

Sustainable Campus: Towards a Model for the University of Pretoria

Neal E Dunstan
Resident Landscape Architect
Department of Facilities Management
University of Pretoria

Introduction

“We must put the 21st century city in nature rather than put nature in the city. To put a city in nature will mean using engineered systems that function as those in nature and deriving form from them.”

- Diana Balmori from ‘A Landscape Manifesto’



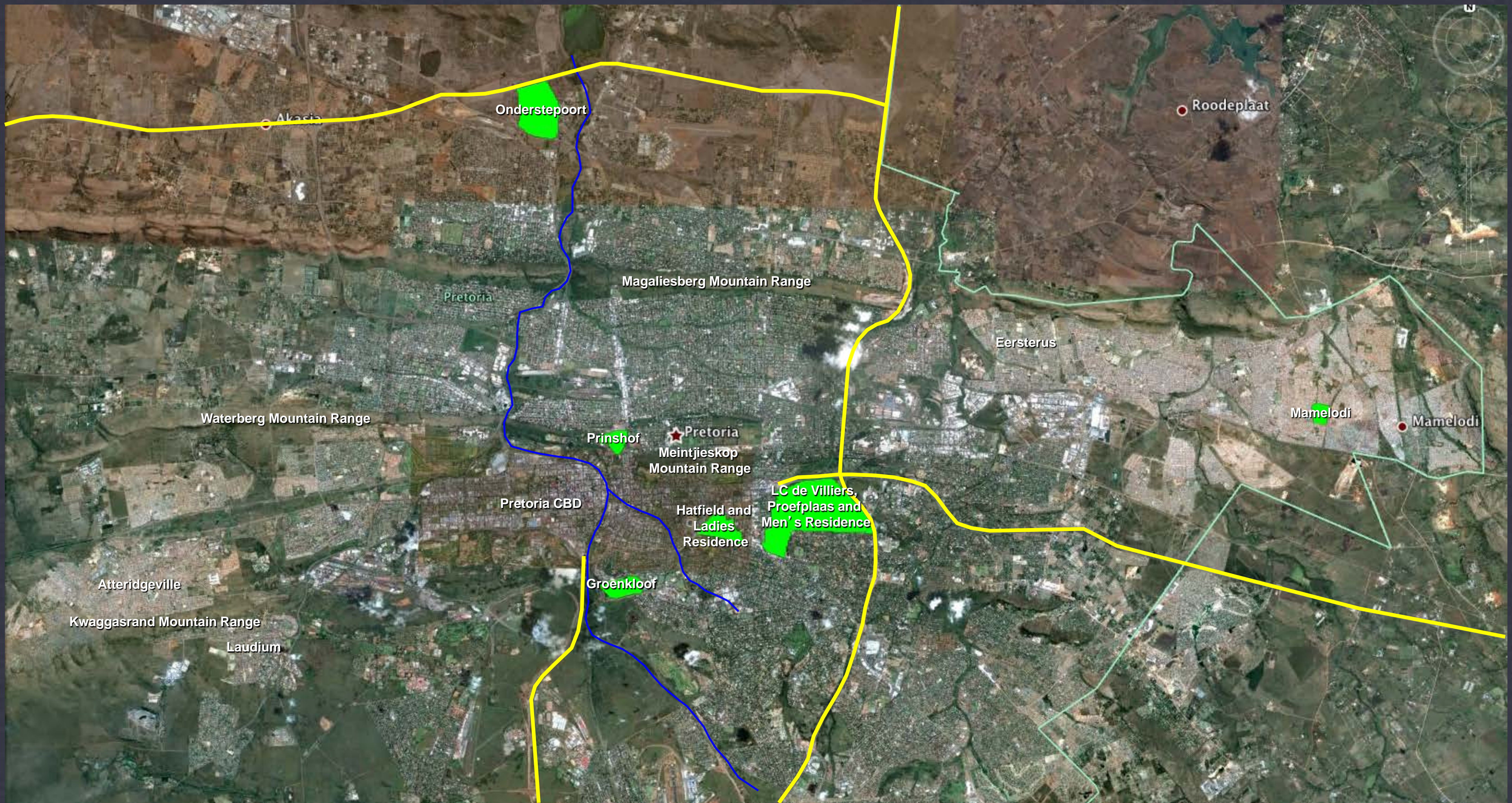
national context

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regional context

