



**water & sanitation**

Department:  
Water and Sanitation  
**REPUBLIC OF SOUTH AFRICA**

Private Bag X3055, WORCESTER, 6850, Street Address Corner Mountain Mill Drive & East Lake Way,  
WORCESTER, 6850, [www.dws.gov.za](http://www.dws.gov.za)

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

I, **Mrs NM Bila-Mupariwa** in my capacity as Provincial Head: Western Cape in the Department of Water and Sanitation and acting under the powers delegated to me by the Minister of Water and Sanitation, hereby authorises the following water use in respect of this licence.

Serial Number : 5118718696977915819

**Provincial Head: Western Cape**

Date: Sep 5 2025 5:09PM



**LICENCE NO: 01/K30B/II/16508  
FILE NO: 27/2/2/K230/28/5**

**Licensee:** George Local Municipality (Herold's Bay Pumpstation)

**Postal Address:** PO Box 19  
George  
6530

**1. Water Uses authorised by this licence**

**Table 1: Summary of water uses authorised**

<b>1.1</b>	Section 21(i) of the Act:	Altering the bed, banks, course or characteristics of a watercourse; subject to the conditions set out in Appendices I and II.
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**2. Property (ies) in respect of which the water use licence is issued**

**Table 2: Property details where the water use(s) will take place**

Provincial Head

Activity	Farm Name	Farm Portion	Owner's Name	Title Deed Number
Section 21(i)				
Construction of New Rising Main	Brakfontein 236	0	Summer Sixteen (Pty) Ltd	T5208/2017
Construction of Pump Station 4	Erf 116	0	George Municipality	T4329/1929

### 3. Licence and Review Period

- 3.1 This licence is valid for a period of twenty (20) years from the date of issuance and it may be reviewed at intervals of not more than five (5) years.
- 3.2 On review of the licence, a Responsible Authority may amend any condition of the licence, other than the period of validity thereof.

### 4. 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."

#### 4.1 The following definitions are of relevance, but not exclusive, to this licence

Act	National Water Act, 1998 (Act 36 of 1998)
Buffer zone	Buffer zone: a strip of land surrounding a wetland or riparian area in which activities are controlled or restricted, in order to reduce the impact of adjacent land uses on the wetland or riparian area. The buffer zone is measured from the edge of the delineated watercourse determined according to the Departmental guideline - "A practical field procedure for identification and delineation of wetlands and riparian areas."
CEO	The Chief Executive Officer of Catchment Management Agency: Breede-Olifants Catchment Management Agency Private Bag X3055, Worcester, 6850, Street Address: Corner Mountain Mill Drive & East Lake Way, Worcester
CMA	Catchment Management Agency.
Commencement date	The date on which water use starts.
Days	Calendar days.
Delegated Authority	The person that has been delegated certain functions of the Act.
Department	The Department of Water and Sanitation.
Minister	The Minister of the Department of Water and Sanitation.
Provincial Head	Head of Provincial Operations: Western Cape, Department of Water and Sanitation Private Bag X16, Sanlamhof, 7532, 53 Spectrum Building, Voortrekker Road, Bellville
Extent of the watercourse	(a) the outer edge of the 1:100 year floodline or the delineated

	<p>riparian habitat, whichever is the greatest, measured from the middle of the watercourse of a river, spring, natural channel, lake or dam; and</p> <p>(b) Wetlands and pans: the delineated boundary (outer temporary zone) of any wetland or pan.</p>
Regulated area of a watercourse	<p>(a) The outer edge of the 1 in 100 year flood line and /or delineated riparian habitat, whichever is the greatest distance, measured from the middle of the watercourse of a river, spring, natural channel, lake or dam;</p> <p>(b) In the absence of a determined 1 in 100 year flood line or riparian area the area within 100m from the edge of a watercourse where the edge of the watercourse is the first identifiable annual bank fill flood bench (subject to compliance to section 144 of the Act); or</p> <p>(c) A 500 m radius from the delineated boundary (extent) of any wetland or pan.</p>
Sensitive riffle habitats	<p>A pool riffle rapid sequences that occur where a mixture of flows and depth provide a variety of habitats to support fish and invertebrate life. Pools are deep with slow water. Riffles are shallow with fast, turbulent water running over rocks. Runs are deep with fast water and little or no turbulence.</p>

