



REFERENCE: 14/3/1/A1/18/0484/20

Ms Andrea Korff/ Stefanie Fick
Organisation Undoing Tax Abuse
O'Keefe & Swartz Building
318 Oak Avenue
RANDBURG
2188

Email: info@outa.co.za

Dear Ms Korff

APPEAL LODGED AGAINST A DIRECTIVE ISSUED IN TERMS OF SECTION 28(4) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) FOR THE ALLEGED POLLUTION AND DEGRADATION OF THE DIEP RIVER CATCHMENT AND THE MILNERTON LAGOON

Your Complaint lodged in terms of the abovementioned activity and the Appeal lodged against the Directive issued on 21 September 2020 by the Grade 1 Environmental Management Inspector i.e. the Department of Environmental Affairs and Development Planning's Director: Environmental Law Enforcement, refers.

Please find attached my Appeal decision regarding this matter as issued to the City of Cape Town in terms of section 43(11) of the *National Environmental Management Act, 1998 (Act No. 107 of 1998)*.

Your interest in the future of our environment is appreciated.

Yours faithfully,

ANTON BREDELL
**PROVINCIAL MINISTER OF LOCAL GOVERNMENT,
ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING**

DATE: 22/1/2024

Copied to:
Directorate: Environmental Law Enforcement (Mr A. Bassier)
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REFERENCE: 14/3/1/A1/18/0484/20

The Municipal Manager
City of Cape Town
CAPE TOWN
8000

Attention: Mr Michael Webster (Executive Director: Water and Waste)

Email: Lungelo.Mbandazayo@capetown.gov.za
Michael.Webster@capetown.gov.za

Dear Sir

APPEAL LODGED AGAINST A DIRECTIVE ISSUED IN TERMS OF SECTION 28(4) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) FOR THE ALLEGED POLLUTION AND DEGRADATION OF THE DIEP RIVER CATCHMENT AND THE MILNERTON LAGOON

1. Your Appeal lodged against the Directive that you were issued on 21 September 2020 by the Grade 1 Environmental Management Inspector ("EMI") i.e. the Director: Environmental Law Enforcement of the Department of Environmental Affairs and Development Planning ("DEA&DP"), refers.
2. **EMPOWERING PROVISIONS IN THE APPLICABLE LEGISLATION:**
 - 2.1. Section 43(8) of the *National Environmental Management Act, 1998 (Act No. 107 of 1998)* ("NEMA") states that: "A person who receives a directive in terms of section 28(4) may lodge an appeal against the decision made by the ... provincial head of the department to ... the MEC... within 30 days of receipt of the directive, or within such longer period as the ... MEC... may determine."
 - 2.2. Section 43(11) of the NEMA states that after considering the Appeal lodged in terms of section 43(8), the MEC, as the case may be-
 - (a) May confirm, modify or cancel a directive or any part of a directive; and
 - (b) May specify the period within which the person who received the directive must comply with any part of the directive that is confirmed or modified."
3. After a careful consideration of your Appeal, as well as supporting documentation received and the site inspections conducted, I have decided in terms of section 43(11)(a) of the NEMA to **modify** the abovementioned Directive dated 21 September 2020 with this Appeal Directive.
4. You are directed in terms of section 28(4) of the NEMA as follows:
 - 4.1. Continue with implementation of the City's Action Plan and provided updates insofar as the identified sources of pollution.

- 4.2. Continue to implement the measures as directed in the Directive issued on 21 September 2020, except for the following measures that have been modified as follows:
- 4.2.1. The City of Cape Town's Action Plan (Water Quality Improvement program, Lower Diep River Transversal Action Plan, dated 31 July 2020) as submitted to the DEA&DP with the Action Plan's monthly report on 18 November 2020 must be updated to include the following modifications:
 - 4.2.2. **Ref: Diep 113 - submit the revised pollution incident protocols and contingency plans for the Facility, Koeberg and Sanddrift Pump Stations:**
 - 4.2.2.1. The revised pollution incident protocols and contingency plans for the Facility, Koeberg and Sanddrift Pump Stations must be submitted to the DEA&DP's Directorate: Pollution and Chemicals Management for review and comment. This measure is to be complied with **by the end of October 2021**.
 - 4.2.2.2. The City is required to submit the completed over-arching document and appendices within **thirty 30-calender days** of this Appeal Directive to the DEA&DP.
 - 4.2.2.3. The City must provide an interim remediation/incident management response plan to deal with instantaneous pollution events/emergency incidents that may occur and result in the pollution of the Diep River Catchment and the Milnerton Lagoon within **60-calender days** of this Appeal Directive while the revised pollution incident protocols and contingency plans are being finalised.
 - 4.2.3. **Ref: Diep 114 – Update the Action Plan to expedite upgrading of the Facility by the end of August 2025**
 - 4.2.3.1. This measure to be complied with **by the end of August 2025**.
 - 4.2.3.2. The DEA&DP must be kept informed of the progress with the implementation of this measure in the monthly reports that are being submitted by the City.
 - 4.2.4. **Ref: Diep 116 - Update the Action Plan to expedite the upgrade to the Montague Gardens Sewer Gravity Reticulation Network and screening system by 30 June 2025 in order to prevent blockages into the Theo Marais Canal**
 - 4.2.4.1. The timeframe for upgrade to the Montague Gardens Sewer Gravity Reticulation Network measure is amended to be **completed by 30 June 2025**.
 - 4.2.4.2. The City must indicate to the DEA&DP the measures to be undertaken to reduce the blockages as a result of foreign objects entering the sewer reticulation network within **60-calender days** of this Appeal Directive.
 - 4.2.5. **Ref: Diep 117 - Update the Action Plan to expedite the Du Noon and Doornbach Sewer Gravity Reticulation Network by 31 December 2023**
 - 4.2.5.1. This measure must be complied with **by the end of December 2023**.
 - 4.2.5.2. The DEA&DP must be kept informed of the progress with the implementation of this measure in the monthly reports that are being submitted by the City.

- 4.2.6. **Ref: Diep 120 & 122 - Update the Action Plan to expedite upgrade of the Koeberg Road Pump Station (which includes plan, design and construction of stormwater to sewer diversion/s)**
 - 4.2.6.1. This measure falls under the Montague Gardens Bulk Sewer Upgrade project to be completed between **1 July 2022 and 1 June 2024**.
 - 4.2.6.2. Progress reports on the implementation of this measure must be included in the monthly reports submitted to the DEA&DP.
- 4.2.7. **Implement measures at strategic outlets to trap all the general waste from flowing into the Diep River and Milnerton Lagoon (e.g. nets at the mouths of stormwater outlets to capture the general waste, as implemented in the Soet River Catchment), by November 2021**
 - 4.2.7.1. The City is required to implement this measure **by the end of November 2021**. Progress reports on the development of this measure must be included in the monthly reports submitted to the DEA&DP.
 - 4.2.7.2. The City must however provide an interim response plan to deal with the trapping and clean-up of general waste at storm-water outlets flowing into the Diep River & Milnerton Lagoon, **within 60-calen der days** of this Appeal Directive, while the Plan is under development and submit it to the DEA&DP.
 - 4.2.7.3. Progress reports on the implementation of the interim measure must be included in the monthly reports.

5. REASONS FOR THIS APPEAL DECISION:

The reasons for modifying the Directive are outlined herewith below:

Appeal ground 1: Factual background

5.1. Section 28(1) of the NEMA states that “[e]very person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment...

(4) The Director-General, the Director-General of the department responsible for mineral resources or a provincial head of department may, after having given adequate opportunity to affected persons to inform him or her of their relevant interests, direct any person who is causing, has caused or may cause significant pollution or degradation of the environment to-

(a) cease any activity, operation or undertaking;

(b) investigate, evaluate and assess the impact of specific activities and report thereon;

(c) commence taking specific measures before a given date;

(d) diligently continue with those measures; and

(e) complete those measures before a specified reasonable date.

Provided that the Director-General or a provincial head of department may, if urgent action is necessary for the protection of the environment, issue such directive, and consult and give such opportunity to inform as soon thereafter as is reasonable.

(5) The Director-General, the Director-General of the department responsible for mineral resources or a provincial head of department, when considering any measure or time period envisaged in subsection (4), must have regard to the following:

(a) the principles set out in section 2;
(b) the provisions of any adopted environmental management plan or environmental implementation plan;
(c) the severity of any impact on the environment and the costs of the measures being considered;
(d) any measures proposed by the person on whom measures are to be imposed;
(e) the desirability of the State fulfilling its role as custodian holding the environment in public trust for the people; and
(f) any other relevant factors."

- 5.2. The DEA&DP therefore has a discretionary power to issue a Directive irrespective if the transgressor is undertaking reasonable measures to address pollution or degradation of the environment. A Directive could have been issued to the City without even affording them an opportunity to make representations if urgent action was required for causing pollution and degradation of the environment.
- 5.3. In response to the City's correspondence dated 4 November 2019, the DEA&DP clarified that, as the owner of the land (and/or properties) in question, the City of Cape Town has an obligation in terms of section 28 of the NEMA.
- 5.4. The NEMA principles that apply to the actions of all organs of state that may significantly affect the environment specifically require *inter alia* that:
- 5.4.1. Environmental management must place people and their needs at the forefront of its concern and serve their physical, psychological, developmental, cultural and social interests equitably.
 - 5.4.2. Development must be socially, environmentally and economically sustainable.
 - 5.4.3. That the disturbance of ecosystems and loss of biological diversity are avoided, or where they cannot be altogether avoided, are minimised and remedied.
 - 5.4.4. That a risk-averse and cautious approach is applied, which considers the limits of current knowledge about the consequences of decisions and actions.
 - 5.4.5. The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.
 - 5.4.6. That negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.
 - 5.4.7. Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.
 - 5.4.8. Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.
- 5.5. Below is the full background on this matter which has culminated into the Directive currently under this appeal process and this background also provides a rationale for the issuance of the Directive:
- 5.5.1. Numerous Complaints were received by the DEA&DP from various Complainants, the Milnerton Central Residents Association stating *inter alia* the following:

