

# Solid Waste Management Proposal

Ward 2

4<sup>th</sup> Revision (Précis Document)

Document produced by Derek Searle Crabtree



ward 2 forum  
SERVING THE COMMUNITY TOGETHER

## EXECUTIVE SUMMARY

This **Integrated Waste Management Plan (IWMP)** is being proposed by The Ward 2 Forum to the Theewaterskloof Municipality to address the challenge of waste management in the Ward 2 Area, home to some 17 000 people.

A IWMP is a statutory requirement of the new National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) effective 1 July 2009. The primary objective of the Act is to transform the current methodology of waste management, from the traditional collection and disposal, to a more sustainable practice which focuses on waste avoidance and environmental sustainability. It is thus proposed by the Ward 2 Forum that a Waste Management Pilot Project (WMPP) be implemented in the Ward 2 Area.

The Ward 2 area is noted for its natural beauty and floral kingdom particularly the Renosterveld, as Greyton and Genadendal are part of the Central Rûens Renosterveld.

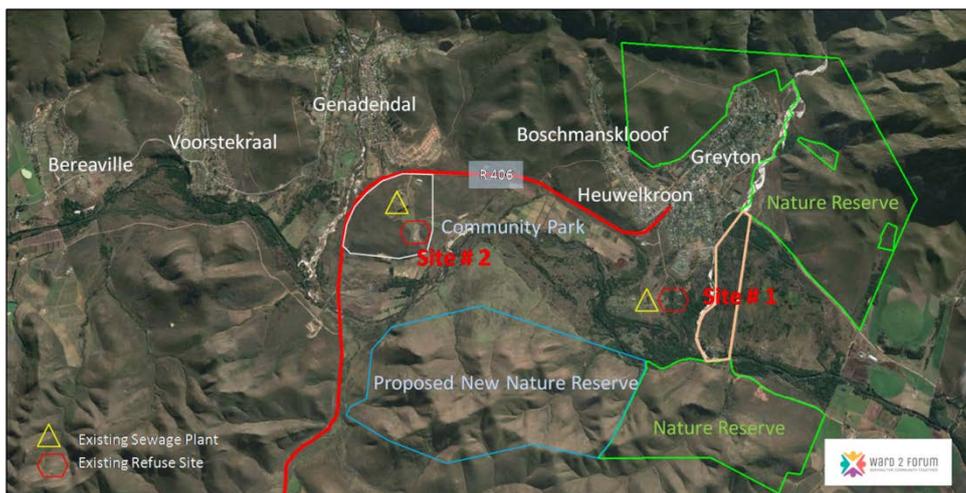
The Ward 2 area constitutes part of the greater Theewaterskloof Municipality region and comprises an area of 581.76 km<sup>2</sup> with an estimated population of 17,381, which in turn makes up a total of 3,651 households.

## CURRENT WASTE MANAGEMENT FACILITIES - WARD 2

Two refuse landfills are being operated in the Ward 2 area, albeit that both sites are unregistered and deemed illegal. Both these facilities are to be decommissioned in the future.

**Site # 1:** situated on the Greyton commonage and is primarily used as a dump site for organic (garden) and limited builders rubble.

**Site # 2:** situated on farm 39 Greyton, Genadendal, this landfill site is utilised for the dumping of all household refuse for the whole ward including farms of the area. Limited organic (garden) refuse and the majority of builders rubble generated in the area.



## POLICY AND LEGISLATION

Whilst existing legislation on waste management in South Africa is generally fragmented, diverse and ineffectively administered. The environment is a cross-sectional matter and it is

therefore important that co-operation between government, of all levels, and the local communities are established to create effective and adequate mechanisms to ensure the effective implementation of waste management.

The Constitution of South Africa (Act 109 of 1996) protects everyone's right to an environment that is not harmful to a person's health and well-being. Furthermore, the constitution also describes the role and responsibilities of Local Government which involve the objectives in Section 152, namely:

- to promote social and economic development.
- to promote a safe and healthy environment.

The Constitution further stipulates under the powers and functions of Municipalities, specifically Part B of Schedule 5 relating to Solid Waste Management:

- Refuse removal
- Refuse dumps
- Solid waste disposal

The Waste Act prescribes the following responsibilities to Municipalities:

- the minimisation of the consumption of natural resources;
- the avoidance and minimisation of the generation of waste;
- the recovery, re-use and recycling of waste;
- the treatment and safe disposal of waste as a last resort;
- ensuring that people are aware of the impacts of waste on health and the environment.

The Ward 2 Forum Plan is cognisant of the legislative stipulations the various applicable sections of the National Environmental Management Act, National Water Act, Atmospheric Pollution Prevention Act, National Waste Management Strategy and the Waste Act.