## 5 Description of activity and affected water resource(s)

George Local Municipality is licensed for section 21(i) water uses for the construction of the sewer infrastructure i.e. pump station and new rising main that will improve the sewage reticulation network and minimise the risk of sewage leaks in the future in the area of Herold's Bay. This is part of the implementation of the project to improve the water and sanitation services provided to the community and to prevent spillage and surcharge into the ocean due to an over loaded system. The properties on which the pump station and rising main will be constructed fall within the regulated area of the watercourse. The proposed project is located on Portion 0 of Farm Brakfontein 236 and Portion 0 of Erf 116, George RD. The water use activity is geographically located at -34° 3' 9.79" S and 22° 23' 30.21" E within quaternary catchment K30B of the Breede-Olifants Water Management Area.



## APPENDIX I

### GENERAL PROVISIONS AND CONDITIONS OF THE LICENCE

#### 1. GENERAL PROVISIONS

##### Legal Framework

- 1.1 This licence is subject to all applicable provisions of the National Water Act, 1998 (Act No. 36 of 1998) as amended from time to time.
- 1.2 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.

##### Administrative Duties/Obligations/Responsibilities of the Licensee

- 1.3 The responsibility for complying with the provisions of the licence is vested in the licensee and not any other person or body.
- 1.4 The licensee will be responsible for any water use charges or levies imposed by a Responsible Authority according to the pricing strategy. The levies/charges will be charged from the date of the issuance of this licence.
- 1.5 No water taken may be pumped, stored, diverted, or alienated for any other purpose other than as intended in this licence without the written approval of the Delegated Authority.
- 1.6 It is the responsibility of the licensee to request an amendment of this licence to reflect the registered volume should the requirements change. All requests must be made to the Provincial Head/CEO.
- 1.7 If the water use licence is not exercised or fully exercised within the 5 (five) year period and the extended 2 (two) year period, as referred to in condition 2.4 and condition 2.5 in appendix I, the licence may be amended to reflect the extent of the water use that is being exercised, or the licence may be withdrawn

##### Change of Property Details

- 1.8 Amendment of the licence to reflect the name of the new owner will not be approved if there are any outstanding charges or levies imposed by the Responsible Authority to the previous owner.

##### Issue of Licence No Guarantee of Supply

- 1.9 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.

##### Monitoring

- 1.10 The quantity of water authorised to be taken in this licence may not be exceeded.
- 1.11 The quality of water authorised to be disposed and discharged in this licence may not be exceeded.
- 1.12 The licensee must adhere to the monitoring programmes submitted with the application.
- 1.13 Any changes to the monitoring programmes should be approved by the Provincial Head/CEO.

#### **Reviewal of Licences**

- 1.14 The volume authorised in this licence may be reduced when the licence is reviewed.
- 1.15 No water taken may be pumped, stored, diverted, or alienated for any other purpose other than as intended in this licence without the written approval of the Delegated Authority.

#### **Effecting of the Reserve**

- 1.16 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.

#### **Liabilities and Rights**

- 1.17 The Department accepts no liability for any damage, loss or inconvenience, of whatever nature, suffered as a result of, shortage of water; inundations or flood; siltation of the resource; and required Reserve releases.
- 1.18 The Minister reserves the right to construct water storage works at any time in any watercourse and to store all surplus water reaching the storage works, as well as to control the allocation of such water.

#### **Dam Safety Requirements**

- 1.19 The licensee is not indemnified from any detrimental effect that the dam(s) may have on other properties.
- 1.20 The Department does not accept any responsibility or liability for any damages or losses that may be suffered by any other party because of the construction and utilisation of the dams.
- 1.21 The licensee is not exempted from compliance with the provisions of the Dam Safety Regulations published under Government Gazette Notice R.139 of 24 February 2012 or any amendment thereof read with Chapter 12 of the Act, which are applicable to all dams with a safety risk.

### **Restrictions**

- 1.22 The licensee must adhere to any restrictions that are gazetted and imposed on the respective water resource.

### **Water Measurement and Reporting**

- 1.23 The Provincial Head/CEO may at any time direct a licensee, at the licensee's expense, to have the accuracy of the licensee's water measuring device/s verified, in addition to the requirements of their inspection and calibration schedule by a person or an institution accredited to verify the accuracy.

