



**EnviroSci (Pty) Ltd**  
Reg No 2018/462716 /07

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Ecologist (Pr Sci Nat 400268/07)  
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**23 June 2019**

**To whom it may concern**

**AQUATIC ASSESSMENT OPINION WITH REGARD TO THE AMENDMENT APPLICATION FOR THE 74.4 MW HARTEBEESTHOEK WEST (PHEZUKOMOYA SPLIT 2) WIND ENERGY FACILITY (WEF) NEAR NOUPOORT**

EnviroSci (Pty) Ltd was appointed to review the proposed amendment application with regard to any potential changes against the previous aquatic impact assessment submitted in 2016 which informed the EIA, noting that all these were conducted by the same lead author as the undersigned.

Presently this information, as well as information collected for other projects within the same region, was used to assess the proposed layout (Figure 1) against the authorised facility layout. Thus, when considering the authorised development and the proposed amendments, the amendment will make use of an existing track/road network and will not require any new watercourse crossings, but would require stormwater management features. The proposed amendment to the authorised WEF are as follows:

Table 1: Proposed amendments

ASPECT TO BE AMENDED	PROPOSED AMENDMENT	
<b>Technical aspects</b>		
Overall Capacity	74.4MW	
Generation capacity per turbine	6.2 MW	
Hub Height	137m	
Rotor Diameter	175m	
Number of Turbines	12, with new localities to avoid various constraints	
Construction Camp, Batching plant / Lay down area locations	Same as previous	
Underground cabling	Will follow internal roads	
Access	Only one new access point required	
Transmission evacuation	Grid line routing and proposed substation unchanged from that authorised and any additional changes will form part of a separate application (BAR)	
<b>Administrative aspects</b>		
Amend the Holder of the EA (if required)	Phezukomoya Wind Power (Pty) Ltd	Hartebeesthoek Wind Power (Pty) Ltd

The most significant amendment being applied for by the applicant would seem to be the increase in hub height, rotor diameter, the generation capacity and revision of the road layout amongst others. These amendments have little bearing on the aquatic environment as the footprints of the construction camp, hardstands, and turbine footings will have little direct impact on the aquatic environment, i.e. the only impacts are associated with the roads crossing the watercourses. With regard to the transmission lines, it is assumed that the towers/pylons would avoid the delineated aquatic zones, but these will be assessed separately due to a number of changes/alternatives in a Basic Assessment process.

The original aquatic impact assessment for the Phezukomoya project was submitted in 2016 and will remain unchanged, although the amendment review was conducted with the following requirement updates, post-2016.

- Macfarlane *et al.*, (2017) Wetland and Rivers Buffers model was utilised in this assessment/review of the proposed amendments. Using this new buffer model, a buffer of 18m was determined for all the watercourses, but the 32m indicated in the 2016 report was retained; and
- Cumulative impact assessment.

With these in mind, the findings of the aquatic assessment can be upheld, especially considering that the modelled buffers are less than those originally prescribed.

In conclusion, the final impact of the proposed layout on the aquatic environment with suitable stormwater management and improvement of current water courses crossings, the overall impact will remain LOW for the following impacts:

- Impact 1: Loss of riparian systems and alluvial watercourses in the construction, operation and decommissioning phases
- Impact 2: Impact on riparian systems through the possible increase in surface water runoff on riparian form and function during the operation and decommissioning phases
- Impact 3: Loss of wetlands and wetland function in the construction phase
- Impact 4: Increase in sedimentation and erosion in the construction, operation and decommissioning phases.
- Impact 5: Potential impact on localised surface water quality during the construction and decommissioning phases
- Impact 6: Storage of hazardous substances particular in the construction phase
- Impact 7: The No-go Alternative
- Impact 8: Cumulative Impacts

Thus, based on the findings of this study, no objection to the authorisation of any of the proposed activities, assuming that all mitigations proposed in the reports submitted are carried out. Similarly, in the assessment of potential cumulative impacts, no additional impacts or changes to the previously assessed impacts would be required due to the proposed amendment. This is also based on the consideration that the number of roads has been consolidated in this application while keeping the new watercourse crossings away from wide/main stem watercourses, and well away from any known wetlands within the region (closest 3 km away). No changes to the original Mitigations or EMP considerations are required.

Please don't hesitate to contact me directly should you have any further queries.

