# National Water Reuse Programme:

Programme Design and Preparation of a Full Funding Proposal to the Green Climate Fund



Environmental and Social Management Framework and Plan Annexure 6

12 September 2022



# **EXECUTIVE SUMMARY**

The Development Bank of Southern Africa (the 'DBSA) has partnered with various government departments (including the Department of Water and Sanitation (the 'DWS'), the Department of Cooperative Governance ('DCOG'COGTA') through its agency the Municipal Infrastructure Support Agency ('MISA'), and the National Treasury for the development of a National Water Reuse Programme ('WRP' or the 'Programme').

In addition, as an Accredited Entity of the Green Climate Fund ('GCF'), the DBSA submitted a proposal to the GCF to support the design and implementation of the WRP in South Africa.

Noting the importance of water reuse to diversifying the 'water mix' in South Africa, and the challenges and barriers to entry that exist in the development of these water reuse projects at scale, the development of a focussed programme to address these challenges and ultimately implement pathfinder projects is critical to contributing towards building a more resilient water future. The project team will design a national Water Reuse Programme (WRP) aimed at enhancing water security and improved resilience to climate change through the scale-up of water reuse approaches and infrastructure in municipalities and through improved management of Ecological Infrastructure (EI).

At the highest level, the WRP will encourage and support municipalities to implement water reuse and reclamation initiatives that would also include nexus issues, such as combined heat and power (CHP) installations and sewage sludge reuse. The WRP would need to be highly effective, technically advanced, and ready-to-launch towards demonstrably achieving climate change resilience objectives (by strengthening the country's adaptive capacity against water stress and scarcity), and measurably maximize climate change mitigation co-benefits, in a manner that explicitly meets the criteria and requirements of the Green Climate Fund – thereby lending itself to the preparation and submission of a successful GCF funding proposal.

This report is the Environmental and Social Management Framework (ESMF) which has been prepared for the Programme and for submission by DBSA to GCF. The aim of the ESMF is to avoid and minimise negative environmental and social (E&S) impacts and to enhance positive aspects of the Programme. The ESMF contains environmental and social baseline information at the national level and provides the framework and guidelines that ensure that the DBSA and the project owners (municipalities) are committed and able to comply with the revised GCF Environmental and Social Policies(B.BM-2021/18) and DBSA Environmental and Social Safeguard Standards. The ESMF is developed at a programme level and provides the framework within which project specific ESMFs will be prepared at the project level. The Water Partnership Office (WPO) will provide support to Municipalities to prepare projects for financing as well as to provide technical and financial support in project implementation. As such, the ESMF will be a key component of all project processes, with the WPO and the DBSA overseeing the use of the ESMF. In all projects, and ESIA will be undertaken and an ESMP will be prepared. This will apply to all 27 projects in the longer-term project pipeline.

The ESIA and ESMP will be subject to information disclosure requirements per GCF Revised Environmental and Social Policy and the Information Disclosure Policy. In order to develop the ESIA and ESMP required, the

DBSA's own due diligence approaches will be applied. The ESIA and ESMP along with the ESS Disclosure Form will be submitted to GCF for clearance following the disclosure and aligned to the ESS requirements in the relevant GCF policies.

Whereas the ESMF provides the framework for ensuring that project processes consider E&S impacts in accordance with GCF and DBSA safeguards, as well as national regulatory instruments, the Environmental and Social Management Plan (ESMP) is a plan developed at project planning phase to outline proposed mitigation measures to address identified environmental risks and impacts that the ESMF would identify throughout the project life cycle. The objective of an ESMP is to guide and manage the range of mitigation measures that are identified in the ESIA study and should include the responsibilities, timelines, costs, and monitoring of identified environmental and social indicators. This would cover all components of projects inclusive of construction and operational activities on site and surrounding areas from an environmental and social perspective. This will need to be appropriately structured in accordance to the nature and scale of each project.

A generic ESMP has been developed for the Programme to assist in the compilation of project specific ESMPs required at the application which will set out the project specific measures and actions required to comply with the Environmental and Social Safeguards (ESS) over a specified timeframe.

The core aims of the Programme are to:

- Encourage the scaled development of water reuse projects at municipal level;
- Support municipalities with the scaling of their reuse projects by providing support in the identification, conceptualization and prioritization of large-scale water reuse projects, in the project preparation and the development of implementation-ready plans, and in the development of blended finance options to fund implementation;
- Assist municipalities to develop diversified projects that not only support water reuse but have extended beneficiation from aspects such as water reclamation through nature –based solutions, sludge management and beneficiation as well as energy generation from biogas.
- Create a new asset class around water reuse infrastructure.
- Assist municipalities to counter the adverse effects of climate change in the water and wastewater services sector.
- Ensure Climate adaptation as a principal objective of the programme.
- Mainstreaming climate resilience into the water use and reuse sector.
- Improve Ecological infrastructure for water security and to meet climate mitigation strategic objectives.

The negative impacts can be addressed and mitigated by implementation and compliance with the requirements of the ESMF and ESMP. The Programme will also provide indirect positive social impacts including job creation. The negative impacts, which have been described, will be mitigated in the planning, design, planning, construction and operation of the facilities.

The proposed Programme will have an overall positive impact on the environment in terms of more sustainable water resource management, climate adaption and provide municipalities with a more resilient water and climate future.

In this regard, projects financed by the DBSA fall in one of the following categories based on the type of project and associated risk:

- Category 1 or High and Substantial Risk: with potential significant adverse social and/or environmental impacts that are diverse, irreversible, or unprecedented;
- Category 2 or Medium Risk: with potential limited adverse social and environmental impacts that are few in number, generally site specific, largely reversible and readily addressed through mitigation measures;
- Category 3 or Low Risk with minimal or no impacts; or
- Category 4 or Financial Institutions: involving the extension of credit-lines to other financial institutions.

These categories align with the risk categories of GCF with the DBSA's categories 1,2 and 3 aligning with the GCF's categories A,B and C respectively. It is important to note that this programme will not be supporting projects that are deemed category 1 (A).

The DBSA has designed its own Environmental and Social Safeguards (ESS) that are aligned with the GCF policies and standards, and with South African National legislation. As GCF and DBSA advance their policies and practices the DBSA and its financial partners will endeavour to address not only updated national policy and legislation and DBSA environmental and social standards but also GCF safeguards within a reasonable time frame to all affected. The DBSA ESS are as follows:

- Standard 1: Project Screening: Environmental and Social Risks, Impacts and Opportunities
- Standard 2: Stakeholder Engagement and Information Disclosure
- Standard 3: Gender Mainstreaming (including SEAH)
- Standard 4: Indigenous Peoples
- Standard 5: Land Acquisition, Land Use Restrictions and Involuntary Resettlement

- Standard 6: Labour and Working Conditions
- Standard 7: Community Health and Safety
- Standard 8: Cultural Heritage
- Standard 9: Biodiversity Conservation and Sustainable Living Natural Resources Management
- Standard 10: Resource Efficiency, Pollution Prevention and Management
- Standard 11: Safety of Dams

In developing the WRP programme, a range of stakeholder engagement processes were held with key stakeholders with the purpose to gather inputs into the design of the programme, as well as ensuring alignment with key strategies and plans. This also had the benefit of improving the levels of awareness and understanding of the importance of water reuse as a programmatic and project level intervention to strengthening climate resilience. These engagements emphasised the importance of strengthening the competency and capacity of government as various levels (from local to national) to initiate, structure and implement water reuse projects, while systematically improving the levels of awareness across society regarding water reuse as a viable, important and safe approach to addressing climate vulnerabilities.

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# **List of Acronyms**

Acronym	Definition
AE	Accredited Entity
ATP	Advanced Treatment Plant
BA	Basic Assessment
BFS	Blended Finance Solution
°C	Degrees Celsius
СНР	Combined Heat and Power
COGTA	Department of Cooperative Governance and Traditional Affairs
CRIDF	Climate Resilient Infrastructure Development Facility
CSAG	Climate Systems Analysis Group
CSIR	Council for Scientific and Industrial Research
DBSA	Development Bank of Southern Africa
DCOG	Department of Cooperative Governance
DEO	Designated Environmental Officer
DFFE	Department of Forestry, Fisheries and Environment
DFI	Development Finance Institutions
DPR	Direct Potable Reuse
DPSIR	Driver-Pressure-State-Impact-Response
DRT	Development Results Template
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
ECO	Environmental Control Officer
EE	Executing Entity
EI	Ecological Infrastructure
EIA	Environmental Impact Assessment
EPIP	Environmental Protection and Infrastructure Programme
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Safeguards
FCA	Financial and Economic Appraisal
GA	General Authorisation
GCF	Green Climate Fund
GCM	General Circulation Model
GEF	Global Environment Facility
GEM	Gender Equality Marker
GEWE	Gender Equality and Women's Empowerment
GTAC	Government Technical Advisory Centre
IPP	Indigenous Peoples Plan

IPR	Indirect Potable Reuse
MIG	Municipal Infrastructure Grant
MISA	Municipal Infrastructure Support Agency
MTSF	Medium Term Strategic Framework
NEMA	National Environmental Management Act
NHRA	National Heritage Resources Act
NWA	National Water Act
NWP	National Water Programme
NWSMP	National Water and Sanitation Master Plan
O&M	Operations and Maintenance
PPP	Public-Private Partnerships
RCMs	Regional Circulation Models
RCP	Representative Concentration Pathway
REIPPP	Renewable Energy Independent Power Producer Procurement
SADC	Southern Africa Development Community
SALGA	South African Local Government Association
SDGs	Sustainable Development Goals
SEP	Stakeholder Engagement Plan
SPV	Special Purpose Vehicle
SWPN	Strategic Water Partners Network
UN	United Nations
UNCT	United Nations Country Team
WPO	Water Partnership Office
WRC	Water Research Commission
WRP	Water Re-Use Programme
WTW	Water Treatment Works
WWTW	Wastewater Treatment Works
WUL	Water Use Licence

# **1 INTRODUCTION**

## **1.1 PROJECT CONTEXT**

South Africa is a water-stressed country and its national water resource system is continually being subjected to pressures, with a potential 17% water deficit forecast by 2030. A number of interventions have already been initiated by national government to avoid this projected water deficit with a key element of these interventions being to develop an enhanced level of diversification in relation to the "mix" of water supply sources. The South African National Water and Sanitation Master Plan (2018) makes a specific note of the need to reduce water demand and increase water supply through amongst others the "*re-use of effluent from wastewater treatment plants, water reclamation, as well as desalination and treated acid mine drainage*". It therefore identifies water reuse as one of the central strategies to ensuring water security and climate resilience.

Implementing water reuse nationwide would support major tenets of South Africa's National Climate Change Adaptation Strategy (NCCAS), which urges water management institutions to adopt more adaptive responses and more water-wise practices. South Africa's updated draft Nationally Determined Contribution (NDC) reinforces this commitment further through its Goal 3: Implementation of the NCCAS interventions for the period 2021-2030, including in the priority sector of water.

At present, most effluent discharge and urban run-off are not reused and in light of The South African National Water and Sanitation Master Plan, the opportunity to initiate a framework for the scaled development of water reuse infrastructure is evident. It also identifies water reuse as one of the central strategies to ensuring water security and climate resilience.

The National Water Programme (NWP) has been separately established as a national intervention to enhance water security for South Africa and comprises of three primary priority initiatives (or sub-programmes). These initiatives are a) the Non-Revenue Water (NRW) Reduction Programme, b) the Water Reuse Programme (WRP) and c) the Private Sector Participation Model for Water and Sanitation. The NWP supports the achievement of South Africa's National Development Plan (NDP), the country's primary socio-economic development planning framework. The NDP notes the impact of climate change and explicitly directs the investigation of water reuse, through a regional programme (such as the WRP which comprises part of the NWP) to support focused investment in such projects.

To this end, the Development Bank of Southern Africa (the 'DBSA) has partnered with various government departments (including the Department of Water and Sanitation (the 'DWS'), the Department of Cooperative Governance ('DCOG'COGTA') through its agency the Municipal Infrastructure Support Agency ('MISA'), and the National Treasury for the development of a National Water Reuse Programme ('WRP'). In addition, as an Accredited Entity of the Green Climate Fund ('GCF'), the DBSA submitted a proposal to the GCF to support the design and implementation of the WRP in South Africa. Noting the importance of water reuse to diversifying

the 'water mix' in South Africa, and the challenges and barriers to entry that exist in the development of these water reuse projects at scale, the development of a focussed programme to address these challenges and ultimately implement pathfinder projects is critical to contributing towards building a more resilient water future.

## **1.2 PROJECT BRIEF AND OBJECTIVES**

The project team will design a national Water Reuse Programme (WRP) aimed at enhancing water security and improved resilience to climate change through the scale-up of water reuse approaches and infrastructure in municipalities as well as through the improved management of Ecological Infrastructure (EI)<sup>1</sup> such as catchments, rivers and wetlands to which municipalities are connected. At the highest level, the WRP will encourage and support municipalities to implement water reuse and reclamation initiatives that would also include nexus issues, such as combined heat and power (CHP) installations and sewage sludge reuse. The WRP would need to be highly effective, technically advanced, and ready-to-launch towards demonstrably achieving climate change resilience objectives (by strengthening the country's adaptive capacity against water stress and scarcity), and measurably maximize climate change mitigation co-benefits, in a manner that explicitly meets the criteria and requirements of the Green Climate Fund – thereby lending itself to the preparation and submission of a successful GCF funding proposal.

## **1.3 KEY PROGRAMME DESIGN ELEMENTS**

With the objective to provide a national programme to support the development of water reuse projects in South Africa, the core aims of the WRP will be to:

- Encourage the scaled development of water reuse projects primarily but not limited to municipal level;
- Support municipalities with the scaling of their reuse projects by providing support in the identification, conceptualization and prioritization of large-scale water reuse projects, in the project preparation and the development of implementation-ready projects, and in the development of blended finance options to fund implementation;

<sup>&</sup>lt;sup>1</sup> Ecological infrastructure refers to naturally functioning ecosystems that deliver valuable services to people, such as water and climate regulation, soil formation and disaster risk reduction. It is the nature-based equivalent of built or hard infrastructure, and can be just as important for providing services and underpinning socio-economic development. Ecological infrastructure does this by providing cost effective, long-term solutions to service delivery that can supplement, and sometimes even substitute, built infrastructure solutions. Ecological infrastructure includes healthy mountain catchments, rivers, wetlands, coastal dunes, and nodes and corridors of natural habitat, which together form a network of interconnected structural elements in the landscape (SANBI 2022)

- Assist municipalities to develop diversified projects that not only support water reuse but have extended beneficiation from aspects such as water reclamation through nature –based solutions, sludge management and beneficiation as well as energy generation from biogas.
- Create a new asset class around water reuse infrastructure.
- Adhere to climate adaptation principles as one of the main objectives, increasing resilience to climate change including aspects around the importance of catchment management and ecological infrastructure for water security
- Adhere to climate mitigation strategic objectives
- Increase institutional capacity and advance the enabling environment for advancing private sector partnerships

To achieve these objectives, the WRP will be constructed around three core components:

- Component 1 Establishing a WRP project pipeline: Establish a national water reuse programme (programme office) that will support and facilitate a programmatic approach: This will provide for a national water reuse programme management office that will be a "Centre of Excellence" that will support project identification and prioritization, will drive project preparation, will facilitate funding solutions, and monitor project implementation.
- Component 2 Implementing water reuse projects: The WRP will support climate innovation and market transformation through the implementation of a range of technical interventions that will support the implementation of water reuse projects and the establishment of water reuse infrastructure as a new asset class. The WRP will establish a panel of service providers to provide municipalities (as the project owners) with professional services support to undertake their project preparation activities including scoping, feasibility and procurement. Although procured and contracted by the WRP the service providers will work directly with the project owners in the project preparation process. This structure will assist in the delivery of the key value proposition of the WRP, that the WRP will enable continuity of care between stages on the project preparation process. This capacity will further enable the achievement of the objective of becoming a centre of excellence. The WRP project owners are primarily the municipalities as water services authorities for their areas of jurisdiction. The project owners will engage the WRP for support and engagement will be through formal written correspondence including on-boarding contractual commitments, signed by the required authority, as required at various stages and gates of the project preparation process. To support the implementation of projects, the approach will be to create an enabling blended financing environment through alternative funding solutions.
- Component 3 Building capacity and creating awareness: A national and regional public awareness and education processes will support the implementation of existing national, provincial and local climate adaptation strategies and plans. These knowledge exchange interventions will underpin the development of awareness regarding climate change impacts at

local levels and will support the successful scaling and implementation of water reuse projects in South Africa as an adaptation response. This stakeholder engagement, learning and communication strategy will also be driven and coordinated by the WRP. While the DBSA will take the lead in the rollout of this component due to its strong institutional position in the water sector, the WPO will undertake key supportive actions. It is important to note the important role of DWS in supporting these important processes, particularly as the water sector leader.

The WRP will be a pathfinder programme for the establishment of a broader National Water Programme. The National Water Programme aims to provide support to the other aspects of the water value chain and is envisaged to be developed over time. The programmatic approach to the development of the WRP will therefore provide '*proof of concept*' guidance in the development of later programmes with certain aspects of the WRP being leveraged to support the other programmes (e.g. the WPO will be progressively developed and strengthened).