### **EXISTING WASTE VOLUMES (WARD 2 DATA)**

It has been understood that the Greyton facility will be supplied with all the waste collected by the municipality from the whole of Ward 2 (Bereaville is about 17 km away). Based on extrapolation of the 2011 Census figures, the Ward 2 population is about 9000 people, producing about 6.7 tons of waste per day (using IWMP data). Further research by the Ward 2 Forum suggests a significantly higher population of 17,200:

<b>Demographic</b>	<b>% of Population</b>	<b>Usage Rate</b>
High income	10% of total	1.24 kg/person/day
Middle income	30% of total	0.78 kg/person/day
Low income	60% of total	0.35 kg/person/day

This gives a total of about **10 tons** of domestic and commercial waste per day.

## **BACKGROUND INFORMATION**

**The Integrated Waste Management Plan (IWMP)** of 2014 has stated objectives:

- To develop communications to inform and educate all communities, to motivate public awareness and acceptance of TWKM’s waste management policies;
- To monitor amounts of waste streams to assess performance in avoiding and minimising waste generation, and to apply this to the roll-out of similar services in the rest of TWKM;

It was recommended that the next stage of the process is the consultation process with the public and the development of detailed action plans and key performance indicators for future monitoring and evaluation of the municipality’s successes in waste management service delivery.

The IWMP contains data on current amounts of waste collected by the municipality but is incomplete and often confusing. It excludes any analysis of Boete Bantam’s recycling project based in Genadendal.

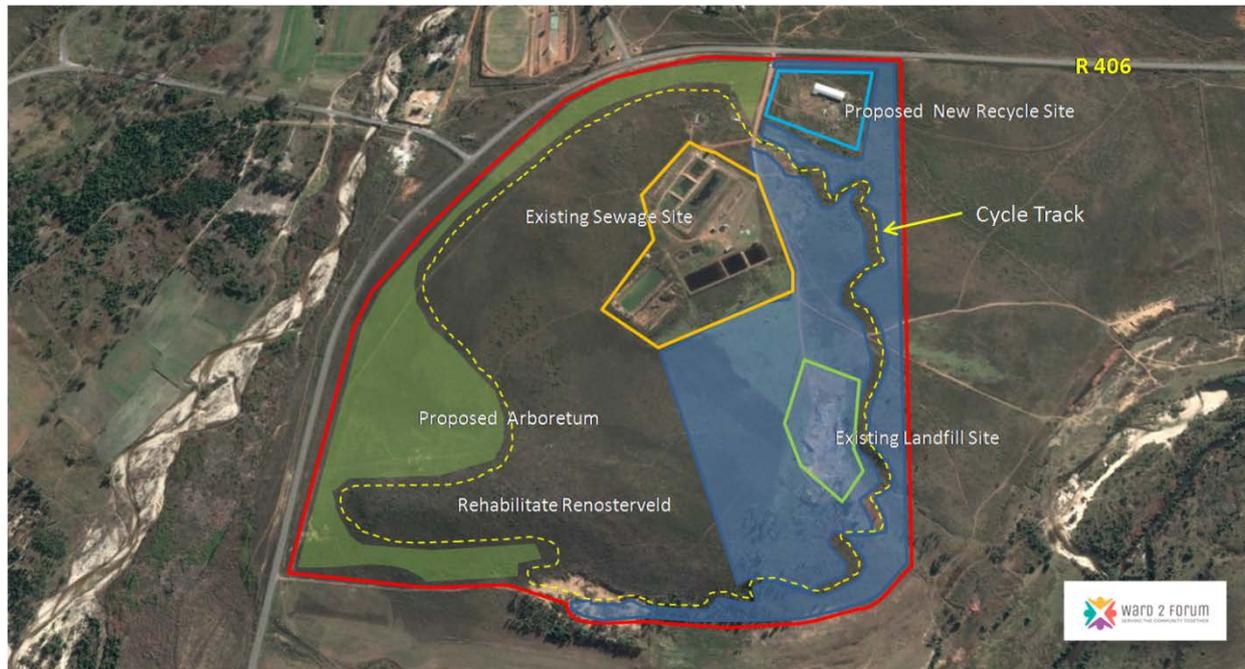
The data for Ward 2 shows a variance in the IWMP between Table 2-1 (page 23) and Tables 2-13 & 2-16 (pages 44-45):

<b>Data source</b>	<b>Description</b>	<b>Amount</b>	<b>Comparison at 330 kg/m<sup>3</sup> average</b>	<b>Difference</b>
Table 2-1	Waste for Ward 2	1525 tons/year	90 m <sup>3</sup> /week	
Table 2-13 Table 2-16	Waste for Genadendal Waste for Greyton	435 m <sup>3</sup> /week 25 m <sup>3</sup> /week	460 m <sup>3</sup> /week	+ 411%

We thus assume that the previous data would have been estimates as these are significant differences, which creates doubts concerning the validity of the raw data and/or its interpretation.

