



REFERENCE NO: 14/3/1/A1/18/0724/26

The Municipal Manager
City of Cape Town Environmental Management
Department Biodiversity Management Branch
Civic Centre, Hertzog Boulevard
CAPE TOWN
8000

Attention: Ms. Julia Wood / Ms. Chandre Rhoda

E-mail: Julia.Wood@capetown.gov.za
Chandre.Rhoda@capetown.gov.za

Dear Madam

APPEALS LODGED AGAINST THE ENVIRONMENTAL AUTHORISATION GRANTED FOR THE PROPOSED DREDGING OF THE MILNERTON LAGOON ON ERF NO. 20315, DIEP RIVER ESTUARY

1. The Appeals lodged against the Environmental Authorisation ("EA") granted on 15 May 2026 and the Responding Statements received on 26 June and 2 July 2026, refer.
2. **Empowering Provisions**
 - 2.1 In terms of sections 43(2) and (6) of the *National Environmental Management Act, 1998* (Act No. 107 of 1998) ("NEMA"):

"Any person may appeal to an MEC against a decision taken by any person acting under a power delegated by that MEC under this Act or a specific environmental management Act."

"The ... MEC may, after considering such an appeal, confirm, set aside or vary the decision, provision, condition or directive or make any other appropriate decision, including a decision that the prescribed fee paid by the appellant, or any part thereof, be refunded."
 - 2.2 In terms of regulation 3 of the National Appeal Regulations, 2025 (Government Notice No. R. 5985 of 13 March 2025):

"These regulations are applicable to an appeal against a decision taken in terms of the Act or a specific environmental management Act that is subject to an appeal to the appeal authority in terms of section 43 of the Act."
3. After considering all relevant facts and supportive documents, I wish to advise that, in terms of section 43(6) of the NEMA, I have decided to **dismiss** the Appeals and **vary** the abovementioned decision as detailed below:

Condition 10:

"The draft EMPr and MMP dated 28 January 2026 (as compiled by Infinity Environmental) and submitted as part of the application for Environmental Authorisation are hereby approved

and must be implemented on condition that the EMPr is amended to include the following measures and submitted to the Delegated Competent Authority prior to the commencement of the activities:

10.1 Amend Paragraph 4.1 of the EMPr to provide that the City of Cape Town's Scientific Services may undertake routine monitoring for the duration of the dredging implementation phase but the monitoring results must be verified by an independent specialist as opposed to the City of Cape Town's Scientific Services.

10.2 Amend the EMPr to provide for the Milnerton Stakeholders Forum to be made aware of the implementation of dredging activities and provide for a mechanism for raising concerns before, during and after the dredging activities.

10.3 Amend the EMPr to provide up-to-date water quality and air quality monitoring data on a publicly accessible platform through the dredging period and the post-dredging monitoring phase.

10.4 The registered I&APs are afforded a 30-days opportunity to comment on the Amended EMPr (and issues raised are responded to and addressed) before it is submitted to the Delegated Competent Authority.

Condition 25:

"Legible photomontages must be created of the proposed sandbanks which will be formed from the dredged material and circulated to the registered interested and affected parties and must be submitted to the Delegated Competent Authority prior to the commencement of the activities."

Condition 26:

"A suitably qualified engineer must be appointed to inspect the bridge foundations pre-commencement of the dredging activities and establish an appropriate exclusion buffer (no-go area) around the support structures during works."

Condition 27:

"The avifaunal specialist must be appointed by the applicant to confirm, prior to implementation, that the berm as designed will not create a persistent terrestrial-access pathway to the island during the bird nesting season, and to recommend appropriate measures to avoid such an outcome."

4. **AMENDMENTS/EXCLUSIONS TO THE DECISION OR ADDITIONAL CONDITION(S):**

4.1 Section F is excluded from the EA.

4.2 The following conditions of the EA are amended as follows:

Condition 3:

"The holder must commence with, and conclude, the listed activities within the stipulated validity period which this Appeal Environmental Authorisation is granted for, or this Environmental Authorisation shall lapse and a new application for Environmental Authorisation must be submitted to the competent authority. This Environmental Authorisation is granted for–

(a) A period of five (5) years, from the date of this Appeal decision, during which period the holder must commence with the authorised listed activities; and

(b) A period of ten (10) years, from the date the holder commenced with an authorised listed activity, during which period the authorised listed activities relating to development, must be concluded."

Condition 6:

"The holder of this Appeal Permit must in writing, within 14 (fourteen) calendar days of the date of this Appeal decision notify all registered Interested and Affected Parties ("Interested and Affected Parties") of –

6.1 The outcome of the Appeal;

6.2 The reasons for the decision;

6.3 The date of the decision."

5. REASONS FOR THIS APPEAL DECISION:

The reasons for dismissing the Appeals and varying the EA are detailed below:

Appeal ground 1: Introduction, direct interest and resident awareness

5.1 During the Basic Assessment process, the I&APs provided, *inter alia*, the following comments:

5.1.1 Odour emissions from sediment disturbance are the primary air quality concern.

5.1.2 Placing dredged material along the Western Bank of the river, in very close proximity to the Woodbridge Island residents is a concern for complaints.

5.2 Odour impacts on adjacent residents associated with disturbance of sediment during dredging were identified and assessed amongst the potential impacts of the proposed dredging activities. In terms of the Preferred Alternative (Dredging without offsite disposal), the significance rating of the odour impact will be "low negative" without mitigation and with the implementation of the mitigation measures. The high organic content of sediments in the lower Milnerton lagoon is a significant contributor to oxygen deficiencies and resultant odour production, thus water quality has deteriorated to a point that sediment removal will not address the challenge. Dredging therefore aims to improve the hydrodynamic functioning to water quality and reduce odour in the lower lagoon while measures to improve influent water quality are underway. The recent flood events naturally removed most of the fine, organic-rich material that previously contributed to odour, and testing shows that sediment contaminants are below guideline thresholds. Current odour problems arise primarily from polluted inflows, not the remaining sediment, and therefore dredging aims to improve tidal exchange rather than directly resolve water quality. The proposed dredging aims to maintain an open mouth and so reduce the risk of flooding along the banks.

5.3 In the Comments and Responses Report, the EAP responded with the following:

5.3.1 There will be temporary odour emissions from sediment disturbance during dredging which is considered as the primary odour concern related specifically to this application.

5.3.2 The residents of the Woodbridge Island already experience odour levels within their homes which are unrelated to the dredging. The smell around the lower lagoon was historically (until 2023) associated with the sediment at the time, that resulted in depth remediation assessments that were undertaken (i.e. 2023 Remediation Plan). The reason for this was due to the H₂S released as a result of the decomposition of organic material, typical of bacteria in anoxic conditions.

5.3.3 Subsequent flood events of the years 2023 and 2024 resulted in the natural scouring which flushed out an estimated 110,000 m³ of fine organic sediment, reopening the lagoon mouth and exposing the bed to oxygen and sunlight at low tide.

