



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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NEAS Reference: DEA/EIA/0002351/2014

DEA Reference: 14/12/16/3/3/2/656

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Mr C.V. Gamede
Umgeni Water
P.O. Box 9
PIETERMARITZBURG
3200

Tel No: (031) 268 7172
E-mail: Phumi.Molefe@umgeni.co.za

PER FACSIMILE / MAIL

Dear Mr C.V. Gamede

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998: GN R. 543/544/545/546: CONSTRUCTION, OPERATION AND DECOMMISSIONING OF A 150ML/DAY SEA WATER REVERSE OSMOSIS PLANT AND ASSOCIATED INFRASTRUCTURE IN TONGAAT ON THE KWAZULU-NATAL NORTH COAST, WITHIN ETHEKWINI METROPOLITAN MUNICIPALITY, KWAZULU-NATAL PROVINCE

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

In terms of regulation 10(2) of the Environmental Impact Assessment Regulations, 2010 (the Regulations), you are instructed to notify all registered interested and affected parties, in writing and within 12 (twelve) days of the date of the EA, of the Department's decision in respect of your application as well as the provisions regarding the submission of appeals that are contained in the Regulations.

Should any person wish to lodge an appeal against this decision, he/she must submit the appeal to the appeal administrator, and a copy of the appeal to the applicant, any registered interested and affected party, and any organ of state with interest in the matter within 20 days from the date that the notification of the decision was sent to the registered interested and affected parties by the applicant; or the date that the notification of the decision was sent to the applicant by the Department, whichever is applicable.

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Appeals must be submitted in writing in the prescribed form to:

By email: appealsdirector@environment.gov.za

By hand: Environment House
473 Steve Biko,
Arcadia,
Pretoria, 0083; or

By post: Private Bag X447,
Pretoria, 0001;

Please note that in terms of section 43(7) of the National Environmental Management Act, 1998, the lodging of an appeal will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged, you may not commence with the activity until such time that the appeal is finalised.

To obtain the prescribed appeal form and for guidance on the submission of appeals, please visit the Department's website at https://www.environment.gov.za/documents/forms#legal_authorisations or request a copy of the documents at appealsdirector@environment.gov.za.

Yours sincerely



Mr Sabelo Malaza
Chief Director: Integrated Environmental Authorisations
Department of Environmental Affairs

Date: 06/11/2019

CC:	Ms A Walsdorff	CSIR	Tel: 021-888-2661	Email: awalsdorff@csir.co.za
	Ms Y Govender	KZN Economic Development, Tourism & Environmental Affairs	Tel: 031-302-2861	Email: yugeshnie.govender@kzndae.gov.za
	Dr D Roberts	eThekwin! Metropolitan Municipality	Tel: 031-311-7527	Email: RobertsD@durban.gov.za

APPEALS PROCEDURE IN TERMS OF CHAPTER 7 OF THE NEMA EIA REGULATIONS, 2010 (THE REGULATIONS) AS PER GN R. 543 OF 2010 TO BE FOLLOWED BY THE APPLICANT AND INTERESTED AND AFFECTED PARTIES UPON RECEIPT OF NOTIFICATION OF AN ENVIRONMENTAL AUTHORISATION (EA)

APPLICANT	INTERESTED AND AFFECTED PARTIES (IAPs)
1. Receive EA from the relevant Competent Authority (the Department of Environmental Affairs [DEA]).	1. Receive EA from Applicant/Consultant.
2. Within 12 days of date of the EA notify all IAPs of the EA and draw their attention to their right to appeal against the EA in terms of Chapter 7 of the Regulations.	2. N/A.
3. If you want to appeal against the EA, submit a notice of intention to appeal within 20 days of the date of the EA with the Minister of Water and Environmental Affairs (the Minister).	3. If you want to appeal against the EA, submit a notice of intention to appeal within 20 days of the date of the EA. with the Minister of Water and Environmental Affairs (the Minister).
4. After having submitted your notice of intention to appeal to the Minister, provide each registered IAP with a copy of the notice of intention to appeal within 10 days of lodging the notice.	4. After having submitted your notice of intention to appeal to the Minister, provide the applicant with a copy of the notice of intention to appeal within 10 days of lodging the notice.
5. The Applicant must also serve on each IAP: <ul style="list-style-type: none"> • a notice indicating where and for what period the appeal submission will be available for inspection. 	5. Appellant must also serve on the Applicant within 10 days of lodging the notice, <ul style="list-style-type: none"> • a notice indicating where and for what period the appeal submission will be available for inspection by the applicant.
6. The appeal must be submitted in writing to the Minister within 30 days after the lapsing of the period of 20 days provided for the lodging of the notice of intention to appeal.	6. The appeal must be submitted to the Minister within 30 days after the lapsing of the period of 20 days provided for the lodging of the notice of intention to appeal.
7. Any IAP who received a notice of intention to appeal may submit a responding statement to that appeal to the Minister within 30 days from the date that the appeal submission was lodged with the Minister.	7. An Applicant who received notice of intention to may submit a responding statement to the appeal to the Minister within 30 days from the date that the appeal submission was lodged with the Minister.

NOTES:

1. An appeal must be:-

- a) submitted in writing;
- b) accompanied by:
 - a statement setting out the grounds of appeal;
 - supporting documentation which is referred to in the appeal; and
 - a statement that the appellant has complied with regulation 62 (2) or (3) together with copies of the notices referred to in regulation 62.



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of regulation 36 of the Environmental Impact Assessment Regulations, 2010

Construction, operation and decommissioning of a 150Ml/day sea water reverse osmosis plant and associated infrastructure in Tongaat on the KwaZulu-Natal North Coast, within eThekweni Metropolitan Municipality, KwaZulu-Natal province

eThekweni Metropolitan Municipality

Authorisation register number:	<i>14/12/16/3/3/2/652</i>
NEAS reference number:	<i>DEA/EIA/0002351/2014</i>
Last amended:	<i>First issue</i>
Holder of authorisation:	<i>UMGENI WATER</i>
Location of activity:	<i>KWAZULU-NATAL PROVINCE: Within Ward 58, eThekweni Metropolitan Municipality,</i>

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.

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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 activities specified below.

