

Samora Machel Building, No. 7 Government Boulevard, Riverside Park, Extension 2, Mbombela, 1200 Private Bag X 11219, Mbombela, 1200

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Litiko Letekulima, Kutfutfukiswa Kwetindzawo Tasemakhaya, Temhlaba Netesimondzawo

Departement van Landbou, Landelike Ontwikkeling, Grond en Ongewing Sake umNyango weZelimo UkuThuthukiswa kweeNdawo zemaKhaya, iNarha neeNdaba zeBhoduluko

Enquiries : D. Tswai Telephone : 087 260 6481 Reference : 1/3/1/16/1N-347 NEAS : MPP/EIA/0001136/2023

Enertrag South Africa (Pty) Ltd 18 Main Road Rondebosch 7701

Attention: Ms. Mercia Grimbeek

Email: Sandhisha.jaynarain@enertrag.com

Dear Madam,

ENVIRONMENTAL AUTHORISATION FOR ACTIVITIES LISTED IN GOVERNMENT NOTICE R983 (AS AMENDED) ASSOCIATED WITH THE DEVELOPMENT OF HENDRINA GREEN HYDROGEN AND AMMONIA (GH&A) FACILITY AND ASSOCIATED INFRASTRUCTURE, HEDRINA, STEVE TSHWETE LOCAL MUNICIPALITY

With reference to the abovementioned application, please be advised that the Department has decided to grant authorisation. The environmental authorisation and reasons for the decision are attached herewith.

In terms of Regulation 4(2) of the Environmental Impact Assessment Regulations, 2014 (as amended), you are instructed to notify all registered interested and affected parties in writing, and within 14 (fourteen) days of the date of this letter, of the Department's decision in respect of your application. Such notification must comply with the requirements of Regulation 4(2) and 4(3) and must draw the attention of registered interested and affected parties to the fact that an appeal may be lodged against the decision in terms of the National Appeal Regulations, 2014.

Your attention is drawn to the National Appeal Regulations, 2014, which regulate appeal procedures. Should you wish to appeal any aspect of the decision, you must, *inter alia*, lodge your appeal with the MEC, within 20 days of the date of receipt of this letter, by means of one of the following methods:

By facsimile:

(013) 766 8295

By post:

Private Bag x 11219

Nelspruit 1200



#### 1/3/1/16/1N-347

By hand:

Samora Machel Building, No. 7 Government Boulevard

Riverside Park Extension 2

Nelspruit 1200

Should you decide to appeal, you must also serve a copy of your appeal on all registered interested and affected parties and any organ of state with interest in the matter.

Yours faithfully,

MR. C.M. CHUNDA

HEAD: AGRICULTURE, RURAL DEVELOPMENT,

LAND AND ENVIRONMENTAL AFFAIRS

DATE:

cc: Mr. Thirushan Nadar

WSP Group Africa (Pty) Ltd

Email: thirushan.nadar@wsp.com



Samora Machel Building, No. 7 Government Boulevard, Riverside Park, Extension 2, Mbombela, 1200, Private Bag X 11219, Mbombela, 1200

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LitikoLetekulima, Kutfutfukiswa KwetindzawoTasemakhaya, Temhlaba Netesimondzawo Departement van Landbou, LandelikeOntwikkeling, GrondenOngewing Sake umNyangoweZelimo UkuThuthukiswakweeNdawozemaKhaya, iNarhaneeNdabazeBhoduluko

# **Environmental Authorisation**

**Application number:** 

1/3/1/16/1N-347

**Holder of Authorisation:** 

Steve Tshwete Local Municipality

Hendrina Green Hydrogen and

**NEAS** reference number:

MPP/EIA/0001136/2023

Location of activity:

Ammonia Facility: Portion 18 of the farm Weltevreden 193 IS and Portion 3 of the farm Dunbar 189 IS; Power line of up to 132 kV on Portions 1 and 3 of the farm Dunbar 189 IS; Water pipeline on Portions 1, 2, 3, 4, 6, 10 and 14 of the farm Bultfontein 187 IS. Portions 0, 1, 2, 4, 5, 6 and 7 of the farm Dunbar 189 IS, Portions 6 and 7 of the farm Geluk 26 IS. Portion 0 of the farm Komati Power Station 56 IS and Portions 1. 3 and 9 of the farm Wilmanstrust 47 IS. Hendring, Steve Tshwete Local Municipality, Mpumalanga Province.



