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

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/I/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

1.1	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**.

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

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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

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	riparian habitat, whichever is the greatest, measured from the middle of the watercourse of a river, spring, natural channel, lake or dam; and (b) Wetlands and pans: the delineated boundary (outer temporary zone) of any wetland or pan.
Regulated area of a watercourse	(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; (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 (c) A 500 m radius from the delineated boundary (extent) of any wetland or pan.
Sensitive riffle habitats	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.

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

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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.

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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

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.

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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.

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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

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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^3, tonnes and/or m^3/annum)/ dimension	Property Description	Co-ordinates
Section 21(i)				
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

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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.

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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

Provincial Head

water & sanitation
Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Private Bag X313, Pretoria, 0001, Sedibeng Building, 185 Francis Baard Street, Pretoria,
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WATER USE LICENCE APPLICATION SUMMARY:

PROPOSED CONSTRUCTION OF THE HEROLD'S BAY SEWAGE PUMP STATION 4 AND UPGRADE OF ASSOCIATED RISING MAIN

WU32053

NAME OF APPLICANT:

George Municipality

Compiled by:

James Dabrowski
(Confluent Environmental)

Signature: 

Date: 10 April 2025

1. Applicant Details

Name of applicant: George Municipality
Address: 90 York Street, Old Town Hall, George, 6529
Cell phone number: (044) 801 9268
E-mail address: mgeyer@george.co.za

2. Person Submitting Application

Dr J.M Dabrowski (Ph.D., Pr.Sci.Nat. Water Resources)

Registration Number: 114084
Date of registration: November 2015

3. Background and Purpose

The Herolds Bay Pump Station no. 1 (PS1) is located at the Herold's Bay beachfront, at the main parking lot on Uitspanning Street and can be accessed by following the R404 into Herolds Bay. The pump station was refurbished in 2004 and is the main sewage pump station in Herolds Bay, receiving all sewage gravity flows from the area and pumped flows from two smaller pump stations along the cove. The sewage is subsequently pumped to the Herolds Bay Wastewater Treatment Works (WWTW) (Figure 1). The pump station's current operating capacity is 19 L/s. The pump station was originally designed to convey 11 L/s of flow per pump (duty standby operation) with a head of 190 m. Both pumps feed into a single 160 mm diameter uPVC class 12 pipe rising main. The length of the pipeline is 1 375 m and discharges into the Herolds Bay WWTW located at 138 masl.

The harsh operating conditions (highly corrosive environment and sand loading) result in high maintenance requirements and frequent breakdowns of operations. The lack of critical spares and high variations in seasonal inflows compound the situation. Based on the development plans received from the George Municipality, the sewage that this pumpstation will have to accommodate in the future will increase to 52 L/s to service the full developable area in and beyond the current urban edge. Based on these challenges, the municipality therefore plans to construct a new pump station (PS4) and associated rising main (Figure 1).

The development will take place within the regulated area of a watercourse and triggers Section 21 (i) water uses as defined by the National Water Act.

Figure 1: Map indicating the location of PS1 and the proposed PS4 and the new rising main.

4. Location of Water Uses

Herolds Bay is situated in quaternary catchment K30B of the Breede-Gouritz Water Management Area (Figure 2). The catchment area falls within the South-Eastern Coastal Belt (Ecoregion Level 1: 20). The terrain is described as low mountains and moderately undulating plains with moderate relief. Altitude ranges between 0 - 1300 m.a.m.s.l. The Mean Annual Precipitation (MAP) is relatively high, ranging between 500-800 mm and is a-seasonal, occurring throughout the year.