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 EIA regulations.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

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, 2010 the Department hereby authorises –

UMGENI WATER

with the following contact details –

Mr. C.V. Gamede

Umgeni Water

P.O. Box 9

PIETERMARITZBURG

3200

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Cell: (083) 581 1904

E-mail: Phumi.Molefe@umgeni.co.za

to undertake the following activities (hereafter referred to as “the activity”) indicated in Listing Notices 1, 2 or 3 (GN R. 544, 545 & 546):

Listed activities	Activity/Project description
<p><u>GN R. 544 Item 9:</u></p> <p><i>The construction of facilities or infrastructure exceeding 1000 metres in length for the bulk transportation of water, sewage or storm water –</i></p> <p><i>(i) with an internal diameter of 0,36 metres or more; or</i></p> <p><i>(ii) with a peak throughput of 120 litres per second or more, excluding where:</i></p> <p><i>(a) such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or</i></p> <p><i>(b) where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.</i></p>	<p>Pipelines will be required to transport raw water abstracted from the sea to the proposed desalination plant, and potable water from the desalination plant to Umgeni Water's bulk water supply systems. These pipelines will cumulatively exceed 1 000m in length and will be designed with an internal diameter greater than 1.0 m. The rates of peak throughput may exceed 120 litres per second.</p>
<p><u>GN R. 544 Item 10:</u></p> <p><i>The construction of facilities or infrastructure for the transmission and distribution of electricity –</i></p> <p><i>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts.</i></p>	<p>Electrical infrastructure will be required to provide power to the 150 Ml/day desalination plant. The power supply for the project will have the following requirements:</p> <ul style="list-style-type: none"> • A 132kV transmission line from the nearest substation located outside the desalination plant boundary. • A 132kV to 11kV step-down substation. • 30 MVA bulk supply point at 11kV. • A 11 kV line from the sub-station to the pump station
<p><u>GN R 544 Item 11:</u></p> <p><i>The construction of:</i></p> <p><i>(vi) bulk storm water outlet structures;</i></p> <p><i>(x) buildings exceeding 50 square metres in size; or</i></p> <p><i>(xi) infrastructure or structures covering 50 square metres or more</i></p> <p><i>where such construction occurs within a watercourse or within</i></p>	<p>Pipeline and powerline infrastructure proposed as part of the desalination project will traverse watercourses in the region. The construction of new buildings and supporting infrastructure exceeding 100 m² will be required within 32 m of a watercourse (at the proposed desalination plant site). Bulk storm water systems and</p>

Listed activities	Activity/Project description
<p><i>32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</i></p>	<p>associated outlet structures at the desalination plant will be appropriately designed during the detailed design phase and may be located within 32 m of a watercourse. Further investigation into these aspects of the proposed development will form part of the detailed engineering design phase.</p> <p>The wetland offset activities will include the creation of berms, infiltration trenches within 32m of a watercourse.</p>
<p><u>GN R544 Item 13:</u></p> <p><i>The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 but not exceeding 500 cubic metres.</i></p>	<p>Pre- and post- water treatment chemicals will be required at the desalination plant. The capacity is not expected to exceed 80m³, however the exact volumes of dangerous goods to be used during operation of the desalination plant will be confirmed as part of the detailed engineering design phase and will be based on the results of the pilot plant investigations.</p>
<p><u>GN R 544 Item 14:</u></p> <p><i>The construction of structures in the coastal public property where the development footprint is bigger than 50 square metres, excluding</i></p> <p><i>(i) the construction of structures within existing ports or harbours that will not increase the development footprint or throughput capacity of the port or harbour;</i></p> <p><i>(ii) the construction of a port or harbour, in which case activity 24 of Notice 545 of 2010 applies;</i></p> <p><i>(iii) the construction of temporary structures within the beach zone where such structures will be demolished or disassembled after a period not exceeding 6 weeks.</i></p>	<p>The intake and discharge marine pipelines will transect the Coastal Public Property and will cover an area exceeding 50 m². Permanent structures (Sea water intake and brine discharge pipelines) required for the proposed project will be constructed on/along the sea bed. The pipelines will be tunnelled from the pump station through to a point behind the surf zone and then will be laid on the seabed up to the intake/diffuser.</p> <p>The wetland offset activities will occur in wetlands within the coastal public property.</p>
<p><u>GN R 544 Item 15:</u></p>	

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Listed activities	Activity/Project description
<p><i>The construction of facilities for the desalination of sea water with a design capacity to produce more than 100 cubic metres of treated water per day.</i></p>	<p>The project constitutes the development of a desalination plant with a design capacity of 150MI (or 150 000m³) of potable water per day when operating at full capacity.</p>
<p><u>GN R 544 Item 16:</u> <i>Construction or earth moving activities in the sea, an estuary, or within the littoral active zone or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater, in respect of –</i> <i>(vi) infrastructure covering 50 square metres or more-</i> <i>but excluding</i> <i>(a) if such construction or earth moving activities will occur behind a development setback line; or</i> <i>(b) where such construction or earth moving activities will occur within existing ports or harbours and the construction or earth moving activities will not increase the development footprint or throughput capacity of the port or harbour;</i> <i>(c) where such construction or earth moving activities is undertaken for purposes of maintenance of the facilities mentioned in (i)-(vi) above; or</i> <i>(d) where such construction or earth moving activities is related to the construction of a port or harbour, in which case activity 24 of Notice 545 of 2010 applies.</i></p>	<p>Construction and earth moving activities required for the proposed project will occur within the sea (marine intake and discharge pipelines and associated infrastructures) and within 100 m inland of the Mdloti estuary (e.g. potable water pipelines and powerline). Infrastructure associated with the proposed project will cover an area that exceeds 50 m². The offset activities will include the removal of sediment, creation of berms for the rehabilitation of wetlands within 100m of the high water mark.</p>
<p><u>GN R 544 Item 18:</u> <i>The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from:</i> <i>(i) a watercourse;</i> <i>(ii) the sea;</i> <i>(iv) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater –</i></p>	<p>Construction activities required for the proposed project (such as trench digging and pipe laying, construction of desalination plant site) would result in the infilling, depositing, dredging, excavation, removal or moving of more than 5m³ of material from the sea, watercourse, and within a distance of 100 m inland of the estuary. The offset activities will include the removal of sediment, creation of berms, landscaping of</p>