#### 1. Decision

The Department is satisfied on the basis of information available to it and subject to compliance with the conditions of this environmental authorisation, that the applicant should be authorised to undertake the activity as specified below. Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

#### 2. Activities authorised

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act 107 of 1998) and the Environmental Impact Assessment Regulations 2014 (as amended), the Department hereby authorises:

Enertrag South Africa (Pty) Ltd 18 Main Road Rondebosch 7701

Attention: Ms. Mercia Grimbeek

Cell: 083 777 6675

Email: Sandhisha.jaynarain@enertrag.com

To undertake the following activities listed in Government Notices R983, R984 and R985 of 4 December 2014 (as amended) associated with the development of Hendrina Green Hydrogen and Ammonia Facility on Portion 18 of the farm Weltevreden 193 IS and Portion 3 of the farm Dunbar 189 IS, and associated infrastructure including a power line of up to 132 kV on Portions 1 and 3 of the farm Dunbar 189 IS, and a water pipeline on Portions 1, 2, 3, 4, 6, 10 and 14 of the farm Bultfontein 187 IS, Portions 0, 1, 2, 4, 5, 6 and 7 of the farm Dunbar 189 IS, Portions 6 and 7 of the farm Geluk 26 IS, Portion 0 of the farm Komati Power Station 56 IS and Portions 1, 3 and 9 of the farm Wilmanstrust 47 IS, Hendrina, Steve Tshwete Local Municipality (hereafter referred to as "the activity"):

Activity number	Activity Description	Extent to which Activity is Authorised  Where activities authorised are in accordance with the Site Layout and Sensitivity Map dated 2023/04/28 for Option 2 for Site Alternative 2 & Figures 11.4 for Site Alternative 2, Figure 11.5 for Preferred pipeline alternative 2, and Figure 11.6 for Preferred powerline option 1 for Site 2 as included the EIAR dated 22 June 2023
GN R983 Activity 9(i)	The development of infrastructure exceeding 1000m in length for the bulk transportation of water or storm water with an internal diameter of 0.36m or more.	The development of a pipeline (Pipeline Alternative 2) exceeding 17km in length with an internal diameter of 360mm for the transportation of feed water to the facility and for the crystalisation associated with the Reverse Osmosis plant.
GN R983 Activity 10(i)	The development and related operation of infrastructure exceeding 1000m in length for the bulk transportation of sewage, effluent, process water, return water, industrial discharge or slimes with an internal diameter of 0.36m or more.	



