spaces can be reconverted into nice spaces for staff to engage with each other
- Support Staff and administrators: key competitive factor: how quickly can you deal with frontline issues when you have a lot of students? Flow could be better and more efficient with improve idea generation in this area.

VI. Prof Ina Wagenaar (Vice-Dean Faculty of Science) made the following further points:

- Standing in for the Dean
- For Sciences the practical component will be important in other words Laboratory Spaces

VII. Dr Randall Carolissen (Johannesburg Business School) - also fairly new made the following further points:

- Balance the dynamic: feed off the vibrancy and energy of the city and remain part of the city without the downside (security, access and transport corridors).
- Approach to teaching will not only be a blended learning one but students and staff will need access to the system on a 24-hour basis. Students and staff must be able to safely access the campus whilst remaining integrated with it
- 4IR university: Smart university - future designs must reflect that
- Universities should be models of “Green Design” and set the example for the rest of society

VIII. Prof Kammila Naidoo (Faculty of Humanities) made the following further points:

- Hybrid Model: Cater in a different way for large classes; some in the classroom and some accessing lessons online
- Undergrads: fully equipped and useful tutorial group venues. Smaller spaces which enable discussion and intellectual exchange
- Post Grads and Post Docs (bringing in more): Sophisticated infrastructure needed to enable their research to thrive
- We have one excellent common room space. More spaces for staff to have meetings/seminars that are better equipped and better structured.

IX. Reon asked the question:

- Question to representatives from FEBE and FADA. Enrolment figures, especially FEBE which is showing an increase in post graduate students of 20% which equates to 400 students over the next 5 years.
- Is there sufficient capacity wrt to laboratories and other specialist facilities?

X. Prof Daniel Mashao (FEBE) responded:

- FEBE biggest challenge is that there are not enough offices for academic staff. This is a very urgent problem!
- Doctoral Students are being supervised in a less than ideal environment: Ideally a large dedicated space where Doctoral Students can work together and share ideas. They currently work in the library; they do not have space and see other doctoral students working. This is also very urgent.
- Space for research groups in particular.

XI. Prof Daneel van Lill made the following further points:

- Adequate Post-Doctoral accommodation could ideally be located on the Bunting Road campus in the open area between the library and the last block of offices which are not really used
- This could be rooms: short-term accommodation which lends itself to short stays from visiting scholars or used as alternative/temporary accommodation
- A clean well-maintained space with good connectivity close to the library systems or connect with visiting colleagues. Also, seminar space within the residence space on campus provides safety and security

XII. Dr Randall Carolissen (Johannesburg Business School) – added the following points:

- Integrating accommodation into the campuses: At a previous institution an integrated plan was produced.
- Creates a campus atmosphere within a safe environment. Part of the learning process
- Peer interactions key: fully integrated entire campus
- To give direction to future acquisition of buildings although difficult to control prices – this could be managed

XIII. Edward responded to Dr Carolissen – with the following points:

- LHA has designed the Wits SDF we have learned some lessons. These include integration

with other institutions and interest groups around the campuses

- We see consolidation as key. Use existing land resources rather than purchase new: there are opportunities within the current campuses to repurpose or reuse buildings and other spaces.

XIV. Prof Daneel van Lill made the following further points:

- Safety and integration: High risk- the crossing over Kingsway from the Auckland Park Campus to the commercial node across the street is dangerous. There is a bridging opportunity to enable students and staff to get across safely. These do come with security and safety challenges and would have to be carefully considered.
- Taxis are also dangerous on this crossing: Perhaps parking spaces for taxis opposite the McDonalds could reduce risks
- Bridging to 44 Stanley across the road from the Bunting Road campus could also be beneficial.
- On the Soweto Campus: Entrepreneurial Hub – Plan a high level of connectivity, renewable energy. Work in partnership with the city.

XV. Reon asked the question:

- Is there duplication of courses across the campuses? UJ has a broad footprint makes it accessible to students across the city

XVI. Prof Daneel van Lill responded:

- The principle: while most faculty programmes are located on one campus there are some overlaps where one faculty serves a module on another campus for another faculty.
- Staff then do need to travel. Students may need to travel from one campus to another on a rare occasion.

XVII. Prof Wesahl Domingo (Faculty of Law) responded:

- Law faculty does run multiple courses on different campuses. Both APK and SOWETO. Online works well.

XVIII. Edward describes the opportunity sketches:

- Provocations for discussion: Handshakes with the city, outreach spaces/ adult learning opportunities, residential opportunities, green belts, safety and security improvements, how do we efficiently and effectively plan the campuses.

XIX. Prof Wesahl Domingo (Faculty of Law) responded:

- Safety and security on campuses needs to be carefully consider: the darker corners at night. Adequate lighting needs to be provided to illuminate routes from various facilities to residences, etc.
- Students and staff should be able to move safely from their cars to buildings

XX. Edward responded:

- SOWETO Campus has very little green space. So, preserve that and look at opportunities around the campus. This is already happening with some potential acquisition of land adjacent to the campus for potential residence projects.
- Our team has a sustainable focus. We will be reporting on a wide range of aspects from

recycling, carbon reduction, travel, teaching, blended learning. UJ will be reporting against the GRI G4 reporting mechanism. Campuses should be developed in a sustainable way.

XXI. Prof Daneel van Lill responded:

- Recycling: At this stage, we dump our waste in a single container. A different colour coded bin system with waste separation could be implemented. This aspect could be managed better

XXII. Annamarie Meyer (Academic Planning) raised the following:

- Students in residences are out performing those not in-residence using module success rate: Reasons: travel time, space more conducive to teaching and learning, some students face a lot of challenges.
- In the enrolment plan in the past, it was to grow: Science feedback: More Labs are required

XXIII. Prof Wesahl Domingo (Faculty of Law) responded:

- Toilets: State of the toilets is sometimes horrific. Certain levels there is no wheel chair access. Need to be fully accessible, neat and clean.

XXIV. Edward wrapped up the session with thanks

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# UJ: SPATIAL DEVELOPMENT FRAMEWORK
## CONTRACT NO – UJ 19/2020

## CONTRACT DESCRIPTION – Spatial Development Framework for the University of Johannesburg

# STAKEHOLDER: GROUP 4 – CAMPUSES & OPERATIONS: MEETING FEEDBACK

**ATTENDANCE REGISTER FOR MEETING THE HELD-ON MICROSOFT TEAMS ON MONDAY 05th JULY 2021 AT 14H00**

**Present:**

Prof Amanda Dempsey - School of Accounting
Dr Joe Manyaka - Campuses
Dr Randall Carolissen - Johannesburg Business School
Prof Ylva Rodny-Gumede - Internationalisation
Dr Kirti Menon - Academic Planning, Quality Promotion & Professional Academic Staff Development
Ms Nomsa Mahlangu - Sport
Dr Denyse Webbstock - Institutional Planning, Evaluation & Monitoring
Prof Annah Moteetee - Post Graduate School
Prof Bettine Jansen van Vuuren - Strategic Initiatives & Administration
Mr Godfrey Helani - Student Affairs
Mr Andre Arendse - Protection Services
Prof Thea de Wet - Centre for Academic Technologies (CAT)
Dr Tinus van Zyl - Central Academic Administration (CAA)
Mr Mzwakhe Matukane - Revenue Administration
Mr Dirkie Van Der Wat – Soweto Campus director
Mr Kenneth Ntombela - Student Affairs
Mr Conrad van der Horst – Protection Services
Mr Taariq Kagee – Protection Services
Mr Martin Siluthahyi – Logistics
Ms Celiwe Mtebula - Operations
Prof Andre Nel - Operations
Yonela Mfeya - Operations
Mr Greg James – Central Technical Services
Ms Nellie Carmen Van der Byl - Central Technical Services
Edward Brooks - Activate
Reon van der Wiel - Activate
Ludwig Hansen – LHA + UD

**ACTION**

1.1 **ATTENDANCE AND APOLOGIES**

1.1.1 The attendance and apologies are reflected on the front page of these minutes. **ALL**

1.2 **PREVIOUS MINUTES**

1.2.1. No Previous Minutes **ALL**

**ACTION**

1.3 **INTRODUCTION**

I. Edward welcomed everyone to the meeting and presented some initial slides, providing background for the UJ Spatial Development Framework (SDF) project and outlining an agenda for the upcoming 60-minute interaction.

II. The aim of the meeting is to try and understand the current spatial context from the Campus Heads and Operations Heads themselves, to get an understanding of the infrastructure challenges that each campus faces that could impede growth and in the context of Blended Learning the understand what the gaps and opportunities are for each of the campus environments to more effectively support academia and student life over the immediate, medium- and long-term.

III. The slides included:

- A diagram showing (Enquiry by Design) the steps and process to be followed for Workstage 1: Interrogating the UJ Vision and Mission and the spatial implications of this; the holding of stakeholder engagement meetings, the sourcing of status quo technical and academic information and the formulation of principles and priorities to provide a Spatial Design Rationale
- A Matrix, graphically illustrating the UJ values and strategic objectives layered over the project imperatives of Academic Excellence, Spatial Flexibility and Sustainability
- The three informants that drive the direction of the SDF: Academic Mission, Performance Qualities and Normative Principles and Context
- The makeup of the professional team which includes: Architect and Urban Designer, Bulk Services Engineers, Town Planner, Environmental Consultant, Stakeholder Engagement Specialist and Cost Controller
- A slide indicating Potential Space Utilization Phase Change Through Blended Learning – provocation not based on research

IV. Reon presented some slides of drawings from the very large metropolitan and city scale to the campus scale. In addition, “opportunity drawings” were presented for each campus. Some comments

- It is striking how spread out UJ is across the city of Johannesburg
- Spatial opportunities: the university can overcome some of the challenges using the Hybrid Model. We are no longer dependent on sitting in the same room to share knowledge.
- How can UJ do more with less?
- Moving to the city scale: footprint spread out through the city: Important relationships: other institutions, school, Con court, Wits, etc
- DFC: open space and circulation and space allocation, opportunity drawing looking at the potential or reconfiguration for further discussion. Invite participation and discussion around the drawings.

1.4 **STAKEHOLDER ENGAGEMENT – DISCUSSION**

I. Some initial questions were posed to the meeting: What are the bulk infrastructure challenges that each campus faces that could impede growth? How does your role support the academic mission? and in the future of blended learning how do you see your and that of your department changing?

II. Kabelo Motswane (DFC Campus Director) responded and made the following points:

- Water reticulation challenges at DFC: Currently unavailability of drawing information regarding the reticulation of water pipes underground. So there seems to surveys of this reticulation.

III. Prof Ylva Rodny-Gumede (Internationalisation) added:

- Question around the residences: Are there any plans to repurpose buildings like office places that are standing vacant while everyone is working from home? Edward responded that we are thinking seriously about how buildings and which buildings can be repurposed.

IV. Conrad van Der Horst (Protection Services) raised the following issues:

- With the large Imbizo Hall at Soweto Campus are there any plans to increase the parking areas. Also, at APK stadium, is there plans to increase parking. Hosting events is where the parking is a problem.
- Edward responded that our team is looking at the current traffic impact studies and moving forward consideration will be given to the transport question, whether it be public (buses and taxis) or private (cars) and possible solutions for large events, especially at the two campuses mentioned.

V. Taariq Kagee (Protection Services) commented:

- The context for DFC and Soweto: Protection Services' mandate is within the fence and the gate. Increasingly the mandate is extending to off campus buildings: residences, stadiums etc. Social stability at DFC and Soweto is a concern. University Campuses are essentially "Privately owned public spaces" Is the neighbourhood/surrounding context being taken into consideration in the SDF teams planning and thinking?
- Edward responded: We will be engaging more with the communities in later phases of this project. Are these HR facilities shared with staff and students? Would you change anything about the current facilities that you have?

VI. Kenneth Ntombela (Head Student Affairs) added:

- Focussing on the off-campus residences in the context of "Campus Equivalence" there is a perception that APK is "Hollywood" well-resourced and DFC is "Bollywood" not well resourced. There is an element of safety {students feel less safe} with the residences located off campus especially at DFC (Kopano, Habitat, etc) There is also a perception that the some privately owned residences are better resourced and have better facilities than some UJ Campuses.
- What is the team considering for these residences? Student are wanting study areas for academic work, not with the rules and strictness of a library. For Example: University of Stellenbosch has "Day Houses", integrated student centres with the online resources linked to the library. For DFC for SOWETO
- Are our teams' thoughts bench marked with international universities? Edward responded: LHA & UD, our team's design lead, has been involved in the urban framework planning of many universities around the country and has intimate knowledge of DHET rational and processes. We are looking at local national and international bench marks moving forward.
- Edward responded: We are looking at the Day House type spaces in campuses and also including seminar/study spaces in the residences themselves

VII. Kabelo Motswane raised additional concerns:

- Lack of electrical infrastructure documentation and drawings is hampering existing maintenance as well as new development on the campus. We will recommend that existing infrastructure is mapped and documented as a project in itself.
- Natural Spring Water under the Qoboza Klaaste Building: Lots of water is pumped out into the stormwater system 24/7. Is it not possible that the natural spring water could be used for and by the university? Edward responded: The capture of spring water will be considered by our engineering team and reported on with a project to be identified for later study and implementation.

VIII. Mr Dirkie Van Der Wat (Soweto Campus director) made the following further points:

- Electricity power cuts are a problem on Soweto Campus. Power cuts are regular and the last one lasted for 4 days.
- Back up water is in short supply. The residences have their own supply but the other facilities don't have backup water.
- Service Delivery: Maintenance and clean services, etc are a problem as we are quit far from other campuses. With additional buildings it will put more strain on this aspect
- Access is also a problem: Service delivery protests around the Soweto Campus makes it difficult to gain access at times to the campuses.

IX. Andre Arendse (Protection Services) - made the following further points:

- How are we integrating our UJ plan into the broader plans of the other city stakeholders, Wits University, The City of Johannesburg, Etc How do we pool resources with others.
- Edward Responded: We are focussing on where we can integrate. We are looking at Macro links and handshakes with the city.
- LHA + UD have completed the Wits Spatial Development Plan. So we are in a good position to consider the broader issues.
- Andre followed up: He is concerned about the living experience of students on campus: We need to consider recreational spaces as there are very few safe options for students to relax at the moment, especially on DFC. How do we complete the entire Work Live Play experience?
- Edward Responded: Our team is looking at ideas to create more green space on DFC. As well as links with the city: A student village has been mooted to the east of DFC where a number of current residences exist: A safe, secure student village precinct with links to the sports facilities of Ellis Park and the Johannesburg Stadium.
- Taariq commented further: Clarify the element of resilience: how do the campuses as islands in the city continue to operate in the event of a calamity or a shortage. "Crime prevention through environmental design"
- Edward responded that our team considers long term environmental sustainability as key and we are considering a number of initiatives which will ensure operations in the event that the city is not able to supply services.
- Reon posed the question: Are there gaps or opportunities in the context of blended learning for each of the campuses to more effectively support academia and student life?
- Ylva mentioned that more tutor venues will be required perhaps to replace offices. Consolidating existing spaces

X. Reon mentioned that the format of blended learning will change as it matures over time. So we need to future gaze a bit to try and understand what future teaching and learning spaces will look like

XI. Edward wrapped up the session with thanks and a request to email any further thoughts to edward@activate.co.za

# UJ: SPATIAL DEVELOPMENT FRAMEWORK
**CONTRACT NO – UJ 19/2020**

**CONTRACT DESCRIPTION – Spatial Development Framework for the University of Johannesburg**

## STAKEHOLDER: GROUP 3 – SUPPORT EXECUTIVES: MEETING FEEDBACK

**ATTENDANCE REGISTER FOR MEETING THE HELD-ON MICROSOFT TEAMS ON TUESDAY 29th JUNE 2021 AT 11H30**

**Present:**

Ms Sarah Makinta - Expenditure
Ms Tokoza Kwinana - Human Resources
Prof Mariah Frahm-Arp - Library & Information Centre
Ms Khathu Sibanda - Chief Information Officer
Ms Lerato Riba - Financial Governance & Revenue
Dr Carol Bernice Nonkwelo - Research & Innovation
Mr Mzwakhe Matukane – Finance: Revenue Administration Student Financial Aid
Prof Andre Nel - Operations
Yonela Mfeya - Operations
Greg James – Central Technical Services
Nellie Carmen Van der Byl - Central Technical Services
Edward Brooks - Activate
Reon van der Wiel - Activate
Ludwig Hansen – LHA + UD

**ACTION**

1.1 **ATTENDANCE AND APOLOGIES**

1.1.1 The attendance and apologies are reflected on the front page of these minutes. **ALL**

1.2 **PREVIOUS MINUTES**

1.2.1. No Previous Minutes **ALL**

**ACTION**

1.3 **INTRODUCTION**

I. Edward welcomed everyone to the meeting and presented some initial slides, providing background for the UJ Spatial Development Framework (SDF) project and outlining an agenda for the upcoming 60-minute interaction.

