



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) (THE ACT)

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

SIGNED: _____

DATE: _____

19 November 2015

LICENCE NO: 10/C92B/AG/4017
FILE NO: 27/2/2/C1092/1/1

1. **Licensee :** Rooipoort Developments (Pty) Ltd: Rooipoort Mine
Postal Address: P.O. Box 161
Delpportshoop
8377
2. **Water uses**
 - 2.1 Section 21 (a) of the Act: Taking water from a water resource, subject to the conditions set out in Appendices I and II.
 - 2.2 Section 21 (g) of the Act: Disposing of waste in a manner which may detrimentally impact on a water resource, subject to the conditions set out in Appendices I and V.
3. **Property in respect of which this licence is issued**
 - 3.1 Zandplaats 102, Portion 5
4. **Registered owner of the Property**
 - 4.1 De Beers Consolidated Mines
5. **Licence and Review Period**

This licence is valid for a period of twenty (20) years from the date of issuance and it may be reviewed on the interval of not more than 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."

"Department mean" Department of Water and Sanitation

"The Provincial Head" means the Head of Provincial Operations: Northern Cape Department of Water and Sanitation, Private Bag X6101, Kimberley, 8300.

"Responsible Authority" means the Department of Water and Sanitation or Catchment Management Agency.

"Report" refers to the report entitled:

- Integrated Waste and Water Management Plan by Ecko Environmental dated October 2014
- Environmental Management Plan by J Phelan (Plant-It) dated June 2008
- Mine water Balance by Ecko Environmental undated
- Mining Work Programme by De Beers Mines Limited dated May 2007 and as well as all other related documentations and communication (emails, letters, verbal, etc) related thereto. .

7. Description of the activity

The licence authorises water use activities for taking of water and disposing waste or wastewater for Rooipoort Mine on Portion 5 of the farm Zandplaats 102. Gravel be processed to extract of diamonds using conventional opencast alluvial mining methods. The water uses activities fall within C92B Quaternary Catchment of Lower Vaal Water Management Area.

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 Provincial Head of any change of name, address, premises and/or legal status.
4. If the property 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 Provincial Head of the Department 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 this association is compulsory.
6. The Licensee shall be responsible for any water use charges 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 desktop determination of the Reserve has been used in issuance of a licence, when a comprehensive determination of the Reserve has finally been made; it shall be given effect to.
8. The licence shall not be construed as exempting the Licensee from compliance with the provisions 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 applicable provisions of the Act, as amended from time to time.
10. The Licensee shall conduct an annual internal audit on compliance with the conditions of licence. A report on the audit shall be submitted to the Provincial Head within one month of the finalisation of the audit.
11. The Licensee shall appoint an independent external auditor to conduct an annual audit on compliance with the conditions of this licence. The first audit must be conducted within 3 (three) months of the date this licence and a report on the audit shall be submitted to the Provincial Head within one month of finalisation of the report.
12. Any incident that causes or may cause water pollution shall be reported to the Provincial Head or his/her designated representative within 24 hours.
13. Licensee shall use water efficiently to minimise total water intake, avoid usage of water where possible, implement "good" housekeeping and operating practices, and maximise the reuse /recycle of contaminated water.
14. If the Licensee is not the end user/beneficiary of the water use related infrastructure and will not be responsible for long term maintenance and management of the infrastructure, the Licensee must provide a programme for hand over to the successor-in-title including a brief management/maintenance plan and the agreement for infrastructure along with allocation of responsibilities, within three (3) months of the date of issuing of this licence.

15. The Department accepts no liability for any damage, loss or inconvenience, of whatever nature, suffered as a result of:
- 15.1 shortage of water
 - 15.2 inundations or flood
 - 15.3 siltation of the resource; and
 - 15.4 required reserve releases.

APPENDIX II

Section 21 (a) of the Act: Taking water from a water resource

1. The Licensee is authorised to take water from Vaal River for mining process as detailed in Table 1 of Appendix II.

Table 1: Section 21 (a) water use activity

Water use(s)	Purpose	Volume (m ³ /a)	Property Description	Co-ordinates
Section 21(a)				
Taking of water from the Vaal River	For mining process and dust suppression	Portion 5 of the Farm Zandplaats 102	248 000 m ³ /a	S28 ⁰ 40'45.444" E24 ⁰ 03'40.1508"