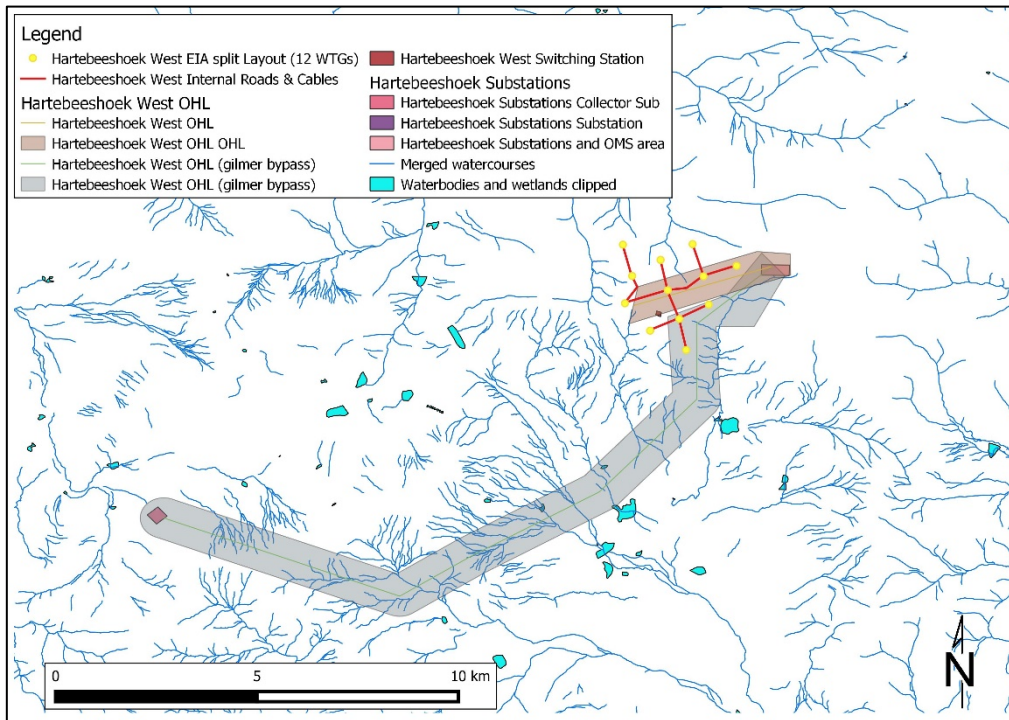
Yours Sincerely

A handwritten signature in black ink, appearing to read 'Brian Colloty', with a stylized flourish at the end.

Dr Brian Colloty  
Cell: 083 498 3299

**References:**

Macfarlane, D.M. & Bredin, I.P. 2017. Buffer Zone Guidelines for Rivers, Wetlands and Estuaries Buffer Zone Guidelines for Rivers, Wetlands and Estuaries. WRC Report No TT 715/1/17 Water Research Commission, Pretoria.



**FIGURE 1A: PROJECT LAYOUT**

**CURRICULUM VITAE**  
**Dr Brian Michael Colloty**  
**7212215031083**

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Pari Park  
Port Elizabeth, 6070  
brian@itsnet.co.za  
083 498 3299

Profession: Ecologist (Pr. Sci. Nat. 400268/07)  
Member of the South African Wetland Society  
Specialisation: Ecology and conservation importance rating of inland habitats, wetlands, rivers & estuaries  
Years experience: 25 years

**SKILLS BASE AND CORE COMPETENCIES**

- 25 years experience in environmental sensitivity and conservation assessment of aquatic and terrestrial systems inclusive of Index of Habitat Integrity (IHI), WET Tools, Riparian Vegetation Response Assessment Index (VEGRAI) for Reserve Determinations, estuarine and wetland delineation throughout Africa. Experience also includes biodiversity and ecological assessments with regard sensitive fauna and flora, within the marine, coastal and inland environments. Countries include Mozambique, Kenya, Namibia, Central African Republic, Zambia, Eritrea, Mauritius, Madagascar, Angola, Ghana, Guinea-Bissau and Sierra Leone. Current projects also span all nine provinces in South Africa.
- Assessment of the aquatic environment of ca 120 renewable projects since 2010, which include the submission of 35 Water Use License Applications post approval.
- 15 years experience in the coordination and management of multi-disciplinary teams, such as specialist teams for small to large scale EIAs and environmental monitoring programmes, throughout Africa and inclusive of marine, coastal and inland systems. This includes project and budget management, specialist team management, client and stakeholder engagement and project reporting.
- GIS mapping and sensitivity analysis

