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WELCOME TO DAY 2 OF THE PLANNING INDABA

12 MARCH 2025

We appreciate your participation and look forward to
your valuable contributions.

Urban
Planning
& Design
Department

2025
Planning
Indaba &
Exhibition

Making progress possible. **Together.**

LUNCH BREAK

12H30 – 13H15



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SESSION 6:

THEMATIC SESSION PART B



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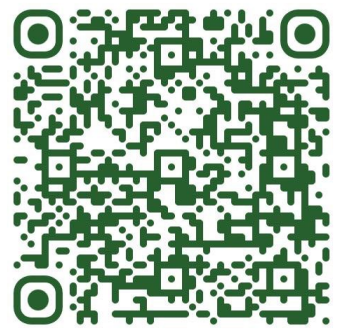
SESSION 6: THEMATIC SESSION PART B

SESSION 5	OPENING	LEAD
13h15 – 13h35	Infrastructure Head: Infrastructure and Planning City of Cape Town	Dr. Katherine Hyman
13h35 – 14h00	Inputs from plenary	All
14h00 – 14h20	Environment Director: Environmental Resource Management City of Cape Town	Lorraine Gerrans
14h20 – 14h45	Inputs from plenary	All
14h45 – 15h15	Summary of the outcomes for the 2 days	Nishendra Moodley Anna du Plessis
15h15 – 16h00	SESSION 6: Summary of the outcomes for the 2 days and Way Forward	Erika Naude
16:00	Close Day 2	

PRESENTATION 5:

INFRASTRUCTURE

DR. KATHERINE HYMAN (CCT)



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ONCE ON LANDING PAGE SCROLL DOWN TO THE COMMENTS SESSION



Submit your comments

Provide your input, comments or suggestions for the:

- [Three growth estimate presentations](#)
- [Six core thematic areas](#)

You are welcome to email your written comments related to the Planning Indaba to Future.CapeTown@capetown.gov.za.



PLEASE NOTE

The closing date for written comments is **Friday, 28 March 2025**.



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An aerial photograph of Cape Town, South Africa. In the foreground, a multi-lane highway curves through the landscape. To the right, a large, modern stadium with a distinctive white, ribbed, dome-like roof is visible. Behind the stadium, a dense residential area with numerous white buildings is situated on a hillside. The background is dominated by large, green, rolling hills under a clear sky. A semi-transparent green banner with white text is overlaid across the middle of the image.

How does infrastructure enable the spatial vision in Cape Town?

Infrastructure and the Spatial Vision

What is long-term infrastructure planning in the CCT context?

Strategic development and maintenance of infrastructure and services to support urban growth, economic development, and resilience.

Why long-term infrastructure planning matters to the CCT?

Ability to address increasing population demands, improve service delivery, mitigate climate change impacts, and economic growth while limiting infrastructure failures in the context of resource constraints.

Why is it crucial for Cape Town?

Creates certainty that our infrastructure pipeline is sufficient to meet demand by implementing the right projects, in the right place, at the right time.



How should infrastructure planning be carried out to enable the City of Hope?

Menti Meter Q



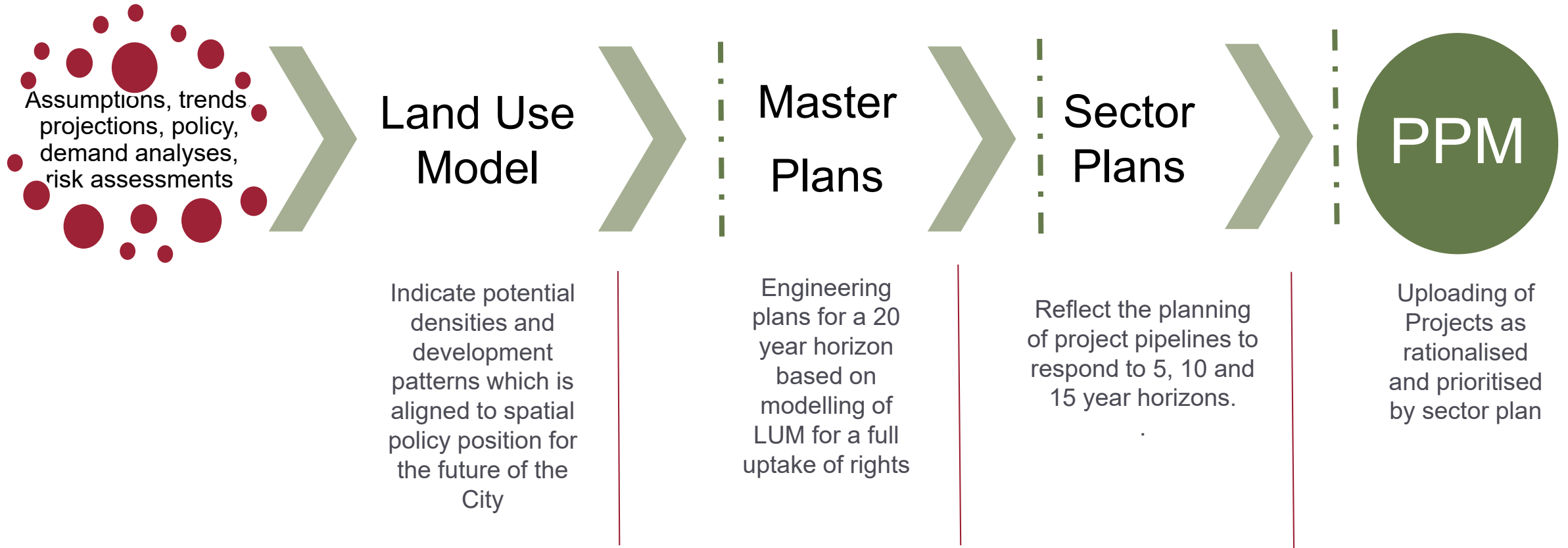
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The City is driving integrated infrastructure planning system