- 5.5.1.1. There is pollution and degradation of the Diep River Estuary/ Milnerton Lagoon.
- 5.5.1.2. Most recent bacterial counts received (based on the City of Cape Town's inland and coastal water test results) show levels of over 120,000 Escherichia coli ("E. coli") / 100ml with some results over a million.
- 5.5.1.3. The estuary is allegedly so polluted that it can be smelt as sewerage at distances of over 500m. This presents a very real health hazard to residents, some of whose homes border directly onto the lagoon. The surrounding beaches are also affected.
- 5.5.1.4. Raw sewerage flows from the Theo Marais storm water canal and into the Duikersvlei stream and then into the Diep River.
- 5.5.1.5. The pollution and degradation of the Diep River and the Milnerton Lagoon is a known and documented problem site which still has not been addressed, after more than 6 years.
- 5.5.1.6. Assistance is requested in ensuring that the City of Cape Town complies with the NEMA requirements as the Complainants have exhausted all other avenues.
- 5.5.1.7. Sewerage pours into the Table Bay Nature Reserve like a river with no evidence of any mitigation procedures.
- 5.5.1.8. When the Diep River Mouth closes, as it is likely to in summer, the risk exists that the Milnerton Lagoon will turn into a 6 km long cesspool as it is difficult to keep the river mouth open artificially.
- 5.5.1.9. The Complainants have exhausted all normal channels having lodged numerous complaints at the City of Cape Town's Department of Waste and Sanitation about the ongoing sewage pollution problem at the Milnerton lagoon which forms part of the Diep River estuary and the City of Cape Town-run Table Bay Nature Reserve.
- 5.5.1.10. Having taken water samples since the beginning of 2020, it has become increasingly clear that the main culprit is the Potsdam WWTW, administered by the City.
- 5.5.1.11. The results for the past couple of months show how the E. coli levels at their sampling points have drastically become worse, despite the City reporting that the water quality is improving.
- 5.5.1.12. The City far exceeds the limits imposed by its Water Use Licence agreement and general legislative requirements, relaxed to the sufficient treatment and discharging of wastewater, which is classified as a hazardous waste.
- 5.5.1.13. The DEA&DP's Directorate: Environmental Law Enforcement issued a Pre-directive (dated 26 March 2020) to the City for the ongoing pollution being caused to the Diep River and Milnerton Lagoon as a result of partially/ untreated sewage emanating from the Potsdam WWTW and other stormwater canals into the Diep River Catchment.
- 5.5.1.14. The DEA&DP's investigation into this matter found that the Diep River continues to hold significantly polluted water. It found that the water within the Diep River is filled with stagnating raw sewage along various sections of the river and that these particular sections have extremely high E. coli and faecal coliforms count. The investigation also found that raw sewage continues to flow within the canal adjacent to the Theo Marais Sports Complex.
- 5.5.1.15. The Pre-Directive issued by the DEA&DP directed the City to:
 - Commence with a thorough clean-up operation of the waste/ pollutants from the stormwater canals, adjacent to the Theo Marais

Sports Complex and the Potsdam WWTW towards the mouth of the Milnerton Lagoon area.

- Amend and submit to the DEA&DP the City's action plan for approval.
 - Erect adequate signage along the Diep River Catchment.
 - Submit update reports on the implementation of the City's action plan to the DEA&DP.
 - Conduct meetings or engagements with affected groups to communicate and inform the communities of the City's actions, in accordance with their action plan.
- 5.5.2. Despite the DEA&DP's efforts in addressing the situation and issuing the City with a Pre-Directive, little meaningful action has been taken, until recently.
- 5.5.3. The criminal conduct aspect of the situation does not appear to be recognised and was not at all considered in the past.
- 5.5.4. The interim plan to deal with polluted water currently flowing into the Diep River is ineffective.
- 5.5.5. While they understand that short term solutions such as to breach the mouth when lagoon becomes eutrophic, does heed some positive results, as a long-term plan it amounts to using the river as an informal sewer and might even be seen as contravening the National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("ICMA").
- 5.5.6. It is their view that the City has a duty towards its communities to resolve this situation as a matter of urgency. Failure to act in resolving the pollution of the Diep River and Milnerton Lagoon, will amount to a dereliction of duty on behalf of the City.
- 5.5.7. It is common cause that the "pollution caused" are due to various different factors. However, the City has a responsibility to practice due diligence in the management of the City's resources and to hold those entrusted with this responsibility, accountable if they do not execute their respective duties.
- 5.5.8. The fact of the matter remains that the pollution caused is due to various circumstances and the crisis did not happen overnight but has persisted for almost 8 years.
- 5.5.9. It is not believed that the City is truly serious about holding those accountable and surely some officials are entrusted with the responsibility to ensure that due diligence is followed and if not, should be held accountable. If the City is not willing to deal with this issue, then it stands to reason that the oversight authority should do so alternatively.
- 5.5.10. The pollution continues unabated and the City's Potsdam WWTW is non-compliant. This is a fact supported by their ongoing testing based on their latest sampling report.
- 5.5.11. The complainants are of the opinion that the City's current interventions are only addressing failing systems and infrastructure that should in any event be working effectively. They would like to see what action the City will be taking to actively remedy the state of the lagoon, which at this stage is still filled with stagnant, polluted effluent and should be a functioning estuary supporting marine and estuarine life.
- 5.5.12. The complainants therefore propose that the DEA&DP direct the City to expand their efforts in providing the following interventions:
- 5.5.12.1. An approved estuarine management plan which addresses the marine life and ecosystem function of the Milnerton Lagoon.

- 5.5.12.2. A plan to actively improve the water condition/ quality within the Milnerton Lagoon and not just sealing off overflowing pipes.
 - 5.5.12.3. Estuary rehabilitation plans and as far as humanly possible restoring the lagoon, back to the condition that it should be, which would support marine life and allow the public to enjoy the lagoon waters.
 - 5.5.13. The City's Pollution Abatement Plan for the Diep River Catchment and Milnerton Lagoon is not adequately being implemented, in order to prevent the ongoing pollution and call on the DEA&DP's Directorate: Environmental Law Enforcement to issue the City with a Directive in terms of section 28(4) of the NEMA.
- 5.6. The DEA&DP's Directorate: Environmental Law Enforcement and officials from the DEA&DP's Directorate: Pollution and Chemicals Management and an EMI from the National Department of Environment, Forestry and Fisheries: Oceans and Coast ("DEFF") conducted numerous Site Inspections to investigate the alleged pollution and degradation of the Diep River catchment and the Milnerton Lagoon. The following, amongst others, were noted during the Site Inspection:
- 5.6.1. The Diep River water has/had a dark greenish colour showing presence of what appears to be algae.
 - 5.6.2. There is polluted water around and on the Diep River estuary.
 - 5.6.3. The Diep River estuary has a foul odour.
 - 5.6.4. The river mouth contains algae.
- 5.7. During the Site Inspections, the City stated *inter alia* that:
- 5.7.1. The hydraulic load at the Potsdam WWTW is approximately 42 ML per day and the facility has two bioreactors capable of handling 30 ML per day and 17 ML per day respectively.
 - 5.7.2. The power failures result in the discharge of partially treated effluent, as there is no emergency retention available.
 - 5.7.3. The main generator does not always start up immediately and these delays add to the over extension of the system. The power outages coupled with the unreliability of the generator results in a final effluent of poor standard.
 - 5.7.4. An upgrade of the entire facility is planned to take place in the next five years to improve the hydraulic capacity and the treatment technology.
 - 5.7.5. There are instances where effluent standards of the Water Use Licence are exceeded but the WWTW is not the sole contributor to the downstream pollution load.
 - 5.7.6. Daily samples are taken and tested in the onsite laboratory in order to make the necessary daily adjustment to the treatment process, whereas weekly samples are sent to the City of Cape Town's Scientific Services Laboratory in Athlone.
- 5.8. On 20 December 2019, the Department of Water and Sanitation ("DWS") issued a Notice of Intention to Issue a Directive in terms of sections 19(3) and 53(1) of the *National Water Act, 1998 (Act No. 36 of 1998)* ("NWA") stating *inter alia* the following:
- 5.8.1. The final water quality (effluent) samples at Potsdam WWTW and tested by the City of Cape Town were extracted from Integrated Regulatory Information System ("IRIS") database and interpreted. The result from April 2019 to November 2019 shows that certain parameters such as Ammonia, Chemical Oxygen Demand and E. coli, do not comply with the effluent standard as set out authorised in terms of the Water Use Licence dated 30 August 2015.
 - 5.8.2. The Intention to Issue a Directive relates to the contravention of section 19(1) of the NWA which states:

“An owner of land, a person in control of land or a person who occupies or uses the land on which-

(a) Any activity or process is or was performed or undertaken; or

(b) Any other situation exists, which causes, has caused or is likely to cause pollution of a water resource, must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring.”

- 5.8.3. Based on the above results from the IRIS System provided by the City of Cape Town, the non-compliance of the treated effluent is causing pollution along the Diep River and Milnerton lagoon. The municipality in terms of section 19(1) of the NWA has failed to prevent pollution along the Diep River and Milnerton lagoon.
 - 5.8.4. The municipality must investigate the non-compliance of the treated effluent that is causing pollution of the Diep River and the Milnerton lagoon and submit a clean-up plan indicating date of commencement and a completion date. The clean-up action plan must also detail how the treated final effluent will be improved to meet the requirements of the August 2005 Water Use Licence.
 - 5.8.5. The municipality must undertake an impact study on the Diep River and Milnerton Lagoon to assess the effects of the poor treated effluent quality. Water quality samples must be taken at the Blaawberg Bridge upstream of the WWTW; at the WWTW discharge point; at the coordinate point downstream of the WWTW and the mouth of the Diep River estuary. The parameters to be tested are those contained on the Water Use Licence. The impact study must investigate the effects that the treated effluent has had on the ecological health (goods and services) and tourism and recreational value of the Diep River and Milnerton lagoon.
 - 5.8.6. The failure to make representations by a certain date was going to result in the DWS issuing the municipality with a Directive in terms of sections 19(1) and 53(1) of the NWA.
- 5.9. On 15 January 2020, water quality monitoring results for the alleged sewerage pollution of the Milnerton Lagoon, Cape Town were received from the DEA&DP's Directorate: Pollution and Chemicals Management. This report stated *inter alia* that:

Discussion and observations

- 5.9.1. Officials from the DEA&DP's Directorate: Pollution and Chemicals Management and the Directorate: Environmental Law Enforcement collected water quality samples at the mouth of the estuary, stormwater canal and slipway between the vehicle and footbridge at Woodbridge island and the final effluent dam of the Potsdam WWTW.

Water quality results

- 5.9.2. The bacteriological results for sites 1 – 3 are significantly above the Target Water Quantity Range for intermediate contact as per the South African Water Quality Guidelines, Volume 2, Recreational Water Use, 1996. The results for site 4 also exceed the General Authorisation limits for the discharge of wastewater into a water resource for E. coli, Ammonia, Electrical conductivity, Chemical Oxygen Demand and Suspended Solids.
- 5.9.3. During their discussions with the City of Cape Town, the City stated that the reason for the discharge of sub-standard effluent from the Potsdam WWTW was due to the recent power outages. However, from the effluent monitoring results received from the City of Cape Town, they can see that the Potsdam WWTW has not been meeting the General Authorisation limits for E. coli, CODs and Ammonia in most sampling results since January 2019,

before the power outages occurred. There are also some exceedances in Suspended Solids and Phosphates.

