LORNAY
ENVIRONMENTAL CONSULTING

Environmental Management Programme

Portion 1 of the Farm Wortelgat No. 723, Stanford

18 August 2025

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DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

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1. INTRODUCTION

This Operational Phase Environmental Management Programme (EMP) has been prepared as part of the Section 24G application in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), for the rectification of listed activities that were unlawfully commenced on Portion 1 of the Farm No. 723, Stanford, within the Overstrand Local Municipality, Western Cape.

The EMP specifically addresses the operational phase of five (5) boathouse units and associated infrastructure including internal access roads and landscaped lawn areas constructed between 2021 and 2024 as part of the Mosaic Farm tourism offering. Although the development was initially intended for limited private use, all units are currently being utilised for tourism accommodation, thereby triggering listed activities under Listing Notice 3 of the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended).

The purpose of this EMP is to provide a framework for the environmentally responsible operation of the site, ensuring that the activity continues to function in a manner that is compliant with environmental legislation, minimises environmental risks, and supports the long-term protection of ecological resources on and around the property. The EMP outlines the required mitigation, monitoring, and management measures that must be implemented during the operational phase to address potential environmental impacts, with particular focus on biodiversity conservation, waste and effluent management, erosion control, access management, and ongoing compliance monitoring.

This document must be read in conjunction with the Section 24G application report, the original specialist studies (where applicable), and any conditions of authorisation imposed by the competent authority. It is a living document that may be updated periodically to reflect new insights, improved practices, or regulatory requirements.

2. OPERATIONAL ACTIVITIES

The operational phase of the development on Portion 1 of the Farm 723 involves the use of five (5) stilted boathouse units and associated infrastructure for tourism accommodation purposes as part of the broader Mosaic Farm tourism node. Each unit accommodates short-term visitors and is serviced as part of an eco-tourism offering. The operational activities are considered low-impact but require structured environmental management to ensure long-term sustainability and compliance with applicable legislation.

Figure 1. Location of the subject property

The operational activities involve the use of five (5) completed stilted boathouses for short-term tourism accommodation, the maintenance of approximately 3216 m² of associated cleared and landscaped areas (including access roads and lawns), and the ongoing management of supporting infrastructure such as raised boardwalks, conservancy tanks, and off-grid wastewater treatment systems.

Operational activities specifically include:

- → Accommodation of guests in the boathouses on a rotational short-term basis as part of the Mosaic Farm eco-tourism offering;
- → Maintenance and upkeep of internal gravel access roads (approximately 580 m in length and 3.8 m average width) that link the units to the existing farm network;
- → Management of lawn areas (±50 m² per unit), including irrigation (where applicable), clearing of invasive species, and general landscape upkeep;
- → Effluent handling via conservancy tanks connected to the Kaackai S-Series Wastewater Treatment System, ensuring compliance with environmental standards;
- → Solid waste handling, with temporary on-site storage and routine removal by a licensed service provider;
- → Ongoing environmental monitoring, including checking for signs of erosion, invasive species regrowth, or any disturbance to surrounding natural vegetation, particularly Agulhas Limestone Fynbos.

3. KEY TERMS AND ABBREVIATIONS

24G	Section 24G for the correction of wrongful activities
CARA	Conservation of Agricultural Resources Act (Act No. 43 of 1983)
DEA&DP	Department of Environmental Affairs and Development Planning (Western Cape)
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECA	Environment Conservation Act (Act No. 73 of 1989)
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
NEMA	National Environmental Management Act (Act No. 107 of 1998)
NEM:BA	National Environmental Management Biodiversity Act (Act No. 10 of 2004)
NEM:WA	National Environmental Management Waste Act (Act No. 59 of 2008)
PPE	Personal Protective Equipment
SDS	Safety Data Sheets
SHE	Safety Health and Environmental

Competent authority - The Department of Environmental Affairs and Development Planning (DEA&DP)

Environmental Control Officer (ECO) - a suitably qualified person to be appointed by the Developer / Applicant, to oversee the implementation of the EMPr and environmental authorisation through the operational phase and into decommissioning (if applicable)

Environmental Management Programme (EMPr) - this document, approved by the competent authority, to control the implementation of the works on the site in such a way as to ensure that they do not result in undue or reasonably adverse impacts on the environment

General waste - Waste that does not pose an immediate hazard or threat to health or to the environment, and includes domestic waste, building and demolition waste, business waste and inert waste

Hazardous waste - Any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment. Infectious mortalities are also considered hazardous

Project manager - Overall responsible and accountable person for the site during the construction, operation and decommissioning of the facility.

Project Management team - The responsibility of the EMPr implementation resides with this team. This team includes a Project Manager and appointed contractors and consultants.

Safety, Health and Environmental Officer (SHE Representative) - A representative from each contractor, appointed as a Safety Health and Environmental Officer, assisting the construction manager on Safety, Health and Environmental aspects of the project on the construction site.

Site Manager **–** the employee of the applicant responsible for the day-to-day control of all activities and operation on site, if applicable. In this instance the site manager is the erf owner.

4. ENVIRONMENTAL CONTROL ON SITE

4.1. Approach

The Table below illustrates the various approaches to be undertaken to manage potential scenarios as a result of the operation of the activity on site:

Table 1: Impact management

Avoidance	Avoiding activities that could result in adverse impacts and/or resources or areas considered sensitive.
Prevention	Preventing the occurrence of negative environmental impacts and/or preventing such an occurrence having negative impacts.
Preservation	Preventing any future actions that might adversely affect an environmental resource.
Minimisation	Limiting or reducing the degree, extent, magnitude or duration of adverse impacts through scaling down, relocating, redesigning and/or realigning elements of the project.
Mitigation	Measures taken to minimise adverse impacts on the environment.
Enhancement	Magnifying and/or improving the positive effects or benefits of a project.
Rehabilitation	Repairing affected resources, such as natural habitats or water resources.
Restoration	Restoring affected resources to an earlier (possibly more stable and productive) state, typically, 'background' or 'pristine' condition. These resources may include soils and biodiversity
Compensation	Compensating for lost resources, and where possible, the creation, enhancement or protection of the same type of resource at another suitable and acceptable location.

4.2. Organisational Structure and Responsibilities

The farm and subsequent operations are managed by the landowner.

Environmental Control Officer

The five units, roads, lawn area and boardwalk are already established and active. However, an Environmental Control Officer (ECO) may be required by the Competent Authority to conduct environmental audits, at a stipulated frequency, to determine the compliance with the conditions of the retrospective Environmental Authorisation and this document. This person can be in house.

5. ENVIRONMENTAL AWARENESS PLAN

It is important to ensure that any contractors and employees, new owners, managers or operators associated with the operation of the proposed activity receive the appropriate level of training and awareness to ensure

that continual environmental due diligence and conservation is applied at all levels of operation. Employees, contractors and sub-contractors as well as the operator, must be made aware of their responsibilities in terms of relevant legislation, guidelines, as well as this EMPr and EA.