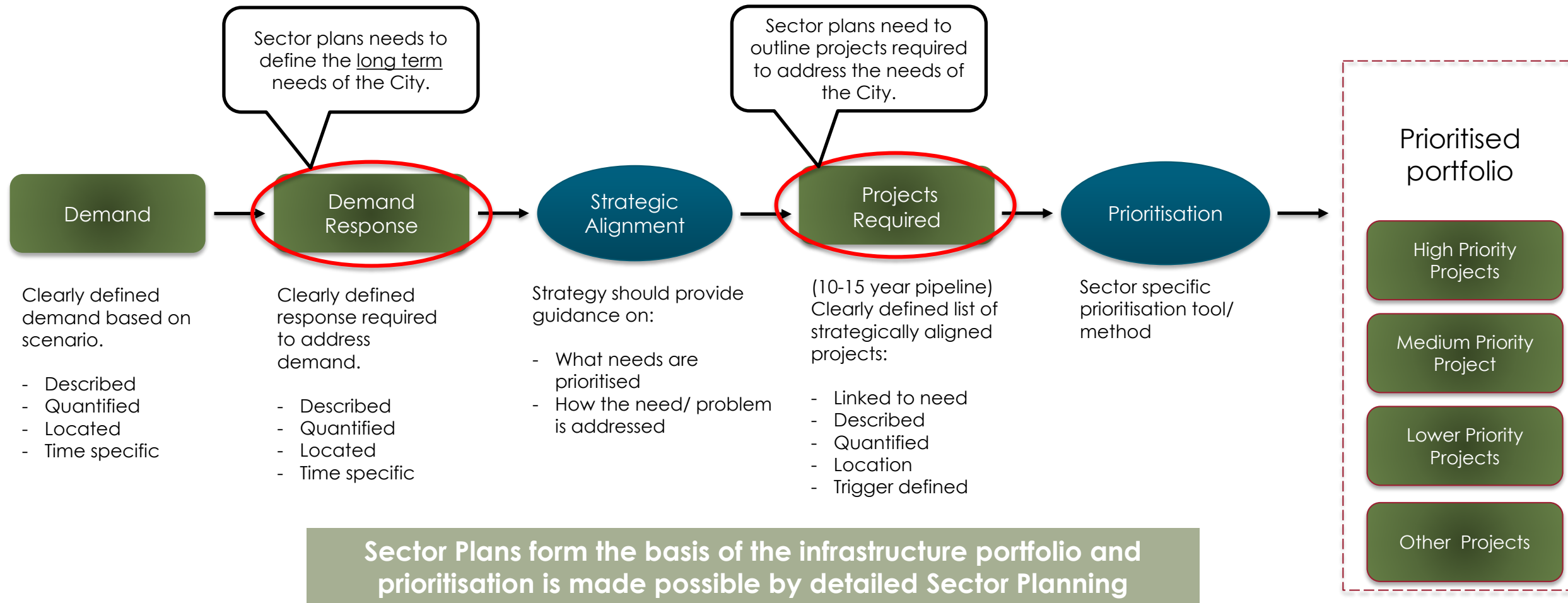


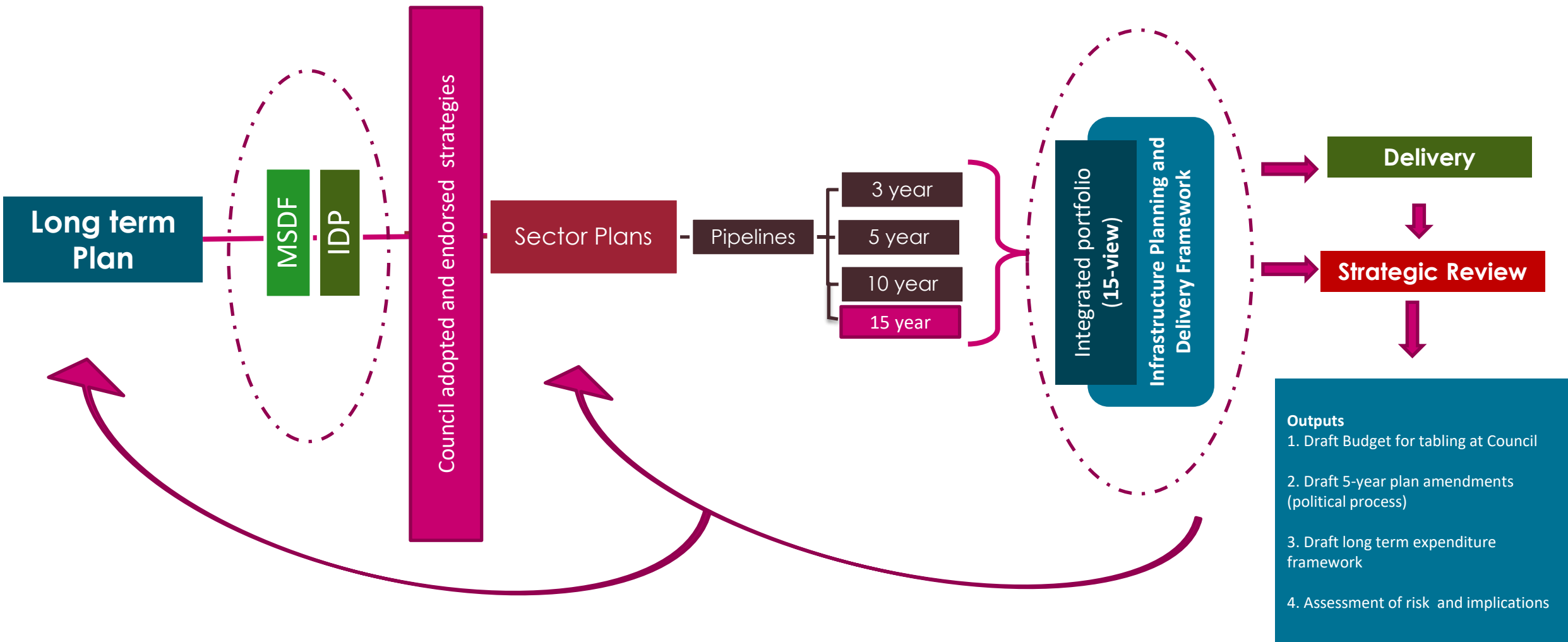
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City's Capital Investment Planning System



Sector Planning Process





Why does theory not always translate into practice?

Infrastructure Complexities and the City Response



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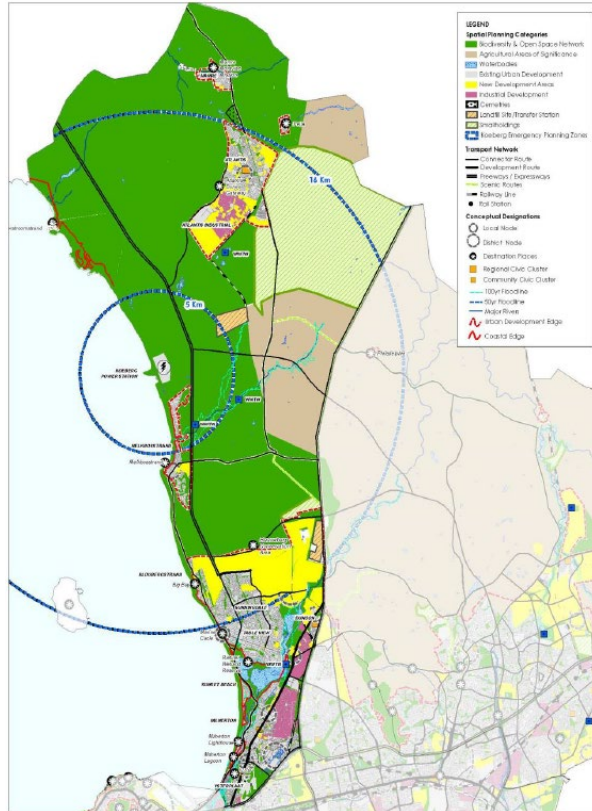
Competing demands disrupt ideal planning

Response in context of resource constraints



Competing pressures means the City needs to make tough choices

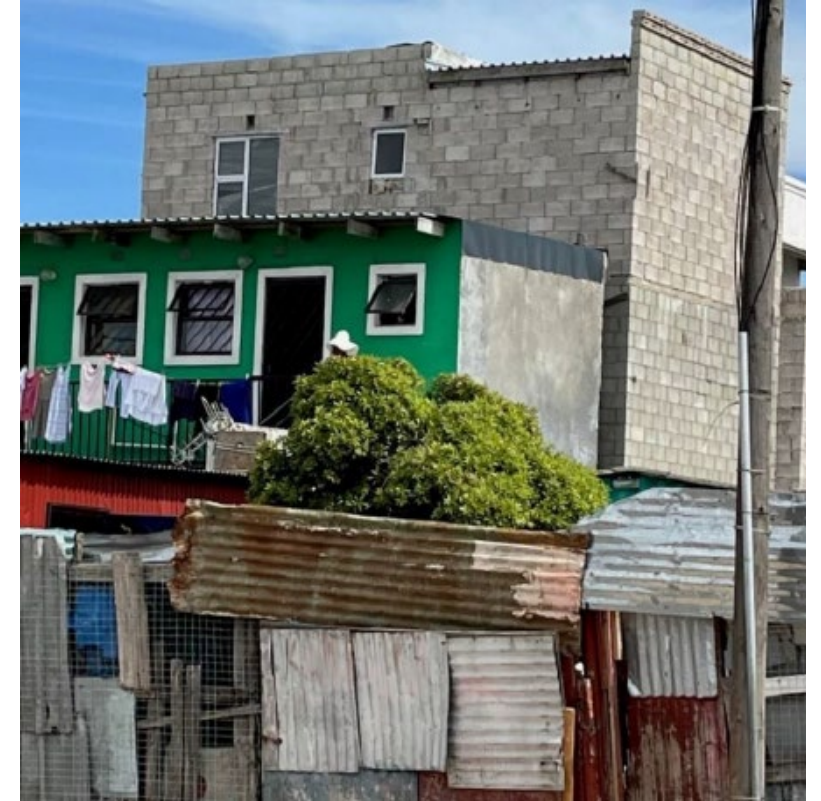
Planned for Demand



Disrupted Demand



Unanticipated Demand



Understanding competing pressures

The Infrastructure Report



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Infrastructure Report

- **Focus:** City's bulk infrastructure across five sectors: Energy, Urban Waste Management, Water and Sanitation, Human Settlements and Urban Mobility.
- **Aim:** provide update on bulk infrastructure pipeline:
 - Tracking identified critical projects.
 - Identify significant new developments or risk areas in City's bulk infrastructure pipeline.
 - Resolving key challenges in City's bulk infrastructure sectors

Provides insight into the level of portfolio preparation temporally and, evidence for strategic choice and decision making

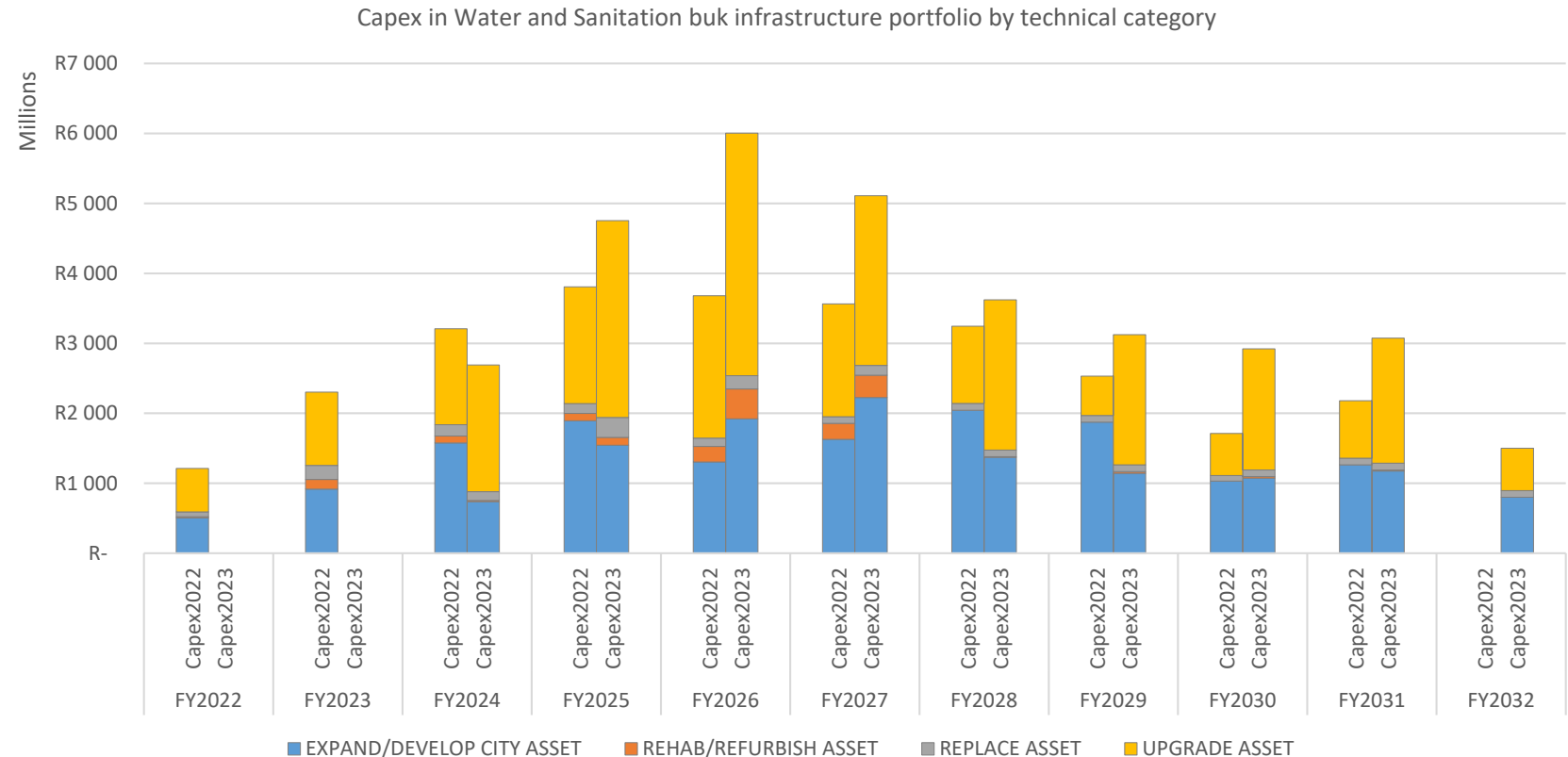


INFRASTRUCTURE REPORT

Making progress possible. Together.

