Report of the SACAP, NCAQS, and CAA Accreditation
Board to the Department of Architecture, Planning and
Construction, Namibia University of Science and
Technology 26 – 28 September 2022

The purpose of the accreditation visit is for continued accreditation

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2. List of Acronyms

ALS	**Architecture Learning Site**
APC	**Assessment of Professional Competence**
B. Arch	**Bachelor of Architecture**
B. Arch Honours	**Bachelor of Architecture Honours**
CAA	**Commonwealth Association of Architects**
Cr	**Credit**
CBE	**Council for the Built Environment**
CHE	**Council on Higher Education**
DAPC	**Department of Architecture, Planning and Construction**
ETQA	**Education andTraining Qualifications Authority**
M. Arch	**Master of Architecture**
MRA	**Mutual Recognition Agreement**
NCAQS	**Namibia Council for Architects and Quantity Surveyors**
NQA	**Namibia Qualifications Authority**
NQF	**Namibia Qualifications Framework**
NUST	**Namibia University of Science and Technology**
NIA	**Namibia Institute of Architects**
NSFAF	**Namibia Students Financial Assistance Fund**
PPE	**Professional Practice Examination**
PrArch	**Professional Architect**
SACAP	**South African Council for the Architectural Profession**
VB	**Validation Board**

3. Introduction

Following the Mutual Recognition Agreement (MRA) between NCAQS and SACAP, a visit to NUST was scheduled for this purpose:

- The MRA establishes criteria, procedures and measures for accreditation of architectural programmes and alignment of accrediting systems to improve the quality of education. This facilitates the substantial equivalency of architectural programs by comparable standards, outcomes and processes even though they may not be identical.

This is the second accreditation visit by SACAP as a signatory of the Canberra Accord since 2017. SACAP is able to facilitate the process of international accreditation for architectural programmes in the African Region due to it being a member of the Canberra Accord. The accreditation visit serves to assess the quality and relevance of Bachelor of Architecture (NQF 7); Bachelor of Architecture Honours (NQF 8) and Master of Architecture (NQF 9).

This report contains the accreditation visit findings and a summary statement that was presented to the DAPC on the 28th of September 2022.The VB thanks the Executive Management, Faculty and Department for their assistance during the visit.

4. Executive Summary

The South African Council for the Architectural Profession was invited by the Namibia Council for Architects and Quantity Surveyors to participate in the accreditation of the architectural programmes at the Namibia University of Science and Technology. This is pursuant to the MRA between SACAP and NUST which establishes criteria, procedures and measures for accreditation of architectural programmes and alignment of accrediting systems to improve the quality of education to facilitate the substantial equivalency of architectural programmes by comparable standards, outcomes and processes.

The VB for the SACAP, NCAQS and the CAA conducted a joint hybrid validation visit to the Namibia University of Science and Technology (NUST) on the 26th – 28th September 2022 after a prior *Unconditional Accreditation* by NCAQS in 2016, and by SACAP and CAA in 2017.

The VB takes note of the prior accreditation outcomes. Further noting that for the CAA - the B. Arch (Honours) and M. Arch are new accreditations and for SACAP and NCAQS - the M. Arch is a new accreditation.

The process involved the inspection of the facilities, reviewing the evidence supplied by NUST, an interview with the Head of School (HoS), academic staff, external moderators and students for the below programmes:

- Bachelor of Architecture: (B Arch)

- Bachelor of Architecture Honours: (B Arch (Hons))
- Master of Architecture: M Arch (Prof)

Following a constructive accreditation visit, the representatives of the VB reached consensus on the recommendations to their respective Councils.

4.1 Final Outcome from SACAP Council:

The SACAP Council has granted NUST Unconditional Continued Accreditation status.

4.2 Further Recommendations:

Transformation:

- DAPC should adopt formalised targets for demographic representivity with regard to both staff and students in terms of race and gender, with particular focus on the intake and the Masters programme at the PrArch exit level.
- There needs to be a greater debate around decolonization of the curriculum with a particular focus on Namibian indigenous knowledge systems and vernacular architecture.

Curriculum:

- There needs to be improved linkages between courses both horizontally and vertically.
- There should be an improved implementation of a sustainability agenda from first year to masters' students.

Teaching and learning:

- Alternative teaching strategies should be designed to balance the work and studying programmes.
- There should be a concise system of providing ongoing feedback to students on the outcome of their assessments.

Assessment:

- There should be an alignment of the examination processes at exit level to international best practices.
- There needs to be appointments of subject specialists as external examiners.

Facilities and Resources:

- NUST has much underutilised facilities, this space should be used to emphasis the working space for students.
- The WIFI connectivity and the IT support at NUST was found to be of a poor standard – greater attention should be directed to this and should be NUST's propriety.

Staff:

- An increase in financial support and psycho-social support pertaining to staff development needs to be implemented.
- The Human Resources pertaining to staff should be improved as well as the conditions of services.

Students:

- A comprehensive strategy to enhance student performance needs to be implemented.
- Channels of communication between students and management needs to be improved.
- Increase the financial support for students to align with the national transformation agenda.

SACAP will conduct an interim visit within two years to ensure that the above recommendations have been implemented.

NUST Department:

- Greater attention and support for the implementation of the new Namibian Bill for Architects and Quantity Surveyors should be given to the whole department.

5. **Preamble:**

Following the MRA between NCAQS and SACAP, a visit to NUST was scheduled for this purpose:

- To exchange information in order to promote adoption of best practices on standards of architectural education, professional practice and qualifications.
- To enhance cooperation between the SACAP and NCAQS.
- To establish criteria, procedures and measures for accreditation of architectural programmes and alignment of accrediting systems to improve the quality of education. This facilitates the substantial equivalency of architectural programs by comparable standards, outcomes and processes even though they may not be identical.