II. The aim of the meeting is to try and understand the current spatial context from the Support Executives themselves as well as their immediate, medium- and long-term spatial needs in the context of the UJ Enrolment and Strategic Plans and the challenges they are facing to support the academic mission, in the current and post Covid "Blended Learning" environment.

III. The slides included:

- A diagram showing (Enquiry by Design) the steps and process to be followed for Workstage 1: Interrogating the UJ Vision and Mission and the spatial implications of this; the holding of stakeholder engagement meetings, the sourcing of status quo technical and academic information and the formulation of principles and priorities to provide a Spatial Design Rationale
- A Matrix, graphically illustrating the UJ values and strategic objectives layered over the project imperatives of Academic Excellence, Spatial Flexibility and Sustainability
- The three informants that drive the direction of the SDF: Academic Mission, Performance Qualities and Normative Principles and Context
- The makeup of the professional team which includes: Architect and Urban Designer, Bulk Services Engineers, Town Planner, Environmental Consultant, Stakeholder Engagement Specialist and Cost Controller

1.4 **STAKEHOLDER ENGAGEMENT – DISCUSSION**

I. Some initial questions were posed to the meeting: How does your role support the academic mission? and in the future of blended learning how do you see your and that of your department changing?

II. Edward provided a bit more context to the Blended Learning environment highlighting the places where teaching and learning currently happens (in the classroom, online, in the library. With the onset of the Covid pandemic are seeing an explosion of online teaching and learning

III. Prof Mariah Frahm-Arp (Library) responded and made the following points:

- Better infrastructure needed. On a practical level, additional power points are needed for devices that students are now required to carry with them (laptops, phones, tablets, etc)
- The need for very different types of spaces: For Example, Virtual Reality spaces. VR equipment is being purchased by the library but currently there is no space to house it where students can readily access and experience it.
- Maker-spaces: the library has a "Maker-space", but more "Maker-spaces" will have to be created: Additional 3D printing and the making of more learning artifacts is going to be required. Students will be making more and more of these learning artifacts in the 4IR environment.

- Edward asked if the future "Maker-spaces" would happen within the libraries spaces themselves? Mariah responded; the library has been weeding out older books: They are buying more online resources and less new physical publications and therefor need fewer book shelves/stacks thereby creating additional spaces within the current libraries for" maker-spaces "rather than requiring spaces in new buildings.

IV. Reon asked the question:

- Question: We are picturing the nature of libraries changing from a study space after class to a more integrate part of the learning process. Do you see the library becoming a more integrated part of the learning process? Even in the blended learning environment, the university still needs spaces for students to work on Campus.
- Mariah responded and confirmed that the libraries are becoming more integrated. There are two new coffee shops in the libraries and a further coffee shop is still required in the third library. Designated areas where students can talk. Also, quiet areas. Students are wanting to work between classes. The "talking" areas have been reduced and quiet areas increased

V. Ms Tokoza Kwinana (Human Resources) responded and made the following points:

- How we support the academic agenda is the employee life cycle from attraction, development and training, to exit.
- Blended Learning: Programmes we roll out use both online and physical, but face-to-face is the preferred method, especially with training of lower-level employees.
- The training rooms need to be set up to accommodate both online and face-to-face learning and teaching
- Edward asked: Are these HR facilities shared with staff and students? Would you change anything about the current facilities that you have?
- Tokoza responded: The facilities are mainly based at APK, they are shared but the feel and look does need to be updated. Our training spaces and programmes are not set up for computer-type online training.
- Edward asked whether it would it beneficial to split the training across various campus.
- Thokoza responded that it may be beneficial but this could be done to an extent through the blended learning format if the facilities were improved. There is a need for staff to be trained at each of the campuses for specific aspects

VI. Edward posed a few additional questions:

- We are finding in our work that the use of resources is changing: In the emerging new context of Blended Learning due to the Covid pandemic; we would like to understand how the use of resources might change in the future? (These could be human, financial, physical, etc resources) and…
- Third Stream Income: Are UJ looking at 3rd Stream income sources; adult learning, coffee shops being run by outside companies, etc. does anyone have additional ideas around 3rd stream income possibilities?
- Mariah responded that they (libraries) have an ambitious dream. To create a Visitors Centre (e.g. Wits Origins Centre attracts good tourist numbers) on the Soweto Campus: As part of the university broader KPI's to provide international and local public engagement. The centre will provide a virtual reality experience of people living in Soweto to give a history of Soweto told by the people of Soweto. Financing for this project is being sought but the thinking is that this would be a good 3rd stream income idea with exciting possibilities.

VII. Mr Mzwakhe Matukane made the following further points:

- In answering the question, "How do we support the academic mission?" Mzwakhe responded "We see ourselves as an enabler for students to be at the university. Funding is provided from many sources e.g. NSFAS, Anglo American, Eskom, etc. We administer the funds from these external stakeholders making sure that funds are managed and required payments made timeously."
- "How do we see our role in the future of blended learning? We try to automate our services to serve a student where ever they are. We are focusing more and more on online services for students, so that they don't have to commute to the campuses for administrative tasks."
- "3rd stream income: UJ already provides many initiatives: E.g. It is promoting SLPs -Short Learning Programmes which look to build entrepreneurial skills. UJ also has programmes that support small businesses. In addition,
- Edward Asked: Does the financial support extend to the purchase of devices for student?
- UJ has supported students with data and devices. Since 2015 UJ has provided over 21 000 devices distributed to students. However, this is still not enough, and UJ is working to provide more. UJ also provides data to all students.
- Is the SLPs require physical space or is it online based? The preference at the moment is to Move to an online platform because of Covid risks.

VIII. Dr Carol Bernice Nonkwelo (Research & Innovation) - made the following further points:

- Suggested that we speak to the faculty heads: UJ has over 200 Doctoral Fellows and additional infrastructure for research etc like laboratories is required.
- Technology Transfer Office: The office supports innovation, incubation and commercialisation of inventions within the university as well as to Start-ups down the line. The Innovation space in Plantation Rd was upgraded not too long ago. But additional space is now required.
- Where is this space located and what type of space? In Plantation Road, across the road from the Mcdonalds. It is an MIT-type space with open spaces for interaction, conversation, collaboration amongst senior students from across many faculties, there are also houses which provide space for Start-up companies. These house open-plan, collaborative type spaces
- The Incubation programme is growing with a further 22 incubatees, which are online at the moment. UJ is in in the process of trying to coordinate Entrepreneurship Education Support within the university. There is a Research Chair in the College for Business Economics, a Centre for Techno-entrepreneurship, a Centre for entrepreneurship in the Business School, and the Tech Transfer Office for Commercialisation as well as UJ Invent, established to provide an internal and external vehicle for start-ups.
- Reon asked the question: We would like to take you up on the offer to visit the facility and talk through how the programme works and where there are gaps.
- Carol mentioned that there are also research programmes: Example the Paleo-sciences Institute currently located in the research village: currently there is no space for equipment or when scientists visit from across different programmes.
- Reon follow up: There seems to be a few spatial implications regarding the requirements for these research groups and the spaces required for them. We need to have a separate offline session about this.
- Carol mentioned short, medium and long-term plans and the need to include the faculty in these discussions. There are also additional staff in the research office who don't have office space. They would like to expand further with external funding.

IX. Reon presented a series of drawings of the spatial layout of UJ campuses:

- Striking how spread out UJ is across the city the city of Johannesburg
- Spatial opportunities overcome some of the challenges using the Hybrid Model. We are no longer dependent on sitting in the same room to share knowledge.
- How can UJ do more with less.
- Moving to the city scale: footprint spread out through the city: Important relationships: other institutions, school, Con court
- DFC: open space and circulation and space allocation, opportunity drawing looking at the potential or reconfiguration for further discussion. Invite participation and discussion around the drawings.

X. Reon asked the question:

- Any thoughts about optimising this dispersed footprint that UJ has in the context of Blended Learning or Hybrid Learning
- Edward prompted with a further question: Another aspect is around sustainability: Where does the responsibility lie for incorporating sustainability into the curriculum or any other aspect of university life?
- No further responses were elicited

XI. Prof Andre Nel thanked all for their participation:

XII. Edward wrapped up the session with thanks and a request to email any further thoughts to edward@activate.co.za

# UJ: SPATIAL DEVELOPMENT FRAMEWORK
**CONTRACT NO – UJ 19/2020**

**CONTRACT DESCRIPTION – Spatial Development Framework for the University of Johannesburg**

## STAKEHOLDER: GROUP 5 – SUSTAINABILITY: MEETING FEEDBACK

**ATTENDANCE REGISTER FOR MEETING THE HELD-ON MICROSOFT TEAMS ON TUESDAY 15th JUNE 2021 AT 12H00**

**Present:**

Mr Mbambeleli Masala - Project Manager CTS : Support Utilities
Kobus de Bryn - Director OHS
Alet Venter – OHS
Masala Mbambeleh – Central Technical Services
Martin Siluthanyi - Logistics
Sister Venter – Occupational Health
Prof Albah Burke -PSYCAD
Prof Andre Nel - Operations
Yonela Mfeya - Operations
Mr Greg James – Central Technical Services
Ms Nellie Carmen Van der Byl - Central Technical Services
Edward Brooks - Activate
Reon van der Wiel - Activate
Ludwig Hansen – LHA + UD

**ACTION**

1.1 **ATTENDANCE AND APOLOGIES**

1.1.1 The attendance and apologies are reflected on the front page of these minutes. **ALL**

1.2 **PREVIOUS MINUTES**

1.2.1. No Previous Minutes **ALL**

**ACTION**

1.3 **INTRODUCTION**

I. Edward welcomed everyone to the meeting and presented some initial slides, providing background for the UJ Spatial Development Framework (SDF) project and outlining an agenda for the upcoming 60-minute interaction.

II. The aim of the meeting is to try and understand the current UJ sustainability initiatives. What are the key strengths and weakness of sustainability at UJ?

III. The slides included:

- A diagram showing (Enquiry by Design) the steps and process to be followed for Workstage 1: Interrogating the UJ Vision and Mission and the spatial implications of this; the holding of stakeholder engagement meetings, the sourcing of status quo technical and academic information and the formulation of principles and priorities to provide a Spatial Design Rationale
- The three informants that drive the direction of the SDF: Academic Mission, Performance Qualities and Normative Principles and Context
- The makeup of the professional team which includes: Architect and Urban Designer, Bulk Services Engineers, Town Planner, Environmental Consultant, Stakeholder Engagement Specialist and Cost Controller
- A Matrix, graphically illustrating the UJ values and strategic objectives layered over the project imperatives of Academic Excellence, Spatial Flexibility and Sustainability
- Our understanding of your current sustainability Initiatives: Bench Marking the UN Sustainability Development Goals, Reporting against the GRI G4 Guidelines, The Draft UJ Energy Resource Waste Sustainability Plan 2021-2025, Pilot projects: E.g. Electric bus initiative, Academic Research e.g. Waste to Energy (Bio Gas)

1.4 **STAKEHOLDER ENGAGEMENT – DISCUSSION**

I. The initial questions posed to the meeting:

- What drives UJ's sustainability Strategy?
- Where does responsibility for driving the Sustainability Implementation Plan lie?
- How can Sustainability be further mainstreamed amongst students?
- How does UJ relate to Sustainability in the context of the Global Excellence ambitions of the university?
- Are there any ambitions or interventions not yet captured in the Sustainability Plan that you can mention or imagine, even dream about?
- We would like to find out which areas you think of when asked what are "unsustainable spaces" on the campuses or even in the city itself?

II. Prof Andre Nel (Operations) responded and made the following points:

- UJ believes they should be addressing the SDGs in some way. Fundamentally they are committed to sustainability as defined in all of the relevant SDG's (except perhaps SDG 14 addressing "life below water"). UJ has made a good start. In the recent QS rankings UJ was the highest ranked African University in terms of sustainability, however UJ want to see themselves by 2025 in the top 20 worldwide in terms of sustainability.
- This goal will be announced later this year. It is non-negotiable

III. Chat comments:

- Kobus on the chat: Limited Space available on landfill sites and reduce the use of plastic in the UJ canteens
- Other chat comments: Removal of the (Single Use Plastics) SUPs, reduce paper use, reduce personal footprint, reduce carbon footprint
- Mariah responded and confirmed that the libraries are becoming more integrated. There are two new coffee shops in the libraries and a further coffee shop is still required in the third library. Designated areas where students can talk. Also, quiet areas. Students are wanting to work between classes. The "talking" areas have been reduced and quiet areas increased

IV. Kobus de Bryn (Director OHS) responded and made the following points:

- We need to give the campus directors more responsibility for dealing with sustainability. They have the manpower to deal with specific issues; reducing water consumption and saving electricity, etc.
- Edward asked if Kobus thought that the campus directors are currently taking this responsibility seriously?
- Kobus responded that he didn't think they were, not due to any fault from their side, but that UJ needed to place more emphasis on this aspect of the campus director's role and responsibilities.
- However, Kobus did feel that Waste Management was being dealt with effectively. Currently UJ is recycling about 45%-60% of all waste generated on campuses, but more could be done. Perhaps using the waste to create energy or compost, e.g. UJ is currently moving 30-50 tons of garden refuse to compost.

V. Adrie Fourie (Solid Green) Mentioned discussion on the chat where:

- It seems clear that participants believe that the responsibility for driving the UJ sustainability plan lies with each individual, but how do we make sure that this is more of a main stream view? How can we draw others in? What is the UJ student view on sustainability?

VI. Yonela (Director Operations) responded that she thought the real issue is about raising awareness on a day-to-day basis regarding everyday activities and how these activities affect the bigger picture:

- Adrie then asked Yonela what she thought the best way to communicate and raise awareness with students was?
- Yonela responded that one of the issues is that students need to be made more aware of their use of consumables like water (e.g. showering) and electricity. UJ are doing some of this with the inclusion of low-water-use taps etc on new projects but now in older residences. Conveying the message to students could be done via a messaging/ad campaign on campuses and in residences which needs funding. Yonela cited the example of the Virgin Active 2-minute time restriction on showers and that communication with students should deal with these everyday issues.

- Availability of recycling equipment for students to actively recycle should be made available or increased on campuses and in residences. All this change requires investment.

