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University Estates
University of the Free State

2012-2015

Introduction

Universities need to continually renew, rejuvenate, regenerate and revisit not only their core business of teaching and learning, but also their facilities and infrastructure.

At the University of the Free State (UFS) we are dedicated to creating the most functional and enriching environment for our staff and students and for visitors to our three campuses. Every year, the University undertakes building and renovation projects that add value to these campuses. These projects involve more than bricks and mortar; they also help people to socialise and live together in residences, to share and discover knowledge in lecture rooms, and to invent and create in laboratories. The University has an ongoing project to create more spaces where staff and students can learn, engage, practice, research, and ultimately succeed. These spaces are newly-built or extended, and repaired, redeveloped, renovated and revamped by the University on it's three campuses. Two of the campuses are in Bloemfontein and one in Phuthaditjhaba in the Eastern Free State.

Many of the University's infrastructural changes are demand-led as staff and students have high needs and expectations. It is crucial to be able to adapt or modify existing buildings, to optimally utilise available space. It is also important to establish a balance between the historic character of the older campus buildings, especially on the Bloemfontein Campus, and the requirements for modern facilities that meet the ever-changing demands of teaching and learning, and research.

All projects were completed within the set norms, true to our motto:

- Within time
- Within budget
- Within quality standards
- Within user expectations
- Completed.

An understanding of the status quo

Planning for the spatial future begins with an understanding of the status quo: the place, the people and the social, economic and environmental forces underlying the trends that are shaping the University's development.

Change and growth are inevitable, and development pressures are a given. Nevertheless, a university with foresight and insight can manage development to ensure the best possible outcome.

The overall intentions of the Property Management Office of Facilities Planning are to address the needs of end users, to guide and manage spatial growth, and to balance competing land-use demands by putting in place a long-term, logical development path that will shape the spatial form and structure of the campuses.

The proposed development path must be dynamic and adaptive to ensure that it remains relevant, realistic and informed by changing events.

Albie Louw | *Property Manager, Facilities Planning*

Project management

The success of the infrastructure development projects on all three UFS campuses can be attributed to the dedication and commitment of all the different UFS staff members and stakeholders under the leadership of the Facilities Planning project manager.

The UFS is one of the few higher education institutions to receive funding from the Department of Higher Education and Training (DHET) for projects completed within time and budget. In this regard, a DHET committee, consisting of nine members from various South African institutions, including the UFS project manager, assisted the DHET to assess applications for the next cycle.

Currently, 95% of UFS/DHET projects for the current cycle are complete and 100% will be completed by the end of 2015.

UFS Facilities Planning is confident and looks forward to the next round of funding to implement future plans to improve our facilities.

Maureen Khati | *Property Manager, Facilities Planning*

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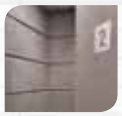
Centre for Universal Access and Disability Support (CUADS) | 51 

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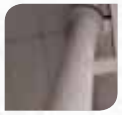
Thakaneng Bridge: moving Kovsie FM and open seating | 54 

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INFRASTRUCTURE

QWAQWA CAMPUS

It always seems impossible until it is done.

– Nelson Mandela

New entrance

Campus entrances establish a strong sense of place, offering an inviting "face" to students, staff and the general community. With this in mind, the UFS has revamped the Qwaqwa Campus entrance. The Qwaqwa Campus is situated in the Eastern Free State. The previous entrance was insufficient for the volume of University traffic, as there was only one lane each for incoming and outgoing traffic, and no additional entrances for students.

Conceptually, the architects' approach was guided by what they saw as the functions of the entrance gate: to identify, mark and celebrate the Qwaqwa Campus; to organise and focus the modes of transport arriving and departing from the campus; to act as a security checkpoint regulating access and egress from the campus; and to facilitate and be responsive to the needs of students who are mainly reliant on public transport.

To achieve this, the structure would have to symbolise and project the identity and aspirations of the institution. It was envisaged that the main gate would take the form of a linear building that would assist in anchoring and underscoring the entrance to the campus.

Most students arrive in taxis, some by bus, and a minority on foot or in a private vehicle. All of this had to be taken into account in the design of the new entrance. The upgraded entrance has two incoming lanes and two outgoing lanes, as well as a new pedestrian entrance. There is a indoor student lounge with ablution facilities, that serves as a waiting area for students, particularly during inclement weather. Informal traders also have a new sheltered area in which to exercise their trade. In addition, there are a pick-up and drop-off area for taxis and a new security booth.

The upgraded entrance has two incoming lanes and two outgoing lanes, as well as a new pedestrian entrance.

Physics and Geography Building

To prevent duplication of facilities and to best utilise the facilities it was decided to combine these two projects in one building, therefore ensuring maximum value for money.

The new complex includes a 350-seat auditorium, lecture rooms for 290 students, laboratories for 480 students and offices for 19 people. The building is linked to the existing Chemistry Building to ensure accessibility to the first floor. One of the lecture rooms has 180 seats and is designed so that it can open up after hours to be used as a 24-hour overnight study facility. The central axis of the building runs along the central axis of the campus that links up with the student dining hall at the far south of the campus. The building acts as northern termination point for this central campus axis. The project was completed in 2015.

The building incorporates several energy and natural resources saving and recycling systems. Motion sensors for the lights, rainwater recycling for the toilet cisterns and compliance with the latest SANS 10400 building regulations, among others, have resulted in a building that should be sustainable for years to come.

New Student Housing Unit 2 and Wellness Centre

At the UFS's Qwaqwa Campus, which is in a rural area, there is much need for campus accommodation.

By adding 440 beds (there are now a total of 1 223), 39% of students now have housing on campus. The second student housing unit, with 250 beds, has a common room, study rooms, a services and workers' rest room building, a manager's flat and a heat pump room. The accommodation consists of six separate blocks, in double storey and three storey arrangements, all connected by paved walkways, with common paved seating areas and social assembly points as well as garden walls. The accommodation also consists of 77 single bedrooms (48 rooms for senior students only), 85 double bedrooms, divided between male and female students, one single room for people with disabilities and one assisted double bedroom for people with disabilities. Each block has its own waiting area, kitchen and ablution facilities as well as storerooms and smaller rest rooms for workers. An extra 20 beds for Health Sciences with housing for a residence head was added.

This development also houses a new Wellness Clinic to meet the needs of the campus community. It provides all forms of primary health care. It has three examination rooms, a procedure room, three consultation rooms, one boardroom, a head nurse office, a reception area with secure access control into the building, a fully functioning kitchen, male and female ablution facilities, a sluice room for equipment cleaning, two storerooms, and a fully equipped, access controlled medicine dispensary as well as a secure medical waste area.

Roof to arena

The Qwaqwa Campus of the UFS needed a sheltered common space that students could use for informal study, to socialise, and for organised functions.

To meet this need a partial steel roof structure was placed over the existing amphitheatre in front of the library so that the space can be used more effectively and all students and staff can access it. There is new paving, decorated with the UFS logo, to address rainwater reticulation and reduce maintenance.

