



CITY OF CAPE TOWN  
ISIXEKO SASEKAPA  
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# Standard Operating Procedure for the Implementation of Temporary Package Plants

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Water and Sanitation  
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Making progress possible. **Together.**

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## Purpose of SOP

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While capacity upgrades are under way at constrained WWTWs, the SOP will enable sustainable development in suburbs falling within the drainage areas for these three plants, while limiting the increase in discharge during the upgrade period.

### City Wastewater Treatment Plants at capacity

	Potsdam	Macassar	Zandvliet
Current capacity	47 MI/d	34 MI/d	72 MI/d
Proposed upgraded capacity	100 MI/d	70 MI/d <sup>(3)</sup>	90 MI/d <sup>(1)</sup>
Upgrade available by <sup>(2)</sup>	Q1 2027	Q2 2028*	Q4 2024



# Map of WWTW Catchments at capacity

## DESCRIPTION OF CATCHMENT AREAS

- **Potsdam**

Atlas Gardens, Blouberg, Bothasig, Brooklyn, Burgundy Estate, Century City, Du noon, Edgemead, Glenwood, Killarney Gardens, Milnerton, Montague Gardens, Monte Vista, N1 City, Parklands, Platteklouf(partial), Platteklouf Glen, Richwood, Rivergate, Rugby, Sandown, Summergreens, Sunset Beach, Sunset links, Tableview, Tygerdal, Welgelegen, West Beach

- **Macassar**

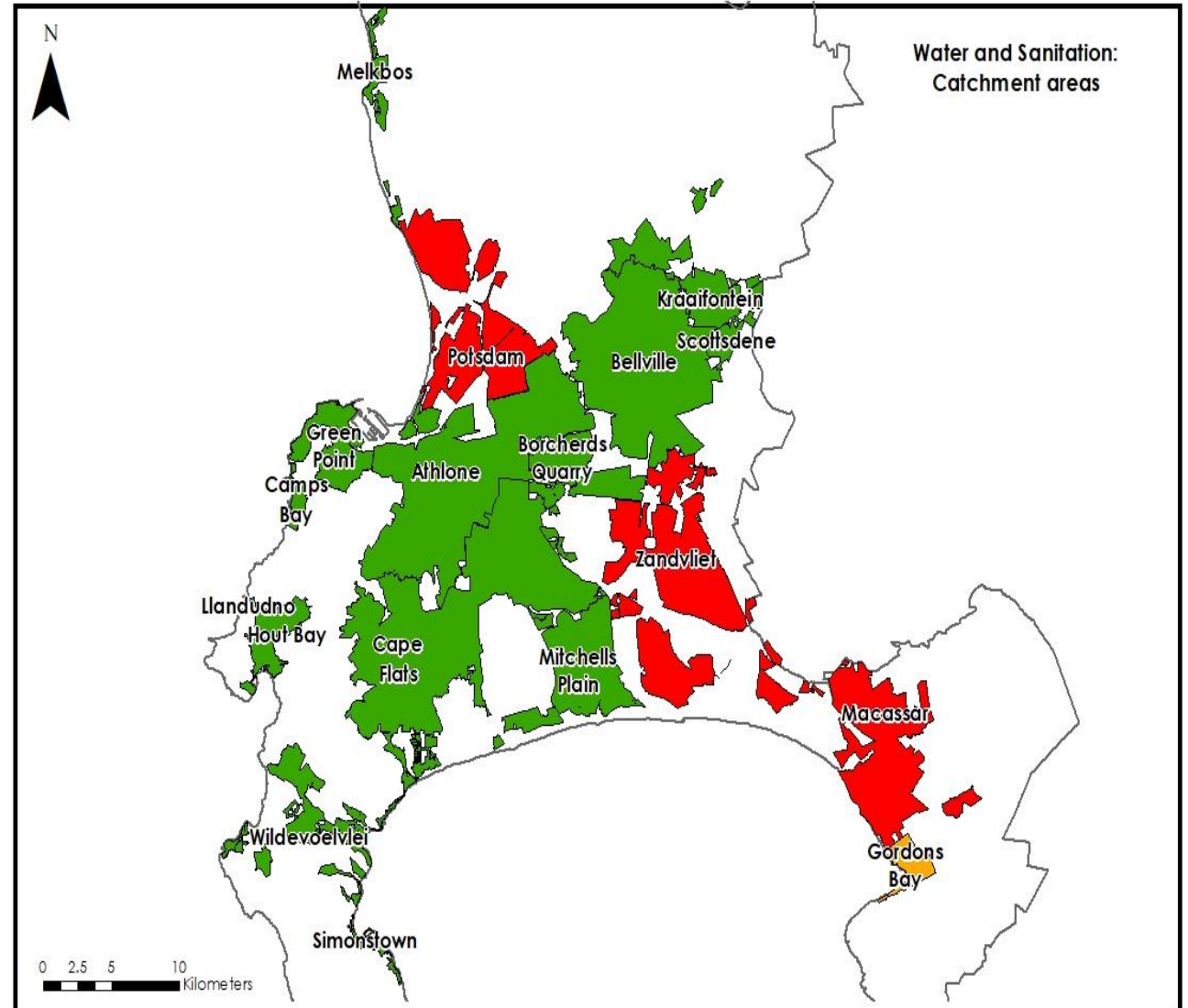
Asanda, Asla Park, Audas Estate, Bene Township, Berago, Braeview, Bridgebank, Bridgewater, Briza, Broadlands Village, Carwick, Chris Hani Park, Chris Nissen Park, Deaconville, Die Wingerd, Dorhill, Fernwood, Fraaigelegen, George Park, Goede Hoop, Helderberg, Heldervue, Helderzicht, Heritage Park, Highveld, Humanshof, Illaire, Jacques hill, Jonkers hoogte, Kalamunda, La Concorde, Longdown estae, Lwandle, Martinville, Mission grounds, Montchere, Monte sereno, New Macassar, Nomzamo, Olive groove, Onverwacht village, Parel Vallei, Riverside, Somerset West, Steenbras View, Stuart's Hill, Vredenzicht