- 5.9.4. Further monitoring results from the City of Cape Town for the Rietvlei and Diep River Catchment indicate that there are other factors which contribute to the E.coli levels in the catchment as monitoring points further downstream of the Potsdam WWTW, have higher E. coli levels than the first monitoring point just downstream of the Potsdam WWTW. The E. coli counts at most of the monitoring points in this catchment are significantly above the Target Water Quality Range for intermediate contact as per the South African Water Quality Guidelines, Volume 2: Recreational Water Use, 1996. This shows that this section of the catchment and estuary is severely polluted and poses a threat to human health.
- 5.9.5. From their monitoring results of 11 December 2019, they can also see that the sample taken at the Potsdam WWTW (site 4) had a lower E. coli count than the sample taken at Woodbridge Island (site 3) downstream, though it still exceeds the General Authorisation limits. This further corroborates the previous statement that E. coli counts further downstream of the Potsdam WWTW are most likely due to other factors such as runoff from the nearby informal settlements into the lagoon/ estuary via the stormwater outlets, etc.
- 5.9.6. In light of the abovementioned bacteriological results, the Directorate: Pollution and Chemicals Management proposed that the Directorate: Environmental Law Enforcement issue a letter to the City of Cape Town requesting the following information:
 - 5.9.6.1. The City of Cape Town must provide measures for dealing with power outages (in the light that additional load shedding is likely to occur) and further investigate why the Potsdam WWTW facility is not able to reach the compliance levels for the discharges.
 - 5.9.6.2. The City of Cape Town should state what the various possible sources of pollution are and which sources result in the high levels of E. coli.
 - 5.9.6.3. The City of Cape Town must provide a list of projects/ measures/ initiatives undertaken in the 2018/19 and 2019/20 financial years and that will be undertaken in the 2020/21 financial year with projected budget allocations.
 - 5.9.6.4. Short, medium- and long-term measures must be provided as to how the City of Cape Town plans to tackle these pollution sources and reduce the E. coli levels in the catchment, as the current status quo is unacceptable and poses a risk to human health and the environment.
- 5.10. On 17 January 2020, the City of Cape Town submitted their representations (which were submitted to the DWS on 15 January 2020) to the DEA&DP's Directorate: Environmental Law Enforcement in response to the Pre-directive of the DWS, which stated the following:

Introduction and context

- 5.10.1. The City confirms the results of the testing of effluent from Potsdam WWTW as set out in the DWS letter. The statement that the effluent quality does not comply with the Water Use Licence dated 30 August 2015 is noted.
- 5.10.2. The contents of the Water Use Licence dated 30 August 2005 are still under discussion between the DWS and the City. The City cannot meet certain of the water quality criteria set out in the licence and this has been recorded on the IRIS System. The City submitted extensive comments with regards to the Water Use Licence and is still engaging with the DWS's regional office

to resolve the contents. It is the City's intention to continue these engagements.

- 5.10.3. The Pre-directive refers only to the water quality data pertaining to the final effluent from the Potsdam WWTW and has been issued on the premise that the poor water quality in the river and lagoon is entirely due to the quality of this effluent. In fact, there are numerous other sources of pollution which have more substantive impacts upon the water quality, as is confirmed by the data that the City has available. These include:
 - 5.10.3.1. Pollution resulting from the communities unlawfully dumping sewage and other waste materials into the stormwater system.
 - 5.10.3.2. Pollution arising from sewer reticulation overflows/ leaks and bursts due to the communities flushing and dumping materials other than sewage into the sewer system.
 - 5.10.3.3. Runoff of diverse pollutants from the Joe Slovo and Dunoon informal settlements flowing into the river.
 - 5.10.3.4. Diffuse sources from upstream industrial and agricultural activities.
- 5.10.4. Since the abovementioned sources of pollution are diffuse and intermittent and are due to the acts of various role-players, it is not fully possible to control them.
- 5.10.5. In addition, due to rags, debris and sand entering the WWTW with the influent sewage, the inlet screens and other equipment are susceptible to damage.

City's efforts to improve the WWTW effluent quality

- 5.10.6. The City is in the process of an upgrade project for the WWTW, in respect of which engineering consultants are currently busy with the design process. This will take into account inter alia the changes experienced over time in the influent waste water quality. The upgrades and extensions to the WWTW include advanced membrane bioreactor and disinfection technologies. The project was initiated in 2016 and will cost approximately R1.75 billion. Demolition of obsolete process sections was completed, and tender submissions for the civil, mechanical and electrical work were due for completion. Project completion is scheduled for 2024.
- 5.10.7. The following steps have already been voluntarily undertaken to improve the WWTW effluent quality in the immediate future:
 - 5.10.7.1. A sludge dewatering press maintenance specialist was brought in to advise on rectifying recurring problems with the dewatering equipment.
 - 5.10.7.2. In the process of urgently procuring a new press via supply chain deviations. In addition, it is intended to move another mobile press from the Cape Flats WWTW and both will be deployed at Potsdam WWTW. This will greatly enhance the quality of the effluent. However, the emergency procurement may be hampered by the lengthy supply chain processes.
 - 5.10.7.3. A contractor appointed to manage the disinfection of the final effluent was to be on site before the end of January 2020. Disinfection will assist greatly in improving the effluent quality.
 - 5.10.7.4. The WWTW was subject to audit inspections by the DWS (in November 2019) and the provincial authorities together with the DEFF (in December 2019). Feedback received thus far indicates that various departments are satisfied with the City's performance.
 - 5.10.7.5. The results of the December 2019 and early January 2020 effluent analyses show a substantial improvement in its quality, which is now compliant with the licence requirements, except for the E. coli count, which is above the

zero indicated in the licence. The City has been questioning whether the requirement should be zero, as waste water treatment plants are generally unable to meet this standard. Furthermore, animals contribute to E. coli naturally occurring in the environment.

5.10.7.6. The City submits that the interventions outlined above already constitute a "Clean-up plan" as required in terms of the Pre-directive.

Representations with regard to the proposed impact study to assess the effects of the Potsdam effluent quality

5.10.8. The City is already in possession of extensive water quality information which it can use to measure compliance with the parameters set out in the Water Use Licence. The City undertakes regular testing of water quality of the final effluent, at points immediately upstream and downstream of the WWTW. In addition, the City undertakes regular sampling at other points in the lower and upper Diep River catchment including the Milnerton Lagoon. The results of these various tests serve to provide a comprehensive understanding of the water quality from time to time. The City is willing to make the results available to the DWS upon request.

5.10.9. It is already known to the City that the effluent is not the only and not the major cause of the pollution in the river and lagoon. Thus, the proposed study, if it seeks to establish the impact of the WWTW alone, will provide a unidimensional analysis of a multidimensional problem, which will not be useful. Pollution from various diffuse sources referred to herein will remain notwithstanding the upgrade of the WWTW.

5.10.10. Furthermore, with many contributing factors at play at various times, it will not be possible to single out the effects of the effluent alone on water quality or on ecological health, tourism and recreation.

5.10.11. In view of the circumstances outlined above, the City submits that sufficient information is already available to understand the impact of various pollutants on the river and lagoon, and that undertaking a new impact study as required by the DWS is unwarranted.

Summary of representations

5.10.12. The premise upon which the Pre-directive was founded, namely that the poor water quality is due to the WWTW effluent, is flawed.

5.10.13. The City's current and planned upgrades to the WWTW infrastructure and processes constitute a "clean-up plan" as required by the Pre-directive.

5.10.14. It will not be useful and will constitute wasteful expenditure to undertake a study of the impacts of the WWTW effluent on water quality, ecological infrastructure, tourism and recreation.

5.10.15. In conclusion, it is submitted that the issuance of a final Directive pursuant to the Pre-directive would not be administratively fair in the circumstances outlined above and is furthermore not necessarily given the pro-active steps already taken and planned by the City to improve the water quality.

5.11. On 12 February 2020, the DEA&DP's Directorate: Environmental Law Enforcement requested the City to provide it with a report and action plan, which *inter alia* include the following:

5.11.1. Clean-up of the solid waste situated at the stormwater outlets flowing into the Milnerton Lagoon.

5.11.2. Implement adequate measures at the stormwater outlets to prevent solid waste from flowing into the Milnerton Lagoon in future.

- 5.11.3. Implement adequate measures to effectively deal with the current power outages/ load-shedding, in order to prevent the discharge of sub-standard effluent from the facility, as the current measures are inadequate.
 - 5.11.4. Investigate the source(s) of pollution emanating upstream from the stormwater canal adjacent to the Theo Marais Sports Complex, Milnerton, as it forms part of the City's stormwater management system.
 - 5.11.5. Proposed short, medium and long-term measures to be implemented in order to improve the current state of the Milnerton Lagoon.
 - 5.11.6. A list of projects/ initiatives/ measures to be undertaken within the City's current (2019/20) and following financial years (2020/21), with adequate budget projections and timeframes, in order to address the pollution caused by the run-off from the neighbouring human settlements, agricultural and industrial discharge into the City's stormwater outlets, in respect of the City's by-laws relating to stormwater management.
- 5.12. On 20 February 2020, a Pre-directive was issued to the City by the DEFF, in terms of section 28 of the NEMA and section 58 of the ICMA, in order to make written representations as to why a Directive should not be issued for the alleged pollution and degradation of the Diep River catchment and the Milnerton Lagoon. The Pre-directive was issued due *inter alia* to the following:
- 5.12.1. The City is responsible for:
 - 5.12.1.1. Managing the stormwater infrastructure in Milnerton, Potsdam WWTW and the Milnerton Lagoon, which is an estuary of high ecological importance.
 - 5.12.1.2. Ensuring good water quality standards of the surrounding environment which should be in line with the water quality guidelines for recreational use.
 - 5.12.2. It has been observed that the Milnerton lagoon has very little, to no marine life due to poor water quality and pollution being discharged into the lagoon. The sediment in the lagoon is dark grey/ black which suggests the sediment may be anoxic as a result of the decomposing bacteria. The water is dark and discoloured and there is a foul odour, similar to that of sewage which emanates from certain parts of the lagoon.
 - 5.12.3. Samples were collected at three different sites around the Milnerton Lagoon and one sample was collected at the discharge point of the Potsdam WWTW.
 - 5.12.4. After independent analysis by the Council for Scientific and Industrial Research, the bacteriological results showed that the lagoon had E. coli levels which were significantly above that of the Target Water Quality Range for immediate contact as per the South African Water Quality Guidelines, Volume 2: Recreational Use, 1996.
 - 5.12.5. Several stormwater outlets are discharging polluted effluent into the Milnerton Lagoon. The accumulation of all the pollution has resulted in the lagoon becoming a public health risk and has caused significant degradation of marine life within the lagoon.
 - 5.12.6. The discharge of polluted effluent into Milnerton lagoon and its surrounding coastal waters has been an ongoing issue for a number of years. The City is responsible for causing significant harm to the marine and coastal environment and has failed in its duty to protect the well-being of the environment.
- 5.13. On 13 March 2020, the City responded to the DEA&DP's Directorate: Environmental Law Enforcement's 12 February 2020 letter *inter alia* as follows:

- 5.13.1. It is confirmed that the entire WWTW facility will be upgraded in the next five years.
 - 5.13.2. There are two large generators on site which are capable of running the entire plant as well as two back-up generators, one of which is for raw sewage and runs the head of works (screens and degritters and the raw sewage pump station. However, one of the generators is currently not functioning and is in the process of being repaired. The remaining generator has occasionally failed but this has been overcome by resetting it after each power failure to ensure that it switches on at the appropriate time).
 - 5.13.3. In the event of the main generators not working sewage will be pumped into the reactor but will not be aerated and thus partially treated effluent may enter the pond system. The second back-up generator is used to power Ultra Violet ("UV") disinfection system. The UV disinfection system was under repair, which had to be completed at the end of April 2020.
 - 5.13.4. The electronic linkages between the large and small generators have been improved so as to obviate the possibility of all generators failing simultaneously. If there is any overflow from the plant this is stored in the stormwater overflow dam and pumped back into the plant upon restoration of power to the raw sewage pumps.
 - 5.13.5. It is correct that inflows into the plant are lower in times of water restrictions.
 - 5.13.6. It is correct that there is daily water testing occurring in order to optimise the treatment process.
 - 5.13.7. The City is aware of the water testing results.
 - 5.13.8. It is correct that other sources of pollution contribute to the water quality in the catchment and lagoon.
 - 5.13.9. The City noted the observations from the site visit. Pollution problems in the catchment and lagoon, including the stormwater system, are being comprehensively addressed in terms of Annexures A and B attached to their letter.
 - 5.13.10. Referred to Annexure B of their letter, being a report drafted by the Water and Sanitation Informal Settlements Services Branch, that set out the parameters of service delivery to informal settlements in the catchment and existing and planned interventions relating thereto.
- 5.14. On 27 March 2020, a Pre-directive was issued by the DEA&DP's Directorate: Environmental Law Enforcement to the City to make written representations as to why a Directive should not be issued for the alleged pollution and degradation of the Diep River catchment and the Milnerton Lagoon. The Pre- directive was issued due *inter alia* to the following:
- 5.14.1. During the investigation of the alleged pollution and degradation of the Diep River catchment and the Milnerton Lagoon, it was confirmed that the action plan is not being adequately implemented by the City in order to prevent the ongoing pollution of the Diep River Catchment and Milnerton Lagoon, which poses a significant risk to the health and well-being of inhabitants of the area and the general public.
 - 5.14.2. The Diep River continues to hold significantly polluted water.
 - 5.14.3. The water within the Diep River is filled with stagnating raw sewage along various sections of the river. These particular sections have extremely high E. coli and faecal coliforms count.
 - 5.14.4. Raw sewage continues to flow within the canal adjacent to the Theo Marais Sports Complex and has not been addressed since December 2019.

- 5.14.5. The spike in raw sewage released into the Diep River during the December 2019 has not been adequately addressed.
 - 5.14.6. The City's letter dated 13 March 2020, does not adequately address the requests outlined within the Department's letter, dated 12 February 2020.
 - 5.14.7. The Pollution Abatement Programme for addressing pollution within the Diep River Catchment is very vague.
 - 5.14.8. "Annexure A" of the City's response does not adequately address the clean-up of the Diep River Catchment and the various stormwater canals leading into the catchment, as it has no measurable timeframes and some of the actions are outdated.
- 5.15. On 13 March 2020, Representations were received from the City, which stated *inter alia* that:
- 5.15.1. The City, on 20 February 2020, embarked upon a Water Quality Improvement Programme led by its Catchment, Stormwater and River Management Branch, with the Diep River and Milnerton Lagoon identified as a priority area. The programme is a transversal programme involving numerous City departments as well as other organs of state, including the DEA&DP.
 - 5.15.2. The City notes the DEA&DP's comments with regard to the follow-up inspection and sampling undertaken. However, the City wishes to comment that single and isolated samples are not necessarily useful for determining trends in water quality. Progress with implementation of the City's plan will be apparent from the updated plan which will be submitted for consideration. It is premature to conclude at this point that there is no progress with the implementation of the plan.
 - 5.15.3. The City acknowledges the persistence of pollution in the Diep River.
 - 5.15.4. The City further acknowledged that there have been occasional sewage spills, for various reasons including sabotage to the infrastructure, which has resulted in some polluted areas in the river, canal and lagoon.
 - 5.15.5. The City confirms that there have been intermittent flows of sewage into the Theo Marais canal which have been exacerbated by illicit industrial discharges, dumping of foreign objects into sewers, load shedding and pump station design and age. Sewage does not flow permanently into the canal. The City has responded to the intermittent flows by pumping the canal weir out whenever pollution is observed.
 - 5.15.6. The City has addressed the ingress of sewage into the water in a number of ways since December 2019. These include the sealing off of pond No. 2 outlet coming from Potsdam WWTW and the pumping out of spillages.
 - 5.15.7. The City disagreed that its letter of 13 March 2020 does not adequately address the request outlined in the DEA&DP's letter of 12 February 2020. The interventions reflected in the City's action plan must be given time to take effect, adequately address the DEA&DP's concerns. The City has sought clarity with regard to the aspects in which its letter does not address the requests outlined in the DEA&DP's letter.
 - 5.15.8. The City notes the DEA&DP's comments regarding purported vagueness of the pollution abatement plan.
 - 5.15.9. The City notes the DEA&DP's comment and will elaborate on the projects comprising the action plan in its revised plan which was to be sent to the DEA&DP. The reason for including already completed projects is in order to create a holistic picture and to allow for the impacts of completed interventions to be noted in future.

- 5.15.10. The City notes the DEA&DP's comments with regard to the cause of the pollution but reiterates its position, as stated in its letter of 13 March 2020, that the pollution in the Diep River and Milnerton is caused by a multitude of diffuse factors, some of which are outside of the City's control. It should furthermore be noted that other organs of state besides the City are responsible for the condition of the river and lagoon. In particular, the river upstream of the N7 is not within the jurisdiction of the City, and lack of regulation there negatively impacts upon water resources downstream.
- 5.15.11. The City commenced with a clean-up of the relevant stormwater canals on 13 March 2020, by pumping out the stilling basin at the weir of the Theo Marais Canal by vacuum tanker. By Friday 3 April 2020 the City was to commence work to block off the canal and extract all the water therein to sewer, and then do a thorough clean-up to remove all sediments and solids from the canal downstream of the weir. Thereafter, the City will divert flow from the canal downstream of the weir and remove sediments from the canal between the weir and the junction of the canal with the Diep River.
- 5.15.12. The City requested that the DEA&DP provide clarity with regard to how far towards the river mouth the City is expected to clean, bearing in mind that the removal of sediments downstream of the Theo Marais Canal may cause re-suspension thereof and render the situation at the river mouth worse. The City furthermore requests clarity as to what coastal public properties are required to be cleaned and whether this has been addressed with other responsible organs of state.
- 5.15.13. The City has already placed extensive signage in the area. It is hereby requested that the DEA&DP indicate to the City where it wishes additional signage to be placed.
- 5.15.14. The City will submit bi-weekly reports as requested.
- 5.15.15. The City will endeavour to conduct all engagements possible within the limits of the COVID- 19 Disaster Management Regulations. The Water Quality Improvement Programme has a stakeholder engagement workstream which works together with a broad spectrum of stakeholders including the DEA&DP.
- 5.15.16. The City submitted that the issuance of a final Directive would not be lawful, in that it would violate the principles of co-operative government which require that organs of state cooperate with each other in good faith in matters of mutual interest, as per section 41(1)(h) of the Constitution of the Republic of South Africa, 1996.
- 5.15.17. The City submitted that the issuance of a final Directive is unnecessary due to the fact that the City:
 - 5.15.17.1. Has at all relevant times together with officials at the DEA&DP and other organs of state been seeking solutions to the problem at hand.
 - 5.15.17.2. Has commenced implementation of a plan of action as demanded in the letter of 12 February 2020.
 - 5.15.17.3. Is addressing the problem at hand to the best of its ability within the limits of its authority and available resources.
- 5.15.18. The City requests that, upon receipt of the updated action plan, the DEA&DP consider whether the plan and its monitoring system can be approved by the DEA&DP, either as submitted or modified by agreement.
- 5.15.19. The City wishes to establish a platform for more detailed engagement with the DEA&DP, especially given the mutual understanding reached at the meeting held on 6 February 2020, to the effect that the City and the

DEA&DP would embark upon a more collaborative approach going forward.

5.15.20. The City wishes to be informed whether the further investigations by the DEA&DP and the issuance of the pre-Directive were prompted by Complaints received over and above those received prior to the DEA&DP's letter of 12 February 2020.

5.15.21. The City trust that the DEA&DP will give due consideration to its representations and looks forward to fruitful future engagement with the DEA&DP.

5.16. On 1 June 2020, the City submitted a report titled "[a]nalysis of ambient water quality in the Diep Catchment within the City of Cape Town area", to the DEA&DP's Directorate: Environmental Law Enforcement. This report stated *inter alia* the following:

Diep River downstream of Potsdam WWTW

5.16.1. The Potsdam WWTW is located a short distance downstream of the Blaauwberg Road bridge. Water Quality in the channel is compromised by treated effluent discharge from the WWTW which was particularly overloaded during 2019. Measures to address this have been implemented e.g. belt press and repair of UV disinfection/ supplementary dosing with chlorine chips. The WWTW is also due for a major upgrade which will take several years to complete.

Milnerton Lagoon at Wooden bridge

5.16.2. Water quality in the lagoon at this location is poor and reflects upstream sources such as the WWTW.

Milnerton Lagoon near sea outlet

5.16.3. Water quality in this lowest section of the lagoon is generally similar to that upstream, although inflows of the sea water result in some flushing/ dilution of pollutant loads.

Theo Marais Canal

5.16.4. The constructed Theo Marais Canal daylights from a large below-ground culvert that drains the industrial area of Montague Gardens and residential suburb of Bothasig. Water quality in the canal at the sample location located close to the Koeberg Road Pump station is severely compromised. Sources of faecal contamination are likely frequent overflows from this pump station and sewage spills, overflows and illicit discharges that enter the stormwater culvert from Montagu Gardens and Bothasig areas. Measures to address the poor functioning of the Koeberg Pump station are being investigated and mitigation includes removal of contaminated sediments from the canal in the vicinity of the pump station and dosing with bioremediation products to break down organic loads.

5.17. On 2 September 2020, the DEA&DP's Directorate: Environmental Law Enforcement received recommendations for the Directive from the DEA&DP's Directorate: Pollution and chemicals Management which stated *inter alia* the following:

Potsdam WWTW

5.17.1. The City should furnish the DEA&DP with monthly water quality results of not only the final effluent of the Potsdam WWTW, but of the entire stretch of the Diep River for the monitoring point upstream of the Potsdam WWTW at Blaauwberg Bridge to the lagoon mouth.

