

**APPENDIX H. ENGINEERING PLANS,
STORMWATER, SEWER AND ROADS**



East Coast Aquaculture Pty Ltd
Lot 234, Cascade Road, Banners Rest, Port Edward, KZN
P.O.Box 1794, Link Hills, 3652
T: 083 307 1478 F: 0865 287 340

Mr J Maivha
18 Phando Environmental Consulting
info@phando.co.za

26 June 2018

Dear Jeffrey,

Proposed Fish Farm : Madlankala Primary Co-Operative – Requests for details regarding the Water Extraction Pit

I refer to an email request from Mduduzi Mncwanga (Madlankala) to assist you in this matter and our subsequent telecom yesterday. The motivation for the Extraction Pit is as follows:

The Project will require a source of water to provide for its initial charge/fill (611,000 litres over the period of 12 month establishment as production is scaled up) and then on-going top up requirements (estimated to be 37,500 litres per month – less in winter more in summer).

Once the initial charge of water is in the system it will continuously recirculate through the Farm with zero environmental discharge. The only water loss that will occur will be evaporation, with a higher loss during hot windy summer months, and limited some mechanical loss (splashing and when fish are harvested) and Filtration System loss. The water loss will need to be replaced.

In considering how best to extract water from Lake Qubu we considered 2 Options:

1. DIRECT EXTRACTION

This would entail running a surface/moveable pipe between the Farm and Lake. Because there is a significant amount of vegetation around the Lake it is difficult to access open water of a 1m depth. In addition the Lake Water Level will change over time and it would prove difficult and awkward to keep moving the extraction end of the pipe. Initial Charge will be drawn in this manner.

2. INDIRECT EXTRACTION / EXTRACTION PIT/WELL

This entails digging a Pit/Well into the Ground above the High Water Level to below the Water Table allowing water to seep into it and extract water from there. Top Up will be drawn in this way. The Pit would be fenced off to prevent unauthorised entry and mitigate the risk of Human/Animal Safety.

The 2nd Option is preferred.