### **Pump Stations**

- 1.24 The licensee must design all new pump stations in such a manner that environmental and health risks due to the discharge of untreated sewage into the water resource are avoided.
- 1.25 The designs of all new pump stations and the refurbishment of existing ones must be approved by the responsible authority.
- 1.26 No new pump stations will be allowed within the 1:100 year flood line or riparian habitat, whichever is the greatest and / or within the temporary zone of a wetland unless authorised.

### **Manholes**

- 1.27 The licensee must ensure that:
- 1.27.1 Manholes are covered at all times with a suitable cover that is not prone to theft and cannot be removed by unauthorised persons;
- 1.27.2 No new manholes are constructed in the 1:100 year flood line or riparian habitat, whichever is the greatest and / or within the temporary zone of a wetland. Existing manholes situated within the 1:100 year flood lines must be sealed adequately to ensure no ingress of water during any rainfall event.

### **Operations**

- 1.28 Suitably qualified and experienced mechanical and electrical artisans must be available to be called in for inspection and maintenance of the works.
- 1.29 Prior to the approval of any new development, the licensee must check and verify the capacity and adequacy of available wastewater infrastructure to ensure that the systems can handle the additional load arising from the new development and notify the Regional Head/CEO within six (6) months prior to approval of any new development.





### **Stormwater Management**

- 1.30 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, spilled on the premises.

### **Amendments**

- 1.31 The licensee may apply for amendment of this licence in terms of the Act at any time during the period of validity of this licence. Applications must be submitted to the Provincial Head/CEO.

### **Appeals**

- 1.32 If this licence is appealed, it is automatically suspended and the water use activities must cease upon receipt of a notification of the appeal from the Department, alternatively the licensee may request the Minister to lift the suspension pending conclusion of the appeal via the Chief Director Legal Services at the address below:

Private Bag X313,  
Pretoria,  
0001



A stylized, handwritten signature in black ink, consisting of a series of loops and curves.

Provincial Head

## 2. GENERAL CONDITIONS

### **Administrative Duties/Obligations/Responsibilities of the Licensee**

- 2.1 The licensee must avail an original copy of the water use licence and the supporting reports upon request by the Department.
- 2.2 The conditions of the authorisation must be brought to the attention of all persons (employees, sub-consultants, contractors etc.) associated with the undertaking of these activities and the licensee must take such measures that are necessary to bind such persons to the conditions of this licence.

### **Commencement of a Water Use Licence.**

- 2.3 The licensee must inform the Provincial Head/CEO in writing within seven (07) days after the licensee commences with water use licence and again within thirty (30) days upon completion of the activity/ies.
- 2.4 The water uses authorised in this licence must be fully exercised within five (5) years from the date of issuance of this licence.
- 2.5 If the licensee cannot exercise or fully exercise the water use licence within 5 (five) years, the licensee may request from the Provincial Head/CEO, with reasons, an extension of time to fully utilise the said water use licence, at least three months, before the expiry of the 5 (five) years. Only one request for extension of time, with maximum of 2 (two) years for commencement or of fully exercising of water use licence will be considered.

### **Change of Details of Licensee or Property**

- 2.6 The licensee must inform the Provincial Head/CEO of any change of ownership, name, address, premises and/or legal status within sixty (60) days of such change taking place.
- 2.7 If the properties in respect of this licence is/are subdivided or consolidated, the licensee must provide full details of any change(s) in respect of the properties to the Provincial Head/CEO within sixty (60) days after the registration of title deed(s).
- 2.8 If the licensee is not the end user/beneficiary of the water user related infrastructure and will not be responsible for long term maintenance and management of the infrastructure, the licensee must provide a hand over report to the successor in title including a brief management/maintenance plan and the agreement for infrastructure along with allocation of responsibilities, within sixty (60) days after the date of change of end user or beneficiary.

### **Early Renewal for the Licence**

- 2.9 The licensee must, if needed, apply for early renewal of this licence in terms of the Act within one (1) year before the expiry date of a licence. The application must be submitted to the Provincial Head/CEO.