Additional seating was put in and the neglected large-scale chess set was restored. There are solar photo-voltaic panels on the roof structure so students can use the solar energy to charge their cellular phones and use their laptops while enjoying the space.

Universal access

The UFS is committed to ensuring that all students and staff experience its campuses fully and equally. This is accomplished by developing universally accessible campuses that embrace and celebrate diversity.

To this end, various parts of the Qwaqwa Campus had to be renovated to become universally accessible. Thresholds to doorways and covered walkways were made accessible by modifying paving and adding concrete aprons and ramps at thresholds. Access for wheelchair users to the first floors of the Humanities building and the Education building was addressed by building a new shared lift shaft between the two buildings. Wheelchair access to the library's first floor was improved by making the existing lift in the middle of the library more accessible on the ground floor to wheelchair users. Several new paved walkways were also constructed to ease the flow of pedestrian and wheelchair traffic across the campus grounds.

Converting boiler house to sport facility

Sport is an important cohesive activity on university campuses. To encourage this activity, more bathrooms and changing rooms near the UFS sports fields were needed.

The old boiler house to the west of the sports fields, previously a storeroom, was converted into sport facilities. The newly-converted building consists of a small tuck shop and male and female changing rooms with toilets and shower facilities.

There is also an open indoor area with informal seating, as well as a games area for pool tables and table tennis.

Three offices for the sport facility staff were also included.

The newly-converted building consists of a small tuck shop and male and female changing rooms with toilets and shower facilities.

D

SOUTH CAMPUS

We can change the world and make it a better place. It is in our hands to make a difference.

– Nelson Mandela

Student Technology Information Centre

The South Campus in Bloemfontein has a limited number of buildings and a new multifunctional building was needed.

The Student Technology Information Centre, previously the School Technology Innovation Centre, now consists of a multifunctional space with a recording studio, offices, an ablution block, storerooms and a server room. Existing space in the Education Building on the South Campus was altered to accommodate this facility.

New lecture halls and disability access

The migration of the extended programme to the South Campus meant more classrooms were needed, and these also had to act as multi-purpose venues. An additional 500 students had to be accommodated on this campus.

The new lecture hall building has five lecture rooms, each seating 90. Two are on the ground floor, two on the first floor and one on the second floor. A computer laboratory with 50 seats is also on the second floor. The two lecture rooms on the ground floor can be combined to form one larger conference venue.

A mechanical lift from ground floor to the second floor acts as a vertical link between the lower campus and upper campus.

A bridge from the second floor connects the building to the upper campus. This system enables wheelchair users to move more effectively between the lower campus and the upper campus, thereby addressing the University-wide issue of universal accessibility.

Several other places on the campus were renovated as part of the universal access project, including a new four-stop mechanical lift at the Administration building.

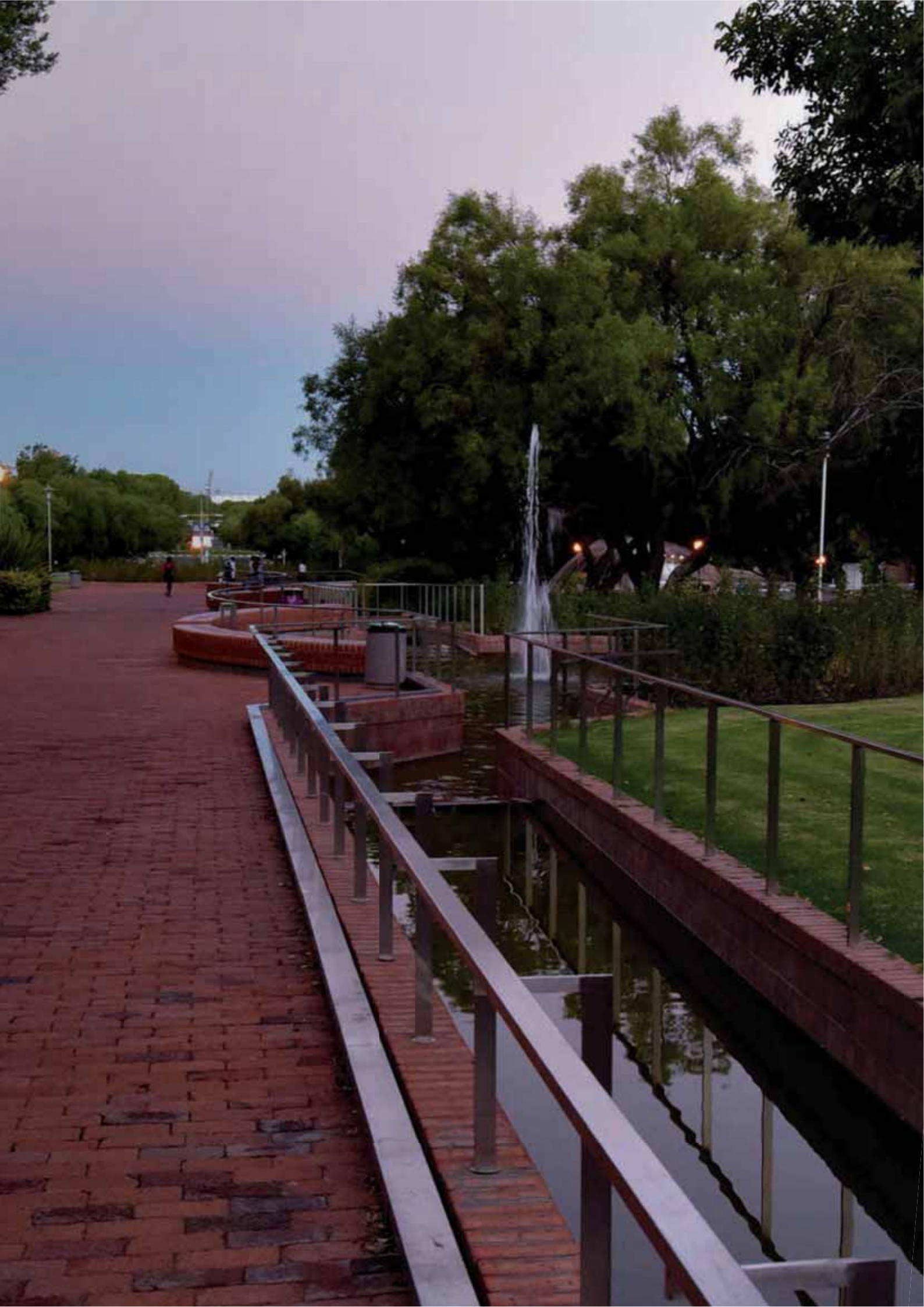
Several other places on the campus were renovated as part of the universal access project

New student residence

The UFS is building a new residence on the South Campus so that the students there can experience the benefits of a living learning environment and also have safe and secure accommodation.

