

AUBREY WITHERS ENVIRONMENTAL CONSULTANT

File 1012 : Development ECO Checklist No.: 3

Date: 24 August 2022

PROJECT DETAILS

ECO Checklist for the Bulk Earthworks, Dune Rehabilitation and the Construction of Bulk Services for the Preekstoel Beach Lifestyle Estate on Portion 2 of Erf 599 and Erf 1028, Still Bay East, Western Cape

REPORT ECO Checklist for Civils Construction

AWEC FILE NO. 1012

AUTHOR Aubrey Withers

DEVELOPER

Vivren Properties (Pty) Ltd.

Bruce Ladegaard and Tjaart van der Walt

CONSULTING ENGINEER

ICON Consulting Engineers

Brennan Rutherford

CONTRACTOR

ASLA Construction

Chris de Jager

CONSULTANT

Aubrey Withers Environmental Consultant

6 Santa Rosa Street

Die Boord, 7613

Mobile: 023 658 8744

aubreywithers@mweb.co.za

ECO CHECKLIST #3

PREEKSTOEL BEACH LIFESTYLE ESTATE, STILL BAY EAST, WESTERN CAPE

PREPARED FOR: Vivren Properties (Pty) Ltd.

Date of Site Visit:	4 August 2022	Date of Issue	24 August 2022
Site Visit Undertaken by (ECO):	Aubrey Withers.		
Distribution List:	Name	Company	Email
	Chris de Jager	ASLA	chris@asla.co.za
	Bernard Olivier	ASLA	bernard.olivier@ alsa.co.za
	Brennan Rutherford	ICON	brennan@iconeng.co.za
	Tjaart van der Walt	Vivren Properties	tjaart@missionholdinggroup.co.za
	Bruce Ladegaard	Vivren Properties	bruce@dragonflyprop.co.za
	Jessica Christie	DEADP, George	jessica.christie@westerncape.gov.za
	Marius Venter	DEADP Appeals	marius.venter@westerncape.gov.za
	Jean du Plessis	CapeNature	jduplessis@capenature.co.za
	Rhett Smart	CapeNature	rsmart@capenature.co.za
	Thandeka Mbambo	DEA O & C	oceia@environment.gov.za
	Shadon Carelse	Hessequa Mun	shadon@hessequa.gov.za
	Hendrik Visser	Hessequa Mun	hendrik@hessequa.gov.za

INTRODUCTION

This document provides a Table (ECO Checklist) of the mitigation measures as described in the Environmental Management Programme (EMPr) for the Construction Phase of the **Preekstoel Beach Lifestyle Estate, Still Bay East,** as prepared by Aubrey Withers Environmental Consultants. The ECO Checklist describes the mitigation actions that should be implemented during the construction of Municipal Services and the Rehabilitation of the Dunes, as well as the persons/ parties responsible for implementing the actions. The ECO checklist should be read together with the EMPr.

The EMPr headings provided in the left-hand side column of the ECO Table are as per the EMPr for ease of reference. The two columns on the right-hand side of the table should be completed by the ECO during his site inspections. Compliance is measured as Non-Compliant (NC), Partially Compliant (PC), Compliant (C), or Compliant plus added value/ effort (C+). The observations made and corrective actions required are documented in the "comment" column. Where no comments are included in the "comment" column, the specific measure is either not applicable at this stage of the project or will be addressed during ensuing ECO visits.

Key to Compliance Indicators:

NC	PC	С	C+
Non-Compliant	Partially Compliant	Compliant	Compliant plus added value/effort

The Construction Manager (CM)/ Site Agent (SA) and the Environmental Control Officer (ECO) will use this document when monitoring construction activities on site. This document can also be used for compliance monitoring during the operational phase of the development. The roles and responsibilities of the CM/ SA and ECO are described in Section A and Section E of the EMPr.

