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ENVIRONMENTAL MONITORING REPORT NO.5 FOR Pinnacle Point WWTW Upgrade, Mossel Bay Municipality



Compiled by:

HillLand Environmental

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**PINNACLE POINT WWTW UPGRADE
ENVIRONMENTAL MONITORING REPORT NO 5**

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Environmental Monitoring Report No. 5

HillLand Environmental (Pty) Ltd, the appointed Environmental Control Officer (ECO) compiled this report as the environmental monitoring report (**No.5**) for the upgrading of the Pinnacle Point WWTW. This report monitors compliance against the Environmental Management Programme (EMPr, compiled by Cornerstone – dated June 2023) and constitutes the fifth Environmental Monitoring Report. It covers construction inspections of **23 May and 7 June 2024** for the upgrading of the existing Pinnacle Point WWTW on Remainder of Erf 15390, Mossel Bay.

Pre-construction activities:

Date	Comment
5 December 2023	Site inspection and identification of No-Go area
11 January 2024	Environmental induction

Construction phase activities:

Date	Comment
25 January 2024	Site Meeting & site inspection
8 February 2024	Site inspection
22 February 2024	Site Meeting & site inspection
14 March 2024	Site inspection
20 March 2024	Site Meeting & site inspection
16 April 2024	Site inspection
25 April 2024	Site Meeting & site inspection
9 May 2024	Site inspection
23 May 2024	Site Meeting & site inspection
7 June 2024	Site inspection

The following table represents the Construction Phase Environmental Management Programme (CEMP) checklist as required in terms of the CEMPr:

Item	Management / Mitigation Measure	Compliance/ Notes	Photographic record (where applicable)
Environmental awareness training	Environmental induction must be done with all staff on site Subsequent courses shall be held as and when required.	Done – environmental induction was done in January 2024. Environmental Do's and Don'ts to be included in the regular toolbox talks - ongoing.	
Site establishment	1. The specific location for the construction site camp, storage of materials, ablution facilities, shall be identified in consultation with the ECO and must be clearly demarcated. 2. Stockpiling of both natural and manufactured materials shall be restricted to the permanent and temporary stockpile areas identified by the Project Manager / Consulting Engineer and the ECO. 3. Vegetation removal shall be kept to the minimum. 4. Topsoil to be rescued and stockpiled for use during rehabilitation. 5. No fauna or flora must be disturbed/damaged or removed outside the development footprint.	1. Site camp (including ablution facility) and construction material stockpile area are within the existing wastewater treatment works facility. 2. The contractor is spoiling subsoil material at an external site. The remaining soil is stockpiled on site. 3. Vegetation clearing was limited to the development footprint - DONE. 4. Topsoil is stockpiled within the existing WWTW facility. 5. Disturbance is limited to the development footprint – The top layer of material next to the excavation site consists of historic dumped material (prior to the commencement of this project). The waste material layer is unpredictable due to its unknown composition and thus it poses an unknown risk (stability) and may collapse and expand beyond the development footprint.	 Construction and excavations are limited to demarcated development footprint (orange netting).

			 111400 Environmental Drained Point WWTW 07/06/2024 13:12 36°19'58" S 22°07'17" E 1000, Mossel Bay Remains, Mossel Bay Historic dumped material stability is undetermined.
Access and traffic control	Existing access track to be used	Existing access tracks are being used and maintained.	
Contaminated water control	No contaminated water from the construction site, shall be discharged into the environment. Any contaminated water shall be disposed of in an appropriate disposal facility.	Not applicable to the current activity on site – bulk excavation of the reactors and foundation of the clarifier. Dewatering was required and was done to the satisfaction of the ECO. Water was released in the stormwater trench (with a silt fence). A stormwater diversion trench above the northwestern edge of the clarifier excavation is in place to prevent stormwater from entering the excavation. Silt fences are in place at the end of the stormwater trench. The trench held up well during the recent heavy rain storm.	 111400 Environmental Drained Point WWTW 07/06/2024 13:12 36°19'58" S 22°07'17" E 1000, Mossel Bay Remains, Mossel Bay No contaminated water entering the surrounding environment noted after the heavy rain in early June. This is the stormwater trench.