6. *Nature of the SACAP accreditation:*

The accreditation process and its nature emanate from Section 13 (a) of the Act number 44 of 2000. As per the Act, accreditation is subject to Sections 5 and 7 of the Higher Education Act, (No. 101 of 1997). The implication of accreditation is therefore conditional upon the accreditation of the architectural programmes by the Council on Higher Education. This means that accreditation is an outcome-based evaluation system of architectural qualifications. Hence, SACAP evaluates the evidence provided by the ALS through interviewing the Executive Dean, Head of School, academic teaching staff, students and external examiners as well as conducting an onsite visit to inspect the facilities.

7. Aims and Objectives:

The aim and objective of accreditation is to improve the quality of architectural education and safeguard the standards of the architectural programmes. Accreditation is a continuing quality control process and it occurs once in every four years coinciding with the Council term of office. The SACAP accreditation system is substantially equivalent to all Canberra Accord signatories which, whilst granting the ALS Canberra Accord accreditation in the NUST instance, benchmarks the ALS internationally. Therefore, this report makes provision of the outcomes of the examined programmes: Bachelor of Architecture, Bachelor of Architecture Honours and Master of Architecture.

8. Criteria for Evaluation:

SACAP examines the quality and relevance of architectural qualifications, the standard of achievement and competence of graduates of ALSs at Higher Education Institutions (HEI). The priority of SACAP is to benchmark architectural qualifications against the SACAP competencies as the main criteria for evaluation. To this end, all application and validation documentation prepared by an ALS should identify how the SACAP competencies and standards are being met within the curriculum, pedagogic approach and assessment practices of the ALS.

In reviewing the work of students, the lowest qualifying standards for graduation are of greatest concern. In addition, the ALS should respond to accreditation criteria which focus on the ALS's ability to deliver architectural qualifications. This includes, but is not limited to, the quality, relevance of teaching and learning design, research, the nature of the ALS learning environment and the extent of available resources for both staff and students. These aspects are set out on the evaluation matrix and the subject/module/unit review template.

9. Members of the Validation Board:

The SACAP VB consisted of Ms Lula Scott (Chairperson), Dr Judith Ojo-Aromokudu (VB member) Mr Kevin Bingham (VB member), Mr Kagiso Molebatsi (VB member), Mr Jonathan Manning (VB member), Mr Charles Nduku (VB observer), Mr Mzwakhe Hlatshwayo (SACAP Secretariat).

The NCAQS VB consisted of Ms Manda Bakkes (Chairperson), Ms Una Ferreira (Secretariat), Prof Gerald Steyn (VB member), Dr Katlego Mwale (VB member), Ms Nina Maritz (VB member), Mr Ben Kathindi (VB member) and Mr Lesley Hindjou (VB observer).

The CAA VB consisted of Mr Lenano Mosime (Chairperson & Secretariat), Mr Jayantha Perera (VB member), Mr Belang Rapalai (VB member), Prof. Paul Kotze (VB member).

10. NUST DAPC Self Appraisal Report:

The vision of DAPC is to grow into a regionally leading school of architecture and urbanism: that actively shapes Namibia's socio-spatial transformation to a predominantly urban society, while situating itself within the wider international debates, especially from those of the Global South. The major task of the ALS is to educate young architects to be competent and qualified architects but also responsible citizens who can add value in society and in uplifting Namibia's economy.

To achieve this, students are exposed to urban and spatial realities in order to acquire exposure to real critical issues facing society. Research and policy development are applied in teaching to show meaningful engagement in contextual teaching. Site specific teaching and research also overlaps with community service. This enables acquisition of knowledge and skills which can be used outside the classroom and enhances entrepreneurship amongst students.

However, some strengths and weaknesses have been identified in the ALS:

Strengths;

- There is a good staff to student ratio - 1: 10.
- Since 2019 five staff members are in the process of completing their PhD.
- There is about 50% of non-white staff and an equal distribution of gender.
- The tuition fees of the ALS are lower compared to some South African ALSs.
- The ALS is working hard to forge relationships with other tertiary institutions, locally and internationally.

Weaknesses;

- There are currently no student support systems at institutional and departmental level for students with challenges in learning.

- The postgraduate students often have difficulty trying to balance their full - time study together with working.

- The splitting of the M Arch programme into 2 years has benefits to the students at NUST. The split enables the student to complete half of the modules in one year and complete the rest the following year. As a result, students do well due to less pressure (compared to other one-year programmes).

11. Accreditation Documents:

The evidence documents were received on time and presented digitally to the members of the VB. The information was further clarified in the presentation by the HoS and staff. All sessions in the programme were organised appropriately and the VB was well received. The displayed student work was impressive.

11.1   Response to previous validation report

The 2017 VB made a recommendation to review the B. Arch and B. Arch Hons programmes. The revised programmes entail Design, Technology, Theory, and Practice clusters.

NUST offers affordable fees and the staff to student ratio is aligned to Canberra Accord ratio of 1: 10. It has a state-of-the-art infrastructure including qualified and ambitious academic teaching staff. Since the environment is conducive, this enables teaching and learning to be socially relevant and contextualised. The ALS presented clear systems to achieve their objectives as stated in the SER.

11.2   Report from the HoS at DAPC: Dr Phillip Lühl

The HoS gave a comprehensive vision of the ALS. In his presentation he indicated that DAPC, since established in 2010, is meeting the demands of the 21st century. The ALS has fulfilled its transformative mandate and academic achievement. In fulfilling the transformative mandate, the ALS offers affordable fees to enable previously disadvantaged students to enrol in large numbers.

The average staff - student ratio of 1:10 affords students quality teaching. This quality teaching is enhanced through the appointment of qualified academic teaching staff. The quality of the academic teaching staff serves as a competitive advantage towards academic achievement. Despite the heavy workload and lack of staff development opportunities, the staff complies with the affirmative action policies.