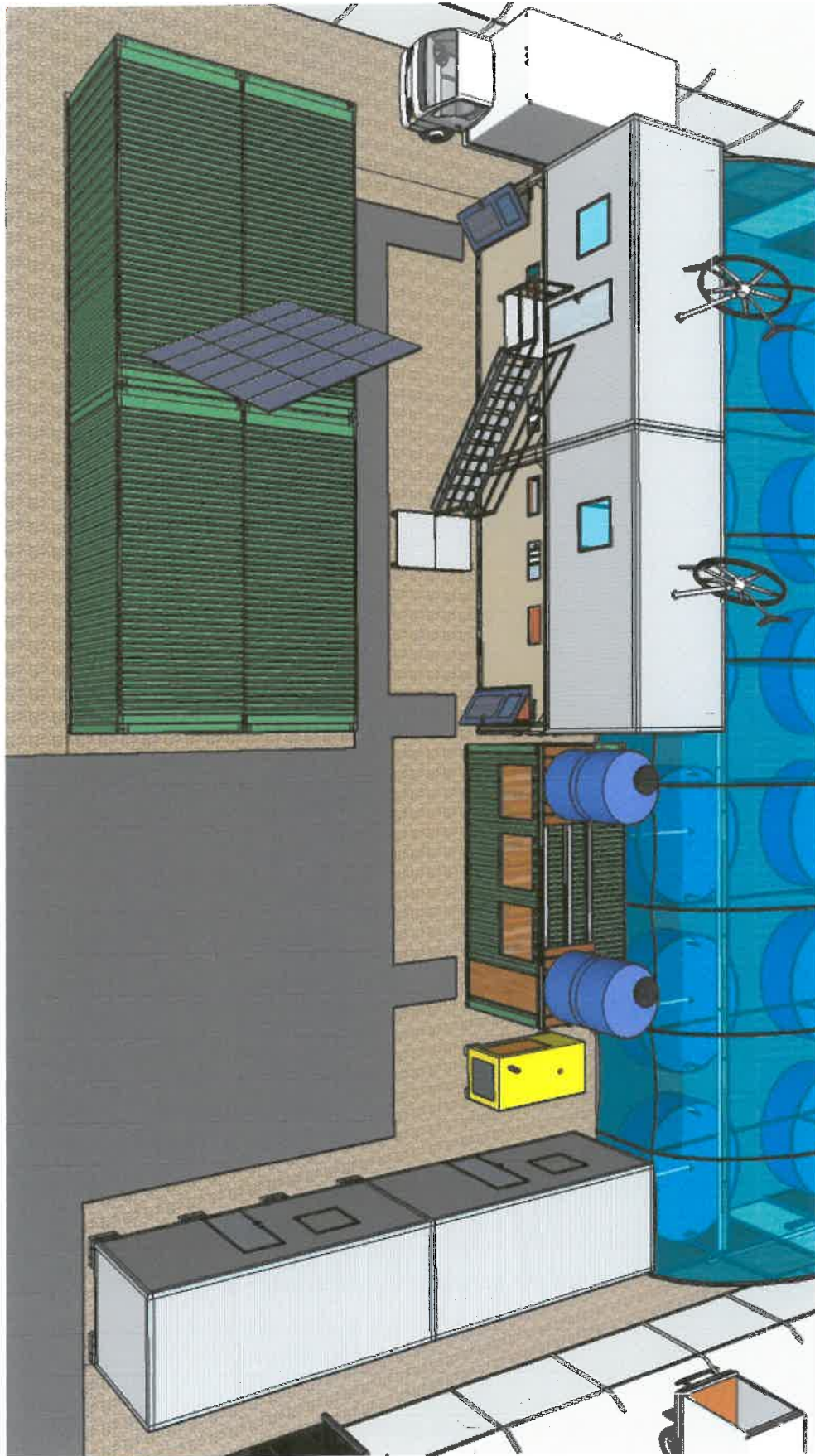
Yours sincerely

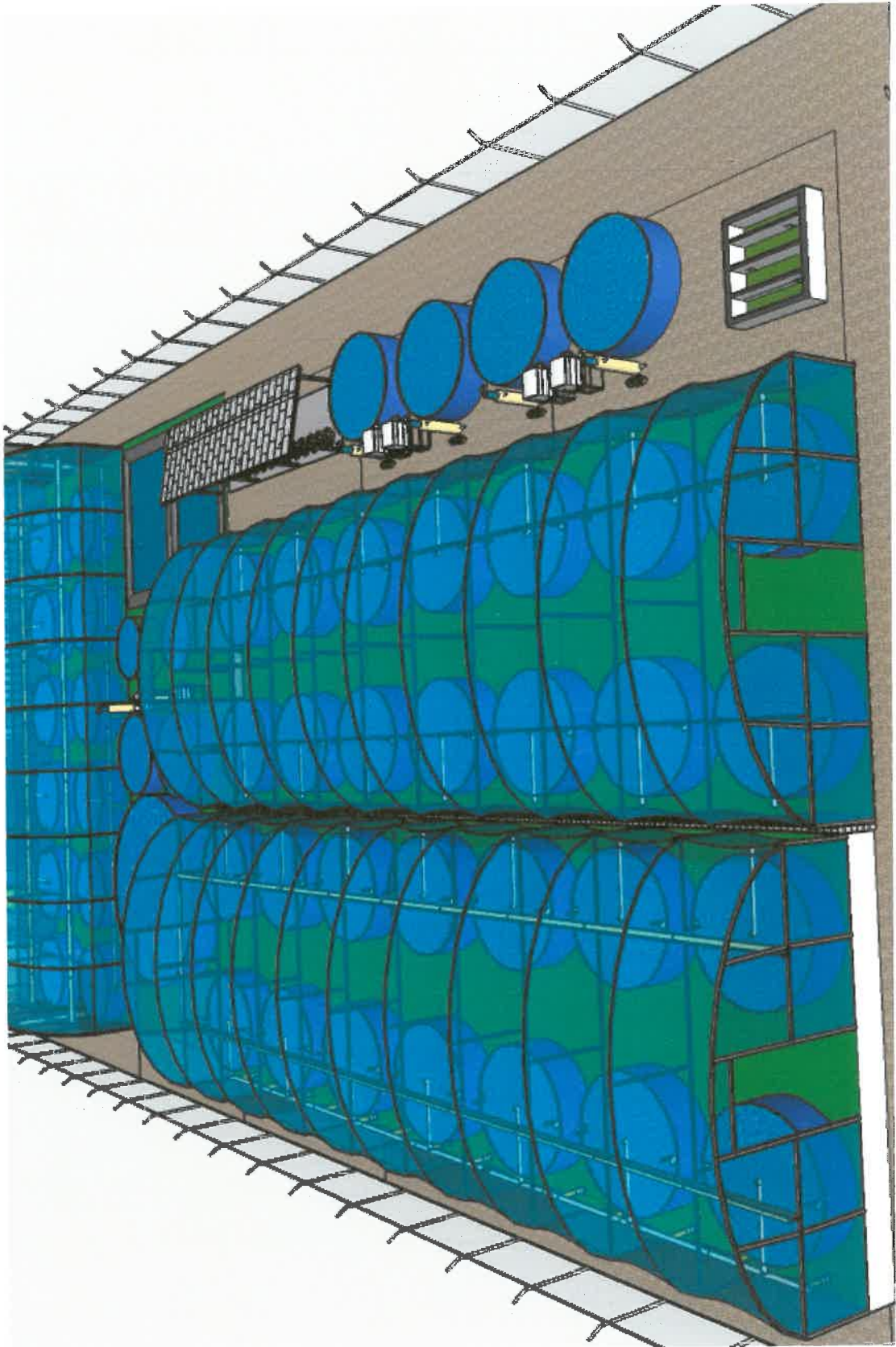
Kumaran Moodaly (not signed due to electronic transmission)
Marketing & Sales Director