The new residence will have 270 beds within two main three-storey blocks.

There are 26 single rooms, 120 double rooms and two rooms for differently abled students on the ground floor level. In addition, each floor will have separate laundry/drying and cleaners' facilities, shared by both wings on that floor. Each wing will have its own ablution block, study room, communal lounge, and kitchen. Four separate single-room flats will also be available – each sharing a lounge, kitchen, and bathroom, with a laundry facility separate from that of the main blocks.



BLOEMFONTEIN CAMPUS

We shape our buildings; thereafter they shape us.

– Winston Churchill

New wing to existing Physics Building

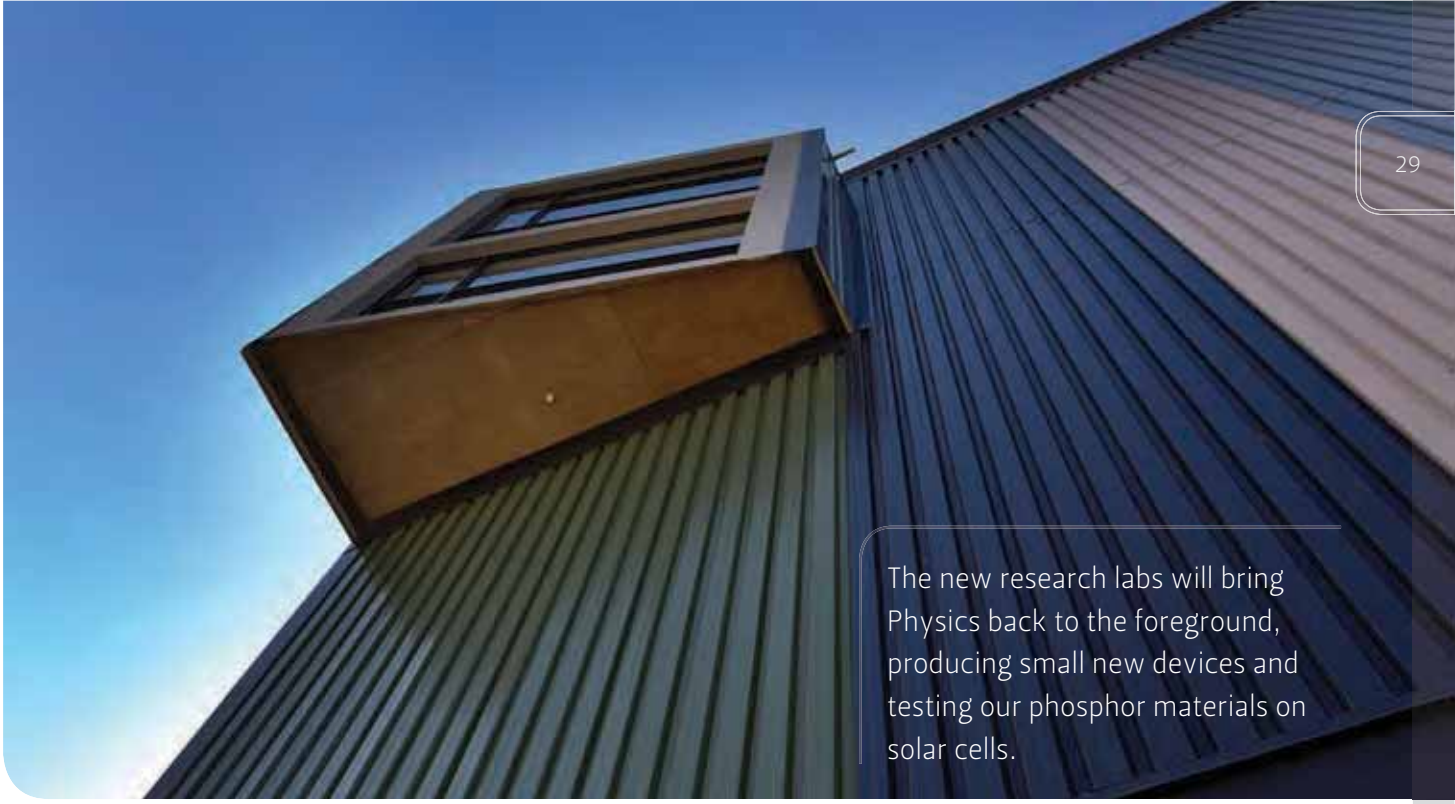
The new building has four storeys and is attached to the existing Physics building. It includes 10 offices, 20 research cubicles, four lecture halls with 380 seats in total, four laboratories for 20 students each, a meeting room for 20 to 30 people with video conferencing facilities, and services circulation.

With storerooms close by, experimental demonstrations in class can be presented. One of the four new lecturing rooms contains tables and chairs that can be moved around for tutorial classes and study groups and lecturers can move among the students during the tutorials.

Smaller conferences can be hosted in the new lecturing rooms. A new exploratorium was added to the building, bringing back the opportunity to establish a physics experimental playground for schoolchildren and new students to explore new science.

The new research labs will bring Physics back to the foreground, producing small new devices and testing our phosphor materials on solar cells. The department can now teach astrophysics students using the new telescope on the top floor: the roof opens up and the telescope points to the open sky. New offices will help in hosting international post-docs and visitors. Physics is definitely moving into a new era with strong international links and collaboration.

It can now compete with the best in the world.



The new research labs will bring Physics back to the foreground, producing small new devices and testing our phosphor materials on solar cells.

New Genetics Building

The Department of Genetics boasts a new building that includes an administration block with a reception area, seven offices, a small committee room and a seminar room for 50 people.

The undergraduate laboratory block provides a laboratory for 150 students while the research block has facilities for 30 researchers. The ablution block is placed to the south, a central position for when Phase 2 is being built. This building also hosts a chemical waste sorting and storage facility. This is a first for the University.

Several sites were investigated for the new building, but due to its size and envisaged second phase, a "green fields" site was found on the western side of the campus. The main entrance caters for visitors from the north, students on foot, and those using the parking area in front of the library. The secondary south entrance is for those who use the dedicated parking area south of the building. The link between these two entrances is the spine of the building, a helix with services/buildings spaced on either side. The helix will be extended in the second phase to keep the circulation and linkage of buildings as simple as possible.

This building also hosts a chemical waste sorting and storage facility. This is a first for the University.

Biotechnology and Food Sciences Building

To best support the UFS's strategic emphasis on teaching and research activities in the field of Biotechnology and Food Sciences, it was decided to extend the existing Biotechnology Building.

The renovated Biotechnology Building, with four new research laboratories as well as nine renovated research laboratories, will have a dramatic effect on the quality and quantity of postgraduate students – essential given the national priority to graduate more students, especially at doctoral level.