It is also important to recognize that there is significant scope for projects under the WRP. The needs at municipal level vary technically and in scale and, with many municipalities being in need of support, it is necessary to have a phased and progressive approach to developing the WRP and providing this support. Likewise, there is opportunity to provide support to other sectors, including mining and industry, and this could be provided in later stages of the WRP's development.

Activities	Sub-activities	
Component 1 – Establish a WRP and project pipeline		
	Activity 1.1.1: Establish the WRP within the DBSA	
	Activity 1.1.2: Establish Oversight Committee and develop governance modalities	
Sub-component 1.1:	Activity 1.1.3: Appoint staff and operationalise the WPO and technical WRU	
Establishment and	Activity 1.1.4: Develop PIP and annual workplan and budgets	
Operationalisation of the WRP	Activity 1.1.5: Finalise operational manual and supporting tools	
	Activity 1.1.6: Establish financial arrangements and reporting regimes.	
	Activity 1.1.7: Develop and implement monitoring and evaluation and reporting regimes	
Sub-component 1 2. Project	Activity 1.2.1: Design and launch an open-ended RFP.	
pipeline preparation	Activity 1.2.2: Procure and manage a panel of project preparation service providers	
	Activity 1.2.3: Provide technical assistance for project structuring and preparation	
Component 2 – Implementing water reuse projects		
Sub-component 2.1: Provision	Activity 2.1.1: Provide technical assistance for detailed design and implementation of projects	
of Technical Assistance for	Activity 2.1.2: Facilitate procurement and contracting	
Project Implementation	Activity 2.1.3: Monitor, evaluate and report on project development.	

#### Table 1: WRP intervention framework

	Activity 2.2.1: Develop principles and approved protocols for developing the BFS	
Sub-component 2.2:	Activity 2.2.2: Project finance support through the BFS.	
Development of the Blended	Activity 2.2.3: Establish the IBCF function and appoint specialist independent service provider	
Financing Solutions	Activity 2.2.4: Provide financial structuring services on a project-by-project basis	
	Activity 2.2.5: Audit and report to measure impact of the BFS use and efficacy	
Component 3 – Building capacity and creating awareness		
	Activity 3.1.1: Develop, manage, and maintain the WRP brand	
Sub-component 3.1:	Activity 3.1.2: Development of knowledge products and collateral	
awareness creation	Activity 3.1.3: Undertake outreach and awareness creation events	
	Activity 3.1.4: Facilitate and manage forum	
	Activity 3.1.5: Provide strategic review and guidance on specific projects and interventions	
Sub-component 3.2:	Activity 3.2.1: Develop a key stakeholder engagement framework	
Strengthen institutional and	Activity 3.2.2: Undertake targeted strategic outreach	
regulatory frameworks	Activity 3.2.3: Establish and maintain strategic partnerships with key actors and institutions	

Therefore, the development of the WRP passes through a number of stage-gates. In order to lay the foundation for future programmatic development the start-up design will consider the following:

- □ Use the City of uMhlathuze water reuse project as a pathfinder for project preparation, ownership, financing and contracting considerations;
- An enhanced focus on municipalities with Wastewater Treatment Works greater than 25 ML/ day; and
- Develop a portfolio of projects in order to demonstrate the programmatic approach and its management and operational needs.
- Support building blocks for EI to promote water security at various scales and levels of governance in catchments to enhance resilience to climate change and to stem the destruction of important ecosystems, noting that principally for each project intervention the linkages between EI and built infrastructure will be thoroughly understood and the use of ecosystem based approaches being thoroughly explored through the undertaking of project preparation studies.

The final business case for the WRP will outline a complete suite of risks and provide a risk management framework for the Programme, including details relating to the Programme's national and local impact. Importantly, this phased approach enables the progressive mitigation of the various financial, operational and fiduciary risks.

## 1.4 PROGRAMME GOVERNANCE OVERVIEW

The WRP is part of a National Water Program (NWP), which comprises several sub-programmes, of which the WRP is one such sub-programme. The programme will be centrally managed and implemented by the Water Partnerships Office (WPO) that will report to an Oversight Committee that provides strategic guidance for the programme and oversees overall progress. The DBSA will participate in its capacity as GCF Accredited Entity (AE) and WPO managing agent. DBSA will act as management agent of the WPO for a period of five years or until such time that the WPO is institutionalized. The WPO will not have its own legal personality during this initial period and this will only be developed over time in conjunction with the National Water Programme.

To give effect to the NWP, which is broader than just the water re-use sub-programme (WRP), it is proposed that the following governance structures are required as provided in Figure 1.





The organisational structure recognises and respects the power and function and accordingly roles of local government as Project owner. It further allows for scalability as the water reuse project pipeline grows and or sub-programmes are implemented. It distinguishes strategic oversight of the Programme, and the necessary co-ordination at national level, with the need to decentralise implementation at local project level. The WPO will be established as a centre of excellence to support the intended outcomes of the water reuse projects.

The programme owners of the WRP is outlined as the DWS while project owners will be the municipalities at local levels where such projects will be implemented and aligned to the municipal role of water services provider. The core functions of the WRP, through the WPO, will be to:

- **Create the enabling environment:** Support water reuse projects through addressing various policy, regulatory and institutional aspects and creating an environment that is conducive to prepare and implement water reuse projects at scale;
- **Support project preparation:** Support project scoping, preparation and design towards developing bankable projects, as well as developing a pipeline of projects;
- **Provide procurement support:** Support project preparation by scoping, procuring and providing appropriate contracted capacity by undertaking procurement and management of the service provider capacity, for the WPO, WRU and the project owners;
- **Develop administrative standardisation:** Provide a range of appropriately standardised documentation, tools and instruments that support procurement, contracting, loan agreements, and monitoring and reporting templates;
- **Facilitate best practice:** Transfer of lessons learned and best practice into project approaches will support the introduction of efficiency, effectiveness and innovation;
- **Drive technologies and innovation:** Provide expertise that can support the introduction of new technologies, through focused collaboration with its Advisory Committee (which may include representation from research institutions such as the Water Research Commission, CSIR and others);
- **Undertake monitoring, reporting and oversight:** Undertake a range of activities that assess progress and support adaptive management of projects;
- **Manage communications and knowledge exchange:** Facilitate the creation of awareness and knowledge regarding the range of benefits from water reuse projects.

Key activities of the WPO will include:

- Assist the Programme Custodian (DWS) and Project Owners (municipalities) to implement the WRP;
- Undertake the OC and WPO secretariat function schedule committee meetings and keep records of monitoring and evaluation of the programme;
- Produce a guide for water reuse project implementation;
- Plan the WRP with estimated annual and multi-year budgets;
- Compliance function regular reporting and audits (internal and external);
- Develop organisational requirements like job specs etc. and appointment of staff;
- Ensure that legislation and regulatory related issues are highlighted and propose amendments if applicable;
- Exercise duty of care of the office and take responsibility for all technical content of programmes;
- Develop various technical models/approaches to ensure standardized methodologies;
- Develop standardised procurement documentation including tender specifications and agreements;
- Invite and prioritise participation of private sector;
- Receive municipal project applications and screening thereof;
- Support Project owners to initiate, plan and prepare feasibly bankable water reuse projects and keep OC updated of developments;;

- Engage with DBSA SCM to ensure that there is a panel of services providers for project preparation support.
- Support WRP procurement processes in consultation with DBSA SCM;
- Assist with evaluation of bids and contract negotiations/award; and
- In consultation with the Infrastructure Fund (IF) assist project owners with financing through the development of appropriate blended finance solutions for the various sub-programmes.

DWS is the water sector lead and as such has the mandate to ensure sustainable water resource management and development, as well as oversee/ regulate that municipalities provide water services according to national norms and standards. COGTA (through its agency the Municipal Infrastructure Agency (MISA)) have the mandate to support municipalities in providing effective services. Municipalities will be the primary water reuse project owners and ultimate beneficiaries of the projects and will be required to work closely with the WRU and Service Providers to prepare and implement the water reuse projects. They will identify projects and/ or be engaged when the WRP identifies opportunities. As water services authorities (WSAs) they will need to lead the project preparation process, with direct engagement with the WRP and the WPO. As project owners, the relevant WSAs will request project preparation support and if approved, will be allocated a project preparation transaction advisor to assist with the preparation of the water reuse project. The WPO will facilitate the process with the key aim of encouraging scaled and effective development of water reuse at municipal level. Project owners will ultimately be accountable for identifying, conceptualising and prioritising of large-scale water reuse projects.

Key activities of Project Owners include:

- Proper water services delivery planning;
- Water use licensing;
- Identification of opportunities for water reuse projects;
- Application for project preparation support to the WPO;
- Working with the project preparation service provider to prepare the project, including providing all information required and receiving and considering reports timeously;
- Taking decisions at the appropriate time to allow the project preparation process to proceed as is feasible, including prioritisation of the project in the Integrated Development Plan (IDP) and Infrastructure Master Plan of the municipality; engaging DWS on the water licence process; keeping Council timeously advised of developments etc.;
- If the project is approved for implementation, facilitating a procurement and contracting process in accordance with the MFMA and SCM requirements, including engagement with National treasury if it is a PPP;
- Monitoring, evaluation and reporting on the water reuse project as is appropriate at the various project development phases;

 Development of contract management plan and capacity to ensure implementation of the water reuse project.

The Water Research Commission (WRC) has done significant research and groundwork on the technical and water quality aspects of water reuse as well as several studies on social and cultural perceptions of water reuse, including a recent study which measures the South African public's current awareness and understanding of aspects of water reuse. The proposed programme design will build on the WRC work and develop a strategy on how to educate and communicate the details of water reuse as a means of improving the public's perception of the approach. The key drivers affecting water reuse choices include climate change impacts and importance of water security, water quality, the cost relative to other water supply options and the social, cultural, and religious perceptions.

The Programme will also build on work undertaken to address water accounts for South Africa and its catchments and sub catchments, the mapping of sensitive ecosystems and their services by the South African National Biodiversity Institute (SANBI) and Department of Forestry, Fisheries and Environmental ((DFFE) including recent work by the DBSA/SANBI GEF 'Biodiversity for Water Security Project (2021)', and sustainable Green Finance Taxonomies Project currently being developed by the Department of National Treasury.

### 1.5 PURPOSE OF THE ESMF AND ESMP

An ESMF provides a practical suite of steps to be applied during project formulation and design to identify and mitigate environmental and social risks as well as ensure improved project performance against designated environmental and social safeguards. While this ESMF provides an overarching framework for the entire WRP, it is essential to note that this importantly applies to all projects undertaken under the WRP.

The ESMF therefore outlines measures and plans to reduce, mitigate and/or offset adverse risks and impacts, a budget to implement identified measures, the parties responsible and their capacity.

Noting that the WRP comprises of three components which includes an array of activities to ensure programmatic governance, to develop blende financing solutions as well as address an array of institutional capacity issues, this ESMF is focused upon the water reuse projects themselves and how the programme will ensure that environmental and social safeguards are adhered to through the roll out of these projects.

This report is the Environmental and Social Management Framework (ESMF) which has been prepared for submission by DBSA to GCF. The aim of the ESMF is to avoid and minimise negative environmental and social (E&S) impacts and to enhance positive aspects of the Programme. The ESMF contains environmental and social baseline information at the national level and provides the framework and guidelines that ensure that the DBSA and the programme beneficiaries are committed and able to comply with GCF Environmental and Social Policies, and DBSA Environmental and Social Safeguard Standards.

The Environmental and Social Impact Assessment (ESIA) is a comprehensive document that describes a project's potential environmental and social risks and impacts. All projects, in accordance with national regulatory instruments, will require an ESIA to be undertaken no matter no matter the type of project development each project requires (ie new facilities, existing facilities). These assessments will be undertaken by the Project Owners (ie Municipalities) and these will be submitted to the Provincial level Environmental Authorities who will evaluate these, make recommendation for any required amendments as well as ultimately approve these assessments. These are subject to information disclosure requirements. The undertaking of these assessments are a prerequisite for the obtaining of a water use license under the National Water Act (Act 36 of 1998) which will be required for each project.

The ESIA is produced through undertaking a number of key processes that include:

- initial screening of the project and scoping of the assessment process;
- examining the various project alternatives;
- identifying stakeholders (focusing on those directly affected and other stakeholders) and assimilating environmental and social baseline data;
- identifying, predicting and analysing the various impacts;
- generating mitigation or management measures and actions;
- evaluating the significance of impacts and evaluating any residual impacts;
- consulting with stakeholders and disclosing to people affected by the project, including setting up a grievance mechanism; and
- documenting the assessment process in the form of an ESIA report.

An Environmental and Social Management Plan (ESMP) is a plan developed at project planning phase to outline proposed mitigation measures to address identified environmental risks and impacts throughout the project life cycle. The ESMP may form part of the ESIA or be prepared as a standalone document that accompanies the ESIA. As noted above, these will require submission to, and the approval of, Provincial Environmental Authorities. The objective of an ESMP is to guide and manage the construction and operational activities on site and surrounding areas from an environmental and social perspective. The ESMP is compiled early in the project application process to set out the project measures and actions required to comply with both DBSA and the GCF/IFC Environmental and Social Safeguards (ESS) over a specified timeframe.

The ESMP is agreed with the DBSA and other affected funders/stakeholders and will form part of the legal agreement requirements. The identified actions and measures, which are included in the ESMP, must be diligently implemented. An ESMP does not exclude the client from obtaining any other approvals or licenses in terms of environmental legislation, if and where required.

The Environmental and Social Management Plan (ESMP) component of this report have been developed at a programme level to integrate the social and environmental impact mitigation measures, environmental monitoring and institutional responsibility. The ESMP also addresses DBSA's environmental management procedures and standards and aims to provide guidance for the development of project specific ESMP's.

## 1.6 FOCUS AND CONTENT OF THE ESMF AND ESMP

This document sets the framework for the management of environmental and social impacts related to the Programme for future implementation of projects selected for financing under the Programme. It describes the programme background and context, and the applicable Environmental and Social legislative framework as well as the safeguards. While describing the selected technologies/archetypes, it provides a description of the associated environmental and social risks and potential impacts for each. It is important to note that the relative scope and detailed assessment of the various E&S risks and impacts be determined by screening against the ESMF and its requirements, as well as the safeguards and standards of the GCF and the DBSA. Noting that the projects undertaken under the WRP are assessed as being Category B, in terms of their impact, it is essential that all projects undertake a comprehensive ESIA that informs the development of a fit for purpose ESMP. Nevertheless, the initial project screening and assessments will review this Categorisation and the implications thereof.

The scope and depth of the ESIA and the ESMP must be proportional to the level of risks and impacts and be determined by the screening and the specific requirements of the applicable safeguards pursuant to the ESS standards and policy of the GCF. For Category B projects an ESIA and ESMP will always be required. The contents of the scoping report, which are included in Appendix C of this report, are also stipulated by law through Regulations to the National Environmental Management Act (Act 107 of 1998) published in Gazette Notice 40772 in 2017. This report is required separately to the ESIA and the ESMP as stipulated by national regulatory requirements.

Where there are instances that projects will impact upon Indigenous Peoples, an Indigenous Peoples Plan (IPP) will be developed and this plan will outline the actions necessary to minimize and/or compensate for any adverse impacts and identify opportunities and actions to enhance the advantageous impacts of a project. The IPP and the ESMP will need to align and be coherent. The plan will set out how these are to be undertaken in a culturally appropriate manner. Where there are biodiversity impacts, or impacts on cultural heritage it will be required that more detailed studies be undertaken and an accompanying Plan will also be required. It is expected that the ESMP will cover these elements, but the level of risk and impact may require very specific plans to address such impacts, such as a cultural heritage site management plan or a biodiversity action plan. Likewise, should there be a need to resettle communities a Resettlement Action Plan is required. At this juncture it is not likely that land acquisition would be required as all projects are expected to take place on municipally owned land. Should land acquisition be required then a land acquisition plan will be addressed as

part of the Resettlement Action plan (aligned to the safeguards guidance provided by DBSA). Outlines for these plans are provided in the Annexes as follows:

- Appendix G: Draft Outline of an Indigenous Peoples Plan
- Appendix H: Draft Outline of a Resettlement Action Plan
- Appendix I: Draft Outline of a Cultural Heritage Site Management Plan
- Appendix J: Draft Outline of a Biodiversity Action Plan

The use of environmental and social checklists is intended to provide tools for individual project design and implementation, as they allow participating entities to assess the environmental and social aspects that are key. The design of the checklist will be dependent on the nature of the project, the level of risk and impacts, and linkages to the DBSA and ECF/GCF safeguards.

As part of the framework, the document sets out to describe the general guidelines for gender and stakeholder engagement, as developed in the Gender and Stakeholder Engagement Plans. While impacts related to indigenous groups are not expected in the implementation of projects, a guideline for mitigating potential impacts on the indigenous groups has been developed as part of this ESMF, for the potential situations in which future projects might impact them.