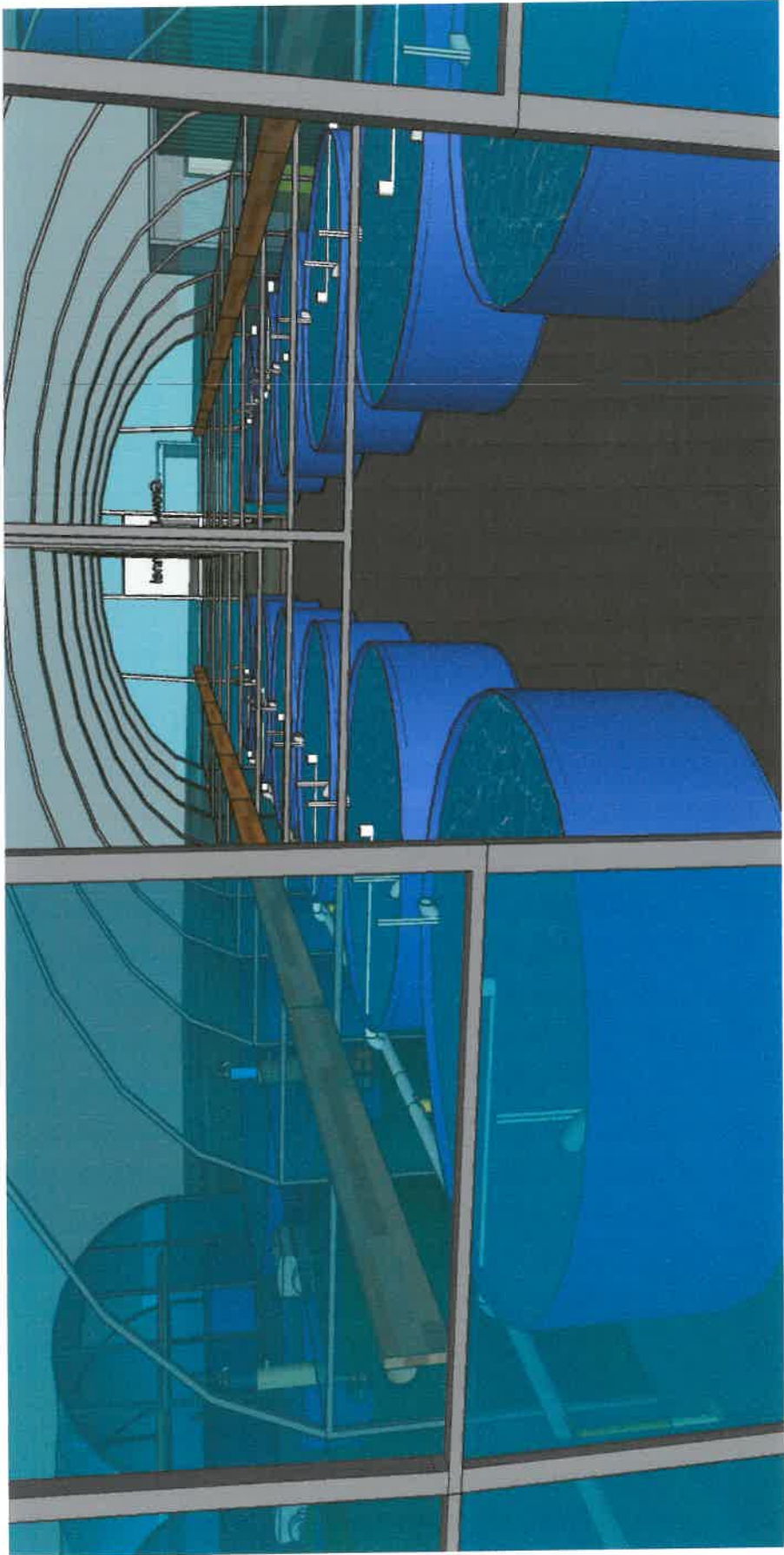
cc mduduzi,mcwanga@za.bellequipment.com, cmmngomezulu@gmail.com, zamo@tpa.co.za