- 5.3.4 The natural scouring flushed out the lower lagoon but it was not observed in 2024/2025 due to increases in pollutant loading from the catchment of raw and partially treated effluent.
- 5.3.5 The main reason for odour release within the lower lagoon is the water quality itself flowing within the lower lagoon and is not primarily caused by the sediment. Therefore, any temporary odour released from the disturbance of sediment by the placement of dredged material on the banks of the lagoon is anticipated to be minor in relation to the existing smell due to the intermittent presence of raw or insufficiently treated wastewater within the lower lagoon.
- 5.3.6 The proposed development has been slightly amended to exclude the placement of dredged material along the western bank immediately downstream of the Loxton Road bridge.
- 5.3.7 The proposed dredging is intended to improve the hydrodynamic function of the lower lagoon, to assist with the ecological functions such as increased saline intrusion within the lagoon and sun exposure to sediment on the sandbanks, which should indirectly improve the conditions of the lower lagoon such that an improvement in odour could occur.
- 5.3.8 Current odors are mainly caused by sewage flows rather than accumulated sediment, and the sediment in the lower lagoon is predominantly sand and its disturbance is not anticipated to have long-term effects on odour.
- 5.4 The EMPr approved in the conditions of the EA consists of the following measures to mitigate the potential impacts of the activities:
- 5.4.1 Notification of I&APs about the relevant contact details to which any complaints regarding nuisances such as dust, noise and odour can be submitted during dredging activity.
- 5.4.2 The Applicant must clearly communicate to potentially I&APs that odour impacts may last for the duration of the project, but is expected to cause net benefit post-construction phase.
- 5.4.3 The complaints register for the duration of the dredging phase must be maintained on the site.
- 5.4.4 The dredging activities will be undertaken during dry, low flow summer months, and when overall water quality has improved so as to ensure coincidence with improved conditions and thus, reduced risk of odour release.
- 5.4.5 Should odour impacts significantly intensify or result in sustained complaints, additional mitigation measures may include relocating material to a more distant or submerged location, if feasible.
- 5.4.6 The continued monitoring of H₂S by City of Cape Town's Scientific Services during the implementation of dredging will be undertaken to compare results to the World Health Organization ("WHO") guideline values and any relevant health-protective thresholds.
- 5.4.7 Any sustained exceedances must be communicated timeously to the Air Quality Management Unit, the Environmental Control Officer, Water and Sanitation, the contractor and the Milnerton Stakeholders forum, in order for any appropriate corrective measures to be implemented.
- 5.5 I concur with the contents of the Responding Statements from the Applicant and the Delegated Competent Authority in relation to this ground of appeal.
- 5.6 Considering the above, the proposed dredging aims to maintain an open mouth to reduce the risk of flooding along the banks and there will be temporary nuisances from sediment disturbance during dredging. However, the EMPr which contains the abovementioned measures will be implemented to mitigate or manage the potential impacts of the activities.

Appeal ground 2: Inadequate public participation and late circulation of material information

- 5.7 In terms of the NEMA, *"the general objectives of integrated environmental management is to— (d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;"* Section 24(4) of the NEMA require that:
- "(4) Procedures for the investigation, assessment and communication of the potential consequences or impacts of activities on the environment (a) must ensure, with respect to every application for an environmental authorisation— ... (v) public information and participation procedures which provide all interested and affected parties, including all organs of state in all spheres of government that may have jurisdiction over any aspect of the activity, with a reasonable opportunity to participate in those information and participation procedures;"*
- 5.8 To give effect to the NEMA provisions, the 2014 EIA Regulations include the following clear, fair and comprehensive public participation procedures that must be followed in terms of applications for EAs:
- 5.8.1 Regulation 3 states that *"(8) Any public participation process must be conducted for a period of at least 30 days."*
- 5.8.2 Regulation 19 requires the applicant to submit to the competent authority a Basic Assessment Report, including specialist studies and the EMP, *"....which have been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority;"*
- 5.8.3 Regulation 41 states that *"(2) The person conducting a public participation process must take into account any relevant guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of an application or proposed application which is subjected to public participation..."*
- 5.8.4 Regulation 44(1) state that *"The applicant must ensure that the comments of interested and affected parties are recorded in reports and plans and that such written comments, including responses to such comments and records of meetings, are attached to the reports and plans that are submitted to the competent authority in terms of these Regulations."*
- 5.9 A clear, fair and detailed public participation process which was undertaken for the proposed development is outlined on pages 15 to 18 of the reasons for the EA. Therefore, the I&APs were afforded a reasonable opportunity to participate in the EIA process for the proposed development, hence comments, issues and objections were submitted by the I&APs regarding the proposed development.
- 5.10 A public meeting is not specifically a legislative requirement for a public participation process. However, it has been clarified by the Applicant, as detailed in the Responding Statement, that the correspondence of 10 April 2026 did not relate to a public participation process for the application for EA, that it relate to a separate process because this application's public participation process was completed in December 2025.
- 5.11 The Water Quality Remediation Plan ("WQRP") was circulated to the I&APs on 15 May 2026 due to the instruction from the Department of Environmental Affairs and Development Planning ("DEA&DP"), for information purposes only. The DEA&DP required the document to be made available for information purposes only since it was referred to in the Basic Assessment Report ("BAR").
- 5.12 The estate-manager channel to notify residents of a gated, access-controlled estate is an appropriate and acceptable process in terms of the EIA Regulations. Therefore, the EAP

requested the estate manager to distribute the notification about the proposed development and proof that distribution from the person in control of the land was received by the EAP.

- 5.13 The proposed development was appropriately described in the BAR, the preferred alternative was clearly and accurately described in plain language in the BAR and the site plan which locates the proposed activities applied for, structures and infrastructure at an appropriate scale was attached to the BAR. There is no specific provision in the applicable NEMA and regulations which require the submission of photorealistic or three-dimensional simulations for the proposed development.
- 5.14 The notification requirements during the public participation process have limitation in terms of the notification required, no *individual* registered letter sent to every ratepayer is required by the applicable NEMA and 2014 EIA Regulations.
- 5.15 The feasible and reasonable alternatives which were identified and assessed during the Basic Assessment process are outlined on pages 18 to 22 of the reasons for the EA. These alternatives are inclusive of Preferred Design Alternative 1 which will entail dredging with placement of material within the Lagoon (herewith authorised) and the unpreferred design alternatives which include Design Alternative 5 which would entail dredging of the channel with partial off-site disposal.
- 5.16 I concur with the contents of the Responding Statements from the Applicant and the Delegated Competent Authority in relation to this ground of appeal.
- 5.17 Considering the above, the I&APs were afforded fair and reasonable opportunities to partake in the public participation processes of this Basic Assessment process. The public participation processes followed exceeded the minimum requirements of regulation 41 of the 2014 EIA Regulations as a public meeting and placement of the BAR on the EAP's website were undertaken for the proposed development. Additionally, the comments received from the I&APs were appended in the proof of public participation documents submitted with the BAR. The issues, comments and objections were included, responded to and addressed as detailed in the Comments and Responses Reports submitted with the BAR.

Appeal ground 3: Unacceptable Degradation of Visual Amenity and Aesthetic Value

- 5.18 During the Basic Assessment process, the I&APs requested information on the impacts of the proposed development on the visual aspect of the lagoon.
- 5.19 The proposed development will entail that approximately 30,000 m³ of material will be moved within the lagoon' and the dredged material is to be placed on the sides of the dredge channel to form sand banks. As a result, the Screening Tool Report identified Landscape/Visual Assessment as one of the specialist assessments that needed to be verified if it is required to inform the Basic Assessment process. The EAP verified that a standalone Visual Impact Assessment is not required due to the following:
 - 5.19.1 The proposed dredging will not result in any permanent change in the landscape nor sense of place.
 - 5.19.2 Temporary visual disturbance is anticipated as a result of the dredging and particularly dewatering activities, which have been assessed in the BAR.
- 5.20 At high tide, all proposed sandbanks will be completely submerged. At low tide, sandbanks will be visible but will appear similar to existing natural sandbanks already present in the lagoon system. The dredged material will be placed at levels designed to remain below high-tide elevation. The proposal has been revised to avoid placing material along the

western bank immediately downstream of the Loxton Road bridge to address visual and security concerns raised by Woodbridge Island residents.

- 5.21 The visual impacts were, however, considered by the EAP in the Final BAR as follows, although no specialist Visual Impact Assessment was conducted for the proposed development:

Impacts on sense of place

- 5.21.1 Dewatering would result in the temporary occupation of a highly visible and well-used area, located near Woodbridge Island and adjacent to Marine Drive. This area is popular and frequented by residents, visitors, and recreational users due to its accessibility, the pedestrian footpath alongside the lagoon, the park and the outdoor gym facility that encourages public use. The dewatering activities such as the installation of geotextile tubes, delivery of flocculant chemicals, and ongoing pumping operations will disrupt the natural and recreational character of the site, detracting from the areas' sense of place during the dewatering period.

