CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

City of Cape Town

Potsdam Sustainability Campus Programme

Making progress possible. Together.

Contents

The Potsdam Sustainability Campus Programme

About

The Potsdam Sustainability Campus Programme aims to create a cross-departmental, practical learning environment where carbon neutrality in particular and sustainability in general can be unpacked in an experimental and transversal manner.

As defined by the **United Nations' 17 Sustainable Development Goals** (SDGs) everything and everyone are interconnected when thinking about sustainability - it is not a mere 'green' agenda anymore. We are all in this together and need to see and understand the integrated and transversal impact of city development. Numerous natural disasters, growing hunger and pollution has demonstrated that climate change is a reality, not just theory. The SDGs calls for global action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

However, as government, it is very difficult to, within resources constraints, 'experiment forward' as business are able to do. Acquiring an unused site, earmarked as a testing ground/learning 'campus', enables the City to roll up its sleeves and take on the challenge. It is an opportunity to work alongside other governmental structures, the private sector and institutions, whether local or international, to unlock what carbon neutrality and sustainability really means for us as government, and in doing so, move forward in supporting our residents and towards the vision of building a City of Hope.

The campus offers opportunities for innovative, collaborative exploration and experimentation with regenerative design thinking with regards to carbon positive sustainable practices within the built environment.

Envisioned as a City-owned exhibition platform, offering learning- and knowledge-development opportunities for a variety of regenerative practices, the programme aims to:

- help unpack and meet carbon neutrality targets for 2030 and 2050, towards a carbon positive city through the actions on site; and
- provide an opportunity for wider discussions as a learning and experimentation hub.

This supports the global SDGs while aligning with the **City's Integrated Development Plan** (IDP), policies and strategies, showcasing various benefits in one location.

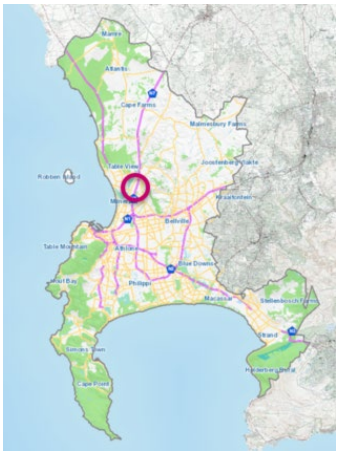
Potsdam's location

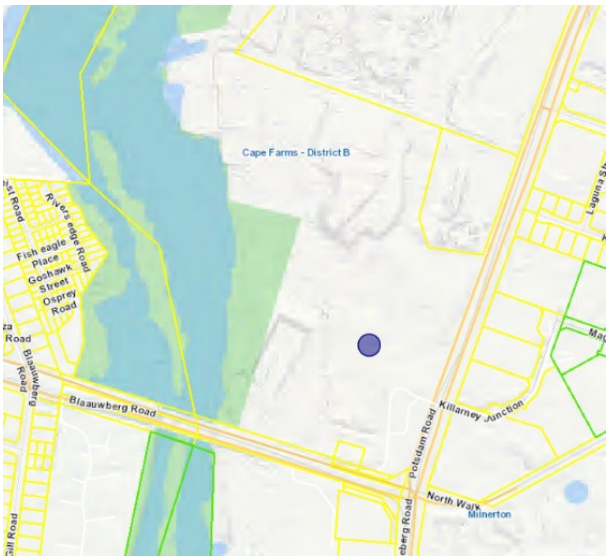
The site (originally part of the Potsdam Outspan) offers a unique opportunity to address multiple challenges the City faces in achieving carbon neutrality goals for 2030/2050, including job creation and food production, working towards achieving the global Sustainable Development Agenda.

With the Diep River (and now Table Bay Nature Reserve) running along its western edge, the site also accommodates various service delivery infrastructure elements along its corners, including the Killarney Waste Depot, a water and sanitation facility and public transport interchange, and an equestrian centre. The site holds an agricultural zoning and it is from this valuable land use that we will grow the campus into a learning and development centre. Within the immediate context, this initiative will support wider programmes that address the rehabilitation of the Diep River system, empowering communities to understand and mitigate against climate change impacts, and offers the opportunity to highlight employment opportunities in various industries/spheres.