ECO Objectives and Compliance Inspection Scope:

The objectives of this ECO site inspection are to monitor ongoing site clearance and related construction activities being undertaken on site against the requirements of the approved EMPr (Construction Phase).

Compliance Inspection Methodology:

The EMPr states that an ECO must be appointed by the developer to oversee the construction phase of the project. The ECO will then need to undertake periodic site visits to assess whether any environmental degradation is resulting from the construction phase of the project and to check (monitor and report on) compliance with the EMPr. The daily on-site activities will be controlled by the Construction Manager (or Site Agent) and RE.

The ECO is to complete an ECO Checklist after each site visit and circulate this checklist amongst the contractor/s, developer and Authorities (DEADP and Hessequa Municipality) to serve as a record of proceedings. The ECO Checklist must be circulated no more than 5 days after each site visit. The ECO Checklist will also be used for the recording of general site instructions as they relate to the environmental scope of works on site. The site instruction file will, however, also be used for issuing "stop work" orders for the purposes of immediately stopping any particular activities of the contract due to the environmental risk or any significant impacts that may result.

Tracking of Compliance Status:

Date of ECO Checklist Conducted	NC	PC	С	C+
4 March 2022		4	36	
13 April 2022		1	39	1
4-12 August 2022		1	51	

TABLE OF CONTENTS

(Headings as per the EMP and EA for ease of reference)

ECO CHECKLIST #1	3
INTRODUCTION	4
SUMMARY OF SITE INSPECTION OUTCOME	4
SUMMARY OF COMPLIANCE INSPECTION FINDINGS:	4
SECTION F: CONSTRUCTION ENVIRONMENTAL MANAGEMENT PL	AN 7
F.1 GENERAL CONSTRUCTION MANAGEMENT PROGRAMMES	7
F2 BIOPHYSICAL MANAGEMENT PROGRAMMES	10
F.2.1 Fauna and Flora	10
F.2.2 Water	10
F.2.3 Soil	11
F.2.4 Energy Management	14
F.2.5 Hydrocarbon and Hazardous Materials HandlinF.3 SOCIO-ENVIRONMENTAL MANAGEMENT PROGRAMMES	
F.3.1 Archaeological and Heritage Resources	15
F.3.2 Socio-Economic Benefits of the Development	16
F.3.3 Security	16

LIST OF ACRONYMS AND ABBREVIATIONS

ARC Architect

AWEC Aubrey Withers Environmental

BC Body Corporate

CM Construction Manager

DEADP Department of Environmental Affairs and Development Planning

ECO Environmental Control Officer

EMPr Environmental Management Programme
EAP Environmental Assessment Practitioner