		The development of a grid connection line of
GN R983 Activity 11(i)	The development of facilities or infrastructure for the transmission and distribution of electricity outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kV.	up to 132kV (Preferred power line option 1 for Site 2) of up to 3km at:  PL1-A - 26°12'19.20"S 29°33'41.35"E  PL1-B - 26°12'3.63"S 29°33'49.99"E  PL1-C - 26°11'35.49"S 29°33'21.66"E  PL1-D - 26°11'25.87"S; 29°33'29.33"E  PL1-E - 26°11'20.24"S; 29°33'21.94"E  PL1-F - 26°11'17.23"S; 39°33'25.04"E
GN R983 Activity 16	The development and related operation of facilities for the desalination of water with a design capacity to produce more than 100m <sup>3</sup> of treated water per day.	The development of a Reverse Osmosis infrastructure with a capacity to produce approximately 3182m³ purified or treated water per day to supply the electrolysis process with sufficient quality feed water, and the development of an evaporator / crystallizer for the treatment of effluent.
GN R983 Activity 25	The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of more than 2000m³ but less than 15000m³.	
GN R983 Activity 12 (ii)(a)(c)	The development of infrastructure or structures with a physical footprint of 100m² within a watercourse or if no development setback exists, within 32m of a watercourse measured from the edge of a watercourse.	The development of an access road, storm water control infrastructure, electrical cabling and water supply pipelines within 32m of a watercourse or across a watercourse.
GN R985 Activity 14	The development of infrastructure or structures with a physical footprint of 10m <sup>2</sup> or more, within a watercourse of if no development setback has been adopted, within 32m of a watercourse, measured from the edge of a watercourse.	
GN R983 Activity 19	The infilling or depositing of any material of more than 10m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10m³ from a watercourse	The infilling and removal of soil into and from a watercourse for the purpose of developing pipelines and a road across a watercourse.
GN R983 Activity 24(ii)	The development of a road with a reserve wider than 13.5m or where no reserve exists where the road is wider than 8m.	
GN R983 Activity 56(ii)	The widening of a road by more than 6m, or the lengthening of a road by more than 1km where no reserve exists where the existing road is wider than 8m	
GN R985 Activity 4	The development of a road wider than 4m with a reserve less than 13.5m	The development of internal roads 5m to 8m wide, which will collectively be more than 1km in length, and the widening of an existing internal or access roads.
GN R983 Activity 48(i) (a)(c)	The expansion of infrastructure or structures where the physical footprint is expanded by 100m² or more within a watercourse or if no development setback exists, within 32m of a watercourse, measured from the edge of a watercourse	
GN R985 Activity 18	The widening of a road by more than 4m, or the lengthening of a road by more than 1km	



GN R983 Activity 27	The clearance of an area of 1ha or more, but less than 20ha of indigenous vegetation	The clearance of not more than 12ha of indigenous vegetation and the associated transformation of 30ha of agricultural land for the purpose of developing power lines, water pipelines, internal and access roads and associated infrastructure.
GN R985 Activity 12	The clearance of an area of 300m² or more of indigenous vegetation	
GN R983 Activity 28(ii)	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 1 April 1998 and where such development will occur outside an urban area, where the total land to be developed is bigger than 1ha	
GN R984 Activity 4	The development and related operation of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500m <sup>3</sup> .	The development and related operation of a storage facility for:  Liquid Ammonia 2273m³  Hydrogen and Oxygen 59 566m³  Nitrogen 3983m³
GN R985 Activity 10(f)	The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80m <sup>3</sup> .	
GN R984 Activity 6	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent.	The development of the green hydrogen and ammonia facility that will produce up to 100 000 tons of Ammonia, Fluorine, Fluorine Compounds and Hydrogen Cyanide per annum which will require a license in terms of NEM:AQA
GN R984 Activity 7(ii)	The development and related operation of facilities or infrastructure for the bulk transportation of dangerous goods in liquid form, outside an industrial complex, using pipelines, exceeding 1000m in length, with a throughput capacity of more than 50m³ per day	The development and related operation pipelines exceeding 1000m in length for the daily transportation of 402m³ of liquid ammonia and 800m³ of liquid hydrogen.
GN R985 Activity 23(ii) (a)(c)	The expansion of infrastructure or structures where the physical footprint is expanded by 10m² or more where such expansion occurs with a watercourse; and if no development setback has been adopted, within 32m of a watercourse, measured from the edge of the watercourse.	The expansion of internal and access roads within National Protected Area Expansion Strategy Focus area.

The granting of this environmental authorisation is subject to the conditions set out below

## 3. Conditions of Authorisation

## Scope of authorisation

3.1. Authorisation of the activity is subject to the conditions contained in this authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.