The site is strategically located on the corner of Blaauwberg and Potsdam Roads, and carries an agricultural zoning, making it well suited for the purposes of the sustainability campus.

- **Geographical location**: c/o Blaauwberg and Potsdam Roads (top end of Koeberg Road), Table View, Blaauwberg District
- **Physical address**: 1 Potsdam Road, Cape Farms, Table View





Vision and objectives

The Potsdam Sustainability Campus is a regenerative, nature-positive, carbon-neutral, and inclusive place for learning towards community wellbeing. By providing a City-owned exhibition platform (living lab) for experimentation with a large array of sustainable practices, materials and technologies, we can physically demonstrate how various innovative approaches, coupled with integrated design thinking, can impact the health and wellbeing of the people of Cape Town.

Programme scope

The Potsdam Sustainability Campus is proposed as a five-themed programme[1]:

- Sustainable Environment
- Sustainable Services
- A Sustainable and Regenerative Built Environment
- Sustainable Business
- Sustainable Mobility

These unfold as chapters of a story that shares the journey of city/place making; with added value that can be extracted from their inter-relatedness, rather than predetermined phases.

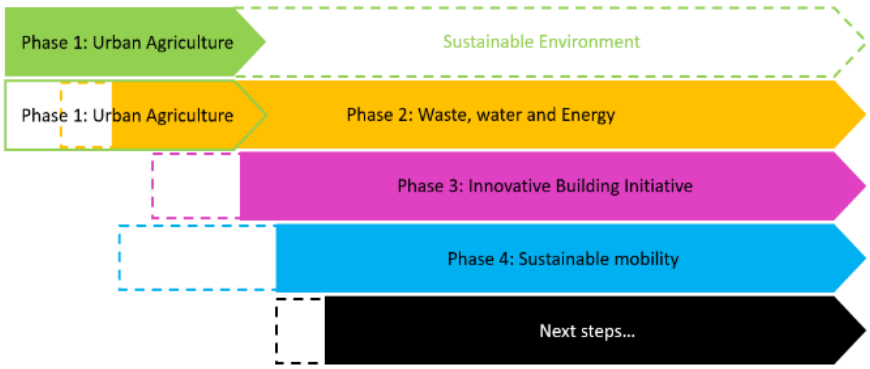


***Figure 9**: Programme Themes*

The initial phase of the overall programme is vested in the Sustainable Environment theme – getting the site 'development ready', rapidly moving towards implementation as per the existing zoning (agriculture). This links intentionally to uses already on the site (waste/water/equestrian centre, mobility), while affording the opportunity to systematically unpack the transition in systems-thinking to ensure development in a sustainable manner.

Agriculture within the urban context

The Agriculture Chapter, as part of the wider environmental sustainability programme, is the first phase of the Potsdam Sustainability Campus, and the lessons learnt will serve as a learning opportunity.

The Potsdam Agriculture Chapter has a clear and important goal – to create strong urban communities that thrive through the use of agriculture. This approach focuses on empowering local communities, establishing a circular economy and sustainable food production. It aligns closely with the United Nations' SDGs, which provide the framework for explorative projects across the site. The agricultural activities and projects envisioned at the campus reflect these goals, ensuring that efforts are directed towards achieving positive outcomes for the local community.

Agriculture within the urban context plays a crucial role in this mission. By bringing people together in shared green spaces, it creates a sense of belonging and collaboration. Community gardens, urban farms, and similar initiatives offer more than just fresh produce; they create opportunities for people to connect, learn, and grow together. This shared experience not only strengthens community ties, but also encourages individuals to contribute positively to their surroundings.

Waste management

The Potsdam Sustainability Campus enables innovative collaboration and experimentation to find opportunities and solutions to divert waste to other industries as resources. Solutions to the increasing burden of undiverted waste will go beyond just assisting to achieve the Urban Waste Directorate's target of extending the life of the existing landfill space to 2040. Waste diversion into other industries through upcycling and recycling would provide large economic, environmental, energy, health benefits and opportunities while creating more sustainable communities.