HOA Home Owners Association

RESP Responsibility

SHE Safety, Health & Environmental Officer

SA Site Agent

RE Resident Engineer

APPENDICES

APPENDIX 1: Names of inducted staff members

APPENDIX 2: Photo Sheet

SECTION F: CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

F.1 GENERAL CONSTRUCTION MANAGEMENT PROGRAMMES

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY)	REQUIRED ACTIONS	TARGET AND RESPONSIBILITY	COMPLIANCE	ECO COMMENTS
Establish appropriate partnerships and good relationships with local authorities, local	Ensure appropriate communication with all local authorities, CapeNature, and contractors.	To be undertaken by professional team and ECO, project manager (consulting engineer and/or site agent) as ongoing process.	С	The ECO Checklists will be distributed by the ECO to authorities, CapeNature and contractor on a monthly basis.
community, and contractors	Contractors to be fully informed by the ECO as to their environmental contractual obligations. Induction of staff must take place.	ECO is to undertake the induction of staff and to monitor environmental contractual obligations of contractors on ongoing basis for the duration of the project.	С	A site hand over meeting was held with ASLA construction on 20 July 2022 during which the contractor was made aware of their environmental obligations. Environmental Awareness Posters have been provided to the Contractors. The induction of ASLA staff was undertaken on 4 August 2022 (Appendix 1).
	3. Appropriate signage that indicates the contact details of the Implementing Agent, Contractor, RE (or RE's representative) and ECO must be provided on site. Given that access across the site must remain open during the day, appropriate signage must be erected on the entrance gate warning visitors to the Nature Reserve about the movement of heavy construction vehicles.	The contractor's Notice Board still needs to be erected at the entrance to the construction site. The signboard warning the public of construction traffic has been placed on the construction site. The Notice Board is to have the ECO's telephone No. on it.	PC	The contactor's Notice Board still needs to be placed at the entrance to the construction site
Undertake construction of Municipal Services without adversely affecting the environment, including the gravel entrance road across the site to the	Communicate with contractor's staff to ensure that all the environmental specifications are understood and carried out.	To be undertaken by ECO and site agent before construction commences.	С	A meeting was held with the contractor's staff on 4 August to induct them to make them aware of their environmental obligations re site office, materials store area (storage yard), to keep the access road in good condition and the conduct of the staff throughout the construction phase.
Nature Reserve.	The contractor must point out the site office and the holding yard.	To be sanctioned by the ECO and site agent before installation of services takes place.	С	A small container has been placed near the entrance of the site to act as a temporary site office, eating area, placement of toilet and waste bin (Photo 1), and a larger storage container has a been placed within the storage yard for the duration of the services contract.

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY)	REQUIRED ACTIONS	TARGET AND RESPONSIBILITY	COMPLIANCE	ECO COMMENTS
	3. Control all construction in terms of the Construction Guidelines This will include the removal of alien vegetation and the removal and storage of natural topsoil, brushwood and chip wood if applicable.	ECO to inform and educate the construction staff and RE of the Construction Guidelines and the Recommendations for Clearing of Invasive Alien Vegetation, prior to commencement of construction. ECO to monitor compliance.	С	The brushwood chips (mulch or wood chips) was placed over the stable platforms to prevent windblown sand (Photo 2). The remaining wood chips have been stored in heaps across the site.
Storage of construction materials on site and concrete mixing areas	Construction material (concrete and mortar raw materials) must be stored in designated areas in a neat and orderly manner.	Area for construction material has been designated by the Site Agent and to be in secured area out of the way of services construction areas. ECO to monitor compliance.	С	The storage area has been vetted by the ECO and is out of the way within the east of the site. The construction of services is currently underway.
	2. Contractor to store building rubble in a suitable designated area, with rubble removed from site on a weekly basis (if not to be used as fill).	The area for any building rubble storage to be designated by the ECO. Contractor to remove builder's rubble on weekly basis. ECO to monitor compliance.	С	No building rubble is being generated during the current phase of works.
	The building contractor must indicate the dumping area for all spoil from the site. Trucks removing spoil must remain on designated access roads.	ECO to assess spoil dumping area, and to monitor condition of road.		The construction of services is not being undertaken in the second phase of construction.
	4. All other solid waste to be kept in appropriate containers with lids and removed from the site on a weekly basis to a licensed waste disposal facility. The burning of solid waste and paper on site will not be allowed. Recyclable waste (e.g. paper, glass, tin, plastic) should be recycled if possible.	Contractor to remove solid waste on a weekly basis. ECO to monitor compliance.	С	The construction of services is currently being carried out. A dustbin with a lid is kept at the small container used for storing small tools and which is also used for the eating area.
Storage of construction materials on site and concrete mixing areas (cont.)	5. Only one refueling area should be provided at the stores/site office for refueling construction vehicles where appropriate.	Contractor to report all fuel and oil spills to the ECO immediately and to remove contaminated soil to a licensed waste disposal facility.	С	A mobile diesel bowser is provided on site. All machines are parked in a central area after work for the day.