Water and Sanitation

- **Significant increase** in planned capital expenditure driven by **increased pipe replacement** and **pump station-related projects** aimed at reducing frequency, duration and impact of sewer spills.
- Following trends remained fairly consistent from last year:
 - Capital expenditure grows **consistently to 2026**, dropping annually thereafter.
 - Majority of capital commitments relate to **new and upgrade** capital projects.
 - **Bulk Water** capital projects account for **majority of capital commitments** followed by Sanitation.



Bulk Water

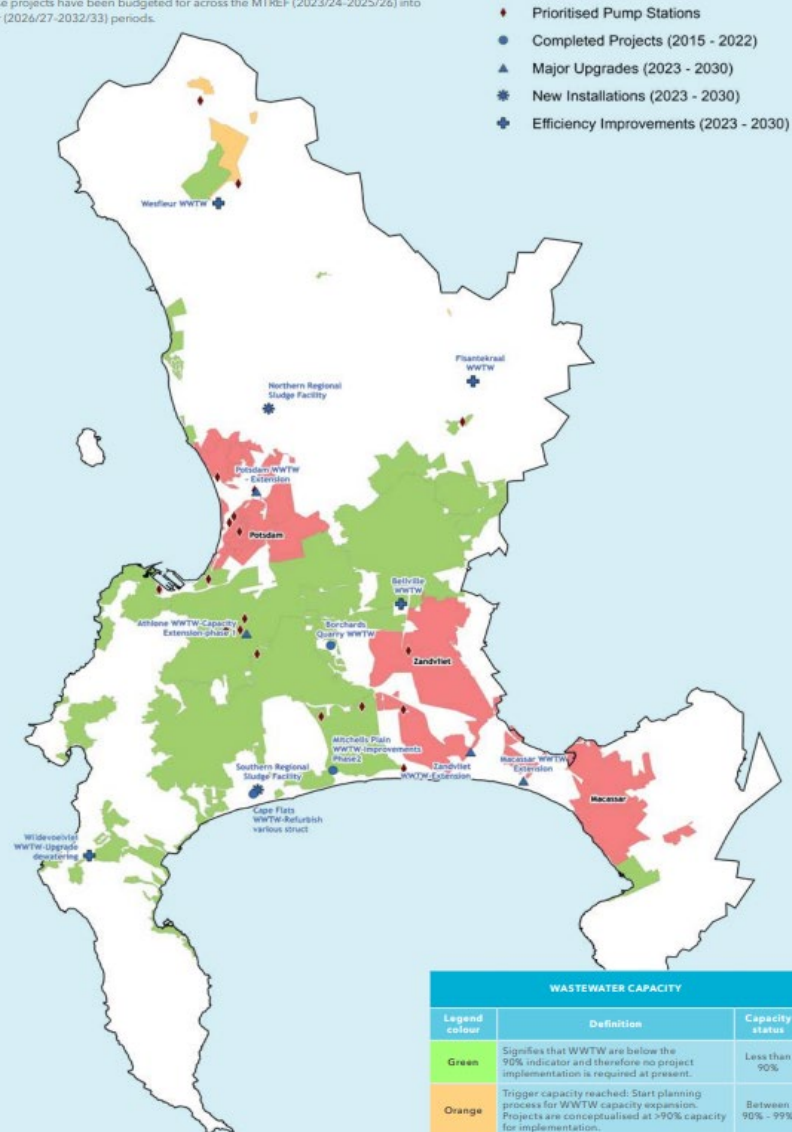
- Due to budget constraints and tariff affordability concerns, **current priority is waste water to address wastewater treatment backlogs** which are currently impacting on development (e.g. Potsdam).
- Bulk Water is currently **reviewing demand** and is **reprioritising projects** to address areas of greatest need and highest demand first.
- The first **desalination** plant phase 1 (70ML/d) **remains on track** to be completed in 2030.
- Since the 2022 report, both the **Spes Bona** and **Contermanskloof** reservoirs have been **completed**.
- The Steenbras Reservoir infrastructure is also currently **undergoing a re-evaluation** process which has prompted new, further infrastructure interventions for both the Helderberg Scheme and Steenbras Reservoir.



Completed Contermanskloof reservoir

Wastewater Capacity and Capital Projects

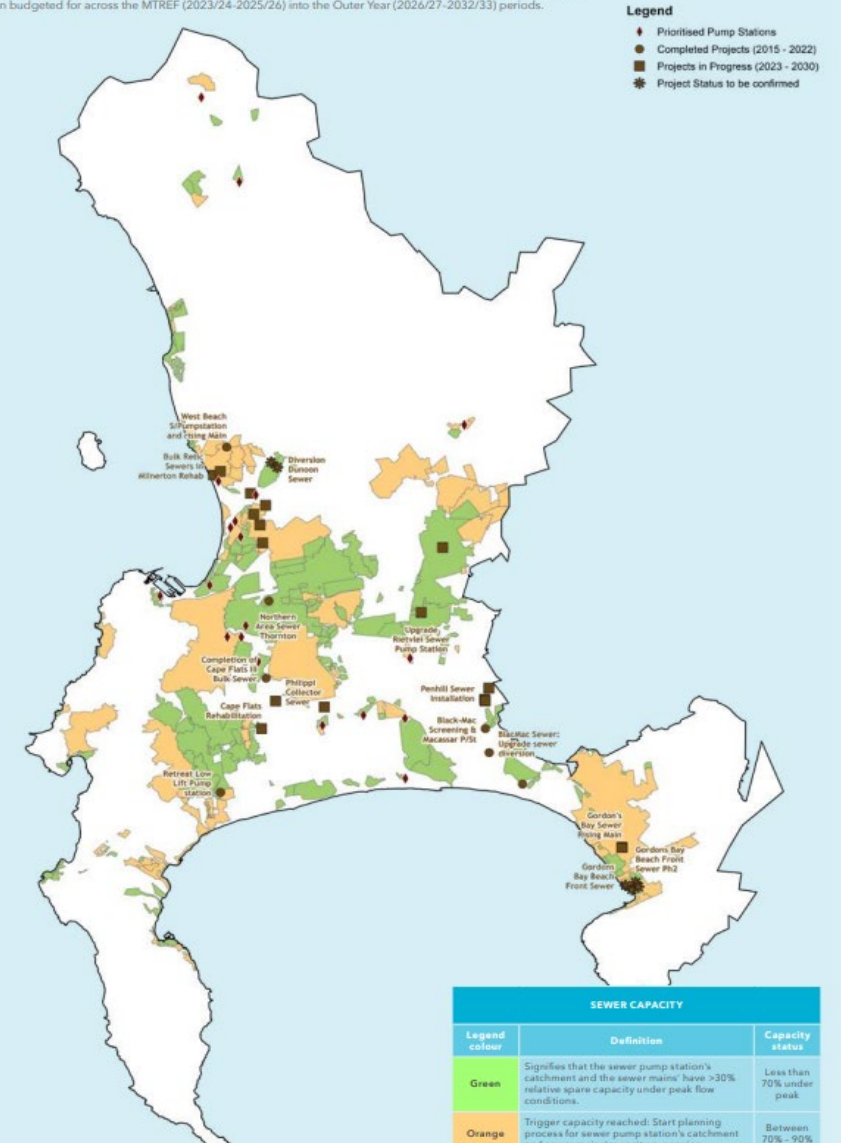
Water & Sanitation infrastructure generally have a project lifecycle of between 7-10 years and therefore, these projects have been budgeted for across the MTREF (2023/24-2025/26) into the Outer Year (2026/27-2032/33) periods.



Source: Water & Sanitation Department - Wastewater Capacity (May 2023).
Critical Infrastructure Projects (SAP PPM).

Sewer Capacity and Capital Projects

Water & Sanitation infrastructure generally have a project lifecycle of between 7-10 years and therefore, these projects have been budgeted for across the MTREF (2023/24-2025/26) into the Outer Year (2026/27-2032/33) periods.



Source: Water & Sanitation Department - Sewer Capacity (2018).
Critical Infrastructure Projects (SAP PPM).

Stormwater

- The 2023 report provides detailed information on **known stormwater backlogs** and current plans to address them. This is a new addition since the first report
- However, stormwater master planning is still a **significant gap** and remains a **critical priority** for the City.