Finally, the document provides the tools for environmental and social management and monitoring with the inclusion of the ESMP. This includes the suite of standard checklists, the different E&S safeguard standards, standardised ESIA, ESMP and planning instruments structure and content guidance across the various phases of project implementation, requirements for stakeholder engagement and grievance redress, as well as the requirements for reporting and monitoring. For the latter, the DBSA's Development Results Template (DRT) provides the basis for monitoring all projects and the DBSA Monitoring Unit will guide projects to provide the requisite reports. The mitigation measures are described in detail and identifies specific people or organisations to undertake specific tasks and responsibilities, in order to ensure that potential biophysical and socio-economic impacts are minimised. The priorities for the project are set out and the plan details responsible parties, resources and time frames to manage and implement environmental and social mitigation measures required to manage the environmental, health and safety and social commitments.

# 2 ENVIRONMENTAL AND SOCIAL LEGAL PROVISIONS

## 2.1 NATIONAL LEGAL PROVISIONS

## 2.1.1 CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA (ACT NO. 108 OF 1996)

The South African Constitution (Act 108 of 1996) is the supreme law of the land. The Constitution of the Republic of South Africa (Act No. 108 of 1996), chapter 9 (3) underpins equality and clearly states that "The state may not unfairly discriminate directly or indirectly against anyone on one or more grounds including race, gender, sex, pregnancy, marital status, ethnic or social origin, colour, sexual orientation, age, disability, religion, conscience, belief, culture, language and birth".

The Constitution provides the foundation for environmental regulation and policy in South Africa. The right to environmental protection and to live in an environment that is not harmful to health or well-being is set out in the Bill of Rights (Section 24). This fundamental right underpins environmental policy and law, in particular the framework environmental legislation established by the National Environmental Management Act, 1998 (Act No. 107 of 1998).

The environmental right is set out in Section 24 of the Constitution's Bill of Rights which states that:

Everyone has the right-

- (a) to an environment that is not harmful to their health or well-being; and
- (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-
  - (i) prevent pollution and ecological degradation;
  - (ii) promote conservation; and
  - (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

The Environmental Right in the Constitution is supported by other environmental legislation to protect the environment while pursuing sustainable economic growth. The main legislation is the National Environmental Management Act, (Act 107 of 1998) (NEMA).

## 2.1.2 THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT NO. 107 OF 1998)

The National Environmental Management Act (Act No. 107 of 1998), as amended (NEMA), aims to give effect to Section 24 of the Constitution – 'to secure an environment that is not harmful to the health and well-being of the people of South Africa'.

NEMA is the framework legislation governing environmental matters and all other related legislation must be read subject to its provisions. Any functions and actions carried out by organs of state must follow the general principles (see section 2) and spirit of this law, and these organs are bound by the Act (section 48).

The principles as per Section 2 of NEMA state that sustainable development requires the consideration of, amongst other factors:

- "That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied (section 2(4) (a) (i))."
- "That waste is avoided, or where it cannot altogether be avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner (section 2(4)(a)(iv))."
- "That a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions (section 2(4) (a)(vii))."
- "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 (section 2(4)(a)(viii))."
- "The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment (section 2(4)(p))."

Section 28 of NEMA imposes a duty of care responsibility on persons to take reasonable measures to prevent pollution or degradation of the environment from occurring, continuing or recurring, or in so far as such harm is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment (Section 28(1)). This duty rests on, amongst others, the land owner, person in control or user thereof (Section 28(2)); and includes state organs.

#### It also defines "**pollution**" as

any change in the environment caused by-

- (i) substances;
- (iii) noise, odours, dust or heat, emitted from any activity, including the storage or treatment of waste or substances, construction and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience and productivity of natural or managed ecosystems, or on materials useful to people, or will have such an effect in the future (section 1).

There is a duty on persons to take reasonable measures to prevent pollution or degradation of the environment from occurring, continuing or recurring, or in so far as such harm is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment (Section 28(1)).

This duty rests on, amongst others, the landowner, person in control or user thereof (Section 28(2)); this includes state organs.

The Act also requires the application of integrated environmental management principles (i.e. Environmental Impact Assessment (EIA) requirements) and objectives set out in Chapter 5.

The NEMA Environmental Impact Assessment (EIA) Regulations 2017 provide a list of activities that require Environmental Authorisation, if triggered. Should a Listed Activity (namely an activity listed within the regulations) be triggered, either a Basic Assessment or Scoping and EIA process will be required. Listed activities that may potentially be applicable are provided in Table 2. These may be directly applicable to the project archetypes (see archetype descriptions further down in this section of the report) and excludes associated activities such as change of land use, road construction, clearing of vegetation, construction of dams, etc., and excludes site specific biodiversity listed activity triggers. The applicability of these listed activities will depend on existing authorisation and permits that are in place, and in some cases an amendment could be undertaken.

Listing Notice 1 – (requires Basic Assessment Process)			
Clause	Description		
9.	The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water— (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.		
10.	The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes – (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes aroad reserve or railway line reserve; or (b) where such development will occur within an urban area.		
16.	The development and related operation of facilities for the desalination of water with a design capacity to produce more than 100 cubic metres of treated water per day.		
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; but excluding where such infilling, depositing, dredging, excavation, removal or moving— (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies; (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.		
25.	The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.		
34.	The expansion of existing facilities or infrastructure for any process or activity where such expansion will result in the need for a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the release of emissions, effluent or pollution, excluding— (ii) the expansion of existing facilities or infrastructure for the treatment of effluent, wastewater, polluted water or sewage where the capacity will be increased by less than 15 000 cubic metres per day;		
45.	The expansion of infrastructure for the bulk transportation of water or storm water where the existing infrastructure— (i) has an internal diameter of 0,36 metres or more; or (ii) has a peak throughput of 120 litres per second or more; and (a) where the facility or infrastructure is expanded by more than 1 000 metres in length; or (b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more; excluding where such expansion— (aa) relates to transportation of water or storm water within a road reserve or railway line reserve; or (bb) will occur within an urban area.		

Table 2: Selected Listed activities that may be applicable to the proposed archetypes or WRP projects

48.	The expansion of— (i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more; or (ii) dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres or more; where such expansion occurs— (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding— (aa) the expansion of infrastructure or structures within existing ports or harbour that will not increase the development footprint of the port or harbour; (b) where such expansion activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of
	2014, in which case that activity applies; (dd) where such expansion occurs within an urban area; or (ee) where such expansion occurs within existing roads, road reserves or railway line reserves.
50.	The expansion of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, where the combined capacity will be increased by 50 000 cubic metres or more.
53.	The expansion and related operation of facilities for the desalination of water where the design capacity will be expanded to produce an additional 100 cubic metres or more of treated water per day.
57.	The expansion and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage where the capacity will be increased by 15 000 cubic metres or more per day and the development footprint will increase by 1 000 square meters or more.
63.	The expansion of facilities or infrastructure for the transfer of water from and to or between any combination of the following— (i) water catchments; (ii) water treatment works; or (iii) impoundments; where the capacity will be increased by 50 000 cubic metres or more per day, but excluding water treatment works where water is treated for drinking purposes.
Listing Notice 2	2 - Scoping and Environmental Impact Assessment (EIA) Process
6.	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding— (i) activities which are identified and included in Listing Notice 1 of 2014; (ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; (iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or (iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.
11.	The development of facilities or infrastructure for the transfer of 50 000 cubic metres or more water per day, from and to or between any combination of the following — (i) water catchments; (ii) water treatment works; or (iii) impoundments; excluding treatment works where water is to be treated for drinking purposes.
25.	The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of 15 000 cubic metres or more.

A Basic Assessment Process takes between 8 and 10 months to complete and Scoping and Environmental Impact Assessment (EIA) Process take 18 – 24 months to complete.

#### Should any listed activities be triggered, completion of the Department of Forestry, Fisheries and Environment

(DFFE) National Web based Environmental Screening Tool is required. It is a geographically based webenabled application which allows a proponent intending to submit an application for environmental authorisation in terms of the Environmental Impact Assessment (EIA) Regulations 2014, as amended, to screen their proposed site for environmental sensitivity.

Environmental Screening is undertaken in six main steps with the final step being the generation of the screening report which is required to be submitted with an application for Environmental Authorization as identified in regulation 16(1)(v) of the EIA Regulations 2014, as amended, whereby a Screening Report is required to accompany any application for Environmental Authorisation.

The Screening Tool is required for all projects and also provides site specific EIA process and review information. At this stage, the screening will review which listed activities apply to the project, for example, the Screening Tool may identify if an industrial development zone, minimum information requirement, Environmental Management Framework or bio-regional plan applies to a specific area. Further to this, the Screening Tool identifies related exclusions and/or specific requirements including specialist studies applicable to the proposed site and/or development, based on the national sector classification and the environmental sensitivity of the site.

The Screening Tool can also be used to inform and highlight any additional potential environmental sensitivities of a site that does not necessarily trigger a listed activity.

### 2.1.3 NATIONAL WATER ACT (ACT NO. 36 OF 1998)

The National Water Act (NWA) makes provision for one's "right" to water, the Reserve. This is the water required to maintain the ecosystem and basic human needs. Except for the water required for this Reserve and basic human needs use, all other water uses must be authorised by the Department of Water and Sanitation or a Catchment Management Agency (CMA).

The legal framework for water use authorization is:

- The Constitution of the Republic of South Africa
- The National Water Act (No. 36 of 1998)
- The National Water Amendment Act (No. 27 of 2014)
- The Procedural Requirements for Water Use Licence Applications and Appeals (Regulation).

It is necessary to authorize water use:

- To protect water resources;
- To promote equitable access to water;
- To facilitate social and economic development;
- To protect aquatic and associated ecosystems and their biological diversity; and
- To meet international obligations.

There are four types of water use authorizations:

#### Schedule 1:

Schedule 1 Water Use constitutes -

- water taken for reasonable domestic use in a person's household from any source;
- small gardening (but not for commercial purposes);
- watering of livestock (excluding feedlots) that graze on that land (within the carrying capacity of that property);
- storing and using run-off water from a roof (rain water harvesting);
- in emergencies, e.g. fire-fighting;

• recreation, e.g. swimming, angling, etc.

A Catchment Management Agency (CMA) may limit the taking of water in terms of Schedule 1 (Schedule 3(2)(e) of the Act. Water users in this category can commence with their activities without informing the Department.

#### General Authorization:

General Authorization (GA) is an authorization to use water without a licence, provided that the water use is within certain limits and complies with conditions set out in the Gazetted General Authorisation. This authorization requires a registration with the Department prior to exercising the water use(s).

#### **Existing Lawful Use:**

Existing Lawful Water Use (ELU) means the use of water authorization by or under any law that took place at any time for a period of two years before the commencement of the NWA, 1998.

An Existing Lawful Water Use, with any conditions attached, is recognised but may continue only to the extent that it is not limited, prohibited or terminated by this Act. No licence is required to continue with an Existing Lawful Water Use until a responsible authority requires a person claiming such an entitlement to apply for a licence. If a licence is issued it becomes the source of authority for the water use. If a licence is not granted the use is no longer permissible.

#### Licensed Water Use:

A responsible authority may dispense with the requirement for water use licence if it is satisfied that the purpose of this Act will be met by a licence, permit or other Authorization granted under any other law. Person(s) intending to use water in this category should write a letter, attaching the relevant authorization to request the Department to dispense with the requirements of a water use licence (WUL).

Water Use	Example
Section 21 (a) Taking water from a water resource.	Abstracting water from a river or borehole for the following purposes: - domestic use - irrigation - watering of livestock - industrial - mining - water bottling, etc.
Section 21 (b) Storing water.	Raw water containment facilities constructed in-stream and in off-channel dams.
Section 21 (c) Impeding or diverting the flow of water in a watercourse.	Construction of structures/facilities within surface water resources, e.g. weirs, bridges, pipelines, etc.
Section 21 (d) Engaging in a stream flow reduction activity.	Plantation of forestry species (Eucalyptus, Pine and Wattle).
Section 21 (e) Engaging in a controlled activity identified as such in	Irrigation with water containing waste, artificial recharge of aquifer, modification of atmospheric precipitation and in- stream power generation activities.

Table 3: Activities that constitute water uses and require authorization in terms of Section 21 of the NWA

Water Use	Example
section 37(1) or declared under section 28(1) of the NWA.	
Section 21 (f) Discharging waste or water containing waste into a water resource.	Discharging of water containing waste into a surface water resource, e.g. discharging treated effluent into a river or a wetland.
Section 21 (g) Disposing of waste in a manner which may detrimentally impact on a water resource.	Disposal of effluent into a water containment facility, dust suppression and stockpiles.
Section 21 (h) Disposing of waste in a manner which contains waste from or which has been heated in any industrial or power generation process.	Discarding of industrial/power generation waste water or water which has been heated.
Section 21 (i) Altering the bed, banks, courses or characteristics of a watercourse.	Construction of structures/facilities within surface water resources, e.g. weirs, bridges, pipelines, etc. Introduction of unnatural characteristic to the resource.
Section 21 (j) Removing, discharging or disposing of water found underground if it is necessary of the efficient continuation of an activity or for the safety of the people.	Extraction of water from underground workings for safe continuation of activities.
Section 21 (k) Using water for recreational purpose.	The use of surface water resources for fishing, boating, etc.

The NWA places considerable responsibility on local authorities for the protection of water resource. Part 4, Section 19(1), states that, "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."

The NWA defines a "watercourse" as -

(a) a river or spring;

(b) a natural channel in which water flows regularly or intermittently;

(c) a wetland, pan, 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 as defined in the National Water Act, 1998 (Act No. 36 of 1998); and a reference to a watercourse includes, where relevant, its bed and banks; and 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.

Where existing Water Use Licences are in place, these can be amended to address proposed changes to the licensed water use activities resulting of reuse of effluent, such as changes in discharge volume and quality. The amendment process requires a quantitative analysis of the potential downstream ecological impacts and impacts on downstream users. A WUL takes into account the return flows which are regarded as a resource and is important to ensuring the reserve is catered for.

### 2.1.4 NATIONAL HERITAGE RESOURCES ACT (NO. 25 OF 1999)

The purpose of the National Heritage Resources Act (Act No. 25 of 1999) (NHRA), is to ensure that heritage resources of South Africa, which are of cultural significance or other special value for the present community and for future generations, are considered part of the national estate and fall within the sphere of operations of heritage resources authorities. Section 38 (1) of the Act lists the following activities that could be applicable:

- (a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- (c) any development or other activity which will change the character of a site-
  - (i) exceeding 5 000 m<sup>2</sup> in extent; or
  - (ii) involving three or more existing erven or subdivisions thereof; or
- (d) the re-zoning of a site exceeding 10 000  $m^2$  in extent.

Should any of the above activities be triggered, a Notice of Intent to Develop (NID) Form will need to be compiled by a Heritage Practitioner and submitted to the relevant heritage authority for review and decision making as to whether or not further studies, such as a Heritage Impact Assessment, is required.

## 2.1.5 DRAFT GREEN FINANCE TAXONOMY

South Africa's National Treasury published the technical paper "Financing a Sustainable Economy" in May 2020 with the aim of unlocking access to sustainable finance and stimulating the allocation of capital to support a development-focused and climate-resilient economy.

One of the recommendations of the paper is to "develop or adopt a taxonomy for green, social and sustainable finance initiatives, consistent with international developments, to build credibility, foster investment and enable effective monitoring and disclosure of performance".

A green finance taxonomy is an official classification or catalogue that defines a minimum set of assets, projects, and sectors that are eligible to be defined as "green" in line with international best practice and national priorities. It can be used by investors, issuers, and other financial sector participants to track, monitor, and demonstrate the credentials of their green activities in a more confident and efficient way.

The Draft Version of such a taxonomy for South Africa has been developed through extensive engagement with South African stakeholders and was published in June 2021. (https://sustainablefinanceinitiative.org.za/taxonomy-working-group-oct/)

The Taxonomy will have a range of benefits. Among other things, it will:

- Help the financial sector with clarity and certainty in selecting green investments in line with international best practice and South Africa's national policies and priorities.
- Reduce financial sector risks through enhanced management of environmental and social performance.
- Reduce the costs associated with labelling and issuing green financial instrument.,

- Unlock significant investment opportunities for South Africa in a broad range of green and climatefriendly assets.
- Support regulatory and supervision oversight of the financial sector.

## 2.1.6 OTHER NATIONAL LEGISLATION THAT MAY BE RELATED TO WATER MANAGEMENT

The following Acts also have an indirect bearing on the management of water in South Africa:

- i. National Water Services Act, Act 108 of 1997
- ii. Municipal Systems Act, Act 32 of 2000;
- iii. Disaster Management Act, Act 57 of 2002;
- iv. National Environmental Management: Biodiversity Act, Act 10 of 2004; and
- v. National Environmental Management: Protected Areas Act, Act 57 of 2004.

These have, however, not been discussed in detail but should be consulted during the detailed planning and feasibility stages of proposed water reuse projects implementing the archetypes.

