

City Centre Sustainable Housing Design Competition

Brief Revision A 2023-07-25



Sponsored by: the National Home Builders Registration Council (NHBRC) (event and prizes sponsor) and Boogertman and Partners (B+P) (printing sponsor).

Hosted by: the University of Pretoria, Department of Architecture.

Background

This proposal is initiated by the International Council for Research and Innovation in Building and Construction (CIB) Working Commissions in Architectural Design and Management (W096), Smart and Sustainable Built Environments (W116), and Construction in Developing Countries (W107), and the Future of the City Centre Network. With support from the University of Pretoria, and Nelson Mandela University.

Context

Africa is projected to have the fastest urban growth rate in the world. By 2050, Africa's cities will be home to an additional 950 million people¹. Municipalities are struggling to keep pace with this growth leading to housing backlogs and informal settlements. In South Africa, the backlog is estimated to be over 2.2 million housing units². At the same time, city centres in many African cities have been neglected and are rundown as corporate and government offices move to suburban locations. As

¹ Oecd.org, (2023). Africa's Urbanisation Dynamics 2020: Africapolis, Mapping a New Urban Geography | en | OECD [ONLINE] Available at: <https://www.oecd.org/development/africa-s-urbanisation-dynamics-2020-b6bccb81-en.htm#:~:text=Africa%20is%20projected%20to%20have,it%20also%20poses%20significant%20challenges>

² By Querida Saal, (2023). Silence on far-reaching changes in housing delivery during SONA | GroundUp [ONLINE] Available at: <https://www.groundup.org.za/article/ramaphosa-silent-on-far-reaching-changes-in-housing-delivery-during-sona/> [Accessed 19/5/2023].

well as challenges, city centres provide opportunities for housing by enabling access to economic opportunities, social infrastructure, and public transport.

Brief

Given housing backlogs and the opportunities found in city centres, there is a need to develop new models for sustainable housing in African cities. This competition is an opportunity to explore, develop and present ideas for sustainable housing in the city centre of Pretoria in the city of Tshwane³. No ideas or submissions will be discounted. Teams can determine the number, arrangement, size, and type of sustainable housing. The objective is to create a community. This can involve home working and places for employment, such as workshops. External space is important. It should be defined and safe. It could include play spaces, leisure, and horticulture. Important aspects will be environmental, economic, and social sustainability, as well as diversity and inclusion.

Site

The site is located at the eastern boundary of Pretoria city centre and is defined by Johannes Ramokhoase Street (north) Ockerse Street (east) Madiba Street (south) and Nelson Mandela Drive (west) with a water course, the Apies River, crossing it. All existing buildings on the site such as the Kanuga Auto Parts and Skill Centre building can be re-used or demolished. The site is situated between Church Square and the Union Buildings. The Tshwane University of Technology Arcadia Campus is across the junction at the southwest corner. Within walking distance, there are work and self-employment opportunities, schools, clinics, and recreation facilities.

- Site coordinates for Google Earth are latitude: -25.7431001 and longitude: 28.2004208
- Site photos can be accessed at: https://drive.google.com/drive/folders/18-zZCF26lfy5otzF_1CCyXwhpTxdAgLf?usp=sharing
- Site drone video file can be accessed at: https://drive.google.com/drive/folders/1na6mLfRl1f0of--tRTy0C7Gz_r3kFwjH?usp=sharing

³ Rwelamila, P.D. (2023). 'Pretoria-Tshwane, South Africa'. In B. Giddings and R. Rogerson (eds.). *Future of the City Centre*. London: Routledge, 83-99. doi: <https://doi.org/10.4324/9781003141198-8>