Responding to Disruptions

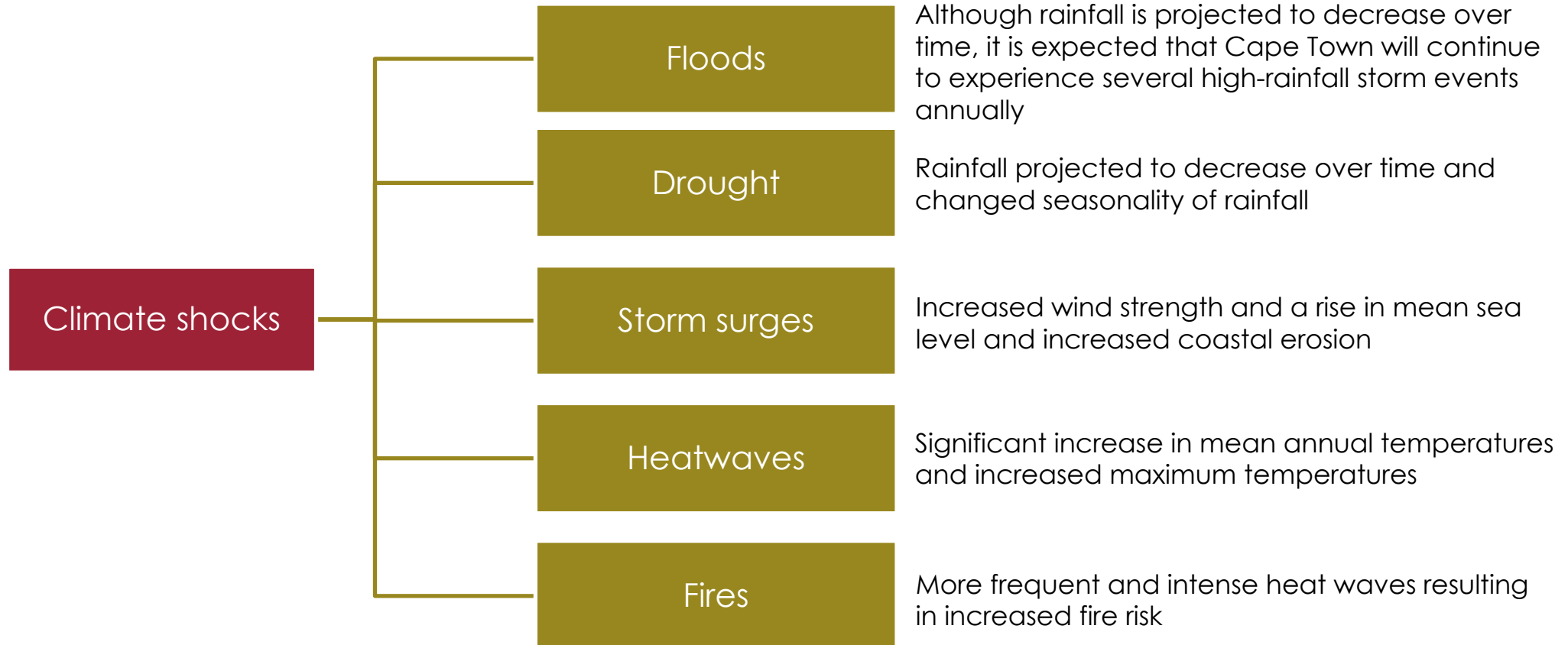
Infrastructure Planning for Climate Change



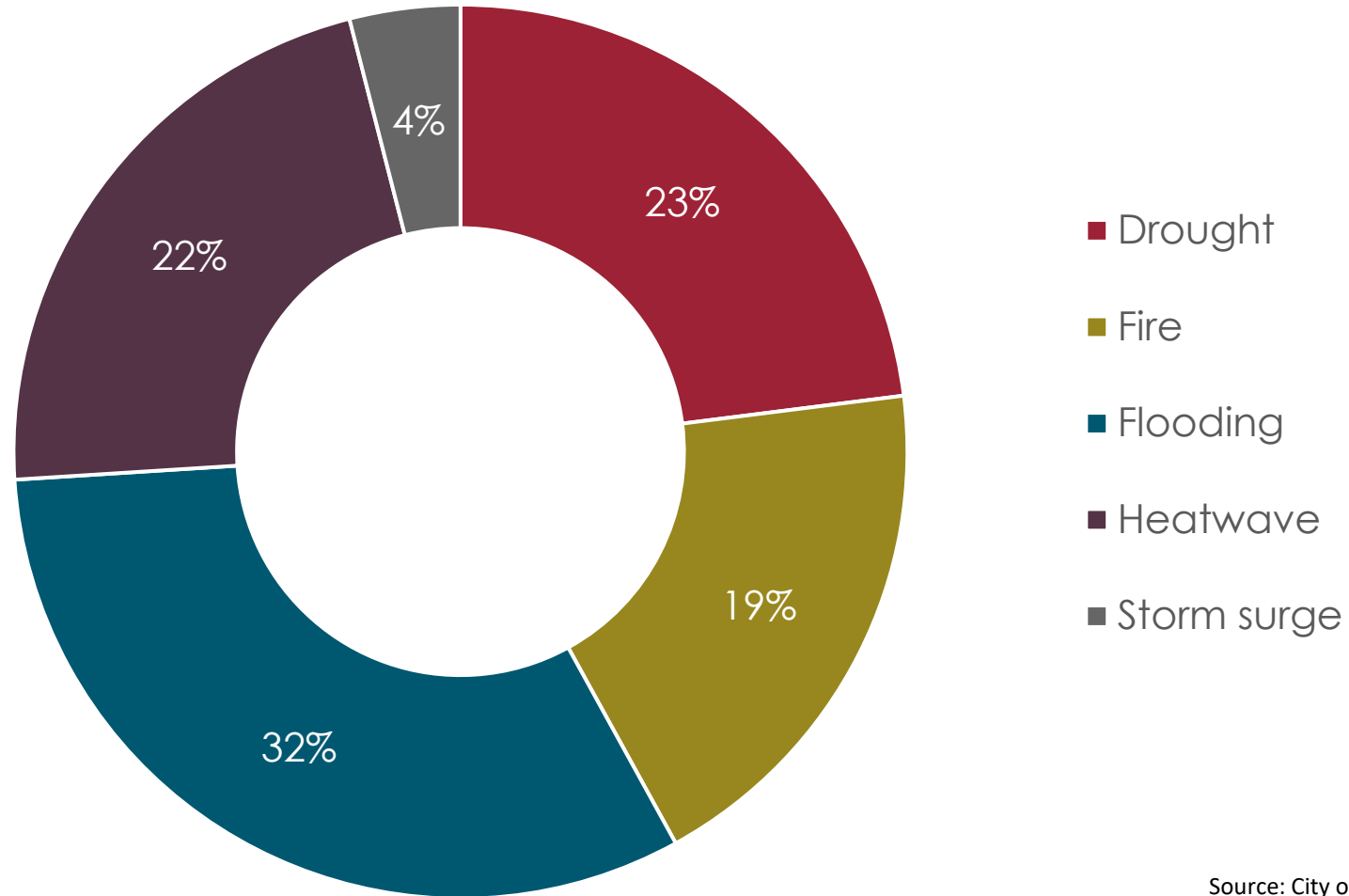
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Climate Resilience

Identified climate shocks for Cape Town



Climate Resilience Projects



Source: City of Cape Town Infrastructure Report 2023

Coastal Management

- The preservation of the City's coastline is vital in ensuring that coastal environments are preserved as well as guaranteeing both City and private infrastructure is protected.
- All sites/ areas have different physical characteristics and the environmental, social and economic objectives are often conflicting.
- Coastal infrastructure is often designed for the future but constructed to be adaptive and developed over time.



Storm: 13 July 2018



After Storm: 13 July 2018



Construction of revetment



Proposed future plan

Project: Milnerton Geocontainer Revetment, Construction June 2023

Flood Alleviation

- Due to climate change, it is likely that events that were previously 1:100 year flood events are occurring with more intensity.
- Vulnerable communities are affected most by flooding.
- Flooding results in substantial costs to the City (direct and indirect)
- There are both technical (master planning) and social challenges associated in addressing flooding.

Areas of informality overlain with floodplains



Source: Assessing the cost of flooding in informal settlements in Cape Town (Howden, 2024)

Responding to Blind-spots

Unanticipated Demand and Accelerated Density



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Higher than anticipated density remains a critical infrastructure challenge

- High demand for affordable housing in Cape Town has resulted in the proliferation of additional semi-formal and informal dwellings, and higher densities across Cape Town.
- Properties with infrastructure designed for 1 dwelling have densified to being multi-dwelling even.
- Strain on existing services and infrastructure – not designed to accommodate increased capacity.



Example of Engineering Challenges

Water:

- Network condition deteriorate over time and progressively fail.
- Legal and illegal water and sewer connections/leadings will have to be reinstated to all upgraded mains.

Sanitation:

- Illegal sewer connections.
- Increased storm water runoff will increase ingress rate into sewers.

Urban Waste Management:

- Community unrest, vandalism, extortion and damage to property and attacks on staff – additional costs to department.
- Inadequate vehicles to service increasing demand.

Urban Mobility:

- Parking, road reserve widths and modal transfers.
- Informal businesses operating in road reserves.

Stormwater:

- Lack of positive grade (i.e. relatively flat area) / Lack of space to install required infrastructure.

Energy:

- Multi story buildings – safety and clearance issues might.



How can the City's infrastructure planning system better respond to increased density at pace?

Menti Meter Q



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Retrospective update to respond to gaps in planning system

- The City has to ask itself how this growth is going to emerge in space and time across Cape Town.
- Determine infrastructure capacity requirements through analysis of infrastructure needs relating to existing infrastructure and impact of existing and potential densification.

