:

AQUATIC BIODIVERSITY COMPLIANCE STATEMENT

Development on Portion 12 of Farm Ongegunde Vryheid 746

Report for

Claire de Jongh

Port Elizabeth

EAPASA Registration 2021/3519

by

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January 2025

ANTON BOK AQUATIC CONSULTANTS

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AQUATIC BIODIVERSITY COMPLIANCE STATEMENT:

Upgrade of Dwellings on Portion 12 of Farm Ongegunde Vryheid 746

1 BACKGROUND AND TERMS OF REFERENCE

The unauthorised development investigated in this report entails the upgrading of two existing residential dwellings on the coast on Ptn 12 of the Farm Ongegunde Vryheid 746, located at Mostertshoek. This low-density coastal resort is located approximately 4.5 km west (in a straight line) from the Cape St. Francis Bay lighthouse, within the Kouga Municipality, Eastern Cape. The two dwellings in question are located near the coastal high water mark of the sea and thus in terms of NEMA (1998) 2014 EIA Regulations, environmental authorisation is required for any development or expansion greater than 50 m^2 and/or the excavation or infilling of more than 5 cubic metres of material (soil, sand or grit) in this locality.

The Environmental Screening Report for this development produced by Claire de Jongh (see main report) designated the locality as having a Low Sensitivity Rating in terms of aquatic biodiversity features. The complete Environmental Screening Report prepared by Claire de Jongh forms part of the Application for Environmental Authorisation and should be referred to if further details are required.

In terms of existing environmental legislation, an Aquatic Biodiversity Compliance Statement is required to be prepared by a suitably qualified specialist that is registered with the South African Council for Natural Scientific Professions (SACNASP) in the field of aquatic sciences. The contact details of the author (Dr AH Bok) as well as a copy of his SACNASP Certificate (with registration number), as well as a curriculum vitae are attached to this report as Appendices 1 and 2.

2 LOCATION AND DESCRIPTION OF PTN 12 OF FARM ONGEGUNDE VRYHEID 746

2.1 Locality

The nearest recognised watercourse to the site is the Krom River located approximately 6 km north (in a straight line) of the two upgraded coastal dwellings at Mostertshoek and there are no small streams or wetlands within 500m of the property (see Figure 2 below).

The National Freshwater Ecosystems Priority Areas (NFEPA) project **(**Driver *et al.* 2011) identified important freshwater areas in South Africa that require management actions in order to conserve these ecosystems and ensure sustainable use of water resources. These strategic spatial priorities are termed Freshwater Ecosystem Priority Areas or FEPAs. The NFEPA project produced FEPA maps which show different categories with different management implications for freshwater systems. The FEPA map for the Study Area is given in Figure 2.