- **Zandvliet**

Amandelsig, Austinville, Bellville Teachers College, Benno Park, Blackheath, Bluedowns, Danarand, Delft, Delrovillage, Dreamworld, Driftsand, EersteRiver, Eindhoven, Ekuphumleni, Electric City, Eyethu, Fairdale, Faure, Forest Heights, Fountain Village, Graceland, Greenfields, Hagley, Highbury Highgate, Hillcrest heights, Hindle Park, Malibu Village, Khayelitsha, Kuils River (partial), Mandela Park, Nonqubela, Oakdene, Roosendal, Rustdal, Silveroaks, Silverton-Khayelitsha, Silversands, Sunbird Park, The Conifers, Tuscany Glen, Turtle Creek, Umrhabulo Triangle, Welmoed, Wesbank, Zevendal, Zevenwacht, Zevenzicht

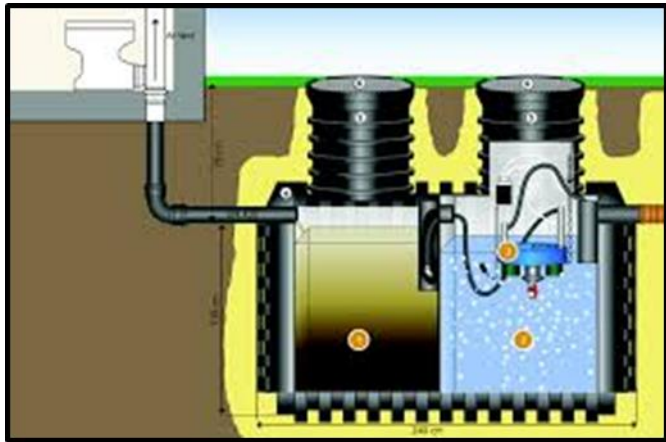
- **Gordon's Bay (diverts to Macassar)**

Dobson, Mansfield Industria, Mountainside, Onverwacht - Gordon's Bay, Protea Park - Gordon's Bay, Sea Breeze Park, Temperance Town, Winslow



# Package Plant for Wastewater Treatment – Definition

- Any onsite, waterborne, **domestic wastewater treatment system** consisting of one or more modules.
- Total capacity typically less than **4 000 kl/day**.
- Includes equipment largely manufactured off site and brought onsite for installation. Possible to use for residential developments or some other uses incorporating a small component of non- domestic activity.



