



**PROJECT-SPECIFIC  
ENVIRONMENTAL MAINTENANCE MANAGEMENT PLAN ADDENDUM  
FOR THE  
[INSERT PROJECT TITLE]**

**THIS ENVIRONMENTAL MAINTENANCE MANAGEMENT PLAN ADDENDUM FALLS UNDER  
THE AMBIANCE OF THE OVERARCHING ENVIRONMENTAL MAINTENANCE MANAGEMENT  
PLAN FOR THE REHABILITATION, REPAIR AND UPGRADE OF EXISTING STORMWATER  
INFRASTRUCTURE WITHIN SENSITIVE ENVIRONMENTAL AREAS**  
**EDTEA REF NUMBER: DM/MMP/0003/2019**

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IN ASSOCIATION WITH [INKANYEZI YETHU](#)

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## ACRONYMS

|        |  |
|--------|--|
| BID    | background Information Document  |
| BMD    | Biodiversity Management Department   |
| CSCM   | eThekweni Coastal Engineering Stormwater Catchment Management                      |
| DAFF   | Department of Agriculture, Forestry and Fisheries                                  |
| DEA    | Department of Environmental Affairs (National)                                     |
| DFFE   | Department of Forestry, Fisheries and the Environment                              |
| DWS    | Department of Water and Sanitation   |
| DMOSS  | Durban Metropolitan Open Space System  |
| DMRE   | The Department of Mineral Resource and Energy                                      |
| ECO    | Environmental Control Officer  |
| EDTEA  | Department of Economic Development, Tourism and Environmental Affairs (Provincial) |
| EKZNW  | Ezemvelo KZN Wildlife  |
| EMA    | eThekweni Municipal Area   |
| EMPr   | Environmental Management Programme   |
| GA     | General Authorisation  |
| KZN    | KwaZulu-Natal  |
| LDV    | Light Duty Vehicles  |
| MMP    | Maintenance Management Plan  |
| NEMA   | National Environmental Management Act (Act No. 107 of 1998)                        |
| NEMPAA | The National Environmental Management: Protected Areas Act (Act No. 57 of 2003)    |
| PLC    | Parks, Leisure and Cemeteries  |
| PM     | Project Manager  |
| PPP    | Public Participation Process   |
| SA     | South African  |
| SABS   | South African Bureau of Standards  |
| SAHRA  | South African Heritage Resources Agency  |
| SANBI  | South African National Biodiversity Institute                                      |
| SHE    | Safety, Health and Environment   |
| SOP    | Standard Operating Procedure   |
| WUA    | Water Use Authorisation  |
| WULA   | Water Use License Application  |
| WUL    | Water Use Licence  |

## **DEFINITIONS:**

### Alien Species:

- (a) A species that is not an indigenous species.
- (b) An indigenous species trans-located or intended to be trans-located to a place outside its natural distribution range in nature, but not an indigenous species, that has extended its natural distribution range by natural means of migration or dispersal without human intervention.

### Contractor:

This is a person/company in the employment of the Employer, acting for the Employer or has a written agreement with the Employer. This applies to both principal and sub-contractors.

### Durban Metropolitan Open Space System (DMOSS):

DMOSS is a system of open spaces of land and water within eThekweni Municipality that incorporates areas of high biodiversity value linked together in a viable network of open spaces.

### Employer:

Employer means the client line department which is the Coastal, Stormwater, and Catchment Management Department of the eThekweni Municipality.

### Engineer:

Engineer means the engineering company acting through a Director, a Partner or an official authorised thereto in writing responsible for design and project management. (The Engineer is also sometimes referred to as the Project Manager). For certain projects, this role is undertaken by another professional person responsible for the design and/or management of the contract/s, referred to as the Principal Agent.

### Engineer's Site Representative:

An on-site representative of the Engineer, who is responsible for the day-to-day management of the project.

### Environmental Control Officer (ECO):

An independent Environmental Consultant assigned to the project. The independent Environmental Control Officer shall be a member of the environmental representative team and shall advise the Principal-Agent/Engineer on all environmental matters relating to the development in consultation with Biodiversity Management Department (BMD).

### Environment:

Environment means the surroundings within which humans exist and that are made up of:

- (a) The land, water and atmosphere of the earth.
- (b) Micro-organisms, plant and animal life.
- (c) Any part or combination of (a) and (b) and the interrelationships among and between them.
- (d) The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human
- (e) health and well-being.

### Forest:

Includes:

- (a) A natural forest, woodland and a plantation.
- (b) The forest produces in it.
- (c) The ecosystems which it makes up.

### Environmental Representatives:

Line Department Environmental representative responsible for environmental management as required by the Environmental Consultant (ECO) and BMD.

Estuary:

Estuary means a body of surface water:

- (a) that is permanently or periodically open to the sea;
- (b) in which a rise and fall of the water level as a result of the tides is measurable at spring tides when the body of surface water is open to the sea; or
- (c) in respect of which the salinity is higher than freshwater as a result of the influence of the sea, and where there is a salinity gradient between the tidal reach and the mouth of the body of surface water.