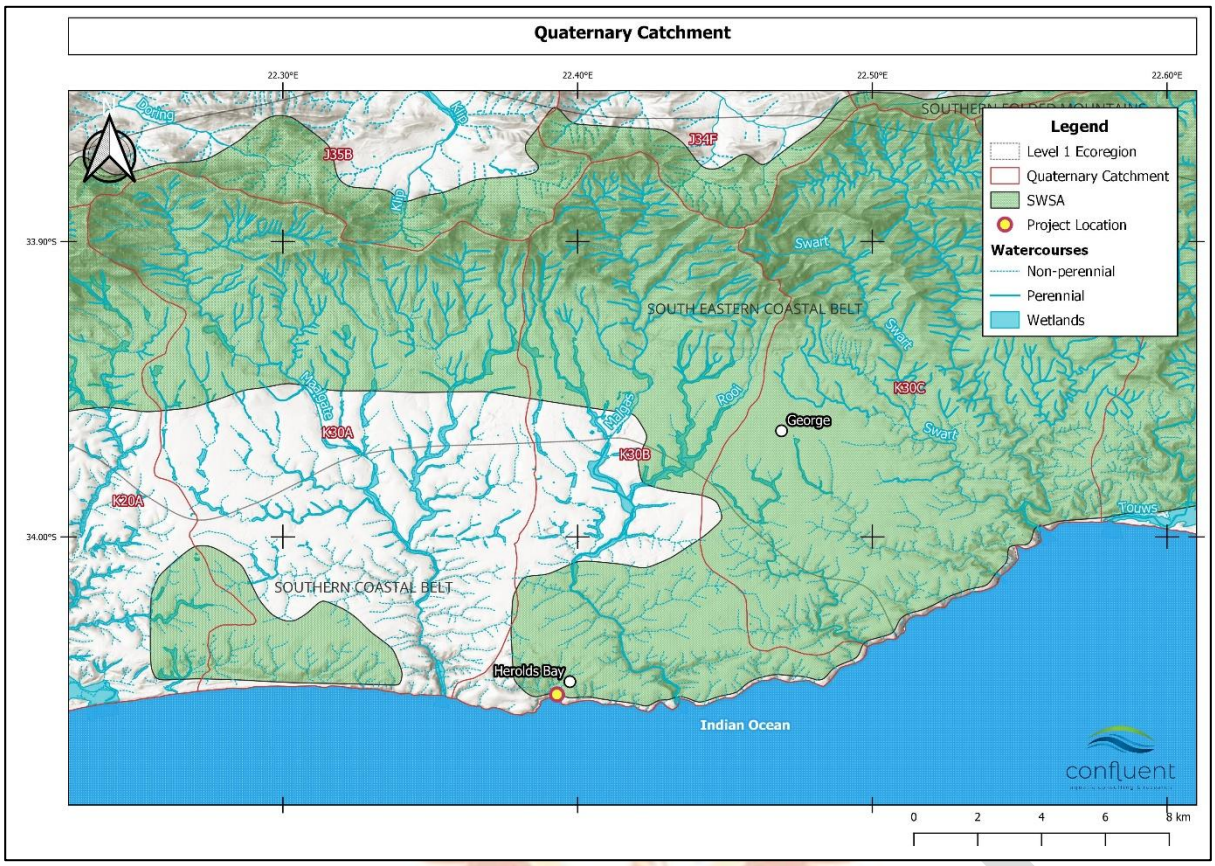

Figure 2: Map indicating location of project area in quaternary catchment K30B

The properties on which the pumpstation and rising main will be constructed and that fall within the regulated area of the watercourse (i.e. within 100 m) include the following (see Table 1):

- Erf 116 (pump station)
- RE/236 (pump station and rising main)

The watercourse follows the alignment of the rising main along Skimmelkrans Land and Spekie Gericke Drive. The watercourse is classified as a non-perennial stream with a distinct channel, characterised by a bedrock and boulder substrate. The channel is narrow and confined by a steep, well vegetated slope to the north. Skimmelkrans Lane runs immediately along the southern edge of the watercourse (**Error! Reference source not found.**). The southern banks have been filled in and lined with concrete retaining walls to support the road. Further upstream the watercourse runs beneath Skimmelkrans Lane and then runs along Spekie Gericke Drive, before cutting underneath the R404 and up towards its catchment area to the north. Further downstream the watercourse transitions into a very small temporarily closed estuary. This estuarine zone is located below the 5 m contour, which is typically used to delineate the Estuarine Functional Zone (EFZ). It is perched above normal tidal levels and is only occasionally influenced by extreme tidal events (e.g. spring tides and storm surges). The bed substrate is sandy (of marine origin) and flooding from the catchment area occasionally opens up a narrow, shallow channel that can pass through the Herolds Bay Beach to the sea. The banks of this estuarine zone have been stabilised by various methods, including gabion baskets and retaining walls. Freshwater flows from the catchment area are intermittent and as a result there is frequently no open surface water body present. Occasional tidal surges or freshwater inflows can result in a temporary open surface water body of no more than 1 000 m^2 in extent.

Water uses are associated with the construction of the rising main and pumpstation, which are located within the regulated area (i.e. 100 m) of the non-perennial stream. While the rising main will cross the estuarine zone, an estuary is not defined as a watercourse and the crossing is therefore not considered a Section 21 (c) or (i) water use.