# Development of SOP

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- Entitled “Temporary Package Plants for Wastewater Treatment in Constrained Catchments – Standard Operating Procedure”
- Includes full lifecycle
- Involved Key City Stakeholders
- Involved regulatory agencies DWS and DEA&DP - fully aware of the need and for speedy processing
- Considered range of affected City by-laws
- Considered National Legislation & guidelines (DWS & DEA&DP) plus WRC guidelines
- Integration with existing processes of Landuse management and Water services engineering



# Considerations

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- All TPP to have emergency overflow to sewer reticulation system in case of maintenance, repair or failure.
- During normal operation, no treated effluent and sludge will be allowed into sewer network.
- The TPP design and operation needs to cater for both wet and dry outputs.
- All TPP to be decommissioned once WWTW upgrade completed, to an agreed phase-out plan.
- All licensing approvals to be obtained via National DWS and Western Cape Government DEA&DP.
- City has no control over these regulatory agencies but will facilitate interaction.

## Definition of development size

MAJOR LAND CATEGORY	UNIT	SIZE OF DEVELOPMENT		
		SMALL	MEDIUM (5x)	LARGE
RESIDENTIAL	DAILY FLOW	400 l/DU/d x 10 = 4.0 kl/d	400 x 50 = 20.0 kl/d	> 20.0 kl/d
	# UNITS [DU's]	UP TO 10	11 TO 50	> 50
NON-RESIDENTIAL	DAILY FLOW	Match RES at 4.0 kl/d	Match RES at 20.0 kl/d	> 20.0 kl/d
	FLOOR/ GLA [m <sup>2</sup> ]	UP TO 2 000 m <sup>2</sup>	UP TO 10 000 m <sup>2</sup>	> 1 ha