Exacerbated nuisance

- 5.21.2 Flooding in winter during 2023 resulted in the natural scour and removal of approximately 110 000 m³ of sediment from the lower lagoon. The visual intrusion from sediment storage infrastructure may extend beyond the immediate footprint of the dewatering operation, affecting nearby residential properties, pedestrian traffic, and tourism experiences associated with the lagoon and coastal walkway.
- 5.22 In the Comments and Responses Report, the EAP provided the following responses:
- 5.22.1 At high tide, the proposed sandbanks and channel would be entirely covered and not visible.
- 5.22.2 At low tide, sandbanks would be visible, similar to those already found near the mouth of the lagoon and upstream of the wooden bridge during low tides.
- 5.23 The EMP approved in the conditions of the EA include the following measures regarding the visual impacts:
- 5.23.1 The disturbed dewatering area, i.e., area used for dewatering activities alongside Marine Drive will be rehabilitated.
- 5.23.2 The areas along the access route that were unavoidably impacted for use of the access route will be restored to the original condition to reduce long-term effects.
- 5.23.3 The disturbed areas should be planted with suitable local indigenous vegetation to stabilize the bank(s). Clearing of invasive alien plants will be undertaken during and after construction activities within the disturbed area(s).
- 5.23.4 The soil and cover vegetation removed to excavate/establish the area for placement of geotextile tubes for dewatering activities should be replaced and restored to the same extent and level as the existing undisturbed park area.
- 5.23.5 All dredged slurry must not be used for any other purpose than waste disposal and must be removed from this area and disposed of at a suitably licensed Waste Disposal Facility. Proof of disposal slips must be kept on site.
- 5.23.6 Geotextile tubes and associated dewatering materials from the area should be removed and either dispose of at an appropriate waste disposal facility, retaining proof of disposal for Environment Control Officer ("ECO") review, or return them to the Contractor's offices if they are to be reused.
- 5.24 I concur with the following contents of the Responding Statements in relation to this ground of appeal:

- 5.24.1 Detailed photographic visual simulations are not a statutory requirement. The plan which locates the proposed activities applied for as well as associated structures and infrastructure has been provided at an appropriate scale as required by regulation 3(1)(c) of the 2014 EIA Regulations.
- 5.24.2 The assessment of visual impacts in the BAR confirmed that at high tide the sandbanks will remain fully submerged, and the appearance of the lagoon from residential and public viewpoints will be unchanged at high tide. The assessment concluded that the dredging will not result in any permanent change in the landscape or sense of place, due to the visual disturbance principally associated with site establishment and, under the off-site alternative, dewatering. Therefore, a standalone Visual Impact Assessment was not considered necessary.
- 5.24.3 The long-term improvement in tidal flushing, reduced odour and improved water quality resulting from the proposed dredging and infrastructure upgrades upstream will benefit the amenity and attractiveness of the precinct.
- 5.24.4 The Milnerton Lagoon is a dynamic tidal estuary where intertidal sandbanks and berms form, shift and re-form as a normal feature of its functioning.
- 5.25 Considering the above, the EAP considered the visual impacts of the proposed development and included measures to mitigate/manage the visual impacts such as the rehabilitation of the disturbed dewatering area, i.e., area used for dewatering activities alongside Marine Drive, restoring the impacted area along the access route to the original condition and planting the disturbed area with suitable local indigenous vegetation to stabilize the banks. However, the following Condition 25 is included into the conditions of the authorisation:
- "Legible photomontages must be created of the proposed sandbanks which will be formed from the dredged material, circulated to the registered interested and affected parties and must be submitted to the Delegated Competent Authority prior to the commencement of the activities."*

Appeal ground 4: Flood risk, changed lagoon conditions, emergency access and residential exposure

- 5.26 During the Basic Assessment process, the I&APs wondered, *inter alia*, whether the dredging would in any way increase flood risk, particularly during spring tides.
- 5.27 The water quality of the Milnerton Lagoon has declined due to high levels of pollution and other anthropogenic impacts, with consequences to both human well-being and the ecological function of the lagoon. Recommendations from the 2023 Water Quality Remediation Plan included targeted dredging of portions of the system. The purpose of the proposed dredging is to attempt to improve hydrodynamic functioning of the estuarine system and remove, dewater and dispose of the organic, nutrient-rich fine sediment. Consequently, the specialist Estuarine Impact Assessment was commissioned to inform the Basic Assessment process and guide the project design. This study described, *inter alia*, the modification of the Diep River Estuary by anthropogenic impacts, and its degradation in water quality, and stormwater inputs. Based on the impact study's modelling results, the estuarine specialist confirmed that dredging will result in a significant improvement in tidal forcing in the Diep Estuary as a whole, but is unlikely to result in a change to the Estuarine Health Score of the system. Storms in the winter months bring large volumes of freshwater into the estuary that flush out the system and create an almost entirely freshwater environment. Lower rainfalls in summer introduce less freshwater into the estuarine system and allow saline intrusion further upstream, with highest salinities at the estuary mouth decreasing upstream. The Potsdam Waste Water Treatment Works ("WWTW") discharge

makes up most of (if not all) the freshwater inflow at the head of the estuary during periods of low flow (i.e., the dry summers).

- 5.28 Based on the modelled results, the dredging should change how water moves through the channel, especially during different seasons. The model shows that in the wet season, when there is more freshwater flowing into the system, the combination of this flow and tidal movement increases water speed and force on the lagoon bed, which helps move built-up unwanted sediment (including organic solids) out toward the ocean. However, after dredging, the channel is deeper and consequently holds more water, which can lower the energy of water flow, especially in the dry season. This means less force may be applied to the bed, reducing the likelihood of sediment being stirred up and transported. While this can help reduce erosion, it may also lead to more sediment settling in the dredged channel over time, potentially requiring future maintenance. Overall, dredging is modelled to improve water flow and flushing during high flow periods (like the wet season) but may conversely lead to more sediment build-up in the dry season due to lower flow energy.
- 5.29 In addressing the concerns of the I&APs, the BAR states that *“Hydrodynamic modelling confirms that dredging will not increase flood levels or alter tidal dynamics in a way that would raise flood risk to adjacent properties. Dredging adjusts morphology but does not increase lagoon storage volume or alter flood conveyance pathways.”*
- 5.30 In the Comments and Responses Report, the EAP provided the following responses:
- 5.30.1 The coastal engineers responsible for project design have confirmed that the proposed dredging activities are not anticipated to have any impact on flooding. Hydrodynamic and sediment transport modelling, including modelling of flood conditions, was undertaken as part of the project design. The proposed dredging will not alter the volume of sediment in the lagoon and is not expected to affect flood risk.
- 5.30.2 The potential for disruption to activities and residents around the lagoon during the dredging phase is noted. This may include noise and other disturbance.
- 5.31 In the EMPr, the following measures are proposed for the mitigation or management of the potential flood impacts of the proposed development:
- 5.31.1 Contractor to rehabilitate disturbed dewatering area, i.e., area used for dewatering activities alongside Marine Drive (should dredging with off-site disposal be implemented for the project) and restore the areas along the access route that were unavoidably impacted for use of the access route to the original condition to reduce long-term effects.
- 5.31.2 Paragraph 3.5 of the reasons for the EA states that *“Dredging will not increase flood levels or alter tidal dynamics in a way that would raise flood risk to adjacent properties. Although dredging adjusts morphology, it does not increase lagoon storage volume or alter flood conveyance pathways.”*
- 5.32 I concur with the following contents of the Applicant and Delegated Competent Authority's Responding Statements that:
- 5.32.1 Dredging will not increase flood levels or alter tidal dynamics in a way that would raise flood risk to adjacent properties.
- 5.32.2 The proposed dredging aims to maintain an open lagoon mouth that will limit the build-up of water and therefore reduce the risk of flooding along the lagoon banks.
- 5.32.3 The proposed dredged channel does not alter flood conveyance pathways and does not raise the average lagoon bed level across any section of lagoon.
- 5.32.4 The estuarine impacts study stressed the importance of maintaining the channel at its scoured depth and always keeping the Estuary mouth open to ensure continued functioning (and associated benefit of tidal flushing) over time.