Courses are mapped (horizontally and vertically) to align with SACAP competencies. For instance, the complexity of the projects is clearly defined: From Semester 1 to Semester 6 (1ST Year to 3rd Year). Included in this is the supervision of an M. Arch qualification which is aligned with SACAP competencies.

The current structure of DAPC from B Arch – Hons – Masters, is a (3 + 1 + 2) programme instead of a (3+1+1). However, there is justification for the programme to be taught as such and this has benefits to the students.

The ALS has responded to the recommendations of the previous VB despite existing challenges. The challenges include the inability of graduates to find employment, impact of the COVID-19 pandemic to continuous learning, lack of funding from the state and the evaluation template of the NCAQS which is not aligned to the internal processes.

Recommendations;

- The VB suggests that the ALS streamline their assessment to align with the NCAQS examination.
- The VB recommends that DAPC should align their M. Arch to a 3+1+1 to satisfy the requirements of CA.

Photo 1: VB interviewing the HoS

11.3 Report on the interviews with the Academic Teaching Staff:

The staff demonstrated vibrancy and enthusiasm towards the ALS. However, COVID-19 resulted in four teaching staff positions being lost and have not been filled to date. This created an increased workload and a demoralised workforce. During the interview the teaching staff expressed unhappiness regarding HR processes which impacts negatively on their responsibilities. The Namibian laws regarding conditions of services also compound the problems.

The VB noted that procurement processes are flawed and require great improvements. The staff should not be buying resources to aid teaching and learning. However, management advised that the staff needs training on how to motivate for the procurement of resources to avoid delays. These differing views require improved communication and collaboration.

The academic improvement strategy as a response to the pandemic was commended by staff. Some semesters have been retaught due to loss of time. A blended approach to teaching was adopted. This means that some courses remain online while others were taught onsite. Students had an opportunity to access online material via MS Teams. However, poor connectivity and lack of access to data posed threats.

The VB advised the teaching staff that a recommendation will be made to management to develop a comprehensive strategy to address student needs. This includes effective systems of recruitment, improving working conditions, provision of access to resources and capacity building programmes.

The VB commends the staff for their valuable inputs, professionalism and honest opinions.

Photo 2: VB interviewing academic teaching staff

11.4   Report on the interview with the external moderators:

There were five external moderators who were interviewed. The external moderators demonstrated a willing attitude in providing factual information pertaining to their work at DAPC. In their view, post pandemic, there was much improvement shown by the ALS in presenting student work. The Design course enhances variety of skills and there is improved access to social research. The external moderators expressed great satisfaction in the use of assessment matrix by DAPC.

The external moderators were concerned about the lack of specialisation in the various modules that were being assessed. They found it difficult to moderate all the subjects as they are not qualified for all of them. The DAPC should appoint specialist moderators for each module to ensure effective quality assurance processes. Furthermore, at 5th year Masters programme, a brief should be provided to the external moderator working together with the appointed academic to review the research.

The external moderators applauded the improvement but suggested semester modules to some courses. The VB commends the external moderator's valuable inputs.

Photo 3: VB interviewing external moderators

11.5 Report on the interview with the students:

The student turnout for the interview was impressive. The vibrant student body displayed an ethos of enthusiasm and commitment to their studies and to the DAPC. The VB commended their participation and professional approach in the matters that were raised. A request was made to reduce the number of assignments per week at master's level - which has created pressure amongst the students. Increased academic programme and reducing holidays will benefit the students to acquire the necessary skills.

At honours level, the lack of site visits deprives student practical exposure to acquire industry experience. This included an insufficient number of mentors which compromises student industry experience. In addition, the ALS inability to provide the required resources such as good internet connectivity, printing facilities, storage and functional computers hinders academic success.

There is an absence of an onsite canteen and interfaculty student life, the students feel isolated due to this.

The students recommended that:

- DAPC should review their M. Arch to accommodate students who are employed.
- The Work Integrated Learning should shift towards the end of the third-year academic programme.
- The lecturers should be objective and avoid being bias during crit.
- Site visits should be annually reviewed and not recycled.

Photo 4: VB interviewing students
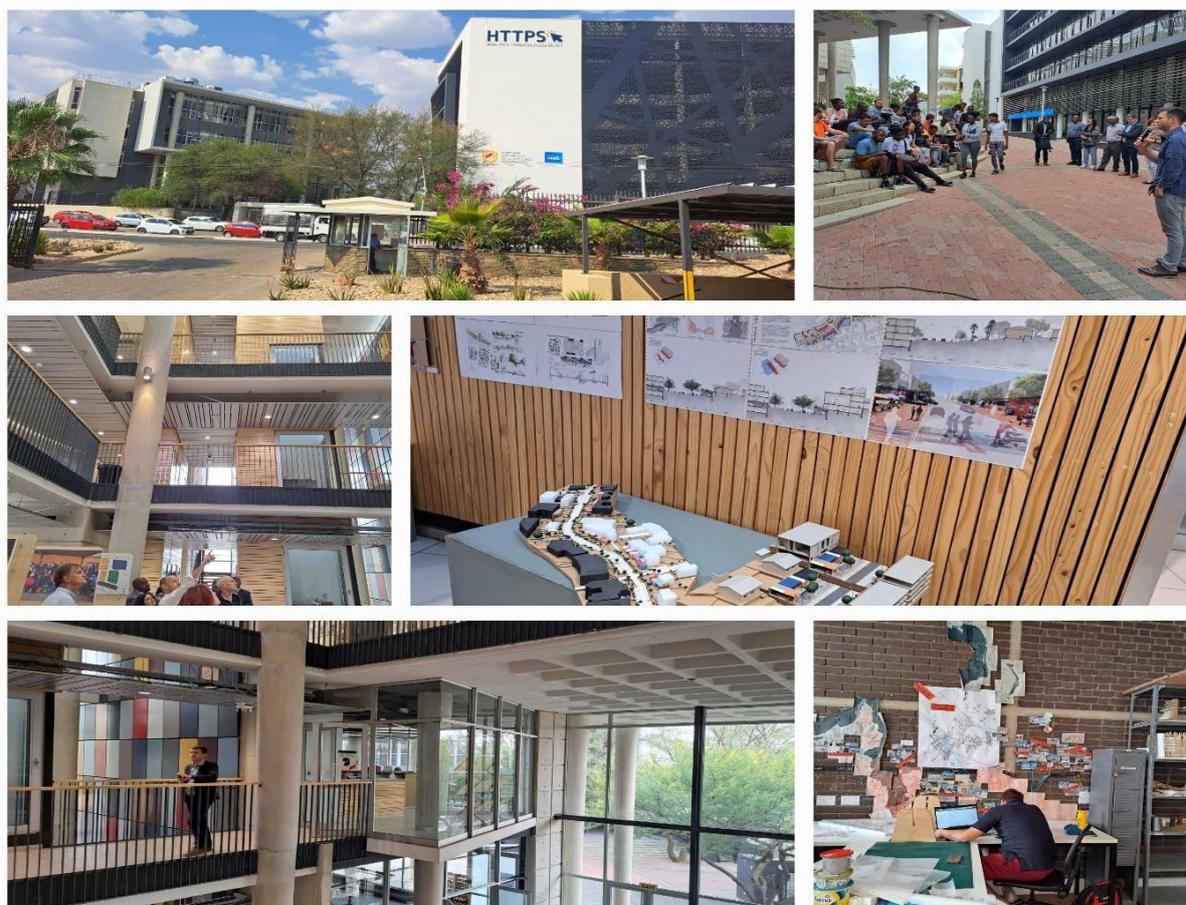
12. Facilities and Resources:

Photo 5: Facilities, studios and student exhibition of portfolios

Location

The premises of the DAPC are within a dedicated building with sole use by the DAPC, located within the main campus of NUST. Close by is the HTTPS Building, this serves as an overflow facility. The surrounding area is well developed and established with its close neighbour - the Hotel School. There is evidence of students walking freely, offering a sense of comfort and safety.

Transport

1. The NUST Hotel School Taxi rank located outside the hotel school serves as a feeder system.
2. Students also use private transport, or walk.
3. Other means of public transport include E-Hailing.
4. The Main Bus Station - Windhoek, Mandume Ndemufayo Avenue, Windhoek, Namibia is 1.3km away or is a 15-minute walk to NUST.
5. The Windhoek Railway Station is 1.9km away or is a 23-minute walk to NUST.

Access to students and staff:

The NUST campus library is open from 08h00 - 22h00, with reduced hours over weekends.

Security

On initial impression, the on-campus security appears well resourced. Elaborate and technology driven access control mechanisms are evident at all access points of the DAPC and areas within the campus in general. There are staff positioned at access points one would assume to serve as security. However, there is no oversight, management, or control evident, and the technology driven access control mechanisms are not activated. There does not appear to be any clear quality in the access control to the campus as a whole. As visitors the VB members walked freely between areas without query. Management noted monitoring systems had been deactivated during the Covid 19 pandemic.

Reviewing current security systems will benefit both staff and students considering that the campus is open over extended hours.

Overview of the Premises

The four-storey building is a modern, well-resourced building dedicated to the DAPC and serves as an effective and positive physical environment for learning. Designed around a central vertical atrium, this permits visual and physical interactions. Access to the various floors uses lifts or steps. Most areas are enclosed offices, workplaces, studios, with open gallery or project display opportunities available on the ground floor and in the common passage. All areas have access to natural light and ventilation.

Ablution facilities (male, female, and paraplegic) are available on all floors. Paraplegic access to the ground floor is available with ramps. With regards to the emergency escape – there is emergency exit signage and equipment, it is non-compliant but management is in a process of upgrading. The facility is a non-smoking facility and there is dedicated smoking areas outdoors.

The workshop (model building)

There is an open plan environment that is used for model building - this is a well-developed sector for study. The models on display in the studios, workshop and exhibition spaces were of various level of student skills. The large open spaces available invites the student to have creative discussions. The hubs with this workshop offering creates multipurpose opportunities serving as workshop areas, collaboration spaces and as well as a training facility.

The workshop is well stocked with different material and is resourced allowing the students to use equipment provided.

Students that were in the workshop studio at time of the visit appeared to be collaborating on projects, giving one a sense of working as a team. Supervision by a part-time staff is available but only 4 hours per day.

Work environments

There are dedicated spaces available outside of the studio to work, however this is limited, and the students work in their studios and workshops. Free Wi-Fi is available but this is unstable and slow. Free data is not available to students when off campus for online learning.

The studios and lecture facilities are adequate in size, well-resourced and available after hours for ongoing work opportunity. Onsite the use of a copy and print facility is limited which hinders the student.

There is a computer facility available for student use and training opportunities. Students provide their own laptops or have access to computers on campus. Where offsite use of computers is needed students who do not have laptops are hindered.

Library

The NUST campus library is open from 08h00 till 22h00, with reduced hours over weekends. The library is a modern stand-alone building on the campus.

The library has a postgraduate reading room, on a lower level, with a dedicated staff member and computer terminals. Library Staff are not solely responsible for Architecture, though those who were interviewed were knowledgeable about reference locations. Material available for students is mostly hardcopy, with access to the university intranet to source reference material that is available digitally. There are many workstations within the library, but these looked very well used by all different faculty students.

Lecturer workspaces

Permanent lecturers have dedicated offices, some of which are shared. Part-time lecturers usually work out of their studios, bringing their own learning material when needed. Online submissions and teaching methods have reduced the need for onsite storage of material, thus a reduced need for dedicated offices. The admin area is easily accessible for students to inquire on registration and accounts related matters.