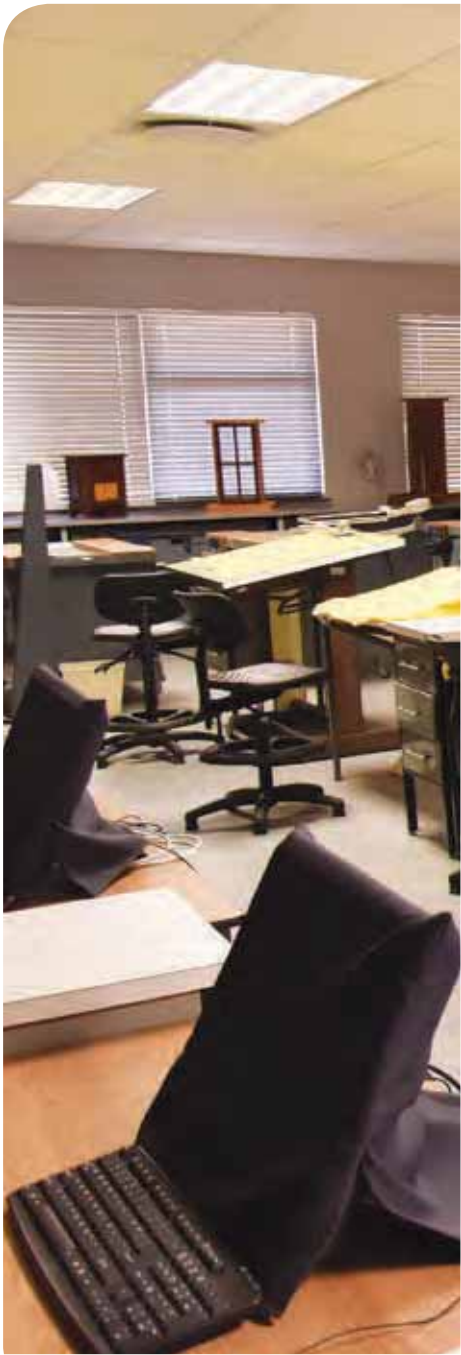
The addition is to the south-western corner of the existing building. There are six new offices, a lecture room for 70 students and laboratories housing 56 postgraduate students. The total area renovated was 2 800m^2 and the extension was 560m^2.

New wing to the Educational Building: technical engineering graphics

The first wing of the teacher training building was built during the second cycle of DHET funding.

The second phase, an additional wing to the existing building, was finished during the third cycle of DHET funding. The design of this new wing matches that of the existing building. It is situated to the west of the existing building, as per master planning.

The new wing includes two technology teacher education laboratories, an ICT laboratory, offices and storage space, over a total of 1 087.4 m^2. The lecture hall now has the latest educational and technological equipment.



Film and sound studio

A new film and sound studio was needed to facilitate optimal teaching and learning in the exciting new Honours degree in Film Studies that has recently been introduced at the UFS.

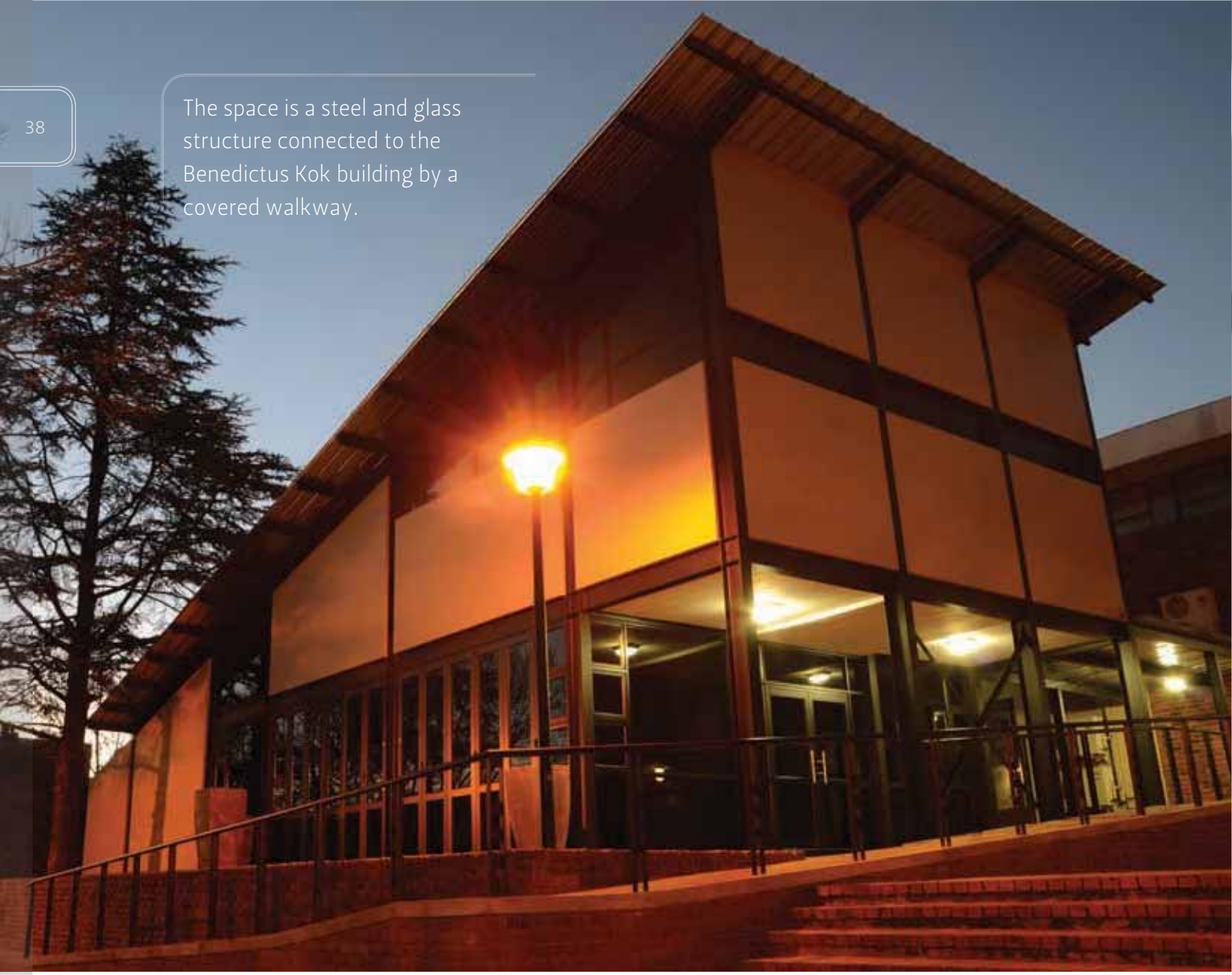
The studio includes new lecture halls, a screening room, an editing room, a multi-camera recording studio, a video and audio control room, a single camera studio, single and group cubicles, offices and storage space. This building has the specialised infrastructure design input necessary for the implementation of media-based technologies such as sound reinforcement and audiovisual and stage/studio lighting systems. The studio was built on the site of the old squash courts, utilising both this and also extending the site. Some material in the studio was reused – like the seating in the one lecture hall. This had been used in a movie theatre in Bloemfontein that was demolished. From there it was moved to the Sterrewag theatre on Naval Hill and now has been reused here.