- 3.2. Commencement for the purposes of all conditions of this authorisation means the start of any physical implementation in furtherance of the activities, including site preparation, clearance of vegetation, and any other action on the site.
- 3.3. The holder of the authorisation must ensure compliance with these conditions by any person acting on his or her behalf, including but not limited to, an agent, subcontractor, employee or person rendering a service to the holder of the authorisation.
- 3.4. The activities which are authorised may only be carried out at the property indicated above.
- 3.5. Any changes to, or deviations from, the project description set out in this authorisation must be approved, in writing, through an amendment process as may be applicable, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.
- 3.6. In the event that the impacts exceed the significance as predicted in the environmental impact assessment report, the authorisation may be suspended and/or withdrawn after proper procedures have been followed.
- 3.7. In the event of any dispute concerning the significance of a particular impact, the opinion of the Department in respect of its significance will prevail.
- 3.8. The Department may change or amend any of the conditions of this authorisation if, in the opinion of the Department, it is environmentally justified.
- 3.9. This activity must commence within a period ten (10) years from the date of issue. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken, unless the holder of this environmental authorisation has lodged a valid application to amend the validity period of this authorisation before this authorisation lapses, in which case, this authorisation will remain valid. However, the activity, including site preparation, may not commence prior to the amendment application being decided.
- 3.10. The holder of this authorisation is responsible for compliance with the provisions for Duty of Care and Remediation of Environmental Damage contained in Section 28 of the National Environmental Management Act, 1998 (Act 107 of 1998).
- 3.11. This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity, including, inter alia, the National Environmental Management: Air Quality Act (Act No 39 of 2004), the National Environmental Management: Waste Act (Act 59 of 2008), the National Water Act, 1998 (Act No. 36 of 1998), the National Forests Act, 1998 (Act 84 of 1998), the Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983), as amended, the National Heritage Resources Act, 1999 (Act 25 of 1999), the National Environmental Management: Protected Areas Act, 2003 (Act 57 of 2003), and the provisions of all relevant SABS and SANS standards.

#### Appeal of authorisation

- 3.12. The applicant must, in writing, within fourteen (14) days of the date of the decision on the application ensure that-
  - All registered interested and affected parties are provided with access to the decision and the reasons for such decision.
  - b) The attention of all registered interested and affected parties is drawn to the fact that an appeal may be lodged against the decision in terms of the National



- Appeal Regulations 2014, if such appeal is available in the circumstances of the decision.
- c) The decision includes the complete environmental authorisation granted or refused.

## Management and monitoring of the activity

- 3.13. The Environmental Management Programme (EMPr) dated 23 June 2023 submitted as part of the Environmental Impact Assessment Report is hereby approved, and must be implemented and adhered to throughout the lifecycle of the activity.
- 3.14. Prior to commencement, plant species of conservation importance (endemic, protected, Red Data) must be identified and marked, and may not be disturbed, or, where required, the relevant permits for their relocation or removal must be obtained from the relevant authority.
- 3.15. Any plant species categorized as Endangered or Critically Endangered in terms of the Red List of South African Plants must be conserved *in situ*.
- 3.16. Plant species of conservation concern that are identified for relocation must be relocated to areas of similar habitat that will not be transformed, unless otherwise stipulated by the relevant permitting authority. Such species must be monitored and managed until such time that they have, in consultation with the ECO, been determined to be successfully re-established.
- 3.17. Prior to commencement, an Alien Plant Management and Rehabilitation Plan must be appended in the EMPr, which must be implemented throughout the lifecycle of the activity.
- 3.18. Prior to commencement, a Major Hazard Installation Quantitative Risk Assessment including emergency response plans must be developed and incorporated in the EMPr.
- 3.19. The grid connection overhead power lines must be fitted with bird flight diverters according to the applicable Eskom Engineering Instruction. These devices must be installed as soon as the conductors and earth wires are strung to prevent mortality due to electrocution and collisions on the overhead lines.
- 3.20. The disturbance of nests or breeding activities of birds, reptiles, or any other wildlife, is strictly prohibited.
- 3.21. All vertebrates, including slow moving reptiles and smaller mammals, must be allowed to move unharmed, or be assisted and relocated in consultation with the Environmental Control Officer.
- 3.22. Activities are prohibited from taking place within any watercourse or wetland, or below the 1:100 year flood line, or within 32m of any watercourse or wetland, unless specifically authorised herein.
- 3.23. The applicant must appoint an independent ECO that will have the responsibility of monitoring and reporting on compliance with the conditions of this environmental authorisation as well as monitoring and reporting on the implementation of the approved EMPr:
  - 3.23.1. The ECO must be appointed before the commencement of site clearing activities and the Department must be notified of such an appointment for communication purposes.
  - 3.23.2. The ECO must monitor contractors' entry into sensitive habitat.
  - 3.23.3. The ECO must monitor the restriction of site clearing to designated areas.
  - 3.23.4. The ECO must oversee the surveying and demarcation of areas that are prohibited from being developed.
  - 3.23.5. The ECO must oversee the implementation of an alien plant control program.