- 5.32.5 The specialist's mitigation measures have been incorporated into the EMPr for implementation.
- 5.32.6 A Maintenance Management Plan has also been prepared to address the post dredging phase and the estuarine specialists' recommended mitigation that the channel must be maintained at its depth and the estuary mouth be kept open.
- 5.32.7 The May 2026 storm is consistent with the hydrodynamic modelling of the specialist Estuarine Impact Assessment and does not invalidate the Basic Assessment process and its specialist studies.
- 5.33 Considering the above, the flood risks of the proposed dredging were identified and assessed where it was concluded that dredging will not increase flood levels or alter tidal dynamics in a way that would raise flood risk to adjacent properties as it aims to maintain an open lagoon mouth that will limit the build-up of water and therefore reduce the risk of flooding along the lagoon banks. The EMPr, including the Maintenance Management Plan, recommended measures that require the channel to be maintained at its depth and the estuary mouth to be kept open.

Appeal ground 5. Sediment, pollution, health and safety, long-term effectiveness, cumulative impacts and requested relief

- 5.34 During the Basic Assessment process, the I&APs stated that excavating anoxic, sulphide-rich sediment and exposing it to air on the banks will release Hydrogen Sulphide and potential airborne pathogens.
- 5.35 In terms of sediment quality, samples collected in the lower lagoon in November 2023 as part of the dredging investigations were tested for trace metals and organic and other contaminants. These samples were targeted to include the areas of highest accumulation of fine sediments. In these samples, metals were all below the values set out in the National Action List used to make decisions on the suitability of dredged material for underwater offshore disposal ("UOD") in South African coastal waters and the relevant literature. While the contamination of estuaries with trace metals and organic contaminants will continue to require periodic monitoring and assessment, guideline values for chronic and acute ecological impact are not currently exceeded and available data do not suggest that metal contaminants are a significant driver of ecological impact in the Milnerton Lagoon.
- 5.36 The alternative that includes offsite disposal of sediment is not preferred since this alternative involves dewatering operations, would use limited landfill space, and involve transport and loading to move sediment off-site to an appropriate and capacitated landfill site, as well as odour and nuisance impacts associated with the dewatering area without offering any significant, additional hydrodynamic or water quality benefits over the preferred alternative.
- 5.37 In the Comments and Responses Report, the EAP provided the following response:
 - 5.37.1 Off-site disposal is not necessary due to the natural scouring that occurred during the flood events in 2023 and 2024.
 - 5.37.2 The accumulated organic material that may have significantly contributed to anoxic sediment and poor water conditions in the past have been flushed by the flood events in 2023 and 2024 from the lagoon into the sea. Despite this, oxygen levels have returned to near zero (barring brief periods of improved tidal flushing that brought oxygen rich seawater into the lagoon), indicating that polluted inflowing water is the primary concern.
 - 5.37.3 Dredging targets the improvement of hydrodynamic functioning to improve water quality and reduce odour in the lower lagoon while measures to improve effluent water quality upstream are underway.

- 5.37.4 Whilst the risk of odour associated with sediment disturbance is acknowledged, the primary source of odour since the major flood events of 2023 and 2024 is believed to be the inflowing water itself, rather than any significant build of organic matter in the lower estuary. The proposed intertidal areas will be subject to daily submersion during tidal cycles.
- 5.38 The reasons for the EA state the following:
- "Clarification was provided on the quality of the sediment and it was explained that recent flood events naturally removed most of the fine, organic-rich material that previously contributed to odour. Further, testing indicates that sediment contaminants are below the guideline thresholds and the current odour problems arise primarily from polluted inflows, not the remaining sediment. In addition, the proposed dredging aims to improve tidal exchange rather than to directly resolve the water quality."*
- 5.39 The specialist's mitigation measures have been included into the EMPr to address the sediment quality impacts. This includes a Maintenance Management Plan to address the post dredging phase and the estuarine specialists' recommended mitigation that the channel must be maintained at its depth and the estuary mouth be kept open.
- 5.40 I concur with the following contents of the Applicant and Delegated Competent Authority's Responding Statements:
- 5.40.1 Sediment quality was assessed in previous studies and the current BAR found the guideline values to be below the thresholds for chronic and acute ecological impact.
- 5.40.2 Dredging will mainly involve sandy remaining material.
- 5.40.3 The Maintenance Management Plan, which is part of the EMPr, provides for the periodic maintenance of the hydrodynamic functioning of the lower lagoon.
- 5.40.4 The City is undertaking major upstream infrastructure upgrades, including the expansion of the Potsdam WWTW (completion December 2027), a capacity upgrade and overflow pond at Koeberg Road Pump Station (2027), the new Montague Gardens Bulk Sewer (2026), and further upgrades at Montague Drive, Phoenix Park and Sanddrif East pump stations (2027–2028). These are part of a broader, coordinated response to the underlying pollution sources.
- 5.41 Considering the above, recent flood events naturally removed most of the fine, organic-rich material that previously contributed to odour, and that testing shows sediment contaminants are below guideline thresholds. Current odour problems arise mainly from polluted inflows, not the remaining sediment, and the dredging aims to improve estuarine functioning rather than directly resolve water quality.

Appeal ground 6: The authorised intervention appears to go beyond dredging and may alter the lagoon form and water-holding behaviour in front of homes

- 5.42 During the public participation process of the BAR, the I&APs indicated that dredging activities will create spoil sites.
- 5.43 The reasons for the EA acknowledge that requests for sediment removal off-site rather than placement within the Lagoon was a significant issue that was raised by the I&APs and outlines the feasible and reasonable alternatives which were considered for the EA.
- 5.44 The BAR states that off-site disposal was assessed but found not to be the best practicable environmental option due to significant costs, logistical constraints, traffic impacts, and the lack of substantial additional environmental benefit. Sediment quality testing indicates that the remaining sediment is predominantly clean sand with contaminants below guideline thresholds. Flood events in 2023–2024 removed most of the historic organic, odour-producing sediment. The various design and layout alternatives assessed for the

proposed dredging are in the Alternatives Section H of the BAR. The preferred alternative entails the reshaping of the lagoon by dredging a channel and placing material on both sides of the dredged channel within the intertidal zone. Approximately 30,000 m³ of sediment will be dredged to reshape the lagoon and establish a channel that enhances tidal flushing and helps maintain an open mouth.

- 5.45 In the Comments and Responses Report, the EAP responded with the following:
- 5.45.1 The removal and dewatering of dredged material is considered in the alternatives (Section H of the final BAR), but dewatering and offsite spoiling of material is not part of the preferred alternative which seeks to create a dredge channel with the dredge material placed on either side of the channel to form sand banks. The Final BAR shows a schematic diagram of the preferred dredging alternative.
- 5.45.2 Offsite disposal of a large volume of dredged material, including a high proportion of sand, would be cost-prohibitive and would result in an unjustifiable use of limited landfill airspace and municipal expenditure given the limited expected environmental benefits.
- 5.45.3 Refer to Section H of the BAR, which presents the assessment of alternatives and the motivation for the preferred alternative without off-site disposal. In the opinion of the EAP, the proposed alternative is the best practicable environmental option.
- 5.46 I concur with the contents of the Applicant and Delegated Competent Authority's Responding Statements that:
- 5.46.1 The preferred design alternative entails dredging with the placement of material within the Lagoon and placing the dredged material on the sides of the dredged area to build up sandbanks within the intertidal zone.
- 5.46.2 The visual impacts are expected to be negligible.
- 5.46.3 The placement of material along the western bank immediately downstream of the Loxton Road Bridge will be avoided to address the visual and security concerns.
- 5.47 Considering the above, Section H of the Final BAR provided an overview of the different feasible and reasonable alternatives that were considered during the Basic Assessment process, including the reasons for the non-preferred off-site disposal of dredged material and the preferred layout and design alternative which involves the use of dredged material to create sandbanks along the Milnerton lagoon.