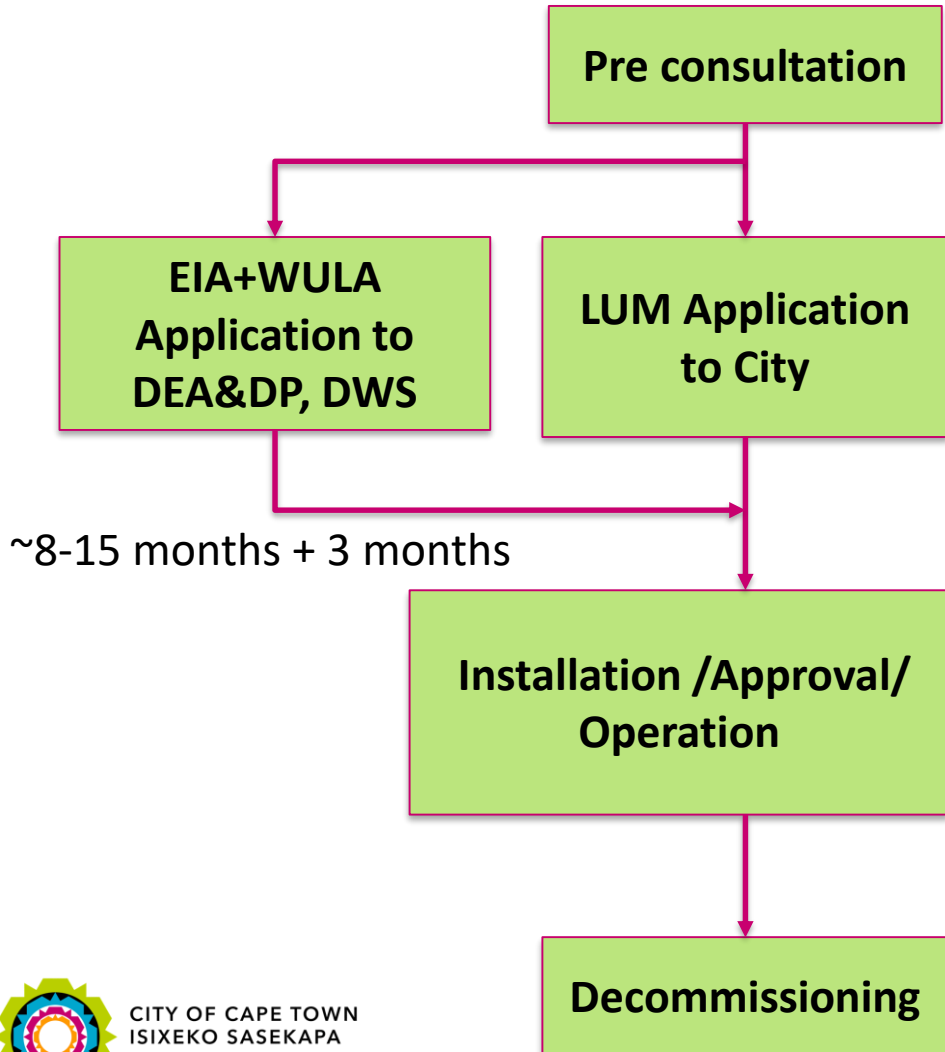


# Landuse rights a key consideration

TPP only needed for New or Extension applications Medium or Larger

LANDUSE RIGHTS	SIZE OF DEVELOPMENT	
	SMALL < 4kl/day	MEDIUM/LARGE
Existing zoning right not lapsed	Allow to connect normally	Allow to connect normally
Building plan		
Application to extend validity period		
New Land Use application		<b>TPP considered</b>

# SOP outline



## HIGHLIGHTS

Engage Planning & Engineering

Prelim Capacity Letter & Endorsement letter issued

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Application to City and regulatory authorities in parallel