2. The quantity of water authorised to be taken in terms of this licence may not be exceeded without prior authorisation by the Department.
3. This licence does not imply any guarantee that the said quantities and qualities of water will be available at present or at any time in the future.
4. The abovementioned volume may be reduced when the licence is reviewed.
5. The Licensee shall continually investigate new and emerging technologies and put into practice water efficient devices or apply technique for the efficient use of water containing waste, in an endeavour to conserve water at all times.
6. All water taken from the resource shall be measured as follows:
 - 6.1 The daily quantity of water taken must be metered or gauged and the total recorded at the last day of each month; and
 - 6.2 The Licensee shall keep record of all water taken and a copy of the records shall be forwarded to the Provincial Head each year with the annual water balance.
7. No water taken may be pumped, stored, diverted, or alienated for purposes other than intended in this licence, without written approval by the Department.
8. The Licensee shall install and monitor appropriate water measuring devices to measure the amount of water abstracted, received and/or consumed, as applicable to the infrastructure.
9. The Licensee shall ensure that all measuring devices are properly maintained and in good working order and must be easily accessible. This shall include a programme of checking, calibration, and/ or renewal of measuring devices.
10. The Licensee shall be responsible for any water use charges or levies, which may be imposed from time to time by the Department or responsible authority in terms of the Department's Raw Water Pricing Strategy.
11. The Licensee shall establish and implement a continual process of raising awareness amongst itself, its workers and stakeholders with respect to Water Conservation/Water Demand Management initiatives.

APPENDIX III

Section 21 (g) of the act: Disposing of waste in a manner which may detrimentally impact on a water resource

1. CONSTRUCTION AND OPERATION

1.1 The Licensee shall carry out and complete all the activities, including the construction and operation of the facilities listed in Table 1 of Appendix III, according to the Report and according to the final plans submitted with the Integrated Water Use Licence Application as approved by the Provincial Head.

Table 1: Geographical positions of all the waste water management facilities

Water use(s)	Purpose	Capacity/ Volume (m ³ , tonnes and/or m ³ /a)	Property Description	Co-ordinates
Section 21(g)				
Disposing of water and fine tailings in the FTSP.	To allow for fine material to settle to be used in rehabilitation.	Footprint 8.9 ha 164400 tonnes/a	Zandplaats 102, portion 5	S28°40'42.6360" E24°04'03.0360"
Dust Suppression	To allow dust to settle during excavation	20 400m ³ /a	Zandplaats 102, portion 5	S 28° 41' 38.4" E 24° 05'39.84"

1.2 The Licensee must ensure that the disposal of the waste water and the operation and maintenance of the system are done according to the provisions in the Report.

1.3 The waste facilities listed in Table 1 of Appendix III shall be operated and maintained to have a minimum freeboard of 0.8 metres above full supply level and all other water systems related thereto shall be operated in such a manner that it is at all times capable of handling the 1:50 year flood-event on top of its mean operating level.

2. QUALITY OF WATER CONTAINING WASTE TO BE DISPOSED

2.1 The Licensee shall submit the nature and the quality of the waste or water containing waste disposed off into the Fine Tailings Settling Panels on a quarterly basis.

3. MONITORING

3.1 The Licensee must establish a groundwater monitoring network within one (1) year from the date of the issuance of this licence. This must be submitted to the regional head for approval within one (1) month after completion.

3.2 The Licensee shall conduct ground water monitoring on a quarterly basis for the variables shown in Table 2 of Appendix III and the results must be submitted to the Provincial Head on an annual basis.

3.3 Monitoring network shall be set up as an early warning system to detect any polluted seepage that might occur from the wastewater system.



- 3.4 If ground water pollution has 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 Provincial Head.
- 3.5 Monitoring boreholes shall be clearly marked and numbered, and must be equipped with lockable caps. The Department reserves the right to sample monitoring boreholes at any time and to analyse these samples, or to have samples taken and analysed.

Table 2: Groundwater monitoring variables and frequency

Groundwater Variables	Frequency
Electrical Conductivity (mS/m)	Quarterly
Sodium (mg/l)	Quarterly
Magnesium (mg/l)	Quarterly
Calcium (mg/l)	Quarterly
Chloride (mg/l)	Quarterly
Sulphate (mg/l)	Quarterly
Nitrate (mg/l)	Quarterly
Fluoride (mg/l)	Quarterly
Iron mg/l)	Quarterly
pH	Quarterly

- 3.6 The date, time and monitoring point in respect of each sample taken shall be recorded together with the results of the analysis.
- 3.7 Monitoring points must not be changed prior to notification to and written approval by the Provincial Head.
- 3.8 Analysis shall 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, 1982 (Act 30 of 1982).
- 3.9 The methods of analysis shall not be changed without prior notification to and written approval by the Department.

4. STORMWATER MANAGEMENT

- 4.1 Stormwater leaving the Licensee's premises shall in no way be contaminated by any substance, whether such substance is a solid, liquid, vapour or gas or a combination thereof which is produced, used, stored, dumped or spilled on the premises.
- 4.2 Stormwater shall be diverted from the mine complex site and roads and shall be managed in such a manner as to disperse runoff and concentrating the storm-water flow.
- 4.3 Where necessary works must be constructed to attenuate the velocity of any storm-water discharge and to protect the banks of the affected watercourses.
- 4.4 Increased runoff due to vegetation clearance and/or soil compaction must be managed, and steps must be taken to ensure that stormwater does not lead to bank instability and excessive levels of silt entering the streams.
- 4.5 All storm-water that would naturally run across the pollution areas shall be diverted via channels and trapezoidal drains designed to contain the 1:50 year flood.