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY)	REQUIRED ACTIONS	TARGET AND RESPONSIBILITY	COMPLIANCE	ECO COMMENTS
	6. Concrete mixing must be restricted to a designated area on site and cement residues to be removed from site as soon as possible. At least one wastewater catch pits must be constructed for the capture of concrete residues from cleaning of the cement mixer. Residues are to be removed from site from time to time.	ECO to monitor compliance. Contractor to remove cement residues from each logical phase of construction.	С	Concrete is being used during the current phase of works on site for the foundations of the sewer manholes. No concrete waste is being generated on site.
	 All parked mechanical vehicles must have a drip tray present to prevent spillage of oils and fuels. 	ECO checked all construction vehicles and none of them were leaking oils or diesel.	С	Drip trays are on site but are not necessary to be used as no oil or diesel drips were noted.
Prevent possible negative impacts of construction personnel on the environment	Contractors will be responsible for the conduct of their personnel on site, as it pertains to trespassing, littering, and unacceptable social behaviour.	Contractor responsible for social management. ECO to monitor for duration of contract.	С	Contractor to take note. All staff were observed within the construction area.
	ECO must inform construction personnel of environmental rules to apply during construction period.	ECO to meet with contractor prior to commencement of construction in new areas to inform workers of the sensitivities of the site and how they should conduct themselves.	С	The ECO met with the Contractor on 4 August 2022. The environmental awareness information was provided to the Contractor, and staff were inducted.
	Maintain strict supervision over all construction activities.	ECO to monitor construction activities and if any adverse impacts occur, he must inform the Site Agent, RE and client of such conduct on an on-going basis.	С	ECO will conduct monthly inspections and inform the Site Agent and Contractor of any transgressions.
	All construction workers must stay within the development area demarcation and no personnel will be allowed beyond the demarcated area.	ECO to monitor for duration of contract.	С	All staff were observed within the construction area.
	5. Driving on site must not exceed 20km/hr to at all times.	ECO to monitor on site for duration of contract	С	No evidence to the contrary has been noted.
	Construction staff will not be allowed to stay on site and must be bussed to site each day.		С	No construction staff stay on site.

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY)	REQUIRED ACTIONS	TARGET AND RESPONSIBILITY	COMPLIANCE	ECO COMMENTS
Prevent possible negative impacts of construction personnel	Chemical toilets must be used on site and must be emptied and sanitized regularly.		С	One chemical toilet is provided on site and is serviced once a week.
on the environment (cont.)	Toilet paper, soap and water must be provided to staff.		С	Such commodities are available on site

F.2 BIOPHYSICAL MANAGEMENT PROGRAMMES

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY)	REQUIRED ACTIONS	TARGET AND RESPONSIBILITY	COMPLIANCE	ECO COMMENTS
F.2.1 Fauna and Flora				
Minimise the removal of indigenous vegetation during the de-grubbing phase	If natural vegetated areas larger than 20m² are found on site, they should be left intact. If any milkwood trees are found they must not be harmed	Where possible try and save areas of natural vegetation on site during degrubbing. Any milkwood trees must be kept and must be surveyed in to be kept at all costs.	С	No areas larger than 20m² were located on site. One Milkwood tree was located on the property on the dune to the south of the entrance road. An application has been submitted to the Department of Forestry to have it removed. A permit has been granted by Forestry to remove the milkwood tree.
Alien plant management	Alien vegetation must be removed by appropriate mechanical means and chipped for a mulch to be later used to cover the bare sand to prevent wind erosion.	Alien plant management is a long term commitment and any seedlings must be appropriately controlled. The ECO is to instigate.		A number of rooikrans seedlings have already been noted on the site. Alien vegetation seedlings must be sprayed with appropriate herbicides at the end of the installation of Municipal services, or hand pulled.
Minimise disturbance to fauna	Contractors must not harm or disturb any wildlife, especially snakes, tortoises, buck, hares and birds.	ECO/Contractor to monitor. The contractor must report all incidents of harm to any fauna to the ECO who will report such incidents to the authorities.	С	No incidences of wildlife were noted on site.
	All fauna must be removed from the construction site without harming them and taken Geelkrans Nature Reserve.	ECO/Contractor to monitor on a going basis. CapeNature may be contacted for a list of snake handlers in the area.	С	Contractor to take note. Whilst evidence of small buck has been noticed (spoor), no wildlife was found on the site.
F.2.2 Water				
Institute measures to minimise ground water pollution during construction phases of project.	1. No pollution of surface or ground water may occur due to any activity on the property. The relevant requirements of the National Water Act, 1998 (Act No. 36 of 1998) must be complied	The ECO/Site Agent to monitor use of oils, diesel and other hydrocarbons on site.	С	No incidence of water pollution was noted on site. An oil spill kit must be on site and personnel must have the appropriate training to use such a kit.