Indigenous Vegetation:

Indigenous vegetation refers to vegetation consisting of indigenous plant species occurring naturally in an area, regardless of the level of alien infestation and where the topsoil has not been lawfully disturbed during the preceding ten years.

Interested and Affected Parties (I&APs):

All persons who may be affected by the project either directly or indirectly, or who have an interest or stake in the area to be affected by the project. I&APs include landowners, tribal or local authorities, local residents, tourists, public interest groups, etc.

Invasive Species

Invasive species means any species whose establishment and spread outside of its natural distribution range:

- (a) threaten ecosystems, habitats or other species or have demonstrable potential to threaten ecosystems, habitats or other species; and
- (b) may result in economic or environmental harm or harm to human health.

Littoral Active Zone:

Littoral active zone means any land forming part of, or adjacent to, the seashore that is unstable and dynamic as a result of natural processes; and characterised by dunes, beaches, sand bars and other landforms composed of unconsolidated sand, pebbles or other such material which is either unvegetated or only partially vegetated.

Maintenance:

Maintenance means actions performed to keep a structure or system functioning or in service on the same location, capacity and footprint.

Maintenance Management Plan:

Maintenance management plan means a management plan for maintenance purposes defined or adopted by the competent authority.

Natural Forest:

Natural forest means a group of indigenous trees

- (a) Which have crowns that are largely contiguous; or
- (b) Which have been declared by the Minister to be a natural forest under section 7 (2) of the National Forests Act (No 84 of 1998)

Principal Agent:

Principal Agent means the company acting through a Director, a Partner or an official authorised thereto in writing responsible for the administration of the project on behalf of the Employer. (The Principal-Agent is also sometimes referred to as the Project Manager).

Principal Agent's Site Representative:

An on-site representative of the Principal Agent responsible for day-to-day management of the project.

Progressive Reinstatement:

Reinstatement of disturbed areas to topsoil profile on an ongoing basis immediately after selected maintenance activities (e.g., backfilling of a trench) are completed. This allows for passive rehabilitation (i.e., natural re-colonisation by vegetation) to commence.

Rehabilitation:

Rehabilitation measures are taken to rehabilitate degraded ecosystems or restore cleared ecosystems following exposure to impacts that cannot be completely avoided and/or minimised. Rehabilitation emphasizes the reparation of ecosystem processes, productivity and services, whereas the goals of restoration also include the re-establishment of the pre-existing biotic integrity in terms of species composition and community structure.

Riparian Vegetation:

Vegetation occurring on the banks of a river or stream (i.e., vegetation fringing a water body). In this specification, riparian vegetation in terms of removal, storage and replacement is only applied to sedge, grass, groundcover, reed, bulrush, or herbaceous component of riparian vegetation and excludes the woody component.

Solid Waste:

Means all solid waste, including maintenance debris, chemical waste, excess cement/concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

Subsoil:

Subsoil is the soil horizons between the topsoil horizon and the underlying parent rock. Subsoil often has more clay-like material than the topsoil. Subsoil is of less value to plants, in terms of nutrient (food) and oxygen supply, than topsoil. When subsoil is exposed it tends to erode fairly easily.

Tree:

Tree includes any tree seedling, sapling, transplant or coppice shoot of any age and any root, branch or other part of it.

Topsoil:

This is defined as the A horizon of the soil profile. Topsoil is the upper layer of soil from which plants obtain their nutrients for growth. It is often darker in colour, due to the organic (humus) fraction. Topsoil is deemed for the purposes of this specification as the layer of soil from the surface to the specified depth required for excavation. Where topsoil is referred to, it is deemed to be both the soil and grass/ground cover fraction.

Water Body:

Any open body of water including streams, dams, rivers, lakes, and the sea.

Watercourse:

Watercourse means

- (a) a river or spring,
- (b) a natural channel in which water flows regularly or intermittently,
- (c) wetland, lake or dam into which, or from which, water flows, and any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse; and

a reference to a watercourse includes, where relevant, its bed and banks.

Wetland Vegetation:

Vegetation that is indicative of a wetland environment, e.g., sedges, *Barrentonia*, rushes, reeds, hydrophilic grasses and ground-covers, but for the purposes of this specification excludes woody species.

Wetland:

Wetland means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.

Woodland:

A group of indigenous trees which are not a natural forest, but whose crowns cover more than five per cent of the area bounded by the trees forming the perimeter of the group.



## 1 INTRODUCTION

### 1.1 Background

eThekwini Coastal Engineering Stormwater Catchment Management (CSCM) Department has compiled an overarching Environmental Maintenance Management Plan (MMP) for the routine rehabilitation, repairs and upgrades of municipal stormwater infrastructure within sensitive areas. Utilising this overarching MMP the eThekwini Coastal, Stormwater & Catchment Management (CSCM) Department has compiled this MMP Addendum for maintenance work on the [Insert Project Title] which falls within a recognised sensitive environment (as defined). The intention of this document is to apply the specific conditions for the [Insert Project Title] in conjunction with the overarching MMP for Maintenance, Repair and Upgrade of Existing Stormwater Infrastructure within Sensitive Environmental Areas<sup>1</sup>.