## WARD 2 FORUM PROPOSAL

- The proposal is that land made available by the Community is utilised for the purposes of establishing the Ward 2 Drop-off, sorting and recycling facility. The area is ideally situated, central positioned in the Ward to serve all communities and has existing infrastructure to facilitate all the requirements without huge financial implications.



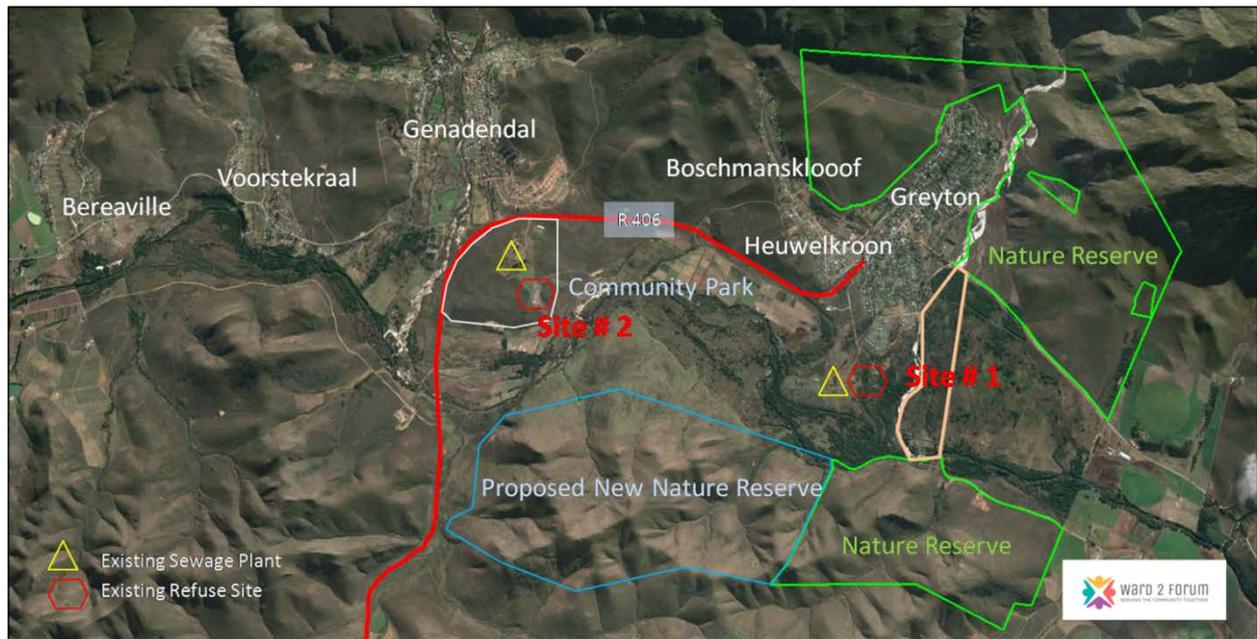
Requirement to have the drop-off positioned for ease of access is catered for as the site is positioned directly adjacent to the R 406. Enough gradient in the topography allows for the bins to be out of site and drop-off drive way to be at the same level as the existing R 406 road surface.

Land allocated by the Genadendal community is earmarked by the community as the area to be rehabilitated catering for additional facilities for the community and includes the development of a Arboretum, Cycle track (sponsored by Cape Epic) and a area to re-establish the Central Rhuen Renosterveld floral system. The area will be a community project and will be known as the Park of Unity.

## MOTIVATION

As part of the Ward 2 Forum vision to create a Biome that would include the incorporation of existing Nature Reserves and additional areas to be proclaimed conservation areas, the establishment and consolidation of a controlled Waste Management infrastructure within the Ward.

The aerial picture below indicates the extent of the Biome which will ensure the protection of specific areas around Greyton and Genadendal which has been identified as sensitive areas that require conservation.



## PERCEIVED CONSTRAINTS

The proposed land for the alternative solution is on the Community Land (Farm 39) is recognised as a perceived challenge due to the unsure nature of ownership. To alleviate this challenge the community of Genadendal are prepared to enter into a contractual agreement to ensure a legal framework within which the proposed development of a Drop-off, Recycling and Sorting facility will be constructed for the use of all within the Ward 2 area.