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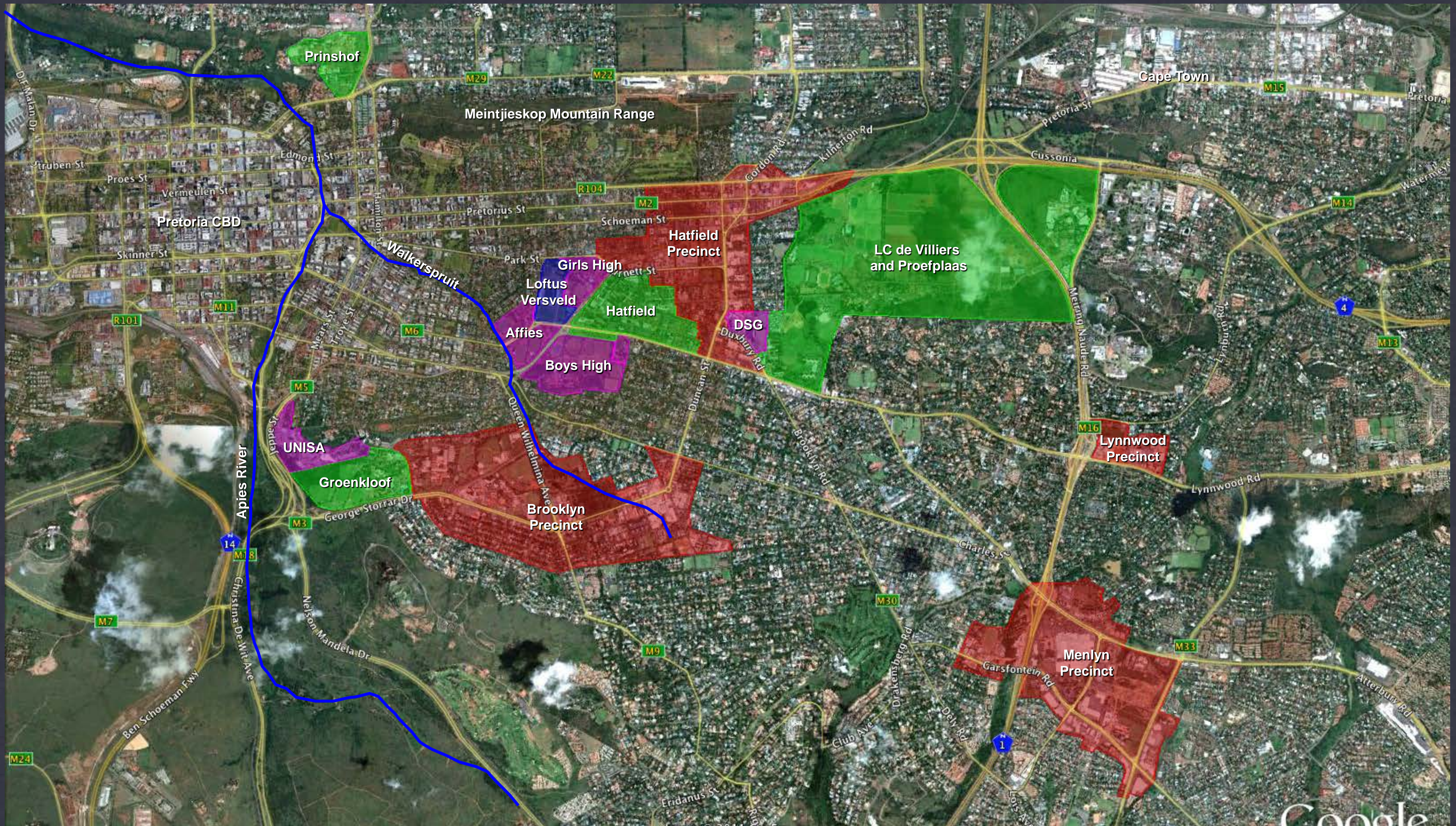


university of pretoria campuses

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Quick Facts

- * Founded in 1908
- * 6 campuses; 27 residences; 9 faculties and a business school; 140 departments and 85 centres, institutes and bureaus;
- * Afrikaans and English lecturing languages (communication also in Sepedi)
- * 42 000 plus FTE resident students; 44% white, 56% black
- * ±330ha in total area