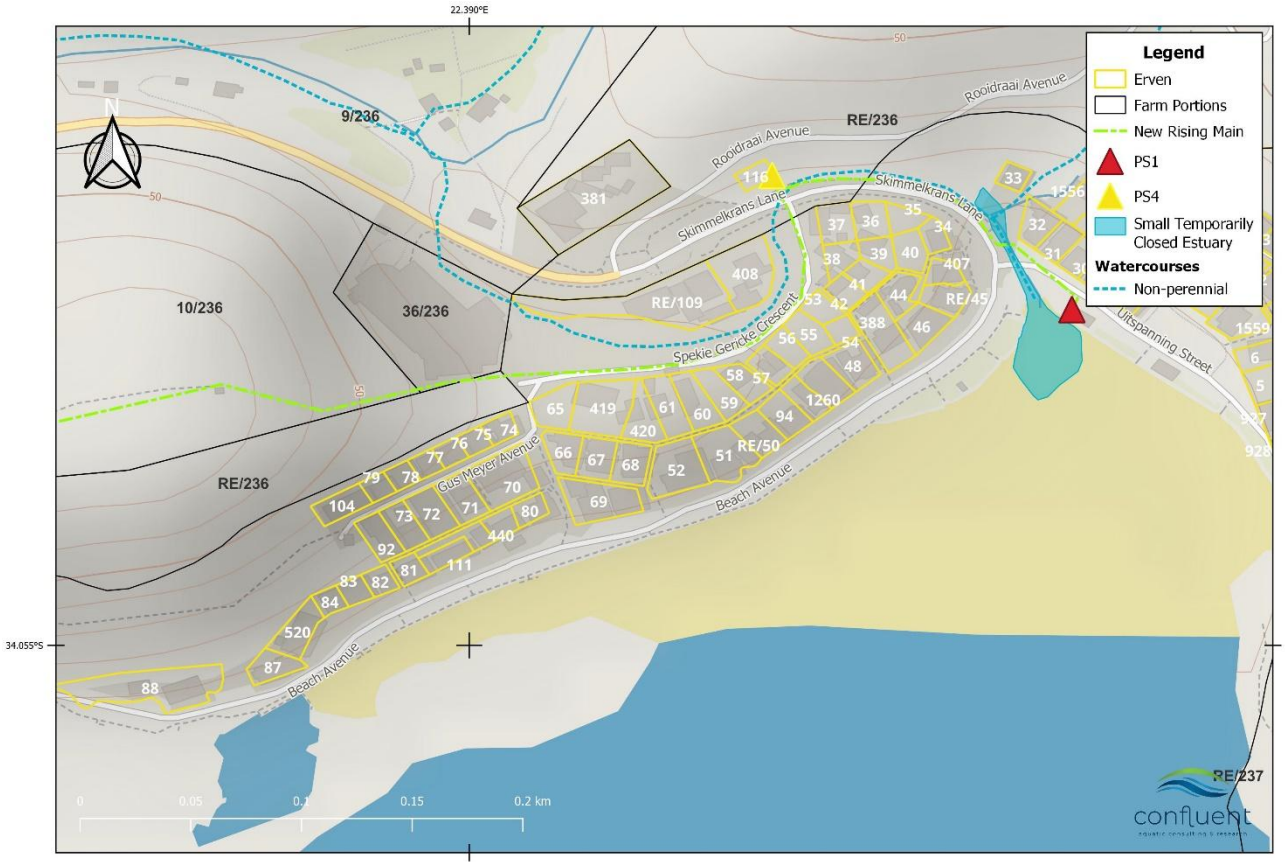

Figure 3: Map indicating the location of the pump stations and alignment of the new rising main relative to property boundaries, watercourses and estuaries.

Table 1: Property details

Property description	Title Deed number	Owner
Erf 116	T4239/1929	George Municipality
RE/236	T5208/2017	Summer Sixteen (Pty) Ltd

5. Administrative Documents and Technical Reports Submitted by Applicants

Administrative Documents

The following administrative documents will be submitted in support of this application:

- Title deeds of properties
- Tax invoice of Breed-Olifants Catchment Management Agency (BOCMA) administration fee

Reports and Other Technical Documents

Table 2: Technical Reports

Technical documents	Compiled by	Date compiled
Appendix 1 - Aquatic Biodiversity Assessment Report	James Dabrowski (Confluent Environmental	June 2024
Appendix 2 - Engineering Services Report	SMEC South Africa (Pty) Ltd	December 2024
Appendix 3 – Public Participation Report	James Dabrowski (Confluent Environmental)	April 2025
WULA Summary Report	Confluent Environmental	April 2025

6. Project Description

Pipeline between Pump Station 1 (PS1) to Pump Station 4 (PS4)