APPENDIX I. ENGINEERING PLANS, CROSS SECTION PLANS









**APPENDIX J. DECLARATIONS AND CV'S OF
EAP AND SPECIALISTS**

CURRICULUM VITAE of DOVHANI JEFFREY MAIVHA

Name of firm: 18Phando Environmental Consulting (PTY) LTD
Position in firm: Director (Botanist / EAP)
Contact Details: 076 822 0733 / 076 341 5101
Email address: maivhaj@gmail.com / info@phando.co.za (preferred)
Home address: 11 Birkett court
02 Christie Road
Pietermaritzburg
3201
Gender: Male
Marital status: Married
Identity Number: 840108 5712 083
Languages: Venda, English, Zulu, Sotho, Xhosa (good at all)
Driver's License: C1
Professional affiliation: SACNASP – Reg. No. 400671/15 (Botanical Science)

BIOGRAPHICAL SKETCH

Jeffrey Maivha commenced work at Ezemvelo KZN Wildlife (EKZNV) in 2009, after completing a degree in Bachelor of Science (Botany and Zoology) and an Honours degree in Botany. His initial work at EKZNV covered reviewing land-use change applications (EIA's) for potential impacts and opportunities for biodiversity conservation and draft organisation's official reports and recommendations to various organs of state viz. KwaZulu-Natal Department of Agriculture, Environmental Affairs and Rural Development (DAEA&RD). Manage Access and Excel Databases and spatial data capture. Review Environmental Authorisations to ascertain whether Ezemvelo's recommendations have been included in the Environmental Authorisation and provide support and technical input in the lodging of appeals to the Minister of Environmental Affairs in cases where insufficient provision has been made to safeguard biodiversity in an Environmental Authorisation. Interact with Environmental and Planning consultants as well as applicants. Attend site inspections to determine on-site environmental and biodiversity sensitivity, meetings and other decision making forums viz. DFA Tribunal Hearings, KZN DEWC and RMDEC. Provide administrative support to the IEM team, also provided input into environmental related legislation and policies, development of conservation guidelines, norms and standards documents and the KZN Biodiversity Offset Document and Norms and Standards for Biodiversity Assessments.

In 2011 he joined the Ecological Advice section of EKZMW as a Chief Research Technician. He was responsible for performing technical and ecological tasks, including the gathering and management of data, required by the Ecological Advice section to support nature conservation in the Zululand District of KwaZulu-Natal. He was also responsible for conducting EIA scoping and contribute to Protected Area Management Plans plus provide data for the development of District Management Plans, SEA's, various environmental and planning tools and also assist with the collection of data for the development of invasive alien species plans for the protected areas.