Part of LUM: City sets development conditions

Obtain authorisation from DEA&DP, DWS

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Construction, As-builts, WSI agreement

Water connection, Account master data updated

Inspections & Section 137 clearance, Property now transferable

TPP Operation, ongoing monitoring and sample quality

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Decommissioning requested, undertaken, approved

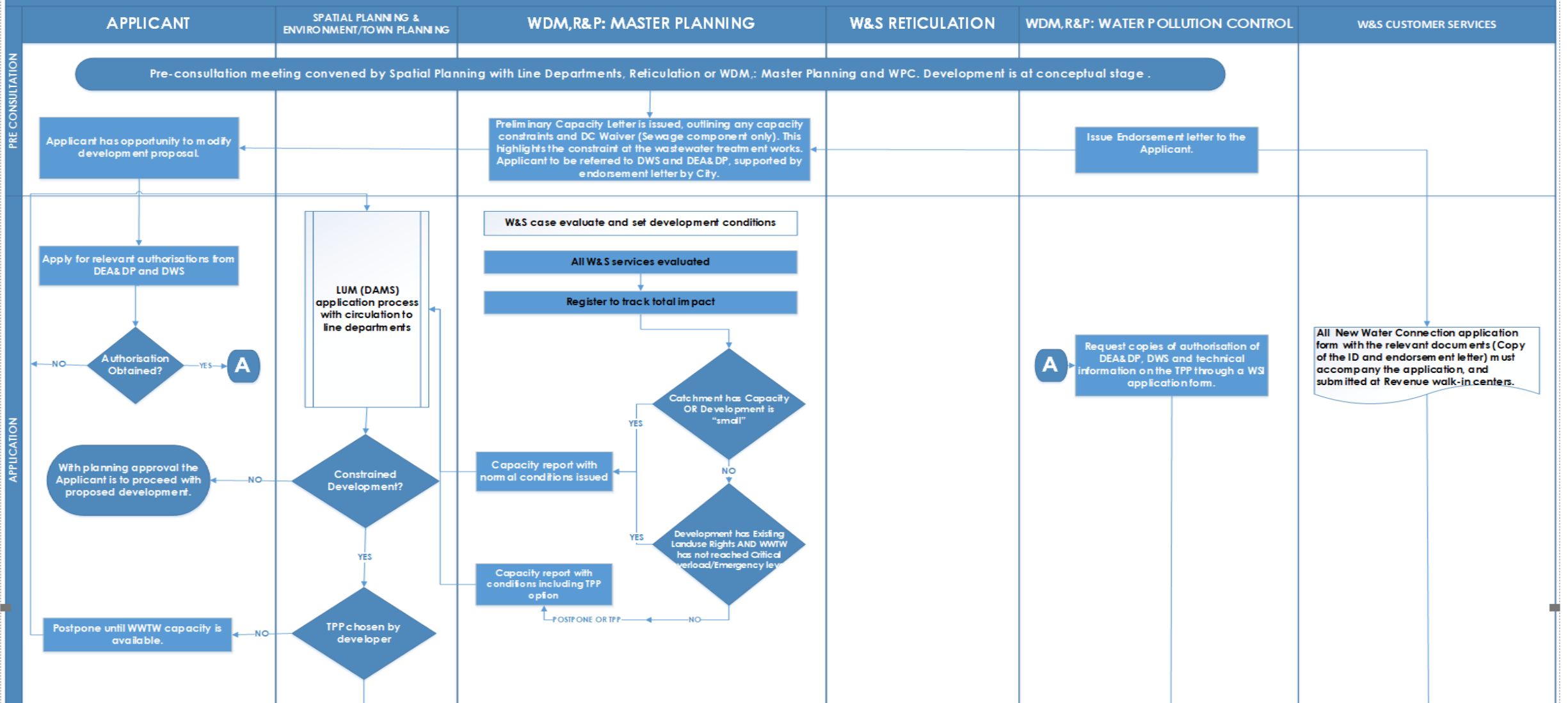
Normal connection made, Account master data updated