Early initiative opportunities include:

An educational space to assist with the implementation of behaviour change programmes. Minimising waste impacts, reducing illegal dumping, cleaning our natural waterways and environment, and ensuring efficient and optimal waste management relies on taking co-responsibility for how we minimise the waste we generate, and properly dispose of it.

The approach to experimentation, innovation and exploration extends all the way down to the materials used to create the campus. As such, the intention is to trial and promote alternative building technologies within the construction sector, which share the same ethos of circularity and sustainability as the campus.

Agriculture was identified as key to unlocking the potential of the site. Organic waste processing through sustainable compost production methods is seen as critical to sustainably enabling agriculture on site. These composting methods include black soldier fly farming (BSF), earthworm beds, wind-blown composting as well as small-scale mechanical plants. Additional by-products as outputs and products from the organic waste composting include energy generation (through gas generation), farm animal feed production, fertiliser production (worm

tea and BSF frass), water harvesting (from the organic matter) and other agricultural by products.

Building technology and materials

The programme puts a strong focus on highlighting sustainable practices all around the site. This means that all buildings need to contribute to an eco-friendly environment. It is crucial to consider a broad spectrum of methods and technologies that support sustainability by reducing environmental impacts whenever possible, and selecting design solutions that require less raw resources or finding alternative materials with smaller ecological footprints.

In addition to minimising use, we aim to cut down on the energy consumed during material production. This can include finding suppliers who use renewable energy sources or adopting processes that generate less waste. Another important aspect is to enhance the ability to reuse building materials by conducting life cycle assessments, which helps to evaluate the overall environmental impact of the materials throughout their entire lifespan.

Through careful consideration, the campus supports sustainable practices and promotes a healthier, more responsible approach to construction and design where all potential building materials are:

- Alternatives to virgin aggregate materials used in concrete
- Alternative additions to concrete which aid in cement reduction
- Low or no volatile organic compounds (VOCs)
- Low to no maintenance
- Locally manufactured
- Contributors to increase un-/semi-skilled local labour
- Locally sourced in order to reduce the carbon footprint
- Energy and water efficient
- Non-toxic
- Contributing to waste reduction
- Less impactful on the environment
- Improving indoor air quality
- Durable and renewable
- Re-usable or recyclable
- Regenerative

Water

We recognise that the role of water in climate mitigation is much greater than commonly understood. We are actively facilitating Cape Town's transition into a city which is sensitive to our water resources, and which makes optimal use of stormwater and urban waterways for flood control, aquifer recharge and recreation. The Potsdam Sustainable Campus seeks to ensure safe drinking water and sanitation for all, focusing on the sustainable management of water resources, wastewater and Drinking water: Universal and equitable access to safe and affordable drinking water for all.

- Sanitation and hygiene: Access to adequate and equitable sanitation and hygiene for all and ending open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
- Wastewater: Improve water quality by reducing pollution, eliminating dumping and minimising the release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse.
- Water stress: Substantially increase water use efficiency across all sectors, and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.

- Water management: Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.
- Ecosystems: Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.
- Every drop counts: Designing for water efficiency in buildings, enabling them to use water responsibly, minimising waste and maximising efficiency. Innovative water-saving design solutions, from rainwater harvesting to smart fixtures, helping to drastically reduce water consumption. Learn how to implement these approaches effectively for a more sustainable future, where every drop counts.

Energy

Cape Town faces several energy challenges, including constrained energy supply, a growing population, energy poverty and the impacts of climate change. This is why we are shifting towards a more resilient, resource efficient and sustainable energy future for all Capetonians. Potsdam's aim is to unlock the transformative potential of wheeled renewable energy for all residents. We hope to bring together developers, local governments, and end-users to explore how wheeling can drive grid decarbonisation and align with corporate ESG goals, and to discover practical ways to integrate these energy solutions into projects.

Anticipated benefits

The Potsdam Sustainable Campus initiative offers the opportunity for numerous stakeholders to engage with the programme.