13. Review of academic courses

13.1   Bachelor of Architecture (B. Arch)

Architectural Design 1 A & B, 2 A & B, 3 (ARD511S, 521S, 611S, 621S, 721S)

The course introduces students to abstract thinking through the manipulation of form and surfaces of a cube. As students' progress through the module, there is a build up by scaling intervention to

deal with contextual issues. However, students' ability to understand how context influences the design as they progress has been limited by lack of contextual drawings and limited exploration of spatial possibilities. These could be achieved by introducing comprehensive site analysis and contextual response as part of the design experimentation.

The objectives of the course were clear and achieved. However, the VB suggested the following:

- Explore variation of spatial experience using volume to aid design development.
- Use technology and layering to improve project development and design.
- Improve drawing skills.
- Assignment projects should progressively increase in scale and complexity.

Applied Building Science (ABS 511S)

The title of the course Applied Building Science could be better aligned to the course content. Perhaps the ALS should consider Introductory Building Science. The content should also be integrated with Theory and Design. It is concerning that student's average performance is below 60%. It is advisable to use current references instead of outdated ones.

Architecture in Context (ACC 511S)

Students are introduced to the basic elements of design by incorporating the buildings of historical relevance and the history of Architecture, starting off with hunters, gatherers and the earliest human expressions including Namibia, Ancient Egypt and then moving to Greece and Rome etc. Structures and contexts are well covered. The lectures are recorded and students can listen to the recordings online. Two face-to-face sessions are also provided. There is a good progression through the module covering historical topics. There is no pre-requisite to this module. 28 students are registered with only 26 having final marks.

Graphics and Communication (GPC511S)

A lack of creativity & graphic design content was observed as well as insufficient freehand drawing content, just penmanship. Some link to projects was evident, but little creative impact was observed. There is too much ruler-based drawing taught. Weird unreadable fonts. Little exploration of media other than standard pencil & smooth paper was evident, which impacts negatively on other courses' presentations. Other course submissions don't demand a variety of media, so little parallel upskilling takes place.

Construction and Technology (CST 521S, 621S)

The course outline is informative, covering Building Technology and Communication through drawings. The course links directly to design but it would be beneficial if linked to theory. Great

work was produced during the Vertical Studio week- but raw material was not available for the VB to scrutinise. The VB noted CAD drawings instead of free hand. This was due to the hybrid mode of teaching as a result of the pandemic. The VB recommends free hand drawings for alignment with SACAP competencies.

There is good progression however, lecture notes were missing in the validation files. Students understanding of construction might be improved through the thinking process. The absence of a marking guides resulted in inconsistent marking.

Landscape and Context (LSC 521S)

The course introduces students to contextual layers, including landscape, socio-cultural, principles and methodologies of contextually responsive planning and design. The module is theoretical, practical and feeds into the design modules. Students are assessed on their ability to exhibit an understanding of key theories relating to socio-cultural context and evaluate the key attributes of the physical infrastructure, settlement patterns and architectural typologies etc. The course is presented in hybrid mode.

Architectural Drafting (ATD 521S)

There are simple drawing conventions before students engage on doing full scale drawing. However, these are not given as small assignments. In addition, the formal drawing assigned to students is too complex and not related to studio.

Vertical Studio 1, 2 & 3 (VTS 521S, VSD521S, VST621S)

This is a new course in the programme. It is an elective and done across all B. Arch students. Students are having a choice to choose between Vertical studio 1, 2 & 3. The project brief for this course focuses on providing real life solutions such as housing challenges for low-income communities. Students design technological solutions appropriate to the communities. Course objectives are clear and achieved throughout.

Architecture and Discourse (AAD 611S)

The module is dedicated to the key theoretical debates in architecture. Key themes covered are Tectonics-simplicity and complexity, ornaments, austerity, honesty and perception. Use function and form, proportion and organisation. It also uses site context and building, natural and constructed. Learning outcomes include the ability of students to analyse architectural theory, conduct relevant research, display awareness and critically evaluate the built environment. No lecture notes were provided.

Computer Aided Drafting and Visualisation (CAD 611S, CGI 721S)

There is alignment with SACAP competencies. Teaching is done through application of software such as computer lab tutorials and CAD software. Assessment is carried out through projects including 3D & 2D models. There is evidence of students work which is marked although combined with Architectural design.

Building Structures (BDS 621S)

Students should be encouraged to use correct references. It is noted that drawing convention errors are carried through from junior years. (Course content not provided)

Housing and Everyday Life (HEL 621S)

Housing is introduced as a critical arena for architectural and urban intervention. Course content is highly localised with exposure to the international context. The ALS may consider making this module an elective and offer theoretical content on sustainable development or green buildings or environmental, urban design and other contemporary discourse. The lecture notes provided are well presented.

Work Integrated Learning (WIA 711S)

The teaching staff provide an outline of the work students should do. However, sample of students Log Sheets were not available. It is the VB's view that the timing of this module and student readiness is not correct. It does not adequately meet alignment to the required competencies. Preparation of students prior to WIL not evident and appears as if delegation of teaching responsibilities of Practice, Local Authority, built environment relationships, contractual matters and general project administration is delegated to practices. This becomes difficult to measure due to inconsistency of practice size and expertise.

There seems to be a lack of understanding of the relevance of experiential learning by the external examiner.

Principles of Urban Design (PUD 721S)

The aim of this course is to provide students with concrete knowledge of how urban form has transitioned from settlement to town or city overtime, reflecting on how this is evolving form has responded to various environmental, social, political and philosophical situations and concepts. The course is presented in lectures. Students are exposed to principles of urban design. The course is aligned horizontally with design as students are expected to implement urban design principles they have learned.