The new film studio will have a positive impact on the new Film and Media Honours and the Department of Drama and Theatre Arts academic programme. The third-year classes have been moved to the new venue. The screening room will be used for general third-year lectures, while the open space will be used for acting classes and rehearsal space for the third-years specialising in acting. The film specialisation students will be based in the new studio and the editing section.

The Film and Media Honours, as well as the Honours students specialising in aspects of film, will be based in the new venue all through the year.

The new film and media studio is comparable to facilities in the industry thus allowing "real world" training to be offered.

The space is a steel and glass structure connected to the Benedictus Kok building by a covered walkway.



Nursing School multifunctional spaces

The School of Nursing's programmes received a boost with the addition of a new academic and research space.

The space is a steel and glass structure connected to the Benedictus Kok building by a covered walkway. It consists of two multifunctional floors. Since the completion of this space in 2014 it has been extensively used for: individual academic writing sessions by staff in the Faculty of Health Sciences aimed at improving the research outputs of the faculty; innovative teaching and learning including strategies to stimulate critical thinking; and academic programme planning and retreats – since the space is well equipped for discussions and group work, it is a popular setting for academics to work together on their projects.

It has also been used by other internal and external stakeholders, for example, the postgraduate school and professional organisations. The total area is 162m^2.

Dissection hall

This new facility was built as a double-storey wing to the existing Francois Retief Building.

The new dissection hall is on the first floor and covers 733m^2, on the same level as the existing hall, to enable easy access between the two facilities. The ground floor houses various offices with floor space totalling 465m^2, housing 16 people.

The new hall was needed as the previous dissection hall has been used for undergraduate anatomy training since 1972. Due to prospective growth in the number of medical students as well as changing methods in teaching and training, the new modern dissection hall was needed to ensure that students receive an optimal learning experience during dissection tuition.

The new hall has special lighting and modern equipment for the training (dissection programme) of second-year medical students. The hall also has high quality sound and computer equipment. A unique camera system allows students to follow dissection demonstrations on 10 screens in the hall. Dissection demonstrations are recorded, enabling lecturers to compile new visual aid material for teaching and learning.

The dissection programme for medical students is of critical importance, not only for acquiring anatomical knowledge, but also for the development of critical skills and professionalism of medical students. This new hall is also used for clinical workshops and postgraduate teaching seminars and workshops. This includes, among others, orthopaedic (shoulder, hip and knee workshops), otorhinolaryngology, cardiothoracic surgery (valve and endoscopy workshops) and anaesthesiology workshops. Both present and future generations of medical students will benefit from this new world class facility.

The new hall was needed as the previous dissection hall has been used for undergraduate anatomy training since 1972.

Visitors Centre

The Visitors Centre was established in 2014 to help position the University as a community-centred institution offering services to the public and working to international standards.

As at many universities around the world, the trend has been to provide a central point to welcome visitors, where they can access information and the campus.

The Department of Communication and Brand Management in partnership with Protection Services manages the centre, with a security officer at the front desk and three switchboard operators in the back office space. As the first point of contact with the public, the staff at the centre are trained to offer a quality service.

The centre is part of the access control project in that visitors have to enter the campus through Gate 5 on DF Malherbe Drive. It is strategically located to be able to help pedestrians, taxi commuters and drivers of vehicles who want to access the campus.

The centre will eventually offer value-added services such as campus tours for international visitors, visiting academics and other visitors to the campus, guided by student assistants. It is also ideal as a registration point for conferences and seminars held on the campus. The centre's aims are to enhance and uphold the University's public image, pitching it at international standards and enhancing the level of customer service.

The centre's aims are to enhance and uphold the University's public image.

Furniture store

A new consolidated storage facility for UFS furniture was established.

The aim was to set up a furniture "exchange" via which spare furniture could be re-utilised by other departments instead of being auctioned. The storage facility was built as an in-fill building between existing offices and storage buildings on an under-utilised site.

The ground floor and mezzanine floor provide a total floor area of 350m^2. The site, on an existing pedestrian route, uses the existing concrete fence to direct pedestrians away, while keeping the trees along the sides of a new access road. The facility has an off-street entrance.

Karee renovations

Karee, a male residence, is one of the Bloemfontein Campus's older residences and its need for renovation and redecoration was showing.

The work to Karee included upgrading seven bathroom units and five kitchen units. In addition, renovations inside the hostel included new floor finishes and paintwork, and new worktops, ceilings and aluminum doors. The bathroom facilities were completely renovated.

The project was completed in 2015.

Benito Khotseng renovation

The Benito Khotseng Building was revamped to create a modern, academic-friendly environment for academic staff and students.

The building was renovated for senior research professors and students of the Centre for Research on Higher Education and Development, the International Studies Group and Trauma, Forgiveness & Reconciliation Studies. The building now houses more than five MA students, 13 PhD students and 20 postdoctoral research fellows. It also houses the Department of Performance Management and Staff Development: Human Resources.

The revamped space includes a new reception area, 29 offices, two open-plan offices, three conference rooms, and a private library space. In an attempt to utilise all available spaces, two storerooms in the basement of the building were converted into study spaces for up to 12 people.

Winkie Direko second floor offices renovations

The UFS, in partnership with the South African National Roads Agency, launched the SANRAL Chair in Science, Mathematics and Technology Education on the Bloemfontein Campus in 2014, which entailed renovations in the Winkie Direko Building.

To accommodate the chair, several offices were demolished and turned into a boardroom, an executive office and a receptionist's office.

Interiors were refitted, including new window finishings, new floor finishes and the walls painted in new colours.

Plants Sciences laboratory upgrading

Cutting edge technology is of utmost importance at universities.

The laboratory was upgraded into a first-class facility that is able once again to accommodate the needs of students.

The department can also now host workshops and research projects with international students and researchers in the upgraded facility.

Water storage facility

In the midst of water restrictions and a potentially intermittent municipal water supply, the UFS identified the need for emergency storage reservoirs.

A minimum 24-hour storage capacity scenario was decided upon and constitutes a storage volume of 2.09 Mℓ (2 x 1.045 kℓ reservoirs/tanks). Since the reservoirs' main purpose is to store an emergency supply and they do not hold water for daily use, chlorination and circulation though the reticulation network will prevent the water from becoming stagnant.

UFS Sasol Library: Centre for Teaching and Learning and space management

Careful planning of the utilisation of space is important for a growing university. Through this project more than 3500m^2 was re-employed for new use.