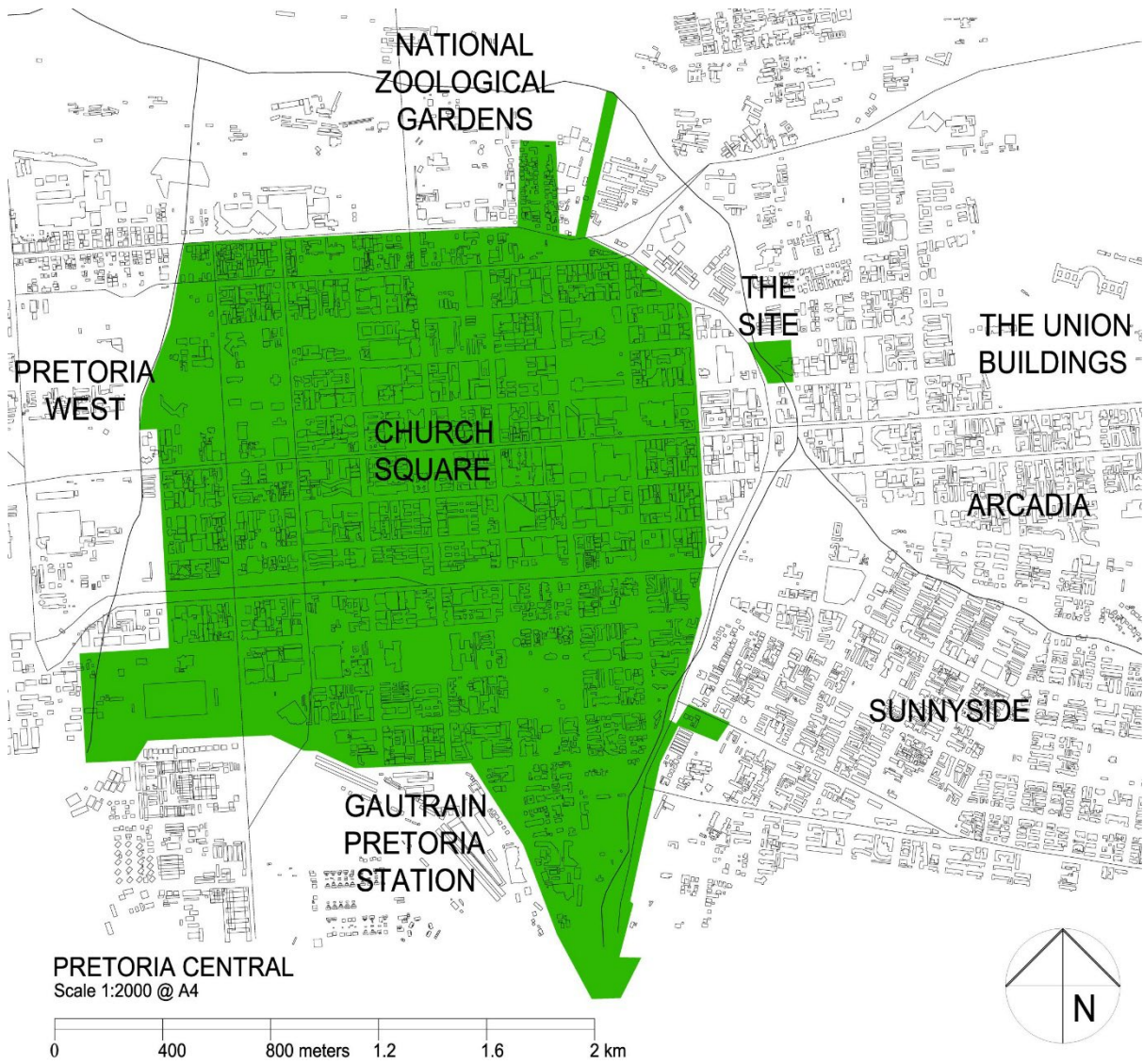


Figure 1: Pretoria Central with Site



Figure 2: Pretoria Locality Plan with Site

Competitors

The competition is open to teams of third-year students at the following architectural learning sites:

- Cape Peninsula University of Technology - Architectural Technology and Interior Design
- Durban University of Technology - Department of Architecture
- Nelson Mandela University - School of Architecture
- Tshwane University of Technology - Department of Architecture and Industrial Design
- University of Cape Town - the School of Architecture Planning and Geomatics
- University of Johannesburg - Architecture
- University of KwaZulu-Natal - Architecture, Planning & Housing
- University of Pretoria - Department of Architecture
- University of the Free State - Department of Architecture
- University of the Witwatersrand - School of Architecture and Planning.

Teams must consist of 1 to 6 members. The team can include members who are students from other disciplines to provide specific expertise.

