



## water & sanitation

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA

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### LICENCE IN TERMS OF CHAPTER 4 OF THE NATIONAL WATER ACT, 1998 (ACT NO. 36 OF 1998)

I, **Margaret-Anne Diedricks**, in my capacity as Director-General in the Department of Water and Sanitation, acting under authority of the powers delegated to me by the Minister of Water and Sanitation, hereby authorise the following water use in respect of this licence

SIGNED: 

DATE: 18 December 2015

LICENCE NO: 18/K30B/FG/4081

FILE NO: 27/2/1/K230/102/1

1. Licensee: George Local Municipality  
Postal Address of applicant: P O Box 19  
GEORGE  
6530

2. Water Use

- 2.1 Section 21 (f) of the Act: Discharging waste or water containing waste into a water resource through a pipe, canal, sewer or other conduit, subject to the conditions set out in Appendices I and II

3. Property on which the use will be exercised

- 3.1 Erf 464, George RD

4. Registered owner of the Property

Table 1: Summary of registered owner of the Property

Water Uses	Property Description	Title Deed No.	Co-ordinates	Property Owner
21(f)	Erf 464	T39662/2001	S 34°06'49.7" E 22°05'56.1"	George Local Municipality

5. Licence and Review Period

- 5.1 This licence is valid for a period of twenty (20) years from the date of issuance and may be reviewed every five (5) years.

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## **6. Definitions**

“Any terms, words and expressions as defined in the National Water Act, 1998 (Act 36 of 1998) shall bear the same meaning when used in this licence”.

“The Department” means the Department of Water and Sanitation.

“The BG-CMA” means the Breede-Gouritz Catchment Management Agency.

“The Responsible Authority” means Chief Executive Officer: BG-CMA, Private Bag X 3055, Worcester, 6849.

## **7. Description of the activity**

This licence authorises George Local Municipality to discharge maximum of 4 015 000 m<sup>3</sup>/a waste water from Gwaing Waste Water Treatment Works (WWTWs). The existing Gwaing Waste Water Treatment Plant & associated activities are located on Erf 464. The plant and its associated activities are situated within the Breede-Gouritz Water Management Area, in quaternary catchment K30B.

## APPENDIX I

### General conditions for the licence

1. This licence is subject to all applicable provisions of the National Water Act, 1998 (Act 36 of 1998).
2. The responsibility for complying with the provisions of the licence is vested in the Licensee and not any other person or body.
3. The Licensee must immediately inform the Responsible Authority of any change of name, address, premises and/or legal status.
4. If the property/ies in respect of which this licence is issued is subdivided or consolidated, the Licensee must provide full details of all changes in respect of the properties to the Responsible Authority within 60 days of the said change taking place.
5. If a Water User Association is established in the area to manage the resource, membership of the Licensee to the Association is compulsory.
6. The Licensee shall be responsible for any water use charges and/or levies imposed by a Responsible Authority.
7. While effect must be given to the Reserve as determined in terms of the Act, where a lower confidence determination of the Reserve has been used in issuance of this licence, the licence conditions may be amended should a higher confidence reserve be conducted.
8. The licence shall not be construed as exempting the Licensee from compliance with the provisions of any other applicable Act, Ordinance, Regulation or By-law.
9. The licence and amendment of this licence are also subject to all the applicable procedural requirements and other provisions of the Act, as amended from time to time.
10. The Licensee must conduct an annual internal audit on compliance with the conditions of this licence. A report on the audit shall be submitted to the Responsible Authority within one month of the finalization of the audit.
11. The Licensee must appoint an independent external auditor to conduct an audit every two years on compliance with the conditions of this licence. Both these audits may be subjected to external audit.
12. If the water use described in this licence is not exercised within 3 years of the date of the licence, the authorization will be withdrawn. Upon commencement of the water use, the Licensee must inform the relevant authority in writing.
13. Flow metering, recording and integrating devices shall be maintained in a sound state of repair and calibrated by a competent person at intervals of not more than two years. Calibration certificates shall be available for inspection by the Responsible Authority or his representative upon request.
14. Any incident that causes or may cause water pollution shall be reported to the Responsible Authority or his/her designated representative within 24 hours.



## APPENDIX II

**Section 21(f) of the Act: Discharging waste or water containing waste into a water resource through a pipe, canal, sewer or other conduit**

### 1. QUANTITY OF WASTEWATER TO BE DISCHARGED

- 1.1 This licensee authorises the discharge of maximum quantity of four million and fifteen thousand cubic metres per annum (4 015 000 m<sup>3</sup>/a) of treated effluent into Gwaing River from Gwaing Waste Water Treatment Works, based on an average of eleven thousand cubic meters per day (11 000 m<sup>3</sup>) as stipulated in table 2.