Environment and Services (EAS 621S)

Information provided on the student work presented was in many instances not corrected e.g., floating slab between brick walls. The work tends to be done in isolation with no bigger picture – such as services in urban contexts. (Course content not provided)

13.2 Bachelor of Architecture Honours (B. Arch Hons)

Honours Design Project 1 & 2 (HDP 811S, HDP 821S)

The new curriculum has responded to the comments made in 2017 regarding the (course HDP 811S and HDP 821S) need to rationalise, reduce courses and projects to foster better learning process and outcomes. The external examiner mentioned that the course is well structured and students could benefit if drawing can be explored as a form of critical enquiry. Learning outcomes are aligned to SACAP competencies and has achieved parity between male and female students. Teaching is studio based with explicit application of theoretical knowledge acquired in the complementary theory. Assessment is carried out through exams, design projects and dissertation.

Site visits are lacking and slow procurement of educational resources is noted.

Global South Urbanisation (GSU 811S)

This course aims to evaluate the dramatic effects of urbanisation in the Global South; Deepen students understanding of the processes underlying urbanisation (social, cultural, political, economic), beyond spatial design and formal aspects of urban design; Sensitise students to the role of architects and planners in the processes involved in such Urbanisation. Students are involved in field trips. The course has a vertical link and horizontal alignment. Students are expected to implement the theory they learn on design.

Construction Economics and Works Estimation (CEW 811S)

The course applies a blended approach of online lectures and physical lectures, Individual assignments and project excursions. The course content appears to be broad and technical with an expectation of taught understanding and analysis. There is no clear evidence that prior modules have been given tools to analyse this. One assumes this subject matter was covered under other modules.

It is recommended that this course be linked with Building Structures listed under the Technology Cluster. It is the VB's view that it should be introduced earlier at B. Arch level. The External examiner recommends cost analysis of green design principles, sustainable materials, construction methods, etc to be incorporated.

Research Methodology (RMR 811S)

The course is aligned with SACAP competencies. The course is designed to prepare students to conduct applied research and be able to statistically analyse data in order to make appropriate decisions based on research findings. The class is mixed gender and race; however, the lowest performing students are from the PDI group. External assessment is clear and fair. External examiner's are of the view that the course is well structured, and contents are in line with SACAP competencies.

Integrated Construction Technology (ICT 821S)

The course is mainly taught in group work and lectures. Highrise structures and complex foundations come to the fore as the course progresses. Fewer students and high pass rates are observed. However, evidence files could not be opened.

Environmental Design and Technology (EDT 821S)

Lectures are presented as studies and group work. Dated references are also noted. Guest lectures are involved in the courses. Indoor air quality could carry more weighted particularly in response to issues of communicable diseases. The course content matter should be better reflected in the design brief. Validation evidence folder was empty.

Building Law and Contract Management (BLC 821S)

This course aims to provide students with the legal knowledge and skills required in the procurement, administration, and management of a building project. It applies blended learning with emphasis on self-research to support lectures. Offering an effective overview, there is a strong emphasis on the building and tendering contracts and management with absence of adequate focus on professional appointment contracts, professional indemnity, consumer protection and role of the architectural professional in the industry.

A review of the course outline to integrate aspects of Professional Practice Management (PPM 921S) (currently M. Arch suggested to be taught earlier under to B. Arch and/or B. Arch Hon) could benefit students. External examiners concern on documentation quality and accuracy to be noted.

13.3   Master of Architecture (M. Arch)

Integrated Design Studio 1 & 2

IDS 1 & 2 "aims to support students to research and independently identify and resolve built environment problems associated with large-scale, multi-purpose complex building design and

construction in a given rural or urban setting". IDS 2, in the following semester, "aims to enable students to define strategies for spatial intervention at various scales through in-depth analysis of a technological and/or spatial and/or economic and/or social and/or theoretical issue".

Students are expected to choose and define individual projects based on their own research interests. In the second semester the focus is on developing the briefs for thesis design in the following year. It could be argued that a semester is a long time to spend on developing a brief, but it also serves to familiarise students with conceptualisation beyond their own theses by encouraging them to explore context and opportunities for spatial interventions.

Only 4 of 16 of the most recent Masters intake were female. Teaching occurs in a blended mode in the Masters studio on the 3rd floor DAPC building. Assessment is carried out through dissertation and assignments. An issue of short semester was a concern raised and enable better curriculum delivery; a pre COVID-19 academic year timetable to be reinstated.

Advanced Building Construction (ABC 911S)

Advanced Building Construction is described as "a course dedicated to the study of advanced alternative structural systems for vertical and horizontal large-span structures as well as innovative design solutions for the building envelope". Students are required to integrate knowledge into their corresponding Design Studio work. A typical assignment was to develop four alternative structural solutions for a high-rise building consisting of 40 floors. This is a challenging assignment and proportionate to the level of difficulty expected.

Sustainable Materials Lab (SML 911S)

Sustainable Materials Lab is a 10 credit (100 hours) workshop-based course, intended to equip students with an advanced understanding of sustainable construction materials, their impact on the environment and their thermal capabilities. The external moderator noted: "The course is well structured and the submissions for the assignments show an in-depth exploration of materials and construction technology." The focus of the course the analysis and evaluation of construction materials. A review of student projects confirms the moderator's assessment.

Critical Urban Theory (CUT 911S)

This course aims to develop among students a critical understanding of the schools of thought in urban theory and their genealogy". Interesting in this instance is that prescribed reading material ranges from the contemporary favourites to the French philosopher, Lefebvre's, *The production of space*. There is also a student seminar on contemporary writings on African urbanism.

Applied Research Methodology (ARM 921S)

This course focusses on research methodology in architecture and the built environment. Assessment items are assignments on mapping, precedents and analysis techniques, and concludes with a Research Proposal Summary. The latter constitutes half the subject marks. Research methodology is a strictly structured and standardised discipline to ensure the replicability of investigations. For that reason, the subject contents are inevitably similar to research methodology courses everywhere.