Infrastructure Type

Infrastructure Capacity and Required interventions		
Water Current	0	1
Water with projected densities	1	2
Sewer Current	1	2
Sewer with projected densities	2	2
Stormwater Current	1	1
Stormwater with projected densities	1	2
Roads Current	1	2
Roads with projected densities	1	2
Solid Waste Current	1	1
Solid Waste with projected densities	1	2
Electricity Current	0	1
	Current	Projected
	Timeframe	

What we know about infrastructure planning needs:

- Some of the **bulk project upgrades** that are required for these high growth areas will be “**triggered**” for implementation based on the **development of surrounding areas**.
- **Future projects in current Master Plans will not** provide sufficient capacity to accommodate the additional demand
- New land use model is **key to informing master plan** updates
- **Sector plans and projects pipelines** will have to be revised after extensive Master Plan updates.

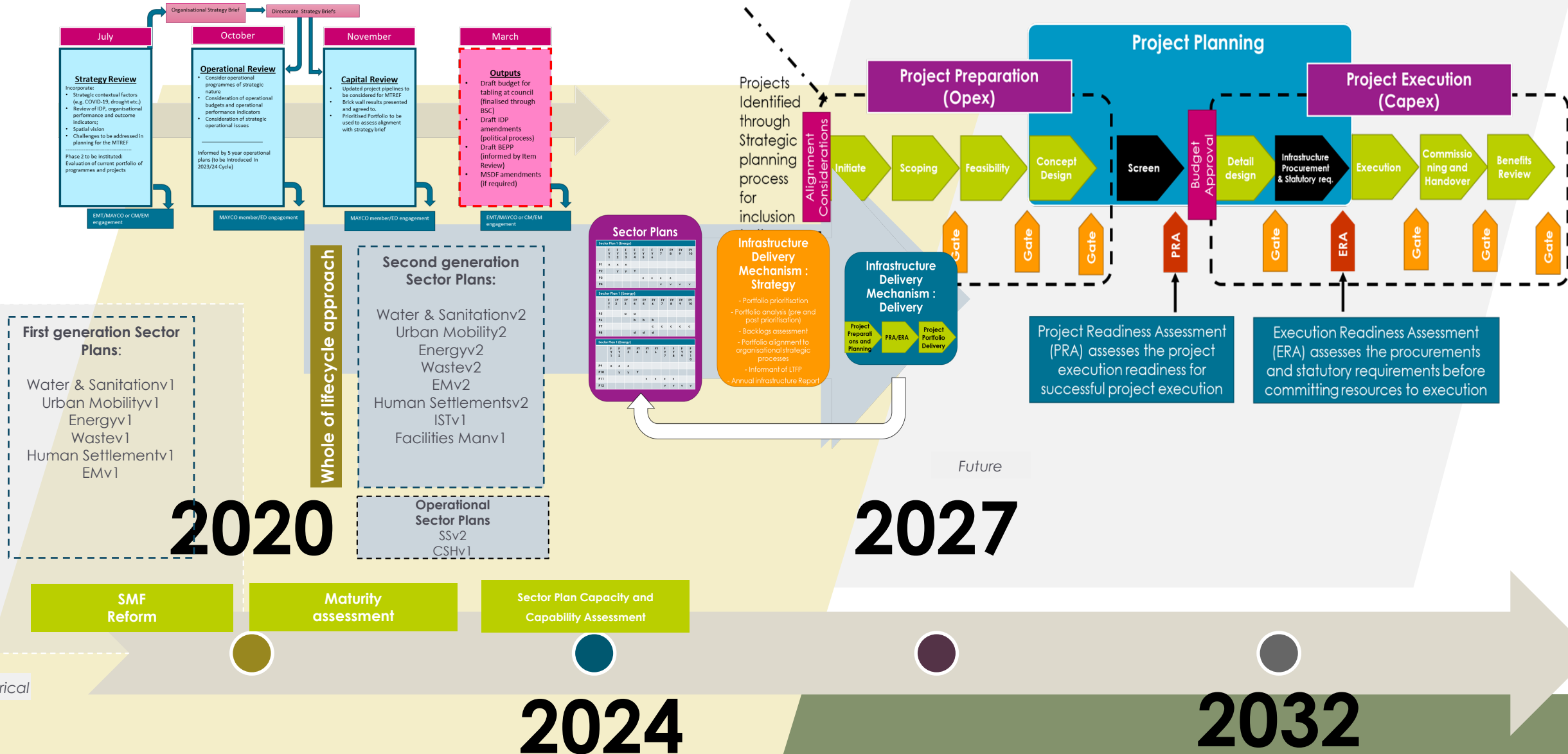


Continued maturity interventions



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Clear, long-term sector plans which integrate transversally and align with agreed upon long-term imperatives and objectives.



Building a City of Hope, Investing in Capital

- Infrastructure planning that seeks to provide a long term view of the full needs of Cape Town.
- Infrastructure planning that continues to evolve to an agile state, to match changing demand patterns.
- Infrastructure planning that supports and enhance targeted area coordination and investment across infrastructure types.



Inputs from plenary

13h35 – 14H00

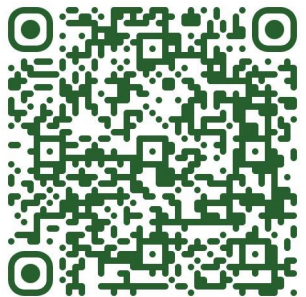


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PRESENTATION 6:

ENVIRONMENT

LORRAINE GERRANS(CCT)



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The Environmental Right – Section 24

- Section 24 of the Constitution of the Republic of South Africa of 1996 gives everyone the right to an environment that is not harmful to their health or well-being. It also places a duty on the government to protect the environment for the benefit of future generations.
- Everyone has the right to:
 - An environment which is not harmful to their health or well-being
 - Have the environment protected for the benefit of present and future generations through reasonable legislative and other measures that:
 - prevent pollution and ecological degradation
 - promote conservation
 - secure ecologically sustainable development and use of natural resources, while promoting justifiable economic and social development.
- Section 24 therefore places a duty on all spheres of government to take reasonable steps – including to make laws and formulate plans – to prevent pollution, promote conservation and ensure sustainable development.



Critical questions in the application of the Constitution, NEMA, NHRA and MPBL in planning and development

- Application of the NEMA environmental impact test:
- Will this decision / development damage the environment?
- If so, can the damage be avoided?
- If not, can the damage be mitigated?
- When is damage to the environment justified?
- What would constitute “justifiable social and economic development”?
- What about cumulative impacts and ecological systems?
Do we have the tools to assess this? Can AI be used to assist?
- MPBL S99 relevant considerations – what weight is assigned to the environment and how are the biophysical and heritage considerations assessed?



Realising the spatial vision through the Environmental Strategy

- Sustainable development is inherently complex, made up of ecological, social and economic pillars, overlaid with governance and systems dynamics.
- The Environmental Strategy:
 - recognises that the environment underpins economic and social development. It advocates moving away from a “balancing” narrative.
 - facilitates progressive realisation of the Constitution S24 environmental right
 - Speaks to the assumptions and aspirations of the City:
 - Carbon neutrality
 - Climate change adaptation
 - Resilience and sustainability
 - A City of Hope with quality public spaces
- Identifies strategies to fast-track capital projects for sustainable environmental, economic and social investment e.g. land banking
- Makes provision for fine-scale biodiversity, ecosystems and coastal planning (BioNet, GINet and Coastal edge mapping)



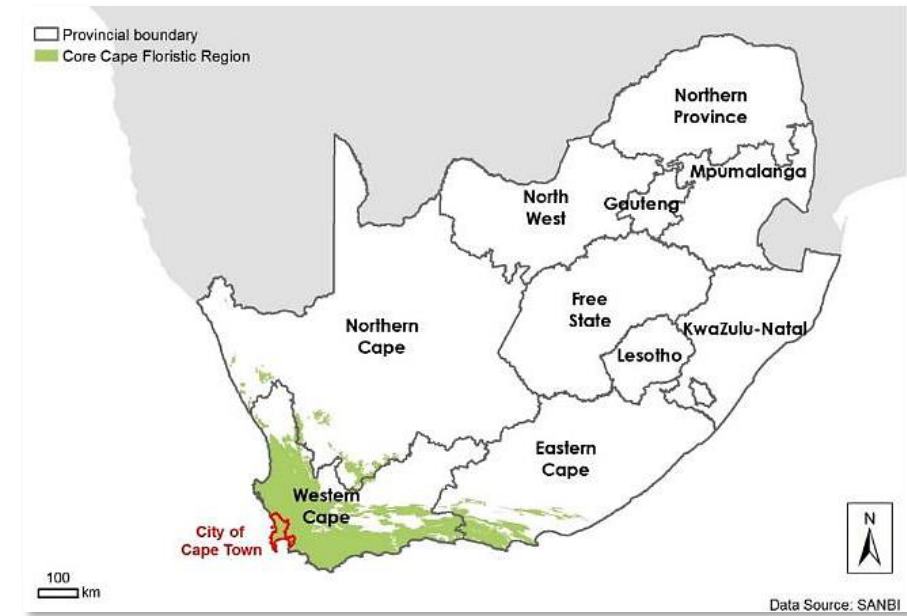
Measures to conserve the environment: Cape Town Biodiversity Network (BioNet)



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Cape Town's biodiversity in context