## 2.2 INTERNATIONAL LEGISLATION

The following international Environmental Conventions and Directives are relevant to water quality management:

- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted 22 March 1989 (entry into force, 5 May 1992).
- The Bamako Convention on the ban of the Import into Africa and the Control of Transboundary Movement of Hazardous Wastes within Africa was adopted in Bamako, Mali, 30 January 1991 (entry into force 10 March 1999).
- Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Sep. 10, 1998, (entry into force Feb. 24 2004).
- Convention on Persistent Organic Pollutants, 22 May 2001, (entry into force May 17, 2004).
- Convention on Environmental Impact Assessment in a Transboundary Context, Feb. 25, 1991 (entered into force Sept. 10, 1997), reprinted in 30 I.L.M. 800 (1991).
- Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context, Kiev, 23 May 2003 (entry into force 11 July 2010).
- Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Mar.
   17, 1992 (entry into force Oct. 6, 1996), reprinted in 31 I.L.M. 1312 (1992).
- Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, Jun. 25, 1998 (entry into force Oct. 30, 2001), reprinted in 38 I.L.M. 517 (1999).

- Kiev Protocol on Pollutant Release and Transfer Registers under the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, 21 May 2003, (entry into force 8 October 2009).
- London Convention 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (entry into force 30 August 1975), administered by the International Maritime Organisation (IMO)

### 2.2.1 GREEN CLIMATE FUND

The Green Climate Fund (GCF) commits to (1) gender equality and equity; and (2) inclusiveness in all activities. Gender mainstreaming is central to the GCF's objectives and guiding principles, including through engaging women and men of all ages as stakeholders in the design, development and implementation of strategies and activities to be financed. The GCF Governing Instrument states that: "*The Fund will strive to maximize the impact of its funding for adaptation and mitigation… promoting environmental, social, economic and development co-benefits and taking a gender-sensitive approach.*"

In this regard the Revised Environmental and Social Policy (B.BM-2021/18) notes that all supported GCF activities will commit to:

- Avoid, and where avoidance is impossible, mitigate adverse impacts to people and the environment;
- Avoid, and where avoidance is impossible, mitigate the risks of Sexual Exploitation, Sexual Abuse and Sexual Harassment (SEAH) to people impacted by GCF-financed activities;
- Enhance equitable access to development benefits; and
- Give due consideration to persons in vulnerable positions and situations and marginalised populations, groups, and individuals, including women and girls, local communities, indigenous peoples, and other marginalized groups of people and individuals that are affected or potentially affected by GCF-financed activities and are especially vulnerable to exploitation or other potentially harmful unintended project impacts.

Aligning with and adhering to the GCF environmental and social safeguards is imperative and all projects will be designed, managed and monitored to ensure this. The proposed updated suite of safeguards2 are outlined in

<sup>&</sup>lt;sup>2</sup> https://www.greenclimate.fund/sites/default/files/page/gcf-new-ess-stage-2-report-march-2022.pdf

Table 4, below.

#### Table 4: Proposed new environmental and social safeguards for the GCF

Environmental and	Description				
Social Safeguard					
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	(a) Identify funding proposal's environmental and social risks and impacts;				
	(b) Adopt mitigation hierarchy: anticipate, avoid; minimize; compensate or offset;				
	(c) Improve performance through an environmental and social management system;				
	(d) Engagement with affected communities or other stakeholders throughout funding				
	proposal cycle. This includes communications and grievance mechanisms.				
ESS 2: Labour and	(a) Fair treatment, non-discrimination, equal opportunity;				
working Condition	(b) Good worker-management relationship;				
	(c) Comply with national employment and labour laws;				
	(d) Protect workers, in particular those in vulnerable categories;				
	(e) Promote safety and health;				
	(f) Avoid use of forced labour or child labour.				
ESS 3: Resource	(a) Avoid, minimize or reduce project-related pollution;				
Efficiency and Pollution Prevention	(b) More sustainable use of resources, including energy and water;				
	(c) Reduced project-related greenhouse gas emissions.				
ESS 4: Community Health, Safety and Security	(a) Avoid, minimize or reduce project-related pollution;				
	(b) More sustainable use of resources, including energy and water;				
	(c) Reduced project-related greenhouse gas emissions.				
ESS 5: Land Acquisition	(a) Avoid/minimize adverse social and economic impacts from land acquisition or				
Resettlement	restrictions on land use:				
	(i) Avoid/minimize displacement;				
	(ii) Provide alternative project designs;				
	Interim environmental and social safeguards of the Fund				
	Page 2				
	(iii) Avoid forced eviction.				
	(b) Improve or restore livelihoods and standards of living;				
	(c) Improve living conditions among displaced persons by providing:				
	(i) Adequate housing;				
	(ii) Security of tenure.				
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	(a) Protection and conservation of biodiversity;				
	(b) Maintenance of benefits from ecosystem services;				
	(c) Promotion of sustainable management of living natural resources; and				

	(d) Integration of conservation needs and development priorities.				
ESS 7: Indigenous	(a) Ensure full respect for indigenous peoples				
Peoples	(i) Human rights, dignity, aspirations;				
	(ii) Livelihoods;				
	(iii) Culture, knowledge, practices;				
	(b) Avoid/minimize adverse impacts;				
	(c) Sustainable and culturally appropriate development benefits and opportunities;				
	(d) Free, prior and informed consent in certain circumstances.				
ESS 8: Cultural Heritage	(a) Protection and preservation of cultural heritage;				
	(b) Promotion of equitable sharing of cultural heritage benefits.				
	2. The International Finance Corporation (IFC) PS can be viewed at:				
	http://www.ifc.org/wps/wcm/connect/c8f524004a73daeca09afdf998895a12/IFC_Perf				
	ormance_Standards.pdf?MOD=AJPERES.				

### 2.2.2 UNITED NATIONS (UN) SUSTAINABLE DEVELOPMENT GOALS

Goal 5 of the Sustainable Development Goals ('SDG's' or the 'Goals') encourages an end to all forms of discrimination against all women and girls everywhere. The Goals aims to eliminate all forms of violence against all women and girls, and harmful practices. It recognizes the value of unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family. Further, it ensures the universal access to sexual and reproductive health and reproductive rights. It encourages countries to undertake reforms to give women equal rights to economic resources, as well as access to natural resources.

SDG 6 is a core feature for the goals. At a programme level, SDG Target 6.3 states that "by 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally".

Finally, the Goals encourage the adoption and strengthening of sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

### 2.2.3 INTERNATIONAL STANDARDS

The DBSA and IFC/World Bank safeguards will apply to the Programme along with the associated Environmental Health and Safety Guidelines to ensure that all projects will ensure a net benefit for:

• Gender equity (UNEP Marker system and UNEP gender guidelines will be applied to all projects)

- Biodiversity/Ecosystem services (alignments with emerging global targets, standards and good practices)
- Climate Adaptation
- Climate mitigation
- Water use and re-use

The "Do No Harm" Principle will apply and all projects will complete a detailed Development Results Template complete with baseline metrics, targets and indicators and will report every 6 months against this framework. This will be applied to all projects and is provide in Appendix B.

## 2.3 DBSA ENVIRONMENTAL AND SOCIAL SAFEGUARDS

Projects financed by the DBSA fall in one of the following categories based on the type of project and associated risk:

- Category 1 or High and Substantial Risk: with potential significant adverse social and/or environmental impacts that are diverse, irreversible, or unprecedented;
- Category 2 or Medium Risk: with potential limited adverse social and environmental impacts that are few in number, generally site specific, largely reversible and readily addressed through mitigation measures;
- Category 3 or Low Risk with minimal or no impacts; or
- Category 4 or Financial Institutions: involving the extension of credit-lines to other financial institutions.

As a Green Climate Fund (GCF) Accredited Entity (AE), the DBSA commits to ensuring compliance with the GCF Environmental and Social Safeguards (ESS).

### 2.3.1 ALIGNING TO GCF SCREENING

As a preliminary process in due diligence, the screening of environmental and social risks of activities involves the following actions:

- Identify the potential environmental and social risks and impacts of the activities (including direct and indirect, induced, long-term and cumulative impacts, potential environmental and social risks);
- Analyse the identified risks and impacts to understand their potential significance including SEAH risks and will take into account the activities' areas of influence including associated facilities and third-party impacts.
- Associated facilities must meet the requirements of their environmental and social safeguards pursuant to the ESS standards of GCF. Where the associated facilities are financed by other funding agencies, GCF, and the accredited entities, may then rely on the environmental and social requirements of these funding agencies, provided that these are more stringent or equivalent to the ESS standards, as determined by GCF.

- Assign an environmental and social risk category; and
- Determine applicable standards, policies and plans for meeting requirements, including the scope of further assessments

The environmental and social risk categories of activities supported by GCF are defined as follows:

- Category A. Activities with potential significant adverse environmental and/or social risks and impacts that, individually or cumulatively, are diverse, irreversible, or unprecedented;
- Category B. Activities with potential limited adverse environmental and/or social risks and impacts that, individually or cumulatively, are few, generally site-specific, largely reversible, and readily addressed through mitigation measures; and
- Category C. Activities with minimal or no adverse environmental and/or social risks and/or impacts.

Thus the DBSA's Category 2 risk profile aligns with that of the GCF Category B.

The DBSA has designed its own ESS that are aligned with the GCF policies and standards, and with South African National legislation. As GCF and DBSA advance their policies and practices the DBSA and its financial partners will endeavour to address not only updated national policy and legislation and DBSA environmental and social standards but also GCF safeguards within a reasonable time frame to all affected.

Projects that are supported by the DBSA will be carefully designed to benefit local communities, with a particular focus on women and vulnerable groups, and the environment in their focal areas, with no anticipated adverse social or environmental impacts.

While the DBSA Safeguards are applicable to each archetype included in the Programme (the Funding Proposal refers to four types of waster reuse options (DPR, IPR, INR and IR)) the programme effectively covers two key stages of project development, namely a project preparation phase and a detailed design/ implementation phase. It is during these two key phases of project delivery where the safeguards are importantly applied, noting that these are underpinned by the financing arrangements as well as efforts to build capacity and ensure awareness. The applicability of the DBSA's safeguards against these two key project delivery phases are presented in Table 5. It must be noted that should specific projects require different structuring and phasing, then each of these project phases must be assessed against the safeguards.

DBSA ESS	GCF interim ESS and IFC	Project Preparation	Comments	Detailed Design and	Comments
Standard 1: Project Screening: Environmental and Social Risks, Impacts and Opportunities	Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts	Yes	Up to feasibility scale of assessment	Yes	Detailed assessment of risks and their mitigation

#### Table 5: Summary of applicability of Environmental and Social Safeguards
DBSA ESS	GCF interim	Project	Comments	Detailed	Comments
	ESS and IFC	Preparation		Design and	
	PS1-8			Implementation	
Standard 2: Stakeholder Engagement and Information Disclosure		Yes	Stakeholder assessment with strategic engagement and disclosure	Yes	Detailed engagement plan supported by thorough engagement and disclosure
Standard 3: Gender Mainstreaming (including SEAH)		Yes	Assessment of gender and SEAH impacts with plan for management	Yes	Detailed action plan to ensure gender mainstreaming and protection against SEAH, supported by mitigation and reporting framework to ensure implementation
Standard 4: Indigenous Peoples	Performance Standard 7: Indigenous Peoples	Possibly	Assessment of possible impacts through assessment of affected people and beneficiaries. IPP developed where applicable	Possibly	Detailed IPP implementation, supported by mitigation and reporting framework.
Standard 5: Land Acquisition, Land Use Restrictions and Involuntary Resettlement	Performance Standard 5: Land Acquisition and Involuntary Resettlement	Possibly	Assessment of possible impacts and plan for interventions where necessary	Possibly	Detailed action plans, including resettlement action plans where needed,, supported by reporting framework to track progress.
Standard 6: Labour and Working Conditions	Performance Standard 2: Labour and Working Conditions	Yes	Scoping assessment of implications and challenges to manage	Yes	Detailed labour plans to address identified challenges including mitigation and management options, as well as reporting structures to ensure responsive management.
Standard 7: Community Health and Safety	Performance Standard 4: Community Health, Safety, and Security	Yes	Scoping assessment of implications and challenges to manage	Yes	Detailed action plans to manage identified and emergent health and safety issues, supported by clear accountabilities.
Standard 8: Cultural Heritage	Performance Standard 8: Cultural Heritage	Possibly	Assessment of status and potential implications and challenges to manage, if identified.	Possibly	Where identified, detailed action plans to manage identified and emergent impacts. Effective reporting frameworks to ensure adaptive and responsive management.
Standard 9: Biodiversity Conservation and Sustainable Living Natural Resources Management	Performance Standard 6: Biodiversity Conservation and Sustainable Management	Possibly	Assessment of status and potential implications and challenges to manage, if identified. Nature based	Possibly	Where identified, detailed action plans to manage identified and emergent impacts. Effective reporting frameworks to ensure adaptive and

DBSA ESS	GCF interim	Project	Comments	Detailed	Comments
	ESS and IFC	Preparation		Design and	
	PS1-8			Implementation	
	of Living Natural Resources		solutions must be explored.		responsive management.
Standard 10: Resource Efficiency, Pollution Prevention and Management	Performance Standard 3: Resource Efficiency and Pollution Prevention	Yes	Detailed regulatory impact assessment of these in the feasibility level assessments, producing management plans and adherence to environmental and water use regulations.	Yes	Complete all regulatory requirements. Develop monitoring and reporting framework to support provision of data to regulatory authorities and adhere to license conditions.
Standard 11: Safety of Dams		No	These projects will not develop dam/ impoundment infrastructure that requires screening against national dam safety regulations.	No	

The DBSA will align with the GCF safeguards which in the interim are aligned to the International Finance Corporation's (IFC) Environmental and Social Performance standards. These standards provide clear requirements for the following:

- Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
- Performance Standard 2: Labour and Working Conditions
- Performance Standard 3: Resource Efficiency and Pollution Prevention
- Performance Standard 4: Community Health, Safety, and Security
- Performance Standard 5: Land Acquisition and Involuntary Resettlement
- Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- Performance Standard 7: Indigenous Peoples
- Performance Standard 8: Cultural Heritage

<u>DBSA Safeguard Standard 1</u> refers to Project Screening: Environmental and Social Risks, Impacts and Opportunities that sets out the responsibilities to assess, manage and monitor environmental and social risks and impacts associated with each stage of a project for which the DBSA provides financing to achieve environmental and social outcomes consistent with the ESS Environmental and social assessment carried out under ESS 1 determines whether project operations trigger any risks addressed under Standards 2 -11 and whether the client needs to implement related mitigations.

Projects undertaken in terms of this Programme may be Category 2 or Medium Risk Category Projects which include (only projects relevant to this programme are listed):

- Water supply projects (without impoundments or new river intakes)
- Medium to small scale sanitation projects
- Water purification plants
- Reservoirs for public water supply
- Pipelines (depending on the route).

Category 2 programmes and projects are medium risk projects which may have adverse environmental and social impacts, but which are likely to be potentially less severe than those associated with Category 1, high and substantial risk projects. For category 2 projects few impacts are irreversible and mitigation measures can be more easily prescribed.

The DBSA approach to Category 2 projects requires the following:

- An Environmental and Social Scoping report,
- An ESIA,
- An ESMP containing sufficient detail to assess, manage and mitigate the project's environmental and social risks and outcomes and comply with the DBSA ESSSs. The ESMP to address any project related GHG emissions and climate change risks. The ESMP to detail project resource use, including at least water and waste usage.
- If the project is not a regulated Listed Activity according to relevant country legislation, DBSA requires that the client apply the ESSSs stipulated environmental and social assessment requirements
- Any additional impact and / or risk assessments and plans that the DBSA may consider necessary as determined by the project environmental and social screening and appraisal (including gender, SEAH and the need for Grievance Response Mechanisms)

There may be the possibility that certain projects may, through the screening stage, be deemed to be Category 1 in nature. Category 1 projects have impacts that are likely to be significant, broad and diverse. They may be irreversible and could lead to significant impacts on the social, physical and biological environment, and changes in land use. Project types include, amongst others:

- Any project requiring a Resettlement Action Plan (RAP) (ESSS5)
- Large dams and reservoirs, levees or weirs affecting river flow
- Canals and channels, including normal flow of water diversions in a riverbed
- Water transfer schemes between water catchments and impoundments
- Large sewage works and associated infrastructure
- Projects with large resettlement components and all projects with major impacts on human populations
- Projects affecting tribal or indigenous populations

Should the projects be deemed to be Category 1 then the DBSA safeguard standards require the following procedures to be undertaken:

- An Environmental and Social Scoping report;
- A comprehensive ESIA;

- A detailed ESMP (or similar) and all supporting documentation, setting out the project mitigation measures. Depending on the project scope a Strategic Environmental and Social Assessment and Cumulative Impact Assessment, Environmental / Social Management System and Emergency Preparedness Plan may be required. The ESMP to address any project related GHG emissions and climate change risks. The ESMP to detail project resource use, including at least water and waste usage;
- A Stakeholder Engagement Plan (SEP) outlining:
- The level of stakeholder support for the project
- The free, prior and informed consultation process to be undertaken with key and affected project parties to disclose project risks, impacts and outcomes
- How stakeholder participation in key project design and implementation stages is enabled (ESSS2)
- Any special measures necessary to consult with indigenous peoples and vulnerable groups who may be impacted by the project (ESSS4)
- Measures to apply gender mainstreaming practices in project design and implementation (ESSS3)
- In cases of incidences of Gender-Based Violence and or Sexual Exploitation and Abuse the client will ensure:
- Reporting and response protocols are in place with specific procedures for Gender Based Violence including confidential reporting with safe and ethical documenting of Gender Based Violence cases, that indicate when and where to report incidents, and what follow up actions will be undertaken.
- Modalities are in place to provide services and redress to survivors.
- Project information disclosure mechanisms (ESSS2)
- Grievance and redress mechanism (appropriate in scale to the project risks and adverse impacts) to address any project related grievances.
- Projects with high magnitude/impact will require the use of an independent advisory panel of expertise agreed to by DBSA and funded by the Client.