Listed activities	Activity/Project description
<p><i>but excluding where such infilling, depositing, dredging, excavation, removal or moving;</i></p> <p><i>(a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or</i></p> <p><i>(b) occurs behind the development setback line.</i></p>	<p>terrestrial areas and cultivated wetlands to create rehabilitated wetlands and buffer areas.</p>
<p><u>GN R 544 Item 22:</u></p> <p><i>The construction of a road, outside urban areas,</i></p> <p><i>(i) with a reserve wider than 13,5 meters or,</i></p> <p><i>(ii) where no reserve exists where the road is wider than 8 metres,</i></p>	<p>The proponent intends to use existing roads to access the proposed facility (pending approval from relevant authorities). However, if a new access road needs to be constructed, it may have a reserve wider than 13, 5 meters or may be wider than 8m and would be located outside of urban areas.</p> <p>The road design will be finalised during the detailed engineering design phase.</p>
<p><u>GN R 544 Item 23:</u></p> <p><i>The transformation of undeveloped, vacant or derelict land to –</i></p> <p><i>(ii) residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares; -</i></p> <p><i>except where such transformation takes place –</i></p> <p><i>(i) for linear activities; or</i></p> <p><i>(ii) for purposes of agriculture or afforestation, in which case Activity 16 of Notice No. R. 545 applies.</i></p>	<p>The desalination plant will cover an area of land approximately 7ha in extent and will be constructed on land which is largely undeveloped and has a current land use zoning of "Agriculture". Some portions of the land are currently used for sugar cane growing.</p> <p>The implementation of the project would therefore result in the transformation of more than 1ha of undeveloped agricultural land to industrial use, outside an urban area.</p>
<p><u>GN R 544 Item 24:</u></p> <p><i>The transformation of land bigger than 1000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule or thereafter such land was zoned open space, conservation or had an equivalent zoning.</i></p>	<p>The implementation of the project would result in the transformation of approximately 7ha of undeveloped agricultural land to industrial use. Components of the terrestrial pipelines will traverse land zoned as open space.</p>
<p><u>GN R 544 Item 47:</u></p>	

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Listed activities	Activity/Project description
<p><i>The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre –</i></p> <p><i>(i) where the existing reserve is wider than 13,5 meters; or</i></p> <p><i>(ii) where no reserve exists, where the existing road is wider than 8 metres –</i></p> <p><i>excluding widening or lengthening occurring inside urban areas.</i></p>	<p>The proponent intends to use existing roads to access the proposed facility (pending approval from relevant authorities). However, existing roads (such as the S Dune road between the circle and the proposed site) may be required to be widened by more than 6m.</p> <p>The details will be confirmed as part of the detailed engineering design phase.</p>
<p><u>GN R 545 Item 5:</u></p> <p><i>The construction of facilities or infrastructure for any process or activity which requires a permit or license in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent and which is not identified in Notice No. 544 of 2010 or included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case that Act will apply.</i></p>	<p>The operation of the desalination plant would require a Coastal Waters Discharge Permit in terms of the Integrated Coastal Management Act (No. 24 of 2008).</p>
<p><u>GN R 545 Item 14:</u></p> <p><i>The construction of an island, anchored platform or any other permanent structure on or along the sea bed excluding construction of facilities, infrastructure or structures for aquaculture purposes;</i></p>	<p>Permanent structures (Sea water intake and brine discharge pipelines) required for the proposed project will be constructed on/along the sea bed. The pipelines will be tunnelled from the pump station through to a point behind the surf zone and then will be laid on the seabed up to the intake/diffuser.</p>
<p><u>GN R 545 Item 24:</u></p> <p><i>Construction or earth moving activities in the sea, an estuary, or within the littoral active zone or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater, in respect of:</i></p> <p><i>(iii) inter- and sub-tidal structures for entrapment of sand;</i></p> <p><i>(viii) tunnels;</i></p> <p><i>(ix) underwater channels;</i></p> <p><i>but excluding –</i></p>	<p>Construction and earth moving activities will occur within the sea, and, in and within 100 metres of the estuary (tunnelling of the potable water pipeline, powerline). Depending on design and technical criteria of the desalination plant, structures such as inter- and sub-tidal structures for entrapment of sand and tunnels and/or underwater channels may be used in the construction and operation phase of the</p>

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Listed activities	Activity/Project description
<p>(a) activities listed in activity 16 in Notice 544 of 2010;</p> <p>(b) construction or earth moving activities if such construction or earth moving activities will occur behind a development setback line;</p> <p>(c) where such construction or earth moving activities will occur in existing ports or harbours where there will be no increase of the development footprint or throughput capacity of the port or harbour; or</p> <p>(d) where such construction or earth moving activities takes place for maintenance purposes.</p>	<p>proposed development. This will also be subject to further investigation and analysis in the detailed engineering design phase.</p> <p>Permanent structures (Sea water intake and brine discharge pipelines) required for the proposed project will be constructed on/along the sea bed. The pipelines will be tunnelled from the pump station through to a point behind the surf zone and then will be laid on the seabed up to the intake/diffuser.</p> <p>The offset activities will include the removal of sediment, creation of berms, landscaping of terrestrial areas and cultivated wetlands to create rehabilitated wetlands and buffer areas, within 100m from the high water mark.</p>
<p><u>GN R 546 Item 2:</u></p> <p>The construction of reservoirs for bulk water supply with a capacity of more than 250 cubic metres.</p> <p>(a) In KwaZulu-Natal Province:</p> <p>iii. Outside urban areas, in:</p> <p>(dd) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(gg) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined.</p>	<p>Two 37.5Ml freshwater holding reservoirs and a 6Ml reservoir for screened water will be required for the proposed project and will be located at the desalination plant site. These reservoirs will be constructed within an area which has been identified as CBA1 by the EKZNW Terrestrial Systematic Conservation Plan and within 1km of the high water mark.</p>
<p><u>GN R 546 Item 4:</u></p> <p>The construction of a road wider than 4 metres with a reserve less than 13,5 metres.</p> <p>(a) In KwaZulu-Natal:</p> <p>ii. Outside urban areas, in:</p> <p>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(hh) Areas seawards of the development setback line or within</p>	<p>The proponent intends to use existing roads to access the proposed facility (pending approval from relevant authorities). The proposed project may therefore require the construction of an access road to the proposed desalination plant. If required, this road would be located outside urban areas within an area which has been identified as CBA1 by the EKZNW</p>