**Table 2: Summary of treated effluent discharged into Gwaing River**

Water resource	Volume (m <sup>3</sup> /a)	Volume (m <sup>3</sup> /day)	Property	Co-ordinate	Purpose
Gwaing River	4 015 000	11 000	Erf 464	S 34°06'49.7" E 22°05'56.1"	Discharging of treated effluent

- 1.2 The quantity of waste water authorised to be discharged/disposed in terms of this licence must not be exceeded without approval from the Responsible Authority.

### 2. QUALITY OF WASTE WATER TO BE DISCHARGED

- 2.1 The quality of the treated effluent discharged into Gwaing River from Gwaing WWTWs must not exceed the following limits as specified in table 3 below:

**Table 3: Quality of waste water to be discharged**

Variable	Limit
pH	5.5 – 9.5
Nitrate/ Nitrites (as N) in mg/l	15
Ammonia (as N) in mg/l	6
Chemical oxygen demand in mg/l	75
<i>E coli</i> per 100ml	150
Orthophosphate (as P) in mg/l	10
Suspended solids in mg/l	25
Chlorine as Free Chlorine in (mg/l)	0.25
Electrical Conductivity (mS/m)	70
Oil or grease	2.5

### 3. MONITORING

#### 3.1 Monitoring for Quality and Quantity

- 3.1.1 The quantity of treated effluent discharged into the Gwaing River shall be metered and recorded daily.
- 3.1.2 The quality of treated effluent discharged into the Gwaing River shall be sampled and analysed monthly.

- 3.1.3 Flow metering, recording and integrating devices shall be maintained in a sound state of repair and calibrated by a competent person at intervals of not more than two years. Calibration certificates shall be available for inspection by the Responsible Authority or his representative upon request.

### 3.2 Monitoring points

Monitoring for quality and flow shall only be carried out at the monitoring points listed below:

#### 3.2.1. Monitoring points for flow:

- 3.2.1.1 at the inlet point of the WWTWs; and at the discharge point.

#### 3.2.2. Monitoring points for quality:

- 3.2.2. 1 at the outlet point of the WWTWs where the treated effluent is discharged into the Gwaing River; and

- 3.2.2. 2 in the Gwaing River, upstream and downstream of the discharge point.

- 3.2.3 The monitoring points shall not be changed without prior notification to and written approval by the Provincial Head.

### 3.3 Surface water Monitoring

- 3.3.1 The licensee must develop and submit to the Responsible Authority within six (6) months of issuance of the Licence a bio-monitoring programme that will include the compilation of an initial database from which the scope and frequency of future bio-monitoring can be developed. This initial assessment must lead to the establishment of a reliable site-specific long-term bio-monitoring programme. This programme must be able to qualify and quantify the impact on biological systems in the water environment in the area directly affected by the plant activities as well as downstream from these activities.

- 3.3.2 A competent and capable aquatic scientist must be appointed by the Licensee to submit a monitoring programme for aquatic macro-invertebrates and habitat integrity.

- 3.3.3 Monthly treated wastewater samples shall be taken at the outlet point of the Gwaing WWTW's and be analysed for the variables as stipulated in table 4:

**Table 4:** Monitoring variables

Variables	
pH	Nitrate/Nitrite as Nitrogen (NO <sub>3</sub> /NO <sub>2</sub> as N) (mg/l)
Electrical Conductivity (EC) (mS/m)	Ortho-Phosphate as Phosphorous (PO <sub>4</sub> as P) (mg/l)
Chemical oxygen demand (COD) (mg/l)	Chlorine as Free Chlorine (mg/l)
Faecal Coliforms/ E. Coli (CFU/100 ml)	Electrical Conductivity (mS/m)
Ammonia as Nitrogen (NH <sub>3</sub> as N) (mg/l)	Oil or grease

N: B and/or any other variable(s) as may be required from time to time by the Provincial Head.

- 3.3.4 The date, time and monitoring point in respect of each sample taken must be recorded together with the results of the analysis.