Stronger communities

- Enhanced local resilience to issues around food security, waste and water management, and energy
- Improvement in social cohesion through public participation in both processes and projects
- Understanding of the opportunities vested in the climate change agenda, empowering communities to appreciate the job opportunities that emerge and not be left behind in the changes that comes through it
- Better appreciation of service delivery and understanding their own roles in being responsible residents
- Improved understanding of new and appropriate building techniques and material choices
- Direct and indirect opportunities through training and education
- Healthier and more resilient communities
- Thinking global but acting local

City of Cape Town/local government

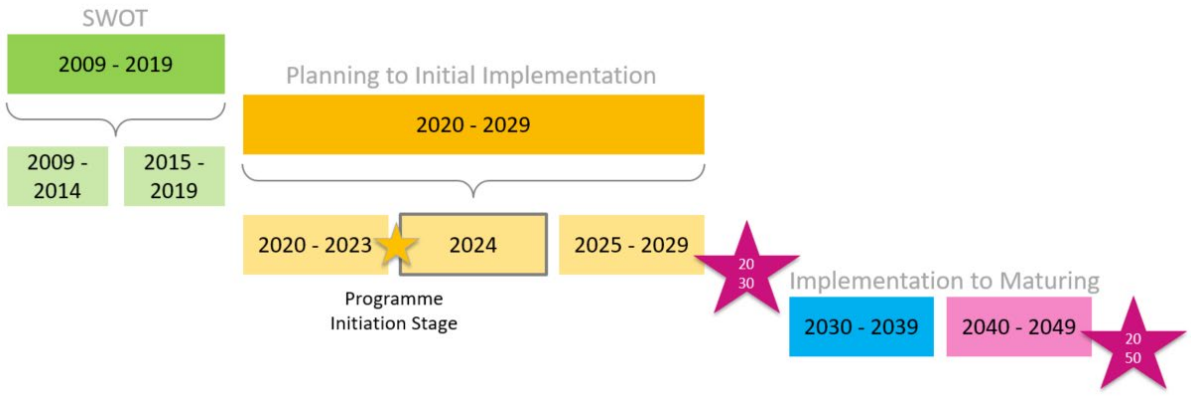
- Provides the City with a site to pilot new processes and approaches to address climate change, the City's response to the SDGs, carbon neutrality and other sustainable pledges before mainstream rollout across the metro.
- A space for proactive learning through pilot implementation before broader metro rollout.
- The site borders a number of the City's work functions (waste, water, mobility, urban agriculture, nature reserves and the Diep River). This strategic location creates opportunities for the City to explore circular economy approaches to a number of work functions in one location.

- Test, explore and unpack unresolved issues around transversal working arrangements, implementation, operation and maintenance. This includes internal arrangements as well as engagements with the private sector and neighbouring community.
- To research and test alternative or better approaches to City products and processes for more efficient and effective service delivery.
- The site is a strategic location to assist in the management of the Table Bay Nature Reserve.
- The site is located just before the Diep River system opens up into the Milnerton Lagoon, making it a strategic position for the rehabilitation of the river system and pilot point to buffer zone projects for rollout across the broader Diep River waterway.
- Allows the City to record, analyse and demonstrate the benefits of sustainable processes and development through monitoring and evaluation in partnership with others.
- Expand on the City's eco-tourism opportunities.
- Demonstrates the City's appetite to lead by example in terms of climate change, carbon neutrality and sustainability for both the private sector and other municipalities.
- Greater anticipated uptake of sustainable and resilient activities towards achieving sustainable development goals.
- Replicability of similar initiatives/projects in other parts of Cape Town and beyond.
- Help to establish better and stronger policy development in climate change mitigations.
- Opportunities for transversal engagement with the multiple City directorates.

External partners/private sector

- The strategic site location and its proposed programmes offer the City and external stakeholders like tertiary institutions a place for practical research, as well as circular economy studies in various industries.
- The success of the sustainable building and business chapters should result in more and better sustainable products and materials available locally; and create opportunities for accelerated certification processes.
- Opportunity for partnership with other international governmental agencies; drawing down direct foreign investment and exposure to market.

Programme timeline



The programme timeline is packaged into 10-year focus periods, with the current period being the planning to initial implementation phase, which includes more detail planning, garnering of widespread buy-in and site initiation through early initial implementation of key catalytic, pilot projects.

Contact

If you have any questions, or need more information about the Potsdam Sustainability Campus Programme, email *sustainabilitycampus@capetown.gov.za*.