Brine disposal, produced from the treatment process, is a barrier to the introduction of water reuse projects and has to be considered during project screening. A saline brine waste stream may remain after recovery for some types of treatment. This presents a challenge as most municipalities do not permit the direct discharge of brine into sewerage lines. Therefore, in these situations, industries often concentrate waste streams to reduce volumes and improve ease of removal, thereby incurring additional treatment costs. Coastal sites typically dispose brine in the sea. For inland sites, disposal is more complicated and costly. Brine is beginning to be viewed as a resource with extractable value, but it remains an environmental barrier nonetheless and will require the necessary permitting and supporting environmental assessments including ESIAs, ESMPs and Section 21 water use license under the National Water Act.

Water reuse projects will have the option to assess the feasibility of sludge beneficiation, noting the range of regulatory requirements and the potential environmental impacts. In the preparation of the WRP this has not been identified as a priority outcome for the programme. Nevertheless, during project preparation these options

will be explored with the intent to maintain projects within this medium risk categorisation. As such, the project eligibility criteria for project selection, prioritises Category B and C projects.

For medium risk projects, the depth and type of environmental and social impact assessment required will depend on the type of project and the type of environmental and social risks encountered. The client / project owner / sponsor will provide at least the following:

- An Environmental and Social Scoping report,
- An ESIA,
- An ESMP to assess, manage and mitigate the project's environmental and social risks and outcomes and comply with the DBSA ESSs.
- Safeguard report reflecting on the alignment of activities with all applicable safeguards and associated global good practice guidelines (including specifically all GCF, IFC and DBSA standards and guidelines) and noting any gaps and how these will be addressed.

In terms of the safeguards, the projects to be undertaken would be categorised as Category 2 projects which are those that have potentially limited adverse social and environmental impacts that are few in number, generally site specific, largely reversible and readily addressed through mitigation measures. At the screening stage it will be imperative to assess all ESS as laid out in Table 5. Where needed due to the nature of the projects impacts and scale then Indigenous People Plans, Resettlement Action Plans, biodiversity protection plans, and cultural heritage management plans will be developed. The WRP will also establish a dedicated WPO to manage the programme level compliance to both the GCF and DBSA environmental and social standards and will be accountable for ensuring the development of supporting safeguard instruments.

Early engagement with the South African leading line ministries, including DWS, Department of Cooperative Governance (DCOG) and the Department of Forestry, Fisheries and the Environment SA, national designated authority (DFFE) and the GCF focal point will be a key risk mitigation measure to ensure meeting the GCF requirements for environmental and social safeguards are aligned to the South African policy framework. These have been outlined in the ESMF.

If the project is not a regulated Listed Activity, DBSA requires that the client apply the ESSs stipulated environmental and social assessment requirements along with any additional impact and / or risk assessments and plans that the DBSA may consider necessary and as determined by the project environmental and social screening and appraisal.

Category 3 or low risk category are those projects which are unlikely to have adverse environmental impacts as the social, physical and biophysical environments will not be significantly affected. Project types include:

- Health service projects with minimal negative social and environmental impacts
- Internal reticulation of urban developments with minimal negative social and environmental impacts
- Institutional development and capacity-building projects with minimal negative social and environmental impacts
- Advisory assignments (to consider all relevant stakeholders)

- Technical assistance (to consider all relevant stakeholders)
- Rights issues (to consider all relevant stakeholders)
- Securitisation

Category 4 projects involve DBSA lending to financial intermediaries that on - lend or invest in subprojects that may result in adverse environmental and social impacts.

Financial intermediaries include private or public sector companies that receive corporate loans or loans for investment projects from the DBSA that are used to finance a set of subprojects. Financial intermediary subprojects equivalent to Category 1 and Category 2 are subject to the relevant ESS requirements, as if they were directly financed Category 1 or Category 2 projects. However, if a Client will use a DBSA corporate loan to finance high and substantial risk investment projects known at the time of loan approval, the loan will be considered Category 1.

Category 4 financial intermediaries are required to:

- Have adequate corporate environmental and social governance policies and apply the DBSA's Standards to its Category 1 – and Category 2 subprojects, comply with local environmental and social policy and legislation and seek global best practices as applicable to their operational activities.
- Develop and maintain an ESMP in line with the DBSA's Standards that is appropriate for the scale and nature of its operations—recognising that the operations of financial intermediaries vary considerably.
- Demonstrate that it has the management capability, organisational capacity, resources and expertise to monitor ESMS sub project implementation.

A high-level screening of the project archetypes has been undertaken. A detailed screening of projects to be implemented will take place as part of the project development. Table 6 provides an overview of the initial project pipeline. In a number of the larger municipalities, particularly the Metropolitan municipalities, there is already an understanding of the importance of water reuse and the environmental, social and regulatory impacts. In these contexts, public acceptance of these project is likely to be stronger.

Proje ct #	Municipality	No. of Projects	Total Reuse Flow (MI/d)	Potential reuse types	Already Initiated Water Reuse Projects	Public Acceptability
1	Nelson Mandela Metropolitan Municipality	1	40	DPR, INR	Yes	Medium
2	City of Ekurhuleni	3	113	DPR, INR	Yes	Medium
3	City of Johannesburg Metropolitan Municipality	3	200	IPR, INR	No	High
4	City of Tshwane Metropolitan Municipality	2	110	IPR, INR	No	High

#### Table 6: Initial project pipeline

5	eThekwini Metropolitan	3	162	DPR, IPR,	Yes	Medium
	Municipality			INR		
6	City of uMhlathuze	1	75	INR	Yes	High
7	Sol Plaatjie Local Municipality	1	15	IPR	No	Medium
8	City of Cape Town Metropolitan	2	110	DPR	Yes	High
	Municipality					
9	Drakenstein Local Municipality	1	10	IPR	Yes	Medium
10	Mangaung Metropolitan	1	25	IPR	Yes	Medium
	Municipality					

#### Table 7: Initial screening of the first ten projects in the WRP pipeline

No.	Municipality	Risk Category									Safegu	uards	
	DBSA		ESS 1	ESS 2	ESS 3	ESS 4	ESS 5	ESS 6	ESS 7	ESS 8	ESS 9	ESS 10	Comments
	GCF interim ESS and IFC PS1-8		PS1			PS7	PS5	PS2	PS4	PS8	PS6	PS3	
1	Nelson Mandela Metropolitan Municipality	2	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	ESS 9 will require more detailed assessment as part ES, ESIAS and ESMP
2	City of Ekurhuleni	2	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	• ESS 9 will require more detailed assessment as part ES, ESIAS and ESMP
3	City of Johannesburg Metropolitan Municipality	2	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	ESS 9 will require more detailed assessment as part ES, ESIAS and ESMP
4	City of Tshwane Metropolitan Municipality	2	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	ESS 9 will require more detailed assessment as part ES, ESIAS and ESMP
5	eThekwini Metropolitan Municipality	2	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	ESS 9 will require more detailed assessment as part ES, ESIAS and ESMP
6	City of uMhlathuze	2	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	ESS 9 will require more detailed assessment as part ES, ESIAS and ESMP
7	Sol Plaatjie Local Municipality	2	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	<ul> <li>IPP needed</li> <li>ESS 9 will require more detailed assessment as part ES, ESIAS and ESMP</li> </ul>
8	City of Cape Town Metropolitan Municipality	2	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	<ul> <li>Indigenous peoples screening needed</li> <li>ESS 9 will require more detailed assessment as part ES, ESIAS and ESMP</li> </ul>
9	Drakenstein Local Municipality	2	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	ESS 9 will require more detailed assessment as part ES, ESIAS and ESMP
10	Mangaung Metropolitan Municipality	2	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	ESS 9 will require more detailed assessment as part ES, ESIAS and ESMP

<u>DBSA Safeguard Standard 2</u> refers to stakeholder engagement, stating that 'effective, open and transparent engagement between the Client and project stakeholders is an essential element of any transaction, leading to improved environmental and social project sustainability, project acceptance, and contributing to successful project design and enhanced implementation.'

For the purpose of this ESS, the term "stakeholder" is used to refer to:

- Project beneficiaries those who will benefit directly from the project, with indirect beneficiaries also being tracked over the course of the programme implementation.
- Project affected parties those who are affected or likely to be affected but not project beneficiaries.
- Other interested parties those who may have an interest(s) in the project.

This ESS applies to all projects that the DBSA supports.

For the Programme, stakeholders are likely to include the following:

- i) Institutions providing project oversight, namely DWS, DFFE, DBSA and Municipalities
- Department of Cooperative Governance and Traditional Affairs (COGTA) and its agency MISA, Government Technical Advisory Centre (GTAC) and the National Treasury, South African Local Government Association (SALGA)
- iii) Water Utilities/Boards and Water Service Authorities, Private sector water developers and service providers
- iv) Financiers
- v) Local and district municipalities
- vi) Civil society organisations (resident's associations, community-based organizations, nongovernmental organisations, etc.)
- vii) Water Research Commission (WRC) and other academic research institutions (UCT, Wits, Rhodes, NMMU etc)

For the purposes of this Programme a Communications Strategy and Implementation Plan has been developed along with a Consultation and stakeholder engagement plan.

A specific context relevant stakeholder engagement plan (SEP) will need to be developed for each water reuse project to be implemented and in each municipality as they all differ. A draft structure for the SEP is provided in Appendix F to this report. In addition, each project would also be required to comply with NEMA public participation and consultation requirements, should listed activities be triggered and this would need to be incorporated.

The <u>DBSA Safeguard Standard 3</u> refers to gender mainstreaming, that is an institutional and development strategy to address the factor that 'gender inequality exposes individuals to different types of risks and impacts from development projects, especially in areas of health, education, labour, water and sanitation, energy, transport, ICT and access to, benefits from and control of resources.'

A Gender Action Plan has been developed detailing the above. For this Programme, the following actions are proposed to mainstream gender and address SEAH:

- Applying quotas in female participation in sanitation policies for water committee members, Boards and agencies.
- Integrating a monitoring system with gender and SEAH monitoring indicators.
- Ensuring a 30-40% target for the beneficiaries of the program to be women.
- Raising Public awareness campaigns aimed at creating an appreciation and understanding of the benefits of water reuse.
- Enabling all water stakeholders—from the implementing agencies to the beneficiaries to build requisite skills and knowledge for gender-sensitive services and management.
- Developing on a project-by-project basis a scorecard to ensure support to the GCF E&S safeguards as well as a project level SEAH toolkit that will ensure protection from sexual abuse, exploitation, and sexual harassment

The approach to the ensuring protection against SEAH is structured around four key steps that are outlined in Table 8, and the toolkit that will be developed during the establishment phase of the programme will align to these steps as well as with the policies of both GCF and DBSA.

Table 8: Four s	teps to	ensurina	protection	aaainst	SEAH in	the WRP
Tuble 0. Tour 5	teps to	chisting	protection	uguinse	3E/ 11/ 11/	the with

Steps	Actions
Assessing: Identifying and	Undertake social risk assessment
assessing the risks and the	Assess the impact of these risks and effectiveness of existing controls
response capacity	Review ability of the client to respond to SEAH risks
	Develop risk register, outlining priority risks
	Establish procedures to review and update the risk assessments during
	projects
	Establish appropriate management committee to oversee and review
	procedures and plans
Addressing: Establishing the	Develop risk mitigation measures and outline an implementation plan
mitigation, reporting and monitoring	Monitor progress against the implementation plan and adapt as and when
measures	appropriate
	Conduct new risk assessments when needed and based upon monitoring
	results
	Ensure reporting of progress
Responding: Ensuring project	Provide essential services for survivors of SEAH
response on cases	Reporting of cases as appropriate ensuring confidentiality of survivors
	Document cases and record actions taken
Communicating: Creating	Develop an awareness creation and communications plan
awareness and understanding	Undertake interventions to ensure staff are aware of procedures

It is a requirement that all projects:

- Ensure that GRMs are established by the AE and/or EEs to address SEAH in addition to other E&S impacts of the activities proposed for GCF financing.
- Specify all procedures required in incidences of SEAH (or similar terms employed by the AE that are
  of substantive equivalence). This may include confidential reporting with safe and ethical documenting
  of SEAH cases, that indicate when and where to report incidents, and what follow-up actions will be
  undertaken.
- Indicate the modalities for timely services and redress to SEAH survivors, including as appropriate, medical care, psychosocial support, legal support, community driven protection measures, and reintegration.

<u>Safeguard Standard 4: Indigenous Peoples</u> considerations are essential and there are potentially a few areas where the San and Khoi-Khoi peoples may be impacted-upon by these projects. Where projects impact upon indigenous peoples, an Indigenous Peoples Plan will be developed. A draft outline of an Indigenous Peoples Plan is provided in Appendix G.

The DBSA uses the term to include a distinct social and cultural group which:

- self identify as members of an indigenous cultural group and whose identity is recognised as such by others.
- Are collectively attached to geographically distinct habitats, ancestral territories and natural resources in the project area.
- Possess customary cultural, economic, social, or political institutions separate from mainstream society or culture.
- Utilise a distinct language, different from official languages for the country or region in which they reside.

However, upon initiation of individual projects, confirmation that this standard is not applicable will need to be assessed.

<u>Safeguard Standard 5: Land Acquisition, Land Use Restrictions and Involuntary Resettlement</u> may apply in certain circumstances but it is expected that that new and existing projects will take place on land owned by the Municipality. As such, it is expected that these projects would not require the acquisition of land or the the resettlement of communities. Nevertheless, the DBSA project risk categorisation flags this and as such projects that require this automatically are categorised as risk level 1. Noting this, the project eligibility criteria has flagged this as a key consideration. Thus, this assessment will be undertaken for every project with an appropriate land acquisition plan and a resettlement action plan where necessary. An outline of a resettlement action plan is provided in Appendix H.

<u>Standard 6: Labour and Working Conditions</u> recognises the importance of employment creation and income generation in pursuit of poverty reduction and inclusive economic growth. Clients should promote sound

worker-management relationship and enhance the development benefits of a project by treating workers in the project fairly, and provide safe and healthy working conditions, considering the needs to ensure protection against sexual abuse, exploitation and sexual harassment. The national policies with regards to affirmative action and equal opportunity will apply noting that all public and private sector businesses are required to report annually to the national Department of Labour with regards to employment equity and Broad Based Black Economic Empowerment plans and progress made in this regard. This will be included in contracts for the construction phase and for the operational management of the facilities of proposed projects. Under the DBSA ESS 6 the objectives of this safeguard are outlined as follows and as such will be considered on each and every project.

- To promote fair treatment, non-discrimination and equal opportunity of project workers;
- To protect workers, especially vulnerable workers such as women, persons with disabilities, migrant and contract workers, as appropriate;
- To promote health and safety in the workplace;
- To prevent the use of all forms of forced and/or child labour and
- To provide workers with accessible means to raise workplace concerns.

It is important to note that in terms of the Occupational Health and Safety Act (Act 85 of 1993) public and private sector organisations must provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery, and ensure the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work. As such plans must be put in place to ensure this and this is subject to audit by the Department of Labour.

<u>Safeguard Standard 7: Community Health and Safety</u> – The Safeguard recognises that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. Hence the objectives of this safeguard is:

- To anticipate and avoid adverse impacts on the health and safety of project affected communities during the project life – cycle;
- To promote quality and safety in the infrastructure design and construction;
- To avoid or minimise community exposure to project related traffic and road safety risks, diseases and hazardous materials;
- · To put effective measures in place to address emergency events and avoid disasters; and
- To ensure that personnel and property are safe.

In this regard these projects have been identified as having a Category B level of risk and as such these projects are expected to have no to minimal negative impacts upon communities and their health and safety. However, this safeguard addresses the health, safety, SEAH and security risks and impacts on project affected communities and the corresponding responsibility of Clients to avoid or minimise such risks and impacts, with

particular attention to people who, because of their particular circumstances, may be vulnerable. Hence, while the initial categorisation is level 2, it is a requirement that each project is assessed.

Although this project is not likely to directly impact on communities, there is nevertheless the potential and as such each project **must** ensure that any potential risks are minimised and overall positive impacts are realised at a community level. In terms of the Occupational Health and Safety Act (Act 85 of 1993) public and private sector organisations must provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery, and ensure the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work. As such plans must be put in place to ensure this and this is subject to audit by the Department of Labour.

<u>Safeguard Standard 8: Cultural Heritage</u> may apply to this project as, although sites will be selected which do not have any cultural heritage aspects, the associated pipelines may trigger the requirements of the National Heritage Resources Act (NHRA) (Act 25 of 1999)his Standard applies if a project / programme:

- Involves excavations, demolition, movement of earth, flooding or other changes in the physical environment
- Is located within a legally protected area or a legally defined buffer zone
- Is located in, or in the vicinity of, a recognised cultural heritage site
- Is designed to support cultural heritage conservation, management and use
- Impacts materially on intangible cultural heritage or if a project intends to use such intangible cultural heritage for commercial purposes
- Impacts on or depends on cultural heritage including manmade, natural capital or institutional capital.