### **3.4 Groundwater monitoring**

- 3.5.1 The Licensee shall design the groundwater monitoring programme and it must be submitted to the Responsible Authority for approval within six months of the issuance of this licence.
- 3.5.2 The licensee must conduct groundwater monitoring on a quarterly basis and the results must be submitted to the Provincial Head.
- 3.5.3 The Licensee shall analyse the quality of all boreholes in the groundwater quality network, quarterly based on the impact of the facility:
- 3.5.5 If ground water pollution have occurred or may possibly occur, the licensee must conduct necessary investigations and implement additional monitoring and rehabilitation measures which must be to the satisfaction of the Responsible Authority.
- 3.5.6 The Licensee shall submit a hydro geological report within six month of the issuance of this licence and this report shall include but not limited the following:
  - 3.5.6.1 A hydrosensus down flow gradient of the site to confirm that there is no at risk groundwater or spring users;
  - 3.5.6.2 A conceptual model showing likely groundwater flow paths and discharges and;
  - 3.5.6.3 A proposed groundwater monitoring design and programme;

### **4. METHODS OF SAMPLING AND ANALYSIS**

- 4.1 Sampling and analysis shall, wherever applicable, be carried out in accordance with methods prescribed by, and obtainable from, the South African Bureau of Standards (SABS), in terms of the Standards Act, Act 30 of 1982, or any other method approved in writing by the Provincial Head.
- 4.2 The methods of analysis shall not be changed without prior notification to, and written approval by the Responsible Authority.
- 4.3 Sample analysis must be conducted by a recognized analytical laboratory, accredited to analyze the relevant constituents in the wastewater, or approved by the Responsible Authority to perform the analyses.

### **5. STORMWATER**

- 5.1 Storm water leaving the licensee's premises shall in no way be contaminated by any substance, whether such substance is a solid, liquid, vapour or gas of a combination thereof which is produced, used, stored dumped or spilled on the premises.
- 5.2 The licensee shall ensure that no stormwater will ingress into the wastewater system and that no wastewater ingress into the stormwater system.
- 5.3 Wastewater impoundments must be designed, constructed and managed to ensure that there is sufficient capacity to contain the 1:50 year flood event, with a minimum of 0.8 m freeboard. Freeboard will be defined as the difference between the water level and the crest of the overflow.

- 5.4 Stormwater shall be diverted from the impoundments and roads and shall be managed in such a manner as to disperse runoff and to prevent the concentration of the stormwater flow and Waste water systems must be properly maintained on a continuous basis.
- 5.5 Cut-off drains shall be provided around the Waste Water Treatment Works to prevent storm-water ingress into the surrounding of the works. These drains shall be designed to contain the maximum runoff, which could be expected over a period of 24 hours with a frequency of once in every 20 years.
- 5.6 The licensee shall conduct regular inspections upstream to ensure that stormwater does not ingress into the wastewater system.

## **6. SLUDGE MANAGEMENT**

- 6.1 Sewage sludge from the drying beds and other solid sewage waste, for instance grit and screenings, shall be handled, stored, transported, utilized or disposed of in such a manner as not to cause any odour, flies, health hazard, secondary pollution or other nuisance. Sewage sludge shall be disposed of according to the first edition document titled "Guidelines for the Utilization and Disposal of Wastewater sludge, Water Research Commission Report No TT 261/06, March 2006, as amended from time to time., to the satisfaction of the Responsible Authority and in accordance with the requirements of section 20(1) of the Environment Conservation Act, 1989 (Act 73 of 1989).
- 6.2 Sewage sludge or any other solid sewage waste may be alienated for utilisation or disposal thereof, only in terms of a written agreement and provided that the responsibility for complying with the requirements contained in this Licensee is accepted by the Licensee and such other party, jointly and separately.

## **7. PIPELINES**

- 7.1 The pipelines used for the conveyance of waste or water containing waste shall be painted in a conspicuous colour or manufactured of a coloured material distinctly different from the colour of the pipelines in which drinking water is flowing to avoid the possibility of any cross-connections of the different pipelines.
- 7.2 All stop-valves and taps on the pipelines conveying the waste or water containing waste shall be of a type that can be opened and closed by means of a loose wrench. This wrench shall be in the safekeeping of a responsible member of the staff to prevent unauthorised use thereof.
- 7.3 Notices manufactured of a durable weatherproof material warning against the use of water containing waste for drinking and washing purposes shall be displayed at prominent places where the water containing waste is being reused and at all taps. Such notices shall be worded in the official languages applicable in the area.
- 7.4 The Licensee must inspect the pipelines conveying the water containing waste and the pumping facilities on a weekly basis to check for leaks or malfunctions and records shall be kept of such inspections.
- 7.5 The Licensee shall have the full length of the pipeline surveyed on an annual basis to monitor the integrity of the pipeline. The results of the survey shall be reported in writing to the Responsible Authority.