**TERTIARY EDUCATION**

- 1994: B Sc Degree (Botany & Zoology) - NMU
- 1995: B Sc Hon (Zoology) - NMU
- 1996: M Sc (Botany - Rivers) - NMU
- 2000: Ph D (Botany – Estuaries & Mangroves) – NMU

**EMPLOYMENT HISTORY**

- 1996 – 2000 Researcher at Nelson Mandela University – SAB institute for Coastal Research & Management. Funded by the WRC to develop estuarine importance rating methods for South African Estuaries
- 2001 – January 2003 Training development officer AVK SA (reason for leaving – sought work back in the environmental field rather than engineering sector)
- February 2003- June 2005 Project manager & Ecologist for Strategic Environmental Focus (Pretoria) – (reason for leaving – sought work related more to experience in the coastal environment)
- July 2005 – June 2009 Principal Environmental Consultant Coastal & Environmental Services (reason for leaving – company restructuring)
- June 2009 – August 2018 Owner / Ecologist of Scherman Colloty & Associates cc
- August 2018 Owner / Ecologist - EnviroSci (Pty) Ltd

**SELECTED RELEVANT PROJECT EXPERIENCE**

**World Bank IFC Standards**

- Kenmare Mining Piliivilli, Mozambique - wetland (mangroves, peatlands and estuarine) assessment and biodiversity offset analysis - current
- Botswana South Africa 400kv transmission line (400km) biodiversity assessment on behalf of Aurecon - current
- Farim phosphate mine and port development, Guinea Bissau – biodiversity and estuarine assessment on behalf of Knight Piesold Canada – 2016.
- Tema LNG offshore pipeline EIA – marine and estuarine assessment for Quantum Power (2015).
- Colluli Potash South Boulder, Eritrea, SEIA marine baseline and hydrodynamic surveys co-ordinator and coastal vegetation specialist (coastal lagoon and marine) (on-going).
- Wetland, estuarine and riverine assessment for Addax Biofeuls Sierra Leone, Makeni for Coastal & Environmental Services: 2009
- ESHIA Project manager and long-term marine monitoring phase coordinator with regards the dredge works required in Luanda bay, Angola. Monitoring included water quality and biological changes in the bay and at the offshore disposal outfall site, 2005-2011