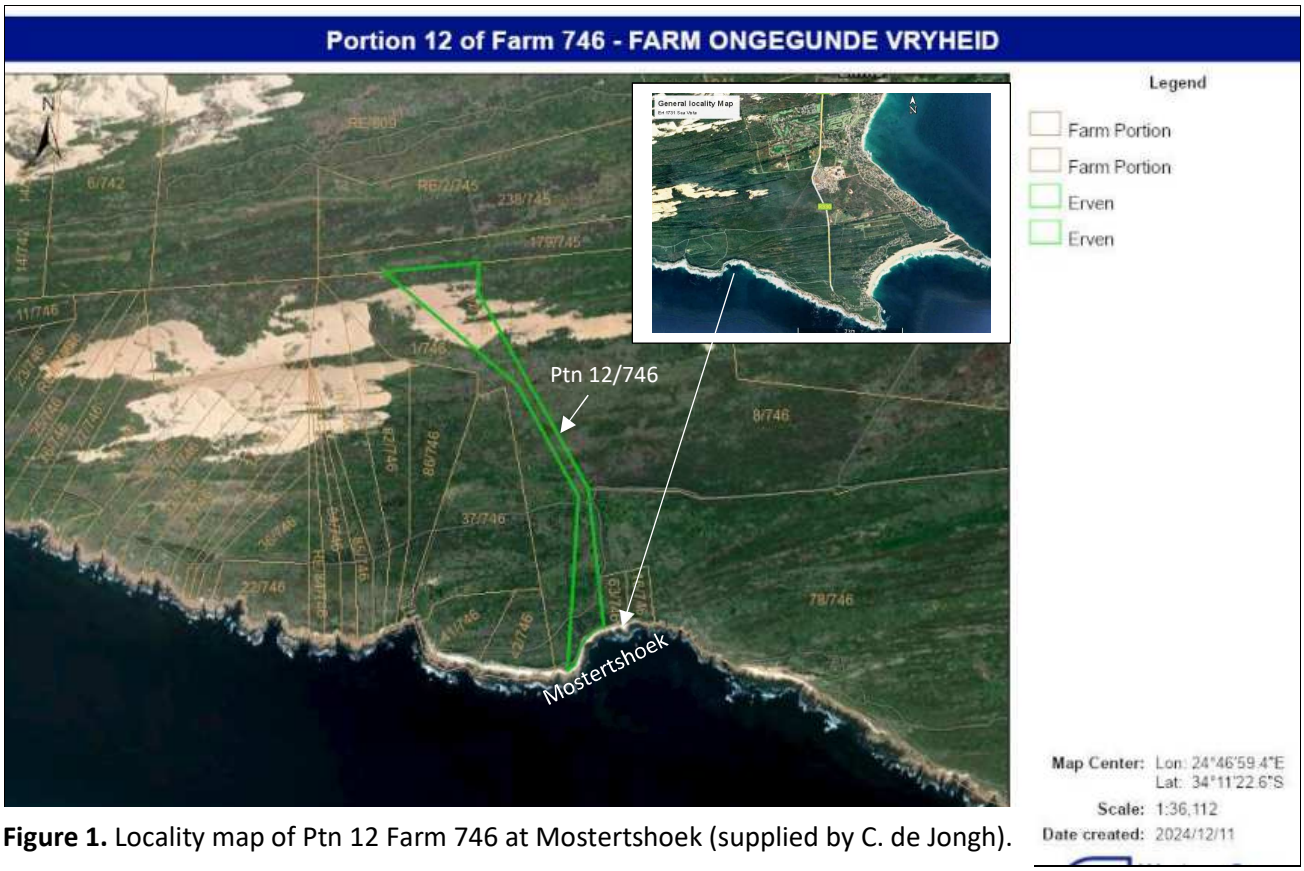

Figure 1. Locality map of Ptn 12 Farm 746 at Mostertshoek (supplied by C. de Jongh).