This MMP Addendum has been prepared to allow CSCM to proceed with the [Insert Project Title] within a sensitive environmental area/s. The sensitive environmental area/s associated with the [Insert Project Title] has been indicated below and for ease of reference shall be referred to from this point forward as the 'sensitive environmental area': [Remove all non-applicable points below]

- Formally Protected Areas<sup>Error! Bookmark not defined.</sup>, including Nature Reserves;
- Durban Metropolitan Open Space System (DMOSS);
- Natural vegetated areas of indigenous vegetation (not within DMOSS);
- Public Open Space as per the approved eThekwini Municipalities approved zoning schemes;
- Watercourses (as per definition of watercourses in the National Water Act, 1998<sup>Error! Bookmark not defined.</sup>);
- 1:100 year flood lines;
- Riparian habitats;
- Estuary (as per definition of littoral active zones in the National Environmental Management: Integrated Coastal Management Act, 2008<sup>Error! Bookmark not defined.</sup>); and
- Littoral active zones (as per definition of littoral active zones in the National Environmental Management: Integrated Coastal Management Act, 2008).

### 1.2 Environmental Principles

The principle of sustainable development that guides environmental management in South Africa requires consideration of the following aspects, for all maintenance activities covered in this MMP Addendum:

- That the disturbance of ecosystems and loss of biological diversity are avoided, where they cannot be altogether avoided, are minimised and remedied;
- That pollution and degradation of the environment are avoided, where they cannot be altogether avoided, are minimised and remedied;
- That the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, where it cannot be altogether avoided, is minimised and remedied;
- That waste generation is be avoided, or where it cannot be altogether avoided, is minimised and reused or recycled where possible and otherwise disposed of in a responsible manner; and
- That negative impacts on the environment and on people's environmental rights are anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

### 1.3 Purpose

The purpose of this MMP Addendum is to provide site-specific, practical environmental management measures to minimise negative environmental impacts that can potentially arise during the [Insert Project Title] within [detail specific location]. This MMP Addendum is intended to be used in conjunction with the overarching MMP

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<sup>1</sup> Maintenance Management Plan For The Rehabilitation, Repair And Upgrade Of Existing Stormwater Infrastructure Within Sensitive Environmental Areas, Enviropro, 2021.

that translates mitigation measures into actions that can be practically implemented during the undertaking of the maintenance project.

This MMP Addendum aims to assign responsibilities to specific personnel during the [Insert Project Title], develop mitigation measures that can translate into action plans and provide for regular auditing of the mitigation measures.

The objectives of the MMP Addendum are as follows:

1. Ensure compliance with local, provincial, national and/or international regulations, standards and guidelines, relating to the protection of the environment.
2. Clarify the roles and responsibilities of the team members.
3. Detail the process/procedure to be followed that will avoid conflict within sensitive areas under Ezemvelo KwaZulu-Natal Wildlife (EKZNW) management. [Remove if not applicable]
4. Identify measures of mitigating any potential negative impacts thereby reducing or eliminating them.
5. Provide detail on specific actions required for minimising negative impacts and provide tools or methods for monitoring the effectiveness of mitigation measures.
6. Optimise positive impacts to maximise the benefit thereof.
7. Provide monitoring and auditing processes during maintenance activities.
8. Provide methods of compliance monitoring and reporting of the monitoring.
9. Provide waste management, recycling and re-use strategies.
10. Provide practical environmental management measures to minimise negative environmental impacts that can potentially arise during maintenance activities.

There are several general principles that form the basis of this MMP Addendum<sup>2</sup>:

1. Minimise and avoid damage to watercourses, natural areas, habitats, fauna and flora within the repair/maintenance area.
2. Take active measures to minimise soil loss due to both wind and water action from the repair/maintenance area.
3. Take active measures to manage potentially polluting activities and to prevent pollution of any sort both on the site and into the surrounding areas.
4. Minimise and avoid damage to identified cultural heritage features within the repair/development area.
5. Minimise any disruptive impact that the repair/maintenance may have on visitors and on the sense of place within the protected area.

#### 1.4 Project Description

[Insert Detailed Project Description]

[Include maps of all maintenance activities within Annexure 4]

[If applicable included details of all specialist findings for the project. All specialist report must be included in Annexure 2]

#### 1.5 Legislative Context

A number of activities provided in the National Environmental Management Act (NEMA) Environmental Impact Assessment (EIA) Regulations of 2014 as amended, listed activities contain an exclusion clause that allows maintenance work to be undertaken without Environmental Authorisation through an EIA Process provided the work is undertaken under an authorised MMP. The NEMA listed activities that are applicable to the [Insert Project Title] have been provided in table 1 below. [Remove all non-applicable listed activities below]

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<sup>2</sup> Sourced from sample MMPr provided by EKZNW.