## **South African**

- Plant search and rescue programmes for Nuxba, Oyster Bay and Garob Wind Farms, current for EGP
- Plant Search rescue for Transnet Capital Tank Farm and Landside Infrastructure projects, as well as manager of Port of Nqura Nursery - current
- Plant search and rescue, for NMBM (Driftsands sewer Phase 1 and 2, Glen Hurd Drive Upgrade), Department of Social Development (Military veterans housing, Despatch), - current
- Wetland specialist appointed to update the Eastern Cape Biodiversity Conservation Plan, for the Province on behalf of EOH CES appointment by SANBI – current. This includes updating the National Wetland Inventory for the province, submitting the new data to CSIR/SANBI.
- Coega PV Plant Search and Rescue on behalf of JG Afrika – completed 2017
- CDC IDZ Alien eradication plans for three renewable projects Coega Wind Farm, Sonop Wind Farm and Coega PV, on behalf of JG Afrika (2016 – 2017).
- Nelson Mandela Bay Municipality Baakens River Integrated Wetland Assessment (Inclusive of Rehabilitation and Monitoring Plans) for CEN IEM Unit - Current
- Rangers Biomass Gasification Project (Uitenhage), biodiversity and wetland assessment and wetland rehabilitation / monitoring plans for CEM IEM Unit – current.
- Gibson Bay Wind Farm implementation of the wetland management plan during the construction and operation of the wind farm (includes surface / groundwater as well wetland rehabilitation & monitoring plan) on behalf of Enel Green Power - current
- Gibson Bay Wind Farm 133kV Transmission Line wetland management plan during the construction of the transmission line (includes wetland rehabilitation & monitoring plan) on behalf of Eskom – 2016.
- Tsitsikamma Community Wind Farm implementation of the wetland management plan during the construction of the wind farm (includes surface / biomonitoring, as well wetland rehabilitation & monitoring plan) on behalf of Cennergi – completed May 2016.
- Alicedale bulk sewer pipeline for Cacadu District, wetland and water quality assessment, 2016
- Mogalakwena 33kv transmission line in the Limpopo Province, on behalf of Aurecon, 2016
- Cape St Francis WWTW expansion wetland and passive treatment system for the Kouga Municipality, 2015
- Macindane bulk water and sewer pipelines wetland and wetland rehabilitation plan 2015
- Eskom Prieska to Copperton 132kV transmission line aquatic assessment, Northern Cape on behalf of Savannah Environmental 2015.
- Joe Slovo sewer pipeline upgrade wetland assessment for Nelson Mandela Bay Municipality 2014
- Cape Recife Waste Water Treatment Works expansion and pipeline aquatic assessment for Nelson Mandela Bay Municipality 2013
- Pola park bulk sewer line upgrade aquatic assessment for Nelson Mandela Bay Municipality 2013
- Transnet Freight Rail – Swazi Rail Link (Current) wetland and ecological assessment on behalf of Aurecon for the proposed rail upgrade from Ermelo to Richards Bay
- Eskom Transmission wetland and ecological assessment for the proposed transmission line between Pietermaritzburg and Richards Bay on behalf of Aurecon (2012).
- Port Durnford Exarro Sands biodiversity assessment for the proposed mineral sands mine on behalf of Exxaro (2009)
- Fairbreeze Mine Exxaro (Mtunzini) wetland assessment on behalf of Strategic Environmental Services (2007).
- Wetland assessment for Richards Bay Minerals (2013) – Zulti North haul road on behalf of RBM.
- Biodiversity and aquatic assessments for 105 renewable projects in the past 6 years in the Western, Eastern, Northern Cape, KwaZulu-Natal and Free State provinces. Clients included RES-SA, RedCap, ACED Renewables, Mainstream Renewable, GDF Suez, Globeleq, ENEL, Abengoa amongst others. Particular aquatic sensitivity assessment and Water Use License Applications on behalf of Mainstream Renewable Energy (8 wind farms and 3 PV facilities.), Cennergi / Exxaro (2 Wind farm), WKN Wind current (2 wind farms & 2 PV facilities), ACED (6 wind farms) and Windlab (3 Wind farms) were also conducted. Several of these projects also required the assessment of the proposed transmission lines and switching stations, which were conducted on behalf of Eskom.
- Vegetation assessments on the Great Brak rivers for Department of Water and Sanitation, 2006 and the Gouritz Water Management Area (2014)
- Proposed FibreCo fibre optic cable vegetation assessment along the PE to George, George to Graaf Reinet, PE to Colesburg, and East London to Bloemfontein on behalf of SRK (2013-2015).



## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

### DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

File Reference Number:	(For official use only)
NEAS Reference Number:	DEA/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

#### PROJECT TITLE

<i>Phuzu Lomoya EIA Split</i>
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#### Kindly note the following:

1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at <https://www.environment.gov.za/documents/forms>.
3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

#### Departmental Details

<p><b>Postal address:</b> Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Private Bag X447 Pretoria 0001</p> <p><b>Physical address:</b> Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Environment House 473 Steve Biko Road Arcadia</p> <p>Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at: Email: <a href="mailto:EIAAdmin@environment.gov.za">EIAAdmin@environment.gov.za</a></p>
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**1. SPECIALIST INFORMATION**

Specialist Company Name:	EnviroSci (Pty) Ltd		
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	4	Percentage Procurement recognition
			100
Specialist name:	Dr Brian Colloty		
Specialist Qualifications:	PhD		
Professional affiliation/registration:	SACNASP Ecology 400268/07		
Physical address:	1 Rossini Rd Pari Park Port Elizabeth 6070		
Postal address:	1 Rossini Rd Pari Park Port Elizabeth		
Postal code:	6070	Cell:	0834983299
Telephone:	0413662077	Fax:	-
E-mail:	b.colloty@gmail.com		

**2. DECLARATION BY THE SPECIALIST**

I, Brian Colloty, declare that –

- I act as the independent specialist in this application;
- I 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;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.



Signature of the Specialist

EnviroSci (Pty) Ltd

Name of Company:

13/8/2019

Date



3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, B. Celoty, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

[Signature]  
Signature of the Specialist

EnvioSci  
Name of Company

13/8/2019  
Date

[Signature]  
Signature of the Commissioner of Oaths

2019-08-13  
Date