## **8. PUMP STATIONS AND MANHOLES**

- 8.1 The Licensee shall develop and implement a scheduled monitoring and maintenance plan for all sewage pump stations and manholes under its control.
- 8.2 All pump stations shall have an emergency containment facility with sufficient capacity to ensure untreated effluent retention up to a 24-hour period.
- 8.3 The Licensee must supply the co-ordinates of all the pump stations in the area of jurisdiction before the first review of the Licence.
- 8.4 The Licensee shall ensure that manholes are covered at all times with a suitable cover that cannot be removed by unauthorized persons and manhole covers should be of a material that is less prone to theft.
- 8.5 Existing WWTWs lines and manholes situated within the 1:100 year flood lines shall be sealed adequately to ensure minimal ingress of water during any rainfall event.

## **9. FENCING, NOTICES AND DRAINS**

- 9.1 The site of the Waste water Treatment shall be adequately fenced to prevent the entry of animals and unauthorised persons.
- 9.2 Notices manufactured of durable weatherproof material prohibiting unauthorised entry and warning against the use of water containing waste for drinking and washing purposes shall be displayed at prominent places along the fence and at entrance gates. Such notices shall be worded in the official languages applicable in the area.

## **10. MALFUNCTIONS/ABNORMAL CONDITIONS**

- 10.1 Accurate and up-to-date records shall be kept of all system malfunctions resulting in the disposal of water containing waste not in accordance with the requirements of this licence. The records shall be tabulated under the following headings with a full explanation of all the contributory circumstances:
  - 10.1.1 Operating errors
  - 10.1.2 Mechanical failures (including design, installation or maintenance)
  - 10.1.3 Environmental factors (e.g. floods)
  - 10.1.4 Loss of supply services (e.g. power failure)
  - 10.1.5 Other causes
- 10.2 The licensee must, within 14 days, or a shorter period of time, as specified by the Provincial Head, from the occurrence or detection of any incident referred above, submit an action plan, which must include a detailed time schedule, to the satisfaction of the Responsible Authority of measures taken to:
  - 10.2.1 Correct the impacts resulting from the incident;
  - 10.2.2 Prevent the incident from causing any further impacts; and
  - 10.2.3 Prevent a recurrence of a similar incident.

## **11. CONTINGENCY PLANS AND INCIDENT REPORTING**

- 11.1 The licensee must develop and implement an Emergency and Contingency Plan.



- 11.2 The licensee must implement and promote an environmental call and reporting centre where the following can be reported:
- 11.2.1 Illegal disposals of waste and/or littering;
  - 11.2.2 Broken, ruptured or leaking pipelines wasting potable water;
  - 11.2.3 Open or leaking taps on the property of the Licensee;
  - 11.2.4 Open manholes;
  - 11.2.5 Leaking or broken pipes;
  - 11.2.6 Possible offenders of any environmental regulations, by-laws and/or ordinances;
  - 11.2.7 Any other aspect that might hamper the effective management of the water resources.
- 11.3 The licensee must compile an environmental call and reporting centre protocol, that must be included in the Plan, and which will investigate every complaint within 24 hours of it being reported.
- 11.4 The licensee must rectify all valid issues reported within 7 days of the issue being reported to the Licensee. All incidents shall be recorded in an incident register which will include reasons for non-rectification of issues raised
- 11.5 Statistical summary of malfunctions and incidents shall be included in the Annual Report.
- 12. AUDITING**
- 12.1 The reports generated by the auditors must be submitted to the Responsible Authority by the end of March every year.
- 13. REPORTING**
- 13.1 The information required in terms of condition 3 must be submitted quarterly to the Responsible Authority, under reference **27/2/1/K230/102/1**, within one month of the close of the period concerned.
- 13.2 The occurrence of any incident, which causes or may cause water pollution, shall immediately be reported to the Responsible Authority.
- 14. OPERATIONS**
- 14.1 The sewage purification works shall be supervised and controlled by a suitably qualified and experienced employee of the licensee who shall have under his control an adequate number of operators who have been classified in terms of regulation 2834 dated 27 December 1985 (or any update thereto) and in terms of section 26 of the Act, to ensure proper functioning of the works and processes at all times.
- 14.2 Suitably qualified and experienced mechanical and electrical artisans shall be available to be called in for inspection and maintenance of the plant.
- 15. GENERAL**
- 15.1 This License hereby supersedes the Exemption granted in terms of Section 21 of the Water Act, 1956 (Act 54 of 56).

**[END OF LICENCE]**