**Table 1: Listed activities applicable to the [Insert Project Title] Maintenance Management Plan**

| <b>NEMA LISTING NOTICE 1 of 2014 as amended</b><br><b>(Would normally require a Basic Assessment for Environmental Authorisation)</b> |  |  |
|---|--|--|
| <b>Activity Number</b>  | <b>Listed Activity description</b>   | <b>Aspect</b>  |
| 18  | The planting of vegetation or placing of any material on dunes or exposed sand surfaces of more than 10 square metres, within the littoral active zone, for the purpose of preventing the free movement of sand, erosion or accretion, excluding where —<br>(i) the planting of vegetation or placement of material relates to restoration and maintenance of indigenous coastal vegetation undertaken <b>in accordance with a maintenance management plan</b>   | Beaches and dunes  |
| 19  | The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;<br><br>but excluding where such infilling, depositing, dredging, excavation, removal or moving—<br>b) is for maintenance purposes undertaken <b>in accordance with a maintenance management plan</b> ;   | Watercourses   |
| 19A   | The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from—<br>(i) the seashore;<br>(ii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater; or<br>(iii) the sea; —<br>but excluding where such infilling, depositing, dredging, excavation, removal or moving—<br>g) is for maintenance purposes undertaken <b>in accordance with a maintenance management plan</b> ; | Beaches, dunes, and estuaries                            |
| 27  | The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for—<br>(i) the undertaking of a linear activity;<br>(ii) or maintenance purposes undertaken <b>in accordance with a maintenance management plan</b> .  | Vegetation Clearing                                      |
| <b>NEMA LISTING NOTICE 2 of 2014</b><br><b>(Would normally require a Scoping EIA Process for Environmental Authorisation)</b>         |  |  |
| 15  | The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for—<br>(i) the undertaking of a linear activity;<br>(ii) or maintenance purposes undertaken <b>in accordance with a maintenance management plan</b> .   | Vegetation Clearing                                      |
| 24  | The extraction or removal of peat or peat soils, including the disturbance of vegetation or soils in anticipation of the extraction or removal of peat or peat soils, but excluding where such extraction or removal is for the rehabilitation of wetlands <b>in accordance with a maintenance management plan</b> .   | Wetland Soil   |
| <b>NEMA LISTING NOTICE 3 of 2014</b><br><b>(Would normally require a Basic Assessment for Environmental Authorisation)</b>            |  |  |
| 12  | The clearance of an area of 300 square metres or more of indigenous vegetation within KwaZulu-Natal:<br>i. Trans-frontier protected areas managed under international conventions;<br>ii. Community Conservation Areas;<br>iii. Biodiversity Stewardship Programme Biodiversity Agreement areas;<br>iv. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;   | Vegetation Clearing within protected and sensitive areas |

|  |  |  |
|--|--|--|
|  | <ul style="list-style-type: none"> <li>v. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</li> <li>vi. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;</li> <li>vii. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning;</li> <li>viii. A protected area identified in terms of NEMPAA, excluding conservancies;</li> <li>ix. World Heritage Sites;</li> <li>x. Sites or areas identified in terms of an international convention;</li> <li>xi. Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose;</li> <li>xii. Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</li> <li>xiii. or In an estuarine functional zone.</li> </ul> <p>except where such clearance of indigenous vegetation is required for maintenance purposes undertaken <b>in accordance with a maintenance management plan.</b></p> |  |
|--|--|--|

**Note:** As confirmed by EDTEA during the pre-application meeting held on the [Insert date] no other listed activities are triggered.

*It must be emphasised that this MMP Addendum is **ONLY** applicable to those listed activities in terms of the 2014 NEMA EIA Regulations (as amended) that have the MMP exclusion clause. A Water Use Authorisation in terms of the Section 20 of the National Water Act (No. 36 of 1998) may still be required.*

**1.6 The Applicant**

The contact details of the Applicant are provided in Table 2 below:

**Table 2: Applicant Details**

| Name of Applicant:   | Physical Address:  | Contact number:              | Contact email:   |
|--|--|------------------------------|--|
| Coastal, Stormwater & Catchment Management Department (CSCM) | CSCM, 5 <sup>th</sup> Floor,<br>City Engineers Building,<br>166 K.E Masinga Road | 031 311 7960<br>082 321 1121 | <a href="mailto:Gregory.Williams@durban.gov.za">Gregory.Williams@durban.gov.za</a> |

## 2 ROLES AND RESPONSIBILITIES

Please note that all the contact details for the representatives of the parties tabulated below must be populated **PRIOR** to the implementation of the maintenance activities associated with the [Insert Project Title] being commissioned. [Populate all details below and remove non-applicable organisations]