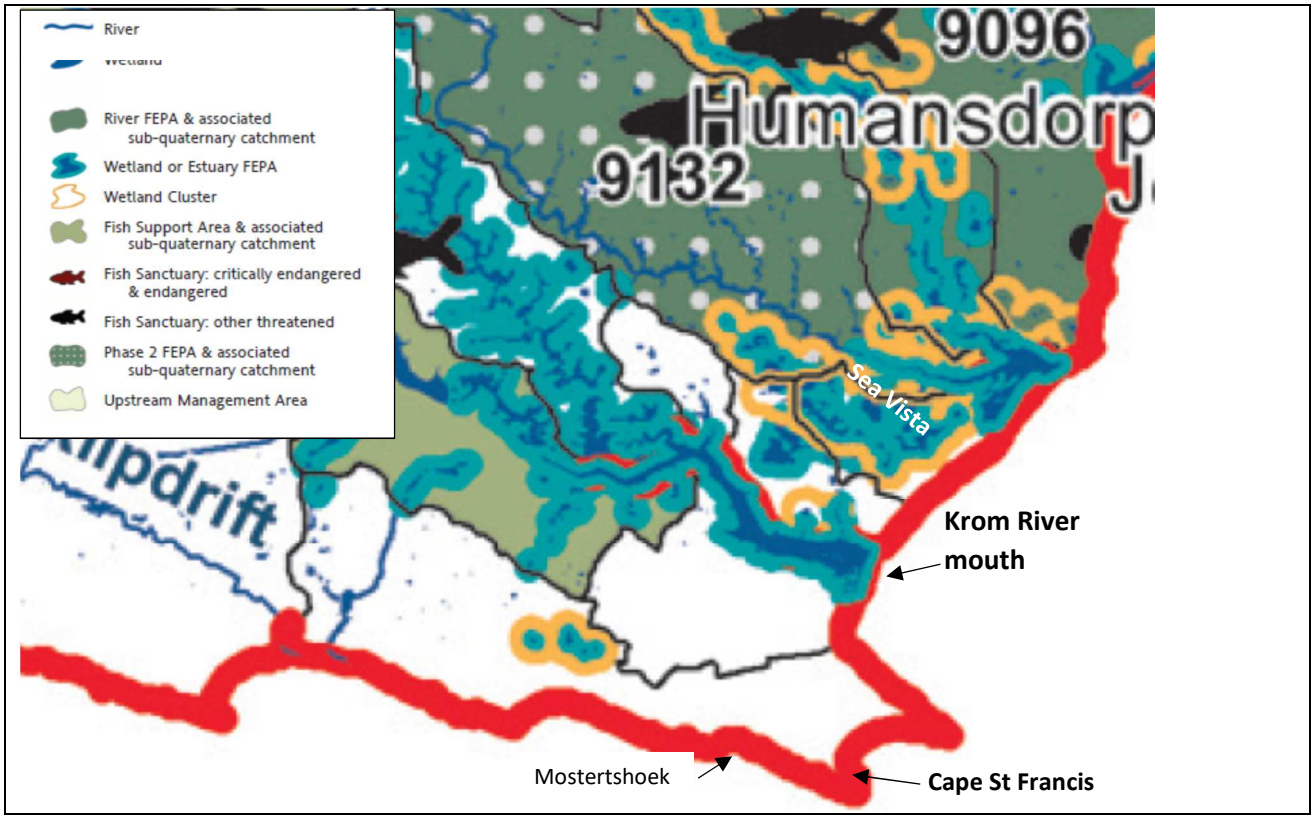

Figure 2. Freshwater Ecosystem Priority Area (FEPA) map of the study area at Mostertshoek.

The NFEPA map for the study (Figure 2) depicts the watercourses and wetlands as well as the various management areas within the adjacent quaternary catchments (from Driver *et al*. 2011). This map shows the

absence of any recognisable watercourses or wetlands within 500m of the dwellings located on the coast at Mostertshoek on Ptn 12 of the Farm Ongegunde Vryheid 746.

2.2 Description of Site

Google Earth images of site taken in November 2023 and in April 2019 are shown in Figure 3 and Figure 4, respectively, below.

As seen in Figures 3 and 4, there are two dwellings on the property, a larger dwelling to the north (Dwelling 1) and a smaller dwelling near the southern boundary (Dwelling 2). No wetland areas, minor streams or watercourses were observed near the development sites. Freshwater for domestic consumption is obtained from a borehole located on an adjacent property over 100m from the high water mark. No surface freshwater resources are utilised or have been disturbed by this coastal development.

Figure 3. Google Earth image of both dwellings on Ptn 12 of Farm Ongegunde Vryheid 746 dated 8 November 2023.

Figure 4. Google Earth image of dwellings at Mostertshoek on Ptn 12 taken in April 2019.

As can be seen in Figures 3 and 4 above, the access road to the houses located on the adjacent property to the north-east of Ptn 12, which was originally located on the seaward side (east) of Dwelling 2, was relocated to behind (west) of the dwelling sometime after April 2019. According to the landowner, this was undertaken to address safety concerns and to enhance privacy.

A site inspection of the dwellings at the coast on Ptn 12 at Mostertshoek was carried out on 14 January 2025 and the photographs taken at this time are given below (Plates 1 to 4).

Plate 1. Dwelling 1 showing beach frontage.