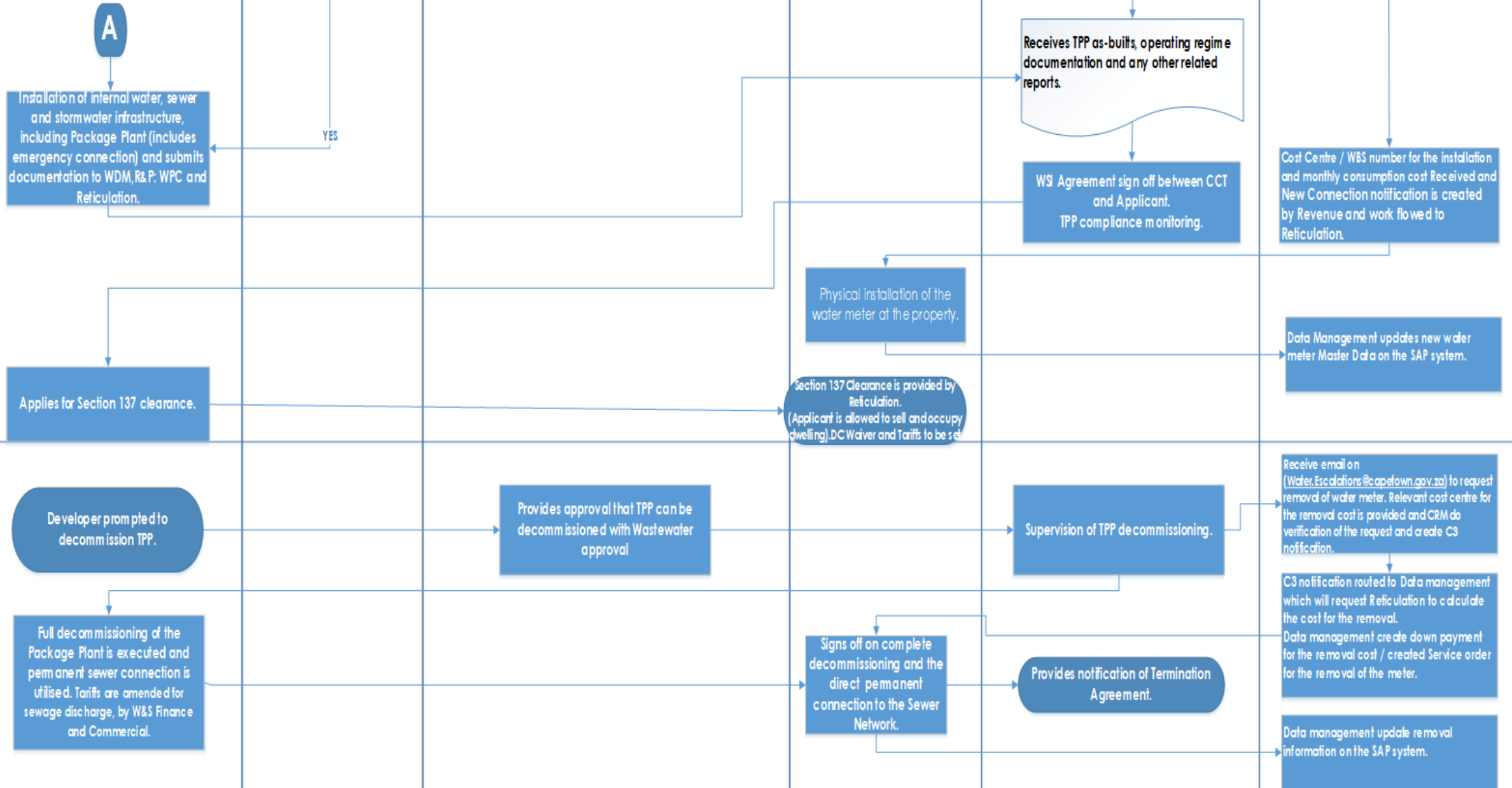
# Approval Process Commenting – Responsibilities in W&S