- 3.23.6. The ECO must oversee all rehabilitation activities.
- 3.23.7. The ECO must maintain the following on site: A site diary; copies of all reports submitted to the Department; and a complaints register of all public complaints and the remedies applied to such complaints.
- 3.23.8. During the construction phase, the ECO must submit monthly compliance reports to the Department in writing and copy the applicant with such reports. Where applicable, the ECO may negotiate the required frequency for the submission of reports with the Department, which must be agreed to in writing by the Department. The reports must include a description of all activities on site, problems identified, transgressions noted and remedial action implemented. All reports must reflect the Department's reference number of the project on the cover page.
- 3.23.9. The ECO must remain employed until all rehabilitation measures as well as site clean-up are completed and the site is handed over to the applicant by the contractor for operation.
- 3.24. The holder of the authorisation must submit an environmental compliance audit report to the Department within 30 days of completion of the construction phase. The environmental audit report must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the conditions of this authorisation as well as the requirements of the EMPr.
- 3.25. The results of operational audits must be used to determine the need for the improvement of existing, or the installation of additional mitigation and monitoring measures.
- 3.26. Records of audits, inspections, tests and monitoring must be maintained and kept on site.
- 3.27. The Department retains the right to monitor and/ or inspect the proposed project throughout its lifecycle.

#### Commissioning and operation of the activity

- 3.28. At least fourteen (14) days written notice must be given to the Department that the activity will commence. The notice must include a date on which it is anticipated that the activity will commence, and must include the name and contact details of the appointed ECO.
- 3.29. Construction personnel must be made aware of the sensitivity of the area and their movements must be limited to the construction areas only and must be enforced in terms of the contracts of appointment.
- 3.30. The perimeter of the construction site must be defined and demarcation of material lay down areas must precede all activities on site.
- 3.31. Fencing must not cause erosion and must not impede the flow of any watercourse or natural drainage. Fencing must be monitored throughout the construction and operation phase, and any signs of erosion caused by it must be remedied immediately.
- 3.32. The activity may not cause or result in the impediment of any watercourse, and the removal of material on site may not result in the destabilization of watercourse banks adjacent or upstream.
- 3.33. Topsoil must be stockpiled at a height not exceeding 1.0m at a pre-designated location for use during rehabilitation.
- 3.34. Storm water management must adhere to the following principles:
  - 3.34.1. No surface storm water generated as a result of the development may be channeled directly into any wetland or watercourse.