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY)	REQUIRED ACTIONS	TARGET AND RESPONSIBILITY	COMPLIANCE	ECO COMMENTS
	with at all times			
Institute measures for stormwater management to prevent erosion, damage to property and pollution of the environment.	Stormwater measures are not required during the installation of services phase of construction. Should a heavy downpour of rain occur the Site Agent must ensure that stormwater is contained on the property.	RE/Site Agent to monitor adequate storage of stormwater after moderate rainstorms and during the wet winter period (Construction Phase).	С	Deep ponding of stormwater on site must be prevented and measures to keep the stormwater on the site must be undertaken by the Site Agent. No heavy rainstorms have occurred on site during the winter period so far.
F.2.3 Soil				
Prevent soil erosion	The whole site has been degrubbed of alien vegetation. Once the various building platforms have been completed it will be necessary to spread the wood chips over the stabilized platforms on site to prevent wind erosion.	ECO to monitor site clearing and site preparation and check for any erosion that may take place.	С	The whole site has been cleared of all alien vegetation and de-grubbed. The phase 1 building platforms have been prepared and the wood chips spread over them. Municipal services are currently being installed within and along the roads (Photo 3). No major wind erosion has been currently noticed on site.
	The Contractor must take appropriate and active measures to prevent soil erosion resulting from construction works, operations and activities to the satisfaction of the ECO.	The contractor is to institute anti-erosion measures such as the spreading of wood chips over the disturbed areas. The ECO is to monitor.	С	No significant wind erosion was noticed on site.
	3. If significant wind erosion of the property takes place despite the use of wood chips, it may be necessary to used specially made netting erected at rights angle to the prevailing winds.	Anti-erosion measures to be discussed with and approved by the RE in consultation with the ECO if and when necessary	С	No significant erosion has been noticed on site as yet.

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY)	REQUIRED ACTIONS	TARGET AND RESPONSIBILITY	COMPLIANCE	ECO COMMENTS
Rehabilitate all areas where soil erosion has taken place	The badly eroded frontal dune system must be rehabilitated by trapping windblown sand using brushwood fences placed at strategic points	If the brushwood fences take too long in trapping sand moved off the beach by wind, sand harvested from the interior of the property can be used to fill in blowouts and reshape dunes. The ECO and the specialist dune rehabilitation company, VULA, will be responsible for such rehabilitation.	С	The back-dune area of the frontal dune system has grown in size (by at least 2m vertically over a period of about 20 years) by rooikrans trapping windblown sand off the beach and from prolonged blow-outs (Photo 4). It is envisaged to mechanically drag such sand back towards the beach to get a stable, low angle dune front, which will be rehabilitated with locally indigenous strandveld plants. Shade netting rows will be used for long term trapping of sand off the beach and prevent erosion of the newly formed backdune (Photo 5).
	2. Institute soil protection and soil rehabilitation measures on site where erosion has taken place with the use of wood chips. Shade netting could be used in areas where windblown open sandy areas are located.	To be planned and facilitated by ECO where necessary.	С	The mass earthworks for the construction of stable building platforms have been completed for Phase 1. No significant erosion of the development site is taking place.
	Eroded areas will need to be backfilled and compacted	Contractor to ensure that the backfilled material is compacted sufficiently so as to not erode in the future. Wood chips and/or shade netting can also be used to prevent wind erosion of sand.	С	No significant erosion was noticed on site.
	4. Plant locally indigenous Strandveld plants over the private open space to stabilize exposed sandy areas. Indigenous grass seeds and Strandveld seeds harvested from the general Still Bay area could also be broadcas over the open sandy areas of future development phases, or wood chips can be used to stabiles sandy areas. The above planting and broadcasting of see should only take place after the first good rains of the winter season.	Phase 2 have been completed. Once the services have been constructed, rehabilitation of the private open space can be planted with Blombos Strandveld. (i.e. landscaping phase) to prevent windblown erosion.		The ECO will need to facilitate stabilisation of open sandy areas when the Phase 2 services have been installed.