Appeal ground 7: Premature issuance of environmental authorisation prior to upstream source control

- 5.48 During the Basic Assessment process, the I&APs stated that the remediation of the water quality upstream from the Potsdam WWTW and the Koeberg Pump Station is significant to achieve hydrodynamic functioning of the estuary.
- 5.49 In terms of the importance of upstream remediation of the estuary, the reasons for the EA state that: "... the EAP agreed that upstream pollution must be remedied. The BAR highlights that long-term recovery depends on upstream interventions currently underway, including major upgrades at the Potsdam Waste Water Treatment Works ("WWTW") and the pump-station."
- 5.50 The BAR acknowledged that "Dredging alone is not expected to achieve the desired permanent ecological, human health and/or aesthetic outcomes within the Milnerton Lagoon unless there is a significant reduction in polluted inflows into the Diep River. In alignment with the 2023 Remediation Plan (Rose et al., 2023), it is proposed that dredging only proceed once oxygen levels in the lower lagoon begin to show recovery, ensuring that

the intervention coincides with improvements in upstream water quality; defined here in terms of dissolved oxygen as the 90th percentile of oxygen concentrations in bottom waters being above the 1.0 mg/L threshold over a three-month period with weekly monitoring, and the 90th percentile in mid- and surface water concentrations being above 2.0 mg/L, which is the threshold for hypoxic conditions harmful to organisms adapted to oxygenated waters."

- 5.51 The measures contained in the EMPr states the following in terms of the Pre-Implementation phase fulfilment of the performance criteria regarding Dissolved Oxygen thresholds:
 - 5.51.1 The proposed dredging of a channel in the lower lagoon is recommended as a short- to medium-term remediation measure to be implemented should the water quality in the lower lagoon improve, as indicated by increased dissolved oxygen levels exceeding 2 mg/l. This is to ensure that the intervention coincides with improvements in upstream water quality to maximize the ecological benefit rather than undertaking dredging while the source of pollution and cause of ecosystem deterioration remains unchanged.
 - 5.51.2 Dissolved Oxygen monitoring must take place in the lower reaches of the system, with control sites upstream of Woodbridge Island.
 - 5.51.3 Schedule dredging only upon exceedance of 2mg/L of Dissolved Oxygen thresholds as measured from monitoring sites within the lower lagoon, to ensure maximum ecological benefit for the lagoon through coincidence with upstream water quality improvements.
- 5.52 I concur with the contents of the Applicant and Delegated Competent Authority's Responding Statements that:
 - 5.52.1 The BAR and the approved EMPr confirm that dredging is not a substitute for upstream pollution source control, and that the long-term recovery of the system depends on the City's catchment-scale infrastructure programme, of which the proposed dredging is one component.
- 5.53 Considering the above, dredging activities should be implemented when the water quality in the lower lagoon improve, as indicated by increased dissolved oxygen levels exceeding 2 mg/l to maximize the ecological benefit rather than undertaking dredging while the source of pollution and cause of ecosystem deterioration remains unchanged.

Appeal ground 8: Total lack of public support

- 5.54 The public participation process provisions contained in the NEMA and the 2014 EIA Regulations require the I&APs to be afforded an opportunity to make representations regarding the proposed development. The public participation process conducted by the EAP complied with the empowering provisions and as detailed in the Comments and Responses Report, the EAP addressed the reasons for the objections of the I&APs.
- 5.55 There is no express provision in NEMA and the 2014 EIA Regulations, which provides that objections to the proposed development should be a criteria for the granting or refusal of the EA. However, the public participation processes entailed I&APs submitting representations, raising issues, making comments, submitting objections at every stage during public participation and the EAP providing responses to the representations, issues, comments and objections in the Comments and Responses Reports. The Delegated Competent Authority did not need to refer to every single document which served before him in reaching a decision.
- 5.56 Dredging of the lower section of the lagoon is proposed to improve hydrodynamic functioning and tidal exchange, facilitating increased oxygenated seawater intrusion into the lower reaches of the system and preventing the excessive accumulation of sediment.

- 5.57 The sediment quality of the dredged material was tested and found to not pose health and safety risk for the adjacent properties of the Woodbridge Island. The conditions of the EA, EMPr and the Maintenance Management Plan contain various mitigation/ management measures to ensure that the potential environmental impacts are at an acceptable level.
- 5.58 I concur with the contents of the Applicant and Delegated Competent Authority's Responding Statement that:
 - 5.58.1 The Basic Assessment process complied with the procedural requirements of NEMA and the EIA Regulations.
 - 5.58.2 The Applicant refined the design of the dredging activities based on the community concerns raised during the public participation process.
 - 5.58.3 Potential environmental, social and economic impacts of proposed developments were identified and assessed before a decision was made by the Delegated Competent Authority.
- 5.59 Considering the above, a thorough and comprehensive public participation process was conducted for the proposed development where the issues raised in the objections of the I&APs were addressed and responded to by the EAP as outlined in the Comments and Responses Report.

Appeal ground 9: Health/ smell risk of new sand/mud banks

- 5.60 Sediment samples collected in November 2023 in the lower lagoon to test for trace metals, organic contaminants and other contaminants. These samples were targeted to include the areas of highest accumulation of fine sediments. In these samples, six metals (arsenic, cadmium, chromium, lead, nickel, and zinc) were all detected at lower concentrations than those reported in 2021 and also below sediment quality guidelines for the Benguela Current Large Marine Ecosystem ("BCLME") region as established in Council for Scientific and Industrial Research (2006) and the slightly more conservative Effects Range Low thresholds. Guideline values for chronic and acute ecological impact are not currently exceeded, and available data do not suggest that metal contaminants are a significant driver of ecological impact in the Milnerton Lagoon.
- 5.61 The EMPr provides for the monitoring of hydrogen sulphide and odour impacts and consists of the following measures to be complied with:

Communication with City of Cape Town's Scientific Services regarding H₂S monitoring

- 5.61.1 Initiate engagement with the City of Cape Town's Scientific Services prior to the dredging activity commencing to ensure that open lines of communication are established between the relevant stakeholders.
- 5.61.2 Initiate engagement with the City's Scientific Services via email or cell phone number, with acknowledgement by the City's Scientific Services of such engagement.

Odour impacts on adjacent residents associated with the disturbance of sediment during dredging

- 5.61.3 The Applicant must clearly communicate to potentially I&APs that odour impacts may last the duration of the project, but is expected to cause net benefit post-construction phase.
- 5.61.4 Maintain the complaints register for the duration of the dredging phase.
- 5.61.5 The intention of the proposed dredging is to avoid anaerobic decomposition by exposing the dredged sandbanks to air, particularly during low tide. Exposure of sandbanks to oxygen and sunlight is expected to encourage aerobic decomposition of organic material, thereby reducing the buildup of anoxic nutrient-enriched fine sediments in stagnant areas.

- 5.61.6 Undertake dredging activities during dry, low flow summer months, and when overall water quality has improved so as to ensure coincidence with improved conditions and thus, reduced risk of odour release.
- 5.61.7 Should odour impacts significantly intensify or result in sustained complaints, additional mitigation measures may include relocating material to a more distant or submerged location, if feasible.
- 5.61.8 The continued monitoring of H₂S by the City of Cape Town's Scientific Services during the implementation of dredging is recommended, with comparison to the WHO guideline values and any relevant health-protective thresholds.
- 5.61.9 Any sustained exceedances must be communicated timeously to the Air Quality Management Unit, the Environmental Control Officer, Water and Sanitation, the contractor and the Milnerton Stakeholders forum, in order for any appropriate corrective measures to be implemented.
- 5.62 I concur with the contents of the Applicant and Delegated Competent Authority's Responding Statements that:
 - 5.62.1 The sediment quality testing was undertaken in 2023 which targeted the areas of highest fine-sediment accumulation.
 - 5.62.2 The sediment sampling showed that metals (arsenic, cadmium, chromium, lead, nickel and zinc) were detected at lower concentrations than in 2021, below the National Action List values used for decisions on underwater offshore disposal in South African coastal waters, and below the Effects Range Low thresholds. Guideline values for chronic and acute ecological impact were not exceeded.
- 5.63 Considering the above, the EMPr provides for the monitoring of hydrogen sulphide and odour pre-implementation of the dredging activities and throughout the dredging activities of the proposed development.