A Heritage Specialist will be required to submit a Notice of Intent to Develop should the pipelines trigger the NHRA requirements and may require application for a permit under the regulations published in 2000 through Government Gazette No. 21239. Heritage requirements are also included in the ESMP. Gudielines provided by the South African Heritage Resource Agency note the following key considerations in this regard as being:

- Social assessment, identification of stakeholders and formation of management committee'
- Documentation, research and investigation of the identity of the place,
- Analysis of the information gathered,
- Development of appropriate responses.
- Implementation plan, and
- Basic principles for the development of management plans.

An indicative table of contents for a cultural heritage management plan is provided in Appendix I.

#### Safeguard Standard 9: Biodiversity Conservation and Sustainable Living Natural Resources Management -

The safeguard adopts a precautionary approach to conserve, manage and use biodiversity in a sustainable manner in line with the Rio Declaration and the Convention on Biological Diversity. This safeguard will apply for sites selected for projects that may fall within critical biodiversity areas or any other natural areas, however sites that have been set aside for conservation purposes must be avoided. In this regard, the WRP aligns with the GCF ESS6/ IFC PS6 which states that in areas that are deemed critical habitats that the programme will not implement any project activities unless all of the following are demonstrated:

- No other viable alternatives within the region exist for development of the project on modified or natural habitats that are not critical;
- The project does not lead to measurable adverse impacts on those biodiversity values for which the critical habitat was designated, and on the ecological processes supporting those biodiversity values;
- The project does not lead to a net reduction in the global and/or national/regional
- population of any Critically Endangered or Endangered species over a reasonable period of time; and
- A robust, appropriately designed, and long-term biodiversity monitoring and evaluation program is integrated into the client's management program.

In such cases where a project is able to meet the requirements defined above, the project's mitigation strategy will be described in a Biodiversity Action Plan, as outlined in Appendix J.

The sites are likely to be located adjacent to or nearby existing water treatment or wastewater treatment works which are often disturbed sites and the projects will typically be in keeping with the existing land use. However, it needs to be acknowledged that WWTW and WTP often create manmade habitat and freshwater features that will be assessed in terms of the required NEMA EIA Regulations and the necessary processes followed, which will result in adequate mitigation measures being implemented.

All natural habitats must be left with a nett positive impact as a result of the projects and biodiversity offsets may be required to compensate for any impacts on natural habitats that cannot be avoided or mitigated in any other way. However, these offsets are only to be used as a last resort with the Biodiversity Action Plan outlining the necessary management and mitigation measures needed. Positive biodiversity/ecosystem impact must be demonstrated (over and above legal or safeguard requirements). Impacts must be integrated into project co benefit objectives with clear targets and indicators. If degraded sites are selected, rehabilitation/restoration of the site must be included in the project design

<u>Safeguard Standard 10: Resource Efficiency, Pollution Prevention and Management</u> – This safeguard draws on and aligns DBSA operations to international pollution, hazardous materials and waste, pest/vector control conventions and standards. It outlines DBSA client requirements to address resource equity, efficiency and pollution prevention over the life of a programme/project. This standard is applicable as a potential waste/effluent streams are planned for treatment that will allow reuse and conversion into a resource which has potential environmental benefits. The ESMP will ensure that the site is constructed and managed with pollution prevention as a focus. In this regard, there is a requirement that a water use license under Section

21 (f) of the National Water Act (Act 36 of 1998) that regulates discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit or ,depending on context, Section 21(g) which regulates disposing of waste in a manner which may detrimentally impact on a water resource. Under these regulations there is a requirement to put in place mitigations and to report on these.

DBSA and all partners will ensure applicability of this standard to safeguard environmental integrity and human health, applying to missions to air, discharges to water, GHG emissions, soil contamination, project-associated waste, and environmentally sound management of hazardous substances following the international best practices and standards.

DBSA and partners will elaborate on the applicability of this standard in the context of the programme archetypes and considering the sensitivity/ vulnerability of the receiving environments and local capacities in enforcing relevant policies and standards of environmental management.

DBSA and partners will follow the relevant IFC EHS Industry Guidelines and all other relevant IFC sector guidelines with regard to wastewater and ambient water quality, water quality and availability, water conservation, and water and sanitation. As such, South Africa has developed guidance on discharge standards to which adherence is also required.- This is a complex area of regulation and considerable attention has already been paid to this in South Africa. The following standards exist:

- South African Water Quality Guidelines for a number of different water user sectors (DWAF, 1996)
- Drinking water quality standards (SANS 241, 2015, Edition 2), and the
- General and Special Standards pertaining to the discharge of treated wastewater to the water resource.

In addition, it must be noted that the water quality discharge standards are also linked to the instream environmental requirements that are outlined under the 'Reserve' requirements that are outlined in Chapter 3 of the National Water Act (Act 36 of 1998). Furthermore, Section 19 of this Act outlines a number of requirements in order to prevent and remedy pollution. These approaches are also encapsulated in the Integrated Water Quality Management Policy that indicates the precautionary approach that is used and therefore, required of all projects.

## 2.4 COMPARATIVE ANALYSIS BETWEEN DBSA AND GCF SAFEGUARD STANDARDS

DBSA, IFC and GCF are currently in process of revising their Safeguard Standards. The DBSA update will ensure alignment of the revised GCF/IFC safeguards as appropriate. As an interim measure partners will align with DBSA/GCF/IFC safeguards noting key points raised by Mott Macdonald GCF Report titled GCF Environmental and Social Safeguards Outline

of proposed new structure and content (March 2022<sup>3</sup>) and incorporating measures where practical. The two key areas of different approaches are noted below:

### 2.4.1 CLIMATE

GCF: The implications of the Paris Agreement for appraisal and reporting of biodiversity, mitigation and adaptation efforts has led to changes in DBSA appraisals and its management systems. Changes relating to the consideration, appraisal and management of GHGs during project delivery and lifetime are reflected within GCF ESS 3. Climate risk assessment (including resilience benefits), hazard and disaster analysis and associated considerations are captured in a proposed new ESS 10 on Climate Change. GCF ESS 3 and ESS 10 together, therefore, will contain the most fundamental changes for embedding climate change across the standards to better align to GCF unique mandate and ambitions, however additional climate references remain integrated as appropriate into the other standards where appropriate.

The following factors should inform the implementation of the Climate Risk Assessment:

- Application of appropriate risk classification methodologies such as IPCC hazard risk classification or other technically credible methodology.
- Disaggregation of risk profiles for impacted communities by marginalized, disadvantaged, gender, age and social vulnerabilities.
- Setting a risk screening period (i.e. 30 years).
- Propose strategy for, and activities to, maximize co-benefits (mitigation/adaptation) and minimize maladaptation potential.
- Include relevant indigenous, local and traditional knowledge.
- The tailoring of the scope of the Climate Risk Assessment may be appropriate if the results of an initial Climate Change Impact Screening (considering the risk receptors and factors identified above), indicates it is appropriate to do so.

DBSA: The bank has considered climate components in ESS 1, and 8 and 9 but these will be expanded upon in its revised safeguards. The focus is on the need to understand project physical and transitional climate risks, provide guidance on how best to assess and manage these risks and their compounding nature, support the maximizing of co-benefits and minimizing mal-adaptation, consideration of natural hazard and disaster analysis and the need to align with the Paris Agreement and the Draft Global Biodiversity Framework.

In the interim DBSA appraisal format requires

• All projects to be mapped in terms of IFC green climate mapping taxonomy;

<sup>&</sup>lt;sup>3</sup> https://www.greenclimate.fund/sites/default/files/page/gcf-new-ess-stage-2-report-march-2022.pdf

- Assess how programme or partner is positioned in terms of DBSA statement on net zero (2022) and DBSA commitment to the Just Transition
- Mainstreaming Climate In Financial Institutions; the key principles<sup>4</sup>
- The Project Company's Progress Towards the Paris Agreement (Climate Change Progress To 1.5°C<sup>5</sup>) which includes a review of the key elements of a client credible transition plan <sup>6</sup>
- Programme project adaptation rating tool7

### 2.4.2 BIODIVERSITY

Until its safeguards are realigned DBSA partners will need to fully align fully align with the relevant provisions in GCF RESP: (para.52) which requires that activities are screened and assessed, including component subprojects for any potential impacts on biodiversity. For activities that have potential adverse impacts on natural habitats, DBSA will require the preparation of a biodiversity action plan (see Appendix J) that describes the long-term mitigation, conservation outcomes, monitoring, and evaluation programme. Where avoidance, minimization or mitigation measures are not available or sufficient, and where there is sufficient evidence to justify and support viability, DBSA in coordination with relevant experts and GCF, will design and implement measures that provide remedy or restoration before adequate and equitable compensation of any residual risks and impacts. Such measures shall be described and costed in the biodiversity action plans and/or ESMPs as part of the consideration for GCF funding. Compensation, or offsets, will be used to mitigate adverse impacts on biodiversity and ecosystems in rare cases, <u>only as a last resort</u>, and only in specific instances where: all other technically feasible avoidance, minimization or restoration measures have been considered; supported by rigorous, sound science; developed in consultation with independent experts; and long-term management, support, and financing have been secured.

## 2.4.3 PROGRAMME ARCHETYPES

Until recently, wastewater treatment works (WWTWs) have simply been seen as a necessary evil to clean our sewage so as not to damage the environment. They are also seen as a generator of a side stream waste in the form of sludge. However, with a move to Circular Economy thinking and Water Sensitive Urban Design, it has been realised that WWTWs can now rather be viewed as potential sources of valuable resources, such as water, energy and nutrients. As such, WWTWs may be viewed as **Water Resource Centres**, where one is able to extract these resources and reuse them within a city environment, thus reducing the pressures placed on non-renewable and other stressed resources. Undertaking baseline assessments of these opportunities for improved beneficiation will be a key element of the project preparation phase.

<sup>&</sup>lt;sup>4</sup> https://www.worldbank.org/content/dam/Worldbank/document/Climate/5Principles.pdf

<sup>&</sup>lt;sup>5</sup> BASED ON WORLD BENCHMARK ALLIANCE FOR OIL AND GAS INDUSTRY HEADINGS

<sup>&</sup>lt;sup>6</sup> Based on the headings of the CLIMATE POLICY INITIATIVE

<sup>&</sup>lt;sup>7</sup> An internal interim tool based on inputs from other IDFC members and still under construction

Incentive-based regulation has gained momentum and support in the South African Water Sector. In this regard, the "Green Drop Wastewater Services Audit measures and compares the results of the performance of Water Service Institutions, and subsequently rewards (or penalises) the institution based on evidence of excellence (or failures) when measured against the defined standards. Benchmarks are used to help WSIs to identify gaps between their standard and industry norms. The report is designed to give comparative analysis and diagnostics to assist WSIs to focus on specific areas for improvement" (DWS, 2022). This review enables the performance at each WWTW and municipality against the following criteria:

- Capacity management;
- Environmental management;
- Financial management,
- Technical management, and
- Effluent and sludge compliance.

Compliance with the Green Drop score of greater than 50% is included in the project eligibility criteria.

The Market Study (Annexure 2 to the Funding Proposal)) presents various water reuse archetypes that may be considered as potential project implementation options within the WRP.

Each type of water reuse project is associated with various characterises. A qualitative summary of the characteristics of each type of water reuse (IDR, IPR, industrial reuse and irrigation reuse) is provided in Table 9. A longer bar indicates a more favourable solution.

Reuse characteristics	Direct Potable (DPR) Indirect Potable (IPR) Industrial		Industrial	Irrigation
Advanced treatment plant product quality:	Highest	Very High ■■■■	Medium ■■■	Lowest
Range of usability of water:	Highest ■■■■	Highest ■■■■■	Medium	Lowest 📕
Capital Cost:	Highest <	High 💶	Medium	Lowest
Operational Cost:	Highest <	High 💶	Medium to High	Lowest
Public Acceptance:	Lowest	Medium 💶	High	Highest
Operational Expertise Required:	Highest <	High 💶	Medium	Lowest

#### Table 9: Summary of water reuse archetype characteristics.

Environmental Considerations	<ul> <li>Reduced discharge to the resource with associated in stream flow requirement considerations</li> <li>However, this also means reduced abstractions from the resource.</li> <li>Improved adherence to water quality discharge standards with reduced WWTW discharges</li> <li>Near environment and social considerations with plant construction.</li> </ul>	<ul> <li>As the water is returned to the resource there is less impact on instream flow requirements</li> <li>Adherence to discharge standards imperative</li> <li>Near environment and social considerations with plant construction.</li> </ul>	<ul> <li>Reduced discharge to the resource with associated in stream flow requirement considerations</li> <li>Improved adherence to water quality discharge standards with reduced wastewater discharges</li> <li>Onsite plant construction likely to have limited environmental footprint.</li> </ul>	<ul> <li>Reduced discharge to the resource with associated in stream flow requirement considerations</li> <li>Concerns regarding nutrient loadings from irrigation return flows</li> <li>No plant construction concerns but pipeline construction will require environmental screening and potentially servitudes/ easements</li> </ul>
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Note the programme will allow for promoting nature based solutions and ecosystem investments as they relate to water reuse either as a cross cutting theme of the below architypes or as a stand alone but significant contribution to such architypes.

## 2.5 DIRECT POTABLE REUSE

#### What is Direct Potable Reuse?

Direct Potable Reuse (DPR) can be described as the treatment of final wastewater effluent in an advanced treatment plant (ATP) and transfer of the product water to the inlet of a bulk water treatment plant or directly into the water distribution network. This is shown schematically in Figure 2.



Figure 2: Schematic of typical Direct Potable Reuse Projects

## 2.6 INDIRECT POTABLE REUSE

What is Indirect Potable Reuse?

Indirect Potable Reuse (IPR) can be described as the treatment of final wastewater effluent in an advanced treatment plant and the transfer of the product water to an environmental buffer (such as an aquifer or surface water reservoir) where it will blend with raw water before treatment in a bulk water treatment plant. This is shown schematically in Figure 3.



Figure 3: Schematic of typical Indirect Potable Reuse Projects

## 2.7 INDUSTRIAL REUSE

#### What is Industrial Reuse?

Industrial Reuse can be described as the treatment of final wastewater effluent in an advanced treatment plant to a quality suitable for industrial purposes and the transfer of the product water to a specific industry or generally to an industrial area. This is shown schematically in Figure 4.



Figure 4: Schematic of typical Industrial Reuse Projects

## 2.8 IRRIGATION REUSE

Irrigation Reuse can be described as the transfer of the polishing final wastewater effluent to quality standards required by agriculture or other irrigation users. This is shown schematically in Figure 5.

Irrigation reuse projects require relatively minimal additional treatment before the treated water is distributed into an irrigation reuse network or a rising main and therefore, the subsequent capital investment on the associated WWTW is relatively minor. For irrigation reuse to be effective, significant capital expenditure may be required in respect of the reused water's distribution network and this should be carefully considered in terms of the climatic objectives of the WRP. However, it is noted that each project will be carefully assessed by the WPO and the DBSA (as the AE) on a case-by-case basis, and as such, in the case that it can be demonstrated that a particular irrigation reuse project contributes towards achieving the proposed climatic-related benefits of the WRP, that project may be considered for inclusion with the WRP.



Figure 5: Schematic of typical Irrigation Reuse Projects

## 2.9 HIGH LEVEL SCREENING

The impacts of each project will be assessed in terms of national water and environmental regulatory frameworks, noting that adherence to these requirements is underpinned by compliance monitoring and enforcement by the Department of Forestry, Fisheries and Environment and by the Department of Water and Sanitation. The impacts of these projects will be contextual but an initial and high-level screening of water reuse projects and key regulatory considerations is presented in Table 10 below.