**Table 3: Roles and Responsibilities**

| ORGANISATION   | RESPONSIBILITIES   |
|--|--|
| <p><b>A. CSCM - eThekweni Coastal Engineering Stormwater Catchment Management</b><br/>The Project Manager (PM) from eThekweni Coastal Engineering Stormwater Catchment Management undertaking the maintenance project or activity.</p> <p>Branch:<br/>Name:<br/>Title:<br/>Contact details:<br/>Tel:<br/>Cell:<br/>Email:</p>        | <ul style="list-style-type: none"> <li>• Ensure that the maintenance team or Contractors comply with the approved MMP.</li> <li>• Ensure compliance with the provisions for duty of care and remediation of damage in accordance with section 28 of the National Environmental Management Act (NEMA), (No. 107 of 1998) and its obligations regarding the control of emergency incidents in terms of Section 30 of NEMA.</li> <li>• Notify EDTEA of any incident as defined in subsection 30(1)(a) of NEMA<sup>3</sup>.</li> <li>• Where construction or operation activities are contracted out (e.g. to Contractors and Subcontractors), the liability associated with non-compliance still rests with CSCM (unless otherwise agreed upon between the authorities, CSCM and the contracting parties).</li> </ul> |
| <p><b>B. Maintenance Team Manager</b><br/>The allocated manager responsible for managing the maintenance staff on the ground and for ensuring that the environmental management requirements are met.</p> <p>Branch:<br/>Name:<br/>Title:<br/>Contact details:<br/>Tel:<br/>Cell:<br/>Email:</p>                                     | <ul style="list-style-type: none"> <li>• Ensuring the on-site implementation of the MMP.</li> <li>• Managing the maintenance team.</li> <li>• Ensuring that the work undertaken is properly and competently directed, guided and executed at appointed stages of the project.</li> <li>• Ensuring the adherence to statutory safety, health and environment (SHE) standards.</li> <li>• Ensuring the inspection and maintenance activities comply with the MMP.</li> <li>• Monitoring the site regularly to ensure compliance.</li> <li>• Avoiding and/or mitigate adverse impacts on the environment.</li> <li>• Ensuring that the maintenance staff is aware of the MMP and all agreed Method Statements.</li> </ul>   |
| <p><b>C. Maintenance Staff</b></p>   | <ul style="list-style-type: none"> <li>• The worker staff allocated by the PM or Team Manager to undertake the inspection or maintenance work.</li> </ul>  |
| <p><b>D. Contractor</b><br/>At times a Contractor may be appointed to assist with maintenance if the Municipality is limited by capacity constraints. The Contractor, like the Maintenance Team Manager, reports to the Project Manager.</p> <p>Company:<br/>Name:<br/>Title:<br/>Contact details:<br/>Tel:<br/>Cell:<br/>Email:</p> | <ul style="list-style-type: none"> <li>• Implement and adhere to the MMP in all respects.</li> <li>• Ensure compliance with the MMP by contractor staff with non-compliances recorded by the contractor for audit purposes.</li> <li>• Be familiar with all conditions of the MMP.</li> <li>• Supply method statements for implementation of the MMP where relevant, which includes mitigation measures.</li> <li>• Ensure the Contractor and all site workers attend environmental awareness training provided by CSCM and relay training to all new sub-contractors when necessary. Proof of training must be kept on record.</li> <li>• Maintain an environmental file.</li> </ul>  |

<sup>3</sup> An incident” is defined as “an unexpected, sudden and uncontrolled release of a hazardous substance, including from a major emission, fire or explosion, that causes, has caused or may cause significant harm to the environment, human life or property”.

| ORGANISATION   | RESPONSIBILITIES   |
|--|--|
|  | <ul style="list-style-type: none"> <li>• Maintain environmental complaints register that must have carbon copies and numbered pages, to record all incidents that occur on-site during construction. Incidents include but may not be limited to:               <ul style="list-style-type: none"> <li>- Public involvement/complaints.</li> <li>- Occupational health and safety incidents.</li> <li>- Incidents involving hazardous materials and/or equipment on site.</li> <li>- Non-compliance incidents.</li> <li>- Spills into or around watercourses.</li> <li>- Encountering fauna of interest and a record of all Flora and Fauna identified within the study area.</li> </ul> </li> </ul> |
| <p><b>E. Regional Ecologist (if applicable)</b><br/>The regional ecologist is a suitably qualified ecologist at EKZNW, the relevant Nature Reserve or appointed by the CSCM.</p> <p>Name:<br/>Title:<br/>Contact details:<br/>Tel:<br/>Cell:<br/>Email:</p>                        | <ul style="list-style-type: none"> <li>• Provide advice and guidance on environmental controls on-site and as stipulated in the MMP.</li> </ul>  |
| <p><b>F. Reserve Manager (if applicable)</b><br/>The Reserve Manager is in charge of the nature reserve management.</p> <p>Name:<br/>Title:<br/>Contact details:<br/>Tel:<br/>Cell:<br/>Email:</p>   | <ul style="list-style-type: none"> <li>• Ensure that maintenance activities in the Nature Reserve are undertaken in a controlled manner and in accordance with operational rules and environmental principles of the nature reserve.</li> </ul>  |
| <p><b>G. eThekweni Biodiversity Management Department (BMD)</b><br/>BMD is the advisor to the CSCM on all environmental matters related to the compilation, implementation and updating of the MMP.</p> <p>Name:<br/>Title:<br/>Contact details:<br/>Tel:<br/>Cell:<br/>Email:</p> | <ul style="list-style-type: none"> <li>• Provide advice and guidance on the environmental controls documented in the MMP,</li> <li>• Advise and monitor compliance of the activities with the MMP providing corrective action support where required.</li> </ul>   |

### 3 STANDARD MAINTENANCE ACTIVITIES ON EXISTING STORMWATER INFRASTRUCTURE IN ENVIRONMENTALLY SENSITIVE AREAS

This section of the MMP covers maintenance and upgrade activities that will take place within [project tlocation] which falls within a recognised sensitive environment (as defined) for the [Insert Project Title] which will include the following activities:

[Insert relevant standard maintenance activities as included in Section 4 of the Generic MMP<sup>1</sup>]