5.1. Aim of the Environmental Awareness Plan

- Promote environmental education and conservation on site
- Inform employees and any new contractors on the applicable environmental procedures and plans
- Communicate mitigation and management measures which are to be implemented

5.2. Environmental Awareness Training and content

- All personnel should undergo induction, which as a minimum should include Safety, Health and Environmental awareness
- All attendees should sign an acknowledgement register upon receiving and understanding the induction
- Staff should be trained on the implementation of emergency procedures where applicable
- Definitions as used in this EMPr should be provided
- How and why environmental protection is necessary, should be explained
- Management measures required to prevent environmental impacts should be outlined
- Awareness should be made of emergency and spills response procedures

In this particular scenario, a general brief regarding general environmental principles such as reduce, reuse and recycle, as well as protection of flora and fauna, is beneficial. Identification of the required mitigation and management measures should also be communicated. Employees must be aware of areas to be farmed and areas which must not be disturbed. Attention should be applied to possible fringe effects and impacts and caution must be applied to the edges of farmed areas, to prevent slow sprawl into new areas.

Environmental awareness should be implemented immediately and repeated at regular intervals and as required.

6. LEGISLATIVE REQUIREMENTS

A Section 24G process was applicable in terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA) and the Environmental Impact Assessment (EIA) regulations (2014) (as amended). Appendix 4 of the NEMA EIA Regulations (GN. R982) sets out the minimum requirements for the drafting of an Environmental Management Programme (EMPr). This EMPr has been created in fulfilment of these prescribed requirements for the construction phase of the activity. The implementation of this EMPr will be a condition of approval of the Environmental Authorisation (EA). Failure by the applicant, to comply with this EMPr, will therefore constitute an offence, and the applicant and / or the appointed contractors can be held liable for penalties and / or legal action. It is therefore important that a copy of this EMPr be issued to each contractor, preferably at the appointment stage, in order to allow for the costs of implementing the EMPr, to be included in cost proposals. This will also ensure that the contractor is aware of his responsibilities prior to appointment and commencement. Each appointed contractor involved in the project, as well as the project manager (as applicable), will be required to sign for and thereby acknowledge contents of, the approved EMPr and therefore abide by the specifications of the document and any amendments thereto.

Other applicable legislation

The Constitution of The Republic of South Africa (Act 108 of 1996)

The Constitution of the Republic of South Africa states that everyone has a right to a non-threatening environment and that reasonable measures are applied to protect the environment. This includes preventing pollution and promoting conservation and environmentally sustainable development, while promoting justifiable social and economic development.

National Environmental Management Act (Act 107 of 1998)

The National Environmental Management Act (NEMA), as amended, makes provision for the identification and assessment of activities that are potentially detrimental to the environment and which require authorisation from the relevant competent authorities. NEMA is a National Act, which is enforced by the Department of Environmental Affairs (DEA). These powers are delegated in the Western Cape to the Department of Environmental Affairs and Development Planning (DEA&DP).

National Environmental Management: Biodiversity Act (Act 10 of 2004)

Chapter 4 of the National Environmental Management: Biodiversity Act, 2004 (NEMBA) deals with threatened and protected ecosystems and species. The need to protect listed ecosystems is addressed (Section 54). Section 73 deals with Duty of Care relating to invasive species, while Section 76(2) calls for development of invasive species monitoring, control and eradication plans by all organs of state in all spheres of government, as part of environmental management plans required in terms of Section 11 of NEMA.

National Environmental Management: Waste Act (Act No. 59 of 2008)

The National Environmental Management: Waste Act (NEM:WA) provides for specific waste management measures (disposal and storage) and the remediation of contaminated land.

National Environmental Management: Air Quality Act (Act No. 39 of 2004)

Section 32 provides provision for the control of dust, section 34 provides provision for the control of noise and section 35 provides provision for the control of offensive odours, all which may be experienced during the construction or operation of an applicable development.

Environment Conservation Act (Act No. 73 of 1989)

The Environment Conservation Act (ECA) provides provision for the prevention of littering by employees and subcontractors during construction and the maintenance phases of development.

Occupational Health and Safety Act (Act No. 85 of 1993)

Section 8 outlines the general duties of employers to their employees and section 9 outlines the general duties of employers and self-employed persons, to persons other than their employees.

Hazardous Substances Act (Act No. 5 of 1973)

This Act provides for the definition, classification, use, operation, modification, disposal or dumping of hazardous substances.

7. OPERATIONAL PHASE IMPACTS AND MITIGATIONS

7.1. Activity specific impacts and mitigations

The following activity specific impacts have been identified for the operational phase of the proposed development:

7.1.1. Wetland Delineation Report

Associated impacts:

- Localised trampling or disturbance of adjacent vegetation by guests.
- Increased domestic effluent generation and potential risk of contamination if conservancy infrastructure fails.
- Light pollution affecting nocturnal fauna.

Impact management measures recommended by the specialist:

→ No hardened development including boardwalks, jetties, slipways should be created within the delineated wetland (or any other wetland) without further specific considerations for authorisation. Such activities would compromise definite and potentially significant Sections 21c and i water uses;
→ New development should not include lawns and landscaping that utilises fertilisers;
→ Discharges from the proposed pool should be dissipated into a soakaway located on the dunes and fully located outside of the no-development area. A saltwater pool should not be used, as this will add to soil salinity in discharge areas;
→ Hardened areas of the development (roof areas, paving, parking areas) should be minimised, and where possible porous material should be used for paving and parking to improve infiltration and decrease runoff; roofs should discharge onto the ground as close to the building as possible without risk of structural damage, to minimise concentrated runoff during storms;
→ No pathways down steep areas of the dune should be permitted, where these would create erosion into the wetland below or degrade the buffer areas;
→ Conservancy tanks rather than septic tanks should be used note that Anchor (2015) recommends that sewage infrastructure should be used instead of conservancy tanks along the estuary shoreline – in the present case it is arguable that the wetland disturbance likely, and the risk of leakage along sewage pipelines from Stanford to the site would far exceed any risk attached to the use of conservancy tanks on-site and their periodic emptying by truck. This said, the following measures must be applied:
    - Sewage pipelines connecting conservancy tanks associated with individual buildings to a main conservancy tank (as proposed) should all be located outside of the no-development line;
    - Conservancy tanks must be bunded, so that pollution can be contained in the event of overflows;
→ Landscaped or open space areas around new buildings should be planted with locally indigenous plants only and lawns, which should be minimised, should be planted with buffalo grass only, which is prevalent in the wetland already;
→ During the construction phases of the development, the no-development zone should be treated strictly as a no-go zone and the disturbance footprint of each unit should extend a maximum of 15 m towards the no-development edge;
→ Construction phase disturbance such as wind- or water borne conveyance of litter, sand, or other construction material towards the wetland area is minimised with dust and erosion control measures.