			 Stormwater trench in place.
Site and waste management	1. Storage areas for potentially contaminating materials shall be roofed with impervious material (or double bagged in a skip until removed). 2. Waste bins/skips must be used for all waste and litter. Waste bins must have lids to prevent content from blowing away or accumulating rainwater. Skips should be covered with netting. 3. The burning of waste is forbidden. 4. At least one chemical toilet must be made available on site for every 15 workers. All workers will be required to use the chemical toilet(s).	1. Storage of hazardous material as per the contractor's method statement and within the existing site camp (if any) 2. The waste storage area is fenced off and litter bins are available at the site camp. 3. No burning or burying of waste noted or reported to the ECO. 4. Portable- and permanent toilets area available on site. The top layer of material next to the excavation site consists of historic dumped material (prior to the commencement of this project). The waste material layer is unpredictable due to its unknown composition and thus it poses an unknown risk (stability) and may collapse and expand beyond the development footprint.	 Storage of material within the demarcated construction site.

			 The slope was battered back to 34-40 degrees and stabilized. However, the top layer is made up of historic dumped/fill material and the risk it could potentially pose is unpredictable – north western corner eroded during the recent heavy rain.
Hydrocarbon management	Bunding is required when storing fuel and a drip tray must be used when refueling. Drip trays to be used under construction trucks (when parked overnight)	No fuel stored on site to the knowledge of the ECO. Drip trays are to be used as described in the contractors method statement.	
Fire prevention and control	1. Any welding or other sources of heating of materials shall be done in a controlled environment and under appropriate supervision 2. Working fire extinguisher to be available on site. 3. No smoking will be allowed on site, in particular in areas within or adjacent to natural vegetation, except in designated smoking points.	1. Not applicable to the current activity. 2. As per the contractor's method statement. 3. No smoking on site noted during ECO site inspection. Dedicated smoking area to be provided at the site camp.	

Dust control	The contractor shall be responsible for the control of dust arising from the operations	No dust issues noted or reported to the ECO. Dust management to be implemented as per the contractors method statement when necessary.	 Hilland Environmental Pinnacle Point WWTW 07/06/2024 13:38 34.19329, 22.07846 6500, Mossel Bay Remains, Mossel Bay no dust mitigation required
Heritage	If any human remains or archaeological remains (e.g. fossils, bones, artefacts etc.) are exposed or uncovered during work on site, the contractor shall stop work immediately and inform the ECO who must contact Heritage Western Cape (HWC) for information on the appropriate course of action to be taken. HWC contact detail: 021 483 5959.	Nothing reported to the ECO	
Concrete management	1. Ready-mix concrete should preferably be used. 2. Cement and other potential environmental pollutants shall be stored in a dry lockable container. 3. Mixing of mortar and concrete must take place on an impermeable substratum. 4. Lined, concrete effluent catchpits must be created where on-site mixing takes place.	No environmental issues noted in relation to the concrete walls for the clarifier. Stand mixer and ready mix are used.	 07 June 2024 1:13 pm No environmental issues related to concrete and cement noted.

Natural vegetation and alien clearing	The surrounding area (fynbos) on the eastern side (east of the access road) and south-western side of the site and WWTW are highly sensitive and are to be regarded as No-Go areas. 1. The development footprint must be pegged and demarcated in consultation with the ECO to avoid any disturbance of the sensitive vegetation areas. 2. Topsoil rescued for use in the rehabilitation phase. 3. Rehabilitate/revegetate all the disturbed surfaces after construction completed. Especially the newly created slopes directly behind the WWTW - erosion control measures will be required on the steep slopes, such as silt fences, logs or netting, to slow down runoff and potential erosion. Mulching and seeding with indigenous grass seed during rehabilitation phase. 4. Engage in alien clearing.	Development footprint was pegged and vegetation within the development footprint was cleared. Sensitive areas as identified in the EMPr are avoided. Topsoil is stockpiled for rehabilitation phase. Invasive aliens within the development footprint were removed.	 Surface water from outside the demarcated construction site resulted in silt wash – not related to the construction activity.  No-go demarcation in place. No disturbance of the natural vegetation noted.
Site closure / rehabilitation phase	All equipment and temporary facilities shall be removed from the site within one week after completion of construction activities. The contractor must remove all oil, cement spills and waste within one week after completion of construction on a site.	Not applicable – still in construction phase.	

