

# HESSEQUA

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SBW657

H S Visser/lc

2 April 2020

**Attention: Mr. Devilliers Neethling**

ELLENSRUST PTY (LTD)

STILBAAI

6674

Dear Sir

## **CONFIRMATION OF BULK SERVICE AVAILABILITY FOR THE DEVELOPMENT OF THE PROPOSED RETIREMENT VILLAGE ON A PORTION OF ERF 657, STILBAAI WEST**

1. The letter from the Department of Environmental Affairs and Development Planning dated 10 March 2020 refers.
2. Below our comments as per their request regarding the services for the retirement resort development in Stilbaai. This serves as additional comments to our letter from the 24<sup>th</sup> of February 2020.
3. Herewith a broad overview of the civil services that will have a direct impact on the development:

### **3.1 WATER:**

There is an existing 150mm asbestos water line adjacent to the erf whereby the proposed development can connect to.

#### **a) Potable water supply**

According to the updated sewer and water masterplans of 2019 the current annual average water demand in Stilbaai is 2171 kl/day and the current water allocation is 3923 kl/day.

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The total existing capacity of the municipal potable water supply is almost double the amount required. The exact sustainable yield of the fountains, springs and boreholes need to be determined and thus an overall water supply allocation could only be supplied. Below is a short summary of the capacity of the existing sources:

Stilbaai is supplied with raw water from 2 boreholes (Platbos and Attie Nel boreholes), 4 fountains (Olienhoutfontein, Grootsandfontein, Palinggat and Hawefontein) and the Olive Grove dam. Water quality from the Palinggat spring and the Platbos borehole sources is poor and the Platbos borehole is currently not in use. Raw water from the Olive Grove dam, which is filled with water from the Melkhoutfontein, is purified at the Olive Grove WTP next to the dam. The WTP has a capacity of 5 270 kℓ/d. Purified water from the WTP is then pumped to the Stilbaai East and Dunes reservoirs in Stilbaai East and the Olienhoutfontein pump station (PS) in Stilbaai West. From the Olienhoutfontein pump station water from the Olienhoutfontein (situated next to the pump station) and the Olive Grove WTP is pumped to the Platbos reservoirs. Water extracted from the Grootsandfontein fountain is pumped to the Toerelle and Platbos reservoirs. The Platbos reservoirs are also supplied with water from the Platbos borehole, situated close to the reservoirs. Bulk water from the Attie Nel borehole and the Harbour fountain is pumped directly into the Stilbaai reticulation system. The current water allocation for Stilbaai from all sources is 1 412 Mℓ per year.

The existing capacity of the reservoirs in Stilbaai

Still bay East Dam – 0.6 ML  
Duine Dam – 1.2 ML  
Preekstoel – 0.6 ML  
Toerelle – 0.5 ML  
Platbos – 6.8 ML  
Stilbay West res – 0.6ML

No additional expansion has been approved or budgeted for in the next financial year as the capacity is currently sufficient to supply the area as well as the proposed development.

Seven additional boreholes with a sustainable yield of 2507 m<sup>3</sup>/d has been drilled and to be connected to the water reticulation system in the 2020/21 financial year that will increase the water allocation to the Stilbaai west area.

Borehole number	Sustainable Yield (l/s @ 24hr)	Volume abstraction (m <sup>3</sup> /d)	Critical water level (mbgl)	Static water level (mbgl)	Pump depth (mbgl)	Borehole depth (mbgl)	Elevation (mamsl)
<b>STILBAAI</b>							
Deep borehole	6	518.4	115	13.85	130	175	85
BH39	3	259	11	3.25	12	13	25
BH46B	1.55	134	11	3.32	12	16	25
BH46C	1	86	11.55	3.85	12	16	25
<b>TOTAL</b>		<b>998</b>					
<b>MELKHOUTFONTEIN</b>							
BH4	7	605	15	2.58	18	40	37
BH36	7	605	15	3.85	18	43	37
BH01B	3.47	300	21	11.85	22	24	49
<b>TOTAL</b>		<b>1509</b>					

### 3.2 SEWERAGE:

The present AADD for the existing erven in the Stilbaai system that contributes to the domestic sewer flow is 2978 kl/d which includes unaccounted -for -water(UAW). The PDDWF for the Stilbaai system is estimated at 2074 kl/d or roughly 70% of the AADD. Approximately 73% of this is a direct contribution from connections to the sewerage system and the 27% is contributed by groundwater infiltration.

After the currently upgrade, the facility will be able to cater for ± 3.8M//d which is deemed roughly equal to the 2018/2019 seasonal peak contributing population of up to 17,250 people (completed by end of June 2020).

No additional expansion of the sewer or WWTW capacity has already been approved however the municipality is in the process to upgrade the existing sewer network. The municipality is in the process to appoint a consultant engineer to upgrade the WWTW to be able to cater for 12 ML/d.

### **3.3 ELECTRICITY:**

A new electrical substation (SS3) has been constructed within 200m from the development site and will serve as the main power source to the development. There is a 120mm<sup>2</sup> x 3 vein cable on the western boundary of the site whereby the proposed development can connect to. The capital contribution for the development's electricity needs will be used to make the connection between the new SS3 Substation and the overhead line in Oester Avenue to ensure that the proposed development is connected to a circular feeder. The municipality will make this connection between the substation and the overhead line. The developer will be responsible for the connection to the site. The Current Distribution Capacity is 9MVA.

### **3.4 SOLID WASTE:**

Two sites will handle the waste generated in Stilbaai, namely Melhoutfontein (49475 m<sup>2</sup>) and Steynkloof (55990m<sup>2</sup>) which is situated in Riversdale. All the sites under consideration are classified G:C: B- where the "G" classification refers to the type of waste that may be received at the site, which in this case is "general waste". General waste is the description given to all domestic waste and all wastes generated from commercial, business and industrial activities that are not hazardous or toxic. Pharmaceutical and medical wastes are also not part of general waste. The "C" classification refers to a volume of waste disposed of less than 25 tonnes per day and the "B-" indicates that the site should not generate significant leachate because of the climate. This climatic water balance is calculated in accordance to the Minimum Requirements (2nd Edition, 1998) Clause 3.4.2. No leachate management systems are required for B- sites per Minimum Requirements. The expected airspace for both sites is between 10 and 15 years. The consultants are currently in the process to determine the airspace at each site.

No additional applications were submitted for expansions as the regional waste site will be used once the airspace limit has been reached.

We trust that this information will be sufficient to make an informed decision regarding the proposed development.

Yours faithfully



**HS VISSER Pr. Plan  
DIRECTOR DEVELOPMENT PLANNING**