[The standard specifications included in the Generic MMP<sup>1</sup> must be used in conjunction with the drawings produced by the engineer and amended where indicated. These project site-specific drawings must be included in **Annexure 5**]

## 4 METHOD STATEMENTS

Detailed site-specific method statements must be adhered to when undertaking work within sensitive environmental areas. All method statements required for the [Insert Project Title] have been tabulated below in Table 4. All method statements indicated in Table 4 have been included in **Annexure 3**. [Remove all non-applicable method statements below]

**Table 4: List of method statements compiled for the [Insert Project Title]**

| Method Statement                         | Objective  |
|--|--|
| Access                                   | Institute adequate access agreements and measures to ensure the safety of landowners and the integrity of the gates/fences.  |
| Aesthetics                               | Reduce construction impacts upon the aesthetics of the surrounding environment.  |
| Bunding                                  | Contain and manage all hazardous substances released into the environment.   |
| Cement Mixing / Concrete Batching        | Provide measures to contain cementitious products impacting upon the surrounding environment.  |
| Contaminated Water                       | Ensure no contamination or pollution of water impacted upon by construction-related activities.  |
| Dust                                     | Reduce construction-related dust impacts on the surrounding environment. Prevent dust nuisance and health impacts on people and animals in the area.   |
| Environmental Monitoring                 | Implement a programme whereby impacts upon the surrounding can be monitored and implement measures to mitigate such impacts.   |
| Erosion control                          | Prevent erosion and reduce potential impacts upon the surrounding environment.   |
| Fire, Hazardous and Poisonous Substances | Impose a “no fire” rule on the entire project. Reduce potential impacts in the event of a fire incident.   |
| Flora and Fauna                          | Preserve fauna and flora through control of construction activities. Reduce the impact of the project on the surrounding vegetation during construction. Prevent infestation of alien species during construction. |
| Fuels and Fuel Spills                    | Manage and contain all refuelling activities to prevent and mitigate potential impacts.  |
| Heritage                                 | Limit and mitigate potential heritage impacts on chance findings should they occur.  |
| Noise                                    | Reduce construction-related surrounding environment.   |
| Watercourse Diversions                   | Prevent hydrological impacts and reduce potential impacts upon the surrounding environment.  |
| Solid and Liquid Waste Management        | Implement measures to reduce, monitor and manage waste generation, whilst maximising recycling efficiency.   |
| Social                                   | Maximise social impacts benefits and minimise negative.  |
| Sources of Materials                     | Source materials that have been legally mined or manufactured.   |
| Topsoil and Subsoil Management           | Manage the removal and stockpiling of topsoil and subsoil during construction for use during rehabilitation.   |
| Traffic                                  | Minimise the impacts and extent of construction-related traffic on the surrounding road network and environment, whilst maximising road user safety.   |
| Training                                 | Foster construction-related skills transfer, environmental awareness, health and safety awareness, and materials and equipment skills.   |

**NOTE:** All site-specific method statements must be approved by BMD prior to maintenance activity taking place on-site.



## 5 SUMMARY OF POTENTIAL IMPACTS

Table 5 provides potential impacts that could arise from the site-specific maintenance activities associated with the [Insert Project Title]. The areas of most concern have been highlighted in yellow and have been expanded on in Section 6 below. [Delete all no applicable activities and impacts below]

**Table 5: Potential Impacts arising from Maintenance Activities**

|          | Nature of Impact  | Impact Management Outcomes  |
|----------|---|---|
| <b>A</b> | <b>Infrastructure Evaluation and Inspection</b>   |   |
| 1        | Disturbance and/or removal of indigenous vegetation.  | <ul style="list-style-type: none"> <li>▪ Minimise or avoid negative impacts on fauna and flora as a result of maintenance activities.</li> </ul>  |
| 2        | New access routes created by vehicles causing disturbance to the environment.                                       |   |
| <b>B</b> | <b>Repair of Concrete Portal / Rectangular / Pipe Culverts</b>  |   |
| 1        | Environmental damage due to inadequate site establishment   | <ul style="list-style-type: none"> <li>▪ Minimise and or reduce any potential environmental impacts linked to the establishment of the relevant site camp.</li> </ul>   |
| 2        | Spillage of cement and contaminated runoff from cement into the sensitive environmental areas.                      | <ul style="list-style-type: none"> <li>▪ Avoid contamination of the surrounding natural area.</li> </ul>  |
| 3        | Poor management of construction rubble and/or waste.  | <ul style="list-style-type: none"> <li>▪ To ensure waste is appropriately stored, handled and safely disposed of at a recognised waste facility.</li> </ul>   |
| 4        | Leaking equipment resulting in pollution of the surrounding environment.  | <ul style="list-style-type: none"> <li>▪ Minimise or prevent pollution of the surrounding environment due to leaking maintenance vehicles/equipment.</li> </ul>   |
| 5        | Improper storage of hazardous fuel/substances on site.  |   |
| 6        | Noise generated during maintenance activities.  | <ul style="list-style-type: none"> <li>▪ To prevent excessive noise pollution from the maintenance activities.</li> </ul>   |
| 7        | Damage to indigenous vegetation.  | <ul style="list-style-type: none"> <li>▪ Limit damage/ clearing of indigenous vegetation</li> </ul>   |
| 8        | Erosion of stockpiles leading to sedimentation of the surrounding environment.                                      | <ul style="list-style-type: none"> <li>▪ Avoidance of physical damage to surrounding natural areas by erosion and sedimentation.</li> </ul>   |
| 9        | Damaging riverine/wetland/estuary sensitive areas through maintenance activities.                                   | <ul style="list-style-type: none"> <li>▪ Avoid any damage to areas outside of the immediate construction footprint.</li> <li>▪ Ensure that the watercourse/estuary banks and coastal areas are protected from potential erosion post maintenance.</li> </ul>  |
| 10       | Damage to coastal areas due to maintenance activity.  |   |
| 11       | Diverting flow within a watercourse /estuary during maintenance activities changes system hydraulics and flow paths | <ul style="list-style-type: none"> <li>▪ Prevent total blockages of the watercourse/estuary</li> <li>▪ Ensure the hydraulics and flow paths within the watercourse/estuary are not permanently altered.</li> <li>▪ Ensure river diversions are only constructed where absolutely necessary.</li> <li>▪ Only implement diversions at the appropriate sections of the watercourse/estuary.</li> <li>▪ Ensure all diversions take place within the macro channel of the watercourse/estuary</li> </ul> |
| <b>C</b> | <b>Refurbishment and/or Replacement of Pipes</b>  |   |
| 1        | <i>All Impacts as identified under Item B.</i>  | <ul style="list-style-type: none"> <li>▪ <i>All Impact Management Outcomes as identified under Item B.</i></li> </ul>   |