The new rising main will start at PS1 and will be installed adjacent to the existing pipeline and will be approx. 175m - 200m in length. The new pipeline route will follow the alignment of the existing pipeline with an offset of 2m. The existing pipeline runs in the Skimmelkrans Road reserve and is installed below ground level. The new pipeline will be directly buried in the road reserve and will require a minimum cover of 1m, therefore local deviations may be required to avoid existing services. The pipeline will be designed to accommodate the ultimate flow of 20L/s; however, the line will be evaluated against the interim design flow of 19L/s. The estuary crossing at Uitspanning Road will be done at the same position as the existing pipe crossing, which is upstream from the roadway. The suspended section of pipe will be of 316L stainless steel and will be self-supporting. The minimum internal diameter of the new pipeline will be upgraded to 200mm. The existing rising main will be utilised to convey sewage to the emergency storage tank that will be constructed in the parking space directly next to PS 1. Please refer to Figure 4.

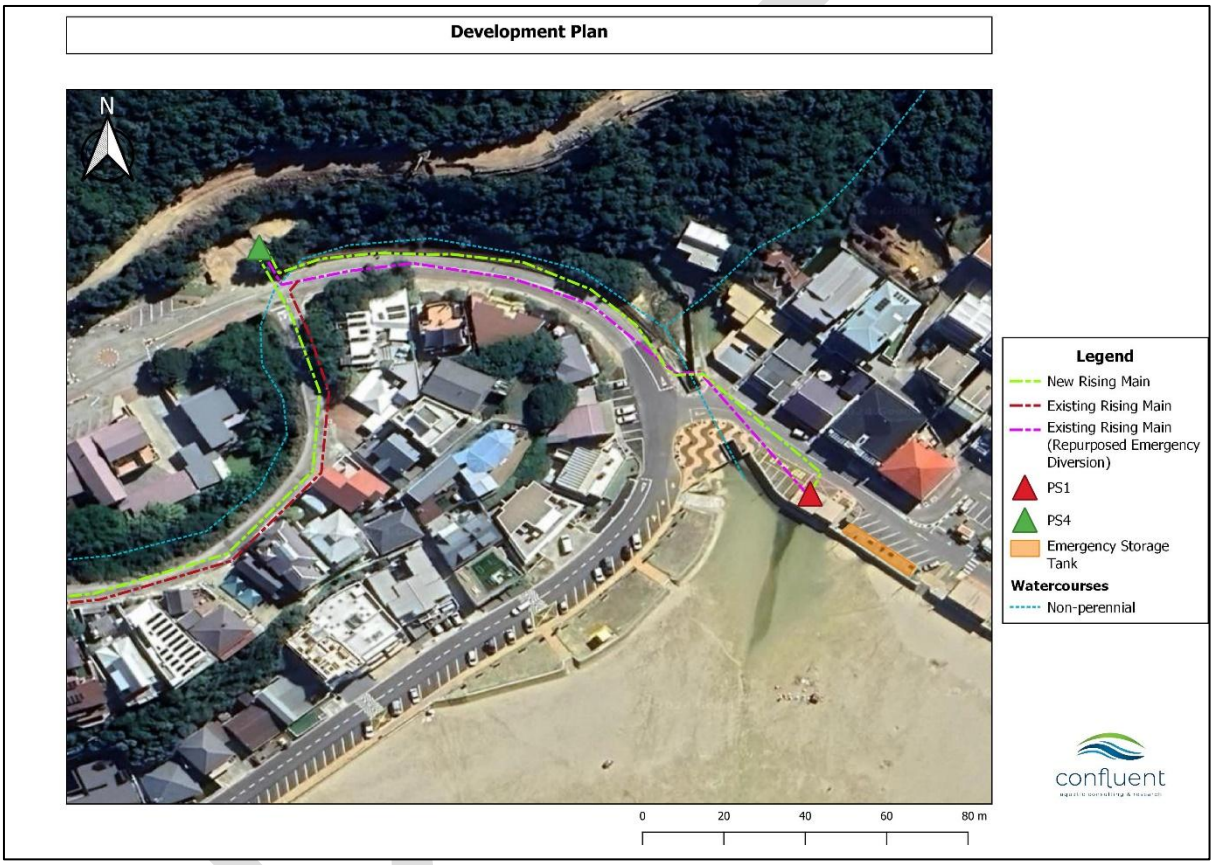

Figure 4: Map indicating configurating of pipelines between PS1 and PS4

Pipeline between PS4 and Herold's Bay WWTW

The new pumping main will leave PS4 and follow Speckie Gericke Drive up to the intersection of Gus Meyer Avenue (0-220m). From there, it will follow the existing pipeline and servitude up the ridge to the WWTW (220m - 1,470m). Although the existing pipeline runs within the servitude, the width of the servitude is insufficient to accommodate the second pipeline. Accordingly, an additional servitude will have to be applied for. The extent of the additional servitude is 4m on the northern side of the existing servitude. The pumping main will follow the road reserve for the first 200 m. The route will cut through thick coastal shrubs and up a steep slope to the WWTW. A 10-meter-wide area will need to be cleared to allow for adequate working space during construction. The disturbed area through the vegetation will be rehabilitated, and there will be no permanent vehicle access along the pipeline route. The only way to access the area will be via the existing jeep track from the WWTW