Plate 2. Dwelling 1 showing road on western side.

Plate 3. Dwelling 2 seen from the north.

Plate 4. Dwelling 2 seen from the south.

3. POTENTIAL IMPACTS AND MITIGATION

3.1 Freshwater Resources

From the above description of the study area, it is apparent that there are no nearby freshwater aquatic habitats or aquatic biota) that have been or will be negatively impacted by the upgrading of the two dwellings on the property.

3.2 Alterations to Access Road

The new section of access road is approximately 2.5 m wide and 85 m long and is located immediately adjacent to and west of Dwelling 1 (see Figure 3 and Plate 2). The section of the original access road located east of Dwelling 1 has been covered by a raised wooden deck with an area of greater than 50^2 m (see Figure 3 and Plate 1).

3.3 Encroachment onto the Marine High Water Mark

Both dwellings are located in close proximity to the High Water Mark and could potentially be vulnerable to damaging high tides during storm surges and very rough seas. However, the negative ecological impacts during such events should be minimal.

Mitigation measures to be incorporated into the EMPr should include the following:

- The areas of the property near the high water mark should be left undisturbed if possible and kept clear of rubble or building waste and should remain well-vegetated (with natural vegetation) to prevent erosion and slumping,
- During maintenance activities strict precautions should be taken to prevent any contamination of the environment from harmful chemicals such as dry cement, paint products, hydrocarbons, etc.
- All septic and/or conservancy tanks for domestic effluent treatment should be well-maintained and emptied on a regular basis (as required) to prevent contamination of the beach and adjacent sea, with resultant negative impacts on marine biota.

4. CONCLUDING STATEMENT

This investigation confirms that the coastal section of Ptn 12 of Farm Ongegunde Vrheid has a low sensitivity rating for aquatic biodiversity features. In addition, the upgrading of the two dwellings on this property should not have a negative impact on the aquatic habitats at or adjacent to the site, provided the mitigation measures recommended in this report are adhered to.

5. REFERENCES

Driver, A., Nel, J.L., Snaddon, K., Murray, K., Roux, D.J., Hill, L., Swartz, E.R., Manual, J. & Funke, N. (2011). *Implementation Manual for Freshwater Ecosystem Priority Areas*. WRC Report No. 1801/1/11.

Author: Anton H Bok

Signature: 

Date: 16 January 2025

APPENDIX 1

Abbreviated Curriculum Vitae of Author (A. H. Bok)

CURRICULUM VITAE (Abbreviated Version) A.H.Bok

Name:	BOK, Anton Hidde	**Nationality**:	South African
Profession:	Aquatic Ecologist (Fish)	**Place of Birth**:	South Africa
Present Position:	Environmental consultant	**Birth Date/ID:**	22/04/1945 / 4504225054086

Key Qualifications:

Anton Bok has over 40 years of experience in the field of conservation, research and management of environmental impacts on rivers and estuaries in southern and central Africa, with emphasis on fish fauna. This work includes baseline fish biodiversity surveys, breeding biology of indigenous fish; specialist studies on fish and aquatic habitats for Environmental Impact Assessments (EIAs), Water Use Licence applications (WULAs), General Authorisations (GAs). Additional activities include research on the design and monitoring of fishways (fish ladders) for indigenous fish; ecological water requirements (i.e. E-Flows) or ecological "Reserve" determinations for various rivers in SA, with specialist input on the flow requirements of the affected fish fauna.