7.1.2. Landscape Plan

Associated ecological impacts:

- Loss and fragmentation of indigenous vegetation within a Critical Biodiversity Area (CBA)
- Potential loss and disruption movement patterns of slow-moving fauna associated with the Overberg Dune Strandveld.
- Although mitigated by elevated structures and limited footprints, the infrastructure interrupts the continuity of the Overberg Dune Strandveld.
- Although some vegetation is regenerating beneath stilted units, the initial clearance has fragmented natural vegetation continuity.

Mitigation measures recommended by the specialist:

→ Given the location and sensitive nature of the vegetation on site it is important that all landscaping related to this development complements and enhances the natural biodiversity on site.

→ The landscape planting theme should complement the existing wilderness appeal and dune strandveld/milkwood forest characteristics of the site. Future landscaping should steer clear of any formalized avenues, mass planting etc and be focused on enhancing and supplementing the existing natural feel and diversity of the site.

→ Only plant species found on the site or in nearby Overberg dune strandveld or Southern coastal forest should be used for future landscaping. A planting palette of appropriate local indigenous species has been drawn up as part of this landscaping plan.

→ Post construction rehabilitation areas should be planted using only plants from the approved planting list, and should be installed in an informal, natural manner and at a density of at least 4 plants per m^2. Use of any plants which are not on the approved list should be strictly prohibited.

→ The owners are encouraged to purchase plants from a local source to reduce genetic contamination.

→ The landscaping should include visual screening of buildings. Figure 3 of the landscape plan includes the planting of thicket species between the units to provide screening. It is proposed that *Sideroxylon inerme* (white milkwood) be the dominant species used in this screening as it is a characteristic flagship species of the site. Other thicket/tree species that can be interplanted with the milkwoods include *Ostespermum moniliferum* (bietou), *Cassine peragua* (bastard saffronwood), *Chionanthus foveolatus* (fine leaf ironwood), *Euclea racemosa* (sea guarrie), *Olea capensis ssp capensis* (iron wood), *Olea exasperata*, *Olea europea ssp africana* (wild olive), *Pterocelastrus tricuspidatus* (candle wood), *Searsia glauca* (Blue kuni), *Searsia lucida* (blink taaibos) and *Searsia laevigata*.

→ Only buffalo lawn (Stenotaphrum secundatum) or kweek (Cynodon dactylon) may be used for lawns.

→ The used of herbicides and insecticides should be kept to a minimum and all compost/organic fertiliser should be organically certified (eg Biogrow, Reliance or Seagro products).

→ All construction footprints should be kept to a minimum and wherever possible the natural vegetation must be maintained.

→ Prior to construction commencing a construction zone must be clearly demarcated and fenced off with temporary fencing. All construction materials and activities must be contained within the construction area (eg. use of future parking and access roads for material storage and construction activities).

→ Prior to disturbance of natural vegetation, a search and rescue operation should be undertaken within the demarcated construction zones (including new access roads and parking). All translocatable species (geophytes, graminoids and succulents) should be removed and planted in suitable nearby habitat on the property. Ideally search and rescue should take place during spring when seasonally visible geophytes can be located.

→ Any topsoil removed during site construction should be stockpiled and available for post construction rehabilitation.

→ All planted areas should be mulched to reduce water loss and weed growth. An automatic irrigation system should be installed with rain sensors to ensure optimal watering while minimising water usage. Once established the irrigation can be reduced or potentially switched off in the rehabilitation areas. Where Possible water from rain tanks should be used for irrigation.

→ Newly planted areas will require active maintenance and care including initial weeding (this should reduce with time as the natural vegetation establishes), watering and pruning/cutting back.

7.1.3. Visual Impact Assessment

Associated Visual Impacts:

- The development would have a localised visual influence, primarily affecting its immediate surroundings.
- It would contribute to the spread of development along the southern shore of the lagoon, gradually altering the natural/rural character of the area.
- There is a potential for landscape fragmentation due to scattered development.
- The development could result in visual intrusion within a largely natural environment, affecting the lagoon's unique 'sense of place'.

Mitigation measures recommended by the specialist:

→ The visual setback line from the lagoon to be the same as the estuary setback line, i.e. a minimum of 100m from the HWM.

→ Existing indigenous vegetation to be retained as far as possible in the vicinity of the proposed development to provide visual screening and a visual backdrop to the development. It is acknowledged that clearings for firebreaks may be necessary.

→ Only areas required for the actual buildings to be cleared. The remainder of the construction site be cordoned off and the natural vegetation protected. The proliferation of construction tracks to be avoided.

→ Additional milkwood trees to be planted between and partly in front of the units to provide visual screening for the proposed development. The milkwoods to be planted in close formation for mutual protection.

→ Formal landscaping to be minimal, and alien plant species avoided. Preferably local buffalo grass or kweek and local strandveld plants to be used. Specifically kikuyu grass or palm trees to be avoided.

→ A landscape development plan, including lists of permitted plant species, prepared by a qualified landscape architect or horticulturist to be submitted together with the Site Development Plan to the local authority.

→ Small articulated building forms, with a domestic scale, to be used as already indicated in the current proposals.

→ The maximum height of the proposed clubhouse to be 6,0m from average natural ground level to the top of the roof, and 4,8m for the accommodation units, as currently indicated in the proposals, irrespective of less stringent local authority building heights.

→ Fenestration of the proposed buildings to be shaded by roof overhangs or other shading devices, as currently indicated for the accommodation units, the shadows helping to make the buildings visually recede into the landscape.

→ No reflective glass or other reflective finishes, which could be visually intrusive, to be used on elevations facing the lagoon. Colour finishes to be dark grey or similar, as currently indicated in the proposals.

→ Internal roads to be as narrow as possible, and parking areas limited in size, as currently indicated, to minimise the visual intrusion of vehicles in the landscape.

- → Outdoor lighting to be restricted, and preferably bulkhead or bollard-type lights with a maximum height of 1.2m, used. All outdoor lighting to have reflectors to conceal the source of lighting to avoid light spillage and maintain dark skies at night.
- → All utility lines to be located underground. No satellite dishes or aerials to protrude above the roof line of buildings.
- → No flags, banners or large signs to be erected at the entrance to the property from the Wortelgat Road, in order to minimise the proliferation of signs in a natural area.