### **Malfunctions, Incidences, Contingencies and Pollution Prevention**

- 2.10 The licensee must service all vehicles and other machinery outside the extent of the watercourse/s.
- 2.11 Oils and other potential pollutants must be disposed of at a licensed site, with the necessary agreement from the owner of such a site.
- 2.12 The licensee must handle, transport, store and use any hazardous substances according to the relevant legislation or South African National Standards (SANS).
- 2.13 Accurate and up-to-date records must be kept of all system malfunctions resulting in non-compliance with the requirements of this licence. The records must be available for inspection by the Provincial Head/CEO upon request. Such malfunctions must be tabulated under the following headings with a full explanation of all the contributory circumstances:
- 2.13.1 operating errors;
  - 2.13.2 mechanical failures (including design, installation or maintenance);
  - 2.13.3 environmental factors (e.g. flood);
  - 2.13.4 loss of supply services (e.g. power failure); and
  - 2.13.5 other causes.
- 2.14 The licensee must, within 24 hours, notify the Regional Head/CEO 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.
- 2.15 The licensee must, within 14 days, or a shorter period of time, as specified by the Provincial Head/CEO, 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/CEO of measures to be taken to:
- 2.15.1 correct the impacts resulting from the incident;
  - 2.15.2 prevent the incident from causing any further impacts; and
  - 2.15.3 prevent a recurrence of a similar incident
- 2.16 The licensee must adhere to the Wastewater Incident Management Protocol.

- 2.17 The licensee must compile/develop an environmental call and reporting centre protocol, which must ensure the investigation of every complaint within 24 hours.
- 2.18 The licensee must implement and promote an environmental call and reporting centre.
- 2.19 The licensee must rectify all valid issues reported within seven (7) days of the issue being reported to the licensee. All valid complaints must be recorded in complaints register which will include reasons for non-rectification of issues raised.

#### **Water Conservation and Water Demand Management (WCWDM)**

- 2.20 The licensee must establish and implement a continual process of raising awareness among itself, its workers and stakeholders with respect to water conservation and water Demand Management initiatives.
- 2.21 The licensee shall use water efficiently to minimise total water intake, avoid usage of water where possible, implement best management and operating practices, and maximise the reuse /recycle of contaminated water.
- 2.22 The licensee must continually investigate new and emerging technologies and put into practice water efficient devices and /or apply technique for the efficient use of water, in an endeavour to conserve water at all times.
- 2.23 The licensee must report annually on the implementation of WC/WDM plan including retrofitting with water efficient technologies and devices, reduction of total water demand, improvement in water use efficiency benchmarks and target.
- 2.24 The licensee must update the WC/WDM plan every five (5) years and submit to the Provincial Head/CEO for approval.

#### **Water Measurement and Reporting**

- 2.25 The licensee shall install appropriate water measuring devices to measure the amount of water abstracted prior use of water.
- 2.26 The licensee shall ensure that all measuring, recording and monitoring devices are properly maintained and in good working order as per design specification and must be easily accessible. This shall include a programme of checking, calibration, and/or renewal of measuring devices.
- 2.27 Calibration/verification certificates of the flow measuring, recording and integrating devices must be available for inspection by the Provincial Head/CEO or the representative upon request.

#### **Membership to a Water Users Association**



- 2.28 If a water user association exists or is established in the area to manage the resource, it is compulsory for the licensee to be a member of the water user association. The licensee must adhere to the rules, regulations and water management stipulations of the water user association.

### **Monitoring, Methods of Analysis and Reporting**

- 2.29 Sample analysis must be conducted by a recognized analytical laboratory, accredited by the South African National Accreditation System (SANAS), or that participates in a recognised Proficiency Testing Scheme to analyze the relevant constituents in wastewater.
- 2.30 The monitoring points must not be changed without prior notification to and written approval by the Provincial Head/CEO.
- 2.31 The date, time and monitoring point in respect of each sample taken shall be recorded together with the results of the analysis.

### **Stormwater Management**

- 2.32 Increased runoff due to vegetation clearance and/or soil compaction must be managed, and steps must be taken to ensure that storm water does not lead to erosion and excessive levels of silt entering the stream.
- 2.33 Storm water management facilities must be constructed, operated and maintained in a sustainable manner throughout the project as detailed in the Storm Water Management Plan.
- 2.34 Increased runoff due to vegetation clearance and/or soil compaction must be managed, and steps must be taken to ensure that storm water does not lead to bank instability and excessive levels of silt entering the stream.
- 2.35 All storm-water that would naturally run across the dirty areas shall be diverted via lined channels and drains designed to contain the 1:50 year flood.
- 2.36 The dirty storm water system shall be designed and implemented to provide suitable routing and pumping capacity for contaminated storm water from the individual facilities to the respective storm water dams in accordance with the design specifications.
- 2.37 Clean storm water must be diverted from construction works and must be managed in such a manner as to disperse runoff and to prevent the concentration of storm water flow.
- 2.38 The licensee must ensure that no storm water should ingress into the wastewater system and that there is no wastewater ingress into the storm water system.