Listed activities	Activity/Project description
<p><i>1 kilometre from the high-water mark of the sea if no such development setback line is determined.</i></p>	<p>Terrestrial Systematic Conservation Plan and within 1km of the high water mark.</p> <p>The details will be confirmed as part of the detailed engineering design phase.</p>
<p><u>GN R 546 Item 10:</u></p> <p><i>The construction 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 80 cubic metres.</i></p> <p><i>(a) In KwaZulu-Natal;</i></p> <p><i>i. In an estuary;</i></p> <p><i>ii. Outside urban areas, in:</i></p> <p><i>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</i></p> <p><i>(hh) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined;</i></p> <p><i>(ii) Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined;</i></p>	<p>The project will require that chemicals such as coagulants, acids, bases, antiscalants and biocides be stored on-site for the pre-treatment/conditioning of the source water, cleaning of the reverse osmosis membrane filters and conditioning of the potable water. It is expected that the combined capacity of these chemicals storage will exceed 30m³.</p> <p>The exact volumes will be confirmed as part of the detailed engineering design phase and will be based on the results of the pilot plant investigations.</p> <p>Construction of such storage facilities will occur in an area which has been identified as CBA1 by the EKZNW Terrestrial Systematic Conservation Plan and in areas within 1km from the high water mark of the sea and within 100m of a watercourse.</p>
<p><u>GN R 546 Item 12:</u></p> <p><i>The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.</i></p> <p><i>(a) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</i></p> <p><i>(b) Within critical biodiversity areas identified in bioregional plans;</i></p> <p><i>(c) Within the littoral active zone or 100 metres inland from</i></p>	<p>The proposed desalination plant and supporting infrastructure would require an area greater than 300m² to be cleared of vegetation, in an area identified as critically endangered by NEMBA (threatened ecosystem – Northern coastal grassland KZN16 and Interior North coast grassland KZN6) and as CBA by the EKZNW Terrestrial Systematic Conservation Plan. Given the fact that the desalination plant and associated infrastructure is to be primarily situated on land which is utilised for agricultural</p>

Listed activities	Activity/Project description
<p><i>high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas.</i></p>	<p>practices, it is not anticipated that 75% of the vegetation to be cleared would constitute indigenous vegetation. This will however need to be ground truthed.</p> <p>However, should 75% of the cleared vegetation constitute indigenous vegetation, this may also occur within 100m of the Mdloti estuary. Portions of the proposed potable water pipeline and powerline would traverse areas identified as DMOSS.</p> <p>The offset activities will require some excavation of areas vegetated by <i>Phragmites australis</i> reeds but not extensive. However, possibly more than 300m².</p>
<p>GN R.546 Item 13 (a) (c) [(i) (ii) [(gg)]]:</p> <p>The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, (a) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans (c) in the KwaZulu-Natal province, (i) in an estuary (ii) outside urban areas in:</p> <p style="margin-left: 40px;">(i) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined.</p> <p>Not applicable in Listing Notice 3 of the 2014 EIA Regulations.</p>	<p>Listed activity not applicable as per Section 53 (2) of the Transitional Arrangements of the 2014.</p>
<p>GN R.546 Item 14 (a) (i):</p> <p>The clearance of an area of 5 hectares or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation in all areas outside urban areas in the KwaZulu-Natal province.</p> <p>Not applicable in Listing Notice 3 of the 2014 EIA Regulations.</p>	<p>Listed activity not applicable as per Section 53 (2) of the Transitional Arrangements of the 2014.</p>

Listed activities	Activity/Project description
<p><u>GN R 546 Item 16:</u></p> <p><i>The construction of:</i></p> <p><i>(iii) buildings with a footprint exceeding 10 square metres in size; or</i></p> <p><i>(iv) infrastructure covering 10 square metres or more</i></p> <p><i>where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</i></p> <p><i>(a) In KwaZulu-Natal:</i></p> <p><i>i. In an estuary;</i></p> <p><i>ii. Outside urban areas, in;</i></p> <p><i>(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</i></p> <p><i>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</i></p> <p><i>(ii) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined.</i></p>	<p>The construction of new buildings and supporting infrastructure exceeding 10m² will be required within 32m of a watercourse. The potable water pipeline towards Waterloo reservoir is proposed to be tunnelled under the Mdloti estuary. Bulk storm water systems and associated outlet structures at the proposed desalination plant site will be appropriately designed during the detailed design phase and may be located within 32m of a watercourse (wetlands within the development footprint). Further investigation into these aspects of the proposed development will form part of the detailed engineering design phase.</p> <p>Such construction will also occur outside urban areas in areas which have been identified as CBA by the EKZNW Terrestrial Systematic Conservation Plan and within 1 km of the high water mark (Pipelines and proposed desalination plant). Portions of the proposed potable water pipeline and powerline would traverse areas identified as DMOSS.</p> <p>The offset activities will include the removal of sediment, creation of berms and landscaping of terrestrial areas and cultivated wetlands to create rehabilitated wetlands and buffer areas, within 1km of the high water mark, within 32m of a watercourse and potentially within CBAs.</p>
<p><u>GN R 546 Item 19:</u></p> <p><i>The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.</i></p> <p><i>(a) In KwaZulu-Natal:</i></p> <p><i>ii. Outside urban areas, in;</i></p> <p><i>(ee) Critical biodiversity areas as identified in systematic</i></p>	<p>The proponent intends to use existing roads to access the proposed facility (pending approval from relevant authorities). However, existing roads may be required to be widened by more than 4m.</p>

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Listed activities	Activity/Project description
<p><i>biodiversity plans adopted by the competent authority or in bioregional plans;</i></p> <p><i>(hh) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined;</i></p> <p><i>(ii) Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined.</i></p>	<p>The details will be confirmed as part of the detailed engineering design phase. The proposed project may require the construction of an access road to the proposed desalination plant. If required, this road would be located outside urban areas within an area which has been identified as CBA by the EKZNW Terrestrial Systematic Conservation Plan, within 1km of the high water mark of the sea and within 100m from a watercourse (presence of a number of wetlands on site).</p> <p>The details will be confirmed as part of the detailed engineering design phase.</p>

The above mentioned activities are now currently listed as follows in the 2014 EIA Regulations, as amended:

Listed activities
<p><u>GN R983 Item 9]:</u></p> <p><i>The development of infrastructure exceeding 1000 metres in length for the bulk transportation of water or storm water –</i></p> <ul style="list-style-type: none"> • <i>with an internal diameter of 0,36 metres or more; or</i> • <i>with a peak throughput of 120 litres per second or more;</i> <p><i>excluding where-</i></p> <p><i>(a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve; or</i></p> <p><i>(b) where such development will occur within an urban area.</i></p>
<p><u>GN R983 Item 11 (i):</u></p> <p><i>The development of facilities or infrastructure for the transmission and distribution of electricity –</i></p> <p><i>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts.</i></p>
<p><u>GN R983 Item 12:</u></p> <p><i>The development of-</i></p> <p><i>(vi) bulk storm water outlet structures exceeding 100 square metres in size;</i></p>

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(x) buildings exceeding 100 square metres in size;

(xii) infrastructure or structures with a physical footprint of 100 square metres or more;

where such development occurs –

(a) within a watercourse;

(b) in front of a development setback; or

(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; -

excluding-

(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;

(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;

(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;

(dd) where such development occurs within an urban area; or

(ee) where such development occurs within existing roads or road reserves.