5.17.2. A monitoring point must be included in the monthly sampling run for the Diep River at the exact discharge point of the final effluent into the river from the WWTW. Why is the final effluent sample being taken after

- chlorination before the effluent is discharged into the maturation pond and not at the point of discharge into the Diep River?
- 5.17.3. There is currently a build-up of sludge in the river at the discharge point of the Potsdam WWTW. This is likely due to historical discharges of non-compliant effluent. However, this sludge build-up has the potential to contaminate the final effluent being discharged here. Has the City analysed samples of this sludge? Why has this sludge not been cleared from this section of the river as it seems nonsensical to discharge good quality effluent into the river if it could potentially be re-contaminated by this sludge? This sludge must be cleaned out of the river.
- 5.17.4. The blueprints for the Potsdam WWTW indicate a lot of black lines running parallel to the canal/river but it is not clear what they are as there are 3 labels for black i.e. unknown pipes, sludge line and foul sewer. Please clarify this.
- 5.17.5. From the "Existing Site Layout" of the blueprints it is difficult to read the labels very well but there seems to be a stormwater outlet between pond 7 and the long pond. Please indicate if this is correct? Old pipes discharging from the maturation ponds or other points in the WWTW into a water resource must be blocked. Only the official discharge point should be discharging into the river.
- 5.17.6. What is the function of the pond next to the final maturation pond (downstream) and why is there sludge visible in this pond?
- 5.17.7. Given that the final effluent quality has not been meeting the discharge standards for the majority of 2019 and the upgrade to Potsdam WWTW is only scheduled for completion by 2025, additional measures should be implemented to improve effluent quality. The City must indicate what measures will be put in place to avoid non-compliant effluent from continuing to be discharged until 2025.
- 5.17.8. The standby generator must come online immediately, not 15 – 20 minutes after the outage.
- 5.17.9. The sludge that pooled after a power outage must be treated/ removed and must not be discharged together with the treated effluent to create a dilution effect.

Pump stations

- 5.17.10. With regards to the pump station failures, the actions indicated in the Transversal Action Plan are noted. It is acknowledged that a pump station audit has been completed and preliminary findings are reported. The next step is to develop a plan for maintenance, refurbishment and upgrades. A more detailed timeline for the development of such a plan must be indicated as the timeline is currently indicated over ten years. The City must indicate the equipment and actions to be taken as contingency measures to deal with spills, as these are likely to occur until upgrading is implemented and basic services in informal areas are improved. Current contingency measures are inadequate to prevent environmental pollution. The plan must address the contingency measures that will be put in place while pump stations are being upgraded or maintained.

General

- 5.17.11. That the DEA&DP propose a quarterly meeting with officials from the City starting in September 2020 to monitor progress and all actions as per the Lower Diep River Water Quality Improvement Plan as well as service in the informal settlements of Joe Slovo and Du Noon. This must be a transversal

meeting to include all Departments/ role-players of the City that must take actions to improve the situation (not only Water and Sanitation). The following should be addressed/ reported back at this meeting:

- 5.17.11.1. Improved waste removal in the informal settlements to address the blockages in the reticulation system.
 - 5.17.11.2. Improved sanitation provision to reduce raw sewage entering the Theo Marais Canal and the Diep River.
 - 5.17.11.3. The proposed upgrade for the Koeberg Road pump station including the findings from the study, budget allocations and a timeline.
 - 5.17.11.4. Progress on the upgrade of the Potsdam WWTW.
 - 5.17.11.5. Removal of sludge from the Diep River at the discharge point on the Potsdam WWTW as well as in the Theo Marais canal.
 - 5.17.11.6. Analyses of the monitoring results for the Diep River/ Milnerton Lagoon.
 - 5.17.11.7. Recent complaints received/ occurrences of sewerage overflows and measures undertaken to resolve this.
 - 5.17.11.8. The finalising and gazetting of the Diep River Estuarine Management Plan (and how it aligns to the Water Quality Improvement Plan).
 - 5.17.12. The DEA&DP's Directorate: Pollution and Chemicals Management recommends that the Directive should be issued to the City Manager and not to Waste and Sanitation alone to ensure that all the relevant City departments are held accountable for implementing the actions in the Transversal Action Plan and any further actions identified.
- 5.18. On 21 September 2020, notwithstanding the measures implemented by the City, to prevent the pollution from occurring, continuing and reoccurring the Directive was issued by the DEA&DP's Director: Environmental Law Enforcement in response to the following:
- 5.18.1. The numerous Complaints received in response to the following sewage spills / overflow incidents:
 - 5.18.1.1. Sewage spill at the Woodbridge Island (Milnerton) stormwater outlet resulting from sewage overflow at the Sanddrift Pump Station, dated May 2020.
 - 5.18.1.2. Sewage overflow from the Koeberg Road Pump Station into the Theo Marais Canal (which flows into the Diep River), dated June 2020.
 - 5.18.1.3. Sewage overflow from a leak in the rising main pipeline (situated in-close proximity to the Koeberg Pump Station) flowing into the Theo Marais Canal, dated 20 June 2020.
 - 5.18.1.4. Sewage seepage incident from Pond No. 5 of the Potsdam WWTW into the Diep River, dated 25 June 2020.
 - 5.18.1.5. Effluent discharge incident from the WWTW flowing an outlet situated along the reed beds, downstream from the Theo Marais canal (adjacent to the stockpiling areas), directly into the Diep River, dated June 2020.
 - 5.18.1.6. Sewage overflow from the Koeberg Road Pump Station into the Theo Marais Canal (which flows into the Diep River), dated 16 July 2020.
 - 5.18.1.7. The general waste spillage at the Milnerton Beach and Lagoon, dated 27 August 2019.
 - 5.18.2. The meeting with the City and the Department to discuss the overflows/ spillage incidents from the WWTW and pump stations along the Diep River Catchment, on 14 July 2020.
 - 5.18.3. The Diep River Sampling Report (dated 29 June 2020) received with a Complaint dated 24 August 2020.

- 5.18.4. The DEA&DP's Site Inspections along the Milnerton Lagoon and Diep River Catchment.
 - 5.18.5. The City's monthly progress reports on the measures undertaken to address the ongoing pollution of the Diep River Catchment and Milnerton Lagoon in accordance with the City's Action Plan.
 - 5.18.6. The City's various remedial activities to improve the overall water quality of the Diep River and Milnerton Lagoon.
 - 5.18.7. The frequency of the sewage overflows/ spill incidents from the WWTW.
 - 5.18.8. The current state of pollution within the Diep River and Milnerton Lagoon which is not only causing significant pollution to the aquatic and coastal environment, but which impacts negatively on the health and well-being of the public and the residents residing along the Diep River Catchment and Milnerton Lagoon.
 - 5.18.9. The remnants of sewage from the overflows/ spill incidents were evident in the Theo Marais Canal and further along the canal towards the Diep River, with foul odours emanating from the area.
 - 5.18.10. The water in the Milnerton Lagoon was dark and discoloured, with foul odours emanating from it. The sediment in the lagoon was dark grey/ black in colour, which suggests the sediment may be hypoxic (oxygen deprived), coupled with the poor water quality which may cause significant harm to the estuarine organisms and coastal environment.
 - 5.18.11. Further observations revealed that the stormwater outlets, flowing into Milnerton Lagoon transmitted large amounts of solid waste which accumulated along the water's edge and mouths of the stormwater outlets. Similar observations of solid waste also occurred within the Theo Marais Canal and the canal at the Duikersvlei junction.
 - 5.18.12. At the Theo Marais Canal and Duikersvlei junction, a historical outlet leading from the WWTW was observed discharging a white foam-like effluent into the Diep River.
 - 5.18.13. Although there are plans to upgrade the WWTW and the Koeberg Pump Station, the current occurrence of overflows and spillages into the Diep River and Milnerton is unacceptable and undesirable, as it is further deteriorating the water quality and causing significant pollution and degradation of the aquatic and marine environment.
- 5.19. On 16 November 2020, a copy of the DEA&DP's Directorate: Environmental Law Enforcement's Responding Statement was sent to the City.
- 5.20. On 18 November 2020, a Complaint was received from the Milnerton Central Residents Association stating the following:
- "During independent water testing today on behalf of OUTA 18/10/2020 1030 at Potsdam WWTW, a fast-flowing discharge of foul-smelling brown water was observed flowing into the lower Theo Marais Canal from the "storm water" pipe leading from the Potsdam WWTW. This site has repeatedly been observed discharging contaminated water into the canal and hence into the Diep river which it joins approximately 75 meters further down even when there has been no or little rain. Previous water samples taken at this site have demonstrated very high e coli levels. This same discharge was previously pointed out to the WC Department of Environment on a previous joint site visit despite the assistant plant manager claiming that day that the plant was not discharging at all that day.*
- The claim by the plant manager who was present at the time, that it is storm water runoff seems implausible given the lack of recent rain, the fact that every storm water outlet is completely dry and the extremely fast flow.*

Your urgent investigation would be appreciated given the recent concerns over the observed deteriorating water quality further down river."

- 5.21. On 24 November 2020, a Complaint was received from the Milnerton Central Residents Association stating in the Diep River Sampling Exception Report (dated 24 November 2020) prepared by water quality specialists, Makoya Amanzi, states that:
 - 5.21.1. On 18 November 2020, Makoya Amanzi performed a routine round of sampling along the Diep River.
 - 5.21.2. The starting point was the Potsdam Waste Water Treatment Plant.
 - 5.21.3. They were encouraged to find that a common undocumented discharge point (their reference PDZ) was not flowing on this day and that the a previously unknown (by the plant staff) culvert had been uncover – presumably during an embankment maintenance activity.
 - 5.21.4. They were once again dismayed to find a strong flow out of one of the other undocumented discharge points.
 - 5.21.5. The water was odorous and they started smelling it long before they arrived at it.
 - 5.21.6. The water was sent in for analyses and was found to be highly contaminated with E.coli – **8 400 000 cfu/100ml**. A similar sample was taken for the plant staff.
 - 5.21.7. The effect this is having on the river is obvious aesthetically (visually and odorous water flowing into and down the channel) as well as measurable by downstream E.coli levels.
- 5.22. The DEA&DP's Directorate: Environmental Law Enforcement received complaints alleging that significant pollution or degradation is being caused to the environment. The City has also submitted section 30 of the NEMA reports to the Department where there were failures at pump stations and facilities that resulted in environmental pollution. Many site inspections were conducted as part of the investigation of the alleged pollution and degradation of the Diep River and the Milnerton Lagoon. The independent water testing conducted by the DEA&DP, DEFF, the City and the complainant(s) confirmed that certain City facilities (although it was acknowledged that there are non-point sources of pollution as well other than the City) are responsible for the pollution and degradation of the Diep River and the Milnerton Lagoon. The other pollution sources, other than the City, which have impacts on the water quality include the following:
 - 5.22.1. Pollution resulting from the communities unlawfully dumping sewage and other waste materials into the stormwater system.
 - 5.22.2. Pollution arising from sewer reticulation overflows/ leaks and bursts due to the communities flushing and dumping materials other than sewage into the sewer system.
 - 5.22.3. Runoff of diverse pollutants from the Joe Slovo and Dunoon informal settlements flowing into the river.
 - 5.22.4. Diffuse sources from upstream industrial and agricultural activities.
- 5.23. The complaints which are investigated or have been investigated culminated into the issuing of the Directive which is the subject to the Appeal process. It is incumbent on the DEA&DP to investigate a complaint which alleges non-compliance with the provisions of the NEMA and enforce the applicable legislation where it is necessary as in this case.
- 5.24. In terms of the statement that *"[t]he city was afforded a mere seven days to submit representations as to why a Directive should not be issued"*, a 7 days period was considered sufficient for the City to make representations as to why a Directive should not be issued in terms of section 28(4) of the NEMA. The pollution of the Diep

River and the Milnerton Lagoon requires immediate action hence a 7 days period was afforded to the City to make representations.