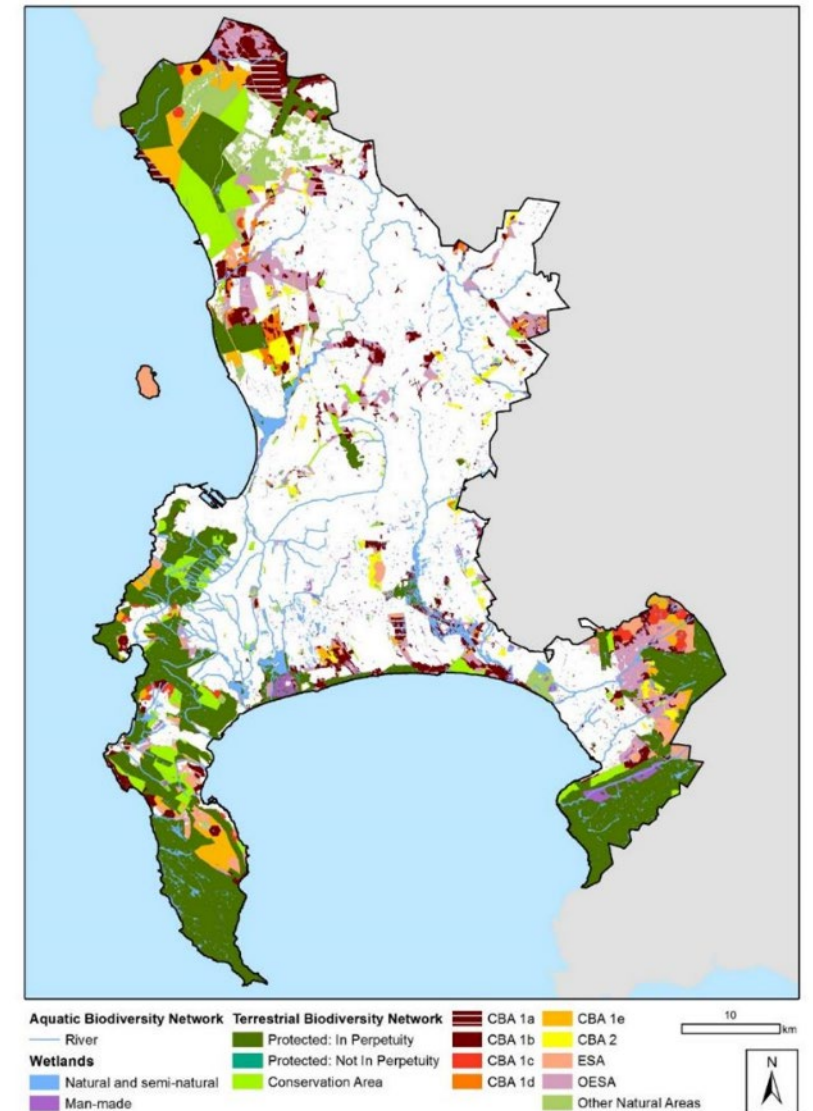
- The most biodiverse city in the world
- 1 of 36 global biodiversity hotspots
- 20 vegetation types in Cape Town
 - 11 Critically Endangered and 7 Endangered
 - 7 endemic to Cape Town
- Over 3 250 plant species
- $\pm$ 15% of South Africa's plants in 0.2% of the country's surface area
- 190 plant species locally endemic to Cape Town
- Rich small mammal, frog (4 endemics), reptile and invertebrate faunas
- Vertebrates: 52 Species of Conservation Concern and 29 threatened
- Ramsar Site, Ramsar City status, Cape Floral Region World Heritage Site and parts of 3 Biosphere Reserves



Bioregional Plan update to Cape Town Biodiversity Spatial Plan 2025

Cape Town BioNet 2024

- Based on the 2021 rerun and 2024 revision
- Updated and new input layers
- Categories aligned to the national CBA Map categories
- New spatial products (maps)
- The **intention** of the Cape Town Biodiversity Spatial Plan 2025 **is to reduce** conflict between the environmental and other sectors, **by providing up-to-date information on biodiversity priorities** that will guide Protected Area expansion, forward planning and development in the most biodiverse city in the world



Bioregional Plan update to Cape Town Biodiversity Spatial Plan 2025

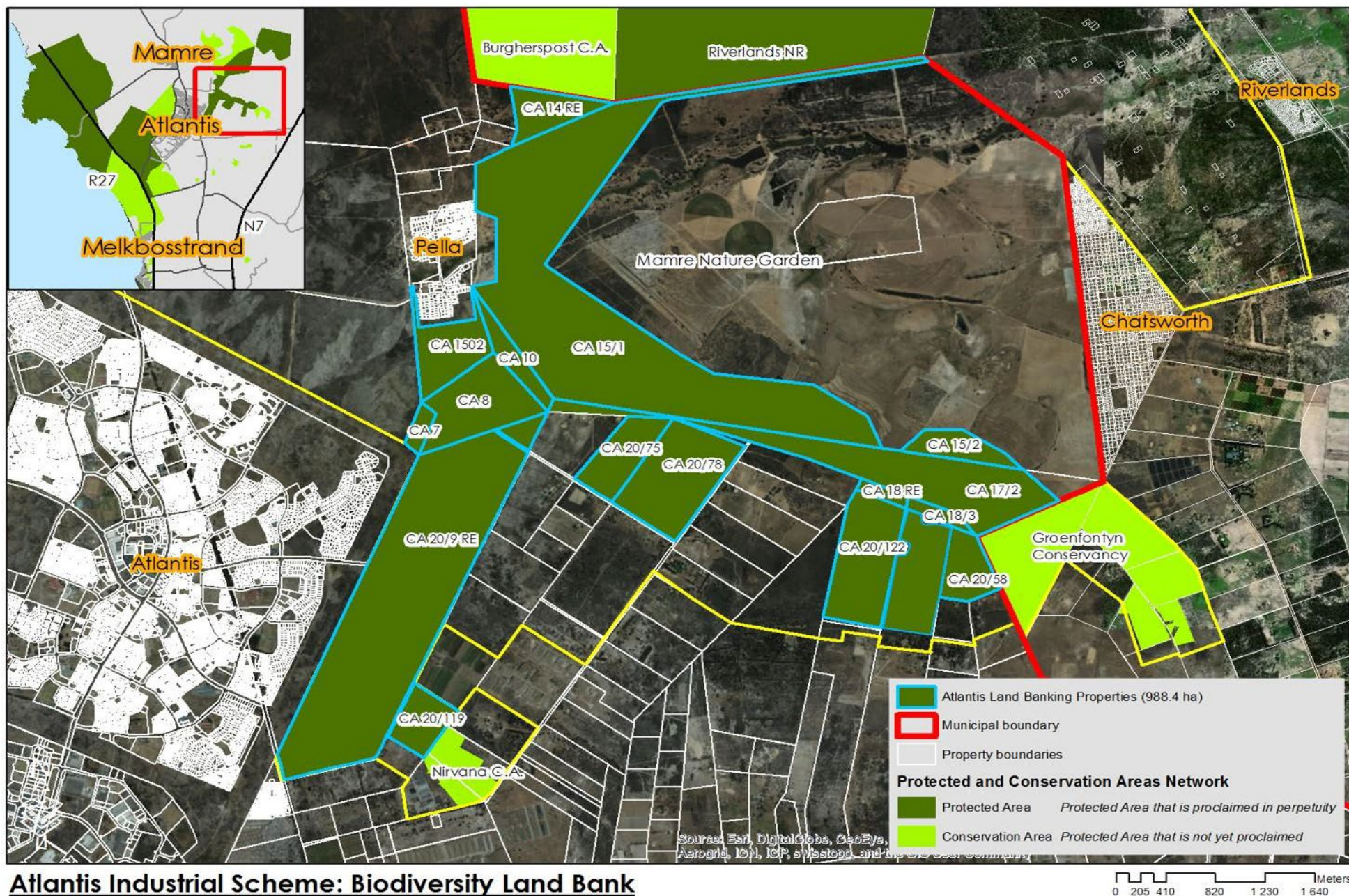
Category	Area	% of BioNet
Total biodiversity priority area baseline of the BioNet (2009)	85 000,00 ha	100%
Total biodiversity priority area remaining of the BioNet	81 775,19 ha	96,21%
IDP Target for June 2025	55 590,00 ha	65,40%
Currently conserved land in Cape Town¹	55 702,91 ha	65,53%

Currently conserved land in Cape Town

Management Authority	Area	BioNet ²
City of Cape Town	20 044,80 ha	23,58%
SANParks (TMNP) ³	24 669,31 ha	29,02%
CapeNature ⁴	5 927,59 ha	6,97%
Eskom ⁵	2 722,14 ha	3,20%
Stewardship (CapeNature & CCT sites)	2 339,07 ha	2,75%
TOTAL	55 702,91 ha	65,53%



Biodiversity land banking



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Biodiversity land banking

Sites utilising the Atlantis Conservation Land Bank

#	Date	Description	Current status	Offset required (ha)
1	16-Mar-13	Ptn 0 of farm CA1183, & Ptn 93 of farm CA4, Atlantis - Greentech manufacturing cluster. Now known as Remainder Erf 171 and Erf 61. (Green Tech Hub: Site 1)	EIA ref: 16/3/1/1/A1/2/303712	29.9
2	16-Jan-13	Portion of Re of Erf 277 Atlantis (Ptn 4 & 1 of CA 1183) (Green Tech Hub: Site 2)	EIA ref: 16/3/1/1/A1/2/3036/12	38.65
3	05-Aug-15	Portion 4 of Erf 1183. Electrical Substation.	EIA ref: 16/3/1/1/A1/2/3013/14.	2.6
4	01-Dec-15	Portion 1 of Erf. 1543 Shopping centre.	EIA ref: 16/3/1/1/A1/2/3035/14	4.4
5	10-May-17	CA1183 portion-50. City Land being sold with approval to clear indigenous vegetation already obtained. (Erf 248)	EIA ref: 16/3/3/1/A1/2/3059/16 CF 1020/0	2.52
6	23-Mar-17	Rem of Ptn 69 of Cape Farm No. 4 (Re Erf 150). City Land being sold with approval to clear indigenous vegetation already obtained.	EIA ref: 16/3/1/1/A1/2/3055/16*	6.22
7	10-May-17	Ptn 55 of Cape Farm No. 1183 (Erf 256). City Land being sold with approval to clear indigenous vegetation already obtained.	EIA ref: 16/3/3/1/A1/2/3058/16	4.3
8	23-Mar-17	Ptn 214 of Cape Farm No. 1183 (Erf 233). City Land being sold with approval to clear indigenous vegetation already obtained.	EIA ref: 16/3/3/1/A1/2/3056/16	1.398
9	23-Mar-17	Ptn 162 of Cape Farm No. 1183 (Erf 216). City Land being sold with approval to clear indigenous vegetation already obtained.	EIA ref: 16/3/3/1/A1/2/3057/16	9.99
10	23-Mar-18	Erf 228 (Previously Ptn 212 of Farm 1183) - Mpac extension	EIA ref: 14/2/1/1/A1/2/0025/16	0.4
11	05-Mar-19	Industrial development: Erf 145	EIA ref: 16/3/3/1/A1/2/3038/18	1.6
12	31-Aug-17	Portion 47 of Farm 1183, Gayatri Cans	EIA ref: 4/2/1/1/A1/2/0073/15	3
13	19-Jul-19	Ptn of Erf 277-RE & 286,	EIA ref: 16/3/3/1/A1/2/3016/19	15.5
14	31-Oct-19	Ptn of RE Erf 277, 246, 254 & 171 (Green Tech Hub: Site 3)	EIA ref: 16/3/3/2/A1/2/3001/19	32.6
15	15-Nov-17	Erf 247	EIA ref: 16/3/3/1/A1/2/3051/17	1.3
Total area:				154.378

