



DATE: 17 JUNE 2024

REPORT TO: URBAN WASTE MANAGEMENT PORTFOLIO COMMITTEE

1. ITEM NUMBER **UWM 18/09/24**

2. SUBJECT

**URBAN WASTE MANAGEMENT DISPOSAL BRANCH – BELLVILLE COMPOST
PLANT BUSINESS PLAN**

ONDERWERP

**TAK STEDELIKEAFVALBESTUUR: WEGDOENING – SAKEPLAN VAN
BELLVILLE-KOMPOSAANLEG**

ISIHLOKO

**ICANDELO LOLAWULO LWENKUNKUMA YEDOLOPHU: UKUL AHLWA
KWENKUNKUMA – ISICWANGCISO SOKUSEBENZA SEZIKO LOKWENZA
UMGQUBA LASEBELLVILLE**

Enter LSU Number Here

3. DELEGATED AUTHORITY

In terms of delegation

This report is for NOTING BY

- Committee name** : Urban Waste Management
- The Executive Mayor together with the Mayoral Committee (MAYCO)
- Council

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4. DISCUSSION

4.1 Background and legal status

The Bellville South Compost facility was established in 1972. Its establishment predates the Environmental Conservation Act, 73 of 1989 (ECA). In terms of Section 82 of the National Environmental Management: Waste Act, 59 of 2008 (NEM:WA), the facility does not require a permit/licence to continue to operate until requested by the Minister.

The City of Cape Town (CCT) has previously advertised for an expression of interest requesting suitable proposals for the future use of the Bellville South Composting Facility. At this time, there were no favourable bids and it the activity continued. If the facility is upgraded, it will require a Waste Management Licence in terms of NEM:WA or registration in terms of Norms and standards depending on nature of the activity and whether it triggers listed activities within NEM:WA.

A degree of separation of some of the deleterious material such as metals, glass and plastic takes place, but in the end a low-quality soil conditioner is produced. The soil conditioner does not meet the legal requirements or generally accepted standards for it to be classified as compost.

During June 2020 to August 2020, the BCP produced approximately 224 tonnes per month of soil conditioner (Internal audit, September 2020). The BCP sells the soil conditioner to farmers at nominal prices

4.2 Strategic intent and future operations

The Bellville Compost Plant is only compost facility owned by the City and has been manufacturing compost for many years. During operations, municipal solid waste that has a high organic content will be sent to the plant and put through the facility. Below the figure notes the various legal requirements relating to organic waste management

Operation Phakisa: Chemicals and Waste Economy

- Promote waste beneficiation
- Generate opportunities from waste resources for the creation of jobs/opportunities in new and existing markets
- Reducing waste to landfill by 75% industrial waste and 50% municipal waste by 2023
- 50% of Household participating in S@S
- Zero Sewage sludge and zero meat production waste to landfill by 2023.

Provincial Government Second Generation IWMP

- Objective and Targets
 - Divert 50% of organic waste from landfill by 2023
 - Achieve 100% organic waste from landfill diversion by 2027
 - Regionalisation and collaborative approaches should be taken with regards to organic waste minimization.

Coastal Park – Waste management licence - 2018



19.1. The information within the Organic Waste Diversion Plan must:

19.1.1. provide a status report of current organic waste sources and volumes disposed at municipal WDFs, and current rules and procedures of organic waste diversion from WDFs, and

19.1.2. set annual targets and identify processes from 2018 that will be implemented to meet these targets for the diversion of organic waste from municipal WDFs, in order to reach a 50% diversion by the year 2023 and 100% diversion by the year 2027.

Figure 1 – Legal context – organic waste

With the above national directives to divert all organic waste from landfill this facility will be combined with the Bellville Refuse transfer station to ensure that the diversion of organics can be increased but also to provide a better quality compost from separated organics at source.

In order to achieve the objectives for organics diversion, the facility will require additional capital investment to restore and upgrade the facility to ensure compliance with the Norms and Standards for composting. While feasibility is being undertaken, the plan is to operationalise the plant and to function as before and contribute to the diversion targets for the City.

Decentralised model as per the subjoined has been supported and approved as per the Sector plan report. BCP will therefore be part of the composting of organic waste since there have been space constraints at Athlone Refuse Transfer Station (ARTS). The transfer of that budget will therefor ensure that the required capital is available for the project.