Table 2. Activity specific impacts and mitigations

IMPACT	DESCRIPTION	MITIGATION	MONITORING	RESPONSIBILITY
Ecological Impact	Loss of remaining indigenous vegetation cover including fauna within the property, primarily Agulhas Limestone Fynbos, due to operational activities such as trampling, informal paths, or vegetation sprawl.	- No further areas of natural vegetation should be disturbed outside the currently cleared areas on the property, unless authorised via a formal environmental application process. - Invasive Alien Clearing must be implemented to avoid further loss of indigenous vegetation. - Guests and visitors must be restricted to designated boardwalks and paths to prevent trampling of regenerating vegetation. - Install signage to raise awareness about sensitive vegetation and no-go areas. - Encourage passive regeneration of cleared areas where possible. - Any landscaping or rehabilitation within or near the development footprint must only use locally indigenous species. - Outdoor lighting should be limited to motion-sensor, downward-facing, and low-intensity lights to reduce light pollution. Blue and white spectrum lighting must be avoided. Lights should not shine directly into natural areas or the estuary buffer zone. **TIMEFRAME:** Actions to be implemented upon EA, immediate	- Responsible site manager / foreman is to check areas on a regular basis for adhoc clearing of indigenous areas or sprawl into indigenous areas.	Responsible manager / appointed person
Aquatic habitat loss within the	Potential degradation or loss of wetland habitat due to indirect impacts such as sedimentation, runoff, or informal encroachment	→ No hardened development including boardwalks, jetties, slipways should be created within the delineated wetland (or any other wetland) without further specific considerations for authorisation.	- Responsible farm manager must monitor sediments fences / traps after every heavy rainfall event and any	Responsible farm manager/ Owner

delineated wetland	from operational activities. Although the development is located more than 32 m outside the delineated wetland edge, poor maintenance or edge effects may result in ecological degradation over time	Such activities would compromise definite and potentially significant Sections 21c and i water uses; → New development should not include lawns and landscaping that utilises fertilisers; → Discharges from the proposed pool should be dissipated into a soakaway located on the dunes and fully located outside of the no-development area. A saltwater pool should not be used, as this will add to soil salinity in discharge areas; → Hardened areas of the development (roof areas, paving, parking areas) should be minimised, and where possible porous material should be used for paving and parking to improve infiltration and decrease runoff; roofs should discharge onto the ground as close to the building as possible without risk of structural damage, to minimise concentrated runoff during storms; → No pathways down steep areas of the dune should be permitted, where these would create erosion into the wetland below or degrade the buffer areas; → Conservancy tanks rather than septic tanks should be used note that Anchor (2015) recommends that sewage infrastructure should be used instead of conservancy tanks along the estuary shoreline – in the present case it is arguable that the wetland disturbance likely, and the risk of leakage along sewage pipelines from Stanford to the site would far exceed any risk attached to the use of conservancy tanks on-site and their periodic emptying by truck. This said, the following measures must be applied: ○ Sewage pipelines connecting conservancy tanks associated with individual buildings to a main conservancy tank (as proposed) should all be located outside of the no-development line;	sediment that has accumulated must be removed by hand. - Any sediment accumulation must be removed manually and disposed of outside the wetland system. - ECO or appointed person to conduct quarterly wetland edge inspections to detect erosion, runoff channels, or informal paths forming and invasive alien plants	

		○ Conservancy tanks must be bunded, so that pollution can be contained in the event of overflows; → Landscaped or open space areas around new buildings should be planted with locally indigenous plants only and lawns, which should be minimised, should be planted with buffalo grass only, which is prevalent in the wetland already; → During the construction phases of the development, the no-development zone should be treated strictly as a no-go zone and the disturbance footprint of each unit should extend a maximum of 15 m towards the no-development edge; → Construction phase disturbance such as wind- or water borne conveyance of litter, sand, or other construction material towards the wetland area is minimised with dust and erosion control measures.		
Sewage Spills and Associated Pollution	The improper functioning, leakage, or overflow of conservancy tanks or pipelines may result in the contamination of surrounding soil, vegetation, and potentially the nearby wetland system. This may lead to nutrient enrichment, degradation of Agulhas Limestone Fynbos, and health risks to fauna and people.	→ All conservancy tanks must be sealed, bunded, and located outside the 32 m wetland buffer and 100 m estuary setback. → Regularly service and empty conservancy tanks before reaching capacity. → Use above-ground connection pipes to the Kaackai S-Series Wastewater Treatment System to allow easy inspection. → Install bunded platforms around conservancy tanks to contain any overflows. → Keep a spill response kit on-site and train staff in its use. → In the event of a spill, contaminated material must be removed immediately and disposed of at a licensed waste facility.	- Weekly inspection of all conservancy tanks and pipelines for signs of leakage, cracks, or overflow. - Maintain a service log with dates of tank emptying and inspections.	Responsible Farm Manager / Appointed Maintenance Contractor

Visual Impacts	Although the proposed development would have a fairly localised visual influence, it would add to the spread of development generally along the southern shore of the lagoon, contributing to the change in natural / rural character of the area, and the lagoon's particular 'sense of place'. A potential visual concern is that this type of development leads to fragmentation of the landscape and visual intrusion on a largely natural environment. On the other hand the nature of the development is relatively low-key and the property would become a private nature reserve, helping to conserve natural and cultural resources.	→ The visual setback line from the lagoon to be the same as the estuary setback line, i.e. a minimum of 100m from the HWM. → Existing indigenous vegetation to be retained as far as possible in the vicinity of the proposed development to provide visual screening and a visual backdrop to the development. It is acknowledged that clearings for firebreaks may be necessary. → Only areas required for the actual buildings to be cleared. The remainder of the construction site be cordoned off and the natural vegetation protected. The proliferation of construction tracks to be avoided. → Additional milkwood trees to be planted between and partly in front of the units to provide visual screening for the proposed development. The milkwoods to be planted in close formation for mutual protection. → Formal landscaping to be minimal, and alien plant species avoided. Preferably local buffalo grass or kweek and local strandveld plants to be used. Specifically kikuyu grass or palm trees to be avoided. → A landscape development plan, including lists of permitted plant species, prepared by a qualified landscape architect or horticulturist to be submitted together with the Site Development Plan to the local authority. → Small articulated building forms, with a domestic scale, to be used as already indicated in the current proposals. → The maximum height of the proposed clubhouse to be 6,0m from average natural ground level to the top of the roof, and 4,8m for the accommodation units, as currently indicated in the proposals,	- Regular site inspections for compliance. - Monitor visual impact post-construction.	Responsible Farm Manager / Appointed Maintenance Contractor

		irrespective of less stringent local authority building heights. → Fenestration of the proposed buildings to be shaded by roof overhangs or other shading devices, as currently indicated for the accommodation units, the shadows helping to make the buildings visually recede into the landscape. → No reflective glass or other reflective finishes, which could be visually intrusive, to be used on elevations facing the lagoon. Colour finishes to be dark grey or similar, as currently indicated in the proposals. → Internal roads to be as narrow as possible, and parking areas limited in size, as currently indicated, to minimise the visual intrusion of vehicles in the landscape. → Outdoor lighting to be restricted, and preferably bulkhead or bollard-type lights with a maximum height of 1.2m, used. All outdoor lighting to have reflectors to conceal the source of lighting to avoid light spillage and maintain dark skies at night. → All utility lines to be located underground. No satellite dishes or aerials to protrude above the roof line of buildings. → No flags, banners or large signs to be erected at the entrance to the property from the Wortelgat Road, in order to minimise the proliferation of signs in a natural area.		
Job creation	Job creation and skills transfer during operation Risk – labour not sourced locally, therefore local benefit and skills transfer is limited	-Ensure labour and contractors are sourced locally as far as possible -Encourage educational opportunities to employees **TIMEFRAME:** Actions to be implemented immediately	-Ensure employees are sourced locally as far as possible by checking staff appointments -Encourage the use of local service providers as far as possible	Owner / applicant

7.2. General operational impacts and requirements

7.2.1. Health and Safety
Responsibility – Owner / operator

Correct Personal Protective Equipment (PPE) must be worn at all times by the personnel on site. Personnel must be trained on the use of PPE. Each contractor should employ their own Safety Officer to monitor the safety conditions during the operations. Suitable warning and information signage should be erected. The handling of hazardous materials should only be done by trained personnel. Safety Data Sheets (SDSs) must be readily available for all hazardous substances on site and employees should be aware of the risks associated with any hazardous materials used. All provisions of the Occupational Health and Safety Act (Act No. 85 of 1993) must be complied with. In the event of an emergency relating to a hazardous substance, procedure details in the SDSs should be immediately implemented.