RESPONSIBLE UNIT	DEVT COORD.	LARGE LUM >1 Ha	SMALL LUM, 137 CLEARANCE	BUILDING PLANS ( COMM/IND)	ALL BUILDING PLANS
WDM Master Planning H/O Eng	Coordination, Master Plan, Standards, Strategy	Hydraulic & MP evaluation, Capacity reports	Coordinated input on request	Coordinated input on request	Coordinated input on request
RETIC Region Eng			Evaluation, Local contact, Clearance, DC's	Input on request	Input on request
BULK WATER H/O Eng		Input on request wrt BW			
WWT H/O Eng		Input on request wrt <b>WWT</b>			
WDM Region Inspectorate				(WPC) San. Bylaw compliance	(WI) Water Bylaw compliance

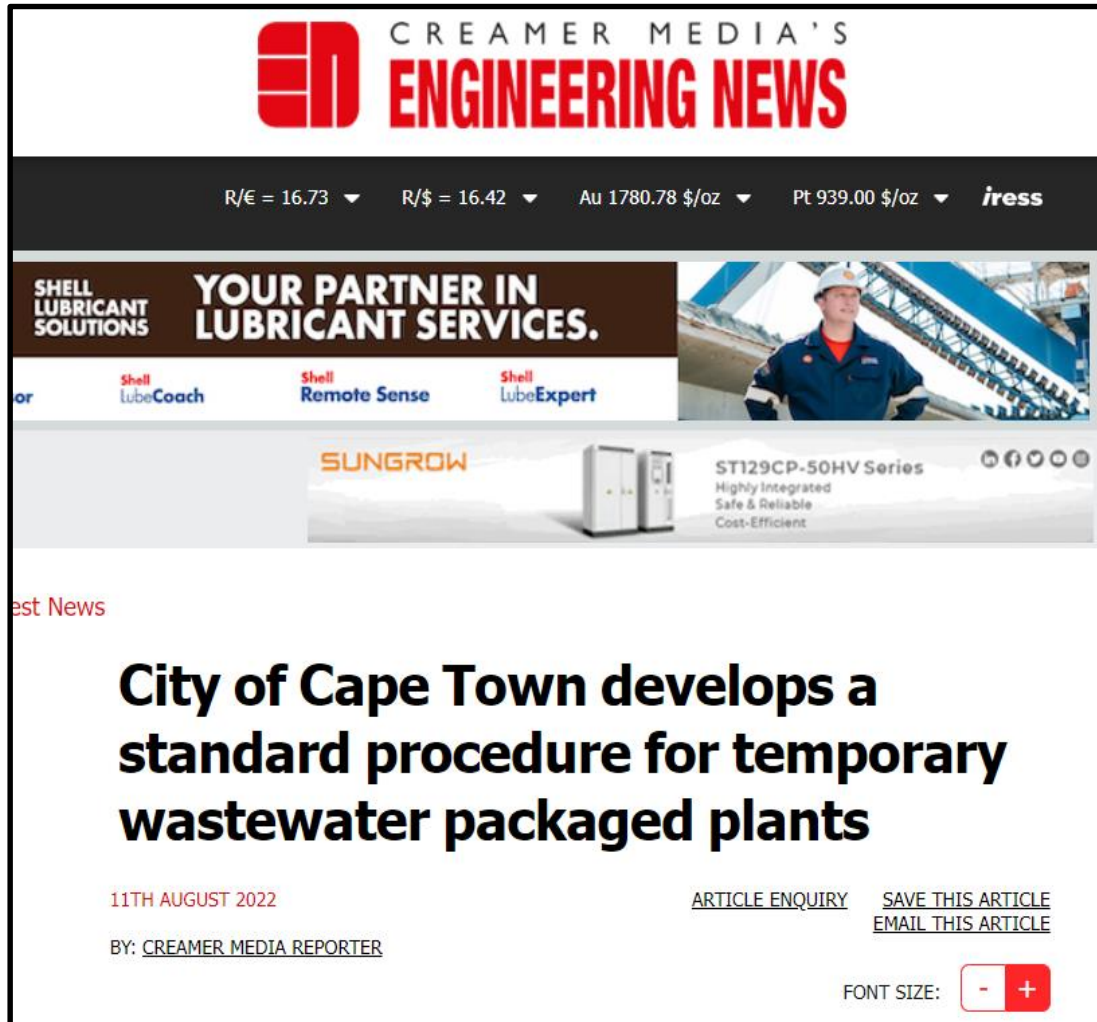
# SOP Process

## HIGH LEVEL PROCESS FOR TEMPORARY PACKAGE PLANT (TPP) INSTALLATION IN CONSTRAINED WASTEWATER TREATMENT CATCHMENTS





# Media Release - July 2022



The screenshot shows the top of a news article on the Creamer Media's Engineering News website. At the top, there is a navigation bar with the site's logo and name, along with currency and gold price information. Below this is a banner for Shell Lubricant Solutions, featuring a worker in a blue uniform and a hard hat. Underneath the banner are logos for Shell LubeCoach, Shell Remote Sense, and Shell LubeExpert. Further down, there is an advertisement for Sungrow ST129CP-50HV Series inverters, described as highly integrated, safe, reliable, and cost-efficient. The main headline of the article is 'City of Cape Town develops a standard procedure for temporary wastewater packaged plants', dated 11th August 2022, and attributed to a Creamer Media Reporter. There are links for 'Article Enquiry', 'Save This Article', and 'Email This Article', as well as a font size adjustment control.

CREAMER MEDIA'S  
**ENGINEERING NEWS**

R/€ = 16.73 ▼ R/\$ = 16.42 ▼ Au 1780.78 \$/oz ▼ Pt 939.00 \$/oz ▼ **iress**

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est News


## City of Cape Town develops a standard procedure for temporary wastewater packaged plants

11TH AUGUST 2022

BY: [CREAMER MEDIA REPORTER](#)

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FONT SIZE:



## City develops a standard procedure for temporary wastewater 'packaged plants'

22 July 2022

*The City of Cape Town wants to inform residents, developers and professionals in the built environment about a Standard Operating Procedure (SOP) which is geared toward applying for temporary package plants in areas draining into the Poitsdam, Zandvliet and Macassar Waste Water Treatment Works (WWTWs). The aim of the standard procedure is to facilitate sustainable development in areas where the City's wastewater treatment capacity is constrained. This creates a clear and transparent process.*



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# Media Release - July 2022: Some Q&A's

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## ***How do I apply to make use of the temporary package plant?***

A developer or built environment professional needs to make contact with one of the City's Development Management district offices. Contact details below

([https://resource.capetown.gov.za/documentcentre/Documents/Forms, notices, tariffs and lists/TDA DM - Contacts.pdf](https://resource.capetown.gov.za/documentcentre/Documents/Forms,_notices,_tariffs_and_lists/TDA_DM_-_Contacts.pdf))

Developers are encouraged to send an email to [PlanandBuilditRight@capetown.gov.za](mailto:PlanandBuilditRight@capetown.gov.za) to subscribe to the Development Management's online portal for more information, maps of the suburbs and areas that are being affected, the SOP and further updates.

