



Hilland Environmental

Environmental Assessment Practitioners

Environmental Monitoring Report No.19 (final) for Pinnacle Point WWTW Upgrade, Mossel Bay Municipality



Compiled by:

Hilland Environmental

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September 2025 - March 2026

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**PINNACLE POINT WWTW UPGRADE
FINAL ENVIRONMENTAL MONITORING REPORT NO 19**

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Final Environmental Monitoring Report (No. 19)

HilLand Environmental (Pty) Ltd, the appointed Environmental Control Officer (ECO), compiled this report as the Final construction and rehabilitation phase environmental monitoring report (**No.19**) 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 **nineteenth and final** Environmental Monitoring Report.

It covers inspections during the snags and rehabilitation period from **September 2025 to March 2026** 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
18 June 2024	Site Meeting & site inspection
03 July 2024	Site inspection
25 July 2024	Site Meeting & site inspection
05 August 2024	Site inspection
22 August 2024	Site inspection
06 September 2024	Site inspection
19 September 2024	Site Meeting & site inspection
09 October 2024	Site inspection
24 October 2024	Site Meeting & site inspection
07 November 2024	Site inspection
21 November 2024	Site Meeting & site inspection
11 December 2024	Site inspection
10 January 2025	Site inspection
30 January 2025	Site Meeting & Site inspection
13 February 2025	Site inspection
20 February 2025	Site Meeting & Site inspection
13 March 2025	Site inspection
20 March 2025	Site Meeting & Site inspection
11 April 2025	Site inspection
24 April 2025	Site Meeting & Site inspection
15 May 2025	Site inspection
20 May 2025	Site Meeting & Site inspection
5 June 2025	Site inspection
19 June 2025	Site Meeting & Site inspection
3 July 2025	Site inspection
17 July 2025	Site Meeting & Site inspection
1 August 2025	Site inspection (and external auditor construction phase inspection)

2 September 2025	Site meeting & Site inspection
23 September 2025	Site inspection – internal stormwater infrastructure construction
8 December 2025	Site inspection – alien clearing and paving around the infrastructure
27 January 2025	Site inspection - paving around the infrastructure
5 March 2026	Rehabilitation / slope stabilization site inspection
11 March 2026	Rehabilitation / Slope stabilization site inspection
19 March 2026	Rehabilitation / Slope stabilization site inspection – final ECO inspection

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

Item	Management / Mitigation Measure	Compliance/ Notes
1. 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.
2. 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 were within the wastewater treatment works facility – <i>fenced off area</i>. 2. Subsoil for backfilling was stockpiled in an already disturbed area (kikuyu grass and parking area) and was demarcated with orange netting. Subsoil material was used for backfilling around the clarifier and reactor - DONE 3. Vegetation clearing was limited to the development footprint - DONE. 4. Topsoil was stockpiled within the existing WWTW facility – behind the dry beds and reused for rehabilitation and shaping. 5. Disturbance was limited to the development footprint. Backfilling, shaping and rehabilitation behind the reactor and clarifier are done. All construction activity remained within the approved development footprint.
3. Access and traffic control	Existing access track shall be used	Existing access tracks were used and maintained.
4. 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.	No contaminated water was noted during site inspections. .
5. 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 and dumping of waste are 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. No hazardous materials noted during the final inspection. 2. Litter bins (closable) were available at the site camp and the site throughout construction phase. 3. No burning or burying of waste noted or reported to the ECO. All building waste has been removed. 4. Suitable ablution facilities were available on site.
6. Hydrocarbon management	Bunding is required when storing fuel and a drip tray must be used when refueling.	As observed during the construction phase.

	Drip trays to be used under construction trucks (when parked overnight)	
7. Fire prevention and control	- Any welding or other sources of heating of materials shall be done in a controlled environment and under appropriate supervision - Working fire extinguisher to be available on site. - No smoking will be allowed on site, in particular in areas within or adjacent to natural vegetation, except in designated smoking points.	- No environmental issues noted or reported to the ECO. - Were in place as per the contractor's method statement and as seen on site during ECO inspections. - No smoking noted on site during ECO site inspection. Cigarette disposal bin to be provided at the site camp.
8 & 9. Noise and Dust control	The contractor shall be responsible for the control of dust arising from the operations.	No dust or noise issues noted or reported to the ECO.
10. 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 noted by or reported to the ECO.
12. Concrete management	- Ready-mix concrete should preferably be used. - Cement and other potential environmental pollutants shall be stored in a dry lockable container. - Mixing of mortar and concrete must take place on an impermeable substratum. - Lined, concrete, effluent catchpits must be created where on-site mixing takes place.	Stand mixer and ready mix were used for bulk works, hand mixing was done on a non-permeable layer (plastic sheet). Cement was stored in the site camp and in a container.
15. 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. - The development footprint must be pegged and demarcated in consultation with the ECO to avoid any disturbance of the sensitive vegetation areas. - During the construction phase, demarcate/fence off the development footprint. Restrict all construction activities, such as stockpiling and parking, to already disturbed areas away from natural vegetation. The contractor(s) must be made aware of the sensitive surroundings. The fynbos outside the footprint must be declared a 'no-go' area and not be disturbed in any way. - Topsoil rescued for use in the rehabilitation phase. - 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. - Engage in alien clearing (at least 5m around the site).	The development footprint was pegged and the vegetation within the development footprint was cleared. Sensitive areas as identified in the EMPr (outside the development footprint) were avoided. Topsoil was stockpiled and used during the rehabilitation phase. Subsoil for backfilling was stockpiled in an already disturbed area and was demarcated (kikuyu grass and parking area) with orange netting. Invasive aliens within the development footprint were removed. The (at least) 5m wide strip around the site has been cleared during the rehabilitation phase. Rehabilitation of the slope behind the reactor and clarifier were done. Fertilizer scattered. Following indigenous seed mix was sown on the slopes and covered with biojute: <i>Dietes irridoides</i> <i>Dietes grandiflora</i> <i>Dietes bicolor</i> <i>Mellinis nerviglumis</i> <i>Juncus effessus</i> <i>Searsia crenata</i>