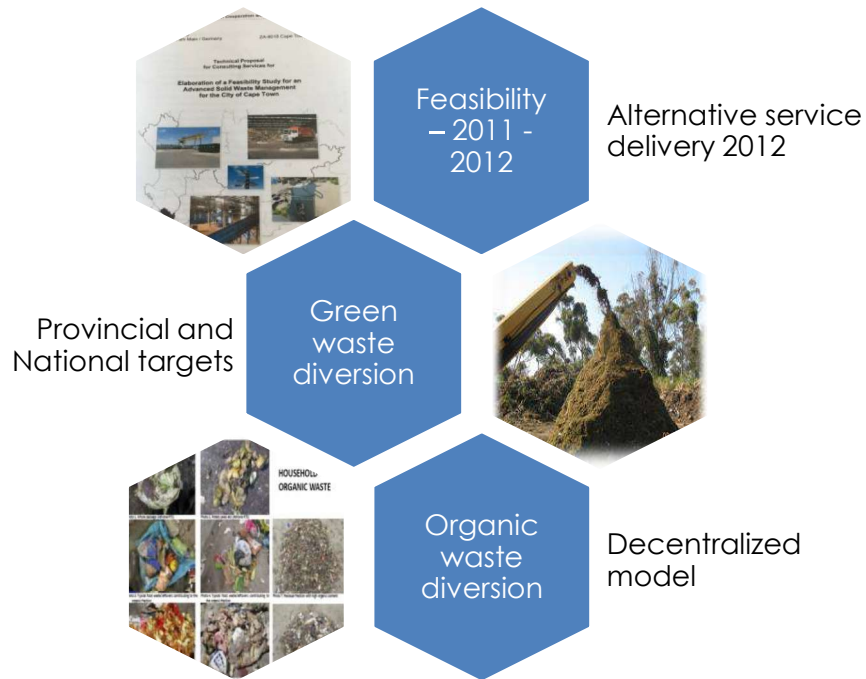


Figure 2 Waste legal requirements for organics

It is imperative that the decentralised model be shared and consideration be given to these options when future planning takes place.