- 2.39 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.
- 2.40 Cut-off drains must be provided around the WWTW 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 twenty (20) years.

### **Restrictions on Access**

- 2.41 Strict access procedures must be developed and followed in order to control access to the property. Access to the facility/ies must be limited to authorised persons and animals.
- 2.42 Notices prohibiting unauthorised persons from entering the 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.

### **Pipelines**

- 2.43 Pipelines used for the conveyance of effluent must 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 different pipelines.
- 2.44 All stop-valves and taps on the pipelines conveying water containing waste must be of a type that can be opened and closed by means of a loose wrench. This wrench must be in the safekeeping of a responsible member of the staff to prevent unauthorised use thereof.
- 2.45 Pollution caused by spills from the pipelines used for conveyance of effluent must be prevented.
- 2.46 The pipelines containing waste must withstand the 1:100 year flood where they cross a water resource and must not affect the 1:100 year flood or flow regime.
- 2.47 The licensee must have the full length of the collector and the outfall sewer lines inspected on an annual basis. The results of the inspection must be reported in writing within one month of finalisation to the Provincial Head/CEO.
- 2.48 Notices manufactured of a durable weather-proof material warning against the use of water containing waste for drinking and washing purposes must be displayed at prominent places

where the waste is being reused and at all taps. Such notices shall be worded in the official languages applicable in the area.

### **Pump Stations**

- 2.49 The licensee must comply with the approved scheduled monitoring and maintenance plan for all wastewater pump stations and manholes under its control. Evidence of the implementation of the plan must be made available upon request.
- 2.50 All pump stations must be operated in such a manner that they have an emergency containment facility with sufficient capacity to ensure untreated effluent retention up to a 24-hour period.

### **Operations**

- 2.51 The licensee must classify the WWTW and register the process controllers on the Green Drop System or Integrated Regulatory Information System. The WWTW must be supervised and controlled by a suitably qualified and experienced employee of the licensee who must have under his/her control an adequate number of process controllers who have been registered in terms of regulation 2834 of 27 December 1985 or any update thereto; to ensure proper functioning of the works and processes at all times.
- 2.52 The licensee must develop and implement an Operation and Maintenance Manual including maintenance schedules and logbooks for recording maintenance work conducted on mechanical, electrical, instrumentation and civil within the wastewater treatment works including all pump stations. These must be available for site inspection by the Provincial Head/CEO or his/her representative upon request.

### **Auditing and Reporting**

- 2.53 The licensee must conduct annual internal audits on compliance with the conditions of this licence. The first audit must be conducted within ninety (90) calendar days from the date of commencement of water use entitlement. A report on internal audits must be submitted to the Provincial Head/CEO within sixty (60) calendar days of the finalisation of the audits.
- 2.54 The licensee must appoint an independent external auditor to conduct biennial (every two (2) years) external audits on compliance with the conditions of this licence. The first audit must be conducted and finalised within one (1) year after commencement of a water use. A report on the audit must be submitted to the Provincial Head/CEO within sixty (60) calendar days of the finalisation of each audit.

### **Compensative Measures**

- 2.55 The licensee must prevent adverse effects on other water users. All complaints must be recorded in complaints register and be investigated by a suitable qualified person, accredited by an institution/ registration body, appointed by the licensee, and if investigations prove that



the licensee has impaired the rights of other water users, the licensee must implement appropriate compensative measures as determined by the Minister.

### **Closure Plan**

- 2.56 A closure plan of any of the water use activities must be submitted one (1) year before commencing with closure to the Provincial Head/CEO for written approval.