VII. Kobus de Bryn made the following further points:

- In 2017/18 UJ started a project where Kobus and his team went to schools to introduce recycling to scholars who were very interested in various aspects of recycling e.g. (the life cycle of glass, the role of earthworms in the rejuvenation of soil, etc.). He noted that it would be important to continue this campaign after the Covid lockdowns had passed.
- Edward asked what initiatives are currently happening on the UJ campuses? Kobus responded that UJ has a "Recycling Week" in September every year where recycling is introduced to students and staff. There are recycling stations on all campuses but the message does not seem to be getting across to students so more needs to be done to increase awareness about waste separation. The bigger impact was seen with the school children (Primary and high schools - future UJ students) in schools around the UJ campuses.
- Kobus made a last comment that he was also involved in some other initiatives: He was assisting Two students who were collecting plastic 2L bottles and building a green farm, in addition, all E-waste was being transported to DFC (students are taking the E-waste apart and reconfiguring/reusing pieces for new applications) as part of the curriculum.

VIII. Masala Mbambeleli (Central Technical Services) made the following further points:

- UJ CTs are currently involved with the following Initiatives: LED light fittings and bulbs with motion sensors are being installed in all buildings, as well as sensors to be installed to switch off AC units and lights automatically in offices and other spaces when occupants leave.
- Are UJ seeing reduction in energy usage with the implementation of the above initiatives? There are smart meters installed in all buildings and UJ has been able to measure significant energy saving across campuses.
- In addition, UJ has installed about 1.7MW of grid-tied solar plant across the 4 campuses. Do you get a sense that the students and staff are aware of these initiatives?
- Energy awareness campaign has raised student awareness amongst students.

IX. Reon shared the metropolitan and city scale drawings of UJ campuses in context: - made the following further points:

- The discussion that followed focussed on connections between campuses and the "Electric Bus Initiative". Prof. Nel commented that it is a dream project and if the savings off the current inter-campus bus service for the last 18 months, which amount to about R12 million, could be used, it would buy 3 electric buses, cash; which would then add further to savings down the line. Stay Bus could operate them and UJ could then learn about operating electric buses.
- Apart from being able to say that UJ has the first continual electric bus service (on the circular route between APK and APB or APB and DFC), the reduction in carbon footprint, and the potential to climb up the QS ratings. Important to build an understanding of the actual cost and understand the ROI for the university.
- Edward spoke about the potential for partnerships with the city: like the BRT which is currently inefficient and unreliable. Are there other opportunities to improve or reinforce the BRT or any other of the existing transport systems? Some food for thought and consideration!

X. Ludwig posed the question in the chat: Are there plans to introduce alternative building materials or construction methods in new or refurbishment projects?

- Greg James (Central Technical Services) Spoke about improving thermal efficiency in building envelopes using new materials. For Example; recently DPW school projects are using a thick monolithic layer as an alternative on roofs which deals with both insulation and waterproofing at the same time. This type of material could potentially be used on some buildings (not all) at UJ where thermal and/or waterproofing challenges are being experienced.

XI. Adrie has been part of the team assisting Melbourne University with their sustainability strategies. Some initiatives she mentioned:

- Discount on food in the canteen if students bring their own "Tupperware", Reuse cups instead of takeaway containers, Create Carbon Sinks on campus? How you treat the biodiversity, how you link that to the curriculum – research projects on site?

XII. Reon introduced the idea of "Living Laboratories"

- These initiatives start closing the gap between the different "silos of operation" and academia
- Campus buildings become places for testing and research, for example a Master Student who could be researching low energy light fittings could use live /used university buildings to undertake the research
- Campus starts to become an environment for exploration and research in itself

XIII. Alet Venter (OHS) – spoke about some initiatives to reduce plastic bags in the collection of garden refuse.

XIV. Green Belt resources and natural settings on campus: precious space on campus talks to the health and well-being of staff and students. These are vital resources that should be maintained. The new structures need to be carefully positioned so as not to unnecessarily reduce this space.

- APB and DFC need improvement to green spaces
- SOWETO and APK do have good green environment
- The SHIP agenda should not compromise the university's "green" resources. Ludwig suggests that criteria for development should be put in place that guide amongst other aspects, new building placement, etc. This is critical to UJ's long term sustainability. An outside source is only looking at their spreadsheets numbers and considering what is beneficial to them.
- The SHIP Programme is dictating the placement, etc of residences to UJ. Prof Nel does think that SHIP is considering other factors; not just numbers. There is uncertainty about the potential opportunity to propose alternative positioning for the residence buildings.
- UJ capital spend budget from DHET is down by a factor of three from the 2018 numbers. Prof Nel is not sure that DHET has the funds to build new residences.
- If the SDF differs significantly from the SHIP document then alternatives proposed by the SDF would be considered.

XV. Edward wrapped up the session with thanks and a request to email any further thoughts to edward@activate.co.za

# ANNEXURES

## 9.2 Sustainability Report

UNIVERSITY OF JOHANNESBURG

# UJ Masterplan – Workstage 1: Final Sustainability Input

**Prepared for:** Activate Architects

**Date:** 20 October 2021

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consultancy for the sustainable built environment

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# 1 INTRODUCTION

The University of Johannesburg (UJ), through its *Strategic Plan 2025*, have anchored their new development roadmap on one strategic goal: "*Global Excellence and Stature (GES)*". There are 6 strategic objectives that support the GES goals, and sustainability is included in Objective 6: Fitness for global excellence and stature both in terms of Key Performance Indicators that relate to financial sustainability but more importantly 'efficient management of the environment'.

The current appointment is focussed on creating a UJ Vision 2030 strategy that provides appropriate guidance to the University in driving academic excellence through appropriate spatial flexibility on all its campuses, while elevating its commitment to sustainability which is regarded as a crucial but missing element from 2013 Campus Master Plan.

## 1.1 The Context

The United Nations' 2030 Agenda for Sustainable Development is a '*plan of action for people, planet and prosperity*' (https://sdgs.un.org/2030agenda). The call is for all countries and all stakeholders to act in a collaborative partnership to drive implementation, and the 17 Sustainable Development Goals sit at the heart of this plan.

*Figure 1: UN SDG's*


Although in no way more important that the rest, Sustainable Development Goal 11, also known as the UrbanSDG aims to "Make cities and human settlements inclusive, safe, resilient and sustainable". It is the only Agenda 2030 goal that is location-specific at a manageable scale.

Cities around the world are undergoing significant growth and the expectation is that more than two-thirds of the global population will be living in urban areas by 2050. SDG 11 set out specific targets that should drive decision-making for interventions on city (and precinct-scale)[1]:

- By 2030, ensure access for all to adequate, safe, and affordable housing and basic services and upgrade slums.
- By 2030, provide access to safe, affordable, accessible, and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.
- By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated, and sustainable human settlement planning and management in all countries.
- Strengthen efforts to protect and safeguard the world's cultural and natural heritage.
- By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.
- By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.
- By 2030, provide universal access to safe, inclusive, and accessible, green, and public spaces, for women and children, older persons, and persons with disabilities.
- Support positive economic, social, and environmental links between urban, peri-urban, and rural areas by strengthening national and regional development planning.
- By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.
- Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.

In response to the call for global action, the City of Johannesburg, alongside eThekwini, Tshwane and the City of Cape Town have committed to achieve net zero carbon (NZC) by new buildings by 2030 and for existing buildings by 2050. This commitment was a result of the pioneering work conducted by these cities as part of the C40 South Africa Buildings Programme[2], ensures city planning alignment with the ambitious goals of the Paris Agreement to restrict global heating at 1.5 degrees Celsius or below.

The city is currently developing appropriate policy and regulations to guide the implementation of its Net Zero Carbon commitment through a Green Building Policy which was approved for public comment, and which will be further supported by the creation of an appropriate by-law that will make the Net Zero Carbon requirements mandatory. While questions remain on exactly what the

[1] https://sdgs.un.org/goals/goal11

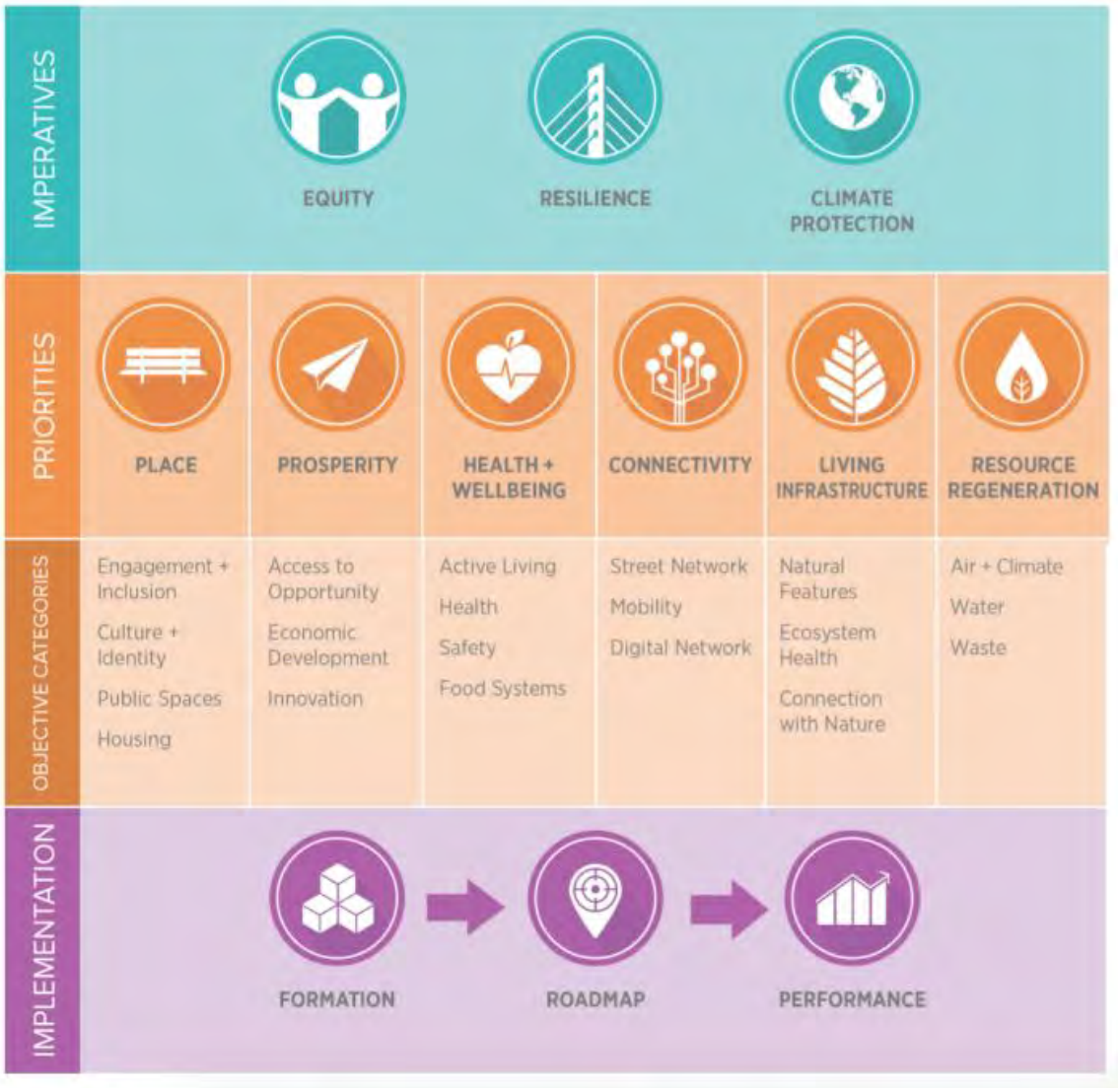
[2] A three-year programme that ran from 2018 until 2020, supported by the C40 Cities Climate Leadership Group (C40) and funded by Children's Investment Fund Foundation (CIFF). Sustainable Energy Africa (SEA) was the local implementing partner and manager of the buildings programme, providing technical support to the cities. A technical officer is deployed in each city to provide additional capacity and to work in cross departmental teams towards net zero carbon building energy performance.

bylaw will contain and how it will be administered, the end goal is clear: Move the city toward net zero.

CoJ is focused on delivering on its international commitments regarding climate change response declarations, while improving the liveability and sustainability of Johannesburg as a developing urban centre and is therefore constantly exploring innovative methodologies and approaches to evaluate and inform resource efficient built environment development practices in the city.

As part of its effort to reduce the carbon footprint of the city, Solid Green was appointed by the city to provide input focussed on formulating appropriate approaches to optimize environmental resilience and sustainability and to ultimately set improved environmental standards for Transit Oriented Development (TOD) corridors and influence new minimum City-wide standards. The appointment entails testing the international EcoDistricts™ Protocol as a possible replicable methodology to guide neighbourhoods and city nodes toward collective impact planning of suitable roadmaps to drive down consumption and target net zero at a future date. Another significant part of the appointment involves the creation of a baseline carbon emissions model for the Study Area to guide the identification of suitable interventions to drive down carbon emissions.

*Figure 2: The EcoDistricts™ Protocol*




Source: EcoDistricts, 2018b:7.

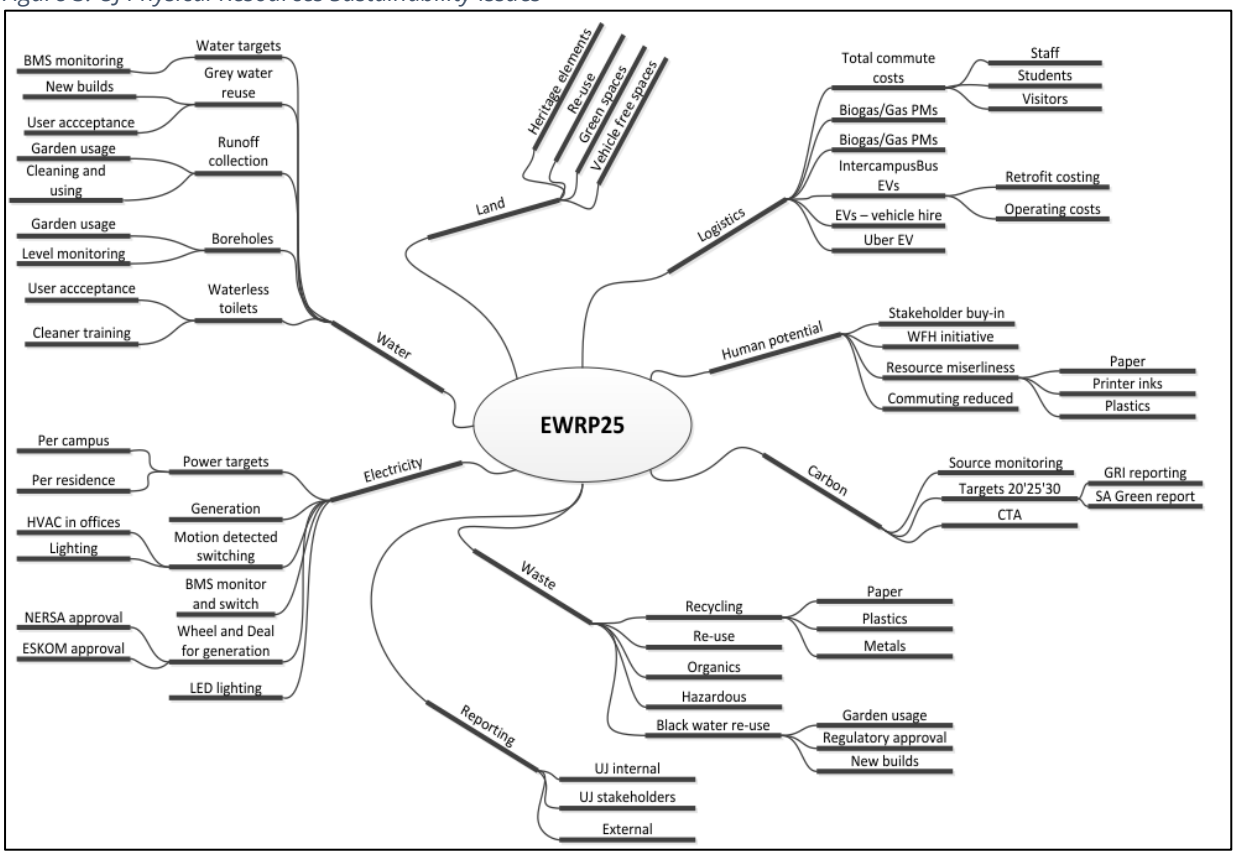
The EcoDistricts Protocol is a good example of an international tool and certification standard, which outlines a sustainable urban development framework for achieving district-scale sustainability. The Protocol identifies three imperatives (Resilience, Equity and Climate Protection) that places social, economic, and environmental sustainability at the centre of urban regeneration, and it includes priorities such as resource regeneration, health and wellbeing, connectivity, living infrastructure, place, and prosperity.