- 5.25. The City has acknowledged that:
- 5.25.1. There have been occasional sewage spills, for various reasons including sabotage to the infrastructure, which has resulted in some polluted areas in the river, canal and lagoon.
 - 5.25.2. There were intermittent flows of sewage into the Theo Marais canal which have been exacerbated by illicit industrial discharges, dumping of foreign objects into sewers, load shedding and pump station design and age.
- 5.26. I acknowledge and concur that the City has been providing bi-weekly and/or monthly reports on the implementation of the Action Plan for the following periods:
- 5.26.1. Bi-weekly report for the period 27 March 2020 to 9 April 2020.
 - 5.26.2. Bi-weekly report for the period 10 April 2020 to 23 April 2020.
 - 5.26.3. Monthly report for the period 25 April 2020 to 25 May 2020.
 - 5.26.4. Monthly report for the period 25 May 2020 to 25 June 2020.
 - 5.26.5. Monthly report for the period 26 June 2020 to 24 July 2020.
 - 5.26.6. Monthly report for the period 25 July 2020 to 25 August 2020.
 - 5.26.7. Monthly report for the period 26 August 2020 to 25 September 2020.
- 5.27. These bi-weekly and monthly reports state(d) *inter alia* that the City is undertaking/ has undertaken/ will undertake the following measures in order to mitigate the pollution of the Diep River and the Milnerton Lagoon:

Potsdam WWTW

- 5.27.1. The City is engaging with the DWS in terms of its final water use license for the Potsdam WWTW, which is still under consideration and discussion. The City's standpoint on the discharge limits set in the license are not possible to comply with, particularly that for E-coli which is set at zero, which is impossible to achieve.
- 5.27.2. The UV disinfection unit is installed and is now in operation.
- 5.27.3. Three out of the four Belt presses have been operational since 17 April 2020 which meets the Plants Sludge Dewatering capacity. BP No. 2 will provide additional sludge dewatering capacity.
- 5.27.4. The City is in the process of an upgrade project for the WWTW, in respect of which engineering consultants are currently busy with the design process. This will take into account *inter alia* the changes experienced over time in the influent waste water quality. The upgrades and extensions to the WWTW include advanced membrane bioreactor and disinfection technologies. The project was initiated in 2016 and will cost approximately R1.75 billion. Demolition of obsolete process sections was completed, and tender submissions for the civil, mechanical and electrical work are also due in this period. Project completion is scheduled for 2024.
- 5.27.5. A sludge dewatering press maintenance specialist was brought in to advise on rectifying recurring problems with the dewatering equipment.
- 5.27.6. The WWTW was subject to audit inspections by the DWS (in November 2019) and the provincial authorities together with the DEFF (in December 2019). Feedback received thus far indicates that various departments are satisfied with the City's performance.
- 5.27.7. The water quality test results of show a substantial improvement in its quality, which is now compliant with the licence requirements, except for the E. coli count, which is above the zero indicated in the licence. The City has been questioning whether the requirement should be zero, as waste water treatment plants are generally unable to meet this standard.

- 5.27.8. The City, on 20 February 2020, embarked upon a Water Quality Improvement Programme led by its Catchment, Stormwater and River Management Branch, with the Diep River and Milnerton Lagoon identified as a priority area. The programme is a transversal programme involving numerous City departments as well as other organs of state, including the DEA&DP.

Theo Marais Stormwater Canal

- 5.27.9. The City has responded to the intermittent flows by pumping the canal weir out whenever pollution is observed.
- 5.27.10. The City has addressed the ingress of sewage into the water in a number of ways since December 2019. These include the sealing off of pond No. 2 outlet coming from Potsdam WWTW and the pumping out of spillages.
- 5.27.11. The City commenced with a clean-up of the relevant stormwater canals on 13 March 2020, by pumping out the stilling basin at the weir of the Theo Marais Canal by vacuum tanker.
- 5.27.12. The City has blocked off the canal and extract all the water therein to sewer, and then do a thorough clean-up to remove all sediments and solids from the canal downstream of the weir.
- 5.27.13. The City will divert flow from the canal downstream of the weir and remove sediments from the canal between the weir and the junction of the canal with the Diep River.
- 5.27.14. The City submits bi-weekly reports as requested.

Signage

- 5.27.15. The signage, as reported previously is still in place. The City's Environmental Health branch has erected a total of 28 signs warning, in three languages, that the water is polluted and unfit for swimming purposes.

River Clean-up

- 5.27.16. Efforts to clean the Diep river continue with the assistance of the Water and Sanitation - Fleet Branch. The imposition of lockdown has impacted the availability of contractors and the Fleet branch is spread thinly across the City. Nonetheless they have made slow progress in removing vegetation and sludge from the river. The river water level has receded from the winter highs making operations slightly simpler.
- 5.27.17. The City's Invasive species branch has finally been able to complete procurement of cleaning contractors for the Diep River and they will be back at full strength in the next reporting period. Land invasions and civil unrest continue to pose obstacles to good river health. While City officials are working hard to overcome engineering challenges, they need to bear in mind that many of the issues affecting Diep River water quality require political solutions.
- 5.27.18. Since the inundation structures built in the floodplain near Du Noon in July 2020, many affected people seem to have moved into the Eskom power line reserve along Malibongwe drive and some have moved to the northern side of the Diep River. Many are however still within the floodplain.

Communications

- 5.27.19. The monthly inland quality reports for the Catchment are also sent directly to bona fide interested parties via email, albeit that these do not include the final effluent quality results from the Potsdam WWTW.
- 5.27.20. The conducted engagements possible within the limits of the COVID- 19 Disaster Management Regulations. The Water Quality Improvement

Programme has a stakeholder engagement workstream which works together with a broad spectrum of stakeholders including the DEA&DP.

- 5.28. I concur that the measures which the City was requested to make representations on, as included in the Pre-directive, are different to the measures contained in the Directive. The City was initially not afforded an opportunity to make representations to all the measures and the timeframes for the additional measures contained in the Directive. However, the City has had an opportunity, as detailed in the Appeal, to make representations in all the measures of the Directive in order to ensure a procedurally fair process.
- 5.29. Considering the above, I disagree that the Directive should not have been issued to the City. As such, this ground of appeal has been adequately addressed.

Appeal ground 2: Directive issued in a procedurally unfair manner

- 5.30. As required by section 28(4) of the NEMA, the City was afforded an opportunity to make representations through a Pre-Directive process before a Directive was issued. The City was required to make written representations within a specific timeframe if it elected to do so. As such, the City made written representations which were considered by the DEA&DP before it was decided to issue a Directive.
- 5.31. When the Pre-Directive was issued, the City was requested to make representations in terms of the following measures:
- 5.31.1. Commence with a thorough clean-up operation of the waste/ pollutants (i.e. raw sewage and general waste) from the stormwater canals, adjacent to the Theo Marais Sports Complex and the Potsdam WWTW) towards the mouth of the Milnerton Lagoon area, including the affected areas within the coastal public property, which must be completed within 30 (thirty) calendar days.
 - 5.31.2. Amend and submit to this Department, for approval the City's Plan, dated 13 March 2020, within 30 (thirty) calendar days, which must include the following:
 - 5.31.2.1. Reasonable timeframes (i.e. daily, weekly and/or monthly associated with the mitigation measures to address the immediate impacts of the pollution within the Diep River Catchment, including the coastal public property.
 - 5.31.2.2. Increase in the frequency of the short- and medium-term actions in order to adequately address the ongoing pollution of the catchment.
 - 5.31.2.3. Reasonable timeframes by the stagnating sludge/ raw sewage within the Diep River Catchment will be removed.
 - 5.31.2.4. Measures to be implemented in order to prevent raw sewage from flowing into the canal adjacent to the Theo Marais Sports Complex.
 - 5.31.3. Erect adequate signage in English, isiXhosa and Afrikaans along the Diep River Catchment to inform the public of the risks and dangers of the pollution in the river.
 - 5.31.4. Submit bi-weekly (i.e. every two weeks) update reports on the implementation of the Plan for the first 30 (thirty) calendar days of receipt of the Directive and thereafter submit update reports once a month until the situation has improved or is under control.
 - 5.31.5. Conduct meetings or engagements with affected groups to communicate and inform the communities along the Diep River Catchment of the City's short, medium- and long-term actions, as stipulated in the Plan, in order to address the current pollution of the river. Such meetings/ engagements

must take place within 30 (thirty) calendar days and the City must provide this Department with proof thereof.

- 5.32. After the City's representations were considered, the DEA&DP's Director: Environmental Law Enforcement included *inter alia* the following additional measures (which were outlined in the City's Action Plan submitted in their representations) in the Directive:
- 5.32.1. Diep 113 – submit the revised pollution incident protocols and contingency plans for the Facility, Koeberg and Sanddrift Pump Stations to the DEA&DP's Directorate: Pollution and Chemicals Management for review and comment, within 30 (thirty) calendar days of receipt of the Directive, to address future incidents which may occur while the upgrade of the aforementioned facilities is in progress.
 - 5.32.2. Diep 114 (Item no. 105 – 107)- Update to enable the expediting of the upgrade of the Facility (Potsdam WWTW) which must be completed by 31 December 2022, in order to prevent/ minimize further pollution of the lower Diep River/ Milnerton Lagoon.
 - 5.32.3. Diep 116 (Item 301) – Update to enable the expediting of the upgrade of the Montague Gardens Bulk Sewer Gravity Reticulation Network and screening system by 31 December 2022, in order to prevent sewer network blockages and spillages into the Theo Marais Canal.
 - 5.32.4. Diep 117 – Update to enable the expediting of the upgrade of the Du Noon and Doornbach Sewer Gravity Reticulation Network (which includes plan, design and construction of stormwater of stormwater to sewer diversion/s) by 31 December 2022, in order to prevent sewer network blockages and spillages into the lower Diep River via the stormwater drainage system and the two outflow channels.
 - 5.32.5. Diep 120 and 122 – Update to enable the upgrade of the Koeberg Pump Station (which includes plan, design and construction of stormwater to sewer diversion/s) which must be completed by 31 December 2021, in order to prevent / minimize pollution into the lower Diep River/ Milnerton Lagoon via the stormwater drainage system inlets and underground pipes.
 - 5.32.6. Implement measures at strategic stormwater outlets to trap all the general waste from flowing into the Diep River and Milnerton Lagoon (e.g. nets at the mouths of stormwater outlets to capture the general waste, as implemented in the Soet River Catchment), by end of December 2021 and provide proof to the DEA&DP's Directorate: Environmental Law Enforcement within 7 (seven) calendar days after completion. These stormwater outlets must be cleaned regularly in order to prevent blockages.
- 5.33. The measures that were imposed in the Directive emanated from Action Plan which was submitted with the representations made with regards to the Pre-directive. It is concurred with the City that the Directive imposed stringent timeframes on the measures as opposed to the timeframes indicated in the Action Plan. However, at this stage the City has made representations in terms of all the measures contained in the Directive as detailed in their Appeal.
- 5.34. Given the nature of the pollution and degradation of the Diep River catchment and the Milnerton Lagoon, the DEA&DP should not even have afforded the City an opportunity to make representations before the issuing of the Directive as that is provided for under section 28(4) of the NEMA where urgent action is required such as in this case. The City has been well aware that Complaints are continuously being received with regards to its negligence which results in the pollution and degradation

of the Diep River catchment and the Milnerton Lagoon where the following took place:

