
UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

introduction/ brief

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Real world problem and background

Currently, the University of Pretoria stands as a gated community within the Hatfield precinct. The rise in fuel prices and living costs in South Africa demands a renewed emphasis on the development of public transport within Pretoria. The Hatfield precinct has been identified as one of six development cores in terms of the Tshwane Metropolitan Spatial Development Framework (MSDF). It will also act as host to one of the three Gautrain Rapid Rail Link stations in Tshwane. Current and future developmental forecasts for the area foresee large-scale social and economical change within the area. The aim of the MSDF is to integrate certain parts of the university with Hatfield, allowing certain functions of the university to become transparent to the public and to invite participation. The botanical garden at the university is located on its Northwestern boundary, adjacent to a proposed green route extending along University Road and connecting Magnolia Dell public park with the Hatfield Central Business District (CBD).

Conservation, education, research and community service – these are the intentions and rewards of a successful botanical garden. The University of Pretoria has had the privilege to sustain its own botanical garden, or the Manie van der Schijff Botanical Garden as it was named in 1986, since 1924. Located in the western area of the campus grounds, it currently contains more than 3000 plant species in an area of more than 3,5 hectares.

The garden is run under the auspices of the Department of Botany and is mainly used as a research facility for its students.

Possible client and requirements

For the type of project proposed by this thesis, the possibility exists that a consortium of three parties could make up the client. Firstly, the University of Pretoria, as it controls all developments on campus and approves all new initiatives according to an agreed Integrated Spatial Development Framework (ISDF) for the campus. Key decision makers on the university team may consist of horticulturists involved in the Department of Plant Science, the caretaker of the botanical garden, and Technical Services. Secondly, due to the possibility that the project might extend onto municipal property, the City of Tshwane Metropolitan Municipality and the Department of Public Works will also have to be included in the decision making process. And thirdly, the Gautrain Development Board will also have to form part of the trio due to the site's close proximity to the Gautrain Rapid Rail Link.

For the purposes of this master's dissertation, a study area within and around the university premises was established by the class group of 2008. This area deals with various aspects of possible future developments, with specific areas chosen for intervention. An overall vision was determined to, over time, partially integrate the University of Pretoria with the Hatfield precinct to form a "University City". Where the botanical garden is concerned, neither the City of Tshwane nor the Gautrain Development Board has proposed for this specific site to be integrally developed within the Hatfield precinct. Therefore, the Department of Plant Science provides the only known immediate requirements for this specific terrain within the botanical garden. In a recent discussion with Mrs. Lorraine Middleton (caretaker and researcher at the botanical garden) a list of desirables and current activities was communicated:

- **Access**: Access to the garden is limited and is of such a nature that many people are not aware of it.
- **Research**: The garden serves mainly research and educational purposes for students studying botany, plant science and agriculture. It also conducts research in plants with medicinal value (Wetsren medicine and etno-botany) and houses a herbal garden used by the students of the Department of Consumer Science.
- **The glass house**: The site contains a temperature controlled glass house constructed in 1989. It is mainly used for research and the germination of different plant species. The facility was mainly developed in accordance with a Eurocentric approach and therefore the current technologies are already outdated and not suitable for the Pretoria climate. A large portion of the glass house is also shaded which reduces its capacity for certain tests to be conducted.
- Further development of **themed gardens**: The garden sprawls over a wide area along the whole western region of the campus.
- A wide variety of **protected trees** that attracts an array of birds and butterflies
- A **commemorative garden** with plaques to honor people who have had a significant influence in the development of the garden
- A **monocot garden**
- A complete collection of **Cycads**
- A s**ucculent** garden

Goal and objective:

The aim of the proposed project is to invent a platform for the integration and understanding of an already established ecosystem of organisms and plants on a historical site. The artificial human structures must be able to germinate from the earth like the plants that surround them and be in unison with their social context. Human processes in these structures, like movement, education, research, social gathering and learning, must be juxtaposed with the natural processes of the garden, but must simultaneously be able to draw from the intelligence it embeds and the metaphysical characteristics that the garden imposes.

Sub problems:

- How will this structure address the available technologies and paradigms contained in it?
- Does this facility need to address the issue of sustainability?
- How will the structure respond to its physical, economic and social context and be relevant towards it?
- How will this building respond to the historically significant buildings surrounding it, and the site on which it stands?
- How can access to the terrain be improved and what decisions concerning pedestrian and vehicular access should be made?
- Will the public become integrated with this facility and if so, to what extent?

Assumptions and delimiters:

This study accepts various proposals that were made by third parties and governmental organizations concerning the future prospects of the Hatfield precinct.

Although the study investigates various aspects such as theories on consciousness, the physiological working and composition of plants, and theories on intuition, it has to be understood that all of these are just laying the foundation of an informed design approach for an architectural dissertation.