According to the research behind the EcoDistricts protocol, '*neighbourhoods provide a uniquely valuable scale to introduce and accelerate investments that can achieve profound improvements in equity, resilience, and climate protection'* and because '*neighbourhoods are small enough to innovate and big enough to leverage meaningful investment and public policy*' (EcoDistricts 2018a:3) the potential benefit of the framework as a departure point.

The intent of this departure point is not to influence UJ toward pursuing a certification of any kind, but rather to ensure that the UJ Activate Project team, and especially the sustainability input provided as part of the SDF development processes, was based on international best practice.

The diagram taken from the UJ Energy Resource Waste Sustainability Plan 2021-2025, also illustrates synergies between the current UJ physical resources sustainability issues and the priorities that form the spatial and end-user focus of the EcoDistricts protocol:

*Figure 3: UJ Physical Resources Sustainability Issues*




Source: UJ Energy Resources Waste Sustainability Plan 2021-2025:4.

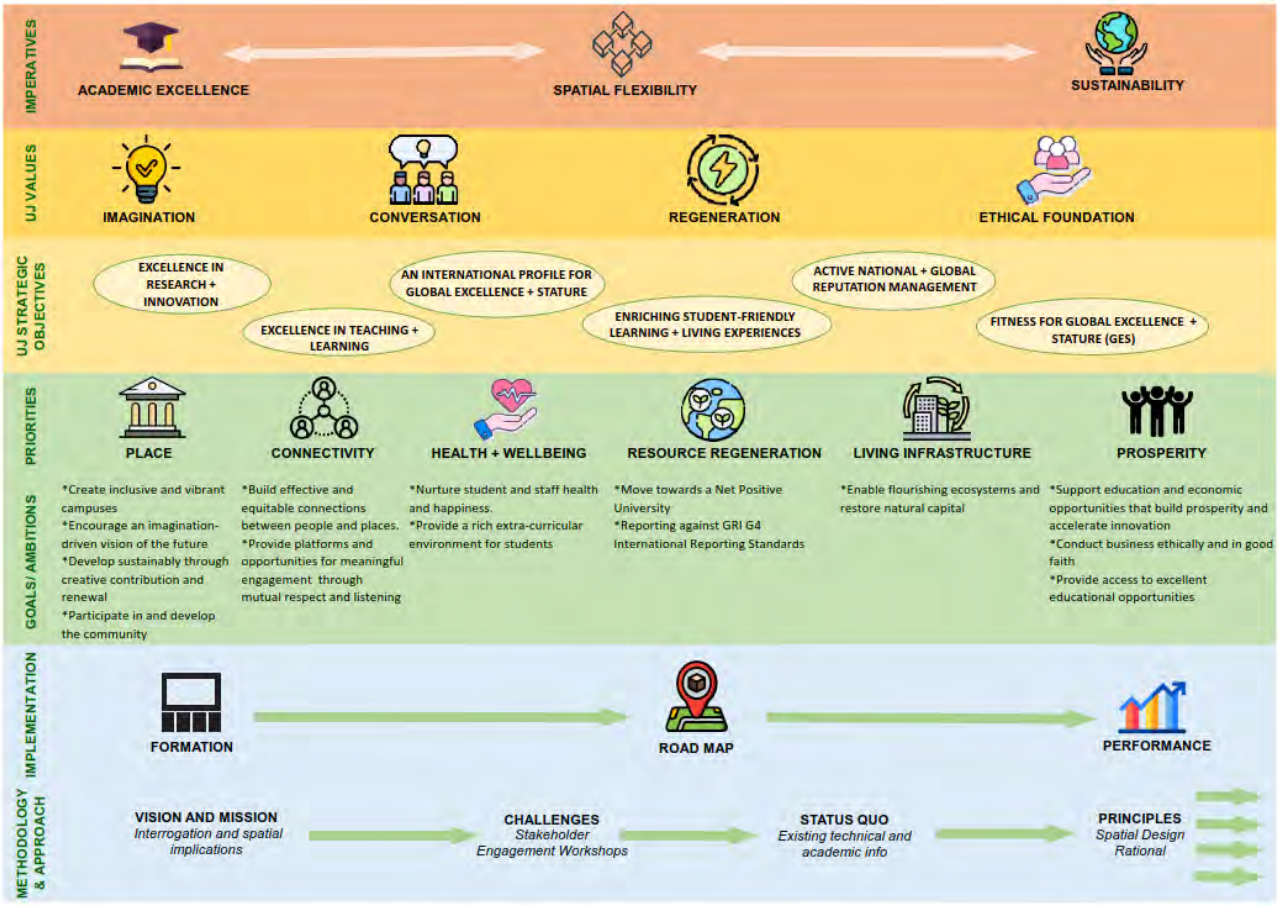
The (EcoDistricts) '*protocol puts a comprehensive lens on every urban regeneration decision, drives the delivery of meaningful performance outcomes, and sets the conditions for sustainable, collective impact. And above all, the Protocol is designed as a flexible performance framework rather than a prescriptive*

*standard, recognizing that every community has the ability and need to advance a place-based sustainability agenda. District teams tailor the Protocol to local circumstances, set performance targets based on local conditions and aspirations, and measure progress against the Protocol's Imperatives and Priorities"* (EcoDistricts 2018a:3).

## 1.2 The Proposed UJ SDF Framework

Using all available information on the UJ values, the 6 strategic objectives that support the GES goal, the commitment to net zero as well as UJs commitment to academic excellence the UJ Activate Project team integrated our strategic understanding with that of the EcoDistricts™ protocol into one methodology to guide the Spatial Development Framework processes in support of the development of a suitable UJ Vision 2030.

*Figure 4: UJ Vision 2030 Guiding Methodology Framework*




Source: Activate Project Team collaborative effort, 2021.

The intent of this approach is to assess the status of the master planning processes around all UJ campuses, and for the Sustainability Input specifically, to identify interventions or guiding principles that could assist UJ to improve its sustainability footprint.

## 1.3 The Current Status Review Process

In addition to reviewing the UJ Energy Resource Waste Sustainability Plan 2021-2025[3], the team the UJ Activate Project Team reviewed (and will continue to revisit) all the resources, drawings, policies and plans UJ shared during the initial stages of the appointment.

All resources shared were assessed by the Sustainability Team and incorporated into an Insight Sheet – which lists the document or resource name, review status, items of significance to note as well as a further notes column to identify any follow-up investigations or documentation to source.

The intent of this interim Sustainability Input report is not to provide the full Insight Sheet, as this information will already be known to the UJ Client Team, but rather to confirm that all existing resources will be utilised by the UJ Activate Project Team to guide the SDF development process, formulate recommendations and identify appropriate actions to investigate or implement to drive the overall development processes of UJ forward[4].

## 1.4 Stakeholder Engagement Input

The detail around the stakeholder engagement processes is documented in a separate report and will entail input from all members of the UJ Activate Project Team. From a sustainability perspective, the intent of the early-stage engagement processes is:

- To build up an understanding of the current understanding of stakeholder around the sustainability focus of UJ.
- Ask participants whether there are opportunities/elements they regard absent from the current Sustainability Strategy/Plan or perhaps previously unconsidered elements that might add value.
- Although the UJ Sustainability Plan assigns the responsibility for driving the Sustainability Agenda with all stakeholders, the intent would be to test whether this is already a shared understanding or whether there might be current challenges that keep all parties from being active participants.
- The team would like to ascertain whether there are any (existing/planned) specific linkages between UJ's Sustainability Agenda and curriculum development across departments.
- Unpack the current commitment to expanding general student sustainability literacy.
- Use stakeholder input to identify the main challenges in mainstreaming sustainability into UJ processes; and
- To understand whether there is currently active tracking of research into sustainability related topics, and/or whether there is a specific focus/drive to increase this focus in all departments.

This list does not provide a definitive or restrictive interaction directive. The processes and the information to be sourced from such engagement processes will remain fluid and dynamic – adaptable to the experiences, outcomes of interaction, and will serve as guiding principles only.

[3] Also referred to as the UJ Sustainability Plan in short.
[4] The preliminary matrixes are included in DRAFT format in Annexure A. It should be noted that these will remain dynamic during the Workstage 1 appointment and the intent of the appointment is not to create a complete and comprehensive summary sheet, but rather to use these tools to guide the team throughout the SDF development processes, to guide internal discussion and debate, and to inform the stakeholder engagement processes.

# 2 THE STATUS QUO GUIDING PRINCIPLES

## 2.1 The Main Themes

In line with the UJ Vision 2030 Guiding Methodology Framework (see figure 4) developed by the UJ Activate Project Team as part of the initial discussion drivers, the main themes for UJ are clear – strengthen academic excellence, developed an appropriate spatial strategy that is cognisant of current conditions and future development scenarios, while increasing the importance assigned to sustainability (and for the purpose of this input report, it is taken here to refer to the environmental, built environment and academic pursuits that will link to the carbon emissions profile, consumption patterns and contribution to SDG implementation and not the financial viability of UJ as it is referred to in the UJ Sustainability Plan).

In short, it is understood that UJ aims to:

- Drive down resource consumption (energy and water), not only through a move toward renewables, but with a clear understanding that even renewables should be treated with care and restrictive usage. The focus seems to fall on carbon neutrality in the long term.
- Reduce waste generated by all campus tenants while also understanding the possible ways in which the positive impact can be multiplied.
- Incorporate the SDGs unto the guiding framework, with an understanding that the initial commitment might be limited but will expand as capacity toward sustainability increases.
- Ensure that all actions taken are in line with relevant legislation and standards.
- Maximise the potential role as a global leader in terms of sustainable practices, research, and negative impact reduction.
- Ensure that all activities/plans/strategies linked to measurable outcomes to track and manage performance.

## 2.2 Reporting Best Practice

According to the UJ Sustainability Plan, '*there are a growing number of reporting standards for sustainability reporting that are either industry, auditing firm aligned or nationally determined. UJ has elected after serious consideration to rather make use of an agnostic reporting standard – the Global Reporting Initiative*' (UJ, 2021:" 25) although no specific motivation for the decision is provided.

The commitment to the GRI G4 reporting principles and standard disclosures are noted and the intent of the current appointment is not to argue for or against a specific reporting system which is regarded by the UJ Activate Project Team as a governance activity.

From the 2019 UJ Stakeholder Engagement Report, it is also known that the University participated in the inaugural (pilot) edition of the Times Higher Education (THE) Impact Rankings[5], ranking highly worldwide in two of the individual UN Sustainable Development Goals (SDGs) – SDG 5: Gender Equality, where UJ ranked 43 in the world, and SDG 10: Reduced Inequalities, where UJ ranked No 5 in the world[6].

[5] Which is also why the Times Higher Education SDG's linkages were incorporated into the comparison matrix provided in Annexure A – creating a link between the EcoDistricts protocol, the GRI G4 reporting elements and the UN SDGs as a guiding framework for further assessment.

[6] According to the website (https://www.timeshighereducation.com), 'the Times Higher Education Impact Rankings are the only global performance tables that assess universities against the United Nations' Sustainable Development Goals

A review of these assessment frameworks, using the EcoDistricts Framework as the departure point provides valuable insight:

1. The EcoDistrict Protocol allow itself to be adapted to a specific project context even if no formal certification process is being pursued, as is demonstrated by Figure 4 in this report in which the UJ Vision 2030 elements were integrated with the guiding principles of the methodology seamlessly;
2. Comparing the GRI-G4 and Times Higher Education Impact Rankings requirements illustrate significant alignment between the intent behind these tools and the recommendations would be to retain the EcoDistrict | GRI G4 | THE Comparison Matrix as an anchoring point in the next stage of the project. Which also links to the UJ strategic objectives framework set out in the main report on page 25.
3. This matrix, along with others that will be used as further engagement tools in Workstage 2 and 3 will play a role of strategic importance for the university in terms of identify sustainability practices and physical interventions relevant to the built environment;
4. More importantly it will allow additional conversations to continue, which will include discussions around governance, equity, and the significant power behind the power of collective impact.
5. During Workstage 2 and 3 it will be these conversations and focussed work sessions that will be used to formulate guiding principles and priorities to inform ongoing project decision-making, viability reviews and ultimately design development.

# 3 THE NEXT STEPS

In Workstage 2 and 3 more detailed assessment around the proposed assessment matrix framework is requirements. The sustainability team proposes that at least one focussed session is undertaken to provide a more detailed overview of the EcoDistrict Protocol to frame the process. This will be linked to the UJ Strategic Objectives Vision and associated principles identified (see page 25 of main report).

Using this initial framework, the sustainability team proposes to work with relevant stakeholder to identify specific priorities and measurable indicators that can be used to track performance. This will be linked to the GRI G4 reporting guidelines where practicable (and relevant), and a matrix will be developed to guide project identification to facilitate impact tracking in each of the UJ vision components.

In sub-sequent Work stages, it is envisioned that sustainability will remain the golden thread that moves through all the design- and investigative components and which could create a concrete link to academia, reporting guidelines and future visioning processes, and it is proposed that this link is further nurtured and expanded as the project progresses.

(SDGs)'. Apparently, the system uses 'carefully calibrated indicators to provide comprehensive and balanced comparison across four broad areas: research, stewardship, outreach and teaching'.

# SOURCES

EcoDistricts. 2018a. Protocol. The Standard for Urban and Community Development. Version 1.3.

EcoDistricts. 2018b. Certified. Handbook. Version 1.3.

Times Higher Education World University Rankings. Undated. Impact Rankings 2021. Webpage: https://www.timeshighereducation.com/impactrankings#!/page/0/length/25/sort_by/rank/sort_order/asc/cols/undefined

UJ. 2019. Stakeholder Report.

UJ Executive Director: Operations. 2021. UJ Energy Resource Waste Sustainability Plan 2021-2025.