7.2.2. Fire risk management
Responsibility - Owner / operator

The boathouses are located in mature, fire-prone dune strandveld vegetation. The surrounding natural vegetation to the south and east is also highly flammable and requires regular (10-20-year interval) fires to maintain the biodiversity and ecological functioning of the landscape. As such, it is important that measures be put in place to safeguard the infrastructure from future wildfires. It is proposed that a firebreak (minimum 10m wide) be installed along the existing access road. The combination of the road and new firebreak will provide opportunity for potential back-burning and general fire defence in the event of a wildfire. Furthermore it is proposed that low, less flammable indigenous species such as *Carpobrotus acinaciformis/edulis, Osteospermum fruticosum, Ruschia macowanii* and *Cotyledon orbiculata* be planted around the infrastructure to reduce fire threat, Future maintenance of the vegetation around the infrastructure should include regular pruning back and removal of dead/dry material in order to reduce fire threat.

A Fire Officer should be identified, who shall be responsible for ensuring immediate and appropriate actions in the event of a fire and shall ensure that employees are aware of the procedure to be followed. The Fire Officer shall ensure that there is basic fire-fighting equipment available on site at all times. Any fires should be reported to the fire officer immediately.

(As part of the expansion which a full Fire Management Plan must be drafted for the entire property).

7.2.3. Fuels and hazardous materials
Responsibility - Owner / operator

Fuels and flammable materials are to be suitably stored, inside the contractor's camp or as appropriate. Impervious materials are to be used in these storage areas to prevent contamination of the ground in the event of spillages or leaks. Quantities of fuels and hazardous materials stored on site should be appropriate to the requirement for these substances on site.

Bulk fuel depots, if required, should be placed within bunded areas to prevent soil contamination in the event of leaks of spills. Bunded area are to have a holding capacity equal to 110% of the largest fuel container. The relevant Health and Safety requirements for the hazardous materials and fuels should be kept on site in the event of an emergency.

7.245. Emergencies protocol
Responsibility - Owner / operator

Fire: The fire officer should be notified of any fires. Employees should be aware of the procedure to be followed in the event of a fire.

Hydrocarbon (fuel & oil) leaks and spillages: Employees should be aware of the procedure to be followed for dealing with spills and leaks, which shall include notifying the project manager / contractor. All vehicles leaking fuel or other liquids should immediately be removed to the maintenance area and repaired. In the event of a hydrocarbon spillage, the soil must be excavated and treated and adequately disposed. The necessary materials and equipment for dealing with spills and leaks are present on site at all times. The clean-up of sewerage spills and any damage caused by the spill or leak shall be for the applicant's account. The applicant shall ensure that the Health and Safety officer is available for the duration of the construction period.

Raw Sewerage spills (from emptying of sewage tank / package plant if required): Employees are to be aware of the procedure to be followed for dealing with spills and leaks. All the necessary materials and equipment for dealing with spills and leaks are present on site at all times. The clean-up of sewerage spills and any damage caused by the spill or leak shall be for the Applicant's account or contractor collecting the raw sewage.

7.2.5. Equipment maintenance
Responsibility - Owner / operator

All mechanical equipment and work vehicles which are present on site, are to be stored, serviced and refuelled only at designated areas. Within these areas drip trays and other impervious materials, for example plastic or metal sheeting, must be used to prevent contamination of the ground in any way.

7.2.6. Erosion Control
Responsibility - Owner / operator

Action should be taken to prevent erosion of soils on site. Should any erosion be detected on site, the cause of such erosion should be identified, and appropriate remedial action must be immediately implemented.

7.2.7. Architecture / Design
Responsibility - Owner / operator

Dwellings and infrastructure to comply with bylaws. Owners should aim to ensure buildings are in line with architectural norms for the area and do not have a negative contribution to the area as a whole. No expansions should be permitted without the required approvals.

7.2.8. Water Use
Responsibility – Owner / operator

The following water saving principles are recommended for the site and can be implemented over time or as and when current infrastructure requires replacing:

- Rainwater storage tanks can be installed to collect runoff rainwater. Rainwater tanks should be installed in such a way as to prevent visual or landscape intrusion
- Shower and wash basin taps should be fitted with flow reduction devices, aerators and motion sensors to maximise water conservation and reduce wastage
- All internal and external taps on site should be regularly inspected and maintained to prevent water wastage through drips and leaks

- All new toilets should be fitted with a dual flush system, reduced flow should be implemented on existing infrastructure if dual flush is not possible
- Grey water from showers, baths, basins and washing machines, should be collected or redirected for reuse (gardening, outside washing etc.)
- Endemic and indigenous plants should be used for gardens and landscaping to minimize water demand i.e. water wise landscaping
- Should irrigation be required, these should be on timed systems and active at low evaporation hours (early morning, late evening)
- Drains should be fitted with grease traps which remove oils and solids from waste water, to improve the quality of the effluent waste water for reuse
- Dry brushing and / or sweeping should be used in preference to water cleaning, where possible (cleaning pathways, machinery etc.)
- Alien invasive vegetation should be removed from the property to promote healthy and functioning rivers, ground water and wetlands, where applicable
- Efficient water use habits should be encouraged across the property
- Sewerage systems should be regularly monitored and maintained to prevent leaks and pollution of groundwater

7.2.9. Electricity

The following electrical saving principles are recommended:

- Regular light bulbs to be replaced with energy saving bulbs in all structures
- The use of solar power should be maximised as far as possible
- Energy saving geysers should be installed
- Solar water heaters should be installed
- Proper insulation should be used on all new structures and renovations, in order to reduce the need for heating and cooling of dwellings
- Programmed lighting should be implemented to prevent lights being left on unnecessarily

7.2.10. Sewerage

All three effluent discharge pipelines should be removed. Effluent from the package plants should be tested on a regular basis to ensure that it meets the Department of Water and Sanitation (DWS) standards.

7.2.11. General waste and refuse

General waste is transferred to the municipal waste site as required. Waste minimisation strategies should be implemented through avoidance, reduction, reuse, recycling, recovery, treatment or responsible disposal. On site bins should be animal and weatherproof. Refuse areas should be secure and screened to avoid visual impacts. Refuse areas should provide for waste sorting (tins, glass, paper etc.). No waste should be stored or disposed of on site.