|   |   |   |
|---|---|---|
| 2   | Inappropriate disposal of concrete pipes leading to contamination and excess waste.   | <ul style="list-style-type: none"> <li>To ensure waste is appropriately stored, handled and safely disposed of at a recognised waste facility.</li> </ul>   |
| <b>D Refurbishment and/or Replacement of Discharge Points</b> |   |   |
| 1   | <i>All Impacts as identified under Item B.</i>  | <ul style="list-style-type: none"> <li><i>All Impact Management Outcomes as identified under Item B.</i></li> </ul>   |
| 2   | Poor management of general waste which has accumulated in and around the outlet structures leading to downstream contamination. | <ul style="list-style-type: none"> <li>To ensure waste is appropriately stored, handled and safely disposed of at a recognised waste facility.</li> </ul>   |
| <b>E Repair of Open Erosion Gullies</b>                       |   |   |
| 1   | <i>All Impacts as identified under Item B.</i>  | <ul style="list-style-type: none"> <li><i>All Impact Management Outcomes as identified under Item B.</i></li> </ul>   |
| 2   | Further expansion of the erosion gullies due to bank collapse leading to downstream sedimentation.                              | <ul style="list-style-type: none"> <li>To ensure there is minimal water intrusion into the existing erosion gullies during infilling.</li> <li>To prevent further downstream sedimentation.</li> </ul>  |
| <b>F Repair and Replacement of Protection Works</b>           |   |   |
| 1   | <i>All Impacts as identified under Item B.</i>  | <ul style="list-style-type: none"> <li><i>All Impact Management Outcomes as identified under Item B.</i></li> </ul>   |
| 2   | Poor management / stockpiling of materials i.e., gabion rock and aggregate.   | <ul style="list-style-type: none"> <li>Avoidance of physical damage to surrounding natural areas by erosion and sedimentation.</li> </ul>   |
| <b>G In-situ Cast Concrete Culverts</b>                       |   |   |
| 1   | <i>All Impacts as identified under Item B.</i>  | <i>All Impact Management Outcomes as identified under Item B.</i>   |
| <b>H Check Weirs</b>  |   |   |
| 1   | <i>All Impacts as identified under Item B.</i>  | <i>All Impact Management Outcomes as identified under Item B.</i>   |
| 2   | Poor management of general waste which has accumulated in and around the weir leading to downstream contamination.              | To ensure waste is appropriately stored, handled and safely disposed of at a recognised waste facility.   |
| <b>I Precast and in-situ Cast Canal Walls and Bases</b>       |   |   |
| 1   | <i>All Impacts as identified under Item B.</i>  | <i>All Impact Management Outcomes as identified under Item B.</i>   |
| <b>J Temporary Excavation and Backfilling of Material</b>     |   |   |
| 1   | New Access Routes Created by Vehicles Causing Disturbance to the Environment  | <ul style="list-style-type: none"> <li>Minimise or avoid negative impacts on fauna and flora as a result of maintenance activities.</li> </ul>  |
| 2   | Diverting flow within a watercourse /estuary during maintenance activities changes system hydraulics and flow paths             | <ul style="list-style-type: none"> <li>Prevent total blockages of the watercourse/estuary</li> <li>Ensure the hydraulics and flow paths within the watercourse/estuary are not permanently altered.</li> <li>Ensure river diversions are only constructed where absolutely necessary.</li> <li>Only implement diversions at the appropriate sections of the watercourse/estuary.</li> <li>Ensure all diversions take place within the macro channel of the watercourse/estuary</li> </ul> |