In 2013 he joined the Department of Agriculture, Forestry & Fisheries (DAFF) as a Senior Forester under Forestry regulations and support Sub-Directorate. His main responsibilities were to implement the National Forest Act, 1998 (Act No. 84 of 1998) and the National Veld and Forest Fire Act, 1998 (Act No. 101 of 1998). Implementation of National Forests Act involved the administration and processing of licences applications for all forms of natural forests and protected trees. Reviewing of Environmental Impact Assessments: Basic Assessment and Scoping EIA reports, Specialist Reports, EMP's, ECO reports for potential negative impacts on natural forest(s) and protected trees, draft the Departmental official comments and recommendations to various organs of state viz. KwaZulu-Natal Department of Agriculture and Environmental Affairs (DAEA). Implementation of National Veld and Forest Fire Act involved facilitating the formation and registration of Fire Protection Associations (FPAs) and promote the functioning of the existing FPAs. Assist in the development of integrated veld fire management plans & ensure conformity with objectives of the plan.

In 2017 he then joined Woodland & Indigenous Forests Management still under DAFF as an Estate Manager for Ngome Forest and was responsible for Overseeing, regulating and managing biodiversity within the Abaqulusi District Municipality in all aspects of indigenous forests, woodlands and associated woodlots. He was also involved in overseeing and providing advice on the management of infrastructure and forest ecology (*viz.* forest assessment, rehabilitation & monitoring rehabilitation thereafter). Ensure forest protection (maintain firebreaks, compliance and law enforcement) and manage the administration of licences (as per National Forests Act, 1998). Coordinate stakeholder engagement and human resource management (supervise staff and ensure employee capacity building) which included evaluating and monitoring performance and appraisal of subordinates. Oversee and evaluate of forestry activities.

During mid-2017 Jeffrey Maivha founded an Environmental Management firm called 18Phando Environmental Consulting (PTY) LTD. It is after realizing his passion for being involved in environmental and development projects and programmes that he decided to shift his focus into providing professional environmental management and environmental assessment services to all sectors of industries. Jeffrey Maivha has been in the field of integrated environmental management, Geographic Information Systems (GIS) and plant ecology for more than seven years now.

He has widespread experience in the management of Basic Assessments, Scoping and EIA processes, as well as the production and implementation of Environmental Management Programmes, Compliance Monitoring (as an Environmental Control Officer). He also has experience in the processes of priority species licence applications and permits including mining permits applications.

Since establishing 18Phando Environmental Consulting in June 2017 Jeffrey Maivha has been involved in assisting other environmental consulting firms with their projects. The firm is still fairly new in business and still seeking growth in the environmental management industry. Currently the firm is providing services to other firms with the intension of finding its ground and be able to grow clients.

KEY EXPERIENCE RECORD

In the last 8 years, Jeffrey has been mainly employed by organisation (EKZNW) and Public Sector (DAFF) and was involved with project management (reviewing of EIA projects, Environmental Authorisations, EMPr, ECO Reports, Specialists Reports, administration of priority species licences and permits). He has contributed to several development projects within KwaZulu-Natal. In 2017 post establishing the firm 18Phando Environmental consulting he has managed to work on few projects as EIA manager or as an assistant to other Environmental firms.

The following table presents an abridged list of projects that Jeffrey has been involved in since establishing 18Phando Environmental Consulting, indicating his role in each project:

Date	Project description	Role	Client
2017/18	Environmental Impact Assessment: Proposed Lower Umkhomazi Bulk Water Supply Scheme, Lower Umkhomazi, Ethekwini Municipality	Project Assistant	Umngeni Water
2018	Licence application for removal of indigenous and trees for construction of Eskom powerline, Manguzi, kwaZulu Natal.	Project manager	Abathembu bushclearing cc
2018	The establishment of sewer pipeline and pump station on Colwyn Drive, Sheffield beach, Kwadukuza Municipality.	Ecological Assessment Review	SDP cc
2018	Masinenge bulk sewage pipeline, Margate, Ray Nkonyeni Local Municipality, Ugu District of KwaZulu-Natal.	Project assistant	Ray Nkonyeni Local Municipality
2018/19	Establishment of Lake Qhubu Freshwater Fish Farm, Eskhawini, Richards bay	Project Manager	Madlankala Primary Cooperative
2018/19	Proposed City of uMhlathuze Local Municipality SCM building extension and alteration, Richards Bay, KwaZulu-Natal.	Project ECO	CIVTECH Engineers