to the cellular mast. The pipeline will be designed to accommodate the ultimate flow of 52L/s. The minimum internal diameter of the new pipeline will be 300mm. The existing rising main between PS4 and the WWTW will be retained as a backup in the event of an issue with the new rising main.

Figure 5: Map showing the alignment of the new rising main from PS1 to PS4 and from PS4 to the WWTW.

New Herold's Bay PS 4

The new pump station will consist of a first floor and ground floor:

First Floor

- A flow stilling basin into which a gravity and pumping main will discharge and exit into the screening channels.
- Three inlet channels with manual screens (Two duty channels and an emergency channel)
- Allowance for future installation of automated mechanical front raked screens, conveyors and washer compactors.
- Two vortex degritters
- One grit classifier to the vortex degritters.
- Odour control system.
- MCC room

Ground floor

- Pump room
- Sump
- Generator room
- Screenings collection room

The raw sewage will be drained under gravity to the PS4 site from the higher areas of Herold's Bay along Rooidraai Road, with PS1 pumping the remaining flow from the lower zones of Herold's Bay to PS4. The pump station will be designed with a dry well end-suction pump configuration. To ensure redundancy, it will operate with a duty standby pump setup. Emergency storage has been incorporated into the building design, with overflow from PS4 going to the larger emergency storage tank at PS1. The PS4 will be built on a portion of ERF 116 and a portion of Erf 236/0 situated along Skimmelkrans Lane, across from Spekie Gericke Drive. Skimmelkrans Road bounds the site to the south, a channelised stream to the east, and a steep retaining wall and Rooidraai Road to the north and west, respectively.

Pipe Bridge

A 200mm diameter gravity sewer line draining sewerage from the higher areas of Herold' Bay along Rooidraai Road must be connected to the inlet works on the first floor of the new pump station. Due to the elevation difference between Rooidraai Road and ERF 116, a pipe bridge spanning 25m will be required to support the pipeline. This bridge will consist of a 2m deep, 1.5m wide galvanised lattice steel structure supported on reinforced concrete foundations and plinths as support. As part of the pump station construction contract, the new pipeline along Rooidraai Road needs to be connected to the pump station, and the existing reticulation needs to be changed over to the Rooidraai Road outfall sewer.

Sump and emergency storage

The sump provided at PS4 will act as both an operational and emergency storage sump. Sizing of the sump is in the region of 25-30m³ with an emergency volume of 170m³. This will provide sufficient storage and suction head for the pumps to operate at their best efficiencies. The sump will be located adjacent to the pump room to reduce suction pipe lengths as well as to ensure minimal secondary losses in the suction pipework. By having the sump adjacent to the pump room rather than below it, the pump suction pipework will be flooded, removing the need for self-priming pumps and making operations and required maintenance easier.

The emergency overflow from the sump will utilise the existing pumping main to drain the overflowing sewage from PS4 to the emergency storage tank at PS1. If the emergency overflow and generators fail, the sewage will discharge to the environment. The pumping main from PS4 to the WWTW, will scour back into the pumpstation sump.

7. Methods Statement (only for c and i activity)

The construction of the new rising main and the pump station will occur within the regulated area of a non-perrenial watercourse that drains towards the Herolds Bay main beach. No infrastructure will however be constructed within the bed and banks of the watercourse. Please see Table 4 for a list of mitigation measures that must be implemented to avoid disturbance and pollution of the watercourse.

8. Stormwater Management Plan

Construction Phase

Stormwater runoff will be managed carefully during construction to prevent input of sediment and pollutants into the watercourse: The following techniques will be implemented:

- Works should preferably be scheduled for the dry season to reduce the likelihood of flooding and or stormwater flows through construction areas;
- A construction schedule must be clearly defined and broken down into phases, to avoid multiple sites being exposed simultaneously. The completion date for each phase of development must be indicated and all excavation and final/temporary road resurfacing operations must be completed before moving onto the next phase;

- During excavation of the road surface for installation of the rising main 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;
- Any diversion of surface runoff must not cause erosion to the bed and banks of the watercourse;
- A silt fence must be placed along the length of the watercourse adjacent to Skimmelkrans Road and Speckie Gericke Drive.
- A silt fence must be place along the length of the watercourse adjacent to the pump station construction area;
- Inlets of existing stormwater culverts located along Skimmelkrans Road and Speckie Gericke Drive must be protected through placement of a filter fabric fence at the inlet to trap and minimise the transport of sediment and debris from the construction area;.