		<i>Brachyleana discolor</i> and <i>Tharcontanthus camphoratus</i> <i>Dodonea anguatifolia</i> Alien vegetation was mulched with a chipper, and the mulch was used on site.
13. Site closure / rehabilitation phase	All equipment and temporary facilities shall be removed from the site within one week after completion of construction activities - DONE The contractor must remove all oil, cement spills and waste within one week after completion of construction on the site - DONE The contractor must repair disturbed areas (e.g. deep tracks left by construction vehicles) within one week after completing construction on a site - DONE 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 - DONE Locally indigenous plant species shall be used for rehabilitation -DONE, refer to rehabilitation notes above Vegetative cover shall be encouraged to take place in as short a time as possible – vegetation cover is observed (19 March 2026)	

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 within the validity period. This final ECO monitoring report will be submitted to the Competent Authority. The external auditor has been appointed and conducted the annual audit inspection on 1st August 2025. The final/completion audit inspection will be done in due course, and then the external environmental audit report will be circulated.
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.	Post construction rehabilitation is now 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:	As per the site development plan.

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; - 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).	Engineer to confirm.
4 This Environmental Authorisation may only be implemented in accordance with an approved Environmental Management Programme ("EMPr").	Noted – the EMPr has been approved – refer to condition 10
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.	Noted.
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.	Notification of I&AP's done on 31 October 2023.

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 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.	This report (dated 20 March 2026) notifies the DEA&DP (within 7 days) from completion of construction and rehabilitation activities.
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 has been 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 was the appointed ECO.
13 The ECO must— 13.1. be appointed prior to commencement of any works (i.e. removal and movement of soil);	ECO was appointed before commencement of any activity.

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 monitors compliance with the EA and EMPr. ECO task schedule – environmental induction with the main contractor, conduct bi-monthly ECO site inspections (based on the EMPr) and report to the professional team (this report).
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. No DEADP site inspections were conducted during this monitoring period.
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 audit inspection was conducted on the 1st of August 2025. The report is due to be submitted once the completion inspection has been conducted – in due course and after the submission of this report.
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) was limited to the development footprint that was pegged by the surveyor and demarcated with orange netting prior to commencement with excavations.
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	Noted – no heritage remains were uncovered during the bulk excavations.

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.

Photographic Record:



Slope rehabilitation / revegetation and erosion protection



Slope rehabilitation / revegetation and erosion protection



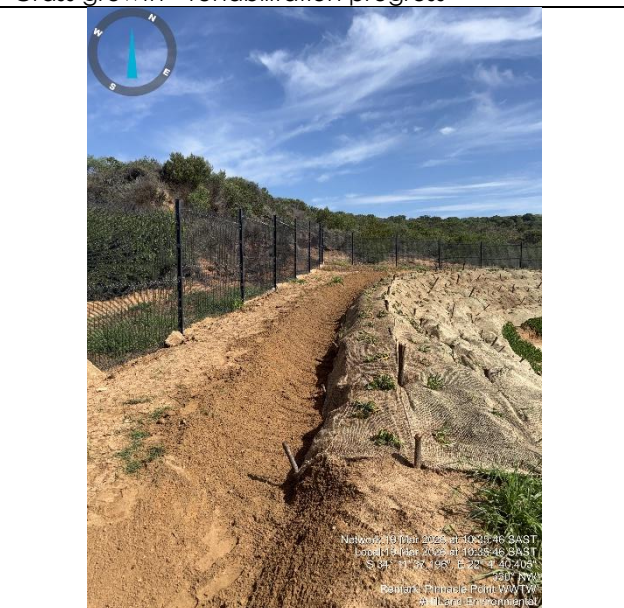
Wood chipped much used in the rehabilitation area



Grass growth – rehabilitation progress



Rehabilitation progress



Stormwater / surface water diversion channel in place (above the clarifier)



Grass growth – rehabilitation progress



Grass growth – rehabilitation progress



Chipping alien vegetation



5m strip alien clearing done



Construction completed - clarifier



Construction completed – bio-reactor

Conclusion

The construction of the clarifier and reactors is now complete. Water testing was completed and backfilling / shaping around (behind) the reactors has been completed.

Construction of the division box and pump station is complete. Installation of the new boundary fence was completed during this monitoring period.

Rehabilitation / revegetation of the slopes have been completed, and vegetation growth was already noted during the final ECO inspection. Erosion protection and soil stabilization was done – Biojute pegged to the slope.

This report notifies the competent authority of the completion of the construction and rehabilitation activities as required in terms of Condition 9 of the EA. Rehabilitation phase completed on 12 March 2026 and final ECO inspection conducted on 19 March 2026. The final report is submitted on 20 March 2026.

The external environmental auditor will now conduct the final audit inspection.