Regulatory	Activity	Direct	Indirect	Industrial	Irrigation
Instrument		Potable	Potable	(INR)	(IRR)
		(DPR)	(IPR)		
GNR. 327 (983)	The development of infrastructure exceeding 1 000 metres in length for the	Yes where	Unlikely	Yes where	Yes where
(2014 EIA	bulk transportation of water or storm water-	water services		pipelines are	pipelines are
Regulations	(i) with an internal diameter of 0,36 metres or more; or	require		required	required
	(ii) with a peak throughput of 120 litres per second or more; excluding	extensive			
as amended in 2017)	where—	reticulation			
	a) such intrastructure is for bulk transportation of water or storm water or storm water or				
	where such development will occur within an urban area				
	The development of—	Yes possible	Yes possible	Yes possible	Yes possible
	(i) dams or weirs, where the dam or weir, including infrastructure and	depending on	depending	depending	depending
	water surface area, exceeds 100 square metres; or (ii) infrastructure or	location	on location	on location	on location
	structures with a physical footprint of 100 square metres or more, where				
	such development occurs—				
	(a) within a watercourse;				
	(b) in front of a development setback; or				
	(c) if no development setback exists, within 32 metres of a watercourse				
	measured from the edge of a watercourse				
	The infilling or depositing of any material of more than 10 cubic metres	Yes	Yes	Yes	Yes
	into, or the dredging, excavation, removal or moving of soil, sand, shells,	particularly	particularly	particularly	particularly
	shell ght, peoples of fock of more than to cubic metres from a	construction	construction	construction	construction
	excavation removal or moving	CONSTRUCTION	CONSTRUCTION	COnstruction	CONSTRUCTION
	(a) will occur behind a development setback:				
	(b) is for maintenance purposes undertaken in accordance with a				
	maintenance management plan; (c) falls within the ambit of activity 21 in				
	this Notice, in which case that activity applies;				
	(d) occurs within existing ports or harbours that will not increase the				
	development footprint of the port or harbour; or				
	(e) where such development is related to the development of a port or				
	harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.				
	The clearance of an area of 1 hectares or more, but less than 20 hectares	Yes possible	Yes possible	Yes possible	Yes possible
	of indigenous vegetation, except where such clearance of indigenous	depending on	depending	depending	depending
	Vegetation is required for-	location	on location	on location	on location
1	(I) the undertaking of a linear activity; or,				

#### Table 10: Overview of regulatory requirements for water reuse projects according to archetype

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	(ii) maintenance purposes undertaken in accordance with a maintenance				
	management plan.				
	The clearance of an area of 300 square metres or more of vegetation	Yes possible	Yes possible	Yes possible	Yes possible
	where 75% or more of indigenous vegetation except where such clearance	depending on	depending	depending	depending
	of indigenous vegetation is required for maintenance purposes undertaken	location	on location	on location	on location
	in accordance with a maintenance management plan.				
	(i) 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;				
	(ii) Within critical biodiversity areas identified in bioregional plans;				
	(iii) Within the littoral active zone or 100 metres inland from high water				
	mark of the sea, whichever distance is the greater, excluding where such				
	removal will occur behind the development setback line on erven in urban				
	areas.				
	(iv) Outside urban areas, within 100 metres inland from an estuarine				
	functional zone; or				
	(v) 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.				
Section 21 of the	Impeding – means to, in any manner, hinder or obstruct the instream flow	Yes but with	Yes and will	Yes and will	Yes and will
National Water Act	of water, temporarily or permanently, but excludes the damming of flow so	primary focus	require	require	require
(Act No. 36 of 1998)	as to cause storage of water;	on impacts on	adherence to	adherence to	adherence to
	<b>Diverting</b> – means to, in any manner, cause the instream flow of water to	the	waste water	waste water	waste water
provides the list of	be rerouted, temporarily or permanently;	characteristics	discharge	discharge	discharge
water use activities	Discharging - waste or water containing waste into a water resource	of a water	standards	standards	standards
that will require an	Dispessing of waster in a manner which may detrimentally impact on a	course and			
authorisation or	Usposing of waste - in a manner which may define the head been bested	to adjusted			
	in any industrial or power deperation process:	flow regimes			
registration in	Characteristics of a watercourse – means the resource quality of a	now regimes			
accordance with the	watercourse, within the extent of a watercourse, including altering the bed.				
Act	banks. course or characteristics of a watercourse				
	Extent of a watercourse – means:				
	(a) The outer edge of the 1 in 100-year flood line and / or the delineated				
	riparian habitat, whichever is the greatest distance, measured from the				
	middle of the watercourse of a river, spring, natural channel, lake or dam:				
	and				
	(b) Wetlands and pans: the delineated boundary (outer temporary zone) of				
	any wetland or pan.				

Regulated area of a watercourse - for section 21(c) or (i) water uses,		
means:		
(a) The outer edge of the 1 in 100-year flood line and / or delineated		
riparian habitat, whichever is the greatest distance, measured from the		
middle of the watercourse of a river, spring, natural channel, lake or dam;		
(b) In the absence of a determined 1 in 100-year flood line or riparian area,		
the area within 100 m from the edge of a watercourse, where the edge of a		
watercourse is the first identifiable annual bank fill flood bench (subject to		
compliance with Section 144 of the Act); or (c) A 500-m radius from the		
delineated boundary (extent) of any wetland or pan.		

## 3 PROGRAMME'S CONTRIBUTION TO CLIMATE MITIGATION/ADAPTATION OBJECTIVES

SA has adopted a series of national and global policies, strategies and commitments to combat climate change and as part of its efforts to reduce greenhouse gas emissions, most notably through its SDG commitments, Climate Change Response Strategy and its recent NDC commitments to the UNFCCC.

SA's adaptation communication outlines the following key sectors for adaptation support to be implemented over 2021- 2030: human settlements, agriculture, water and energy. The draft National Climate Change Adaptation Strategy (DFFE, 2017) places emphasis on the need for improved adaptation planning to support national development aspirations as a key goal for the strategy. In support of this the National Climate Change Response White Paper states that the water sector is a critical component of climate change mitigation and adaptation. The National Climate Change Response Strategy for the Water Sector (DWS, 2014) outlined that good water management as a critical foundation for adaptation to water-related climate change impacts.

The WRP will contribute to address the challenge of growing water scarcity in South African municipalities, in the face of climate change. While national strategic instruments call for water reuse to address water security due to climate change, there is still no strategic initiative to drive water reuse, and as such the WRP is of national importance as part of the broader NWP. It is designed to tackle a number of barriers, including the lack of an integrated approach to natural resource management, competition and trade-offs amongst water users, and inequitable and uneven access to water. Current water usage in South Africa is estimated to be split between agriculture (62%), municipal use (27%), of which urban use comprises 24% and rural use only 3%, industry (3%), forestry (3%), energy (2%), mining (3%), and watering and nature conservation (2%) (GreenCape, 2020). Water is unevenly distributed across the country and is not always available where needed most, resulting in constraints in several highly populated municipalities and settlements, and key economic nodes.

There is also extreme inequality in access to water for productive purposes. These challenges are enhanced by deteriorating quality of water in South Africa's major river systems, water storage reservoirs, and ground water resources – the core water supply systems that underpin social and economic development in South Africa. There is robust evidence on where climate change-linked water supply vulnerability overlaps with socioeconomic, physical, economic, and environmental vulnerability in South Africa, which will be a consideration in the roll-out of the WRP, so that it is able to benefit vulnerable groups. Beyond these barriers, the WRP will also address challenges around infrastructure, governance and institutional capacity.

The WRP will work synergistically with other critical water management interventions in the Master Plan and the National Water Conservation and Water Demand Management Programme, its primary focus is to support climate change adaptation through water reuse. This will significantly improve resource use efficiencies by promoting climate smart designs that result in improved services to vulnerable communities, and the optimising of scarce water resources especially in light of South Africa's drier future and increase likelihood of multi-year droughts.

As part of the response to South Africa's vulnerability to climate change, the WRP supports a low-carbon and climate adaptive development pathway in five ways, by:

- increasing water availability through improved natural, technical, institutional system efficiency.
- broadening treatment options by developing technologies that lead to more resilient systems, link water quality to its intended use and incorporate managed natural systems into urban/rural water infrastructure.
- considering wastewater as a resource through energy and nutrient recovery.
- establishing an enabling environment by explicitly addressing institutional, and financial challenges related to a need to account for nonmonetary benefits, manage trade-offs among alternatives and more effectively engage stakeholders.
- adopting a holistic ecosystem-based approach and promoting nature based solutions to service delivery, the WRP will be aligned to the GCF's objective of providing equitable and effective results to both women and men will aim to mitigate risks for women and reduce gender gaps, including the identification of additional programme activities that offer opportunities to do so.

The WRP will contribute to South Africa's efforts on climate change adaptation and accelerate the transition to climate-resilient sustainable development. The interventions undertaken in the WRP will support the implementation of South Africa's National Climate Change Adaptation Strategy.

## 4 ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

The market study (Annexure 2 to the Funding Proposal) outlines a range of opportunities and barriers regarding the implementation of water reuse projects. This will require addressing both social and environmental barriers to develop advanced solutions that are both socially acceptable and environmentally sustainable. This must be undertaken in conjunction ensuring that political and legal barriers are also addressed (Figure 6).



#### Figure 6: Addressing barriers systematically to lead towards an advanced, exemplar configurations for water reuse projects

The environmental and social management framework providing herein, gives the tools and approach that the WRP will utilise to assess the environmental and social impacts of each water reuse project, providing the various management instruments (as outlined in the sections above) to address and mitigate challenges and conflicts towards ensuring projects are exemplar in their configuration.

The necessary impact assessments and resultant action plans will need to consider these water reuse projects within their catchment and landscape contexts noting their linkage to associated and potentially 'downstream' facilities depending on the nature of the water reuse project.

## 4.1 ENVIRONMENTAL AND SOCIAL RISK APPRAISAL PROCEDURE FOR EACH PROJECT

Each water reuse project that will be supported by this Programme will follow a rigorous appraisal procedure and will require an Environmental and Social Impact Assessment as well as a Gender and SEAH Assessment. This ESMF has identified the generic programmatic level environmental and social negative impacts and will serve as a guiding document for the implementation of projects. The ESMF has determined that the project archetypes may have negative environmental and social impacts, through the screening as well as in Tables 9 and 10. With this in mind, proposed projects should follow a minimum due diligence procedure as follows:

- i. Identify the environmental and social conditions in the targeted municipality along with the applicable ESS safeguards.
- ii. The due diligence for the project must include a dedicated environmental and social risk assessment.
- iii. Establish the conditions and measures required to ensure that all the negative environmental and social impacts are properly and effectively mitigated.

These archetypes have been outlined in Section 2, above.

## 4.2 CHECKLIST OF ENVIRONMENTAL AND SOCIAL ELIGIBILITY CRITERIA FOR POTENTIAL PROJECTS

The following checklist should be completed for each water reuse project that will be supported by this Programme to determine the environmental and social eligibility of the projects. If the answer to at least one of these questions is yes, then the project would be classified as a Category 1 project (with potential significant adverse social and/or environmental impacts that are diverse, irreversible, or unprecedented).

- 1. Would the project displace or involve relocation of more than 50 homes or a population of 200 or more?
- 2. Would the project encroach or modify or be located inside a protected area of natural habitat?
- 3. Would the project displace, modify or render inaccessible a cultural heritage site or structure?
- 4. Would the project be located in the territory of any indigenous people, but that the project would not benefit them?
- 5. Would the project generate significant amount of waste including hazardous waste that could harm the communities or impair the quality of the receiving environment?
- 6. Would the project involve activities with potential significant adverse environmental and/or social risks and impacts that, individually or cumulatively, are diverse, irreversible, or unprecedented?

The WRP does not intend to undertake any projects that would be considered Category 1. However, should this arise the DBSA's Environmental and Social Safeguard standards stipulate that all projects in this category will require the following:

- An Environmental and Social Scoping report,
- A comprehensive ESIA,
- A detailed ESMP (or similar) and all supporting documentation, setting out the project mitigation measures. Depending on the project scope a Strategic Environmental and Social Assessment and Cumulative Impact Assessment, Environmental / Social Management System and Emergency

Preparedness Plan may be required. The ESMP to address any project related GHG emissions and climate change risks. The ESMP to detail project resource use, including at least water and waste

- usage.
- A Stakeholder Engagement Plan (SEP) outlining:
  - o The level of stakeholder support for the project,
  - The free, prior and informed consultation process to be undertaken with key and affected project parties to disclose project risks, impacts and outcomes, and
  - How stakeholder participation in key project design and implementation stages is enabled (aligned with ESSS2)
- Any special measures necessary to consult with indigenous peoples and vulnerable groups who may be impacted by the project (aligned with ESSS4)
- Measures to apply gender mainstreaming practices in project design and implementation (aligned with ESSS3)
- In cases of incidences of Gender-Based Violence and or Sexual Exploitation and Abuse the client will ensure:
  - Reporting and response protocols are in place with specific procedures for Gender Based
     Violence including confidential reporting with safe and ethical documenting of Gender Based
     Violence cases, that indicate when and where to report incidents, and what follow up actions
     will be undertaken, and
  - Modalities are in place to provide services and redress to survivors.
- Project information disclosure mechanisms (aligned with ESSS2)
- Grievance and redress mechanism (appropriate in scale to the project risks and adverse impacts) to address any project related grievances
- Projects with high magnitude/impact will require the use of an independent advisory panel of expertise agreed to by DBSA- and funded by the Client.

## 4.3 CHECKLIST OF ENVIRONMENTAL AND SOCIAL CONDITIONS TO BE FULFILLED DURING PROJECT DESIGN AND IMPLEMENTATION

During the initial screening, each proposed water reuse project must evaluate the applicability of the DBSA / GCF environmental and social standard safeguards as a first step. As indicated previously, based on the high-level evaluation of the archetypes it is assumed that DBSA ESS Standard 11 would not be applicable to the projects, while safeguards 4, 5, 8 and 9 are possibly applicable and will need to be carefully screened.

Noting that there could be opportunity for additional beneficiation from water reuse projects, these additionalities and their potential impacts will also be required to rigorously apply the environmental and social standard safeguards.

During the initial screening of the projects, the rationale for applicability or non-applicability of each safeguard must be prepared based on the **Table 11**.

Table 11: Initial environmental and social safeguards screening

DBSA Safeguard Standard	Applicable	Reason	ESS Standard instrument/tool to
			be implemented
Standard 1: Project Screening: Environmental and Social			
Risks, Impacts and Opportunities			
Standard 2: Stakeholder Engagement and Information			
Disclosure			
Standard 3: Gender Mainstreaming			
Standard 4: Indigenous Peoples			
Standard 5: Land Acquisition, Land Use Restrictions and			
Involuntary Resettlement			
Standard 6: Labour and Working Conditions			
Standard 7: Community Health and Safety			
Standard 8: Cultural Heritage			
Standard 9: Biodiversity Conservation and Sustainable Living			
Natural Resources Management			
Standard 10: Resource Efficiency, Pollution Prevention and			
Management			

The questions/aspects listed in Table 12 need to be understood and answered before taking the planning phase considerations into account. In this regard, the DBSA's Environmental and Social Safeguard Standards guideline provides clear steps and considerations for each of the standards. This includes clarity as to the objectives of the standard, responsibilities in terms of implementing each standard, assessment requirements, and documentation requirements, as well as grievance mechanisms.

These guidelines are accessible online through the following link.

https://www.dbsa.org/sites/default/files/media/documents/2021-

03/DBSA%20Environmental%20and%20Social%20Safeguard%20Standards%202020.pdf

#### Table 12: Additional Environmental and Social information

Question	Yes or No
1. Does the Municipality own the land where the project is to be implemented?	
2. Are any houses located near the proposed site? What is the distance from the proposed	
site to the nearest house?	
3. Is there any infrastructure for transportation of effluent to the site or from the site?	
4. Is there any road infrastructure for access to the site? (e.g. asphalt	

Question	Yes or No
road, gravel road, dirt road)	
5. Is the project located near a Wastewater Treatment Works?	
6.Is the project located near a Water Treatment Plant?	
7. Is the project located near a water body? (e.g. river, lake, pond, wetland – natural or	
man-made)	
8. Is the project located near a natural protected or conservation area?	
9. Will the project result in a net positive impact and avoid the perpetuation of	
environmental pollution?	

## 4.3.1 PLANNING PHASE CONSIDERATIONS COMMON FOR ALL ARCHETYPES

The sites are likely to be located adjacent to existing water treatment or wastewater treatment works which are often disturbed sites and the projects will be in keeping with the existing land use. However, it needs to be acknowledged that some parts of WWTW and WTP may not be disturbed, and these facilities often result in manmade habitat and freshwater features that will need to be assessed in terms of the NEMA EIA Regulations and other relevant environmental legislation. Table 13 provides site selection and planning phase consideration from an environmental perspective that need to be considered.

#### Table 13: Site selection/Planning Phase considerations

Aspect/Impacts	Guiding Principles for Mitigation
Site selection	Avoid greenfields sites and areas including natural / indigenous vegetation
	Avoid wetlands and watercourses (natural and man-made), wherever possible
	Check site for established fauna and bird habitats (natural and man-made)
	Avoid locating site within the proximity of sensitive receptors, such residential
	neighbourhoods (odour, noise & dust)
	Select a site that is accessible, i.e. avoid construction of new access
	roads/infrastructure
	Select a site with appropriate zoning and surrounding land use activities
	Ensure site is not protected and will not block or interfere with conservation corridors
Legislative processes	Check NEMA regulations to assess if any listed activities are triggered. If activities are
	triggered the DFFE Screening Tool Report to be generated to understand potential
	sensitivities and specialist study requirements.
	If no listed activities are tiggered - check biodiversity and freshwater mapping/layers
	for sensitive vegetation or freshwater features.
	Check NWA to determine if a WUL or GA may be required
	Check if any NHRA activities are triggered.
Protection of natural	Locate the facility in an area on site which limits vegetation clearance and avoids the
features, biodiversity on	unnecessary clearance of vegetation and/or habitat.
selected site and	

Aspect/Impacts	Guiding Principles for Mitigation
promoting net positive	Avoid areas within selected sites where there has been no disturbance of vegetation
biodiversity and ecosystem	or topsoil in last 10 years.
benefits	Identify biodiversity offsets, if applicable, to ensure natural habitats are left with a nett
	positive impact. However, avoidance of damaging natural habitat should be the
	primary focus.
	Ensure net positive biodiversity/ecosystem benefits over and above legal
	requirements
	Identify restoration requirements for the site if it is degraded/polluted.
	Promote nature based solutions
Treatment phase	Ensure the site and facility are able to manage/store/process any waste and effluent
wastes/effluent	(types and volumes) emanating from the process to prevent pollution events /
	impacts on the receiving environment. Due consideration of possible downstream
	water resource and environmental impacts will be required. This will include
	understanding the downstream infrastructural requirements as a result of the water
	reuse project and its impacts, dependent also on the reuse archetype which will
	influence what is, or is not, considered 'downstream'. Under DPR projects this will
	not include water services reticulation, but under other archetypes these
	considerations would only be up to the point of discharge.
Protection of natural	The "Environmental buffer" and any areas where irrigation is planned "for IPR must
features, biodiversity	be included in all environmental and social assessments.
	The project should result in a net positive impact on catchments and water
	resources/system and ecosystems (in addition to legal requirements)

Should an Environmental Authorisation and or WUA be required the projects will be subject to the legislative requirements as well as those of the DBSA ESS standards. Should it be established that no further environmental permitting or licensing processes are required the projects can proceed in terms of the ESS requirements. The environmental and social risks and impacts will be assessed for each project and a project ESIA and site specific Environmental and Social Management Plan (ESMP) will be developed.