## ***What help will City offer in securing national/provincial approvals?***

As this is a pioneering initiative within the City, we will facilitate the contact both nationally and provincially to fast-track approvals. Furthermore, the City will support the process and be part of any inspections and handovers throughout the process.

# Media Release July 2022 – Some Q&A's – Process explained

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## ***What will the process be?***

- Once applicants contact the district planning office, it will trigger a pre-application consultation with the City.
- City officials will guide the applicant on the process within the City.
- Thereafter the application is evaluated including for public participation.
- Where a temporary package plant is recommended, the City issues an endorsement letter supporting the temporary package plant.
- Developer should apply to external authorities (DWS and DEA &DP) for Water use and environmental approvals separately (with respect to the temporary package plant).
- The applicant enters into a Water Services Intermediary (WSI) agreement with the City to establish and ensure compliance monitoring.
- The Water Use and Environmental approvals will be part of the requirements to obtain the City's clearance for property transfer.
- The packaged plant can then be utilized.
- At the end of the agreement period when the City's wastewater capacity is available, the temporary package plant will be decommissioned and sewage can be discharged normally through the City's sewer network.





# Media Release July 2022 – Some Q&A's (continued)

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## ***When will the SOP be active?***

- The current process, in place since 2021, has since been updated and can be accessed at [Technical Advisory section](#) of the City's Planning Portal website page.

( <https://www.capetown.gov.za/Work%20and%20business/Planning-portal/Online-planning-and-building-resources/technical-advisories> )



# Sewer DC exemption for development approvals with TPP in constrained areas

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- After consideration by W&S PC and Mayco:
  - Council approved Exemption : C11/10/22 of 27 Oct 2022.
  - Called for by Mayor to enable constrained developments
  - Defines and exempts a specific category of development
  - By catchment areas of 4 WWTWs (available as GIS polygon layer and list of suburbs)
  - Where TPP has been allowed for as condition of development and only means of sewage discharge during LUM approval
  - LUM approval during the period WWT does not have capacity (varies by catchment, up to 2028)
  - Where TPP has been approved by National DWS + DEA&DP
  - Where installation and sustainable management plan of a TPP actually installed was cleared by City (Reticulation and WDM WPC)



# Sewer DC exemption for development approvals with TPP in constrained areas

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- W&S is carrying the cost via its EFF fund (tariff-income, all users pay)
- Discharge constraints
  - Neither solids nor effluent may be disposed of via sewerage system nor into stormwater network
  - Effluent may be discharged into waterway/water body only as per license approval
  - These constraints limit the potential viable sites where it will be possible to discharge
- Operation and water quality will be monitored by City (WDM WPC) while DWS remains regulating authority



# Sewer DC exemption for development approvals with TPP in constrained areas

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- Section 37 clearance, DC invoicing and DC payment process must allow for it
- SAP and financial Property Value Chain processes must maintain linkage in the Property Value Chain:



- All staff involved must be made aware
- Question: Issues that may arise in implementing an exemption???

# Conclusion

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- Version 1: SOP TPP - Completed and Approved
- Decommissioning process included
- DC waiver included
- Version 2: SOP TPP - Completed and Approved
- Media Release done
- Internal TPP Procedures and Work Instruction completed and workshopped. Further workshops with all development staff need to be undertaken to also cater for DC exemption and to make sure version 2 change w.r.t Existing Rights unencumbered has landed.

## Note:

- Small developments of less than 4kl/d will be allowed to **go ahead**.
- Developments that have previously been approved and have rights will **go ahead**.
- New medium to large developments will have to be postponed or will have to install temporary package plants (TPP).
- All (TPP) will have an emergency overflow to the sewer reticulation system in case of maintenance or failure.
- All (TPP) will have to be decommissioned once the upgrade at the particular WWTW is completed.
- All licensing and approvals will have to be obtained via DWS and DEA&DP.
- The City Policy and Regulation Branch of W&S will give guidance to developers on the process.
- No treated effluent and sludge will be allowed to flow to the sewer network.





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**Thank You**

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