- 5.34.1. The Complaints received.
 - 5.34.2. The Site Inspections conducted by the relevant authorities, including the DEA&DP.
 - 5.34.3. The correspondence between the DEA&DP and the City.
- 5.35. The comprehensive list of remedial measures, which the City claims to be unreasonable, are imposed in the Directive since the pollution and degradation of the Diep River catchment and the Milnerton Lagoon requires urgent action. If pollution and degradation of the Diep River catchment and the Milnerton Lagoon is allowed to continue this will be tantamount to a dereliction of its duty which is to enforce compliance where there is non-compliance with the provisions of the NEMA in order to protect the environment.
- 5.36. It is concurred with the Responding Statement of the DEA&DP's Directorate: Environmental Law Enforcement that:
- 5.36.1. As part of this process of considering the City's representations and the implementation of their Lower Diep River: Transversal Action Plan ("Action Plan"), and all the other relevant evidence, the DEA&DP issued a Directive to enforce the implementation of the City's Action Plan and to expedite the time-frames contained therein. Therefore, the City knew that a Directive could be issued for their pollution and degradation of the Diep River and Milnerton Lagoon.
 - 5.36.2. The Directive was issued six (6) months after the Pre-Directive, during which time numerous complaints were still received of sewage spillages and overflow incidents from the Potsdam Waste Water Treatment Works ("WWTW") (interchangeably known as "the Facility") and Pump Stations (namely, Sanddrift and Koeberg Road Pump Stations) which continued persistently (please refer to paragraph 1.1.5 of the Directive which provides a list of the spillages and incidents that occurred over time).
- 5.37. Considering the above, the Grade 1 EMI of the DEA&DP was empowered to issue a Directive with the measures in question. These were in any case provided by the City in their Action Plan submitted in response to the Pre-Directive. However, the timeframes of the implementation of the measures contained in the Directive should have been informed by the timeframes of the City's Action Plan. As such, this ground of appeal has been adequately addressed.

Appeal ground 3: The Department failed to take relevant considerations into account (alternatively, took irrelevant considerations into account), in deciding to issue the directive

- 5.38. The imposition of remedial measures, when a person has caused pollution and degradation of the environment as provided for in terms of section 28(4) of the NEMA, is a prerogative and mandate of the DEA&DP. When a person is causing pollution and degradation of the environment, the DEA&DP does not hesitate to enforce the law through appropriate legislative mechanisms.
- 5.39. The Directive was issued cognizant that the City is already implementing measures to address pollution of the Diep River Catchment and the Milnerton Lagoon. That is acknowledged under the following paragraphs of the Directive:
"1.2 Since the issuance of the Department's Pre-Directive (dated 27 March 2020), the City has been furnishing the Department with monthly progress reports on the measures undertaken to address the ongoing pollution of the Diep River Catchment and Milnerton Lagoon in accordance with the City's Action Plan.

1.3 Whilst the Department acknowledges that there are improvements in the City's attempt to combat the pollution, and that the City has embarked on various remedial measures activities to improve the overall water quality of the Diep River and Milnerton Lagoon, the frequency of the sewage overflows/ spills incidents from the Facility and Koeberg pump station is a major concern, as it is not only abating the City's efforts, but also continuing to cause significant pollution and degradation of the Diep river Catchment and Milnerton Lagoon."

- 5.40. I concur that only reasonable measures may be imposed in the Directive. The measures stem from the Action Plan and there should have been due consideration to the timeframe imposed. Therefore, the measures contained in the Directive must be modified as follows as the City has confirmed in their Appeal that time extensions are required in terms of certain measures which have been imposed in the Directive:

Submit the revised pollution incident protocols and contingency plans for the Facility, Koeberg and Sanddrift Pump Stations to the Department within 30 (thirty) calendar days of receipt of the Directive

- 5.40.1. The City stated that the over-arching document and appendices are completed, and work is in progress to formulate a specific practical implementation protocol to deal with spillages. The 30-day time period directed is impractical as the City will be required to procure services, equipment and plant to effectively implement sewer spill incident response plans. Assuming the resourcing of equipment and goods can be done via a "request for quotation" process, the earliest date by which this item would be achievable would most likely be October 2021. The revised pollution incident protocols and contingency plans for the Facility, Koeberg and Sanddrift Pump Stations must be submitted to the DEA&DP's Directorate: Pollution and Chemicals Management for review and comment. This measure is to be complied with **by the end of October 2021**.
- 5.40.2. The City is required to submit the completed over-arching document and appendices within **thirty 30-calendar days** of this Appeal Directive to the DEA&DP.
- 5.40.3. The City must provide an interim remediation/incident management response plan to deal with instantaneous pollution events/emergency incidents that may occur and result in the pollution of the Diep River Catchment and the Milnerton Lagoon within **60-calendar days** of this Appeal Directive while the revised pollution incident protocols and contingency plans are being finalised.

Update the Action Plan to expedite upgrading of the Facility by 31 December 2022

- 5.40.4. The City stated that the expansion and upgrade of the Facility is a large infrastructure project which is meant to cater for future growth in the Diep River Catchment as well as upgrade some of the existing treatment processes. The expansion and upgrade project are approximately R2 Billion. It needs to be carefully planned to adhere to the City's strict procurement processes in terms of the Municipal Finance Management Act. The project is currently at the end of the detail design and tender documentation phase, and the mechanical / electrical construction tender advertisement is imminent. The estimated completion of the Facility upgrade is August 2025, which is followed by a one-year defects notification period, yet the Directive directs the City to reduce this period by almost 3 years and to complete it **by 31 December 2022**. It is simply not feasible to do so and had

the City been given an opportunity to comment on this deadline it would have explained this.

- 5.40.5. I require this measure to be complied with **by the end of August 2025**. The DEA&DP must be kept informed of the progress with the implementation of this measure in the monthly reports that are being submitted by the City.

Update the Action Plan to expedite the upgrade to the Montague Gardens Sewer Gravity Reticulation Network and screening system by 31 December 2022 in order to prevent blockages into the Theo Marais Canal

- 5.40.6. The City stated that the size (diameter) of the bulk sewer pipeline is not the cause of sewer blockages and resultant spills and consequently increasing it would not necessarily solve this problem. These blockages are the result of foreign objects in the sewer reticulation network. Therefore, the upgrading of the Montague Gardens Sewer Gravity Reticulation Network will not prevent future blockages and resultant spills from this sewer reticulation network.
- 5.40.7. The timeframe for upgrade to the Montague Gardens Sewer Gravity Reticulation Network measure is amended to be **completed by 30 June 2025**.
- 5.40.8. The City must indicate the measures to be undertaken to reduce the blockages as a result of foreign objects entering the sewer reticulation network within **60-calender days** of this Appeal Directive.

Update the Action Plan to expedite the Du Noon and Doornbach Sewer Gravity Reticulation Network by 31 December 2022

- 5.40.9. The City stated that the proposed stormwater to sewer diversions proposed for Dunoon/Doornbach are currently in the design phase and are planned for completion in 2023.
- 5.40.10. This measure must be complied with **by the end of December 2023**.
- 5.40.11. The DEA&DP must be kept informed of the progress with the implementation of this measure in the monthly reports that are being submitted by the City.

Update the Action Plan to expedite upgrade of the Koeberg Road Pump Station (which includes plan, design and construction of stormwater to sewer diversion/s) by 31 December 2021

- 5.40.12. The City stated that this measure falls under the Montague Gardens Bulk Sewer Upgrade project to be completed between 1 July 2022 and 1 June 2024.
- 5.40.13. Progress reports on the implementation of this measure must be included in the monthly reports submitted to the DEA&DP.

Implement measures at strategic outlets to trap all the general waste from flowing into the Diep River and Milnerton Lagoon (e.g. nets at the mouths of stormwater outlets to capture the general waste, as implemented in the Soet River Catchment), within 30 calendar days of receipt of the Directive

- 5.40.14. The City stated that the time period for the Directive is impractical as the planning, design, procurement, and installation of the required stormwater outlet litter traps will take longer than the 30 calendar days prescribed. November / December 2021 would be a reasonable deadline.

- 5.40.15. The City is required to implement this measure **by the end of November 2021**. Progress reports on the development of this measure must be included in the monthly reports submitted to the DEA&DP.
- 5.40.16. The City must however provide an interim response plan to deal with the trapping and clean-up of general waste at storm-water outlets flowing into the Diep River & Milnerton Lagoon, **within 60-calender days** of this Appeal Directive, while the Plan is under development. Progress reports on the implementation of the interim measure must be included in the monthly reports.

Appeal ground 4: Department's decision to issue the directive not rationally connected to the purpose of section 28(4) of NEMA

Section 28(1) of the NEMA states that “[e]very person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment”.

- 5.41. Based on the following Complaints/incidents which have occurred subsequent to the issuing of the Pre-directive (dated 27 March 2020), the DEA&DP's Directorate: Environmental Law Enforcement made a correct decision by issuing a Directive to the City:
 - 5.41.1. On 9 April 2020, the City submitted an incident report for a spillage which occurred at the Koeberg Road Pump Station (attached as “Annexure B” of the Responding Statement).
 - 5.41.2. On 12 May 2020, a Complaint was received regarding a sewerage spill at Woodbridge Island (attached as “Annexure C” of the Responding Statement).
 - 5.41.3. On 16 June 2020, a complaint was received stating that raw sewage from the Koeberg Road Pump Station was overflowing into the Theo Marias Canal which flows into the Diep River.
 - 5.41.4. On 20 June 2020, a Complaint was received regarding sewage overflowing from the Koeberg Road Pump Station into the Theo Marias canal (attached as “Annexure E” of the Responding Statement).
 - 5.41.5. On 25 June 2020, a Complaint was received stating that raw sludge was being discharged from the Facility directly into the Diep River. This was accompanied by video footage (attached as “Annexure F” of the Responding Statement).
 - 5.41.6. On 3 July 2020, the City submitted an incident report for the Facility (attached as “Annexure G” of the Responding Statement).
 - 5.41.7. The independent Diep River Sampling Reports submitted to the Department by the Complainant, dated 29 June 2020 and 08 July 2020, respectively (see attached OUTA reports as Annexure “A” of the Responding Statement).
 - 5.41.8. On 16 July 2020, an incident which occurred at the Koeberg Road Pump Station, which resulted in a sewerage spill into the Theo Marais Canal (attached as “Annexure H” of the Responding Statement).
 - 5.41.9. The City by way of submitting an Action Plan in response to the Pre-Directive acknowledges that it is implementing measures to address the pollution within the Diep River catchment and Milnerton Lagoon. There is therefore a

rational connection between the Directive and the purpose of section 28(4).