United Nations. Department of Economic and Social Affairs. Undated. Transforming our world: the 2030 Agenda for Sustainable Development. Webpage: https://sdgs.un.org/2030agenda

# ANNEXURE A

1. UJ Matrix – Doc Review Sheet
2. UJ Matrix - EcoDdistricts GRI THE Comparison

| # | Document | Review Status | Items to Note | Notes |
|---|---|---|---|---|
| 1 | 2018 UJ Strategic Plan | Reviewed/Scanned | There is a reference to a 2011 baseline of carbon (from another source we now know this was done by KPMG) - need to understand if we can access this document - or more importantly any follow-up reports or strategic improvement plans created as a result that could shed light on the sustainability interventions on the campuses that might have a spatial link.<br>Sustainability is placed within the 'Operations' portion of the budget - does that unit have sufficient capacity to provide suitable attention to the requirements. | Can we have access to the KPMG carbon baseline report and any follow-up studies or investigations that might provide insight into the spatial/built environment interventions identified/implemented to date? |
| 2 | 2019 UJ Annual Report | Reviewed/Scanned | There is a section on Sustainability - specifically addressed energy-, water- and waste management.<br>It mentions the UJ Strategic Plan 2025 which, anchored in the single strategic goal, global excellence and stature (GES), has places a requirement on the institution to improve its sustainability footprint.<br>Mention is made that during 2020 the GRI G4 reporting methodology will be fully implemented. Has this been done? Can we have access to it?<br>Also mentions the phasing of an effective tenant model for energy and resource usage reporting. Has this been done? Can we have access to it? Does this link to strategies to bring consumption down or replace current sources with renewables? Potential spatial link....<br>Second wave of PV installations is mentioned - do we know where the first wave of panels were installed? And the location of the second wave?<br>It mentions the replacement of geysers with reverse heat pump solutions - was an investigation done in support? Do we have access to it?<br>Mention is made of stakeholder engagement around diversification of energy sources with emphasis on renewables (incl solar and natural gas, further techology advancements within sustainabiltiy in terms of the new building programmes and possible trial of electrical vehicle fleet for Operations use on campusus. Was any of this done? Do we have access to the info to understand potential spatial implications? | Do we have access to the 2025 UJ Strategic Plan?<br>Is there a specific Sustainability Plan that we can review?<br>The commitment was to start reporting against the GRI G4 guidelines in 2020 - was this done? Is there a report we can access?<br>Is there a strategy in place to move to renewables - is there a space plan around that? |
| 3 | Campuses Maintenance Policy and ProcedureManual | Reviewed/Scanned | It is understood that sustainabilty falls within 'Operations' based on the 2018 UJ Strategic Plan.<br>No mention of Sustainability is made in this document.<br>More specifically the 'prioritisation of work' also does not indicate any commitment to sustainability (although it does mention risk mitigation but no further insight into what that means).<br>Site services include (water, gas, electricity, stormwater drainage and sewerage) - but no specific interventions around these elements to increase sustainability is mentioned.<br>In terms of building standards used to determine the occupancy readiness of any building the SA National Building standards and the City of Johannesburg Building standards for occupancy will apply and be used to determine maintenance effectiveness. It feels like this is missing an opportunity to link back to increased efficiency or at least active management of consumption levels - but perhaps addressed in a separate sustainability plan.<br>Reference is made to the banning of lead based paints, but there are other items that impact the Indoor Environmental Quality of spaces - perhaps the sustainability strategy moves beyond lead-based paints which has already been phased out legally. | |
| 4 | UNIVERSITY OF JOHANNESBURG BUILDING MAINTENANCE AND STRATEGIC MAINTENANCE PLAN (2013) | Scanned | Actually forms part of the previous document as some sort of Annexure.<br>A description of the approach to maintenance but no mention of sustainability or proactive changing to more efficient systems when maintenance is done. | |
| 5 | National Immovable Asset Maintenance Management Standard | Scanned | Also forms part of the "Campuses Maintenance Policy and ProcedureManual" plan - Public Works doc.<br>This document does make reference to sustainability with mention of the following legilsation: NEMA, Energy Efficiency Strategy for RSA, National Climate Change Response White Pater and the 2014 Draft Green Building Policy. | We need to understand how this document influenced the UJ sustainability strategy (if at all).<br>There is also a COJ Green Building Policy that should be considered for the built environment. |
| 6 | National Immovable Asset Maintenance Management Planning Guidelines | Scanned | Also forms part of the "Campuses Maintenance Policy and ProcedureManual" plan - Public Works doc.<br>Seems to be more detailed than the standard. | |
| 7 | National Immovable Asset Maintenance Competency Framework | Aware of it but did not read | Also forms part of the "Campuses Maintenance Policy and ProcedureManual" plan - Public Works doc. | |
| 8 | Information was shared on Water Consumption for APK, SWC and DFC campus) | Seen | Is there any plans for sub-metering to make sense of this data? | |
| 9 | UNIVERSITY OF JOHANNESBURG MASTER PLAN REVIEW-Ver.02 | Seen | This document sets out some of the priority projects identified at the time including student housing. | This links to the EcoDistricts matrix of the Housing element. Can be setting a baseline and future milestone targets....<br><br>Important to keep in mind that this appointment is not to compile an 'EcoDistricts Roadmap' for UJ!! |
| 10 | 2014 UNIVERSITY OF JOHANNESBURG INFRASTRUCTURE PLAN | Scanned | The document does mention the 'public places/spaces' on the campuses and although it refers to landscaping there is no specific info on the 'volume' of those spaces or any intent to improve those spaces or understand the impact it has on habitat formation...<br>The document indicates that at the time there were no Landscape and Open Space projects planned for Auckland Bunting, Soweto and Auckland Kingsway campuses - are these spaces all safe, accessible to different people (young, old, disabled)?<br>There was recommendations about the landscaping at Doornfontein campus - was this done and the proposed Arrival Square created? | No mention is made of possible green infrastructure (bioswales etc to provide an amenity while also providing a funcional service).<br>It is possible to start linking the use of the public spaces back to the EcoDistricts Matrix (PLACE - Public Spaces).<br><br>There is a range of plans showing the status quo of each campus, including tree coverage (but no volume) but also no plans potentially linking to concepts such as 'green roof', or placement of PV - could be addressed elsewhere |
| 11 | UJ Metering Tender - Folder of documents | Seen | This seems to be reference to very high level metering - is there any plans around sub-metering?<br>There does seem to be a BMS plan for APK Campus - is this linked to a consumption monitoring and efficiency strategy? | Could link to the EcoDistricts matrix around Resource Regeneration and decarbonization |
| 12 | Strategic Area Framework for the Empire-Perth Development Corridor | Scanned | Reference to 'sustainable' mosty linked to public transport access, job creation and densification as a wya to move toward a more sustainable structure and form of settement<br>Document also references the Louis Botha SAF and the aim of creating 'Sustainable and Green Architecture', and goes on to say that the ethic for the Empire Perth SAF is that development should aim at a minimum to:<br>• Obtaining a minimum rating of 4 stars in the Green Star rating system (or equivalent)<br>• Using energy efficient technologies and moving toward a “green” and environmentally sustainable architecture<br>• Responding to local climatic conditions, including passive temperature control by shading devices and capitalising on natural airflow<br>• Utilising environmentally friendly and renewable materials• Recycling materials and water<br>• Choosing a contemporary language that facilitates the above, while meeting aesthetic and functional requirements | It is also important to reference the new COJ Green Building Policy as well as the Net Zero By-laws the city plans to introduce as part of their commitment to move to a low carbon future |

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| 13 | UJ Energy Resources Waste Sustainability Plan 2021-2025 | Reviewed | - Mention of the SDGs and the specific ones that UJ wants to focus on in the short and longer term<br>- Physical challenges mentioned (and incorporated into a useful diagram that links well to the EcoDistricts framework)<br>- Overall intention seem to be to move the university toward net zero with specific activities recieving prioritisation over other<br>- recognises the need for green building practices to be incorported both in maintenance, new construction and refurbishment work<br>- underscores the importance of collective impact (another link to EcoDistricts) of all roleplayers and stakeholders to focus on implementation<br>- the document notes various challenges and shortcomings of the plan, but is clear on elements that could drive UJ sustainability focus forward | The focus of the plan might be too narrow at present to serve as a long-term visioning tool, but there is a wealth of information and commitments illustrated or addressed. |
| 14 | HERITAGE IMPACT ASSESSMENT REPORT FOR THE ESTABLISHMENT OF AN ARRIVAL SQUARE AT CORNER NIND/BEIT STREETS AND CONSTRUCTION OF A SKYBRIDGE ACROSS BEIT STREET,UNIVERISTY OF JOHANNESBURG DOORNFONTEIN CAMPUSDRAFT - NOVEMBER2011 | Seen | Not review in any detail | There are definitive links to the Place priority and this will be more relevant in the next phase of the investigation. |
| 15 | DFC SDP - 119E&S_200317_Impendulo Site Development Plan | Seen | | It does show existing trees and perhaps can be used to create a 'tree canopy coverage' monitoring programme (this is perhaps one of the indicators that links back to the EcoDistricts matrix.<br>Also what could be useful if these types of plans include reference to and placement of recycling bins on campus - perhaps this is adressed elsewhere? |
| 16 | Doornfontein Campus_Rezoning_Stormwater Plan_SWMP01 Master Plan A0_SDP-UJDP (1) | Seen | | This type of plan would have obvious spatial implications.<br>Is the storm-water captured and used elsewhere on site (for irrigation etc? understanding where the water will be captured and where it might come to good use would have potential spatial implications) - the same could be said for rainwater harvesting projects. |
| 17 | SWC - Draft Traffic and Site Assessment Report | Scanned | | This document provides insight into traffic and movement at the Soweto campus that might link back to the illustrative objectives and potential indicators of the EcoDistricts matrix - for instance nr of intersections (now and future planned targets that will link back to moveability for pedestrians, mention is made of pedestrian routes and once again this could link to sustinability targets - increased nr of cyclist facilities, increased cyclist nrs etc) |
| 18 | RE DBSA SHIP UJ RFI - SWC DFC APK - Electricity Accounts | Noted | | Has UJ done any assessment on the consumption data, is there an increased efficiency strategy? |
| 19 | UNIVERSITY OF JOHANNESBURG KINGSWAY CAMPUS SITE DEVELOPMENT PLAN - 10 APRIL 2013-A1 | Seen | | Also looks like ti could be used to assess tree canopy cover.<br>Is there any guidelines on the buildings in terms of sustainability? |
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| UJ MASTERPLAN - SUSTAINABILITY OBJECTIVES/ELEMENTS WITH SPATIAL IMPLICATIONS | | | | | | |
|---|---|---|---|---|---|---|
| ECODISTRICTS FRAMEWORK | | | | GRI G4 REPORTING FRAMEWORK ON SUSTAINABILITY | | TIMES HIGHER EDUCATION IMPACT RANKINGS |
| IMPERATIVES | EQUITY | | | Perhaps links to the 'Social category' of the GRI reporting framework | | SDG#3; SDG#9; SDG#11 |
| | RESILIENCE | | | | | SDG#6; SDG#7; SDG#11; SDG#13 |
| | CLIMATE PROTECTION | | | | | SDG#6; SDG#7; SDG#9; SDG#11; SDG#12; SDG#13 |
| PRIORITY | OBJECTIVE CATEGORY | ILLUSTRATIVE OBJECTIVES | ILLUSTRATIVE INDICATOR | POTENTIAL LINKS TO THE ECODISTRICTS FRAMEWORK | | CORRELATING SDG |
| PLACE | Engagement & Inclusion | - Civic engagement is strong and processes are inclusive and representatives | % of population engaged in public consultation processes (e.g. attendance rates, social media subscribers) | This does perhaps lean itself toward the 'Social' category - but this might also be coverred more effectively by the 'Equity Imperative' | | SDG#3 |
| | Culture & Identity | - Historic and culturally significant places are preserved and celebrated. | Number of public area/public art and cultural interpretive installations. | | | |
| | Public Spaces | - Public spaces are accessible to all (we might need to refine what 'all' means)<br>- Public spaces are high quality, engaging and active | Number of people using public spaces daily, at peak and average levels of occupancy | | | |
| | Housing | - Housing is affordable and well maintained.<br>- Housing is available to meet a diversity of dwelling needs.<br>- Housing is close to facilities that offer a complete set of daily needs. | % of affordable housing units accessible from the relevant campus through existing public transport routes?<br>% of suitable housing on campus | | | |
| PROSPERITY | Access to Opportunity | - Schools (or should rather be Departments) provide quality education. (I am sure we can link this to some of UJs other ambitions around academic excellence)<br>- Career pathways and training are available | Number of training programs matched to district job opportunities<br>OR/AND<br>% of eligible district participants enrolled in training programs<br><br>POTENTIAL LINK TO ACADEMICS/ACADEMIA/RESEARCH? | Perhaps this links to the 'Economic' category of the GRI G4 guidelines - there is also some cross-over with the 'Social sub-category: Labour practices and decent work' | - Procurement processes can be linked to sustainable consumption strategies | SDG#9 |
| | Economic Development | - Employment in the district is retained.<br>- Job quality in the district is enhanced.<br>- New job creation occurs through economic development | Number of 'local sourcing' agreements and programs in operation | | | |
| | Innovation | - Interaction between entrepreneurs is fostered.<br>- Job growth in emerging sectors is higher than in traditional sectors. | Number of incubators, accelerators, maker spaces, and co-working spaces in the district.<br>Number of programs, and enrollment levels to cultivate business innovation. | | | |
| HEALTH AND WELLBEING | Active Living | - Access to recreation facilities and services is improved.<br>- Walkability is enhanced. | Percentage of street lenght pf the various campuses with sidewalks on both sides | | | SDG#3 |
| | Health | - Health outcomes and life expectancy are more equitable.<br>- Affordable, high-quality health case is accessible.<br>- Toxic environments are mediated and regenerated. | Could this perhaps inlude reference to the accessibility to health services across campus? | | | |
| | Safety | - Public safety is enhanced.<br>- The built environment is designed for public safety | # of incidents reported<br>OR<br># of CCTV cameras installed? | | | |
| | Food Systems | - Healthy and affordable fresh food is accessbile.<br>- Food production in the district is encouraged. | - could this perhaps be linked to productive spaces on campus to augment access to healthy foods for staff and students? | | | |
| CONNECTIVITY | Street Network | - The street network supports all travel modes.<br>- The street network accommodates people of diverse ages and abilities. | Intersections per square km.<br>Transit stops per skm.<br>% of total street length with bicycle sharing. | | | |
| | Mobility | - Districts travel, internally and externally, is safe, efficient and multimodal.<br>- Shared mobility options are increased. | Vehicle km travelled daily per capita.<br>Mode split of daily person trips. | | | |
| | Digital Network | - Quality wire and wireless connectivity is available throughout the district.<br>- Local government data is open and accessible for public consumption. | Number of free wifi hotspots per skm.<br>% of public spaces with free wi-fi.<br>% of local government services that can be acessed by district participants via the internet or mobile phone (this could be something that the Uni advocates for with the council) | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **LIVING INFRASTRUCTURE** | **Natural Features** | - The quality and functions of habitat are enhanced.<br>- Natural features are protected. | - where are the environmental 'no-go' areas - perhaps the indicator is the extent to which these areas are preserved (increase in the land size, or improvement of the habitat due to the fauna and flora visible on site...)<br>- what is the extent of the 'no-go-ness' - can these still be productive spaces (living labs, enhacing biodiversity - habitat development, beehives, food production) etc. | This could cover/align with the 'Environmental' category | - Materials<br>- Energy<br>- Water<br>- Biodiversity<br>- Emissions<br>- Effluents and waste<br>- products and services<br>- compliance<br>- transport<br>- overall<br>- supplier environmental assessment<br>- environmental grievance mechanism | |
| | **Ecosystem Health** | - Rainwater is managed in the district.<br>- Soil fertility and famrland are protected. (this potentially links to the environmental no-go areas that Ludwig referred to in a previous meeting)<br>- Contaminated land is remediated for productive reuse (doubt if there are any contaminated spaces within the campusses - but are there perhaps areas previously considered as no-go that might get some attention if UJ steps in = areas potentiallly in or around the campusses - using it as a living lab to transform the spaces as part of the curriculum) | | | | |
| | **Connection with Nature** | - Access to nature is improved | - protect and enhance the tree canopy cover, etc. | | | |
| **RESOURCE REGENERATION** | **Air & Climate** | - Air quality is protected from criteria pollutant emissions.<br>- Electricity generation is decarbonized.<br>- All sectors shift to renewable power and carbon-free fuels.<br>- All sectors improve energy efficiency, reduce waste, and increase natural carbon sinks. | | | | SDG#3; SDG#6; SDG#12 |
| | **Water** | - Potable water is used efficiently.<br>- Alternative water sources are used for non-potable purposes.<br>- Water quality is protected from pollutants. | | | | |
| | **Waste** | - Waste is diverted from landfills through reduction, reuse and recycling.<br>- The residual value of organic waste is captured (this could perhaps be linked to a composting project) | # of businesses/departments participating in waste reduction programs | | | |
| **IMPLEMENTATION STAGES** | **FORMATION** | | | | | SDG#11; SDG#13 |
| | **ROADMAP** | | | | | |
| | **PERFORMANCE** | | | | | SDG#13 |
| **ECODISTRICTS PARTNERSHIP APPROACH** | **COLLECTIVE IMPACT** | | | | | SDG#9 |

# ANNEXURES

## 9.3 Town Planning Report

UNIVERSITY OF JOHANNESBURG

P.O.Box 2050 Lonehill 2062

Tel: 706 2761 or 0791586699

Email : druce@mweb.co.za

VBGD TOWN PLANNERS

# Memo

To: EDWARD BROOKS
From: LLOYD DRUCE
CC:
Date: 14/5/21
Re: INITIAL REPORT: UJ CAMPUSES ZONING AND DEED INVESTIGATION

---

We refer to the above report as follows:

We have examined the current zonings and Title Deeds applicable to the 4 campuses and can report as follows:

1. AUCKLAND PARK CAMPUS:

1.1 The campus was rezoned in 2016 and has a consolidated zoning, zoned "Educational" in terms of the Johannesburg Town Planning Scheme 1979. The zoning permits the following:

1.1.1 Uses: Places of instruction and ancillary uses, which are not defined.

1.1.2 Floor Area Ratio: 0,8

1.1.3 Height: 3 storeys

1.1.4 Coverage: 70%

1.2 There are no unusual special conditions

1.3 TITLE DEEDS: There appears to be no unusual restrictive conditions in the Deeds.

There are some properties in the Deeds which appear to be remote from the campus notably on the adjoining Voorentoe School Site.