Atlantis Generic EMPr has been gazetted as a result of the land bank

- Removal of indigenous vegetation will no longer trigger



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Cape Town BioNet history

- More than two decades of spatial biodiversity assessment, prioritisation and planning in Cape Town.
- First municipality in South Africa to complete a spatial biodiversity plan.
- 37 Core Flora Sites on the Cape Flats in 1999.
- BioNet planning process started in 2001; first version completed in 2004.
- Major revisions in:
 - 2009 (ground-truthing and Red List)
 - 2011 (climate change adaptation)
 - 2016 (national wetland classification)
 - 2021 (extended planning domain)
- Aligned to the SANBI national vegetation map.
- Aligned to national biodiversity targets and planning.
- Adopts latest biodiversity planning best practice.



Measures to conserve the environment: Cape Town Heritage Inventory



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City of Cape Town Heritage Inventory

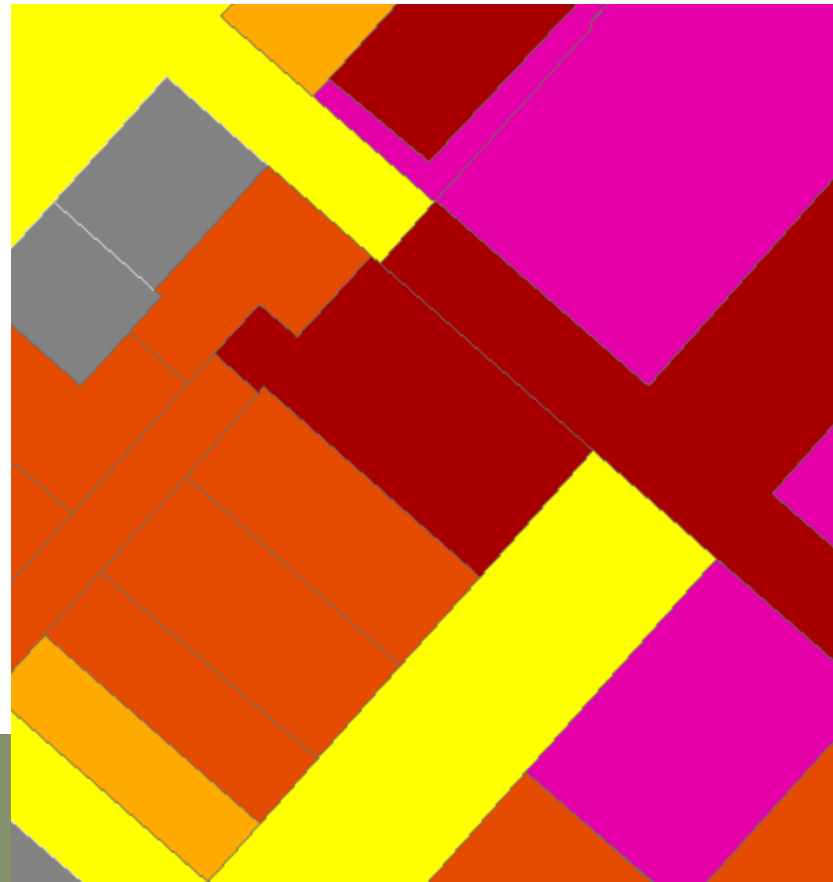
- Formally Protected Sites**

Formal NHRA Protection	Number
National Heritage Sites	79
Provincial Heritage Sites	623
Heritage Register Sites	12
Heritage Areas	4

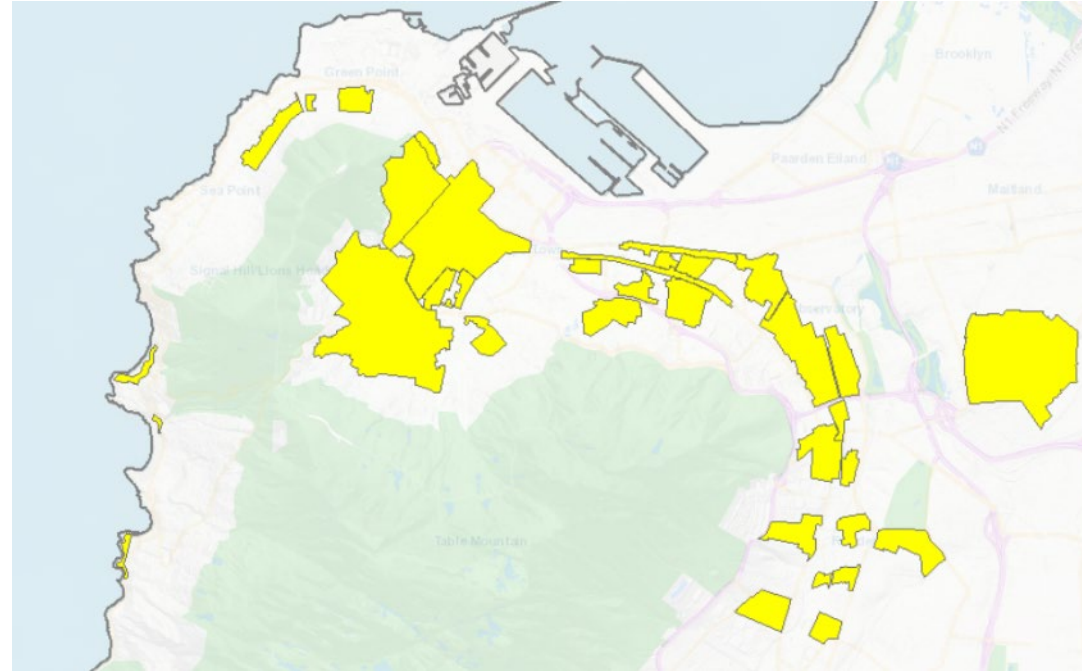
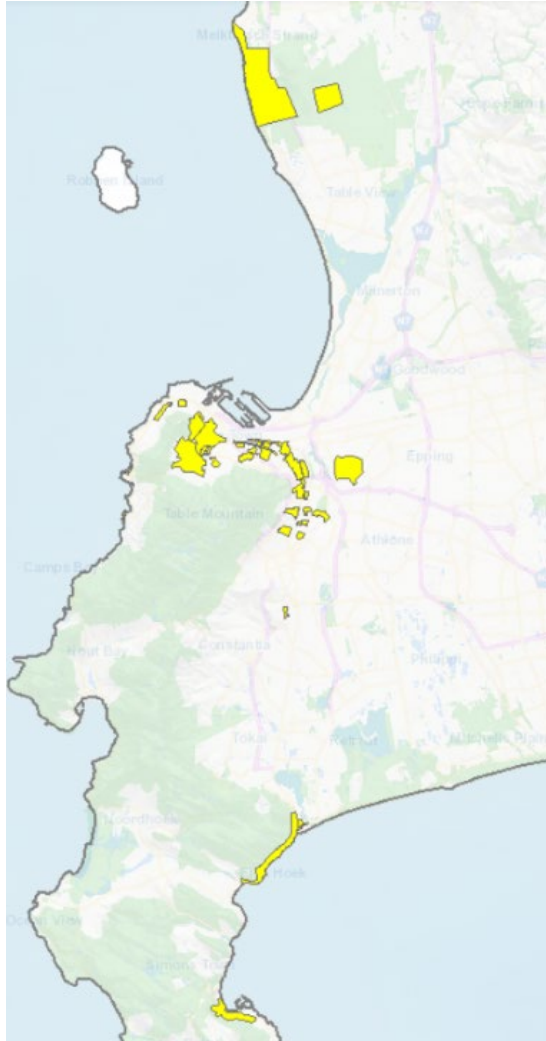
- Graded Heritage Resources in eHeritage**

Grade	Number	Future Action
Grade IIIA	1 657	- Place on Heritage Register - Exempt s34(1)
Grade IIIB	6 296	- Place on Heritage Register - Exempt s34(1)
Grade IIIC	13 759	- Put in place HPOZ - Place on Heritage Register - Exempt s34(1)
Non Conservation-worthy sites	32 330	Exempt s34(1)

Other	Number	Future Action
NHRA Exemption areas	3	Extend exemption areas
HPOZ areas	42	Re-Designate as Heritage Areas