Appeal ground 5: Conclusions, relief sought on appeal

- 5.42. Considering the above, the Directive is modified to extend the timeframes of certain measures and exclude other measure which have either been completed or considered not necessary to deal with the pollution and degradation of the Diep River Catchment and the Milnerton Lagoon.
- 5.43. I concur that the Appeal suspends a Directive until an Appeal is decided in terms of section 43(11) of the NEMA. However, the Action Plan is continuously being implemented by the City.

6. **Additional information received during the appeal process:**

- 6.1. On 10 December 2020, supplementary information (water quality test results at various locations in the Diep River catchment area) to the Appeal was received from the City which provided water quality sampling results up to the end of November 2020. This supplementary information states, *inter alia*, the following:

Potsdam WWTW final effluent and weir

- 6.1.1. The final effluent quality of the Potsdam WWTW is tested at the point of disinfection as stipulated in the Potsdam wastewater licence conditions issued by the national department.
- 6.1.2. The City's water quality sample point (PD FE COMB) is located at the disinfection unit at the head of the holding pond which previously discharged into the Diep River bypass channel via a weir located near the southern end of the pond.
- 6.1.3. Currently the Potsdam final effluent is discharged to the bypass channel immediately after disinfection at a dedicated discharge point (i.e. no longer at the weir).
- 6.1.4. OUTA however collected ad hoc samples at the weir location (PDA).
- 6.1.5. Potsdam WWTW has experienced operational challenges with the wastewater treatment process (e.g. belt press and disinfection unit) which resulted in the quality of the final effluent being compromised since around 2018/19.
- 6.1.6. With the resolution of these issues, the water quality of the final effluent improved significantly as evidenced by the low E.coli test results displayed in figure 5 of their report (April to November 2020).
- 6.1.7. A possible reason for the difference between the Potsdam pond outflow weir ("PDA") and PD FE COMB test results is that the holding pond still holds residual poor-quality effluent which will take time to subside- the PDA weir sample is thus a reflection of this generally poor water quality.

Diep River downstream of Potsdam WWTW discharge

- 6.1.8. The next river sample site that was assessed is located a short distance downstream of the Potsdam WWTW weir. The test results obtained by both OUTA (PDP) and the City (Diep River Potsdam WWTW ("RTV11")) were in a similar/ comparable range. Water quality at this location was unacceptable for a period and this is presumed to have initially been a reflection of the operational challenges experienced at the Potsdam WWTW. Although water quality at this location can also be influenced by upstream sources, the recent tests indicate a gradual improvement in the E.coli levels in the river at this location.

The Marais Canal

- 6.1.9. Theo Marais Canal is large stormwater canal that drains the Montague Gardens area. Water quality in canal has been generally unacceptable reflecting pollution emanating from the Montague Gardens industrial area and also overflows from the adjacent Koeberg pump station. Both the OUTA (Theo Marais stormwater drain ("TMS")) and City (Theo Marais Canal near Koeberg pump station ("RTV03")) results were similar in this regard.
- 6.1.10. The operational challenges experienced at the pump station are being addressed along with the removal of contaminated sediments from the canal there has been a consequent improvement in the recent City's water quality test results.
- 6.1.11. The next sample site in the Theo Marais Canal that was assessed by OUTA is Potsdam residual flow to Theo Marais Canal ("PDC") which was described in their report as "Potsdam residual flow to Theo Marais Canal" and after Potsdam sewage works ("PDD") a short distance downstream. The flow discharging from the old heavily reeded maturation ponds (located along the southern boundary of the wastewater facility) is largely due to rainfall which has resulted in the ponds decanting along with residual pollutants into the canal. The outflow pipes from these old ponds have since been closed. Nevertheless, the test results obtained by OUTA can be compared to the City's sample site which is also located in this vicinity of the canal (Theo Marais Canal just before confluence with Diep ("RTV12")) and these were comparable in terms of the recorded E.coli levels.
- 6.1.12. As this sample is merely 280m downstream of the previously discussed site (RTV03/TMS), the test results from RTV12, TMS and PDC/PDD are comparable due to their close proximity and location in the canal. Water quality at this location while largely influenced by the flow and quality from upstream Montague Gardens area nevertheless also reflects to some degree poor quality water from the smaller Duikersvlei stream which has its confluence with the canal between samples sites RTV03/TMS and RTV12/PDC.
- 6.1.13. An improvement in water quality is apparent which probably reflect the work done to clean sediment from the canal and maintenance measures at the upstream pump station.

Milnerton Lagoon

- 6.1.14. Water quality in the lower Milnerton Lagoon area in the vicinity of Woodbridge Island is monitored by the City (Milnerton Lagoon at Woodbridge Island ("RTV09")) monthly, with the sample being collected approximately from the middle of the Loxton Road bridge leading to the island.
- 6.1.15. The sample site used by OUTA (Milnerton Canoe Club, Woodbridge Island parking ("MCC")) is located on the island side of the lagoon at the "Milnerton Canoe Club" launch site.
- 6.1.16. The City and OUTA test results while not collected from the same site are nevertheless close by (approximately 85m apart) and thus the test results are reasonably comparable, with both reflecting the very poor water quality in the lagoon.
- 6.1.17. Water quality at this site is likely influenced by the upstream catchment and contamination from the Joe Slovo settlement area.
- 6.1.18. The mouth condition (whether open/ closed) and tidal state (neap or spring and high or low tides) at the time of sample collection also influences water quality.

Conclusion

- 6.1.19. Although none of the City and OUTA samples were collected on the same day/ time and there were slight differences in terms of the respective sample locations, many of the City and OUTA test results were initially comparable in terms of the relative E.coli level with the exception of the Potsdam WWTW sample (PD FE COMB) samples that are collected at the disinfection unit and the OUTA PDA samples which were collected from the pond weir overflow to the Diep River bypass channel.
 - 6.1.20. The poor test results (high E.coli) obtained by OUTA at the Potsdam pond weir as compared to the City test (low E.coli) at the disinfection unit is possibly due to residual poor-quality effluent and sediments contained within the pond.
 - 6.1.21. Weekly monitoring undertaken by the City has demonstrated the recent improvement in the quality of Potsdam FE (sample from the disinfection area) which indicates that the treated effluent from this WWTW is not contributing to the microbial load of the river.
 - 6.1.22. Improvements in the Theo Marais Canal area are also evident which indicates that the ongoing efforts to address pollution sources in this section are yielding positive results.
 - 6.1.23. Heavy winter rains probably assisted with flushing contamination from this channel and other sections of the Diep River.
 - 6.1.24. Water quality in the lower Milnerton Lagoon area although still compromised is showing signs of gradual improvement. Periods of poor water quality in the lagoon area reflect the challenges experienced in mitigating contamination emanating from the Joe Slovo informal settlements area. During drier periods the poor water quality of the lower lagoon area tends to be exacerbated particularly if the mouth of the lagoon closes.
 - 6.1.25. In conclusion, there are signs of improvement in water quality of the lower Diep catchment. The complexity of challenges in the greater Diep catchment nevertheless necessitates that the various transversal pollution abatement interventions continue in order to see incremental improvement in ambient water quality in this important river and estuarine system.
- 6.2. On 4 November 2020, I attended a Mayor's oversight site visit to the Potsdam WWTW at which an update was provided by the City. This information presented states *inter alia* the following:

Background

- 6.2.1. Effluent quality has improved significantly over the last 9 months with overall compliance for last 3 months sitting at 86% (compared to 56% in February).
- 6.2.2. Short-term operational improvements have made big impact on effluent quality, including repaired belt presses, cleaned ponds and refurbished UV system.
- 6.2.3. Major planned upgrade in progress -- from 47 - 100 MLD -- to be completed by 2025 costing R2.2 billion.

Status quo of the existing plant: Actions taken

- 6.2.4. Improve dewatering capacity in the short-term.
- 6.2.5. Repairs to the belt press.
- 6.2.6. Repairs to numerous pumps.
- 6.2.7. UV tender in place: commissioning currently taking place.
- 6.2.8. Maturation pond cleaning.

6.2.9. Theo Marais Canal clean up.

WWTW capacity upgrade

6.2.10. Tender was completed on 31 January 2020 to make space provision for the new treatment plant.

6.2.11. Upgrade broken into 3 tenders: demolition, civil and mechanical/ electrical components.

2020 start treated effluent compliance compromised: Period of January to March 2020 (1st quarter)

6.2.12. There was 15% bacteriological compliance.

6.2.13. There was 56% overall compliance.

Interventions 2020

6.2.14. Executive Mayor Alderman Dan Plato and Mayoral Committee Member for Water and Waste Alderman Xanthea Limberg visited the Potsdam WWTP on 10 March to inspect progress on the major R1,75bn upgrade currently underway, to assess conditions and support interventions.

6.2.15. About 50 interventions from February to present-day that contribute to improvements.

6.2.16. Diep River Task team formed to focus on water quality improvement.

6.2.17. Task team at plant level to coordinate activities between stakeholders.

6.2.18. Intensive maintenance and refurbishment program of dewatering presses.

6.2.19. Repair of key equipment such as reactor aerators.

6.2.20. Replacement of defective UV disinfection equipment.

6.2.21. Treated effluent pump station defective filters removed to ensure reliable reuse supply

6.2.22. Operations survey all ponds and initiate improvements to reinstate design capacity.

6.2.23. Ponds cleaned to prevent recontamination of treated effluent.

6.2.24. Assistant plant manager position filled.

6.2.25. Operations initiate extensive daily process monitoring with plant laboratory monitoring.

6.2.26. Operations focus process control during winter, with additional storm water ingress, to stabilize plant conditions during peak flows.

River Water Quality: Diep River Catchment

6.2.27. Large catchment, large part beyond boundaries of the City

6.2.28. Includes Table Bay Nature Reserve

6.2.29. Deteriorating Water Quality due to;

6.2.30. Farming

6.2.31. Water extraction

6.2.32. Landfill Site

6.2.33. WWTW

6.2.34. Informal Settlements (Services)

6.2.35. Industrial Areas

6.2.36. Exponential development.

Pollution sources

6.2.37. Potsdam WWTW – 2019.

6.2.38. Sewer Pump station design and failures.

6.2.39. Sewer surcharges - blockages, abuse and age.

6.2.40. Under serviced settlements (formal and informal) – sewerage, grey water and litter.

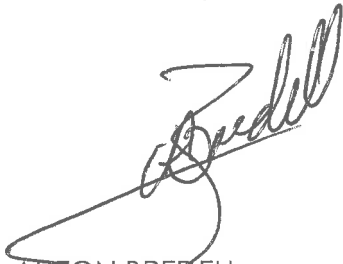
6.2.41. Overcrowding and poorly located settlements

6.2.42. Agriculture

6.2.43. Diffuse pollution of urban runoff

7. 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 considered.
8. Section 28 requires organ of state to react to incidence of pollution and as such, the Grade 1 EMI of the DEA&DP was empowered to issue the Directive.
9. Since I have discharged my decision-making powers when making the decision, I am *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.

Yours faithfully,



ANTON BREDELL
**PROVINCIAL MINISTER OF LOCAL GOVERNMENT,
ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING**

DATE: 22/1/2021

Copied to:
Directorate: Environmental Law Enforcement (Mr A. Bassier)
Directorate: Environmental Law Enforcement (Mr Dale Wakefield)
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