GN R983 Item 14:

The development of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.

GN R983 Item 15:

The development of structures in the coastal public property where the development footprint is bigger than 50 square metres, excluding –

- the development of structures within existing ports or harbours that will not increase the development footprint of the port or harbour;
- the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;
- the development of temporary structures within the beach zone where such structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared; or
- activities listed in activity 14 in Listing Notice 2 of 2014, in which case that activity applies.

GN R983 Item 16:

The development and related operation of facilities for the desalination of water with a design capacity to produce more than 100 cubic metres of treated water per day.

GN R983 Item 17):

Development-

(i) in the sea;

(ii) in an estuary;

(v) if no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater;

in respect of-

(f) infrastructure with a development footprint of 50 square metres or more –

but excluding-

(aa) the development of infrastructure and structures within existing ports or harbours that will not increase the development footprint of the port or harbour;

(bb) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;

(cc) the development of temporary infrastructure or structures where such structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared; or

(dd) where such development occurs within an urban area.

GN R983 Item 19):

The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from –

(i) a watercourse; or

(iii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater but excluding where such infilling, depositing, dredging, excavation, removal or moving-

(a) will occur behind a development setback;

(b) is for maintenance purposes undertaken in accordance with a maintenance management plan; or (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.

GN R983 Item 24 :

The development of-

(ii) a road with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;

but excluding-

(a) roads which are identified and included in activity 27 in Listing Notice 2 of 2014; or

(b) roads where the entire road falls within an urban area.

GN R983 Item 28:

Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for

agriculture or afforestation on or after 01 April 1998 and where such development:

(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;

excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.

GN R983 Item 56):

The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre –

i. where the existing reserve is wider than 13,5 meters; or

ii. where no reserve exists, where the existing road is wider than 8 metres; excluding where widening or lengthening occur inside urban areas.

GN R984 Item 6:

The development of facilities or infrastructure for any process or activity which requires a permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding

(i) activities which are identified and included in Listing Notice 1 of 2014;

*(ii) activities which are included in the list of waste management activities published in terms of **section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)** in which case the National Environmental Management: Waste Act, 2008 applies; or*

(iii) the development of facilities or infrastructure for the treatment of effluent, wastewater or sewage where such facilities have a daily throughput capacity of 2000 cubic metres or less.

GN R984 Item 14:

The development and related operation of-

(i) an island;

(ii) anchored platform; or

(iii) any other structure or infrastructure on, below or along the sea bed;

excluding –

(a) development of facilities, infrastructure or structures for aquaculture purposes; or

(b) the development of temporary structures or infrastructure where such structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.

GN R984 Item 26:

Development—

(i) in the sea;

(ii) in an estuary;

(iii) within the littoral active zone;

(v) if no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or

an estuary, whichever is the greater;

in respect of –

(c) inter- and sub-tidal structures for entrapment of sand;

(g) tunnels; or

(h) underwater channels;

but excluding the development of structures within existing ports or harbours that will not increase the development footprint of the port or harbour.

GN R985 Item 2:

The development of reservoirs for bulk water supply with a capacity of more than 250 cubic metres. in:

(d) In KwaZulu-Natal:

viii. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;

xii. Outside urban areas:

(bb) Areas seawards of the development setback line or within 1 km from the high water mark of the sea if no such development setback line is determined.

GN R985 Item 4:

The development of a road wider than 4 metres with a reserve less than 13,5 metres.

(d) In KwaZulu-Natal:

viii. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;

xii. Outside urban areas:

(bb) Areas seawards of the development setback line or within 1 km from the high water mark of the sea if no such development setback line is determined.

GN R985 Item 10:

The development 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 80 cubic metres.

d) In KwaZulu-Natal:

ix. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;

xiii. Outside urban areas:

(bb) Areas seawards of the development setback line or within 1 km from the high water mark of the sea if no such development setback line is determined.

(cc) Areas within 100 metres from the edge of a watercourse.

GN R 985 Item 12:

The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.

b) In KwaZulu-Natal:

- iv. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;*
- v. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;*
- vi. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;*
- vii. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning;*
- xi. Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose;*
- xiii. In an estuarine functional zone.*

GN R 985 Item 14:

The development of –

- (vi) bulk storm water outlet structures exceeding 10 square metres in size;*
- (x) buildings exceeding 10 square metres in size;*
- (xii) infrastructure or structures with a physical footprint of 10 square metres or more;*

where such development occurs

- (a) within a watercourse;*
- (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.*

(d) In KwaZulu-Natal:

- (i). In an estuarine functional zone;*
- (vii). Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;*
- (viii) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the act and as adopted by the competent authority*

(x). Outside urban areas:

(bb) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined.

GN R 984 Item 18:

The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.

(d) In KwaZulu-Natal:

vii. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;

ix. Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose;

xii. Outside urban areas:

(aa) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined.

(bb) within 100m of a watercourse

as described in the amended Environmental Impact Assessment Report (EIR) dated June 2018 at:

Preferred Desalination Plant Site:

Preferred Alternative	Latitude	Longitude
First Corner Point	29°37'30.24"S	31°08'44.33"E
Second Corner Point	29°37'35.48"S	31°08'40.55"E
Third Corner Point	29°37'33.00"S	31°08'36.54"E
Fourth Corner Point	29°37'29.25"S	31°08'39.65"E
Fifth Corner Point	29°37'26.27"S	31°08'41.35"E
Sixth Corner Point	29°37'22.92"S	31°08'42.05"E
Seventh Corner Point	29°37'20.41"S	31°08'43.65"E
Eighth Corner Point	29°37'19.63"S	31°08'47.22"E
Ninth Corner Point	29°37'23.42"S	31°08'50.75"E

Preferred Pipeline Route for the sea water intake and brine discharge pipes:

Preferred Pipeline Route Alternative	Latitude	Longitude
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Start of Brine Discharge Tunnel	29°37'23.78"S	31°08'50.43"E
Mid-Point of Brine Discharge Tunnel	29°37'24.95"S	31°08'56.87"E
End of Brine Discharge Tunnel	29°37'27.60"S	31°09'11.52"E
Start of Sea Water Intake Tunnel	29°37'41.91"S	31°09'16.54"E
Mid-Point of Sea Water Intake Tunnel	29°37'31.06"S	31°08'59.84"E
End of Sea Water Intake Tunnel	29°37'24.49"S	31°08'49.74"E

Preferred Route for the 132kV Powerline (from Desalination Plant to Mount Moreland):

Preferred Powerline Route Alternative	Latitude	Longitude
Start Point 1a	29°37'19.037"S	31°8'44.827"E
Start Point 1b	29°37'21.726"S	31°8'42.737"E
Middle Point 2a	29°38'16.495"S	31°7'0.165"E
Middle Point 2b	29°38'18.699"S	31°7'2.890"E
End Point 3a	29°39'57.799"S	31°5'24.947"E
End Point 3b	29°39'59.433"S	31°5'28.154"E

Preferred Route for the Potable Water Pipeline:

Preferred Potable Water Route Alternative	Latitude	Longitude
Desalination Plant to La Mercy		
Start Point 1a	29°37'23.8033"S	30°51'18.1568"E
Start Point 1b	29°37'23.0085"S	30°51'17.9665"E
Middle Point 2a	29°36'59.9184"S	30°51'42.5844"E
Middle Point 2b	29°37'00.37"S	30°51'41.80"E
End Point 3a	29°36'40.22"S	30°51'28.45"E
End Point 3b	29°36'40.40"S	30°51'27.52"E
La Mercy Reservoir to Bifurcation Offtake		
Start Point 1a	29°36'27.65"S	31°8'29.89"E
Start Point 1b	29°36'28.86"S	31°8'31.19"E
Middle Point 2a	29°35'51.40"S	31°8'34.43"E
Middle Point 2b	29°35'51.21"S	31°8'36.31"E
End Point 3a	29°35'10.66"S	31°8'21.72"E
End Point 3b	29°35'10.59"S	31°8'24.08"E
La Mercy Reservoir to Waterloo Reservoir		
Start Point 1a	29°36'27.65"S	31°8'29.89"E

Start Point 1b	29°36'28.86"S	31°8'31.19"E
Middle Point 2a	29°38'21.01"S	31°6'53.62"E
Middle Point 2b	29°38'22.13"S	31°6'54.97"E
End Point 3a	29°39'51.05"S	31°4'13.79"E
End Point 3b	29°39'52.49"S	31°4'14.63"E
Bifurcation Offtake to Aroondale Reservoir		
Start Point 1a	29°35'10.66"S	31°8'21.72"E
Start Point 1b	29°35'10.59"S	31°8'24.08"E
Middle Point 2a	29°33'35.09"S	31°9'49.19"E
Middle Point 2b	29°33'36.15"S	31°9'50.61"E
End Point 3a	29°31'43.35"S	31°12'13.80"E
End Point 3b	29°31'44.91"S	31°12'14.30"E

for the 150ML/day sea water reverse osmosis plant and associated infrastructure in Tongaat on the North Coast of KwaZulu-Natal, within Ward 58 of the eThekweni Metropolitan Municipality in the KwaZulu-Natal Province, hereafter referred to as "the property".

The infrastructure associated with this facility includes:

Linear infrastructure:

- Seawater (source water) intake with screens, sea-bed pipeline laid on the ocean floor connecting vertically into an offshore tunnel which connects to the seawater pump station located a short distance inland;
- Brine outfall constructed from the seawater pump station by means of an off-shore tunnel connecting vertically to a diffuser pipeline structure on the sea bed;
- Terrestrial pipelines comprising a very short seawater pipeline between the seawater pump station (located at the desalination plant) and the desalination plant itself, a very short brine pipeline from the plant back to the seawater pump station and treated water pipelines and a pump station connecting to the existing North Coast System via the La Mercy Reservoir; and
- Electrical power line and transformer yard infrastructure.

On-site infrastructure:

- A seawater pump station located within the desalination plant operational site;

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- Pre-treatment facilities including flocculation, potentially Dissolved Air Flotation (DAF), Filtration and pre-treatment membrane filtration (Ultrafiltration);
- SWRO system (with energy recovery equipment) including cartridge filtration and reverse osmosis membranes;
- Pre-treatment and RO buildings and other smaller water treatment related infrastructure;
- The extension and/or upgrading of existing access roads;
- The development of internal access roads;
- All chemical infrastructure for conditioning of the pre and post-filtered water;
- Pump stations and booster pumps for freshwater and brine as required along the proposed terrestrial pipeline routes;
- Two freshwater holding reservoirs each of 37.5MI;
- Domestic sewerage treatment facility;
- Stormwater handling facility;
- Primary electricity building to be connected to 132/11kV substation;
- Desalination plant waste streams handling and treatment facilities;
- Solid wastes (*i.e.* screenings) handling and storage facilities; and
- A total operational site of approximately 70 000m² (7ha) including all on-site infrastructure enclosed by a 3m high security fence.

Conditions of this Environmental Authorisation

Scope of authorisation

1. The preferred Site Alternative for the Desalination Plant, the Pipeline Route for the sea water intake and brine discharge pipes, the potable water Pipeline Route Alternative 1, and the 132kV Powerline Route Alternative 2 for the construction and operation of the 150ML/day sea water reverse osmosis plant and associated infrastructure in Tongaat on the North Coast of KwaZulu-Natal, within the eThekweni Metropolitan Municipality in the KwaZulu-Natal Province are approved as per the geographic coordinates cited in the tables above.
2. 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. The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.
4. The activities authorised may only be carried out at the property as described above.
5. Any changes to, or deviations from, the project description set out in this authorisation must be approved, in writing, 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.
6. This activity must commence within a period of five (05) years from the date of issue of this authorisation. 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.
7. Commencement with one activity listed in terms of this authorisation constitutes commencement of all authorised activities.
8. The holder of an environmental authorisation must apply for an amendment of environmental authorisation with the competent authority for any alienation, transfer or change of ownership rights in the property on which the activity is to take place.