5. PLANT AREAS AND CONVEYANCES

- 5.1 Pollution caused by spills from the conveyances must be prevented through proper maintenance and effective protective measures especially near all stream crossings.
- 5.2 All reagent storage tanks and reaction units must be supplied with a bunded area built to the capacity of the facility and provided with sumps and pumps to return the spilled material back into the system. The system shall be maintained in a state of good repair and standby pumps must be provided.
- 5.3 Any hazardous substances must be handled according to the relevant legislation relating to the transport, storage and use of the substance.
- 5.4 Any access roads or temporary crossings must be:
- 5.4.1 non-erosive, structurally stable and shall not induce any flooding or safety hazard and
 - 5.4.2 be repaired immediately to prevent further damage.

6. ACCESS CONTROL

- 6.1 Strict access procedures must be followed in order to gain access to the property. Access to the waste water containment facilities must be limited to authorised employees of the Licensee and their Contractors only.
- 6.2 Notices prohibiting unauthorised persons from entering the controlled access areas as well as internationally acceptable signs indicating the risks involved in case of an unauthorised entry must be displayed along the boundary fence of these areas.

7. CONTINGENCIES

- 7.1 Accurate and up-to-date records shall be kept of all system malfunctions resulting in non-compliance with the requirements of this licence. The records shall be available for inspection by the Provincial Head upon request. Such malfunctions shall be tabulated under the following headings with a full explanation of all the contributory circumstances:
- 7.1.1 operating errors
 - 7.1.2 mechanical failures (including design, installation or maintenance)
 - 7.1.3 environmental factors (e.g. flood)
 - 7.1.4 loss of supply services (e.g. power failure) and
 - 7.1.5 Other causes.
- 7.2 The Licensee must, within 24 hours, notify the Provincial Head of the occurrence or potential occurrence of any incident which has the potential to cause, or has caused water pollution, pollution of the environment, health risks or which is a contravention of the licence conditions.
- 7.3 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 Provincial Head of measures taken to:
- 7.3.1 correct the impacts resulting from the incident
 - 7.3.2 prevent the incident from causing any further impacts and prevent a recurrence of a similar incident.

8. INTEGRATED WATER AND WASTE MANAGEMENT

- 8.1 The Licensee must update an Integrated Water and Waste Management Plan (IWWMP), which must together with the updated Rehabilitation Strategy and Implementation Programme (RSIP), be submitted to the Provincial Head for approval within one (1) year from the date of issuance of this licence.
- 8.2 The IWWMP and RSIP shall thereafter be updated and submitted to the Provincial Head for approval, annually.
- 8.3 The Licensee must, at least 180 days prior to the intended closure of any facility, or any portion thereof, notify the Provincial Head of such intention and submit any final amendments to the IWWMP and RSIP as well as a final Closure Plan, for approval.
- 8.4 The Licensee shall make full financial provision for all investigations, designs, construction, operation and maintenance for a water treatment plant should it become a requirement as a long-term water management strategy.

9. WATER CONSERVATION AND WATER DEMAND MANAGEMENT (WC/WDM)

- 9.1 Licensee shall develop and submit a water conservation and demand management (WC/WDM) plan to the Provincial Head, which
- 9.1.1 quantify the water use efficiency of the activity;
 - 9.1.2 contains the mine water management and water loss strategies and programs;
 - 9.1.3 sets annual targets for improved water use efficiency for the mining activity, beneficiation and waste disposal practices and stipulates which measures will be implemented to achieve the targets on the mine;
- 9.2 Licensee shall update the WC/WDM plan on an annually basis and submit to the Provincial Head for approval.
- 9.3 Licensee shall report on annually basis the implementation of water conservation and water demand management measures including retrofitting with water efficient technologies and devices, reduction of total water demand, improvement in water use efficiency benchmarks and targets.

10. LOCATION OF WASTEWATER STORAGE DAMS, WASTEWATER DISPOSAL SITES, HOUSING AND SANITATION FACILITIES

- 10.1. Wastewater storage dams, wastewater disposal site, housing and sanitation facilities must be located:
- 10.1.1. outside of the watercourse;
 - 10.1.2. above the 100 year floodline, or alternative, more than 100 metres from the edge of a water resource or a borehole which is utilized for drinking water or stock watering, whichever is the greatest; and
 - 10.1.3. on land is not, or does not overlie, a major aquifer (identification of a Major Aquifer will be provided by the Department upon written request).

11. REPORTING

- 11.1 The Licensee shall update the water balance annually and calculate the loads of waste emanating from the activities. The Licensee shall determine the contribution of their activities to the mass balance for the water resource and must furthermore co-operate with other water users in the catchment to determine the mass balance for the water resource reserve compliance point.
- 11.2 The Licensee shall submit the results of analysis for the monitoring requirements to the Provincial Head on a quarterly basis under the reference number 27/2/2/C1092/1/1.

[END OF LICENCE]