EDUCATION AND ADDITIONAL COURSES

2008 Degree in Bachelor of Science (Botany and Zoology) from University of Limpopo

2009 Honours Degree in Bachelor of Science (Botany) from University of Limpopo

Additional Short Courses

Disaster Risk Management (Disaster Risk Solutions), 2015

Environmental Health and Safety (KwaMahlathi), 2017

Key Skills

- Public participation processes;
 - Project management;
 - Biodiversity/ecological assessment;
 - Basic assessments and Scoping and EIRs,
 - Environmental management programmes;
 - Waste management license applications,
 - Water use license applications,
 - Mining applications;
 - Pre-feasibility and feasibility studies,
 - Environmental screening assessments;
 - Protected plant and tree permit applications;
 - Environmental awareness's
 - Environmental Control Officer Duties;
 - Social Impact Assessments;
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Employment Record

June 2017 to Present: Director at 18Phando Environmental Consulting (PTY) LTD

February 2017 to June 2017: Estate Manager (Ngome Forest) Department of Agriculture, Forestry & Fisheries.

April 2013 to January 2017: Senior Forester, Department of Agriculture, Forestry & Fisheries.

April 2011 to March 2013: Chief Research Technician, Ezemvelo KZN Wildlife

August 2009 March 2011: Development Planner IEM, Ezemvelo KZN Wildlife

April 2009 to July 2009: Intern, Ezemvelo KZN Wildlife

REFERENCES

Name: Simon Bundy
Firm: SDP Ecological & Environmental Services
Position: Director
Contact: 082 446 4847 (simon@ecocoast.co.za)

Name: Andrew Batho
Firm: Afzelia Environmental Consulting
Position: Director
Contact: 083 601 9411 (andrew@afzelia.co.za)

Application for Environmental Authorization

7. DECLARATIONS

(a) Declaration by the applicant

I, JEFFREY MAIVHA (Pr. Sci. Nat.), declare that I-

- am, or represent², the applicant in this application;
- have appointed an environmental assessment practitioner to act as the independent environmental assessment practitioner for this application;
- will provide the environmental assessment practitioner and the KZN Department of Economic Development, Tourism & Environmental Affairs with access to all information at my disposal that is relevant to this application;
- will be responsible for the costs incurred in complying with the Environmental Impact Assessment Regulations, 2014, including but not limited to –
 - costs incurred in connection with the appointment of the environmental assessment practitioner;
 - costs incurred in respect of the undertaking of any process required in terms of the Regulations;
 - costs in respect of any fee prescribed by the Minister or MEC in respect of the Regulations;
 - costs in respect of specialist reviews, if the competent authority decides to recover costs; and
 - the provision of security to ensure compliance with conditions attached to an environmental authorization, should it be required by the KZN Department of Economic Development, Tourism & Environmental Affairs;
- will ensure that the environmental assessment practitioner is competent to comply with the requirements of the EIA Regulations, 2014 and will take reasonable steps to verify whether the EAP complies with the Regulations;
- will inform all registered interested and affected parties of any suspension of the application, as well as of any decisions taken by the KZN Department of Economic Development, Tourism & Environmental Affairs in this regard;
- am responsible for complying with the conditions of any environmental authorization issued by the KZN Department of Economic Development, Tourism & Environmental Affairs;
- hereby indemnify the Government of the Republic of South Africa, the KZN Department of Economic Development, Tourism & Environmental Affairs and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action which the applicant or environmental assessment practitioner is responsible for in terms of the EIA Regulations, 2014;
- will not hold the KZN Department of Economic Development, Tourism & Environmental Affairs responsible for any costs that may be incurred by the applicant in proceeding with an activity prior to obtaining an environmental authorization or prior to an appeal being decided in terms of the EIA Regulations, 2014;
- I will perform all other obligations as expected from an applicant in terms of the EIA Regulations, 2014;
- all the particulars furnished by me in this form are true and correct; and