To better use the space in the Sasol Library, part of the second level and the entire third level were renovated and reorganised. The entrance foyer was also revamped to create a lighter, more inviting entrance to the building. Phase 1 of the project saw the auditorium on level two being enlarged, while a new toilet was added for people with disabilities. There is now a partitioned study area for postgraduate students and overnight study facilities. On the third level, a new copy centre and a new main lending desk were built. In addition, the inter-library loan area was renovated into offices for library staff. The Centre for Teaching and Learning was also established on this level to help departments, individual staff and students to achieve academic excellence in the core function of teaching and learning. In addition, on level eight of the library, space was freed up by installing compact shelving; this space then was used for new audiovisual storage and viewing booths.

Centre for Universal Access and Disability Support (CUADS)

Phase two of the work on the Sasol Library included the revamping of the newly-renamed CUADS.

The centre, formerly known as the Unit for Students with Disabilities, was renovated during December 2014 and January 2015 to improve access for students with disabilities. The unit's facilities include an alternative test and examination venue accessible to the majority of students with disabilities, and a computer lab with assistive technology for students with visual impairment. Over time the number of students with learning impairments has grown and so more and better facilities were needed. The most pressing need was for additional space for students with attention deficit disorder and dyslexia, who need either to write tests and examinations with an amanuensis (scribe) or need a separate space free from distraction. Five sound-proof cubicles were built and the test and examination venue itself was sound-proofed.

The whole unit has new blinds and was repainted, creating a complete new look. This revamp was part of the launch of the newly renamed CUADS, embodying a new approach to serving students with disabilities at the UFS.

VALID CARD HOLDERS
GELDIGE KAARTHOUERS

Traffic access management

Campus safety is of crucial importance to the UFS, and traffic access management is a pivotal part of this.

Controlled entry to the Bloemfontein Campus has therefore been put in place to make the campus a safe space for staff and students.

In 2013, a study was conducted to find ways to effectively deal with access management. Pertinent issues included how to manage visitors to the campuses and the development of a visitor centre, the revamping of the gates so as to better manage traffic, and systems to secure pedestrian entrances. Access control is now operating at the five different gates of the campus and valid card-holders can access the campus through these.

The gates are Nelson Mandela Drive, Badenhorst Street, Wynand Mouton Drive, Furstenburg Street, and DF Malherbe Drive.

Numerous departments at the University were involved in this extensive project.

Access control on the Bloemfontein Campus was officially implemented on 1 November 2014.

In 2013, a study was conducted to find ways to effectively deal with access management.

Thakaneng Bridge: moving Kovsie FM and open seating

The Thakaneng Bridge is the vibrant hub of student life on the Bloemfontein Campus.

The upgrading project was part of the universal access plan, and also was aimed at increasing the amount of seating within and around the bridge.

In raising Kovsie FM and re-purposing an unused outside area, the project resulted in a clearer thoroughfare and more seating.

The upgrading project was part of the universal access plan.

Harmony student housing unit and Kovsie Inn

The UFS aims to house 33.3% of the University's student population on campus.

The 750 beds that have been added since 2013 means that there are now 4 211 beds available, so 18.7% of students can now be housed on campus. This increase has been good news for the students.

The new residences have been built to cater for the diverse academic and social needs of our students. The physical buildings are planned to promote living and learning and therefore provide the students with a holistic university experience.

Harmony has 250 beds. Blocks A and B were designed with undergraduates in mind. Each of the six passages has an access-controlled entrance with 14 double rooms, six single rooms, shower facilities, a kitchen, a passage lounge and a main lounge. The building includes a lecture hall and a common room. Together, the blocks house 184 students.

Blocks C and D are part of Kovsie Inn. Block C is for post-graduate students, with one-bedroom apartments and single rooms for honours, master's and doctoral students. Block D is a hotel with luxury en-suite rooms and a dining room that serves breakfast.

The hotel is a first for the University. Both blocks have a manned reception desk, WiFi, a laundry and dry-cleaning service, daily housekeeping (for the hotel rooms) and weekly housekeeping (for the postgraduate accommodation).

Communication and Brand Management offices renovation

The Department of Communication and Brand Management is tasked with building the University's brand and communicating with its key audiences, thereby increasing the University's visibility.

The look and feel of the department's offices have to tie in with this philosophy.

The department was previously split between two buildings, hampering the synchronisation and coordination of activities and work. The department moved into the west wing of the Main Building's North Block after this had been renovated. Glass and wood were used to create a feeling of spaciousness, accentuated by an open office layout. The offices were refurbished with a modern look, also displaying the University's brand. The new offices are close to the hub of the Bloemfontein Campus, which suits the active nature of the department.

George Du Toit second floor

This area of the George du Toit Administration Building houses finance personnel working on creditors / general bookkeeping / assets and employee expense claims.

This was a much needed upgrade. Some departments had been boxed into offices that provided no professional individual working spaces. Much of the floor was occupied by safes containing documents.

The renovations provided a professional work environment / uniform cubicles and floor space was maximised by transforming unused spaces into glass cubicles. This new working environment helped to improve service delivery and also changed the way how Finance is viewed and how they view themselves.

The maximisation of floor space provided additional office capacity and meant that departments could be grouped together more effectively.

A new committee room was created, providing a meeting space for departmental meetings, unavailable previously. Enhanced security measures included electronic access control gates.

Main Building interior walls paintwork

The Main Building houses the University's top management and is the campus's most iconic building.

It thus has to adhere to the corporate branding regulations of the UFS.

Focus walls in the building, which were previously painted in various colours that were not associated with the University, were changed to the corporate colours of red, blue, light grey and dark grey.

Several focus walls in the offices of staff members were also painted in the corporate colours.

Main Building bathrooms upgrading

With the number of visitors that the Main Building receives every day, the bathrooms were in dire need of an upgrade.

The bathrooms were revamped and all the toilets on the ground and first floor were replaced.

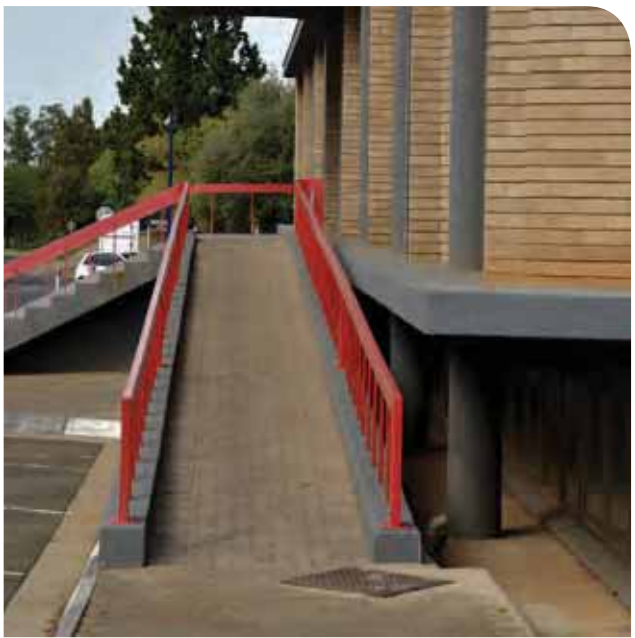
Universal access

The UFS takes pride in being considered one of the leading universities in South Africa in terms of support and accessibility for students with disabilities.