Notification of authorisation and right to appeal

9. The holder of the authorisation must notify every registered interested and affected party, in writing and within 12 (twelve) calendar days of the date of this environmental authorisation, of the decision to authorise the activity.
10. The notification referred to must –
 - 10.1. specify the date on which the authorisation was issued;
 - 10.2. inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Environmental Impact Assessment Regulations, 2010;
 - 10.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
 - 10.4. give the reasons of the competent authority for the decision.
11. The holder of the authorisation must publish a notice –
 - 11.1. informing interested and affected parties of the decision;
 - 11.2. informing interested and affected parties where the decision can be accessed; and
 - 11.3. drawing the attention of interested and affected parties to the fact that an appeal may be lodged against this decision in the newspaper(s) contemplated and used in terms of regulation 54(2)(c) and (d) and which newspaper was used for the placing of advertisements as part of the public participation process.

Management of the activity

12. The Environmental Management Programme (EMPr) submitted as part of the Application for EA is not approved and must be amended and submitted to the Department for written approval prior to commencement of the activity. Once approved, the EMPr must be implemented and adhered to. The approved EMPr must be included in all contract documentation for all phases of the development. The EMPr must be amended to include:
 - 12.1. All recommendations and mitigation measures recorded in the amended EIR and the specialist reports as included in the final amended EIR June 2018; and
 - 12.2. A final development layout plan (with micro-siting of the sea water intake and brine discharge pipeline route, micro-siting of the 132kV powerline route and micro-siting of the

potable water pipeline route), and all mitigation measures as dictated by the final development layout plan.

13. The final development layout plan to be included in the EMPr must indicate the following:
 - 13.1. The final positions of the sea water intake and brine discharge pipeline, the 132kv powerline, and the potable water pipeline within the approved corridors;
 - 13.2. The specific position of the Sea Water Reverse Osmosis Plant and associated infrastructure as listed in pages 18, 19 and 20 of this EA;
 - 13.3. All existing infrastructure associated with the development particularly along the sea water intake and brine discharge pipeline route, the potable water pipeline route, and the 132kv powerline route;
 - 13.4. All sensitive features e.g. estuary, dunes, wetlands, and drainage channels that will be affected by the desalination plant and the sea water intake and brine discharge pipeline route, the potable water pipeline route, and the 132kv powerline route; and
 - 13.5. All "no-go" and buffer areas.

Monitoring

14. The applicant must appoint a suitably experienced Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this authorisation are implemented and to ensure compliance with the provisions of the EMPr.
 - 14.1. The ECO shall be appointed before commencement of any authorised activities.
 - 14.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department at Directorcompliance@environment.gov.za.
 - 14.3. The ECO shall keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
 - 14.4. The ECO shall remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.
 - 14.5. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

Recording and reporting to the Department

15. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this authorisation, must be submitted to the *Director: Compliance Monitoring* of the Department at Directorcompliance@environment.gov.za.
16. The holder of the authorisation must submit an environmental audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and within 30 days of completion of rehabilitation activities.
17. 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 environmental authorisation conditions as well as the requirements of the EMPr.
18. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

Commencement of the activity

19. The authorised activity shall not commence within twenty (20) days of the date of signature of the authorisation.
20. In terms of section 43(7), an appeal under section 43 of the National Environmental Management Act, 1998 will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged you may not commence with the activity until such time that the appeal has been finalised.

Notification to authorities

21. A written notification of commencement must be given to the Department no later than fourteen (14) days prior to the commencement of the activity. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number. This notification period may coincide with the notice of intent to appeal period.

Operation of the activity

22. A written notification of operation must be given to the Department no later than fourteen (14) days prior to the commencement of the activity operational phase.

Site closure and decommissioning

23. Should the activity ever cease or become redundant, the applicant shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.

Specific conditions

24. A qualified estuarine or wetland specialist or ecologist must be commissioned to perform a final walk through of the pipeline route for the sea water intake and brine discharge pipes, for the 132kV powerline route, and the potable water pipeline route to identify all sensitive features including the estuary, wetlands, drainage lines and all other watercourses, and dune forests that may be affected by the construction of the pipeline. This must inform the determination of the final position of the sea water intake and brine discharge pipelines, the 132kV powerline, and the potable water pipeline within the assessed corridors, as well as the final development layout plan that is to be submitted to the Department for approval as per conditions 12 and 13 above.
25. As per the findings of the Maritime Archaeology study undertaken to assess the impact of the authorised activity on Maritime Underwater Cultural Heritage (MUCH), a magnetometer survey must be conducted before commencement of construction activities and the findings thereof must be included in the final EMP to be submitted to this department for review and approval.
26. No activities, which require a water use authorisation, must be allowed to encroach into a water resource without a water use authorisation being in place from the Department of Water Affairs.
27. Where necessary, sand traps and geotextile blankets must be used to prevent sediment entry to estuary waters. This must be done in consultation with an estuarine or wetland specialist or ecologist.
28. Subsurface and surface drainage from the north eastern and south western portions of the desalination plant site must be dissipated into the wetlands downstream of South Dune Road