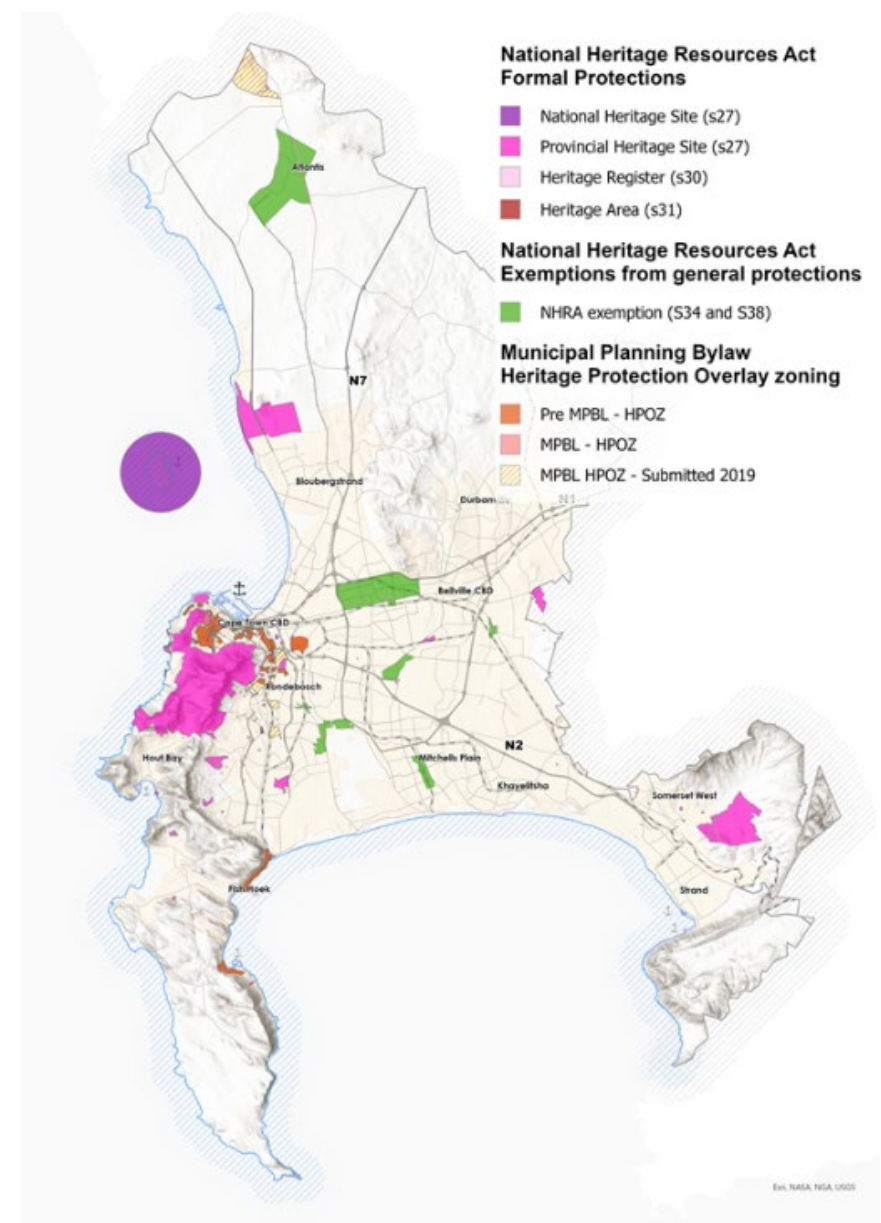
Heritage Protection Overlay Zone



- 21.5 square kilometres of Cape Town protected under the HPOZ (0.8%)
- 42 HPOZ areas

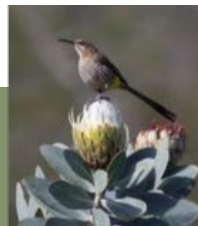
S31 and s38 NHRA Exemption Areas

- HWC can exempt s34 and s38 once heritage audits have been carried out and heritage resources formally protected under the Heritage Register or as PHSs or NHSs.
- Declared Exemption Areas:
 - Parow Station Precinct
 - Mitchells Plein DFA
 - Airport Industria DFA
 - Portion of Voortrekker Road
 - Kuils River DFA
 - Philippi DFA
 - Flamingo DFA
 - Ottery Lansdowne DFA
- Next
 - Maitland
 - Kensington/Factreton



Assumptions for the land use model

- **The City aims to identify what to protect, and release the rest for development, including lifting general protections as far as possible to facilitate development**
- Biodiversity is irreplaceable in terms of where it occurs and must be conserved in-situ.
- De-proclamation of protected areas is not an option.
- Heritage areas (incl. HPOZ) have characteristics that must inform how these areas are developed / redeveloped.
- The State of the Environment data has constraints and indicators need to be further spatialized.
- Infrastructure constraints must be considered in the land use model. Data sources e.g. service request notifications can point to emerging infrastructure constraints e.g. frequent sewer line collapses and pump station failures.



Critical shifts required for resilience and sustainability

- Cape Town's natural beauty and biodiversity are part of what makes this city a unique and desirable place to live, work and visit.
- We need a deeper understanding of the importance of biodiversity for survival, not only our reliance on essential ecosystem services such as water and clean air, but also for recreation, stress reduction, general health and well-being, employment, income-generating opportunities and education.
- The development sector can help for example through increased densities and infrastructure planning to avoid environmental damage and biodiversity loss
- People will protect what they value. Fences are not the only solution. We need to show people the value of biodiversity conservation to help prevent e.g. unlawful land occupation and damage to the environment
- Environmental conservation is a long-term consideration with timelines beyond 5-year political terms.
- Heritage has the potential to become an important local economic driver if it is well-managed and conserved.
- The environment belongs to everyone, but is also everyone's responsibility.



Inputs from plenary

14h45 – 15h30



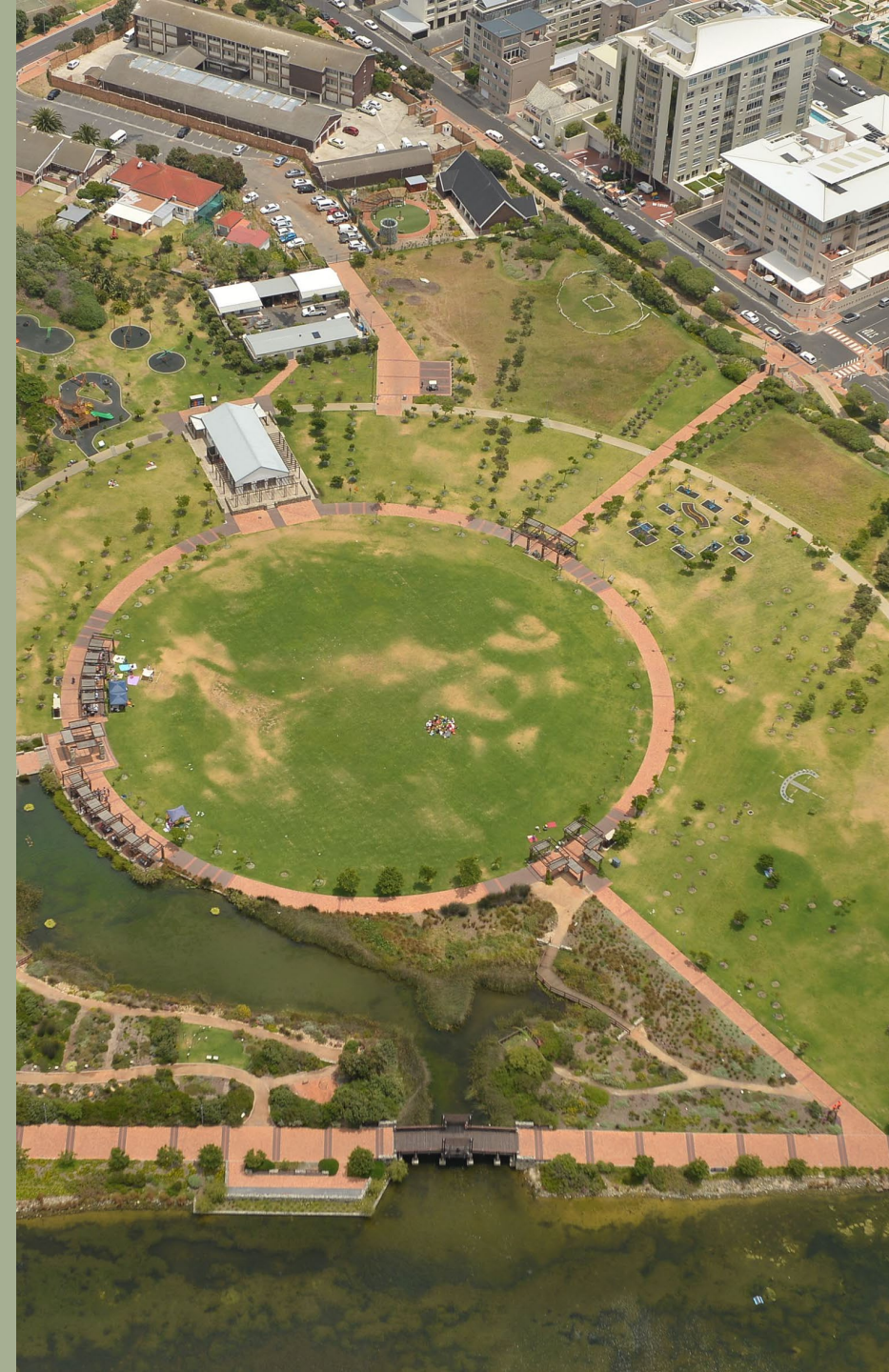
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SESSION 7:

Summary of the outcomes for
the 2 days and Way Forward



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Close of Day 2

16h00



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THANK YOU | ENKOSI | DANKIE

Making progress possible. **Together.**