However, the scope needs to widen as we look to a future of *universal access*.

The principal aim is to create an environment (physical, social, and learning) that is accessible for the benefit of the widest range of possible users, including persons with disabilities.

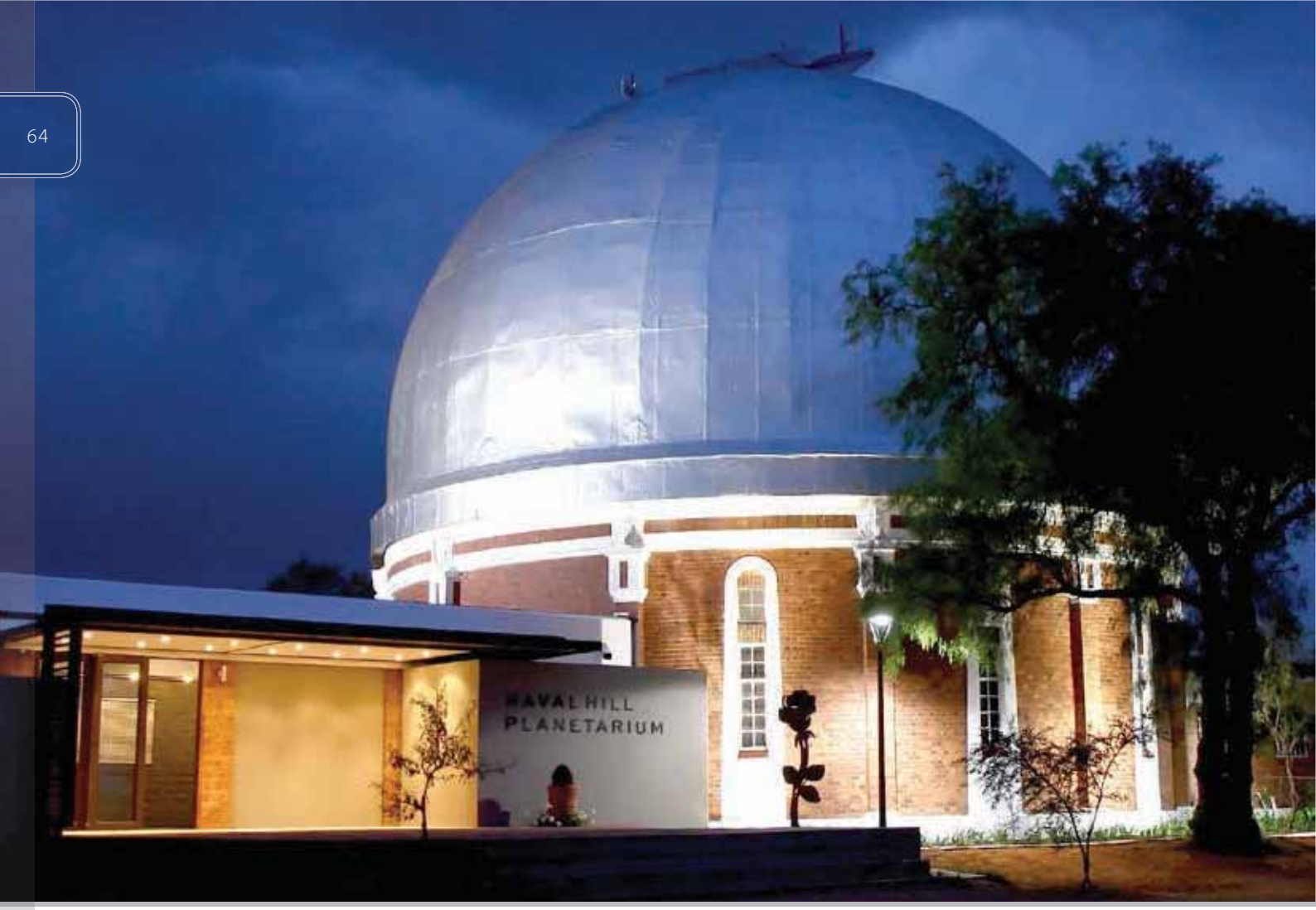
The UFS has already been implementing universal access on its campuses. For instance, the signage at all the new buildings is also in Braille. On the South Campus, the newest lecture venue is built against a hill and therefore has 'ground floor' entrances on the first and third level. The computer labs and the Sasol Library on the Bloemfontein Campus have ramps between the floors instead of stairs. Building entrances with automatic sliding doors accommodate not only people with disabilities, but also students and staff and people like couriers who might be carrying heavy loads of books or boxes and who might find it difficult to open a door.



OFF-CAMPUS

If you look at a blank piece of paper with only a dot - the tendency is to only see the dot and ignore the rest.

- Prof Nicky Morgan

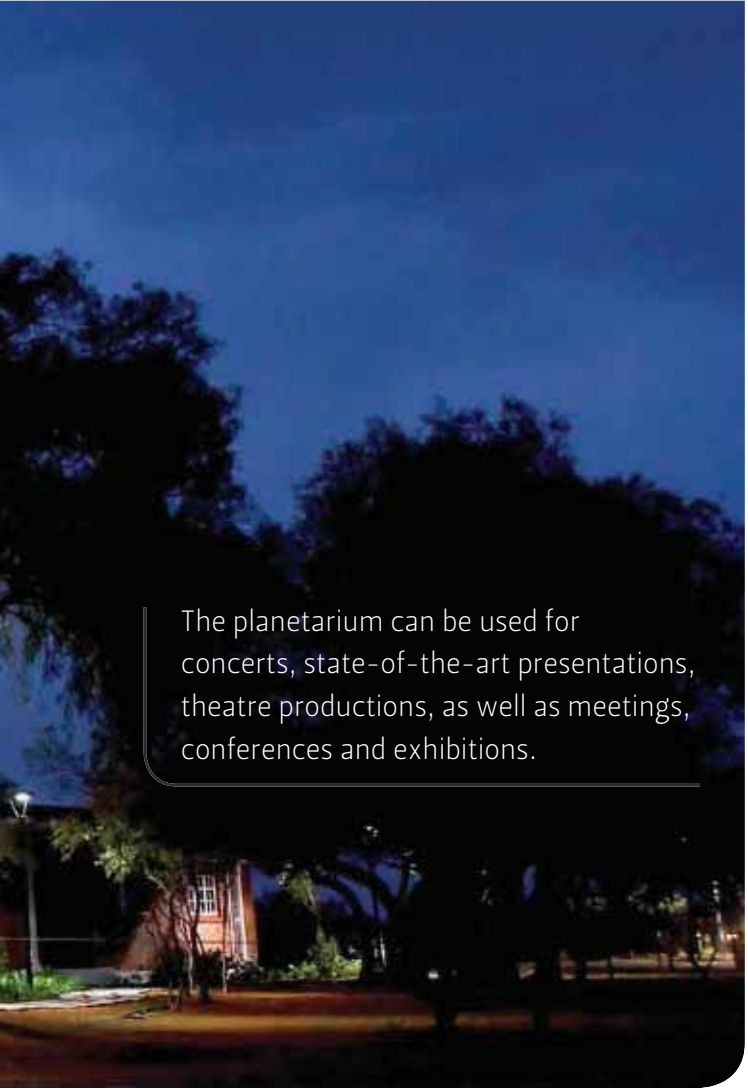


Naval Hill Planetarium

The Naval Hill Planetarium on Naval Hill is now one of Bloemfontein's proud beacons after the old telescope building, the Lamont-Hussey Observatory, was converted into the first digital planetarium in Africa south of the Sahara.