Formal Qualifications

1.	B.Sc. (Zoology), 1968.	University of Cape Town
2.	B.Sc. Hon. (Zoology), 1969)	Rhodes University
3.	M.Sc. (Zoology), 1974	University of Port Elizabeth
4.	Ph.D. (Ichthyology), 1984	Rhodes University, JLB Smith Institute of Ichthyology

Professional Memberships

- Professional Member of South African Institute of Ecologists and Environmental Scientists (elected 1997).
- Member of Southern African Society of Aquatic Scientists.
- Honorary Research Associate of the South African Institute for Aquatic Biodiversity (from 2010).
- Registered Professional Natural Scientist (Reg. No. 400406/11) with South African Council for Natural Scientific Professionals (field of practice: Aquatic Science).
- Registered Environmental Assessment Practitioner (EAP No. 2021/4060, authorised by Environmental Assessment Practitioners Association of South Africa (EAPASA)

Professional Experience

1975 to 1996: Cape Nature Conservation/Eastern Cape Nature Conservation

Employed as aquatic specialist scientist with (the then) Directorate of Cape Nature Conservation in Cape Province, South Africa. Activities included research on the biodiversity, conservation and sustainable utilization of rivers and estuaries in the Cape Province, specialist advice on potential environmental impacts of proposed developments (EIA's), related to these aquatic ecosystems.

1997 to present date: Private environmental consultant

Principle founding member of Anton Bok Aquatic Consultants CC, an environmental consultancy, specializing in environmental impact assessments (EIAs) of developments, mainly those associated with aquatic ecosystems, including Environmental Reserve (E-Flows) studies of rivers, specialising in ecological flow requirements of the fish component. Additional activities include aquatic biodiversity impact assessment reports for EIAs in terms of NEMA (1998) and General Authorisations (GAs) and Water Use Licence Applications (WULAs) in terms of the NWA (1998) for developments in streams and rivers.

Typical recent assignments reflecting consultancy expertise relevant to the present project:

2023 South Africa Aquatic Biodiversity Impact Assessment Report for an EIA and WULA for the upgrading of a road culvert on the DR01763 to Oyster Bay. Client: Engineering Advice and Services Pty (Ltd).

2022 South Africa Aquatic Impact Assessment Report for an EIA and WULA for the removal of sediment from a tributary of the Kariega at the R75 Bridge Crossing at Km 60.9. Client: Engineering Advice and Services Pty (Ltd).

2022 South Africa Aquatic Impact Assessment Report for an EIA and WULA for the development of an Eco-Lodge on Farm 37 near Addo National Park. Client: CEN IEM Unit.

2021 South Africa Specialist Aquatic Report for the WULA **for** proposed new water pipeline from the existing Graaff-Reinet Water Treatment Works (WTW) to the existing Umasizakhe Water. Client CEN Integrated Environmental Management Unit.

2020 South Africa: Specialist Aquatic Study and WULA (WU15586) for S21 (c) & (i) for removal of sediment from Bushmans River on Farm Rokeby Park 489/1 (GA granted on 26/10/2020 by DWS, Ref N. 27/2/1/P610/2/5).

2019 South Africa: Aquatic Impact Report and WULA for S21 (c) & (i) of the NWA for a BWS Pipeline crossing at 3 locations on the Wilgerkloof R., near Willowmore (Client: Uhambiso Consult (Pty) Ltd. GA granted on 20/05/19; Reference 4/5/6/J31A/Wanhoop 19, Uniondale)

2018 South Africa Aquatic Impact Assessment Report for an EIA and WULA (WU9774) for S21 (c) & (i) for BWS Pipeline crossings of rivers near Willowmore (Client: Uhambiso Consult (Pty) Ltd. GA granted by DWS on 09/11/2018, File No. 27/2/2/L130/2/1).

2019 South Africa: Specialist Aquatic Assessment Report for the EIA & WULA for a proposed bridge crossing over Amalinda Stream, East London (Client: Indwe Environmental Consulting, E.L).

APPENDIX 2: **COPY OF SACNASP CERTIFICATE**

SACNASP

South African Council for Natural Scientific Professions

herewith certifies that

Anton Hidde Bok

Registration Number: 400406/11

is a registered scientist

in terms of section 20(3) of the Natural Scientific Professions Act, 2003
(Act 27 of 2003)
in the following field(s) of practice (Schedule 1 of the Act)

Aquatic Science (Professional Natural Scientist)

Effective **2 November 2011** Expires **31 March 2025**

Chairperson

Chief Executive Officer

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