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY)	REQUIRED ACTIONS	TARGET AND RESPONSIBILITY	COMPLIANCE	ECO COMMENTS
	5. Since there is a large volume of rooikrans seeds in the wood chips, rooikrans seedling will germinate over the whole site. These areas should be sprayed using an appropriate herbicide or hand pulled when they reach 05-1m in height.	ECO to monitor and advise accordingly.	С	Some rooikrans seedings have already been noticed growing on the site. It is recommended that such seedlings be sprayed or hand pulled once the services for Phase 1 have been installed or until such seedlings are 05-1m tall.
Prevent pollution / contamination of soil	Prevent cement powder spills and clear such accidental spills as soon as possible as cement powder has a high alkalinity pH rating that can contaminate and affect both soil and water pH dramatically. All hydrocarbon spills are to be addressed immediately to prevent seeping into the ground.	ECO to monitor for duration of contract. Contractor to inform ECO of such spills. Special measures are to be implemented for any hydrocarbon fuel spills. An Oil Spill kit must be kept on site in case of a hydrocarbon spill.	С	Although cement is currently being used on site there have not been any incidents of powder spills. Diesel refilling of construction vehicles is being undertaken from a mobile bowser. No diesel spills have been recorded.
	2. All servicing of vehicles must have a drip tray to prevent accidental spillage of oils and fuels. Similarly, any stationary concrete mixers, dumpers, compressors or generators must have drip trays under them at all times, whether they are working or not.	ECO to monitor for duration of contract.	С	Whilst driptrays are on site, no oil or diesel drips were noted beneath any of the construction vehicles on site.
	3. All vehicles, equipment, fuel and petroleum services and tanks must be maintained in a good condition that prevents leakages and potential contamination of soil.	ECO to monitor for duration of contract.	С	All vehicles are in good working condition and no oil or diesel leaks were noticed.
	 All fuels, oils and hydrocarbon products (e.g. tars) kept in tins and drums must be stored in a suitably bunded area to prevent pollution in case of spills or leakages. 	ECO to monitor compliance for duration of contract.	С	Whilst oils and grease products are presently kept on site, no incidents of spills have been recorded. Tar will probably not be used on site for the construction of the roads. Roads will be paved.