Operational Phase

No stormwater impacts are anticipated during the operational phase and no stormwater infrastructure is planned

9. Rehabilitation Plan

No aquatic habitat was identified within the boundaries of the proposed site and no watercourses will be directly affected by the development. No rehabilitation measures are therefore required for watercourses.

10. Water Uses Applied For

Table 3: Water Uses

Water use(s) activities	**Purpose**	**Capacity/ Volume (m^3, tonnes and/or m^3/annum)/ dimension**	**Property Description**	**Co-ordinates**
Section 21(i)				
Construction of Pump Station 4	Conveyance of sewage to WWTW	52 L/s	Erf 116	22.391, -34.052
Construction of New Rising Main	Conveyance of sewage to WWTW	52 L/s	RE/236 Erf 116	22.393, -34.053 to 22.380, -34.054

11. Impacts and Mitigation Measures

The potential impacts and mitigation measures that are expected from the proposed activities are presented in Table 4**.**

Table 4: Summary of impacts and mitigation measures

Water Use activity	Possible causes of impacts to the water resources	Possible Impacts to the water resource and other water users	Mitigation Measures
Constructing of Pump Station & Rising Main	• Leakage of fuels, oils, and other pollutants from vehicles and construction machinery, or from washing of equipment and vehicles;	• Pollution of watercourses	• Excavators and all other machinery and vehicles must be checked for oil and fuel leaks daily. No machinery or vehicles with leaks are permitted to work in the watercourse; • No fuel storage, refuelling, vehicle maintenance or vehicle depots to be allowed within 30m of the banks of the watercourse; • 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 (sized to contain 110 % of the tank capacity) to contain any possible spills;
	• The presence of construction workers on site will require the need for appropriate ablution facilities. Poor management of these facilities could potentially lead to sewage spills or leaks;	• Pollution of watercourses	• Chemical toilets should be provided on-site at 1 toilet per 10 persons; • Waste from chemical toilets must be disposed of regularly (at least once a week) in a responsible manner by a registered waste contractor; • Workers must be properly instructed in the proper care of the environment, especially with respect to poaching, disturbance of nesting and roosting areas, disposal of human waste, garbage etc.;
	• Storage of construction materials or the temporary lay-down of equipment within an area that drains in the direction of the watercourse;	• Pollution and degradation of habitat quality	• The area(s) chosen for the stockpiling of imported building materials should be demarcated, and notices put up declaring what must be stockpiled where.
	• Dumping of excavated material into the watercourse; • Poor management of waste generated during construction activities;	• Degradation of habitat quality	• No dumping of waste materials in the watercourse; • The watercourse should be inspected on a regular basis (at least weekly) by an appropriately qualified 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.
	• Mixing of concrete or cement in or in close proximity to watercourses.	• Pollution and degradation of habitat quality	• Cement/concrete used in the construction must not be mixed on bare ground or within the watercourse. An impermeable/bunded area must be established in such a way that cement slurry, runoff and cement water will be contained and will not flow into the surrounding environment, the stream or riparian zone or contaminate the soil;
	• Surface runoff through excavated section of the road surface.	• Input of sediment and pollutants into the watercourse.	• Works should preferably be scheduled for the dry season to reduce the likelihood of flooding and or stormwater flows through construction areas; • 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; • Any diversion of surface runoff must not cause erosion to the bed and banks of the watercourse; • A construction schedule must be clearly defined and broken down into phases, to avoid multiple sites being exposed simultaneously. The completion date for each phase of development must be indicated and all excavation and final/temporary road resurfacing operations must be completed before moving onto the next phase;