	The contractor must repair disturbed areas (e.g. deep tracks left by construction vehicles) within one week after completing construction on a site. Areas compacted by vehicles during construction shall be scarified or ripped, if necessary, to allow penetration of plant roots and the re-growth of natural vegetation if outside the boundaries of the site footprint. Locally indigenous plant species shall be used for rehabilitation. Vegetative cover shall be encouraged to take place in as short a time as possible.		
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Compliance with the relevant conditions of EA (16/3/3/1/D6/29/0014/23 – 31 October 2023):

1 This Environmental Authorisation is granted for the period from date of issue until 31 October 2028 (validity period), during which period the Holder must ensure that the— (a) physical implementation of all the authorised listed activities is started with and concluded at the site; (b) construction monitoring and reporting requirements are undertaken at the site and submitted to the Competent Authority in time to allow said authority to process such documents timeously; (c) post construction rehabilitation and monitoring requirements is undertaken and completed at the site; and (d) environmental auditing requirements are complied with; and that such auditing is finalised in time to allow the competent authority to be able to process the environmental audits timeously within the specified validity period.	Physical implementation of the authorised listed activities started well within the validity period. This monitoring report will be submitted to the Competent Authority. Environmental audit is not yet required, only in 2025.
2 The construction phase of the Environmental Authorisation is subject to the following: 2.1 The Holder must finalise the post construction rehabilitation and monitoring requirements within a period of 3-months from the date the development activity (construction phase) is concluded.	Not yet applicable – still in construction phase. Post construction rehabilitation must be concluded within 3 months from the date that the construction phase is concluded.
3 The Holder is authorised to undertake the listed activities specified in Section B above in accordance with the Preferred Alternative described in the FBAR dated 9 March 2023 on the site as described in Section C above. This Environmental Authorisation is only for the implementation of the Preferred Alternative which entails: The Holder is herein authorised to undertake the following activities that includes the listed activities as it relates to the clearance of indigenous vegetation and the transformation of land that is zoned as open space for the upgrading of the Wastewater Treatment Works (WWTW) at Pinnacle Point. The specific details of the proposed upgrading of the WWTW to increase the capacity of the WWTW to 6,9 Ml/day involves the following: - construction of a new inlet works with mechanical screening, vortex-type grit chambers and washing of grit and screenings; - construction of a new flow distribution structure between the old and new plants; - upgrading of the existing office building to facilitate the new MCC, further to this the refurbishment of the existing chlorination building to have the required safety structures; - construction of a new secondary treatment chain with a new biological reactor and secondary settling tank;	As per the site development plan.

- supply and installation of a new mechanical dewatering facility including the construction of a new dewatered sludge hopper; - rehabilitation of the existing access road; - extension of the site area towards the north-west with a footprint of $\pm 6000 \text{ m}^2$; - extension of fencing around the total footprint. The upgrading of the WWTW must be implemented in accordance with the layout developed by WEC Consult Consulting Engineers (dated December 2022) Drawing number 21-MOS-021/SUR101/00 (Annexure 2).	
4 This Environmental Authorisation may only be implemented in accordance with an approved Environmental Management Programme ("EMPr").	Noted
5 The Holder shall be responsible for ensuring compliance with the conditions by any person acting on his/her behalf, including an agent, sub-contractor, employee or any person rendering a service to the Holder.	Holder remains responsible
6 Any changes to, or deviations from the scope of the alternative described in section B above must be accepted or approved, in writing, by the Competent Authority before such changes or deviations may be implemented. In assessing whether to grant such acceptance/approval or not, the Competent Authority may request information in order to evaluate the significance and impacts of such changes or deviations, and it may be necessary for the Holder to apply for further authorisation in terms of the applicable legislation.	No deviations from the approved scope.
7 The Holder must in writing, within 14 (fourteen) calendar days of the date of this decision– 7.1. notify all registered Interested and Affected Parties ("I&APs") of – 7.1.1. the decision reached on the application; 7.1.2. the reasons for the decision as included in Annexure 3; 7.1.3. the date of the decision; and 7.1.4. the date when the decision was issued. 7.2. draw the attention of all registered I&APs to the fact that an appeal may be lodged against the decision in terms of the National Appeal Regulations, 2014 (as amended) detailed in Section G below; 7.3. draw the attention of all registered I&APs to the manner in which they may access the decision; 7.4. provide the registered I&APs with the: 7.4.1. name of the Holder (entity) of this Environmental Authorisation, 7.4.2. name of the responsible person for this Environmental Authorisation, 7.4.3. postal address of the Holder, 7.4.4. telephonic and fax details of the Holder, 7.4.5. e-mail address, if any, of the Holder, 7.4.6. contact details (postal and/or physical address, contact number, facsimile and e-mail address) of the decision-maker and all registered I&APs in the event that an appeal is lodged in terms of the 2014 National Appeals Regulations (as amended). 7.5. The listed activities, including site preparation, must not commence within 20 (twenty) calendar	Notification of I&AP's done on 31 October 2023