2. DOORNFONTEIN CAMPUS:

2.1 The campus is located on a consolidated site, however, there are two zonings applicable to the site. The one is for the eastern part of the site which is an old rezoning done in the 1980's and appears to have no specifics other than its zoning of "Educational" in Height Zone 5. The other is for the western part of the campus which was rezoned in 2012 and has specific zoning details in an Annexure.

2.2 Eastern Side : (East of Sherwell Street)

2.2.1 Zoning: Educational with standard uses of Place of Instruction, Social halls, places of public worship and canteens.

2.2.2 Height Zone 5: Standard zoning allows 4 storeys a FAR of 2,8 and a Coverage of 70%.

2.3 Western side: (West of Sherwell Street)

2.3.1 Zoning: Educational( Uses are same as above)

2.3.2 Height: 16 Storeys

2.3.3 FAR: 1,7

2.3.4 Coverage: 47%

2.3.5 Parking: 0,25 bays per non-residential student and per staff member, excluding first year students

2.3.6 There are no unusual special conditions.

2.4 TITLE DEEDS: There are no unusual or restrictive conditions in the Title Deeds

3 COTTESLOE CAMPUS:

3.1 The campus is located in two parts, the one on consolidated erven in Cottesloe and the other on a farm portion, which contains mainly sports fields.

3.2 The zoning of the entire site is ‘‘Educational’’ with no specific annexure and is in Height Zone 0. There is a part of the site labelled (FADA) on the consolidation plan which has its own specific zoning in an Annexure.

3.3 Zoning (General site):

3.3.1 Zoning: **“**Educational’’ with standard uses of Place of Instruction, Social halls, places of public worship and canteens.

3.3.2 Height Zone 0: permitting 3 storeys, a FAR of 2,1 and Coverage of 70 %

3.4 Zoning (FADA) Area:

3.4.1 Zoning: Educational with standard uses of Place of Instruction, Social halls, places of public worship and canteens.

3.4.2 Height: 2 storeys

3.4.3 FAR: 0,5

3.4.4 Coverage: 40%

3.4.5 Residential density: 10 units per ha

3.4.6 Parking: Standard ratios

3.4.7 No unusual special conditions

3.5 TITLE DEEDS: These have <u>not been perused</u> as they were not supplied.

4 SOWETO CAMPUS:

4.1 The Soweto Campus is on three different land parcels and all three have different zonings

4.2 Western site (Portion 42 Farm Freehold): The site contains sports fields and other buildings and is **zoned "UNDETERMIND**".

4.3 Middle Portion ( Erf 39 Orlando): The site is zoned "EDUCATIONAL" in terms of a Amendment Scheme 01-10827 however no information is available on the Council records of the details pertaining to this scheme.

4.4 Eastern Portion (54 Klipspruit): This site containing the main campus area is zoned **"MUNICIPAL".** However a Consent Use Application was approved in 2010, which permits the following:

4.4.1 Uses: Place of Instruction (University)

4.4.2 FAR: 0,6

4.4.3 Coverage: 35%

4.4.4 Height: 4 Storeys

4.4.5 Parking: To the satisfaction of Council

4.4.6 Special Conditions: IMPORTANT: It <u>was a requirement</u> of the consent use <u>that an application for township establishment was to be submitted within 6 months</u> of the date of the approval. There is no indication that this requirement was ever met and it will be an issue if any additions are made to the campus. The consent could even be deemed to be invalid.

4.5 TITLE DEEDS: Only 2 Title Deeds have been supplied these being for Portion 54(the main campus) and Erf 39 Orlando. There are no restrictive conditions in these Deeds.

5 OTHER PROPERTIES:

5.1 In addition to the 4 campuses above there appears to be other sites owned by the University these are:

5.1.1 Richmond: Erven 219 to 223,247, 248 and 249:

5.1.2 Auckland Park: Erven 198, 199 Re221, 1112 and others. These are all zoned "SPECIAL" and allow a wide range of uses including places of instruction, business, shops, residential buildings and dwelling units.

5.1.3 Devland: Portion 15 of Erf 3812: Not owned by the University but included in the bundle supplied and Zoned **"INSTITUTIONAL"**

6 COMMENTS:

6.1 The above is an initial examination of the zoning pertaining to the sites comprising of each campus.

6.2 It would be necessary to know the exact areas of each site relevant to each zoning, and the extent of Floor Area's utilised to date, in order to ascertain whether the uses and permissible floor areas have been used, and whether there is scope to permit further additions and amendments to the campuses

6.3 The only campus which has inconsistent zoning is the Soweto Campus which has the problem mentioned of a township establishment which should have taken place within 6 months of 2010. This may render the current rights void.

6.4 The University may have some of the missing information mentioned in the memorandum,

I hope this assists with obtaining an initial indication as far as zoning and title deeds is concerned.

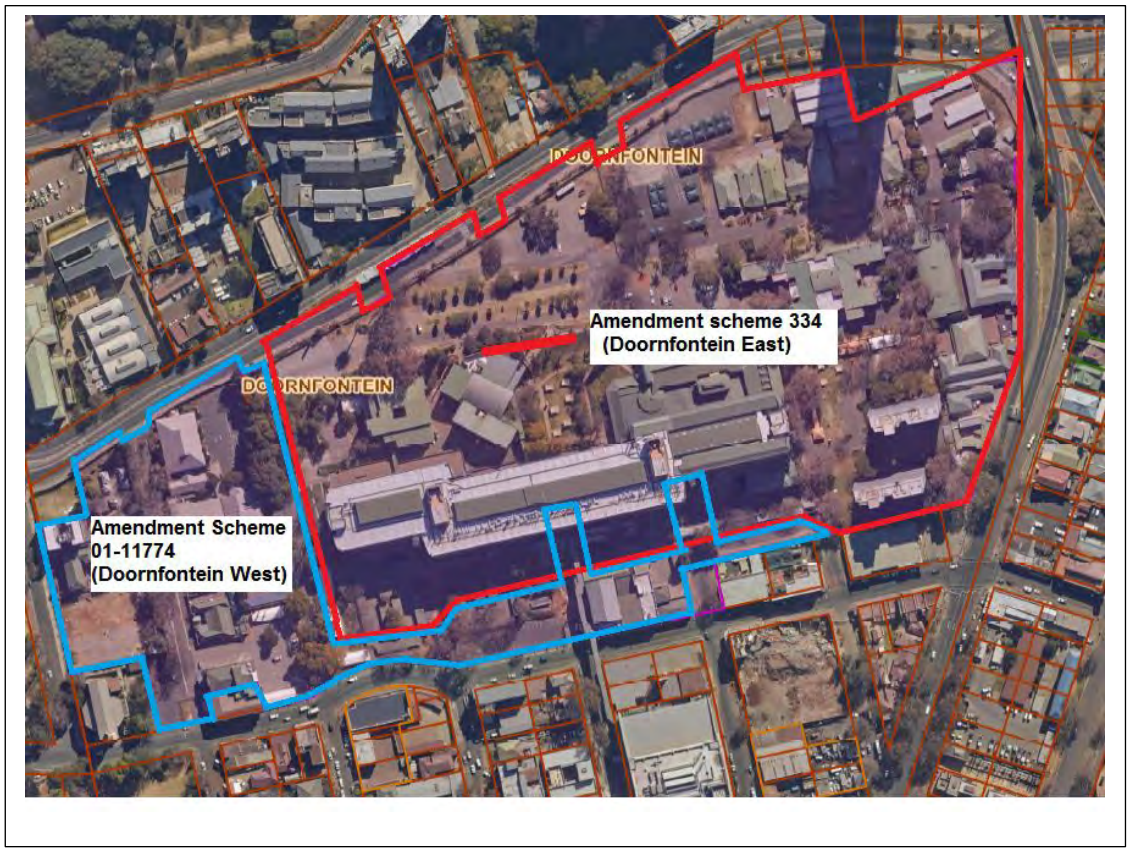
Regards,

Lloyd Druce

# LOCATION OF ZONING SCHEMES PER CAMPUS

1. **Auckland Park Campus:**


2. **Doornfontein Campus:**



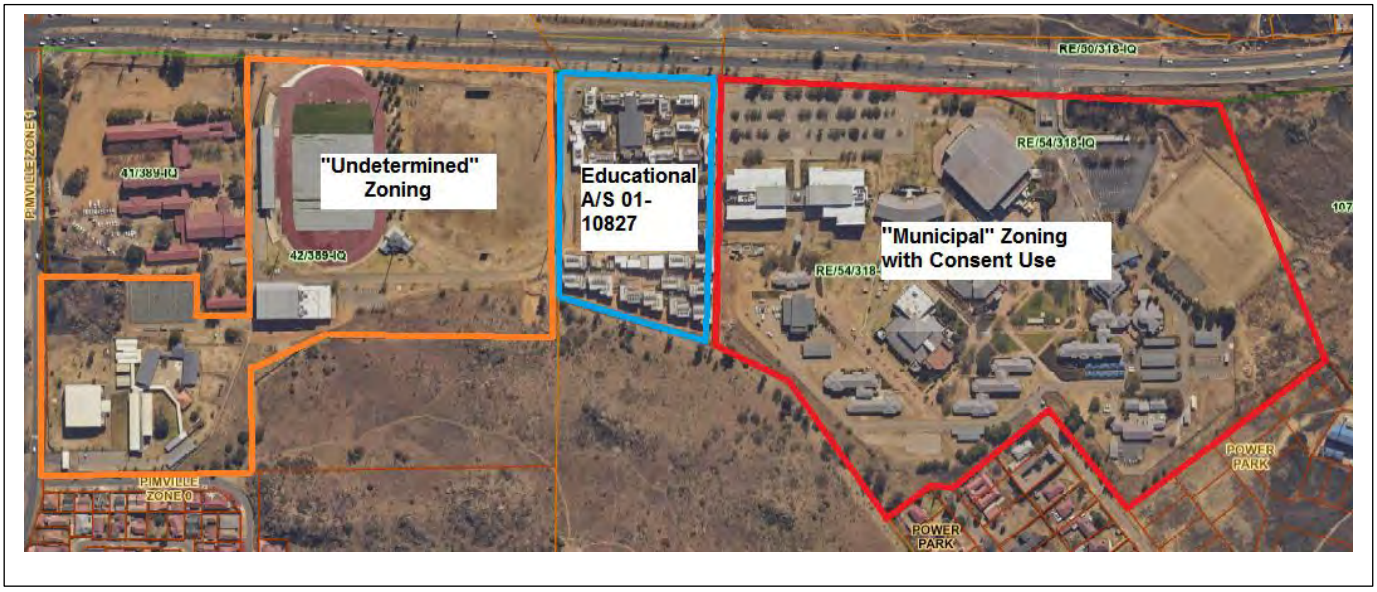

**NOTES:** 1. No information available for Amendment Scheme 334 other than Height Zone 5

3. **COTTESLOE CAMPUS**


**NOTES:** 1. Site has a general zoning of Educational with no details except ion Height Zone 0

2. FADA zoning has specific Amendment Scheme01-5416

4. **SOWETO CAMPUS**




**NOTES:** 1. Site with "Municipal" zoning has a consent use for Educational uses which could be invalid

P.O.Box 2050 Lonehill 2062

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VBGD TOWN PLANNERS

# Memo

To: EDWARD BROOKS
From: LLOYD DRUCE

**ADDITIONAL INFORMATION ON PROPERTIES**

Apart from the main properties on the 4 campuses there are a number of additional properties which are in the near vicinity of the campuses

There are also some anomalies in the ownership of land, versus encroachments on boundaries in the Doornfontein campus area.

The Soweto Campus has three components which will not allow for a consolidated site.

These items are dealt with below:

**Doornfontein Campus:**

1. As can be seen on the photographs overleaf, the boundary of the land owned by UJ, extends into Saratoga Ave, as shown.
2. The SG Diagram (SG 4533/2012) indicates a series of Servitudes which represent the road encroachments, however, while the Title Deed refers to this diagram, it does not mention the road servitudes. Of interest, is the fact that all of these servitudes were withdrawn in 2013, as per the attached example SG 6512/2009, which we cannot explain.
3. The erven at the intersection of Saratoga Ave and Joe Slovo Street ie Re393, 595, 594,548,907, 906,905,904 , Re/903, 610 are owned by the City Council , however, the fence line does appear to be an encroachment, unprotected by servitudes.
4. As far as calculation of rights is concerned (FAR), the cadastral boundary and stipulated erf areas would apply, irrespective of the encroachments.

**Auckland Park Campus:**

1. The aerial photographs overleaf identify a number of properties on the fringes of the main campuses of Auckland Park together with the zoning of each
2. These are all presumably for different functions of the University.