7.2.12. Site maintenance and repairs

Renovations and maintenance should be conducted in line with a maintenance schedule to ensure that renovations are done effectively with reduced wastage. When using paints, cleaners and other solvents for maintenance, preference should be made for environmentally friendly products, water-based paints and avoidance of harsh chemicals. No building materials or products used during renovations should be disposed of on site.

7.2.13. Alien vegetation management

Alien vegetation management and clearing must take place as currently and as per the site-specific alien vegetation management plan. Follow up clearing must take place on a regular basis.

7.2.14. Internal roads and footpaths

No new roads are permitted without the necessary approvals.

7.2.15. *Fauna*

All wild fauna on site must be protected. No feeding of wild animals should be allowed, and edible refuse should be appropriately disposed of. No poisons or traps should be used as far as possible. Professional help, such as Cape Nature, should be sort for 'problem' animals.

7.2.16. *Proposed plant list for landscaping*

The landscaping plan has been designed with the intention of enhancing the ecological integrity of the site while supporting the regeneration of local biodiversity. To achieve this, the proposed plant list includes only indigenous species that are either naturally occurring on the property or found in similar habitat types within the region.

The use of indigenous species is critical in maintaining ecological functionality, supporting pollinators and local fauna, and preventing the introduction of invasive alien species. In line with this approach, the specialist recommends that all landscaping interventions strictly utilise species listed in the approved Landscape Plan.

<u>Ground covers</u>

Arctotis acaulis (gousblom)
Carpobrotus acinaciformis/edulis (sour fig)
Osteospermum fruticosum
Helichrysum crispum (kooigoed)
Helichrysum petiolare
Pelargonium capitatum (coastal malva)
Drosanthemum candens
Ruschia macowanii
Ruschia sarmentosa

<u>Bulbs</u>

Amarylllis belladonna (March lily)
Brunsvigia orientalis (Candelabra)
Chasmanthe aethiopica (cobra lily)
Haemanthus coccineus (April fool)
Watsonia stenosiphon
Lachenalia bubifera
Lachenalia rosea
Watsonia angusta
Zantedeshia aethiopica (arum lily)

<u>Grasses/reeds</u>

Chondropetalum tectorum
Chondropetalum microcarpum

Elegia thyrsifera
Scirpoides nodosus
Thamnochortus erectus

Lawns

Cynodon dactylon (kweek)
Stenotaphrum secundatum (buffalo grass)

Shrubs

Agathosma geniculata
Agathosma serpyllaceae
Aspalathus forbesii
Athanasia quinquedentata
Athanasia trifurcata (klaaslouw bos)
Osteospermum incanum
Chrysanthemoides monilifera (bietou)
Cotyledon orbiculata (pigs ear)
Diosma subulata
Eriocephalus paniculatus (wild rosemary)
Geranium incanum (maagpyn bossie)
Helichrysum dasyanthum
Helichrysum teretifolium
Indigofera brachystachya
Leonotis leonurus (wild dagga)
Leucadendron coniferum (dune conebush)
Leucospermum pattersonii (limestone pincushion)
Linum africanum
Metalasia densa
Metalasia muricata (blombos)
Morella cordifolia
Muraltia satureoides
Oedera capensis
Orphium frutescens
Otholobium bracteolatum
Passerina paleaceae (gonna)
Pelargonium betulinum
Phylica amoena
Phylica ericoides
Polygala myrtifolia (September bush)
Protea obtusifolia (limestone sugarbush)
Protea repens (suikerbossie)
Rhus crenata (dune crowberry)
Salvia africana-lutea (brown sage)
Seriphium (Stoebe) plumosum (slangbos)
Syncarpha argyropsis
Zygophylum flexuosum

8. NON-COMPLIANCE

The Environmental Authorisation (EA) stipulates that, *"Non-compliance with a condition of this Environmental Authorisation and the EMPr may render the holder liable to criminal prosecution."* It is therefore important that the conditions are adhered to as outlined in the EA and EMPr. A Penalties scheme can be used during construction for transgressions. A retrospective Environmental Authorisation will be applicable to this case.

Transgressions relate to actions by the contractor whereby damage or harm is inflicted upon the environment or any feature thereof and where any of the conditions or specifications of the EMPr and EA have been infringed upon. In the instance of environmental damage, the damage is to be repaired and rehabilitated using appropriate measures, as far as possible and as directed by appropriate specialists, if required. These remedial actions are for the account of the contractor or other guilty party as identified by the Project Manager, applicant or ECO. Where non-repairable damage is inflicted upon the environment or non-compliance with any of the EMPr / EA obligations is registered, the Contractor may face a monetary penalty to an amount specified by the Project manager / ECO. The Project manager / ECO reserves the right to implement a first offence warning.

If excessive infringement with regard to any of the specifications is registered, the applicant / project manager, reserves the right to terminate the contractor's contract.

9. MONITORING

The monitoring of works on site is necessary to demonstrate compliance with the specifications of the EMPr and EA and to allow for problems or issues of non-compliance to be identified and remedial actions implemented.

Monitoring should include visual checks by the operator / management on a daily basis or at a frequency considered appropriate. The implementation of regular monitoring will ensure that environmental impacts can be detected early and remedial action implemented.

10. ENVIRONMENTAL AUDITS

The purpose of auditing is to determine and monitor compliance with the EMPr and EA and measure its effectiveness in mitigating environmental impacts. In terms of Regulation 34 of the NEMA EIA Regulations, 2014, the holder of the EA must conduct environmental audits in order to determine compliance with the conditions of the EA and EMPr. Environmental Audit Reports should be submitted to the Competent Authority as stipulated in the EA. The audit reports should be prepared by an independent person. The audit report should also provide recommendations regarding the need to amend the EMPr.

The objective of the environmental audit report is to:
- Report on the level of compliance with the conditions of the EA and the EMPr
- Report on the extent to which the avoidance, management and mitigation measures outlined in the EMP, achieve the objectives and outcomes of the EMPr
- Identify and assess any new impacts and risks as a result of the activity
- Evaluate the effectiveness of the EMPr
- Identify shortcomings in the EMPr
- Identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPr

An environmental audit report should contain the following:
- Details and expertise of the independent person who prepared the environmental audit report
- A declaration that the auditor is independent
- An indication of the scope of, and the purpose for which, the environmental audit report was prepared
- A description of the methodology adopted in preparing the environmental audit report
- An indication of the ability of the EMPr to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity as well as to ensure compliance with the provisions of environmental authorisation and EMPr.

- A description of any assumptions made, and any uncertainties or gaps in knowledge
- A description of any consultation process that was undertaken during the course of carrying out the environmental audit report, if required
- A summary and copies of any comments that were received during any consultation process
- Any other information requested by the competent authority.

Environmental audits are not likely to be undertaken for the current operational activities due to the nature of the activity.