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY)	REQUIRED ACTIONS	TARGET AND RESPONSIBILITY	COMPLIANCE	ECO COMMENTS
Prevention of dust	De-grubbing took place first with the removal of all alien vegetation using mechanical means. All brushwood was chipped and stored in mounts over the site. Any areas that create dust must be wetted down with water or the area covered with wood chips.	ECO to advise during the second phase of earthworks for the installation of services.	С	All brushwood was removed up to the property boundaries and chipped. One complaint was received from a property owner off Kabeljou street. The area causing dust was wetted down with water. No further incidents of dust have been recorded.
	Mass earthworks for Phase 1 on site have been completed and installation of services for Phase 1 is currently being undertaken.	ECO to advise during Phase 2 earthworks.	С	No incidents of dust nuisance have been recorded of dust emanating from site.
	3. All disturbed surfaces must be monitored for dust during windy periods. Given that the excavated sand is moist, very little dust is being generated on site. Water from pipes are being used over the excavations of services to get the right compaction ratios.	Currently water is being used to wet the worked surfaces. ECO to advise on the use of wood chips should dust become a nuisance.	С	No incidents of dust nuisance have been recorded of dust emanating from site.
	Road surfaces may cause dust pollution during their construction phase.	ECO to monitor and advise on the use of water to wet surfaces to prevent dust or to advise on alternative dust suppression measures	С	The gravel access road is in use and is being kept moist. The construction of roads will take place at the end of Phase 2.
F.2.4 Energy Managemen	nt			
Use electricity sparingly during construction	The contractors must be informed of the efficient use of energy (electricity) during construction. When not in use appliances (lights, electrical machinery, motors etc.) must be switched off.	ECO and site agent to monitor for the duration of the contract period.		No electricity is currently required.
•	lazardous Materials Management			
Hydrocarbon and Hazardous Materials Management to be	The contractor shall have a hazardous material spill kit on site.	ECO and site agent to monitor for the duration of the contract period.	С	Construction vehicles are filled from a mobile diesel bowser. No diesel spills have been noted.

carefully undertaken	2.	Prevent cement, bitumen, fuel and other hazardous material spills or clear such accidental spills as soon as possible. All hydrocarbon spills are to be addressed immediately to prevent seeping into the ground.	ECO and site agent to monitor for the duration of the contract period.		Only diesel, oils and grease are being used on site. No incidents of any spills have been recoded.
	3.	Refuelling may take place on site, provided adequate drip trays, spill absorbent material and fire fighting equipment are at hand	ECO and site agent to monitor for the duration of the contract period.	С	Construction vehicles are filled by a mobile diesel bowser. No diesel spills have been noted.

F.3 SOCIO-ENVIRONMENTAL MANAGEMENT PROGRAMMES

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY)	REQUIRED ACTIONS	TARGET AND RESPONSIBILITY	COMPLIANCE	ECO COMMENTS
F.3.1 Archaeological	and Heritage Resources			
Conserve all archaeological settings and artefacts	The ECO must assess the excavated soils for any signs of archaeological artefacts.	Site Agent to monitor and to comply with work stoppage. ECO to ensure training.	С	No archaeological material has been found on site. Should any be found, works on site must be stopped and HWC notified.
	2. Construction personnel must be shown what artefacts to look out for and must point out any archaeological material exposed in the excavations to the ECO. All works must be stopped until such time that the necessary research has been undertaken.	ECO to monitor excavated materials and inform HWC of any finds	С	No heritage resources have been found on site as yet.
	Any burial sites must be reported to the ECO who must investigate the site(s) and inform HWC and SAHRA.	HWC and south African Heritage Resources (SAHRA) must assess sites.	С	Features like burials can occur in unexpected locations, and should any excavations uncover human remains; the ECO and HWC are to be notified immediately. No burial sites have been reported.