Appeal ground 10: Heritage authorisation should be a requirement

- 5.64 The *National Heritage Resources Act, 1999 (Act No. 25 of 1999)* ("NHRA") was identified as one of the applicable legislation to the proposed dredging activities. The National Environmental Screening Tool assigned "Archaeological and Cultural Heritage Theme a *"Very High sensitivity"* in terms of the Archaeological and Cultural Heritage on the site due to the Wooden Bridge, which is a provincial heritage site. It was concluded that the proposed dredging activities are not expected to impact on the Wooden Bridge, as dredging activities will be limited to the lagoon itself. While the sensitivity rating is not disputed, the proposed activities will not impact on the heritage resource, and therefore no specialist assessment was required. Due to the nature of the proposed dredging activities, it was determined that the assessment of heritage impact is not required in terms of section 38 of the NHRA.
- 5.65 The wooden pedestrian bridge (referred to as "the Wooden Bridge") that crosses the lower lagoon from Marine Drive to Woodbridge Island was first built in 1901. This bridge was declared a National Monument under old National Monuments Council legislation in 1987 and is now a Provincial Heritage Site. The proposed dredging considered in this application will not impact the Wooden Bridge since dredging will take place within the lagoon itself. Management measures have been included within the EMPr, specifying the avoidance of any damage to the bridge and its foundations.
- 5.66 In terms of Section 34 (1) of the NHRA, "*no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority*". The proposed activities are not expected to

impact Woodbridge as dredging activities will be limited to the lagoon itself. The Old Milnerton Town Hall is located approximately 250 m east of the site and declared a Provincial Heritage Site. The proposed activity will not impact the Town Hall either. The wooden pedestrian bridge has been identified as a no-go area, and thus must not be altered or damaged in any way by the proposed dredging activities.

- 5.67 In their comments, the City of Cape Town's Environmental and Heritage Management Branch confirmed that *"No impacts to heritage resources are anticipated by the proposed dredging nor are there any heritage legislative triggers."*
- 5.68 The following conditions have been imposed in the EA for the protection of heritage resources:

Condition 20:

"Should any heritage remains be exposed during excavations or any actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape (in accordance with the applicable legislation). Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from Heritage Western Cape. Heritage remains include archaeological remains (including fossil bones and fossil shells); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artifacts and bone remains; structures and other built features; rock art and rock engravings; shipwrecks; and graves or unmarked human burials.

A qualified archaeologist must be contracted where necessary (at the expense of the applicant and in consultation with the relevant authority) to remove any human remains in accordance with the requirements of the relevant authority."

Condition 23

"The wooden pedestrian bridge that crosses the Lower lagoon from Marine Drive to Woodbridge Island, which is a Provincial Heritage Site, may not be altered or damaged in any way due to the proposed dredging activities."

- 5.69 Paragraph 3.6 of the reasons for the EA states that:

"Heritage impacts

The proposed dredging will not impact the Wooden Bridge since dredging will only take place within the Lagoon. Management measures have been included in the EMPr, specifying the avoidance of any damage to the Bridge and foundations. The Old Milnerton Town Hall, which is located approximately 250m east of the site, will not be impacted on. Potential heritage impacts are therefore deemed negligible."

- 5.70 The EMPr, which has been approved in the conditions of the EA, contains the following measures regarding the damage and/or the loss of valuable archaeological settings and artefacts:
- 5.70.1 Should any heritage resources, including evidence of any archaeological and palaeontological material being exposed during dredging activity, then all works must be stopped immediately and Heritage Western Cape ("HWC") must be urgency notified.
- 5.70.2 If any heritage resources are uncovered during implementation, the following Fossil Finds Procedure must be instituted:

Stop Work Immediately

- 5.70.3 If any fossil material (bones, teeth, shells, impressions, petrified wood, etc.) is uncovered during dredging or site activities, all work in the immediate area must cease.

Protect the Find

5.70.4 The find must be clearly demarcated (e.g., with barrier tape) and protected from further disturbance, dust, or damage.

Notify the ECO

5.70.5 The Contractor must inform the ECO immediately. The ECO will assess the situation and record details (GPS location, description, photographs).

Specialist Assessment

5.70.6 The ECO must notify HWC and appoint a qualified heritage specialist to assess the significance of the find and provide further instructions.

Implement Recommendations

5.70.7 Construction may only resume once HWC or the palaeontologist has issued formal clearance, and any recommended mitigation (collection, excavation, documentation) has been completed.

5.71 I concur with the contents of the Applicant and Delegated Competent Authority's Responding Statement that:

5.71.1 The proposed dredging activities are not anticipated to impact on any heritage resources and measures are proposed for the protection of heritage resources on the site.

5.71.2 A condition requiring a pre-commencement engineering inspection of the bridge foundations and the maintenance of an appropriate exclusion buffer around the support structures during works.

5.72 Considering the above, the proposed dredging activities are not anticipated to impact on any heritage resources and measures are proposed in the conditions of the EA and the EMPr for the protection of heritage resources on the site. However, the following condition is proposed as an additional measure for the protection of the heritage resources on the site:

Condition 26:

"An appropriate engineer must be appointed to inspect the bridge foundations pre-commencement of the dredging activities and establish an appropriate exclusion buffer (no-go area) around the support structures during works."

Appeal ground 11: Dredging project (preferred version) - limitations and potential wastage of tax payers money

5.73 Regulation 3(1) of Appendix 1 of the 2014 EIA Regulations state that the contents of the BAR must include, inter alia, "(o) a description of any assumptions, uncertainties, and gaps in knowledge which relate to the assessment and mitigation measures proposed;" Therefore, it is appropriate for the EAP to state the limitations of dredging as a remediation measure.

5.74 In the Comments and Responses Report, the Delegated Competent Authority averred that based on the findings of the Estuarine Impact Assessment Modelling Report dated 2025 and compiled by Anchor Environmental, the modelling results suggest that it is unlikely that dredging will result in a significant improvement in tidal forcing in the Diep Estuary as a whole, and it is unlikely that the dredging activities will result in a change to the Estuarine Health Score of the system. In response, the EAP stated that dredging is proposed as a remediation measure to address specific concerns but is not expected to alter the estuarine health of the entire system.

5.75 A Water Quality Remediation Plan (2023 Remediation Plan) for the Milnerton Lagoon which was prepared for the City of Cape Town in 2023 assessed various short-, medium- and long-term remediation measures for the lagoon and recommended that the primary focus of

remediation of the pollution within the lagoon should be on reducing the sources of pollution into the estuary. Of the short-term remediation measures assessed in the 2023 Remediation Plan, one that was recommended for implementation was dredging of the lagoon to remove built-up organic sediments and increase tidal exchange in the estuary.

- 5.76 Hydrodynamic modelling of the proposed dredging found that the proposed dredging would facilitate greater saline intrusion during incoming and outgoing tides in the lower part of the lagoon. The dredging is expected to increase the exchange of saline and fresh water in the lower lagoon. The increased seawater intrusion is also expected to introduce dissolved oxygen into the lagoon, reducing chemical oxygen demand and disrupting anoxic conditions. During the dry season, average salinities near the mouth of the lagoon were modelled to increase by 11.6 %. During the wet season, average salinities near the mouth are modelled to increase by 54.0 % in the lower water column.
- 5.77 Since 2023, multiple flood events have naturally scoured the system, flushing significant quantities of sediment from the lagoon out to sea. The removal of organic sediments has become less of a priority, and dredging is instead proposed for its potential to improve the hydrodynamics and tidal exchange as a viable localised remediation measure.
- 5.78 I concur with the contents of the Applicant and Delegated Competent Authority's Responding Statements.
- 5.79 Considering the above, the statement of the limitations of dredging as a remediation measure is accordance with the 2014 EIA Regulations. The proposed dredging is proposed for its potential to improve the hydrodynamics and tidal exchange as a viable localised remediation measure. Average salinities near the mouth of the lagoon were modelled to increase by 11.6 % and 54.0% during the dry season and wet season respectively.