11. CONCLUSION

An EMPr has been developed as part of the 24G process to ensure that mitigation and management measures are enforced during the operational phase of the activity, and that the conditions of the EA are upheld. The EMPr should guide all phases of the project to minimize possible negative impacts and assign responsibility for environmental controls. The EMPr provides a tool to recognise the needs of the environment and is intended to be utilised in conjunction with the Environmental Authorisation.

12. DECLARATION OF ACCEPTANCE

I, _____ (name), representing _____ (company name), have read and understood the above Environmental Management Programme and hereby acknowledge its contents and

requirements as a framework for my company's environmental performance during the applicable development.

Signed: _____ Date: _____

APPENDIX A : EAP CV

CURRICULUM VITAE
for
MICHELLE NAYLOR

PERSONAL

Postal address:

Vermont

Hermanus

7201

Residential address: 1 Levine Close, Sundew Villas

Sandbaai

Hermanus

7201

Contact details: cell: 083 245 6556

Email: michelle@lornay.co.za

Date of birth: 19 July 1985

Nationality: South African

Languages: English, Afrikaans

State of health: Excellent

CAREER RECORD

December 2007

- Arcus Gibb, East London, Student intern

- Completion of Compliance Audit for client including site visit, writing of report and compilation

May 2010 to February 2016

PHS Consulting, Hermanus, Environmental Consultant

- Sole Management and completion of Basic Assessments from Application to Environmental Authorization, including quoting, financial management throughout the project, client liaison, liaison with competent authorities, site visits, report writing, appointment of specialists, mapping and all aspects of public participation
- Sole Management and completion of Environmental Impact Assessments from Application to Environmental Authorisation including project management (Specialist team appointments, report reviews etc.), site visits, report writing, all aspects of public participation and mapping
- Management, preparation and co-ordination of public participation for all Basic Assessments and Environmental Impact Assessments including consultation with authorities, organs of state and general public as well as the compilation of a summary document once complete. Organising and attendance of public meetings when required
- Liaising with client and preparation of quotes, sourcing of new work
- Site visits
- Liaising with and management of specialist team including drafting Terms of Reference and appointment upon client satisfaction
- Environmental Control Office (ECO) including site induction, site inspections and site meetings
- Drafting of Environmental Management Plans (EMP) for Construction and Operation
- Alien Management Plans for the alien clearing required as part of Environmental Authorisation
- Estuarine Management Plans for Construction and Operation of a resort along the Uilkraals Estuary
- Requesting and managing Stewardship Applications if applicable to development proposal
- Completion of Environmental Authorisation conditions
- Completion of Notice's of Intent to Develop (NID) to Heritage Western Cape
- Printing, binding and preparation to submit documents

Reason for leaving – pursue own business venture

February 2016 to current

Lornay Environmental Consulting, Hermanus, Director, owner and EAP

- General business and financial management
- Marketing

- Sole Management and completion of Basic Assessments from Application to Environmental Authorization, including quoting, financial management throughout the project, client liaison, site visits, report writing, appointment of specialists, mapping and all aspects of public participation
- Sole Management and completion of Environmental Impact Assessments from Application to Environmental Authorisation including project management (Specialist team appointments, report reviews etc.), site visits, report writing, all aspects of public participation and mapping
- Management, preparation and co-ordination of public participation for all Basic Assessments and Environmental Impact Assessments including consultation with authorities, organs of state and general public as well as the compilation of a summary document once complete. Organising and attendance of public meetings when required
- Liaising with client and preparation of quotes, sourcing of new work
- Site visits
- Liaising with and management of specialist team including drafting Terms of Reference and appointment upon client satisfaction
- Environmental Control Office (ECO) including site induction, site inspections and site meetings
- Environmental audits
- Drafting of Environmental Management Plans (EMP) for Construction and Operation
- Conservation Management Plans including Alien and Fire Management Plans
- Requesting and managing Stewardship Applications if applicable to development proposal
- Completion of Environmental Authorisation conditions
- Completion of Notice's of Intent to Develop (NID) to Heritage Western Cape
- Clarification of the applicability of NEMA

EDUCATION

Jan 2010	Completed Master of Science Degree (Ichthyology and Fisheries Science) at Rhodes University, Grahamstown. Thesis topic: "*Spatio-Temporal Dynamics of Icthyoplankton in the Kowie Estuary, South Africa*"
Mar 2008	Obtained Bachelor of Science (Honours) (Environmental Science) at Rhodes University, Grahamstown. Dissertation topic: "*Assessment of the water quality of the East Kleinemonde Estuary: Implications for complex systems monitoring*"

Apr 2007	Obtained Bachelor of Science (Environmental Science and Zoology) at Rhodes University, Grahamstown
Apr 2007	Placed on Dean's List for 2006 in recognition of academic achievement in the Faculty of Science, Rhodes University
Dec 2003	Matriculated at Hudson Park High School, East London with Merit

SHORT COURSES / SEMINARS

Sept 2019	NEMA EIA training / Screening Tool (DEA)
Feb 2018	Water Use Licence Applications Refresher course
June 2017	NEMA EIA 2014 Training (DEA&DP)
May 2017	Water Use Licence Applications – Section 21c&i (Department of Water and Sanitation and Dr Wietsche Roets)
Feb 2015	IWRM, the NWA, Water Use Authorisations and Water Use Licence Applications – Procedures, Guidelines and Pitfalls (Carin Bosman)
July 2010	NEMA EIA Regulations Workshop (DEA&DP)
Mar 2010	Estuary Management short course in Stellenbosch (CSIR and NMMU)
Oct 2009	Annual Department of Ichthyology and Fisheries Science Postgraduate Seminars (Presentation of thesis findings)
Oct 2008	Annual Department of Ichthyology and Fisheries Science Postgraduate Seminars (Presentation of thesis findings)
Dec 2007	Rhodes University Department of Environmental Science and Coastal & Environmental Services (CES) short course, certificate of competence "*Introduction to Environmental Impact Assessment Procedures*" including EIA process and techniques; Environmental Management; Environmental Law; Social Impact Assessment; Public Participation; Resettlement; Environmental Management Plans and Strategic Environmental Assessment

REGISTRATIONS

Nov 2014	The Interim Certification Board for Environmental Assessment Practitioners of South Africa (EAPSA) certified Environmental Impact Assessment Practitioner (EAP)
Sept 2013	Registration with South African Council for Natural Scientific Professions (SACNASP): Professional Natural Scientist (Reg. No. 400327/13)
June 2011	Candidate Member of the Association of Professional Heritage Practitioners (APHP)
June 2010	Professional Member of the International Association for Impact Assessment (IAIA)

CORE COMPETENCIES & SKILLS

- Preparation and completion of Basic Assessment Reports, Scoping Reports and Environmental Impact Assessment Reports from initiation to Authorisation
- Management, preparation, coordination and completion of entire public participation process including, where required, public presentations, discussions with interested and affected parties, organs of state and authorities
- Completion and implementation of Construction and Operational Environmental Management Plans (EMP)
- Drafting of Alien and Fire Management Plans
- Drafting of Conservation Management Plans for undeveloped areas on a site
- Mapping required for environmental assessments and public participation
- Estuarine specialist work including Management Plans
- Management of timeframes on projects
- Financial project management
- Site visits, including Environmental Control Officer and Environmental Auditing
- Preparation of Terms of Reference (ToR) for specialists, specialist appointment, report review
- Quoting and job sourcing