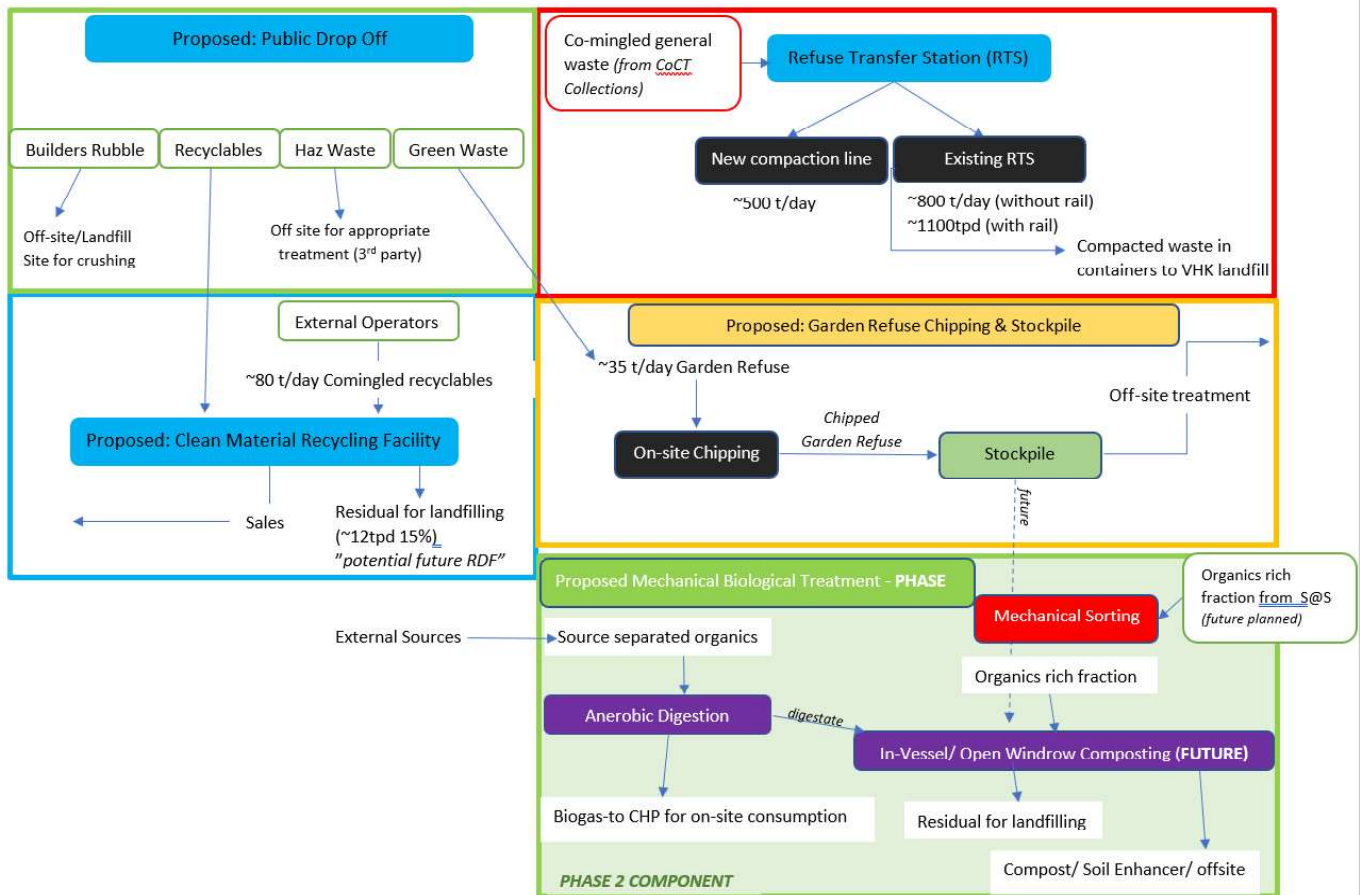


Fig. 2 Process flow and capacities of the proposed upgraded and extended Athlone Transfer Station (ARTS) – showing phase 2 (planned MBT for BCP)

The Bellville Compost plant is part of the waste sector plan and maintaining the facility has major benefit in diversion of organics and accelerate trialing new ways or diverting organic material in other areas of our business.

4.3 Organic waste trials – Waste Markets – Noel Johannesen

2024/25 Organic waste diversion trial

Project Summary

Brief background:

This proposed project is in direct response to the landfill ban on organic waste instituted by the Western Cape DEA&DP. It follows onto the learnings from Langa's Phases **1**

(2019/20) & 2 (2021/23), as well as the 5-Area Organic waste diversion project (2022/23). In all three of these organic waste diversion projects, it was proven that residents and fruit and veg traders will participate if they receive suitable waste containers and are linked to either a drop off option or a regular OW collection service.

Proposed project 2024/25

As a start, two project areas are being proposed: viz. Langa and Khayelitsha (Mandela Park).

Each area will have a team of five personnel, they will offer organic waste collection services to a target population of 2500 households; this includes provision of the relevant S@S tools (buckets, bokashi, compostable bags, etc) and will be linked to a weekly OW collection service.

They will collect the OW from participating households using a bush barrow (see images below), decanting the waste into bigger 25L buckets and then deliver it to the aggregation points. Each aggregation point will have a 6m long shipping container in which to temporarily store the OW in 20L buckets.

The project is scheduled to start on 2 May 2024 and conclude 28 April 2025.

Jobs Created: 15

- o Area workers - 10 (8 Workers/ 2 Team Leaders)
- o Logistics team – 3 (2 Workers and 1 Code 10 Driver)_

The expected diversion

It is expected that the project diversion will be slow at first with about 1-2 ton diverted for the first 3 weeks per area.

But at its height, we are aiming for approximately 5-8 ton a week per area = **approximately 60 ton a month in total**

Communication & Activations/ mobilisation

The entire team, but in particular the team leader and community ambassador will engage the community leaders, counsellors and attend community meetings to activate the community. Door to door activation will be done by each team, which will be supported by project pamphlets handouts.

Logistics tools:**1. Bush Barrows****250 Series BUSHBARROW**

The 250 Series BUSHBARROW is designed as a do-it-all, general purpose wheelbarrow. With a 250 kg capacity rating and versatile loading bed, this barrow can tackle any transport task.

Features summary:

- 250 kg capacity
- 290 liter volume (10.24 cubic feet)
- Extra-long handles for added leverage
- Robust steel frame and welded joints
- Large diameter wheels and tires traverse difficult terrain
- Simple design and standard components that can be serviced anywhere

The 250 series is offered in two cargo box variations:

- Enclosed cargo box (with sheeting)
- Open cargo box (without sheeting)

2. Logistics vehicle**Drop-off S@S Organic Project - Phase 2 in planning – Lanese Hesselman**

Resident drop off separated organic waste in buckets ranging from 5L to 20L. The depot the transfers the bulk organics to a facility for further processing.

Green waste is therefore also chipped and with the organic this is processed for composting.

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5. Way Forward

The target is to divert as much as possible organic waste from landfill and will need to market the product and improve quality to ensure offtake of stock. The maximum output from site will be determined by the space available for storage of the compost and hence the need to combine the two facilities into one Bellville Complex. The Disposal branch will undertake the process to convert the facility to norms and standards.