Appeal ground 12: Start date for dredging should be conditional on the completion of infrastructure upgrade projects

- 5.80 During the Basic Assessment process, the I&APs noted that the implementation of the proposed dredging is to be delayed until water quality in the lagoon reaches acceptable levels in terms of dissolved oxygen. In the Comments and Responses Report, the EAP confirmed that the implementation of proposed dredging (as considered in this application) will be delayed until water quality inflows into the lagoon reach acceptable levels.
- 5.81 As such, the EMPr states that the proposed dredging of a channel in the lower lagoon is recommended as a short- to medium-term remediation measure to be implemented should the water quality in the lower lagoon improve, as indicated by increased dissolved oxygen levels exceeding 2 mg/l. This is to ensure that the intervention coincides with improvements in upstream water quality to maximise the ecological benefit rather than undertaking dredging while the source of pollution and cause of ecosystem deterioration remains unchanged. This pre-implementation phase therefore should only commence once monitoring efforts confirm that dissolved oxygen within the lower lagoon exceed 2 mg/L.
- 5.82 I concur with the contents of the Applicant and Delegated Competent Authority's Responding Statements regarding this ground of appeal.
- 5.83 Considering the above, the suspension of the authorisation pending the completion of the upstream infrastructural improvements such as the Potsdam WWTW upgrade and the upgrading the Koeberg Pump Station is not considered necessary or appropriate. The proposed dredging activities will be subject to the dissolved oxygen levels exceeding 2 mg/l.

Appeal ground 13: Absence of a specialist report on the geotechnical impact on Woodbridge Island residents

- 5.84 During the Basic Assessment process, the I&APs commented that the proposed dredging activities should take into account the foundations of the Woodbridge Island into account when dredging for sediment in the lagoon.
- 5.85 In the Comments and Responses Report, the EAP responded that:
- 5.85.1 The coastal engineers have confirmed that the proposed dredging operation is not anticipated to have any impact on the integrity of the Woodbridge Island revetment/seawall. Hydrodynamic and sediment transport modelling, including modelling of flood conditions, was undertaken as part of the project design.
- 5.85.2 Sediment transport modelling was undertaken to confirm the potential for redeposition during flood events, and found that the proposed channel would result in increased scour during these events, reducing the likelihood of sediment accretion in the lagoon.
- 5.85.3 The results of the hydrodynamic modelling show that there is no significant anticipated change to or erosion of the Woodbridge Island shoreline.
- 5.86 Organic sediments derived from wastewater and urban runoff accumulate on the bed of the estuary over time and are periodically flushed out to sea in large flood events. Prior to major flood events in 2023 and 2024, organic sediments accumulated in the lagoon with limited tidal exchange near the lagoon mouth. Considering the ongoing pollution within the lagoon, organic sediment continues to settle and accumulate on the estuary bed; facilitating anaerobic decomposition and persistence of odour within the lagoon.
- 5.87 The intention is not to deepen the lagoon, but rather to relocate dredged material within it to create an intertidal sandbank and mudflat. The Milnerton Lagoon consists of fine-grained suspended particulate matter from river flow and surface runoff which tends to settle and accumulate in the system. The currents in estuaries are usually too weak to hold the particulate matter in suspension, and it settles on the bottom along with any contaminants that have adsorbed onto and been transported with the suspended particulate matter. The sediment in the middle parts of estuaries is typically muddier than sediment in the lower (near mouth) and upper (near river) parts.
- 5.88 The sediment in the Diep River estuary is composed largely of sand. In a 2021 assessment, the contribution of mud to the bulk weight of sediment sampled in the estuary generally increased with distance upstream of the estuary mouth. Samples analysed from the area surrounding the Wooden Bridge between 2021 and 2023 showed that less than 10 % mud by weight, with more than 90 % classed as sand or gravel.
- 5.89 I concur with the contents of the Applicant and Delegated Competent Authority's Responding Statements regarding this ground of appeal.
- 5.90 Considering the above, results of the hydrodynamic modelling show that there is no significant anticipated change to or erosion of the Woodbridge Island shoreline as dredging activities will be focused on organic sediment which continues to settle and accumulate on the estuary bed.

Appeal ground 14: The sand berm - creation of a land bridge to a bird refuge island

- 5.91 During the Basic Assessment, certain I&APs stated that they favour the proposed dredging activities so that the estuary will be re-shaped and the sediment will be placed on the sides to form mud flats to provide roosting areas for birds, provide a state of the lagoon where fishes thrive and bird life returns and to reduce the amount of sediment that will need to be transported to the landfill.

- 5.92 In terms of the Screening Tool Report, the Animal Species theme is mapped as High sensitivity due to its location within the mapped distribution of three IUCN red-listed bird species, namely the African Marsh Harrier *Circus ranivorus*, the Caspian Tern *Hydroprogne caspia* and the Great White Pelican *Pelecanus onocrotalus*. The invertebrate species Peringuey's Meadow Katydid *Conocephalus peringueyi* and *Bullacris obliqua* are also identified.
- 5.93 The EAP verified that the lagoon does not provide suitable habitat for the listed invertebrate species, which are instead associated with mountain fynbos. While some temporary disturbance is anticipated during the implementation phase, the proposed dredging will not result in any loss of habitat used by these species but rather the long-term improvement of the avifaunal habitat post-dredging as confirmed by the avifaunal specialist. The avifaunal specialist confirmed that with the implementation of the recommended mitigation measures, the impacts of the proposed dredging on local birdlife are of "Low" significance.
- 5.94 The impacts of the proposed dredging on birds are assessed in the Estuarine Specialist Assessment, and a separate impact assessment is not required. An avifaunal / animal species compliance statement was prepared by avifaunal specialist Andrew Jenkins. The specialist recommended the project be authorised from a bird impact perspective.
- 5.95 The Estuarine Impact Assessment describes in detail the fauna and their habitats in the lower Diep River Estuary. Dredging is expected to result in short-term disturbance and related impacts to birds and any fish remaining in the lower lagoon. Invertebrates will be impacted more directly, if present in the dredged areas, but are expected to recover post-dredging. The avifaunal specialist confirmed that despite the habitat disturbance anticipated for the implementation phase of the proposed dredging, such disturbance would be temporary in nature and result in the improvement of habitat not only for avifauna, but for the estuarine ecology within the lower section of the Milnerton Lagoon. The Estuarine Impact Assessment addressed, *inter alia*, the following potential impacts:
- 5.95.1 Disturbance to and mortality of estuarine communities in the dredge footprint.
- 5.95.2 Disturbance to estuarine habitat due to dewatering activities.
- 5.95.3 Noise impacts on surrounding estuarine ecology due to dredging activities.
- 5.95.4 Smothering of estuarine fauna.
- 5.96 The EMP approved for implementation in the conditions of the authorization include the following mitigation measures in relation to the avifaunal and fauna in general:

Disturbance to and mortality of estuarine communities in the dredge footprint

- 5.96.1 Dredge operators should undergo environmental awareness training that specifically includes an introduction to the estuary's faunal species.
- 5.96.2 Equipment must be thoroughly rinsed/ cleaned prior to use to ensure no transfer of introduced species from other systems.
- 5.96.3 Spatial extent of impacts should be constrained to the minimum required through restriction of implementation works footprint.

Smothering of fauna through dredging

- 5.96.4 Dredging activities should be planned to minimize the duration and extent of disturbance to water bodies.
- 5.96.5 The scour channel in the lagoon should be dredged, starting from upstream to downstream across the site, if possible.