The problem here is that a totally objective statement of intent – the research proposal – must inform a Design Thesis which has certain pragmatic elements, but which is also shaped by value judgement, culture and fashion which are patently not scientific considerations. As at other ALSs, students are often intimidated by the language and concepts of research methodology, and often compile their proposals in an unnecessarily complicated manner. Thus, the aim, objectives and research questions are often disparate and opportunistic. Many do not seem to realise that stated research questions must be unambiguously resolved somewhere in the document.

Professional Practice Management (PPM 921S)

The course outline states that "This course aims to equip students with applied knowledge of professional practice with special emphasis on administrative, financial, planning and managerial practices and procedures in the architectural profession and the responsibilities of the architect as Principal Agent". This is an enormously important topic, lectured by Prof Jaco Wasserfall who has extensive private practice experience. It is encouraging that Practice matters is one of the four principal streams, excluding the electives.

It is the VB's view that the course should be introduced earlier at B. Arch level and continued through B.Arch. Hons.

African Urbanism (AUB 921S)

This is a 10-credit elective, the purpose of this subject is to evaluate contemporary African cities "as the material reality of a broad spectrum of interrelated urbanisation processes." The course comprises student-led sessions on theoretical arguments pertaining to the topic on all levels. No course material was presented as evidence. However, the intentions are praiseworthy.

Applied Urban Ecology (AUE 911S)

Each course is introduced to students with a delivery schedule, also known as study or learner guides at some institutions. These are in a standardised template format and explain exactly what is expected from students. Course information include learning outcomes, a time schedule, assessment processes, conditions for a pass, and other informative items. An interesting aspect

is provision for acknowledgement and signing off by the student. All project briefs contain useful guidelines, regarding method and sources of information, as well as detailed rubrics.

Master Design Thesis 1 & 2 (MDT 911S & 921S)

In all architectural programs, the Design Thesis is the culmination of many years of study. According to the outline, The Master Design Thesis "aims to guide students to independently resolve complex-built environment problems through applied research and design to a level of understanding expected for professional architects". In plain terms, with the Design Thesis a student must demonstrate the ability to do an architect's primary job, to design buildings.

Since this is by far the biggest project architectural students would get involved in, and since they have to articulate their own briefs and subsequently, design decisions, many find it daunting. For that reason, the fine-grained time schedule with regular interaction with the study leaders is highly commended.

In spite of a cohesive and well-articulated foundation, the Master Design Projects exhibited nevertheless had some weaknesses. Only cursory attention was paid to sustainability, technical drawings showed no building services, and structural design development was often either unambitious or too simple. Where geometry was more playful the structural design was often naïve. One external examiner opined that the lack of structural development and service articulation may be due to the fact that those students simply ran out of time. He also mentioned that model- building skills could be improved.

All sites were in Windhoek, except one in Walvisbay. With the ALS's concerns for informality, and by implication, the vernacular, it is to be expected that projects deeper into rural regions and possibly internationally would be considered.

Urban integration is a strong point. The ALS's grappling with public/civic and pro-poor buildings and its township agenda is transformational and laudable.

Since it was first offered in 2017, 16 students have graduated with MArch degrees; two in 2019, five in 2020, again two in 2021 and seven in 2022. The ALS admits that "the four cohorts of MArch intake do not yet present a stable demographic picture", meaning postgraduate students are mostly white and male. The demographic profile could improve once this degree is officially recognised.

Dr Philip Lühl, Dr Madelein Stoffberg and Professor Jaco Wasserfall are the design thesis supervisors. It was pointed out that stragglers from the previous intake, and students who joined the MArch after first graduating, sometimes many years ago, require extra assistance. They do not have the design confidence of the stronger students.
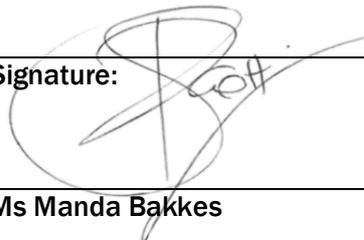
14. Conclusions

Almost three days of hybrid visit by the Visiting Board inspecting the physical infrastructure at NUST. The VB commended the approach and quality of the three programmes including the dedication of the academic teaching staff and the leadership of the ALS. Academic standards including transformation have been upheld while the institution is facing transition in leadership. The VB wishes the Head of School and the ALS the very best in this pursuit of academic success.

15. Acknowledgements

The Visiting Boards wish to thank the following for their time, effort, arrangements, and hospitality:

- Vice-Chancellor & Chairperson: Dr Erold Naomab
- Executive Dean: Prof Harmony Musiyarira
- Head of Department: Dr Phillip Lühl
- The staff, students, alumni, part-time lecturers and external examiners represented at the hybrid visit for making time available and sharing information.

Dr Phillip Lühl	Ms Lula Scott
Date: 24 November 2022	**Date:** 25 November 2022
Signature:	**Signature:**
Mr Lenano Mosime	**Ms Manda Bakkes**
Date: 25 November 2022	Date: 25 NOVEMBER 2022
Signature:	Signature:

16. Annexures

<u>Annexure A: Competencies Used</u>

The competencies are aligned with the identification of work matrix. The matrix is based on the complexity of the project, and the sensitivity of the context and site.