days from the date the applicant notified the registered I&APs of this decision. 7.6. In the event that an appeal is lodged with the Appeal Authority, the effect of this Environmental Authorisation is suspended until the appeal is decided (i.e., the listed activities), including site preparation, must not commence until the appeal is decided.	
8 Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of any activities. 8.1. The notice must make clear reference to the site details and EIA Reference number given above. 8.2. The notice must also include proof of compliance with the following conditions described herein: Conditions no.: 7 and 12.	Written notice was sent to DEA&DP on 28 November 2023.
9 Seven calendar days' written notice must be given to the Competent Authority on completion of the construction activities.	Not yet applicable – notify DEA&DP within 7 days from completion of construction activity
10 The Environmental Management Programme ("EMPr") submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented: 10.1. The EMPr must be read with, and implemented together with the following — 10.1.1. All the conditions given in this Environmental Authorisation; 10.1.2. All monthly ECO reports must be submitted to the competent authority; and 10.1.3. Comply with the auditing schedule as set out by this Environmental Authorisation.	EMPr was approved. This ECO report will be submitted to the DEA&DP.
11 The EMPr must be included in all contract documentation for all phases of implementation.	Noted
12 The Holder must appoint a suitably experienced Environmental Control Officer ("ECO"), for the duration of the construction and rehabilitation phases of implementation contained herein.	Hilland Environmental is the appointed ECO.
13 The ECO must— 13.1. be appointed prior to commencement of any works (i.e. removal and movement of soil); 13.2. ensure compliance with the EMPr and the conditions contained herein; 13.3. keep record of all activities on the site; problems identified; transgressions noted, and a task schedule of tasks undertaken by the ECO; 13.4. remain employed until all development activities are concluded, and the post construction rehabilitation and monitoring requirements are finalised; and 13.5. the ECO must conduct site inspections at least every 2 (two) weeks and must submit ECO Monitoring Reports on a monthly basis to the competent authority.	ECO was appointed before commencement of any activity. ECO monitors compliance with the EA and EMPr
14 A copy of the Environmental Authorisation, EMPr, any independent assessments of financial provision for rehabilitation and environmental liability, closure plans, audit reports and compliance monitoring reports must be kept at the site of the authorised activities and be made available to anyone on request, and where the Holder has website, such documents must be made available on such publicly accessible website.	Noted

15 Access to the site referred to in Section C must be granted, and the environmental reports mentioned above must be produced, to any authorised official representing the Competent Authority who requests to see it for the purposes of assessing and/or monitoring compliance with the conditions contained herein.	Noted
16 The Holder must, for the period during which the environmental authorisation and EMPr remain valid ensure the compliance with the conditions of the environmental authorisation and the EMPr, is audited.	Annual environmental audits to be conducted, first environmental audit is due in 2025 , and must comply with conditions 17, 18 & 19.
20 The physical alteration of the portion of the Remainder of Erf No. 15390, Mossel Bay, must be restricted to "the site" as depicted on the SDP in Annexure 2. 20.1. No vegetation or land may be disturbed outside the perimeter of the site, unless such activities are authorised by the competent authority. 20.2. Prior to the commencement of the physical implementation of any activities, the site must be clearly demarcated, preferably fenced-off.	Physical alteration (construction activity) is limited to the development footprint and is demarcated. The site is demarcated. The top layer of material next to the excavation site consists of historic dumped material (prior to the commencement of this project). The waste material layer is unpredictable due to its unknown composition and thus it poses an unknown risk (stability) and may collapse and expand beyond the development footprint. As reported previously (ECO report No.3) – "The engineers investigated the potential risk, and the proposal was to batter back the slope to 34-40 degrees – Done and ongoing monitoring during construction phase".
21 Should any heritage remains be exposed during excavations or any other actions on the site(s), these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape. Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from Heritage Western Cape. Heritage remains may only be disturbed by a suitably qualified heritage specialist working under a directive from the relevant Heritage Resources Authority. Heritage remains include meteorites, archaeological and/or paleontological remains (including fossil shells and trace fossils); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artefacts and bone remains; structures and other built features with heritage significance; rock art and rock engravings; shipwrecks; and/or graves or unmarked human burials including grave goods and/or associated burial material.	Noted – no heritage remains were uncovered during the bulk excavations.

Conclusion

Bulk excavation of the reactor unit is still in progress and construction of the clarifier is ongoing. The slope that was battered back has a top layer of waste material which could pose a risk (collapse and expansion beyond the approved development footprint) due to its unknown nature and stability, this was especially a concern during the recent heavy rain storm in early June 2024. Water in the clarifier/ reactor excavation from natural seepage is being pumped out once a day, or as necessary. Ongoing ECO monitoring is to be done.