5.96.6 Dredge operators must have sufficient experience to complete dredging operations in the most efficient manner possible.

5.97 I concur with the contents of the Applicant and Delegated Competent Authority's Responding Statements in relation to this ground of appeal and the following recommended mitigation measure:

Condition 27:

"The avifaunal specialist must be appointed by the applicant to confirm, prior to implementation, that the berm as designed will not create a persistent terrestrial-access pathway to the island during the bird nesting season, and to recommend appropriate measures to avoid such an outcome."

5.98 Considering the above, the impacts of the proposed dredging on local birdlife are of "Low" significance with the implementation of the recommended mitigation measures. The proposed additional condition 27 of the EA is also supported to ensure that the dredging activities do not impact the bird nesting season, and to recommend appropriate mitigation. The avifaunal and biodiversity impacts assessments was not based on dredging activities of up to 120,000 m³ of sediment material from along the Woodbridge Island section of the lagoon and the estuary mouth of the lagoon.

Appeal ground 15: Unassessed public health risk: aerosolization of faecal pathogens

5.99 During the Basic Assessment process, the I&APs questioned whether there will be water quality monitoring (for parameters like dissolved oxygen, E. coli, and nutrients) during and after dredging.

5.100 In the Comments and Responses Report, the EAP responded that ongoing water quality monitoring of dissolved oxygen and other physicochemical parameters is proposed before, during, and after the dredging process in addition to the City's routine monitoring of nutrients, faecal indicator bacteria, and other parameters. Registered Interested and Affected Parties will be notified prior to commencement of the proposed dredging.

5.101 Sediment testing shows that contaminants and metals are below chronic and acute ecological risk thresholds. Odour experienced in recent years is caused primarily by upstream polluted inflows, not sediment quality. Temporary odour may occur during dredging but will be monitored through the City's Scientific Services H₂S station at Woodbridge Island, with exceedances to be communicated to relevant authorities and stakeholders.

5.102 Water quality monitoring is already provided for in the EMPr due to the following:

5.102.1 Dissolved Oxygen monitoring must take place in the lower reaches of the system, with control sites upstream of Woodbridge Island.

5.102.2 Schedule dredging only upon exceedance of 2mg/L of Dissolved Oxygen thresholds as measured from monitoring sites within the lower lagoon, to ensure maximum ecological benefit for the lagoon through coincidence with upstream water quality improvements

5.103 Considering the above, management and mitigation measures are included in the EMPr for water quality monitoring before, during and after the dredging activities.

Appeal ground 16: The 120,000 m³ authorisation scope is not adequately assessed

5.104 Upon request for clarity by the I&APs during the Basic Assessment process, the EAP clarified in the Comments and Responses Report that:

- 5.104.1 The proposed activity involves the dredging (with or without off-site disposal) of the lower section of the Milnerton Lagoon from just upstream of the Loxton Road bridge to the estuary mouth with the placement of dredged sediment along channel margin(s).
- 5.104.2 Up to 30,000 m³ of material will be moved within the lagoon to achieve dredging (with or without off-site disposal) of the lower section of the Milnerton Lagoon.
- 5.104.3 Up to 120,000 m³ of material will be dredged during the post-dredging phase to maintain the scoured depth of the dredged channel and an open estuary mouth in accordance with the Maintenance Management Plan, as and when needed to ensure the hydrodynamic function of the lower lagoon is maintained.
- 5.105 I concur with the contents of the Applicant and Delegated Competent Authority's Responding Statements in relation to this ground of appeal.
- 5.106 Considering the above, the EAP clarified that up to 30,000 m³ of material will be moved within the lagoon to achieve dredging (with or without off-site disposal) of the lower section of the Milnerton Lagoon. However, up to 120 000 m³ of material will be dredged during the post-dredging phase to maintain the scoured depth of the dredged channel and an open estuary mouth in accordance with the MMP, as and when needed to ensure that the hydrodynamic function of the lower lagoon is maintained.

Appeal ground 17: Summary of Requested Conditions

- 5.107 Section 24E of the NEMA and regulation 26 of the 2014 EIA Regulations states that contents of the EA should include conditions to ensure that adequate provision is made for the ongoing management and monitoring of the impacts of the activity on the environment throughout the life cycle of the activity. As such, various conditions are attached to the EA depending on the assessment of the significance of the potential environmental impacts of the activity.
- 5.108 Condition 10 of the EA is amended to provide for the following measures in the EMPr:
 - 5.108.1 Amend Paragraph 4.1 of the EMPr to provide that the City of Cape Town's Scientific Services may undertake routine monitoring for the duration of the dredging implementation phase but the monitoring results must be verified by an independent specialist as opposed to the City of Cape Town's Scientific Services.
 - 5.108.2 Amend EMPr to provide for the Milnerton Stakeholders Forum to be made aware of the implementation of dredging activities and provide for a mechanism for raising concerns before, during and after the dredging activities.
 - 5.108.3 Amend the EMPr to provide up-to-date water quality and air quality monitoring data on a publicly accessible platform through the dredging period and the post-dredging monitoring phase.
 - 5.108.4 The registered I&APs must be afforded a 30-days opportunity to comment on the Amended EMPr (and issues raised are responded to and addressed) before it is submitted to the Delegated Competent Authority.
- 5.109 The following additional conditions are included into the conditions of the authorization:

Condition 25:

"Legible photomontages must be created of the sandbanks which will be formed from the dredged material, circulated to the registered interested and affected parties and must be submitted to the Delegated Competent Authority prior to the commencement of the activities."

Condition 26:

"A suitably qualified engineer must be appointed to inspect the bridge foundations pre-commencement of the dredging activities and establish an appropriate exclusion buffer (no-go area) around the support structures during works."

- 5.110 The proposed additional condition in relation to prohibiting dredging activities during the summer months of November to March inclusive is not supported as per the response under **"Appeal ground 7: Premature issuance of environmental authorisation prior to upstream source control"**. The limitation of the authorization to 30,000m³ of dredged material is also not supported as per the response under **"Appeal ground 16: The 120,000 m³ authorisation scope is not adequately assessed"**.
- 5.111 Considering the above, appropriate conditions have been included in the EA in relation to the avoidance, management, mitigation, monitoring and reporting of the environmental impacts of the activities. However, certain conditions have been include into the EA where it has been considered necessary.
6. The National Environmental Management Principles (set out in section 2 of the NEMA) which apply to the actions of all organs of state, serve as guidelines by reference to which any organ of state must exercise any function when taking any decision, and which must guide the interpretation, administration and implementation of any other law concerned with the protection or management of the environment. In terms of the NEMA Principles, the effects of decisions on all aspects of the environment are to be taken into account. As such, the consideration, assessment and evaluation of the social, economic and ecological impacts of activities (disadvantages and benefits) have been undertaken, and the decision is appropriate in the light of such consideration and assessment.
7. In arriving at my decision on the appeal, it should be noted that I have not responded to each and every statement set out in the grounds of Appeal and/ or Responding Statement, and where a particular statement is not directly addressed, the absence of any response should not be interpreted to mean that I agree with or abide by the statement made.
8. I have discharged my decision-making powers when making this decision and I am thus *functus officio* in this regard. My decision is final and your only recourse, should you still be aggrieved by my decision, is to apply to the Western Cape High Court to review my decision.

Sincerely,



Mr. ANTON BREDELL

WESTERN CAPE MINISTER OF LOCAL GOVERNMENT, ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

DATE: 19 OCTOBER 2026

Copied to:

- (1) Mr. Jeremy Rose (Infinity Environmental)
(2) Ms. Sonja Warnich-Stemmet (City of Cape Town)
(3) Mr. Achmad Bassier (DEA&DP: ELE)
(4) Mr. Z. Toefy (DEA&DP)

E-mail: jeremy@infinityenv.co.za
E-mail: sonja.warnichstemmet@capetown.gov.za
E-mail: Achmad.Bassier@westerncape.gov.za
Email: zaahir.toefy@westerncape.gov.za

