



**water affairs**

Department:  
Water Affairs  
REPUBLIC OF SOUTH AFRICA

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The Manager  
**Rand Water**  
P.O.Box 1127  
JOHANNESBURG  
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Attention: Mr. Leslie Hoy

**REQUEST TO CONDUCT EMERGENCY WORK TO REPLACE THE RAND WATER J8 PIPELINE**

Your letter dated 19 September 2012 with regard to the above-mentioned subject refers.

Rand Water has brought to the attention of the Department that it needs to urgently undertake certain construction activities for the replacement of the existing 13 745 meters, 623mm diameter J8 pipeline to avoid the threat of leakage as this might affect schools, government buildings, industrial plants and certain residential areas. Also any major leakage may result in the loss of lives and property damage.

Due to the above, the Department authorizes Rand Water to undertake those activities as indicated in the reports attached to the said letter. The activities should be within the following conditions as specified herein:

- (a) Installation of the pipeline must be carried out as per the installation method as indicated in the report. Storm water management practices must be constructed, operated and maintained in a sustainable manner throughout the project. Storm water management should be carried out as per the Storm Water Management Plan.
- (b) Rand Water must determine flood lines (1:50 and 1:100 year) prior to construction to ensure risks are adequately managed. Flood lines must be clearly indicated on the site plan(s) and drawings along with all wetland boundaries.
- (c) An independent, qualified, professional and registered wetland and aquatic specialist must be appointed before activities commence to monitor the compliance to the wetland management and rehabilitation plan and conditions in this letter pertaining to impacts on wetlands and provide specialist advice for corrective actions and compile monthly audit reports which must be submitted to the Department immediately after completion of the activity for at least 18-months. Rehabilitation of the site must be

carried out as per the EMP (Environmental Management Plan) and Rehabilitation Plan as approved by the Department. These conditions are also applicable to aquatic systems (streams).

- (d) No vehicles shall be allowed to indiscriminately drive through any wetland areas.
- (e) Rand water shall sample the water quality weekly (during construction) for the mentioned variables (Table 1) at monitoring points both upstream and downstream of the activities and report to the Department after the results of each sampling event is received:

**Table 1: Water quality parameters relevant for sampling.**

Variable	Limit
Flow (l/s)	Not applicable
Temperature (°C)	<10% variation
pH	6.0 – 8.5
Electrical conductivity (EC) (mS/m)	<50
Suspended solids (SS) (mg/l)	<25
Dissolved oxygen (mg/l)	≥6
Turbidity (NTU)	<3
Secchi disk depth (m)	≥1 meter
Alkalinity (mg CaCO <sub>3</sub> /l)	<100
BTEX, TPH (mg/l)	<0.1

- (f) The variables may be amended on discretion of the Department. Only an accredited (SANS 17025) laboratory must be used for analysis.
- (g) Pollution incidents shall be dealt with in accordance with Section 19 and 20 of the Act.
- (h) Any incident that may cause pollution of any water resource shall immediately be reported to the Department.
- (i) If surface and/or groundwater pollution has occurred or may possibly occur, Rand water must conduct, and/or appoint specialists to conduct the necessary investigations and implement additional monitoring, pollution prevention and remediation measures to the satisfaction of the Responsible Authority.
- (j) A comprehensive and appropriate environmental assessment and monitoring programme (including bio-monitoring and ecotoxicology) to determine the impact, change, deterioration and improvement of the aquatic system associated with the activity as well as compliance to the conditions must be developed and submitted to the Department for written approval before commencement and must subsequently be implemented as directed.
- (k) A qualified person must be appointed to assess the quality of water both upstream and downstream of the activities prior to commencement of construction.
- (l) Activities that lead to elevated levels of turbidity of any watercourse(s) must be prevented, reduced, or otherwise remediated. Activities must be scheduled to take place during the dry seasons when flows are lowest where reasonably possible. If this is not possible and if management measures have not been provided for in the



reports submitted to the Department, Rand Water must submit such to the Department for written approval before these activities commence. Natural in stream hydrology is to be used to determine which months constitute the low flow months.


- (m) Pollution of and disposal/spillage of any material into the watercourse must be prevented, reduced, or otherwise remediated through proper operation, maintenance and effective protective measures.
- (n) Vehicles and other machinery must be serviced well above the 1:100 year flood line or delineated riparian habitat, whichever is the greatest. Oils and other potential pollutants must be disposed off at an appropriate licensed site, with the necessary agreement from the owner of such a site.
- (o) Operation and storage of equipment must not take place within the regulated area of a wetland, the 1:100 year flood line or delineated riparian habitat, whichever is the greatest.
- (p) Any hazardous substances must be handled according to the relevant legislation relating to transport, storage and use of the substance and all storage facilities must be equipped with large, clearly readable material safety data sheets (MSDS).
- (q) All reagent storage tanks and reaction units must be supplied with a bunded area built to contain at least 110% of the capacity of the facility and provided with sumps and pumps to return the spilled material back into the system. The system must be maintained in a state of good repair and standby pumps must be provided.
- (r) The characteristics of the streambed are likely to be altered locally. In particular the rock and rubble created during the construction process is likely to have sharp edges, and not smooth surfaces that are typically associated with river rocks and pebbles. All rock and rubble must be removed from the watercourse once construction has been completed. Any rock placed in the watercourse to enhance the dissolved oxygen content of the water must adhere to the same criteria, namely only smooth rock surfaces to be placed within the watercourse.
- (s) All areas affected by construction/repair works should be rehabilitated upon completion of the construction phase of the development. Areas should be reseeded with indigenous vegetation species as required, and the use of seed nets is recommended to prevent erosion.
- (t) Alien and invader vegetation must not be allowed to further colonise the area, and all new alien vegetation recruitment must be sustainably eradicated or controlled.
- (u) Existing vegetation composition must be maintained or improved by maintaining the natural variability in flow fluctuations. Rehabilitated areas shall have vegetation basal cover of at least 15% at all times.
- (v) Slope/bank stabilisation measures must be implemented with a 1:3 ratio or flatter and vegetated with indigenous vegetation immediately after the shaping.
- (w) Stockpiling of removed soil and sand must be stored outside of the regulated area of a wetland, the 1:100 flood line or delineated riparian habitat, whichever is the greater, to prevent being washed into the river and must be covered to prevent wind and rain erosion.
- (x) Rand Water must submit a close-up report after the project within 1 (one) month of completion to the Department.

(y) A photographic record must be kept as follows and submitted with reports as set out in condition (c):

- (i) Dated photographs of all the sites to be impacted before construction commences;
- (ii) Dated photographs of all the sites during construction on a monthly basis; and
- (iii) Dated photographs of all the sites after completion of construction, seasonally.

Should you have any queries please feel free to contact L.R. Mabona.

Yours faithfully

  
REGIONAL HEAD: GAUTENG  
DATE: 23/11/2012