- 3.34.2. All surface runoff generated during both construction and operation phases must be managed prior to entering any natural drainage system, wetland or riparian zone so as not to impact on the natural hydrology and morphology of the system.
- 3.34.3. Storm water management must be designed to promote infiltration and slow the release of runoff into wetlands and watercourses.
- 3.34.4. Any point of overland discharge must be located at least 32m away from a watercourse, wetland or riparian zone and overland discharge must occur over areas that have a minimum vegetation cover of 80%.
- 3.34.5. All mechanisms for dissipating water energy must be implemented at the inception of the construction phase.
- 3.34.6. The increase in upstream peak flows must be mitigated by retaining storm water until after peak flows.
- 3.34.7. The attenuation of flows leaving the site is compulsory.
- 3.34.8. The rate of storm water runoff must be reduced by using mechanisms such as the construction of earth berms, grassed swales and armourflex lined channelled structures.
- 3.34.9. Where erosion at the base of swales or channels from piped systems is likely to occur, inverts must be armoured to obviate scour.
- 3.34.10. Gravel berms must be constructed at the inception of the construction phase to divert upstream catchment runoff, which must be dissipated at the outlet points to return the flow to its pre-development state.
- 3.34.11. Sediment trapping facilities must be installed prior to the commencement of earthworks.
- 3.35. Increased runoff due to vegetation clearance and/or soil compaction and/or any hardened surfaces must be managed, and steps must be taken to ensure that storm water does not lead to bank instability and excessive levels of silt entering watercourses or wetlands.
- 3.36. Where ablution facilities for construction personnel are required, dry chemical toilet facilities or e-loos must be provided on site at a ratio of 1:10 for construction staff.
- 3.37. Chemical toilets must be maintained and cleaned regularly and effluent must be disposed of off-site into an approved municipal sewage system.
- 3.38. The storage and handling of fuel, lubricants and other chemicals must be in especially demarcated impervious and bunded areas.
- 3.39. The mixing of cement, asphalt, chemicals or other noxious materials must be undertaken in designated areas on as far as practicable, an impermeable layer such as a concrete slab or in a container suitable for this.
- 3.40. Construction vehicles and equipment must be checked and maintained regularly to ensure that there is no environmental contamination as a result of oil, fuel or hydraulic fluid leakages.
- 3.41. Pollution due to improper storage of construction materials or any hazardous substances is prohibited.
- 3.42. It is the responsibility of the holder of the authorisation to rectify any source of pollution from their undertaking and to take appropriate measures to prevent any pollution of surface as well as underground water.
- 3.43. All general waste generated on the site must be disposed of in a registered landfill site or as directed by any other relevant authority.
- 3.44. All hazardous waste must be disposed of at an official registered site, or be removed by registered hazardous waste contractors.



- 3.45. Construction personnel must be sensitized to the requirements of the South African Heritage Resources Act. Should any material of cultural or archaeological significance be encountered during construction, all activities must cease immediately and the South African Heritage Resources Agency (SAHRA) must be informed accordingly.
- 3.46. Complaints received from the public during the construction and operational phases of the activity must be attended to as soon as possible and addressed to the satisfaction of all concerned.

#### General

- 3.47. A copy of this authorisation must be kept at the property where the activity will be undertaken. The authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.
- 3.48. Where any of the applicant's contact details change, including the name of the responsible person, the physical or postal address and/ or telephonic details, the applicant must notify the Department as soon as the new details become known to the applicant.
- 3.49. Non-compliance with a condition of this authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the regulations.
- 3.50. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the applicant or his successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

#### **ENVIRONMENTAL AUTHORISATION APPROVED BY:**

MR. C.M. CHUNDA

HEAD: AGRICULTURE, RURAL DEVELOPMENT,

LAND AND ENVIRONMENTAL AFFAIRS

DATE: 🛠



# **Annexure 1: Reasons for the Decision**

# 1. Background

1.1. The applicant, Enertrag South Africa (Pty) Ltd, applied for authorisation to carry out the following activities listed in Government Notices R983, R984 and R985 of 4 December 2014 (as amended) associated with the development of Hendrina Green Hydrogen and Ammonia Facility on Portion 18 of the farm Weltevreden 193 IS and Portion 3 of the farm Dunbar 189 IS, and associated infrastructure including a power line of up to 132 kV on Portions 1 and 3 of the farm Dunbar 189 IS, and a water pipeline on Portions 1, 2, 3, 4, 6, 10 and 14 of the farm Bultfontein 187 IS, Portions 0, 1, 2, 4, 5, 6 and 7 of the farm Dunbar 189 IS, Portions 6 and 7 of the farm Geluk 26 IS, Portion 0 of the farm Komati Power Station 56 IS and Portions 1, 3 and 9 of the farm Wilmanstrust 47 IS, Hendrina, Steve Tshwete Local Municipality:

Activity number	Activity Description	Extent to which Activity is Authorised Where activities authorised are in accordance with the Site Layout and Sensitivity Map dated 2023/04/28 for Option 2 for Site Alternative 2 & Figures 11.4 for Site Alternative 2, Figure 11.5 for Preferred pipeline alternative 2, and Figure 11.6 for Preferred powerline option 1 for Site 2 as included the EIAR dated 22 June 2023
GN R983 Activity 9(i)	The development of infrastructure exceeding 1000m in length for the bulk transportation of water or storm water with an internal diameter of 0.36m or more.	The development of a pipeline (Pipeline Alternative 2) exceeding 17km in length
GN R983 Activity 10(i)	The development and related operation of infrastructure exceeding 1000m in length for the bulk transportation of sewage, effluent, process water, return water, industrial discharge or slimes with an internal diameter of 0.36m or more.	with an internal diameter of 360mm for the transportation of feed water to the facility and for the crystalisation associated with the Reverse Osmosis plant.
GN R983 Activity 11(i)	The development of facilities or infrastructure for the transmission and distribution of electricity outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kV.	The development of a grid connection line of up to 132kV (Preferred power line option 1 for Site 2) of up to 3km at:  PL1-A - 26°12'19.20"S 29°33'41.35"E  PL1-B - 26°12'3.63"S 29°33'49.99"E  PL1-C - 26°11'35.49"S 29°33'21.66"E  PL1-D - 26°11'25.87"S; 29°33'29.33"E  PL1-E - 26°11'20.24"S; 29°33'21.94"E  PL1-F - 26°11'17.23"S; 39°33'25.04"E
GN R983 Activity 16	The development and related operation of facilities for the desalination of water with a design capacity to produce more than 100m <sup>3</sup> of treated water per day.	The development of a Reverse Osmosis infrastructure with a capacity to produce approximately 3182m³ purified or treated water per day to supply the electrolysis process with sufficient quality feed water,



GN R983 Activity 25	The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of more than 2000m³ but less than 15000m³.	and the development of an evaporator / crystallizer for the treatment of effluent.
GN R983 Activity 12 (ii)(a)(c)	The development of infrastructure or structures with a physical footprint of 100m² within a watercourse or if no development setback exists, within 32m of a watercourse measured from the edge of a watercourse.	The development of an access road, storm water control infrastructure, electrical cabling and water supply pipelines within 32m of a watercourse or across a watercourse.
GN R985 Activity 14	The development of infrastructure or structures with a physical footprint of $10m^2$ or more, within a watercourse of if no development setback has been adopted, within 32m of a watercourse, measured from the edge of a watercourse.	
GN R983 Activity 19	The infilling or depositing of any material of more than 10m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10m³ from a watercourse	The infilling and removal of soil into and from a watercourse for the purpose of developing pipelines and a road across a watercourse.
GN R983 Activity 24(ii)	The development of a road with a reserve wider than 13.5m or where no reserve exists where the road is wider than 8m.	The development of internal roads 5m to 8m wide, which will collectively be more than 1km in length, and the widening of an existing internal or access roads.
GN R983 Activity 56(ii)	The widening of a road by more than 6m, or the lengthening of a road by more than 1km where no reserve exists where the existing road is wider than 8m	
GN R985 Activity 4	The development of a road wider than 4m with a reserve less than 13.5m	
GN R983 Activity 48(i) (a)(c)	The expansion of infrastructure or structures where the physical footprint is expanded by 100m² or more within a watercourse or if no development setback exists, within 32m of a watercourse, measured from the edge of a watercourse	
GN R985 Activity 18	The widening of a road by more than 4m, or the lengthening of a road by more than 1km	
GN R983 Activity 27	The clearance of an area of 1ha or more, but less than 20ha of indigenous vegetation	The clearance of not more than 12ha of indigenous vegetation and the associated transformation of 30ha of agricultural land for the purpose of developing power lines, water pipelines, internal and access roads and associated infrastructure.
GN R985 Activity 12	The clearance of an area of 300m² or more of indigenous vegetation	
GN R983 Activity 28(ii)	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian	