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY)	REQUIRED ACTIONS	TARGET AND RESPONSIBILITY	COMPLIANCE	ECO COMMENTS	
F.3.2 Socio-Economic Benefits of the Development					
Job opportunities should be afforded to the local community where possible	Both the temporary job opportunities during the construction phase and more permanent jobs (e.g. domestic staff and security) during the operational phase should be allocated to persons from the local communities wherever possible	Phase 2 installations of services are currently being undertaken by ASLA staff. Where possible, ASLA must appoint local staff when needed.	С	Five local workers from Melkhoutfontein are being employed by ASLA for the installation of services.	
	Developer should employ a social engagement strategy. Temporary job opportunities (construction phase) should be allocated to persons from the local community wherever possible.	Developers to ensure compliance with and monitor the local employment strategy. The RE and ECO to monitor compliance.	С	The contractor is currently using 5 general employees from the local. More staff will no doubt be used once construction of houses takes place.	
To prevent injury to public using the gravel access road, construction staff, and delivery of materials	Signboards should be in place to assist the public with safe access over the site.	Site Agent and ECO to check on compliance during the various phases of the development of the site.	С	A few notice boards are in place along the main access road through the property to Geelkrans Nature Reserve.	
F.3.3 Security					
Minimise security risk during the construction phase	The contractor(s) will be responsible for the security of their construction sites and the conduct of their personnel for the duration of the services and building contracts.	The contractor and developer will need to monitor security issues.	С	No breaches of security risks have been noted on site. It was learnt that diesel was stolen from the tanks within the Municipal caravan and camping area. The was advised about this incident.	
Ensure outdoor advertising associated with the project is not visually obtrusive	All outdoor advertising associated with this project, whether on or off the site, must comply with the south African Manual for Outdoor Advertising Control (SAMOAC).	ECO to monitor compliance by developers and contractors.	С	The Advertising Board and the Contractors Board must comply with SAMOAC.	

SECTION G: REHABILITATION OF FRONTAL DUNE SYSTEM

G.1 GENERAL REHABILITATION PROGRAMME

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY)	REQUIRED ACTIONS	TARGET AND RESPONSIBILITY	COMPLIANCE	ECO COMMENTS
Establish appropriate partnerships and good relationships with local authorities, local community, and contractors	Contractors to be fully informed by the ECO as to their environmental contractual obligations. Induction of staff must take place.	ECO is to undertake the induction of staff and to monitor environmental contractual obligations of contractors on ongoing basis for the duration of the project.	С	The induction of the Dune Rehabilitation team also took place on 4 August 2022. A training session with the latter team took place on Monday 8 and Tuesday 9 August 2022 with Deon van Eeden of VULA.
Job opportunities should be afforded to the local community where possible	Developer should employ a social engagement strategy. Temporary job opportunities (construction phase) should be allocated to persons from the local community wherever possible.	Developers to ensure compliance with and monitor the local employment strategy. The RE and ECO to monitor compliance.	С	The developer employed a team of eight general employees and two supervisors from the local community and Still Bay to undertake the rehabilitation of the reshaped dune system.

APPENDIX 2 – PHOTO SHEET



Photo 1: The small container, chemical toilet and dustbin has been provided near the Phase 2 workspace (installation of Municipal services).



Photo 2: The installation of sewer lines for the Preekstoel Beach Lifestyle Estate. Note the stabilized building platforms covered in wood chips.



Photo 3: The installation of sewer pipes in the center of an internal road.



Photo 4: The back dune of the frontal dune system has been raised by at least 2m by windblow sand causing blowouts within the dune system. The sand from these unstable dunes was moved towards the sea



Photo 5: The sand from the unstable back dunes was moved towards the seashore at an angle of repose of dry sand (about 26°). Note the netting to reduce wind erosion and the soil saver hessian to the left of the middle net. The whole area was planted with indigenous strand plants about 1m apart.

APPENDIX 1

Aubrey Withers Environmental Consultants

File Name.: Preekstoel Coastal Estate

Environmental Planning

Tel.:

083 658 8744

Impact Assessments Management Plans

Email aubreywithers@mweb.co.za
Address: 6 Santa Rosa St., Die Boord, 7613

4 August 2022

INDUCTION OF PERSONNEL FROM ASLA CONSTRUCTION FOR THE INSTALLATION OF MUNICIPAL SERVICES: PREEKSTOEL COASTAL ESTATE

Lecto	
Boolley	
JERSHWIN	
Recho Bodley JORSHWIN THEMBISILE	
TRESLIN	
Hillwin	
hgan	
MIMOHLOMI	
Mande Mpahleni	
ABOUL SAMMAN	
Mande Mpahleni ABOUL SAMMAN Dean Strydom 0712199824	
<u> </u>	
Aubrey Withers Environmental Consultants	

A.W.WITHERS BSc(Hons) Geology