This facility currently has adequate staff to operationalise the site having staff currently for oversight, on site management, operators for compost turning and loading and facility operations and cleaning. The facility has access to Front end Loaders for turning of compost, tipper trucks for movement and delivery of compost, hook lifts for disposal of tailing waste and has made application for capital to replace the compost turner at the facility.

The operational branches are working closely with the capital implementation unit to ensure the planning and budgets can be aligned to realise success with the projects. A set-back that has been encountered is that Water and Sanitation requires a portion of the building housing the sorting conveyor, mill, magnetic separator and bagged compost storage area. The existing facility is still part of their property and we are therefore in discussion on how to proceed given that a portion of the site will not be accessible.

In the interim, no further work and expenses are being incurred.

5. RECOMMENDATIONS

It is recommended that the performance monitoring report BE NOTED.

AANBEVELINGS

Daar word aanbeveel dat daar van die sakeplan KENNIS GENEEM WORD.

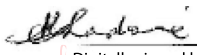
IZINDULULO

Kundululwe ukuba MAKUQWALASELWE isicwangciso sokusebenza.

ANNEXURES

COPY OF QUOTATION FOR ELECTRICAL REPAIRS

FOR FURTHER DETAILS CONTACT

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DIRECTORATE	Urban Waste Management	FILE REF NO	
SIGNATURE : DIRECTOR	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Rustim Keraan <small>Digitally signed by Rustim Keraan Date: 2024.08.29 11:43:10 +02'00'</small> </div>	 Margot Ladouce <small>Digitally signed by Margot Ladouce Date: 2024.08.27 16:10:40 +02'00'</small>	

EXECUTIVE DIRECTOR

NAME

COMMENT:

DATE

SIGNATURE

Phila Mayisela	Digitally signed by Phila Mayisela Date: 2024.08.29 12:56:39 +02'00'
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The ED's signature represents support for report content and confirms POPIA compliance.

LEGAL COMPLIANCE

- REPORT COMPLIANT WITH THE PROVISIONS OF COUNCIL'S DELEGATIONS, POLICIES, BY-LAWS AND ALL LEGISLATION RELATING TO THE MATTER UNDER CONSIDERATION.
- NON-COMPLIANT

NAME

COMMENT:

DATE

SIGNATURE

Joan- Mari Holt	Digitally signed by Joan-Mari Holt Date: 2024.08.29 15:11:05 +02'00'
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For information.



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

URBAN WASTE MANAGEMENT DISPOSAL BRANCH – WASTE SERVICES

ORGANIC WASTE TRIAL – NOEL JOHANESSEN AT BELLVILLE COMPOST
PLANT

18 JULY 2024

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PROGRESS WITH ORGANIC WASTE TRIAL – Bellville Compost Plant

Background and authorisation

- The trial commenced on the 27 May 2024 due to procurement of various items.
- Disposal branch registered the activity with DEA&DP, allowing the composting to take place without a composite liner, subject to compliance the “General duty in respect of waste management”, as per section 16 of NEM:WA (the NEMWA equivalent of section 28 of NEMA).

Purpose

- To conduct a trial of rudimentary process and enable to beneficiation of food waste and garden greens into composting.

Trial implementation

- BCP received a small load of less than 6 tonnes (3.63ton Langa and 1.88 ton Mandela Park – Khayelitsha) of organic waste at the BCP during the month of June.
- Weekly deliver of buckets (20L) (in bunches of 270 units at a time) we distributed. This also results in weekly collection of the biomass for composting.
- Volumes were quite low and this is attributed to the season (rain) as well as awareness raising.
- Green chipped material (10m³ 2/3 times a week) was used.
- The compost has been maturing for about 6 weeks now and will be inspected and tested at 8 weeks.

Way forward/improvements

- One of the challenges is the drying out of the compost and hence an enclosed system would be better.
- Chipped material was too large and must be maintained at 20mm as per tender.
- Look at possibility of using 140L wheelie bins rather than the 20L buckets. This will save time significantly since it takes about 6 hours to empty the buckets.
- Water and Sanitation discussion – requires part of the compost plant erf (which impacts the building) for a new inlet works. No further work or expenditure.

PHOTOGRAPHIC ACCOUNT OF PROCESS



1. Prepare area for receipt of food waste



2. Delivery of 20L food waste buckets



3. Application of food waste to green chipped material prep area.



5. Compost matures in this windrow for 8 weeks.



4. Application of additional food waste to greens





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Thank You

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