Water Use activity	Possible causes of impacts to the water resources	Possible Impacts to the water resource and other water users	Mitigation Measures
			• A silt fence must be placed along the length of the watercourse adjacent to Skimmelkrans Road and Speckie Gericke Drive. • Inlets of existing stormwater culverts located along Skimmelkrans Road and Speckie Gericke Drive must be protected through placement of a filter fabric fence at the inlet to trap and minimise the transport of sediment and debris from the construction area;
Operation of Pump Station 4	• Lack of maintenance of infrastructure	• Sewage leaks into the environment,	• Undertake routine maintenance of pumps and other critical infrastructure according to a prescribed schedule; • Maintenance must be undertaken during low flow periods to allow more time to adequately complete tasks; • An emergency response plan must be formulated and implemented in the event that telemetry systems indicate an emergency situation has occurred; • In an emergency situation residents must be informed through relevant media and social media to, as far as possible, avoid discharging waste into the sewerage system until such time the emergency has been attended to; • An annual audit of the pumpstation must be undertaken to ensure that required maintenance has been undertaken and that all degritting, screening, emergency power generation, telemetry, and pumps and are operating to the required specifications and purpose

12. Water Demand and Water supply

Not applicable

13. Public Participation

A 60-day public participation for the WULA commenced on the 16th of January 2025 and ran till the 18th of March 2025. The comments received from the public can be found in Appendix 3.

Objections were only received from residents that were primarily concerned about the impact of the pump station on the visual aesthetic of the town, the noise and odour emanating from the pump station and the potential environmental impact of the pump station. Many of these concerns are not directly (or indirectly) related to the water uses that will be applied for in this application. Environmental impacts relating to the construction and operational phase of the Pump Station 4 and the new rising main can be mitigated to a low level of risk (see Appendix 1).

In summary, no fatal flaw with respect to the proposed water uses was identified during the public participation process. Given that the new proposed infrastructure will improve the sewage reticulation network in Herolds Bay and minimise the risk of sewage leaks in the future, it is recommended that the water uses be authorised accordingly.

14. Section 27 (1)

The requirements contained in Section 27(1) of the National Water Act, 1998 (Act 36 of 1998) have been considered and are discussed further below.

a) Existing lawful water uses

Not applicable, as the water use license will be for Section 21 (c) and 21 (i) of the National Water Act, 1998 (Act 36 of 1998).

b) Need to redress the results of past racial and gender discrimination

The water use is not specifically targeted at redressing past racial or gender discrimination. The main beneficiaries of this project will be the residents of Herolds Bay as well as numerous visitors and tourists that visit the town on a daily basis. The water use is therefore considered to be in the best interests of the general public – which includes people of all races and gender.

c) Efficient and beneficial use of water in the public interest

Due to the rapid expansion of the George Municipal area, the age of existing infrastructure and planned developments; the George Municipality has identified the need for the upgrade of the sewer infrastructure, Herold's Bay Pump Station 1, and the construction of Herold's Bay Pump Station 4 to relieve the increased sewage gravity flows from the area. The Municipality is implementing 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 proposed water use will result in improved efficiency in the delivery of sanitation services and is of benefit to the broader public.

d) Socio-economic impact –

Herold's Bay originated as a holiday village for visitors, which over decades has slowly expanded in size to include a relatively large group of retired permanent residents. In more recent years this growth has increased dramatically together with the enormous national and international interest in the Southern Cape region in general. It is however considered pertinent that the unique character of Herold's Bay Lower as well as the overall rural character and atmosphere of Herold's Bay Upper be retained and access to the coastline respected. The following socio-economic benefits are anticipated:

- *Community Wellbeing – Clean Water and Sanitation:* Sewer systems are essential to the wellbeing of a community. They help to transport wastewater filled with bacteria out of the area and to a place for treatment, so that clean water can be safely distributed back into the environment. But there's a lot that goes into maintaining this essential infrastructure, and every section of it requires routine inspections and upkeep to protect the community it serves.
- *Creation of employment opportunities:* The direct employment opportunities associated with the operational phase of this project are relatively limited. However, most employment will be in the construction phase.
- *Benefits associated with the socio-economic contributions:* The upgrades will increase the pumping capacity and resilience of the sewerage network which will benefit residents and visitors to Herold's Bay.

e) Any catchment management strategy applicable to the relevant water resource

The dynamic nature of local, national and global environments constantly presents local government with new challenges and demands. Similarly, the needs and priorities of the local communities within George are ever-changing. This presupposes greater co-ordination and integration with other external stakeholders such as national and provincial government, business community and civil society.

In the IDP (2021/2022) George Municipality's vision, mission and strategic goals stipulates that to be sustainable in the future, development is important while keeping it clean, safe and green, while providing clean water and sanitation through sustainable management. Application for the water use license and the implementation of associated licensing conditions such that the Reserve and Resource Quality Objectives are met is linked directly to Strategic Area 1 of the BOCMA management strategy:

"Protecting People and Nature as well as sharing for Equity and Development."