Provincial Head



## APPENDIX II

### Section 21(i) water use: Altering the bed, banks, course or characteristics of a watercourse/s

#### 1. Section 21(i) activities

- 1.1 This licence authorises the Section 21(i) water use activities as set out in Table 3 and in the water use licence application reports submitted to the Department or the Regional Head (refer condition 1.2)

**Table 3: Water Uses Authorised**

Water use(s) activities	Purpose	Capacity/ Volume (m <sup>3</sup> , tonnes and/or m <sup>3</sup> /annum)/ dimension	Property Description	Co-ordinates
<b>Section 21(i)</b>				
Construction of Pump Station 4	Sewage pump station for conveyance of sewage to WWTW	52 L/s	Portion 0 of Erf 116	-34° 3' 9.8" S 22° 23' 29.24" E
Construction of New Rising Main	Rising main for conveyance of sewage to WWTW	52 L/s	Portion 0 of Farm Brakfontein 236	-34° 3' 9.79" S 22° 23' 30.21" E

- 1.2 The licensee must carry out and complete all the activities listed under condition 1.1 according to the following:
- 1.2.1 Specialist Aquatic Assessment: Construction of a New Sewage Pumpstation and Rising Main in Herolds Bay, Western Cape dated May 2024.
- 1.2.2 Design Report: Upgrading of Herold's Bay Sewer Pump Station No. 1 and Associated Rising Main dated December 2024.
- 1.3 No activity must take place within the extent of a watercourse/s, unless authorised by this licence.
- 1.4 No fundamental alterations of the work method statement, site plan/s and drawings are allowed, unless a modification is requested and granted by the responsible authority in writing; and

## 2. Further Requirements

- 2.1 For all the activities listed under condition 1.1, Table 3, “as-built” plans and engineering drawings prepared by a registered professional engineer, must be submitted to the responsible authority within six (6) months of completion of new activities. These plans and drawings must indicate the watercourse/s including wetland boundaries and layout and structure location/s of all infrastructure impeding and/or diverting flow of water in the watercourse/s as well as alternations to watercourse/s on the property/ies.

### 2.2 Structures, Construction Plant and Materials

- 2.2.1 Structures must withstand a 1:100 year flood.
- 2.2.2 Structures must be non-erosive, structurally stable and must not induce any flooding or safety hazard.
- 2.2.3 Structures must be inspected for a minimum of once a quarter for accumulation of debris, blockage, erosion of abutments and overflow areas - debris must be removed and damages must be repaired and reinforced within a reasonable time.

### 2.3 Water Quality

- 2.3.1 In-stream water quality must be analysed on a two-weekly basis during construction otherwise monthly at monitoring points both upstream and downstream of the activities for the following variables until pre-construction water quality levels have been reached;
- 2.3.1.1 pH;
  - 2.3.1.2 Electrical conductivity (mS/M);
  - 2.3.1.3 Suspended solids (mg/l);
  - 2.3.1.4 Turbidity;
  - 2.3.1.5 Total dissolved solids (mg/l)
- 2.3.2 Monitoring must be undertaken as set out in condition 3.
- 2.3.3 Activities must be scheduled to take place during the dry `seasons when flows are lowest where reasonably possible.
- 2.3.4 The licensee must ensure that the quality of the water to downstream water users does not decrease because of the water use activities listed under condition 1.1.

### 2.4 Flow

- 2.4.1 The diversion activities must be conducted in a manner that does not negatively affect the yield of the water course where the activity will take place. The licensee must ensure that the

overall magnitude and frequency of flow in the watercourse/s does not decrease, other than for natural evaporative losses and authorised attenuation volumes.

- 2.4.2 Where flow in watercourse/s is permanent, the trench must be staged across part of the channel to maintain flows. Flows must not be stopped unless essential, if necessary to stop flows it must be for a minimal time only.

## **2.5 Riparian and Instream Habitat (Vegetation and Physical Structure)**

- 2.5.1 Activities must start up-stream and proceed into a down-stream direction where feasible, so that the recovery processes can start immediately, without further disturbance from upstream works.
- 2.5.2 Operation and storage of equipment within the riparian habitat must only take place within the approved limits of disturbance indicated in the site plans and work method statements.
- 2.5.3 Activities must not occur in sensitive riffle habitats unless authorised by this licence.
- 2.5.4 Indigenous riparian vegetation, including dead trees, outside the limits of disturbance indicated in the site plans must not be removed from the area.
- 2.5.5 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.
- 2.5.6 Soils that have become compacted through the water use activities must be loosened to an appropriate depth to allow seed germination.
- 2.5.7 Stockpiling of removed soil and sand must be stored outside the extent of the watercourse/s, to prevent being washed into the watercourse/s and must be covered to prevent wind and rain erosion.
- 2.5.8 The use of machinery within the instream and riparian habitat will lead to compaction of soils and vegetation and must be restricted to demarcated areas only.