	purposes or afforestation on or after 1 April 1998 and where such development will occur outside an urban area, where the total land to be developed is bigger than 1ha	
GN R984 Activity 4	The development and related operation of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500m <sup>3</sup> .	The development and related operation of a storage facility for:  Liquid Ammonia 2273m³  Hydrogen and Oxygen 59 566m³  Nitrogen 3983m³
GN R985 Activity 10(f)	The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80m <sup>3</sup> .	
GN R984 Activity 6	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent.	The development of the green hydrogen and ammonia facility that will produce up to 100 000 tons of Ammonia, Fluorine, Fluorine Compounds and Hydrogen Cyanide per annum which will require a license in terms of NEM:AQA
GN R984 Activity 7(ii)	The development and related operation of facilities or infrastructure for the bulk transportation of dangerous goods in liquid form, outside an industrial complex, using pipelines, exceeding 1000m in length, with a throughput capacity of more than 50m³ per day	The development and related operation pipelines exceeding 1000m in length for the daily transportation of 402m³ of liquid ammonia and 800m³ of liquid hydrogen.
GN R985 Activity 23(ii) (a)(c)	The expansion of infrastructure or structures where the physical footprint is expanded by 10m² or more where such expansion occurs with a watercourse; and if no development setback has been adopted, within 32m of a watercourse, measured from the edge of the watercourse.	The expansion of internal and access roads within National Protected Area Expansion Strategy Focus area.

1.2. The applicant appointed the following Environmental Assessment Practitioner (EAP) to undertake an environmental impact assessment process:

WSP Group Africa (Pty) Ltd 33 Sloane Street Bryanston 2191

Contact person: Mr. Thirushan Nadar

Tel: (011) 361 1381

Email: thirushan.nadar@wsp.com

2. Information considered in making the decision.

In reaching its decision, the Department took the following into consideration:



- a) The information contained in the application form submitted on 24 November 2022 and acknowledged on 02 December 2022.
- b) The information contained in the Scoping report and plan of study, which were submitted on 02 February 2023, acknowledged on 10 February 2023, and accepted on 14 March 2023.
- c) The information contained in the environmental impact assessment report and environmental management programme dated 22 June 2023, submitted on 23 June 2023 and acknowledged on 03 July 2023.
- d) The objective and requirements of relevant legislation, policies and guidelines, including Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Mpumalanga Biodiversity Sector Plan.

# 3. Key factors considered in making the decision.

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below:

- a) Bio-physical impacts
- b) Sustainability
- c) Need and desirability

## 4. Findings

After consideration of the information and factors listed above, the Department made the following findings:

- a) According to the environmental impact assessment report, the development proposal is considered to be environmentally, economically and socially sustainable.
- b) According to the environmental impact assessment report, adequate mitigation measures will be implemented to reduce potential impacts to acceptable levels.
- c) Mitigation measures and recommendations outlined in the environmental impact assessment report and environmental management programme are appropriate and practical for implementation, and it is anticipated that they will reduce the significance of potential impacts.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the proposed activities will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and that any potentially detrimental environmental impacts resulting from the proposed activities can be mitigated to acceptable levels. The application is accordingly granted.