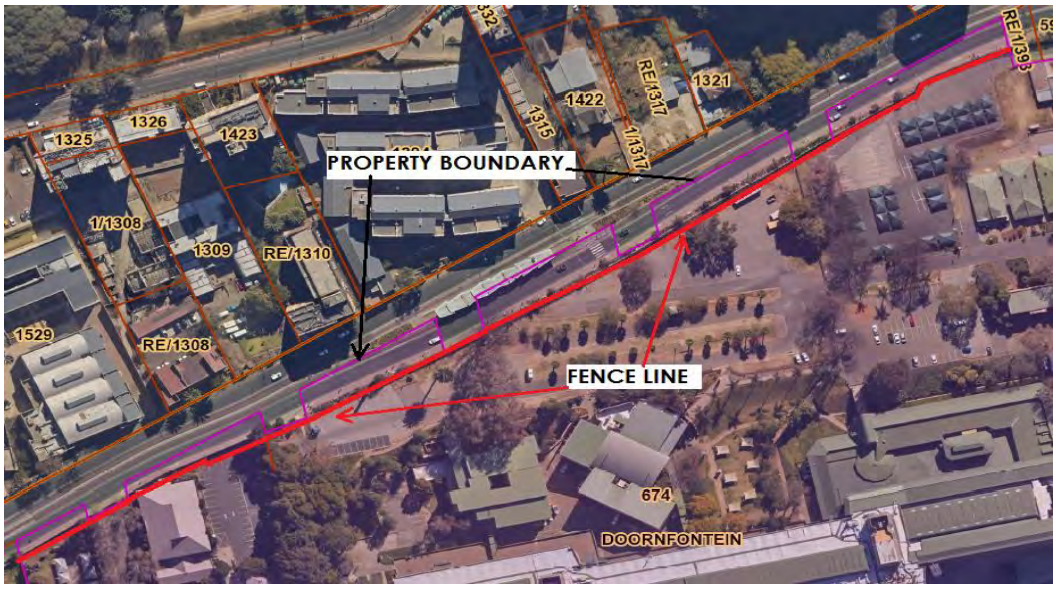
**Soweto Campus:**

1. The campus comprise of 3 distinct portions with different characteristics as far as zoning is concerned.
2. The large portion, ie Portion 54 is zoned “Municipal” with a consent for education, which has expired, but is being replaced with a Township application having an “Educational “zoning. This is yet to be proclaimed.
3. Erf 39 is zoned “Educational” and the portion to the west, namely Portion 43 Freehold is a farm portion zoned “Undetermined”.
4. It would appear that the three components all have different functions on the campus, but it is to be noted that it will not be possible to create a consolidated site, as has been done for Auckland Park and Doornfontein, because the status of the land will not permit this.
5. If necessary, the University can notarially tie them, but I don’t think that is essential at all.

# ADDITIONAL INFORMATION ON PROPERTIES

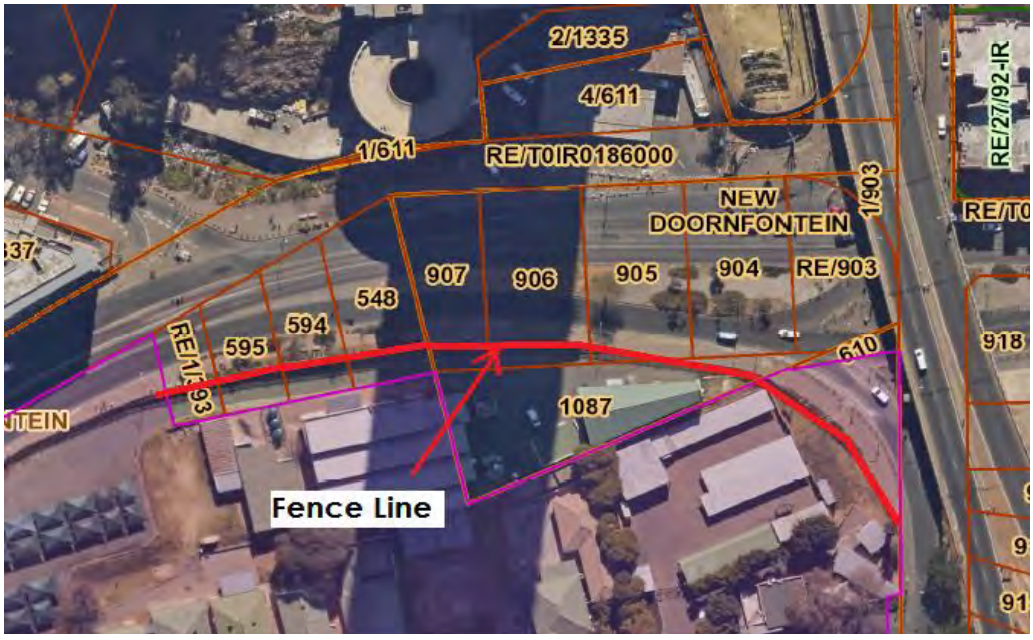
## 1. DOORNFONTEIN CAMPUS:

Discrepancies in boundary versus fence lines:




Fence line is over the Council owned properties Re393, 595, 594,548,907, 906,905,904

Re/903, 610



## 2. AUCKLAND PARK CAMPUS:

The following are adjoining properties outside the main campus with respective zoning:


| Number | Properties (ROSSMORE) | Zoning |
|---|---|---|
| 1 | Erven 100 and 101 | Residential 1 |
| 2 | Erven 807,Re/452 | Private Open Space |
| 3 | Erven 453, 1/452, Re/451 | Educational |
| 4 | Erf 108 | Residential 1 |
| 5 | Erf RE/110 | Residential + Guesthouse |


| Number | Properties (Auckland Park) | Zoning |
|---|---|---|
| 1 | 92-98 Farm IR | Institutional |
| 2 | Erf 2/805 | Educational |
| 3 | Erf 1089 | Residential 1 |


Erven 7 to9 and 14 to 17: Residential 1


| Number | Properties | Zoning |
|---|---|---|
| 1 | Erf 108 | Residential 1 |
| 2 | Erf 1121 | Residential 1 |
| 3 | Erven Re99,100 | Residential 1 |


| Number | Properties | Zoning |
|---|---|---|
| 1 | Erf 1/809 | Educational |
| 2 | RE/116&1/116 | Residential 1 |

## 3. SOWETO CAMPUS


| Number | Properties | Zoning |
|---|---|---|
| 1 | Ptn 42 Farm Freehold 389IQ | Undetermined |
| 2 | Erf 39 Orlando Ekhaya | Education |
| 3 | Ptn Re/54 Farm Klipspruit 318IQ | Municipal (Township Pending ) |

# S G Diagram Example (Withdrawn)

SERVITUDE DIAGRAM

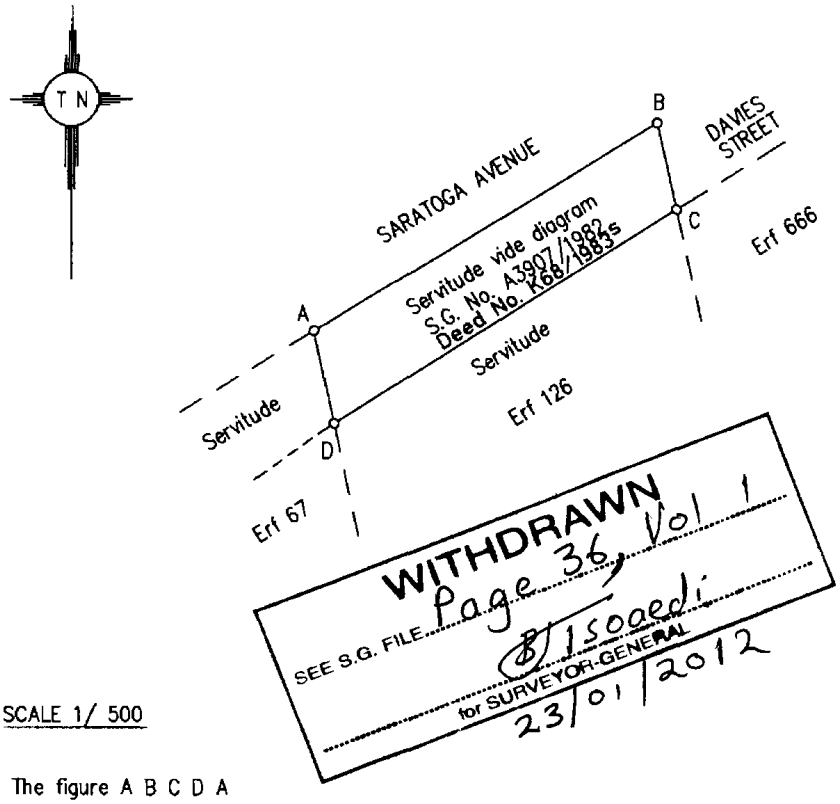
OFFICE COPY

| SIDES metres | | ANGLES OF DIRECTION | | CO-ORDINATES Y System: WG 29° X | |
|---|---|---|---|---|---|
| | | Constants | | +0,00 | +2800000,00 |
| AB | 32,51 | 238 25 40 | A | +94734,25 | +98659,51 |
| BC | 7,21 | 347 45 10 | B | +94706,55 | +98642,49 |
| CD | 32,72 | 57 39 10 | C | +94705,02 | +98649,53 |
| DA | 7,70 | 168 08 00 | D | +94732,67 | +98667,04 |
| | | 354D1 | ⊕ | +94318,45 | +98380,15 |
| | | 386D1 | ⊕ | +93968,33 | +98395,76 |

S.G.No.
6512/2009
Approved
H.a Frank. Schulk.
for SURVEYOR-GENERAL
2009.11.19

DESCRIPTION OF BEACONS

A,B :Not Beaconed
C,D :12mm Iron Peg




SCALE 1/ 500

The figure A B C D A
represents 228 Square metres of land being
A SERVITUDE OVER ERF 126 DOORNFONTEIN TOWNSHIP

Province of Gauteng
Surveyed from NOVEMBER 2007 to SEPTEMBER 2009 by me

R D CLARK PLS No.0096
Professional Land Surveyor

| | | |
|---|---|---|
| This diagram is annexed to<br>No.<br>d.d.<br>i.f.o. Johannesburg<br>Registrar of Deeds ~~Pretoria~~ | The original diagram is<br>S.G.No. A3906/1982<br>Transfer No. T320/1935<br>Grant | File . 101 - 150<br>S.R.No. 2249/2009<br>General plan S.G.No. A2689/1911<br>Compilation IR 1C -12/C1<br>TP 1787 |

# ANNEXURES

## 9.4 Bulk Services Engineering Report

UNIVERSITY OF JOHANNESBURG

# INITIAL REPORT: UJ CAMPUSES AND FIRST SITE VISITS

# CIVIL ENGINEERING ASPECTS

Version 4

20 August 2021

Prepared by:

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# TABLE OF CONTENT



# 1 INTRODUCTION

The project was initiated earlier and a first step was to request site technical information, background data, initially against a checklist of information that we usually provide in our project work, a list modelled on typical reporting we do, sampled on OHSA Construction Regulation, condition reports, audit reporting, specialized and project reports. The team received a significant volume of data and information, most of the information relating to the individual campuses. The following steps were followed:

- The first step was to categorize the information per campus and per discipline
- Reports, documents, drawings and other information were then studied.
- Team meetings followed, where a lot of the information was interrogated and discussed in preparation for the site visits.
- We received the DBSA/ SHIP report in July, and this was also studied and debated amongst the team.

Finally, initial lists and appraisals of the database were prepared and, after some team discussions, made ready for site visits and the stages of project work that would follow these.

# 2 DATABASE

## 2.1 Introductory Comments on Database Provided thus far

We received a long list of general and site related information and data. Following several team meetings and team interactions, after considering draft comments from the team on important information and where practical or possible, we read the documents, digested them, highlighted aspects of same that were felt to be relevant, and then annotated items and content to revisit at various stages, and as the database grew.

We compiled the two lists mentioned under Sections 2.2 and 2.3 as quick reference guides, allowing efficient review and recap of information prior the team meetings, discussions, site visits and such, all targeted as rapid and efficient referencing, envisaging that there will be frequent updates, reviews and embellishments, together with a general expansion as the database expands.

The list "**UJ DATABASE INFORMATION MATRIX – ALL CAMPUSES – version 4**" simply put, has a list of "desirable" specific and background data headings, describing subject content that would be useful now in a study of this kind, but would grow in importance as the planning and design work on these campuses evolves. There is a tick and cross endorsement indicating if we have or do not have a particular document. It makes no qualitative assessment of the document, at this stage. Some sections are more under the control of other team members and are annotated as such. Unfortunately, there are many crosses under the engineering section of influence and expertise.

The list "**UJ DATABASE CATALOGUE AND PRELIMINARY REVUE/COMMENTS – version 3**" has a bit more information in it and starts to comment on the data individually and in a summarized and qualitative manner. This would be expanded as the design steps are concluded but would also guide us in formulating both "nice to have" information as well as "more essential" work. We have not been involved in

recent and detailed project work at the various campuses but see our experience of this type of project work as enabling a quality assessment of the historic and current data and background information for this stage of the assignment.

The lists are broadly broken down in sections described under the headings “land legal” matters, “Plans and Development control”, Environmental Authorizations, Records of Decisions (ROD’s), Water Use Licenses (WULs), Structural and Civil Engineering Matters, Condition Reports, Electrical, Data Networks and Services, Traffic – TIA, TIS, Intersection, Access Studies, Agreements with LO, JRA, Mobility Studies Etc.” and some sections are being worked upon by a few members of the team at the same time. This will be coordinated frequently as the assignment evolves with headings that are self-explanatory.

We note that a lot of information dates back, with a significant volume dating 2014/2015 and before. Some information appears out of date.

We also realized that the reports are mostly documents that study, analyse and report back on issues - where a brief was published, an assignment commissioned, or an objective agreed between the client and the reporting entity or expert. Some have conclusions and some a range of recommendations and such comment. Some documents are not conclusive. After discussion amongst us and during the site visits, with points also raised during some of the Zoom meetings, we noted that many reports had not been implemented, and, in cases, other outcomes had been decided. It was also mentioned that some issues reported had been superseded and had been translated into individual projects through other procurement mechanisms and routes. We are of the opinion that this would need more clarity amongst us, in the future, and would certainly need more clarity from the client body, especially in terms of relevance. We also felt that some information would need to be expanded and modified with more directed focus, in future designs and investigations.

The site visits also revealed some current project work underway or imminent, some specialized reporting underway about many subjects and conditions, and some about to be commissioned. There were a number of issues in discussion amongst the UJ management team. These will be captured as they evolve and as the assignment develops.

Mention is made of the **"DBSA/SHIP TECHNICAL ASSESSMENT**", a document dated 8 July 2021, and received by our team a few weeks later. We have all spent time studying the report, a 157-page document, and, particularly, were able to reference the work prior to and during the first set of site visits. We find that there is a great deal of information in the work reported by JLL and their team but feel that some of the assumptions and discussions would need to be significantly expanded, in order to understand better the constraints considered and also to improve the value and usefulness of the work. Many references are reported in general terms, and, as useful as it is in the current report, we feel that it would need to be expanded. Some of the conclusions reached, whilst sound, would also need to be expanded, qualified, and would need to be defined in more detail. Most of our project team are studying the work and a more coordinated and fuller appraisal will be forthcoming in the future.

## 2.2 UJ Database information matrix

The UJ database information matrix (version 4) of all campuses is appended to this document and this schedule has been reported and described above.

## 2.3 UJ Database catalogue and preliminary review/comments

The UJ Database catalogue and preliminary review/comment (version 3) schedule has been reported and described above.

# 3 SITE VISITS

After having analysed the data provided to the team, discussed same internally, as well as having some external discussions about these large and diverse campuses, we attended Zoom discussions and aspects of the assignment were discussed, including maintenance, services, and other property ownership matters.

We received and studied the DBSA/SHIP document, took note of the engineering content of the report, the reported interactions with the local authority, the reports on available services, which were felt to be generalized, stormwater management, felt to also be generalized, and then site visits were arranged in the week 9 – 13 August 2021, where the 4 campuses were visited. The visits were managed by Mr Greg

James, Director Campus Technical Services, who was helpful and interactive throughout, and we were able to meet various managers and hear their reports and understand their challenges first-hand.

The visits were seen as the first and more general in nature, where site matters were covered, but also the broad history of the developments, some more recent developments and projects, aspects of recent planning, some studies underway on aspects of the more recent and future anticipated projects, security issues as well as maintenance plans, all in all, a range of information.