## **2.6 Directional Drilling**

- 2.6.1 The licensee must submit an as-drilled report within three (3) months of completion of the drilling to the Provincial Head/CEO;
- 2.6.2 Drilling entry and exit locations must be located outside the following designated riparian corridors:

## **2.7 Biota**

- 2.7.1 The licensee must allow movement of aquatic species, including migratory species where applicable.

- 2.7.2 Ensure implementation of all mitigation measures not to disturb the breeding, nesting and/or feeding habitats and natural movement patterns of aquatic biota.

## 2.8 Rehabilitation and Management

- 2.8.1 The licensee must implement the rehabilitation programme to restore the watercourse/s to environmentally acceptable and sustainable conditions after completion of the activities as outlined in the rehabilitation plan.
- 2.8.2 The rehabilitation must be implemented according to the approved Rehabilitation Plan.
- 2.8.3 A photographic record must be kept as follows and submitted with reports as set out in condition 3.
- 2.8.4 Dated photographs of all the sites to be impacted before construction commences.
- 2.8.5 Dated photographs of all the sites during construction on a monthly basis; and
- 2.8.6 Dated photographs of all the sites after completion of construction, seasonally.
- 2.8.7 All disturbed areas must be re-vegetated with indigenous plants in consultation with an indigenous plant expert, ensuring that during rehabilitation only indigenous shrubs, trees and grasses are used in restoring the biodiversity.

## 3. Monitoring and Reporting

- 3.1 The monitoring plan must be implemented and reporting done to the Provincial Head/CEO as stipulated under condition 3.2.
- 3.2 Six (6) monthly monitoring reports must be submitted to the Provincial Head/CEO for the duration of the construction phase and yearly thereafter or until otherwise agreed in writing with the Regional Head/CEO.

## 4. Construction and Operational Phase

- 4.1 At least two water quality monitoring points, one upstream and one downstream of the affected length of the watercourse/s.
- 4.2 A bio-monitoring programme (SASS) must be implemented along the affected length of the watercourse/s and must include a habitat assessment.
- 4.3 Exact positions of monitoring points must be indicated on the master layout plan (including their co-ordinates).

## 5. Site Specific Conditions

- 5.1 Areas where instream access is required must be confined to clearly demarcated areas to prevent unnecessary disturbance of instream habitat outside of these areas.

- 5.2 The watercourse should be inspected regularly (at least weekly) by an appropriately qualified Environmental Control Officer (ECO) for signs of disturbance, sedimentation and pollution during the construction phase. If signs of disturbance, sedimentation or pollution are noted, immediate action should be taken to remedy the situation and, if necessary, a freshwater ecologist should be consulted for advice on the most suitable remediation measures.
- 5.3 Areas where instream access is required must be confined to clearly demarcated areas to prevent unnecessary disturbance of instream habitat outside of these areas.
- 5.4 No machinery or vehicles with leaks are permitted to work in the watercourse.
- 5.5 Refuelling and fuel storage areas, and areas used for the servicing or parking of vehicles and machinery, must be located on impervious bases and should have bunds around them to contain any possible spills.
- 5.6 Works must be scheduled for the dry season to reduce the likelihood of flooding and or stormwater flows through construction areas.
- 5.7 No construction materials to be stockpiled in the watercourse.
- 5.8 Surface runoff from the originating from the road surface upslope of the construction area, must be diverted (by means of a barrier – e.g. sandbags) to avoid stormwater flows through any excavated section of the road surface.
- 5.9 Any diversion of surface runoff must not cause erosion to the bed and banks of the watercourse.
- 5.10 Pump stations will need to be placed within a suitably lined, impermeable concrete bunded area with the capacity to hold untreated wastewater in an emergency and provide for sufficient time for maintenance staff to address any faults/ problems. This is to limit the risk of untreated sewage overflowing in the event of any leakage or accidental spillage at the pump station.
- 5.11 Measures to contain sewage spillages and/overflows must be put in place to ensure that no sewage enters the watercourses. Under no circumstances should raw sewage be discharged into the stream.

**END OF LICENCE**