- Uploading of documents onto company website
- Heritage applications (NID)
- Interpretation of the applicability of the National Water Act and including Water Use Licence Applications (WULA) and General Authorisations
- Regular liaison with client, specialists, organs of state, municipalities etc. as required for a specific project
- Regular use and consultation with applicable Policies, Guidelines and Legislation
- Competent use of equipment and data collection in the field including WP2 plankton nets with flow meters, CTD's and YSI's, in field sample collections and preservation and preparation for phytoplankton and chlorophyll-*a* analysis
- Practical laboratory experience including dissections, microscopy, taxonomy (larval fish and phytoplankton)
- Management of field sampling team
- Excellent report writing skills
- Systems experience including Microsoft Office Word, PowerPoint, Excel, Outlook, Statistic a 8 (Moderate), AutoCAD Drawing 2002 (Moderate), TatukGIS, Mapsource, SANBI BGIS, Google Earth Pro, PRIMER 5 (Moderate)
- Drivers license code B

POSITION CURRENTLY HELD

I am the director and owner of Lornay Environmental Consulting. I am the sole EAP currently and I am involved in impact assessments, water licence applications, management plans, heritage applications etc. I am responsible for day to day running of the business and office.

GENERAL

Jan 2010 Two research papers published in peer reviewed journals:

Kruger, M & Strydom N.A. 2011. Spatial and temporal variability in the larval fish assemblage of a warm temperate South African estuary, with notes on the effects of artificial channelling. *African Zoology* **45**(2): 195–212

Kruger, M & Strydom, N.A. 2011. Plankton dynamics associated with the convergence zone of a shear front on the permanently open Kowie Estuary, South Africa. *African Zoology* **46**(1): 47–59

Sep 2008 Published short communication (popular articles) in two local newspapers regarding my work on local estuaries, including Talk of the Town (Port Alfred) and Eastern Cape Today

2008 Rhodes University Underwater Club committee member (Underwater hockey ladies representative) included organizing and coaching teams, and organizing sports tours, development and club events

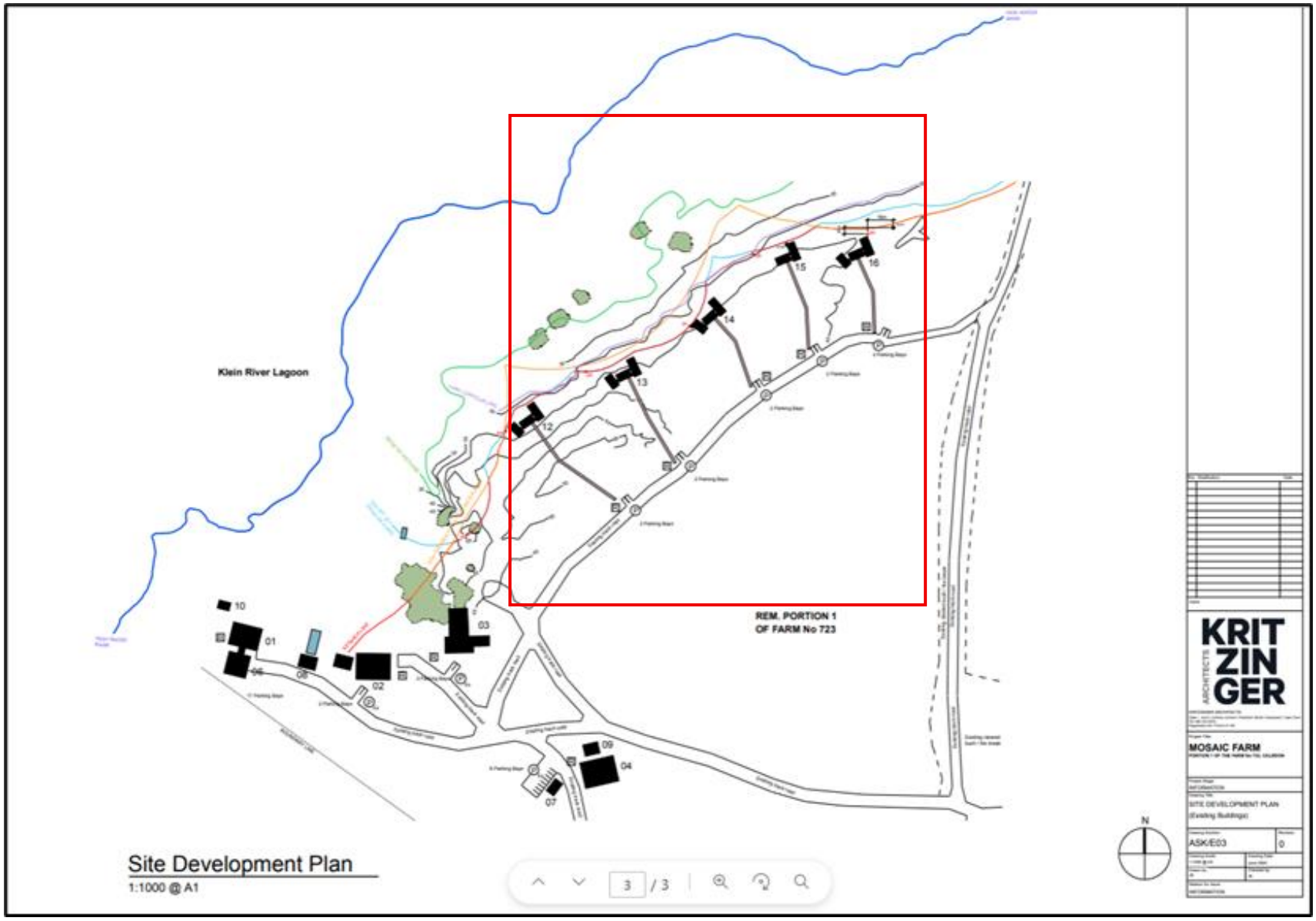
2008/2009 Tutor / demonstrator for second year Ichthyology students at Rhodes University, included sourcing practical materials, demonstrating the practicals and grading students work

2008/2009 Led numerous sampling trips for collection of data for MSc. Included organizing sampling trips, management of sampling team, skippering of boat, collection and preservation of samples in the field and budget management

May 2009 Obtained South African Maritime Safety Authority (SAMSA) certificate of competence skippers license (category R vessel)

M NAYLOR
SEPTEMBER 2023

APPENDIX B


Klein River Lagoon
REM. PORTION 1
OF FARM No 723
Site Development Plan
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KRIT ZIN GER
ARCHITECTS
MOSAIC FARM
SITE DEVELOPMENT PLAN
(Existing Buildings)
ASK/E03
3 / 3