I am aware that a person is guilty of an offence in terms of Regulation 48 (1) of the EIA Regulations, 2014, if that person provides incorrect or misleading information. A person who is convicted of an offence in terms of sub-regulation 48(1) (a)-(e) is liable to the penalties as contemplated in section 49B-(1) of the National Environmental Management Act, 1998 (Act 107 of 1998)



Signature of the applicant³/ Signature on behalf of the applicant

18Phando Environmental Consulting (PTY) Ltd

Trading name (if applicable)

07/06/2019

Date

²If this is signed on behalf of the applicant, proof of such authority from the applicant must be attached.

³If the applicant is a juristic person, a signature on behalf of the applicant is required as well as proof of such authority.

Department of Economic Development, Tourism & Environmental Affairs, KwaZulu- Natal	Application for Environmental Authorization	07 April 2017
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Application for Environmental Authorization

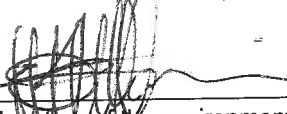
(b) Declaration by the environmental assessment practitioner.

Environmental assessment practitioner (EAP):⁴

Trading name (if any):	18Phando Environmental Consulting (PTY) Ltd		
Contact person:	Jeffrey Maivha		
Postal address:	11 Birkett Court, 02 Christie Road, Pelham, Pietermaritzburg		
Postal code:	3201	Cell:	076 822 0733
Telephone:		Fax:	
E-mail:	info@phando.co.za		
Education Qualifications ⁵ :	BSc Hons Botany		
Professional affiliation(s) (if any) ⁶	SACNASP Reg No. 400671/15		

I, Jeffrey Maivha (Pr. Sci. Nat.) declare that I

- am the independent environmental practitioner in this application;
- will comply with the requirements for an EAP as stipulated in Regulation 13 of the EIA Regulations, 2014;
- do not have and will not have any vested interest (either business, financial, personal or other) in the undertaking of the proposed activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014;
- will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- declare that there are no circumstances that may compromise my objectivity in performing such work;
- have expertise in conducting environmental impact assessments, including knowledge of the National Environmental Management Act, 1998 (Act 107 of 1998), regulations and any guidelines that have relevance to the proposed activity;
- will comply with the National Environmental Management Act, 1998 (Act 107 of 1998), regulations and all other applicable legislation;
- 2014 undertake to disclose to the applicant and the KZN Department of Economic Development, Tourism & Environmental Affairs all material information in my possession that reasonably has or may have the potential of influencing its decision with respect to this application;
- will ensure that information containing all reports in respect of this application is distributed or made available to interested and affected parties and that their participation is facilitated in such a manner that they will be provided with a reasonable opportunity to participate and provide comments on the reports;
- will provide the competent authority with access to all information at my disposal regarding this application, whether such information is favourable to the applicant or not;
- declare that all the particulars furnished by me in this form are true and correct;
- I am aware that a person is guilty of an offence in terms of Regulation 48 (1) of the EIA Regulations, 2014, if that person provides incorrect or misleading information. A person who is convicted of an offence in terms of sub-regulation 48(1) (a)-(e) is liable to the penalties as contemplated in section 49B(1) of the National Environmental Management Act, 1998 (Act 107 of 1998); and
- I will comply with all the requirements as indicated in the National Environmental Management Act, 1998 (Act 107 of 1998) and Environmental Impact Assessment Regulations, 2014.



 Signature of the environmental assessment practitioner

Trading name

18Phando Environmental Consulting (PTY) Ltd

Date

07/06/2019

⁵⁸Please include details of names, education qualifications and professional affiliations of the EAP and each representative of the EAP appointed to manage this application.

Department of Economic Development, Tourism & Environmental Affairs, KwaZulu- Natal	Application for Environmental Authorization	07 April 2017
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