- and/or the M4 via a series of specifically designed dissipation trenches constructed and maintained along the upstream (*i.e.* road) edge of each wetland portion so as to allow the broad dissipation of flow into the wetland, and encourage wetland function in these areas.
29. An ecological corridor, vegetated with locally indigenous vegetation, must be established along the north eastern boundary of the site, in a band of width 20m minimum, extending to the undeveloped land on the upslope side of the property – the purpose of this would be to maintain a level of ecological connectivity between the lower wetland areas and the upland portions of the catchment, notwithstanding the acknowledged high level of fragmentation that is already associated with the impact of roads. If security fencing is used to secure the site, then this corridor should be outside of the fenced area.
30. Conditions 28 and 29 above must be included in the design of the desalination plant.
31. Where crossing of the proposed potable water pipeline through wetlands (seeps of depressional wetlands, channelled valley bottom wetland) is unavoidable, the following mitigation measures must be implemented:
- 31.1. The disturbance zone in these areas should be kept to a minimum – ideally, no greater than 15m including stockpile areas;
 - 31.2. Prior to construction, channel banks should be cleared of invasive alien vegetation in a corridor of width at least 30m across the channel, using methods appropriate to a location on a watercourse;
 - 31.3. The pipeline once covered should not result in the protrusion above the natural ground or channel level;
 - 31.4. Where the channel being crossed is considered significantly incised as a result of head cut erosion, consideration should be given to the inclusion of a low gabion weir structure across the channel at the point of crossing, to flatten an artificially steepened channel gradient;
 - 31.5. Disturbed channel banks should be reshaped, with side slopes no steeper than 1:4, and tying in with the banks on either side;
 - 31.6. All disturbed banks should be planted with appropriate locally indigenous vegetation, sufficient to ensure bank stability;
 - 31.7. Construction of the pipeline should take place in the dry season, when damage to wetland areas as a result of churning up of muddy areas is least likely;
 - 31.8. Dewatering of water accumulating in the pipeline trenches should be designed to allow collection of sediment and control of runoff velocities, ideally promoting diffuse infiltration of dewatered liquids, rather than channelled flow into watercourses.
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32. Visual observation must be undertaken prior to blasting to ensure there are no marine mammals and turtles present in the immediate vicinity (approximately 2-km radius). Blasting must only commence once the species have moved out of the impact zone.
33. A landscape architect must be consulted about the best way to screen the desalination plant from public views. The design of the plant must incorporate screening of industrial type structures from public views.
34. Ablution facilities must be placed outside of the 1:100 year floodline of a watercourse.
35. Search and rescue of indigenous species must be undertaken and, where possible, these species must be relocated to a suitable nursery or relocated to an alternate location within the site or used for rehabilitation at the offset location, in consultation with conservation authorities and relevant specialists.
36. Following the installation of the proposed pipelines/powerline, re-vegetate the surface with a fast growing coastal grass such as *S. secundatum*.
37. No exotic plants may be used for rehabilitation purposes. Only indigenous plants occurring within a ten (10) kilometre radius of the development site must be utilised.
38. Vegetation clearing must be kept to an absolute minimum. Mitigation measures must be implemented to reduce the risk of erosion and the invasion of alien species.
39. Construction must include design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.
40. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate.
41. Any solid waste, which will not be recycled, must be disposed of at a landfill licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act No.59 of 2008). No waste material may be left on site after construction.
42. If any evidence of archaeological sites or remains (e.g., remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials, fossils or other categories of heritage resources are found during construction, Amafa/Heritage KwaZulu-Natal must be alerted immediately, and a professional archaeologist or palaeontologist, must be contacted as soon as possible to inspect the findings.

Wetland Offset Management Plan

43. The Wetland Offset Management Plan as proposed by the Aquatic Specialist and included in the Aquatic Specialist Study must be finalised into a final Wetland Offset Management Plan. The finalised plan must be submitted to the Department for record keeping. The finalisation and submission of the final offset plan to the Department must be done prior to commencement of construction activities, including site clearing.
44. The Wetland Offset Management Plan must include a signed written Memorandum of Understanding (MoU) that outlines conditions that must be agreed upon by all parties involved. These conditions, as included in the proposed Wetland Offset Management Plan, must be included in the required Memorandum of Understanding. The MoU must be included in the final Wetland Offset Management Plan to be submitted to the Department. The MoU terms must be agreed upon by the following parties:
- Umgeni Water (EA Holder);
 - Landowner/s;
 - eThekweni Metropolitan Municipality; and
 - Ezemvelo KZN Wildlife.
45. The conditions must include but not limited to the following:
- Signed documents (Umgeni Water and landowners) indicating Intention to Purchase the required erven in which the offset wetlands and their buffers would be located;
 - Rehabilitation time frames:
 - A maximum period of three years including planning is considered adequate to allow for the initial rehabilitation activities – this time line would need to commence prior to the start of construction activities on the site, with design and construction of the infiltration trenches being required as part of development planning and construction;
 - The wetland offsets and their buffers must demonstrably reach their required condition (RES Category C or better) within a time frame of 7 years after completion of construction;
 - The wetland offsets must be maintained in their required condition throughout the operational phase of the development - in the (likely) event that decommissioning of the plant does not result in the rehabilitation of wetlands on the site to a PES Category C, then the burden of offset management should be ceded to the next developer of the erf;
 - The offset wetlands must be secured into the future through their permanent declaration as Nature Reserves or areas of similar effective conservation status;

- Details of financial arrangements to allow for the initial purchase, rehabilitation and long term management of the site must be provided;
- Details of arrangements for ensuring the independent monitoring / auditing of the outcomes of the offset plan must be outlined;
- The applicant must indicate a clear understanding that the implications of failure to achieve the required level of offset (i.e. the gains in ecosystem conservation targets) would require additional offset activities to be pursued in the future.

General

46. A copy of this authorisation and the approved EMPr must be kept at the property where the activity/ will be undertaken. The authorisation and approved EMPr 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.
47. The holder of the authorisation must notify both the *Director: IEA; National Infrastructure Development* and the *Director: Compliance Monitoring* of the Department at Directorcompliance@environment.gov.za, in writing and within 48 (forty eight) hours, if any condition of this authorisation cannot be or is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.
48. 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.

Date of environmental authorisation: 06/11/2019


Mr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations

Department of Environmental Affairs

Annexure 1: Reasons for Decision

1. Information considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The information contained in the amended EIR dated June 2018;
- b) The comments received from the Department of Agriculture, Forestry & Fisheries, eThekweni Metropolitan Municipality, SANRAL, KZN Coastwatch, and interested and affected parties as included in the amended EIR dated June 2018;
- c) Mitigation measures as proposed in the amended EIR dated June 2018 and the EMPr;
- d) The information contained in the specialist studies contained within Chapters 6-13 of the amended EIR;
- e) Findings of the site visit conducted on 14 July 2016; and
- f) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act 107 of 1998).

2. 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) The findings of all the specialist studies conducted and their recommended mitigation measures.
- b) The proposed Umgeni Water desalination plant will aim to ensure the promotion of sustainable economic development by serving the interests of a growing population as well as other commercial interests in the region. It is recognised that the future of the North Coast region of KZN is greatly dependent on an alternative water source to augment water supply of which desalination is one option.
- c) The amended EIR dated June 2018 identified all legislation and guidelines that have been considered in the preparation of the amended EIR dated June 2018.
- d) The methodology used in assessing the potential impacts identified in the amended EIR dated June 2018 and the specialist studies have been adequately indicated.

- e) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2010 for public involvement.

3. Findings

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

- a) The identification and assessment of impacts are detailed in the amended EIR dated June 2018 and sufficient assessment of the key identified issues and impacts have been completed.
- b) The procedure followed for impact assessment is adequate for the decision-making process.
- c) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- d) The information contained in the amended EIR dated June 2018 is accurate and credible.
- e) EMPr measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the amended EIR and will be implemented to manage the identified environmental impacts during the construction process.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the authorised activity will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the proposed activity can be mitigated to acceptable levels. The environmental authorisation is accordingly granted.