The water use license application process has been implemented to ensure that water use activities are authorised in a manner that achieves these broad mission statements, particularly the mission of ensuring healthy water resources and allocating water for all forever.

f) Likely effect of the water use to be authorized on the water resource and on other water users.

The George Municipal Sanitation master plan includes the upgrade of the Herolds Bay PS 1 for both current and future needs. The master plan includes an interim upgrade to 20l/s (20-year horizon) and an ultimate upgrade to 52l/s. The upgrade of the pump station is required to occur in the next couple of years to meet the current sewage inflow. During peak seasons the existing pump station experiences higher than average inflows and struggles to cope. In addition, the mechanical and

electrical components were last upgraded in 2004, and considering a 15-year design life, these components have reached the end of their useful life.

In addition, the existing pump station has no emergency storage apart from a standby generator that provides back-up power during power outages. With frequent and lengthy periods of load shedding, the Municipality has an immense financial burden to supply fuel to generators. To ensure efficient handling and management of wastewater, preventing sewage spills during peak seasons and power outages due to load shedding and an increasing population growth, the pump station must be upgraded. The upgrade therefor includes an emergency storage volume.

Upgrading the pump stations and adding emergency storage capacity will significantly reduce the likelihood of sewage spills in the future and is designed to accommodate the increasing population growth in the area. This is considered a positive benefit to water resources (including the estuarine and marine environment) through reducing the risk of pollution events and deterioration in water quality.

g) Class and the resource quality objectives of the water resource

The site to be developed falls within quaternary catchment K30B (**Error! Reference source not found.**), in the Breede-Olifants Water Management Area. The quaternary catchment falls within the G15 Coastal Integrated Unit of Analysis (IUA). The Water Resource Class for this IUA is II, indicating moderate protection and moderate utilisation. Main rivers falling within the IUA are the Gwaing River, with a Target Ecological Category (TEC) D. The proposed mitigation and rehabilitation measures are aimed at maintaining and improving the ecological integrity and function of wetland and are therefore unlikely to result in a deterioration in the TEC.

RQO's are defined as clear goals (numerical or descriptive statements) relating to the quality of a water resource and are set in accordance to the management class for the resource to ensure the water resource is protected. The purpose of RQO's is to set clear objectives for the resource against which water use licenses and the related impacts can be evaluated and managed to achieve a balance between the need to protect and utilise the resource. No specific RQOs have been set for the watercourse in which the proposed water uses will occur.

h) Investments already made and to be made by the water user in respect of the water use in question

Total preliminary cost estimate is R51 687 267.50. The estimate for preliminary and general costs was made at 25% of the works cost estimate and a 10% allowance was made for contingencies and escalation. Due to this being a preliminary design, the accuracy of the estimate is placed at +-70%, and the anticipated envelope of costs is presented as well.

Although the project will be designed as a whole, the actual implementation may need to be done in stages to suit construction access periods and project budget allocation. It is therefore proposed that the project be split into work packages which can be implemented as standalone projects or concurrently depending on budget availability and peak seasons in Herold's Bay.

i) Strategic importance of the water use to be authorised

According to the George Municipality IDM, 2012-2017:
Strategic Goal 1: Deliver quality services in George

It is essential that all citizens in George have access to basic services as provided by local government. Access to basic services by all citizens should be 100%. All service-delivery constraints need to be mitigated. It is also essential that the municipality ensures that strategic measures are in place to manage risk areas for service delivery such as shortage of electricity and water, and that the green industry is stimulated to increase recycling practices and water- and electricity-saving practices are encouraged.

According to the George Municipality SDF, March 2013:
Strategy 3: Deliver Quality Services

Towards offering residents, visitors, and investors a unique lifestyle, and ensuring that all have equal access to a quality living environment the Municipality are embarking on a wide-ranging initiative in both the built and natural environment. These encompass delivery of services to all households, upgrading of informal settlements and degraded neighbourhoods, housing delivery to subsidy market; promotion of "green" household technologies and protection of the municipal area's natural and cultural heritage.

Strategy 4: Good Governance in George

The Municipality strives towards institutional excellence in providing a high standard of services to consumers and functioning as developmental local government. To this end the required human resource capacity is being built up, administrative systems are being streamlined, and financial planning, control and management systems are being upgraded.

j) The quality of water in the water resource which may be required for the Reserve and for meeting international obligations

It is not foreseen that there will be a significant impact on downstream water quality or quantity in the watercourse. The primary objective of the development is to upgrade sewage infrastructure and minimise risks of sewage spills in the future. The proposal is therefore likely to result in an improvement of water quality through mitigating this risk

k) Probable duration of any undertaking for which a water use is to be authorised

The duration of this water use is permanent.