The digital dome that was fitted on to the existing observatory structure is a 12-metre seamless aluminum screen, complemented by a powerful surround sound system and multiple data projectors. The planetarium can be used for concerts, state-of-the-art presentations, theatre productions, as well as meetings, conferences and exhibitions. The auditorium can seat about 90 adults or 120 children.

This project was carried out in partnership with the Mangaung Metropolitan Municipality, Letsema and the Department of Economic Development, Tourism and Environmental Affairs.



The planetarium can be used for concerts, state-of-the-art presentations, theatre productions, as well as meetings, conferences and exhibitions.

Trompsburg student accommodation

Lecturing and residential facilities in Trompsburg were needed for students who are being trained at the local hospital.

The most feasible solution turned out to be buying the hotel in the centre of town. The project currently under construction is divided into two phases. Phase 1 consists mainly of converting the former hotel into suitable lecture rooms as well as accommodation for visiting lecturers. The renovated floor area is 704m^2. Phase 2 is a new building to house 60 students from the School of Medicine, the School of Allied Health Professions and the School of Nursing. There are 10 living units of 120m^2 each, with six single bedrooms, two bathrooms and an open plan living/dining/kitchen area in each.

The practical completion of Phase 1 will be in September 2015 and Phase 2 is scheduled for completion in November 2015.

The project currently under construction is divided into two phases.

INFRASTRUCTURE

A building not only signals value to the outside, it also builds value on the inside.

– Prof Jonathan Jansen

Close 11 KV network ring | *Bloemfontein Campus*

A 1000 metre-long 11 kV cable was laid to close the 11 kV network ring on the Bloemfontein Campus. Mini-substation UWK-3 was connected to the west substation. This means that there is now an alternative route to keep the substations live when a power failure occurs.

New electrical infrastructure for Geography and Physics Buildings | *Bloemfontein Campus*

As part of our planned upgrading of infrastructure the electrical installations in the Physics and Geography Buildings were replaced as they had reached the end of their lifespan and had become unsafe. The latest technology was used to ensure that learning is enhanced and OHSA requirements adhered to.

Energy management metering of substations | *South Campus*

As part of the UFS's Energy Management Strategy, all substations are metered in order to monitor the power throughput.

Flippie Groenewoud Building Block B air conditioning | *Bloemfontein Campus*

A new air conditioning system was installed on the second and third floors of the Flippie Groenewoud building. Previously only heating, from diesel-fired boilers, was available, using outdated technology. In total 53 offices received a centralised VRV (multi-split type air conditioning) system. This system was installed to provide cooling as well as heating in an energy efficient way. This was only the first phase: the first floor and basement remain to be done.

Main Building air conditioning | *Bloemfontein Campus*

A new waste heat recovery chiller was installed on the first floor of the Main Building, replacing the ineffective, outdated and noisy existing system. The new system is much more energy efficient with capacity for future air conditioning to the ground floor as well as South Block.

The centralised system provides heating and cooling simultaneously by using heat extracted from offices where cooling is required (for example east facing offices in the morning) to others requiring heating (west facing offices in the morning).

Nelson Mandela Hall air conditioning | *Qwaqwa Campus*

This hall is an open structure without a ceiling and insulation is minimal, resulting in excessive heat radiation. The venue is used for exams, graduation ceremonies, sport events, etc.

Open ducts were installed and an energy efficient evaporative cooling system, with a heat pump to supply heating energy efficiently in winter, was provided.

Heat pumps at new student housing units and Qwaqwa residences

Heat pumps provide hot water to the new student housing units on the Bloemfontein Campus. There is a centralised heat pump room with sufficient and ample storage capacity.

These heat pumps are the most advanced method and much more energy efficient than older methods of heating water.

Until recently all older residences on the Bloemfontein Campus relied on old technology heat pumps for hot water.

Three older residences have been switched over to a new centralised heat pump system.

On the Qwaqwa Campus, water was heated previously by large industrial elements (geysers) that were not power efficient. When the new residences were built, a centralised heat pump system was installed for the campus. All Qwaqwa residences are now being fed from this energy efficient system. The payback period for this installation was calculated at 6.5 years.

VIP lounge air conditioning | *South Campus*

Air conditioning was installed in the VIP lounge on South Campus – a popular venue for functions – so more activities can be undertaken there now.

UFS
UV
STOP

A LAST WORD

Shaping this picture is a continuous process in a dynamic environment in adherence to world-class standards, balancing an ever-growing variety of challenges and demands.

- Nico Janse van Rensburg

Last word ...

When entering any one of our campuses, first impressions are formed by the environment, of which buildings and infrastructure form a major part.

Each building has a unique personality defined by its own language, consisting of function and purpose. We look at each one as a handmade object that was created with passion and built with hard work and detailed planning, to be admired and enjoyed by all for generations to come.

To get the campuses looking good is a continuous process in a dynamic environment, with world-class standards to meet and an ever-growing variety of challenges and demands to be dealt with. These include accessibility, eco-friendliness and energy efficiency, involving established as well as emerging contractors and consultants, budgets, user expectations and the UFS goals, all transformed into building excellence.

Our approach remains that we do not only construct buildings – our goal is much broader. We also build and develop people, which is why, for instance, our Independent Contractors Development Programme, designed to help informal contractors to acquire the necessary skills to become independent, was successfully implemented.

This continuous process also involves the challenge of bringing together a wide variety of people, each with their unique skills and creativity, in such a way that their work and study environments become a home away from home. We may be entering into a new paradigm of adaptability and multifunctionality rather than one of extensions and newly-built spaces, rethinking existing spaces and and how to use them in a dynamic, developing environment. It is increasingly important to translate the language of the building to its users and inhabitants.

On a personal note: it has been an immense privilege to be heading University Estates, and to have the loyal support of all the personnel at both Facilities Planning and Facilities Management. I thank our Vice-Rector: Operations, Prof Nicky Morgan, and senior management for their support and guidance. I have learnt a lot on this journey and a lot still remains to be learnt. All of this could only be achieved with help that goes beyond one's own forces and abilities.

Nico Janse van Rensburg | *University Estates*

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