		SITE SENSITIVITY		
		LOW	MEDIUM	HIGH
PROJECT COMPLEXITY	LOW	PrArchDraught		
		PrArchT		
		PrSArchT		
		PrArch		
	MEDIUM	PrArchT		
		PrSArchT		
		PrArch		
	HIGH	PrSArchT		

<u>Annexure B: Curriculum Overview</u>

BARCH (07)	
Course Name	**Course code**
1st year	
Semester 1	
Architectural Design 1 A	ARD 511S
Applied Building Science	ABS 511S
Architecture in Context	ACC 511S
Graphics and Communication	GPC 511S
Semester 2	
Architectural Design 1B	ARD 521S
Construction and Technology	CST 521S
Landscape and Context	LSC 521S
Architectural Drafting	ATD 521S
Vertical Studio 1	VTS 521S
2nd year	
Semester 1	
Architectural Design 2A	ARD 611S

Construction Technology 2	CST 621S
Architecture and Discourse	AAD 611S
Computer Aided Drafting and Visualisation	CAD 611S

Semester 2	
Architectural Design 2B	ARD 621S
Building Structures	BDS 621S
Housing and Everyday Life	HEL 621S
Vertical Studio 2	VSD 521S

3rd year	
Semester 1	
Work Integrated Learning	WIA 711S
Semester 2	
Architectural Design 3	ARD 721S
Principles of Urban Design	PUD 721S
Computer Graphics and Visualisation	CGI 721S
Environment and Services	EAS 621S
Vertical Studio 3	VST 621S

BARCH HON (08)	
4th year	
Semester 1	
Honours Design Project 1	HDP 811S
Global South Urbanism	GSU 811S
Construction Economics and Works Estimation	CEW 811S
Research Methodology	RMR 811S
Semester 2	
Honours Design Project 2	HDP 821S
Integrated Construction Technology	ICT 821S
Environmental Design and Technology	EDT 821S
Building Law and Contract Management	BLC 821S

MARCH (09)	
5th year	
Semester 1	
Integrated Design Studio 1	IDS 911S
Advanced Building Construction	ABC 911S
Sustainable Material Lab	SML 911S
Critical Urban Theory	CUT 911S
Semester 2	
Integrated Design Studio 2	ISD 921S
Applied Research Methodology	ARM 921S
Professional Practice Management	PPM 921S

African Urbanism	AUB 921S
Applied Urban Ecology	AUE 911S
6th year	
Semester 1	
Masters Design Thesis	MDT 911S
Semester 2	
Masters Design Thesis	MDT 921S

Annexure C: Validation Board Schedule

SCHEDULE FOR 2022 NCAQS / SACAP / CAA VALIDATION VISIT

TIME	VENUE	ACTIVITY	PERSON/S INVOLVED
		Only for on-site validation visit.	
		For both on-site and virtual validation visits.	
		DAY ONE MINUS TWO SATURDAY, 24 September 2022	
11:00-12:30	MS TEAMS Link shared	Pre-meeting of the Validation Boards (VB). Detail inAPPENDIX B.	VB
		DAY ONE MONDAY, 26 SEPTEMBER 2022	
07:30		The VB to be collected at accommodation.	VB
08:00 - 08:15	HTTPS Presentation Room 1 (E5/6/041) (6to floor)	Introduction by VB Chairperson of Board members andby the HoD of ALS of staff members.	VB, Head of ALSand academic staff
08:15 - 09:45	HTTPS Presentation Room 1	Presentation 1 (Summative Self-appraisal) by Head ofALS of the ALSs. Requirements in APPENDIX C. Presentation 2 by staff of the ALS of the outline of theacademic programme. Requirements in APPENDIX C.	VB, HoD of ALS and academic staff
09:45 - 10:00	HTTPS Presentation Room 1	Tea break.	
10:00 - 10:30	HTTPS Presentation Room 1	Private meeting with the HoD of the ALS.	VB, HoD of ALS
10:30 - 12:30	Architecture Building *various*	Members of the VB divide their time between inspection of portfolios and other exhibited work.	VB
12:30 - 13:30	Architecture Building Boardroom E/4/1/046Katrin Vaatz E/4/1/037 (first floor)	Working Lunch	VB

13:30 - 17:00	Architecture Building *various*	Members of the VB divide their time between inspection of portfolios and other exhibited work.	VB
	Architecture Building *various*	Visits to workshops, library, studios, computer facilitiesetc., including informal discussions with staff and students.	
17:00 - 18:00	Architecture Building *various*	Opening of Public Exhibition of best student work and informal socializing.	VB and staff
18:00		The VB departs for accommodation.	VB

		DAY TWO TUESDAY, 27 SEPTEMBER 2022	
08:00 - 09:00	Architecture Building Boardroom	The VB reflects on evidence presented and discussesthe format of interviews to follow.	VB
09:00 - 10:00	Architecture Building Open space outside Architecture Building	The VB meets with students and graduates.	VB and students
10:00 - 10:30	Architecture Building Boardroom	Refreshment Break.	
10:30 - 11:30	HTTPS Presentation Room 1	The VB meeting with external examiners.	VB and external examiners
11:45 - 12:45	HTTPS Presentation Room 1	The VB meeting with full-time and part-time staff (without the HoD of ALS unless invited by the VB Chair).	VB and staff without HoD of ALS
12:45 - 13:15	HTTPS Presentation Room 1	Meeting with the Dean.	
13:15 - 14:00	NUST Hotel School	Lunch meeting with the Dean and ALS staff.	VB, Dean, ALS staff
14:00 - 17:00	Architecture Building Boardroom Katrin Vaatz	Private meeting of the VB to agree on general findingsand report content. The VB drafts statement and outline report.	VB
17:00		Depart for accommodation.	VB
		DAY THREE WEDNESDAY, 28 SEPTEMBER 2022	

08:00 - 11:45	Architecture Building Boardroom Katrin Vaatz	The VB works on the verbal validation statement and draft written validation interim report. VB prepares formeeting with senior management.	VB
12:00 - 13:00	HTTPS Presentation Room 1	The VB meets with VC, DVC, Dean and Deputy Dean toconvey findings and hand over statement.	VB, VC, DVC, Dean and Deputy Dean
13:00 - 14:00	NUST Hotel School	Lunch.	VB
14:00 - 14:30	Architecture Building Open space	VC to convey findings to ALS (students and staff)	VC, DVC, Dean, students andstaff and VB
14:30 -		Depending on the VB members' travelling arrangements.	VB

Annexure D: Validation Board Members

CAA Validation Panel		
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Canberra Accord