Evaluation criteria

The following evaluation criteria will be used to judge the competition. How well do the proposals:

- Explore environmental sustainability
- Support economic sustainability
- Value social sustainability
- Assist diversity and inclusion within the population
- Promote innovative building technologies and indigenous materials
- Respond to the site opportunities and challenges
- Enhance the lives of residents and neighbours.

Judges

The panel of judges will consist of representatives from the following organisations:

- Council for Scientific and Industrial Research (CSIR)
- National Home Builders Registration Council (NHBRC)
- National Department of Human Settlements (DHS)
- Pretoria Institute of Architects (PIA)
- International Council for Research and Innovation in Building (CIB)
- Boogertman and Partners (B+P).

Submissions

Submission should be made by sending 1 no. A1 (594 x 841 mm) size page in portrait orientation, which presents and explains the proposal of each team. The A1 sheet should include plans, sections, elevations, and three-dimensional representations; as well as diagrams and limited text that explain the approach and solutions. A table should be provided on the sheet to include details such as:

- Number of housing units, type, and size. For example: '6 no. 2 bed units, 70m² each' and so on.
- Other uses, people employed, and size. For example: '1 no. craft workshop, 5 people, 20m²' and so on.
- Performance of proposed systems (such as energy, water, food, etc) in response to the site, the needs of the occupants, and the context.

Submission Requirements

Submit 1 no. A1 (594 x 841 mm) size page in .pdf file format per team. The file name must be labelled, in the bottom right hand corner of the page, with the three digit number allocated to the submission. For example "135" in 16 size text. Each architectural learning site will be provided with 20 three digit reference numbers. Please ensure that there are no identifiers such as names or university information on your sheet. All entries must be anonymous. Your submission should be accompanied by the names of team members and the name of the university.

Email or we transfer the file to: CIBCityCentreSustainableDesign@gmail.com by no later than 23h59 on the 16th of October 2023.

No submissions will be accepted after this date. We recommend that you submit early to avoid any technical issues. An acknowledgement of receipt email will be sent with the reference number to the team members listed under that number.

Copyright of submissions:

The organisers reserve the right to use any submitted material for non-profit making promotions, and publications in academic journals and at academic conferences. The participants of the competition submissions will be credited in all cases.

Prizes

| Overall Scheme | <i>South African Rands (ZAR)</i> |
|------------------------------|----------------------------------|
| First Prize | 10 000-00 |
| Second Prize | 7 500-00 |
| Third Prize | 5 000-00 |
| Sustainability Prizes | |
| Environmental | 7 500-00 |

| | |
|---|----------|
| Economic | 7 500-00 |
| Social | 7 500-00 |
| Sponsors Prize | |
| Innovative Building Technologies and Indigenous Materials | 8 000-00 |

Important dates: Judging, Exhibition and Prize-giving

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|---------------------|---|
| Judging | Thursday the 26 th of October |
| Exhibition | Friday the 27 th of October from 10.00 |
| Prize-giving | Friday the 27 th of October from 16.00 |

The competition will be hosted by the University of Pretoria, Department of Architecture.

- Address: Building Science, Hatfield Campus, Lynnwood Road
- Building Science atrium: Welcome, refreshments, prize-giving
- Studio 4 West: Judging and exhibition.

The event is strictly RSVP before Tuesday the 24th of October.

Workshops

To support the competition, there will be four workshops. These can be accessed online and will consist of presentations and discussions for one to two hours on Wednesday afternoons in August.

| | |
|--|---|
| <p>Workshop one Date: Wednesday the 2nd of August Time: 16.00 - 18.00</p> | <ul style="list-style-type: none"> • Aims of the Competition • Future of the City Centre and Plans for Pretoria • The Site and Its Context |
| <p>Workshop two Date: Wednesday the 16th of August Time: 16.00 - 18.00</p> | <ul style="list-style-type: none"> • Affordable Housing - Development and Delivery • Design of Housing • Co-working and Co-living |
| <p>Workshop three Date: Wednesday the 23rd of August Time: 16.00 - 18.00</p> | <ul style="list-style-type: none"> • Environmental Sustainability • Economic Sustainability • Social Sustainability. |
| <p>Workshop four Date: Wednesday the 30th of August Time: 16.00 - 18.00</p> | <ul style="list-style-type: none"> • The Use of External Space • Innovative and Sustainable Building Technologies • Indigenous Materials. |