After each visit, we noted the main features as well as key discussions, allowing for the generality of these, again comparing the information gleaned from the data we had seen and the DBSA/SHIP report. We note some key aspects of the visits, noting that this is a broad summary only.

## 3.1 Site Visit APK

The visit to the campus occurred on Friday 13 August 2021.

Refer to the general comments in this short report. We add key items seen and discussed in the visit.

The UJ APK campus is located along Kingsway Road/Perth Road, is adjoined by SABC on the east and Helen Joseph to the west. The campus is located between suburbs of Westdene, Auckland Park and Brixton. A green belt containing the UJ sports facilities is located between Westdene and Auckland Park, north of the campus.

This campus is the most sophisticated in the university, with a more formal plan and with sections of the campus developed in relatively compact phases. The style of the campus is quite different from the rest of the UJ properties, and most of the team were familiar with the original development, under previous ownership and in a well-publicised architectural and structural style. The campus design, layout, engineering and servicing is complex and more compact of nature and a first visit would need to be followed by more study of the available database, drawings, services layouts and such and this appraisal expanded.

The size of the campus, although quite different from the others in the group, would warrant more study in the underground services, stormwater management,

attenuation and more, as we have mentioned in the other visit notes hereunder. The other campuses, whilst very different in origin and style to the APK one, had some visible features that allowed engineering features to be assessed more readily and thus initial comment could be made. In this case, the database and DBSA SHIP report are not sufficient, as it was presented to our team, in our opinion, to fully understand the topography, the buried services, stormwater and other aspects. The availability of service is an aspect, but others are relevant.

We did observe many features of the scheme whilst we toured campus, such as maintenance issues and parts of the servicing network – such as a lack of stormwater attenuation - but the former should be dealt with in more detail and after more joint research between UJ and team, (possibly with more background data and information), and as soon as practicable.

## 3.2 Site Visit APB

The visit to the campus occurred on Friday 13 August 2021.

Refer to the general comments in this short report. We add key items seen and discussed in the visit.

The Bunting campus is located east of the APK campus and east of the SABC complex. The Netcare development is east of the SABC complex and the Bunting campus wraps around this.

The walks identified a number of physical characteristics that need mention:

- Relatively steep slopes to the north, sloping towards the north east with a steep hill on the south incorporating residences, sports fields, isolated residences, parks vegetated landscape, and roads linking most spaces.
- A residential suburb on the south of the campus adds to the catchment area.
- Johannesburg Water was working on a main in a public street, in the residential suburb directly above the campus, upstream of the sewer line, built on campus itself. It was reported that the sewer and stormwater service was piggi backed above each other and that breaches had occurred in the sewer, between sewer and stormwater service, where sewerage had flowed into the latter. UJ intended appointing a consulting engineer to investigate and report on this, at the same

time offering a possible solution. This is illustrative of the issues reported on underground services that we find commonly on larger, built ventures incorporating old and new buildings and services and is discussed elsewhere in this report.

- Mention of the lack of drawings of the location of underground services, old and new, and consisting of a mix of old municipal services, services dating back to the original development and a general lack of records of these. Mention of this is made in our appraisal, the campus being one featuring unmapped services and ongoing maintenance difficulties resulting from this.
- We were particularly concerned with the topography with respect to the management of stormwater from the south west of the campus, a sizeable catchment area including a hill/park space, sports fields, part of a residential suburb,(Catchment needs to be defined) a relatively porous perimeter between the suburb and campus, the physical barrier of groups of buildings downslope and located approximately along contour, in this case almost “wall to wall “and a notable lack of visible infrastructure to manage the minor and more major storms in conduits and channels, for the former, and overland in streets and green spaces for the latter. There was no visible attenuation in the mix, common to other campus sites. We see this as an important survey/design/study in order to rationalise the campus and future development. This is mentioned in more general terms in the report.
- Many buildings, especially the older campus, showed signs of damp damage, insufficient maintenance, visible structural damage – relatively moderate on first assessment but worthy of review. Condition reports of the older buildings on campus were not available. Maintenance reports were likewise not available.
- It is our opinion that further site visits, backed up by discussion with key stakeholders and/or further reports should be conducted and a more detailed reporting structure developed for the developments on this campus.
- We would expand on these aspects of the campus as the assignment progresses and our study intensifies.

## 3.3 Site Visit SOWETO

The visit to the campus occurred on Wednesday 11 August 2021.

Refer to the general comments in this short report. We add key items seen and discussed in the visit.

The Soweto campus is located along Chris Hani Road the campus consists of 3 erven, owned by the university, with additional land parcels for potential expansion to the west and east of the main campus, the latter owned by the City of Johannesburg.

The walks identified a number of physical characteristics that need mention:

- Relatively steep slopes to the south, sloping towards the north and Chris Hani.
- The data included a TI and SI Traffic assessment done in 2020, projecting traffic growth for years 2022, 2027 and 2032, but the feeling was that future planning could need a review of the report.
- A significant lack of parking during sports events was mentioned.
- The campus comprised the old Vista University on the east and newer developments on the west, including the residential blocks.
- The residential blocks were toured in and discussed in some detail. We noted the different designs and features of the design teams and also some past structural issues in some of the phases.
- Mention of the lack of drawings of the location of underground services, old and new, and consisting of a mix of old municipal services, services dating back to the Vista University days and a general lack of records of these. Mention is made in our appraisal, the campus being one featuring unmapped services and ongoing maintenance difficulties resulting from this.
- We were concerned with the topography with respect to the management of stormwater from the south of the campus, a sizeable catchment area including a hill/park space, a green belt - protected by servitude (Catchment needs to be defined) a relatively porous perimeter, the physical barrier of groups of buildings downslope and located approximately along contour, and a notable lack of visible infrastructure to manage the minor and more major storms in conduits and channels, for the former, and overland in streets and green spaces for the latter. There was no visible attenuation in the mix. We see this as an important survey/design/study in order to rationalise the campus and future development. This is mentioned in more general terms in the report.

- Many buildings showed signs of damp damage, insufficient maintenance, visible structural damage – relatively moderate on first assessment but worthy of review. Condition reports of the older buildings on campus were not available. Maintenance reports were likewise not available.
- The managers we interacted with mentioned issues with roofs, which were in a process of replacement and repair, aesthetic upgrades and other building operations.
- It is our opinion that further site visits, backed up by discussion with key stakeholders and/or further reports should be conducted and a more detailed reporting structure developed for the developments on this campus.
- We would expand on these aspects of the campus as the assignment progresses and our study intensifies.

## 3.4 Site Visit DFC

The visit to the campus occurred on Thursday 12 August 2021.

Refer to the general comments in this short report. We add key items seen and discussed in the visit.

The UJ main campus is located between the suburbs of Hillbrow, Bertrams, Doornfontein and the Johannesburg CBD. Saratoga Avenue runs north of the campus, with Joe Slovo Drive on the East. The campus is serviced by the BRT along Saratoga Avenue as well as the PRASA Doornfontein stop nearby.

The Qoboza/Klaaste building in the south of the main campus is connected to same with an overhead pedestrian bridge over Beit Street.

The walks identified a number of physical characteristics that need mention:

- Relatively steep slopes from north to south while road network and buildings mostly east-west orientated along the contour.
- Large parking area earmarked for future residences.
- Rea Vaya (BRT) bus route north of the campus with a pedestrian gate entrance from campus.
- East gate planned to be upgraded and relocated to prevent service vehicles to drive through the campus to do deliveries to the student centre.

- Mention of sustained and ongoing issues with the location of underground services, old and new, and consisting of a mix of old municipal services located in streets (Now incorporated in the campus) and a general lack of records of these. Mention is made in our appraisal, this campus being the most complex one featuring unmapped services and ongoing maintenance difficulties resulting from this.
- We were concerned with the topography with respect to the management of stormwater from the north of the campus, a sizeable catchment area (Needs to be defined) a relatively porous perimeter, the physical barrier of almost continuous buildings downslope and located approximately along contour, and a notable lack of visible infrastructure to manage the minor and more major storms in conduits and channels, for the former, and overland in streets and green spaces for the latter. We see this as an important survey/design/study in order to rationalise the campus and future development. This is mentioned in more general terms in the report.
- Ground water problems in the heritage building.
- Natural spring water under the Qobosa Klaaste Building. This is worthy of further study, a check on the effects of seepage on the building structure and possibly the harnessing of the “resource”.
- There is 9 underground water “eyes” on the campus where water seeping out of the ground
- Many buildings showed signs of damp damage, insufficient maintenance, visible structural damage – relatively moderate on first assessment but worthy of review. Condition reports of the older buildings on campus were not available. Maintenance reports were not available.
- It is our opinion that further site visits, backed up by discussion with key stakeholders and/or further reports should be conducted and a more detailed reporting structure developed for the developments on this campus.
- We would expand on these aspects of the campus as the assignment progresses and our study intensified.

# 4 DISCUSSION OF SOME ASPECTS OF THE ABOVE

A key part of the assignment, as seen from a civil and structural engineering bias, and as a future team support role, was an assessment of the servicing and technical records made available to the team so far. This initial review, backed up by the site visits and discussions then, suggests that there could be more engineering information available on these large and diverse campuses. We will discuss this aspect in more detail at the next opportunity. There were too few reports on the engineering aspects of the developments and also not enough detailed information on the improvements, such as – contours, buried services, surface water rainfall catchment areas, municipal servicing connections, these covering, sewerage, water, stormwater management and services, including surface water attenuation as well.

We report this after having experience of larger campus projects, whether they be schools, universities or commercial and retail projects, mostly privately owned. Many such operations have evolved and grown over a long period, and many land assemblies have sequentially been concluded, consolidating, and combining many erven and streets in many phases and through land legal procedures, over time. A common characteristic of these mature property assemblies and developments, all having generally a very wide background, age, ownership, servicing history, countless interventions over time, and mostly a dearth of accurate services information, is that there is ever increasing maintenance needs, to a point where it becomes too costly and disruptive to entertain. Many schemes have evolved through a long period, having been subject to many national standards and the regulatory effects of changing national governments, all of these having an impact on matters and, in particular, the servicing of the erven and management of important weather effects such as stormwater runoff. The various national codes and local bylaws have been constantly evolving and changing, and the cost of water and risk to the property owner for example, have made maintenance more critical over time. (National Building Regulations, SABS 0400, SANS 10400, Act 103 of 1977, the OHSA, are a few of these national standards. Local bylaws and the evolution thereof are even more complicated) We have experience of having to find, measure, assess, draw, design around and innovatively overcoming a host of complex restraints in repurposing the project sites and campuses and modernizing them. It often comes down to in-depth study of what is there, the condition of the services, a record of interventions over a

period, often under many management authorities, the plans put in place for modernizing, repair or augmenting them etc. We believe that the UJ campuses fall into this profile, and also feel that they need significantly more attention in the future, from the perspective of essential servicing, so as to be more manageable.

## 4.1 The Students Can Help:

Obviously, a detailed survey of the large UJ campuses is a major endeavour and this would be costly, require specific expertise and would take time. We are conscious that UJ have active engineering faculties on the campuses and that there have already been studies in diverse maintenance aspects – the Meyer Pienaar/BKS designed concrete refurbishment on the APK Campus is case in point. We would be keen to discuss the possibility of mini projects focused on discovering/locating, surveying, mapping, and documenting the hidden and ageing infrastructure of the UJ campuses for the future, all aimed to capture and manage the ever-degrading condition of same. Using the resource of the university, and incorporating this in a curriculum, would reduce cost and would give the students experience in an important and often-neglected field. The young aspirant engineers will surely encounter this challenge in the environment that many will find post their graduation. It is a neglected and complex field, but essential to the building industry.

## 4.2 Stormwater Management:

After having looked at the database, read and absorbed the DBSA/SHIP report, and walked the site, we feel that there is too little structure in the formal management of stormwater on the campuses. The position of catch pits, kerb inlets, stormwater trenches, the slopes of gardens, roads, pavings and kerbs/channels suggest that the effects of storms of various sizes need more consideration. Minor rainfall storms are generally managed on large erven via underground pipework and/or open lined trenches, then into attenuation facilities – now law – and then into the local authority storm water network. The larger rainfall storms have to be more carefully considered. Higher peak flows are generally managed overland and away from developments. Risk of damage to buildings and improvements and, in cases, to human life is somewhat more complex and needs review. We will expand on these statements in

future with specific potential problem areas on the UJ campuses, as the assignment evolves.

## 4.3 Water and Sewer Services

As mentioned above, older schemes that have old and new buried pipework, need deeper study and eventually more attention. The effects of leaking potable water pipes are not only unaffordable – the wasted water in water mains for example is costed and charged at marginal and increased rates, and this is ever costlier with the local authority hiking rates at an alarming rate nowadays – another form of "tax". An example of a single pipe leak in a small property that we were commissioned to resolve, gobbled up R160 000,00 of water charges in just over 12 months, suggesting that many or multiple but modest leaks on campus could be prohibitively costly. Similarly, storm water intrusion into sewer networks (willingly and/or unwillingly) should also be prevented and attended to. This will assist the local authority to convey wastewater within the capacity of sewer mains to their wastewater treatment facilities in the relevant regions. We will expand on these statements in future, as the assignment evolves.

# 5 SYNOPSIS AND CONCLUSIONS

The project was initiated earlier and a first step was to request site technical information, background data, initially against a checklist of information that we usually provide in our project work, a list modelled on typical reporting we do, or have done, sampled on OHSA Construction Regulation reporting, condition reports, audit reporting, specialized and project reports, engineering drawings and project information. The UJ campuses are large scale endeavours and a copious and voluminous database was expected. The team received a significant volume of data and information at the early stages, most of the information relating to the individual campuses. We categorised the information, studied the documentation, met amongst the team, prepared for initial site visits and conducted these in the week 9 – 13 August 2021.

We received the DBSA/ SHIP report in July, and this was also studied and debated amongst the team and integrated in the work so far.

Finally, initial lists and appraisals of the database were prepared and, after more team discussions, and made ready for site visits and the stages of project work that would follow.

The wealth of information reviewed, and the immediate outcome of the site visits indicated to us that the database was biased towards urban planning and other fields, and that little up to date information existed with a civil and structural engineering bias. Reporting was generally not concluded with actual project work, suggesting that there is a need for more technical engineering information more focussed on the servicing of the campuses and covering the fields of water, sewerage, stormwater, civils, structure, geotechnics and also reporting on the many interventions undertaken on the campuses over the years, possibly with a bias on more recent work. We append an appraisal of the documents received and explain the forms in this report.

We note that we commonly find projects needing this type of information, and we acknowledge that the gathering of technical information on large and evolving developments is a vexing and often costly exercise. We offer a possible solution to the task, by co-opting the students from the engineering faculty in the task, reasoning that many will face similar challenges in their working lives.

We comment about the DBSA/SHIP report, noting that it is fresh off the press, but commenting that the servicing of new developments within the campuses should get more detailed engineering attention. We note that the exercise currently being undertaken by our team and in this assignment may well differ from the report, possibly offering a different range of recommendations, but note that this will not remove the need for ongoing and sound engineering inputs.

We have also, as part of out basket of experience, reviewed the electrical supply information, and, similarly, suggest that more expertise should be brought to bear on this trade. The database needs expansion here as well, also in a planned and staged operation.

We make first comments about the servicing and maintenance aspects of the campuses, suggesting more discussion on the database detail, aspects such as stormwater management, attenuation and the never-ending need of maintaining the asset base in good to fair and functional condition.

We are motivated by the assignment and are keen to add as much value as possible from our civil and structural engineering background – enhanced perhaps by our project management experience on similar project work.


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