|          |   |  |
|----------|---|--|
| 3        | Damaging riverine/wetland/estuary sensitive areas through maintenance activities.                     | <ul style="list-style-type: none"> <li>▪ Avoid any damage to areas outside of the immediate construction footprint.</li> <li>▪ Ensure that the river/estuary banks are protected from potential erosion post maintenance.</li> </ul> |
| 4        | Erosion of temporary structures/access roads leading to sedimentation of the surrounding environment. | <ul style="list-style-type: none"> <li>▪ Avoidance of physical damage to surrounding natural areas by erosion and sedimentation of nearby watercourses.</li> </ul>   |
| 5        | Stockpiling of materials in close proximity to sensitive areas  |  |
| <b>K</b> | <b>Removal Of Silt, Debris and Waste from Pipes/Manholes</b>  |  |
| 1        | Poor management of construction rubble, flood debris and/or waste.                                    | <ul style="list-style-type: none"> <li>▪ To ensure waste is appropriately stored, handled and safely disposed of at a recognised waste facility.</li> </ul>  |
| 2        | Noise generated during maintenance activities.  | <ul style="list-style-type: none"> <li>▪ To prevent excessive noise pollution from the maintenance activities.</li> </ul>  |
| <b>L</b> | <b>Repair Of Coastal Outfalls</b>   |  |
| 1        | Environmental damage due to inadequate site establishment   | <ul style="list-style-type: none"> <li>▪ Minimise and or reduce any potential environmental impacts linked to the establishment of the relevant site camp.</li> </ul>  |
| 2        | Damage to coastal areas due to maintenance activity.  | <ul style="list-style-type: none"> <li>▪ Ensure that the coastal areas are protected from potential erosion post maintenance.</li> </ul>   |
| 3        | Damage/disturbance to marine life.  | <ul style="list-style-type: none"> <li>▪ To avoid unnecessary damage/disturbance to marine life due to maintenance activities near and within marine sensitive environmental areas.</li> </ul>                                       |
| 4        | Spillage of building materials, debris and concrete to the surrounding water.                         | <ul style="list-style-type: none"> <li>▪ Avoid contamination of the surrounding natural area.</li> </ul>   |
| 5        | Poor management of construction rubble and/or waste.  | <ul style="list-style-type: none"> <li>▪ To ensure waste is appropriately stored, handled and safely disposed of at a recognised waste facility.</li> </ul>  |
| 6        | Leaking equipment resulting in pollution of the surrounding environment.                              | <ul style="list-style-type: none"> <li>▪ Minimise or prevent pollution of the surrounding environment due to leaking maintenance vehicles/equipment.</li> </ul>  |
| 7        | Noise generated during maintenance activities.  | <ul style="list-style-type: none"> <li>▪ To prevent excessive noise pollution from the maintenance activities</li> </ul>   |
| <b>M</b> | <b>Vegetation Clearing</b>  |  |
| 1        | Clearing of indigenous vegetation.  | <ul style="list-style-type: none"> <li>▪ Protection of indigenous and/or protected vegetation</li> </ul>   |
| 2        | Emissions, smoke, nuisance, safety issues when burning plant material.                                | <ul style="list-style-type: none"> <li>▪ Avoid/minimise air quality, nuisance and safety issues associated with the burning of vegetation.</li> </ul>  |
| 3        | Potential proliferation of alien invasive vegetation.   | <ul style="list-style-type: none"> <li>▪ Minimise/avoid the proliferation of Invasive Alien Plants as a result of maintenance activities.</li> </ul>   |
| <b>N</b> | <b>Temporary Access for the Public</b>  |  |
| 1        | Disturbance and/or removal of indigenous vegetation.  |  |

|   |   |  |
|---|---|--|
| 2 | New access routes created by vehicles causing disturbance to the environment. | ▪ Minimise or avoid negative impacts on fauna and flora as a result of maintenance activities. |
|---|---|--|

## 6 MAINTENANCE ACTIVITIES - ENVIRONMENTAL IMPACTS MANAGEMENT

[Make reference to appropriate mitigations measure stipulated in Section 7 of the Overarching MMP<sup>1</sup> that correlate with the maintenance activities included in Table 5 above]

Add new and appropriate mitigation measures specific to the site that are not covered in the Overarching MMP particularly with regards to the processes detailed in the site specific Method Statements. Please follow same format as that in the Overarching MMP.

**[NOTE: only include relevant activities and mitigations in this section]**

**Where specialist studies have been undertaken specifically for this maintenance activity, please make reference to the studies (Annexure 2) and include any pertinent recommendations that need to be considered in identifying and mitigating potential site specific environmental impacts.**

No decommissioning activities are allowed under this MMP Addendum. Separate approvals and a decommissioning Environmental Management Programme will be required prior to decommissioning. The relevant competent authorities (i.e. EDTEA and DWS) must be contacted prior to decommissioning activities to confirm the need for relevant approvals.

**Annexure 1: Overarching MMP**

**Annexure 2: Specialists Reports (if any)**

**Annexure 3: Project Specific Work Method Statements**



**Annexure 4: Project Specific Maps**

## **Annexure 5: Project Specific Drawings**