local context

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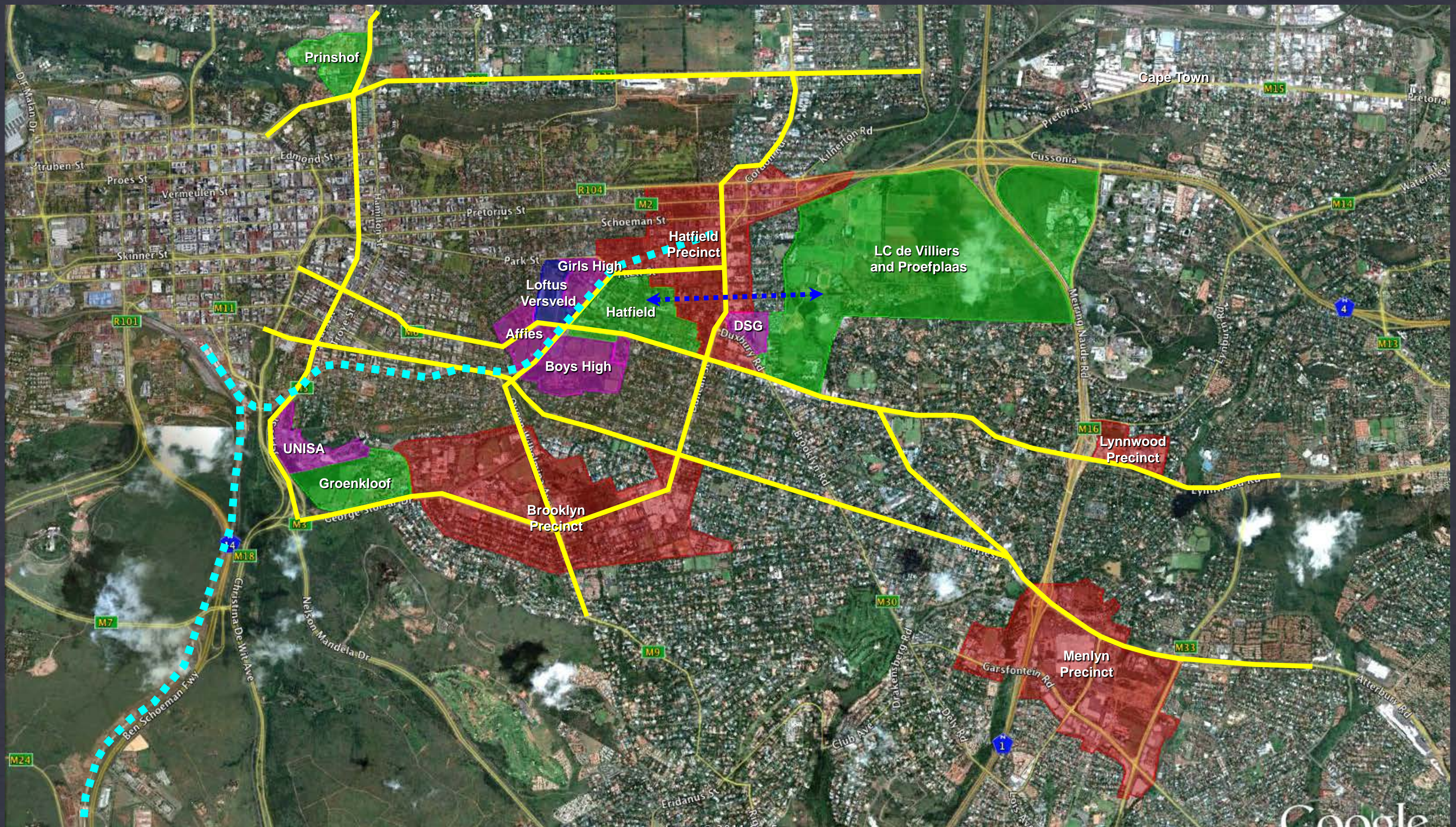
Challenges

- ✿ 2025 vision - draft

“To become a leading research intensive university on the African continent, recognised globally for its excellent quality as a thriving, sustainable, large residential university, whose relevance flows from positioning its comprehensive range of undergraduate and postgraduate programmes within local and global imperatives, while fully harnessing the diversity of its students, staff, teaching and research aims and potential.” (University of Pretoria: Planning Steering Committee. Consolidated Report: Developing UP’s Strategic Plan 2025. February 2011

Challenges

- * funding - state funding being reduced
- * external development pressures and expansion
- * resources, expertise, time, paradigm shift and perception
- * restructuring of department to focus on sustainability without increasing head count
- * co-operation with local and regional authorities; NGO's
- * collaboration



challenges

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Opportunities

- * new post and pioneering role for a South Africa university
- * alignment with 2025 Vision
- * African solutions to African issues
- * resolving numerous issues within the complex structures
- * campus qualities and diversity; cultural and historical diversity
- * creation of a living research model

Current Projects

- * 2025 Vision
- * urban design framework (local practice) and campus master planning (international-local practice)
- * water usage conservation
- * Hartbeesspruit stormwater project
- * waste management plan and pilot recycling project

Current Projects

- * biogas digestors and composting project
- * bus routes, Gautrain, BRT and park-and-ride programme
- * indigenous planting, drip irrigation and maintenance SLA's
- * architecture and landscape architecture audit and database software development

Current Projects

- * green building:
 - * motion detection lighting and conversion to efficient lighting
 - * green walls
 - * solar heated swimming pool and hot water in new residences
 - * vacuum pack toilet systems being investigated
 - * centralised campus cooling
 - * power factor correction capacitors

Proposed Projects

- * botanical garden campus and sustainable site principles
- * comprehensive landscape assessment - draft
- * landscape survey and audit
- * master planning for all campuses
- * buildings materials, landscape & planting palette guidelines
- * stormwater harvesting

Proposed Projects Continued

- * green roof research - awaiting approval
- * alternative energies
- * sustainable sites principles applied in maintenance contract
- * test site and user feedback - under investigation
- * marketing and education

Sustainable Campus

- * landscape architecture post research
- * phase 1: masters degree in landscape architecture
 - * formulate a model for the university
- * phase 2: doctorate degree in landscape architecture
 - * implementation of the model on the university's main campus

Sustainable Indicators

- * transportation systems
- * water resources
- * waste and recycling
- * 'green' buildings/sustainable materials/carbon emissions
- * alternative energies
- * biodiversity/botanical garden

Thank You

Neal E Dunstan

BL (Pret) PrLArch MSACLAP

Landscape Architect

Department of Facilities Management

University of Pretoria

neal.dunstan@up.ac.za