It is recommended that as part of the project specific environmental and Social screening phase, risks are rated in accordance with accepted DBSA risk rating methodology as provided in Table 14.

## 4.4 MATERIAL RISK SUMMARY

This rating needs to take into consideration the more detailed DBSA/GCF categorisation as indicated in the document under section 2.

#### Table 14: Environmental and Social Material risk rating (Screening Phase) (colour coded as per key below)

Risk Rating (After mitigation plan) considers likelihood and severity of impact = significance			
High risk (Category 1)	Risk of irreversible harm significant in terms of climate risk, or biodiversity risk and social		
	livelihood risk \potential red flag or fatal flaw		
High within boundaries	Risk of irreversible harm significant with some	opportunity for positive impacts for	
of DBSA, client and	environment, economy and people and with o	pportunity to address appropriate	
affected parties ability	mitigation measures for fatal flaws and red-fla	gs.	
to manage risk and			
impact (Category 1)			
Medium Risk (Category	Risk is mostly local and or not highly significan	t	
2)			
Low Risk (Category 3)	Risk (Category 3) Risk is minor and can be mitigated or no risk		
Risk examples below	Indicate if short term or long term	Comments	
	Construction or Operations or		
	Closure or Supply Chain related		
ESG			
GHG EMISSIONS			
TRANSITION RISK			
PHYSICAL RISK			
NATURAL CAPITA	L		
DEPENDENCIES			
SOCIAL RISK			
INSTITUTIONAL RISK			

## 4.5 DETAILED RISK ASSESSMENT

Provide below are templates to be followed for the risk assessment.

#### Table 15: Summary of key Environmental and Social Risks as per safeguard standards

ESS 1-9 Risk Rating colour coded as above	Requirements	Compliance / Gap	Recommended Actions / Request for Additional Information
		Reason for the compliance evaluation Details of any areas of non- compliance	State whether additional studies or information are required and how the gap could be addressed e.g. commitment for a baseline study.

#### Table 16: E&S Action Plan and monitoring format

	Recommended Action i.e., additional	Significance			Schedule		
No.	desk study, field survey, modelling, mitigation or compensation measures	<b>/ Priority</b> high, moderate, low	<b>Requirement</b> local, Equator	Parties involved	Suggested timeframe	Deadline pre- construction, pre- operation	Estimated cost (optional)

	Principles <sup>8</sup> (EP)		
Name of the Action - Objective		<u>Start:</u>	
- Deliverable		End:	

## 4.6 CONSTRUCTION AND OPERATIONAL PHASE: ENVIRONMENTAL AND SOCIAL RISKS AND POTENTIAL IMPACTS

This section addresses the positive and negative environmental and social impacts associated with each type of water reuse archetype, as well as any additional beneficiation aspects of the project, so that these are considered holistically. The impacts are presented based on the project's phases, construction, operation, and decommissioning of the facility. The construction and operational phase impacts are similar for each type of technology.

This section further identifies generic risks and impacts at a high level for each archetype included in the Programme. The location, natural features and unique geographic and ecological context of each project may result in very site-specific impacts and risks that will also need to be assessed. This impact assessment also does not take into account any pipelines/networks that may be required for the distribution of water to be reused. Nevertheless, following the regulatory requirements of South Africa, and as noted in Table 10, should pipelines be required then this will be incorporated into the environmental and social assessment.

A number of the impacts can be mitigated/prevented by careful consideration of various aspects during the planning and site selection phases and therefore these impacts and risks must be considered in conjunction with the planning phase considerations.

It is recommended that as part of the project specific Environmental and Social Impact Assessment, risks are rated in accordance with accepted DBSA risk rating methodology as provided in Table 17. The risk ratings should be used when updating the ESMP to be project specific.

IMPACT	RATING	DBSA Risk Category	GCF Risk Category
	Irreversible harm insignificant	1	А
	Negative but mostly local and not highly significant	1	А
	Negative minor and can be mitigated	2	В
	Neutral	2	В
	Co-benefits not articulated into objectives or budgets (faint green)	3	С

Table 17: Project Environmental and Social Sustainability Development Impact Rating

<sup>&</sup>lt;sup>8</sup> Please indicate in this section if the requirement is necessary to bridge gaps with local standards or IFC Standards (PS+ relevant EHS guidelines).

Strategic objective, co-benefit, positive impact,	3	С
measurable indicator (light green)		
Principle objective, co-benefit, positive impact,	3	С
measurable indicator (dark green)		

### 4.6.1 **POSITIVE ENVIRONMENTAL AND SOCIAL IMPACTS OF THE PROGRAMME**

The positive impacts resulting from the implementation of the Programme are:

- Enhanced climate mitigation impact and increased contributions towards a resilient water future
- reduced abstraction of water from natural resources,
- increased availability of water as a resource through reuse,
- job creation,
- increased awareness and capacity building in terms of Advanced Wastewater Treatment options.

The positive impacts will be direct and indirect.

# 4.6.2 POTENTIAL NEGATIVE ENVIRONMENTAL AND SOCIAL RISKS OF THE PROGRAMME

The Programme is aimed at improving the water availability and wastewater management practices. During construction and operation of the proposed facilities, some negative environmental and social risks and impacts might occur. The environmental and social risks and impacts have been assessed at a high level based on the archetypes, and not any required additional infrastructure as this is very contextual in its requirements, and this is presented in the tables below. Nevertheless, the environmental screening and impact assessments will consider carefully all potential related outcomes and impacts. Each of these will be considered on a case-by-case basis at site level. Wherever possible, these impacts will be mitigated by adopting preventative or remedial measures, reducing to a minimum any residual impact. However, this will not include for example the associated impacts of other infrastructural requirements such as the build of water services reticulation networks, water storage reservoirs and so forth. However, as noted before, each project will undertake a thorough assessment that will be cognisant of any upstream and downstream impacts.

Noting the GCF requirement to consider the implications of environmental and social risks across the entire project lifecycle, it must be noted that this juncture the ESMF covers the initiation, construction and operations, as well as project closure, decommissioning or post-closure management of assets. The typical life expectancy of such advanced treatment plants is estimated at 60 years and within this timeframe it can be reasonably expected that environmental and social safeguard requirements will have been further improved or adjusted. The DBSA's commitment to the use of its safeguard standards will remain and these standards would be applied during such a project closure process.

### **Construction Phase Risks and Impacts- All Archetypes**

The table below lists the key potential impacts and possible mitigation measures that are to be considered during the construction stage of any of the selected archetypes/ projects. The construction phase impacts have been identified at a programme level as being common for all archetypes.

Table 18: Impacts and mitigation measures for projects during construction

Potential Impacts/Risks	Possible mitigation measures
Change in landscape and land use	Good housekeeping and site management to reduce potential negative visual impacts and limit areas disturbed Design of facility to be in keeping of surrounding environment
Visual impact of construction site	Screening of Site Camp visual elements Good housekeeping of the site
Dust	Keep roads clean Ensure vehicle speed limits on site are kept to a minimum and below 20 km/hour Maintain groundcover for as long as possible to reduce the total surface area exposed to wind Wet dry and dusty areas using non-potable water Cover fine material stockpiles
Noise	Limit noise levels (e.g. install and maintain silencers on machinery) Comply with Occupational Health and Safety Act (No. 85 of 1993) regulations regarding noise
Litter and Waste Generation	Manage waste collection areas (weather/windproof and animal proof) Daily litter collection Provision of adequate bins with lids Weekly disposal scheduled Proper management of any hazardous wastes generated
Surface, groundwater, and soil contamination	Contain wastewater and sludge before correct disposal e.g. contaminated water discharged into a conservancy tank/lined area Manage run-off and stormwater from construction activities Construction camp to provide adequate sanitation facilities Introduction of best available technologies to support contamination prevention.
Loss of vegetation/habitat and ecological processes/biodiversity	Undertake search and rescue before construction commences Consider establishing a no-go area and habitat/vegetation buffer around the site Limit working area as far as possible where there is natural vegetation
Impact on Existing Site operations (due to	Facility vehicles/staff to have right of way over construction vehicles
shared access road/entrance)	Appropriate security controls in place Existing facility and infrastructure to be regarded as a no-go area
Labour	Source labour force locally Ensure SEAH procedures and grievance response mechanisms are in place and operationalised Implement Gender Action Plan recommendations Comply with Occupational Health and Safety Act (No. 85 of 1993)
Community/Stakeholders	Engage with Stakeholders and implement stakeholder engagement plan recommendations
Sexual abuse, exploitation and sexual harassment	Undertake a project level due diligence of exposure to these risks and develop, implement and monitor an SEAH management plan
## **Operational Phase Risks and Impacts per Archetype**

The table below lists the key potential impacts and possible mitigation measures at a high level that are to be considered during the operational stage of any of the selected archetypes/ projects:

Table 19:	Environmental	and social	risks associated	with operational	phase impacts
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ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS	Α	PPLI PRC ARC	CABLE POSE HETYP	E TO D PE	POSSIBLE MITIGATION MEASURES		
	Direct Potable (DPR)	Indirect Potable (IPR)	Industrial Reuse	Irrigation Reuse			
Visual impact of facility	У	у	У	n	Good housekeeping and maintenance to reduce potential negative visual impacts Visual screening of the site – wall or fence and vegetation around the perimeter Access road and entrance to be swept on a daily basis and kept clean		
Noise	У	У	У	n	Limit noise levels (e.g. install and maintain silencers on machinery) Comply with Occupational Health and Safety Act (No. 85 of 1993) regulations regarding noise		
Odours and Pests	У	У	У	У	Minimise on-site storage of untreated effluent Maintain treatment/processing systems in good order – Provision shall be made for odour control which are positioned strategically considering the prevailing wind direction at the site Pest control systems shall be installed Operational control measures to be put in place at all times to minimise emissions of offensive odours, pests and vermin.		
Litter and Waste Generation	У	У	У	n	Ensure good housekeeping Manage waste collection areas (weather/windproof and animal proof) Daily litter collection Adequate bins with lids Removed packaging and contaminants shall be collected in a skip on site and disposed of periodically at landfill – skip must be emptied before it is full. Skip must have a windproof cover or lid		
Surface, groundwater, and soil contamination	У	У	У	У	Prevent leakage and spillage of untreated effluent Implement adequate stormwater management measures. Use of vegetated swale for contaminated stormwater polishing. Continual monitoring and visual checks on a daily basis for any signs of spillage, overflows and leakages Groundwater Monitoring Plan to be developed/updated and implemented, existing boreholes can be used for this Prevent all contaminated water and/or effluent from leaving the site. Untreated effluent must be stored in leak resistant containers which must be inspected weekly for early detection of leaks. Monitor water quality of final product water in terms of required re-use standards and based on monitoring programme.		
Poor/inconsistent Quality of incoming effluent	У	У	У	У	Ensure quality of incoming effluent meets requirements Maintain correct operational requirements for pathogen removal. Ensure facility is operating correctly – efficiently and effectively. Manage quality and type of incoming effluent accepted		
Loss of vegetation/habitat and ecological	У	У	n	У	Include monitoring requirements for Environmental buffer and areas being irrigated to ensure re-used water meets required quality standards.		

ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS	APPLICABLE TO PROPOSED ARCHETYPE			E TO D PE	POSSIBLE MITIGATION MEASURES
	Direct Potable (DPR)	Indirect Potable (IPR)	Industrial Reuse	Irrigation Reuse	
processes/biodiversit y					Maintain biodiversity offsets or restoration of the site.
Poor/no monitoring and measuring	У	У	У	У	Ensure that all infrastructure required for monitoring and measuring is installed and calibrated/maintained as required e.g. weighbridge, lab equipment. Systems for monitoring and measuring must be out in place prior to the commencement of the project activities. Ensure required monitoring protocols are adhered. Adhere to the monitoring, auditing and reporting requirements set out in the ESMP and legislation. Ensure staff are adequately trained to undertake monitoring and measuring as well as interpret information and take action as/if required.
No/Low demand	У	У	У	У	Responsibility needs to be assigned for securing markets for the reuse of water. This is not a once-off mitigation measure but will require an ongoing and concerted effort. Municipalities will need to ensure internal buy-in to allow for 'internal' reuse in municipal parks and municipal owned properties.
Contamination	У	У	У	У	Ensure monitoring and measuring on an ongoing and continuous basis so the water quality standards are met. Put procedures in place should standards not be met.
Health and safety risks	У	У	У	У	Comply with Occupational Health and Safety Act (No. 85 of 1993) Implementation of health and safety procedures for the staff working on the site (respiratory protection, vaccinations, PPE). Continuous education and awareness to residents and businesses
Lack of available water or electricity	У	У	У	у	Ensure a water risk, mitigation and contingency plan for advanced treatment plants. Implement preventive maintenance plans.
Machinery breakdown, strikes, etc.	У	У	У	n	Plant and equipment maintenance schedules to be built into programme Parts must be locally available Skilled mechanics to be identified Regular checks of machinery and equipment
Excessive feedstock/incoming effluent	У	У	У	У	Operational measures must be put in place to manage excessive feedstock or implement storage if required. Excessive feedstock should not compromise quality standards.
Poor quality product	У	У	У	У	Operational measures must be put in place to manage poor quality product before it is released for use.
Labour	У	У	У	У	Source labour force locally Implement Gender Action Plan recommendations Comply with Occupational Health and Safety Act (No. 85 of 1993)
Community/ Stakeholders	У	у	У	У	Engage with Stakeholders and implement operational phase stakeholder engagement plan recommendations
Sexual abuse, exploitation and sexual harassment	У	У	У	У	Undertake a project level due diligence of exposure to these risks and develop, implement and monitor an SEAH management plan

ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS	APPLICABLE TO PROPOSED ARCHETYPE			TO D E	POSSIBLE MITIGATION MEASURES
	Direct Potable (DPR)	Indirect Potable (IPR)	Industrial Reuse	Irrigation Reuse	
Water quality standards adherence	У	У	У	У	Undertake regular monitoring and reporting as per regulatory requirement including drinking water regulations (SANS 241 and recently published water reuse standards based upon the Californian standards) Regular compliance monitoring in terms of water use license requirements

### 4.6.3 RESPONSIBILITY TO IMPLEMENT THE ESMF

A key element of the success of the WRP will be the establishment of an effective and efficient Water Partnership Office (WPO). The WPO as the lead entity for the WRP will play a central role in initiating, procuring and overseeing interventions undertaken by the Programme. The WPO as being recognized for its technical expertise, planning ability, project management capability, financial competencies, trusted delivery and accepted by stakeholders as a reliable entity. The WPO will be supported by the AE (DBSA) and its current monitoring and evaluation unit in tracking progress and ensuring compliance with safeguards and standards. This monitoring and evaluation will take place across the project lifecycle from initiation, development, construction and operations, and project closure. It is important to note that the DBSA ESS guidelines do cover closure/ decommissioning and notes the need to:

- Decommission and rehabilitate temporary project facilities no longer necessary to the project in accordance with a site – specific closure plan;
- Address site clearance, equipment removal of all, appropriate waste materials disposal, soil ripping and re grade as necessary; and
- Ensure integrated land and water resource management approaches are intended to remain in place for an indefinite or prolonged period. Prepare closure or decommissioning plans at an appropriate timescale to align to this period.

The WPO will therefore be responsible for implementation of current ESMF. The WPO will be supported by a team of Implementing Consultants that will be responsible for development of feasibility studies and implementing each project including the Environmental and Social Due Diligence components, the ESMPs and the Gender and Stakeholder Engagement Plans.

Once a project based ESMP is developed, its implementation will be shared between the involved parties in the construction of the new facility: the programme office, implementing consultants, local municipality, resident engineer, contractors and Environmental Control Officer (ECO).

Monitoring and auditing requirements have been set out the ESMP for the Operational Phase to manage impacts and ensure mitigation measures are implemented. This will include the need for participatory monitoring of progress and impact at project levels. Furthermore, the regulatory requirements will also guide the monitoring and reporting requirements both from an environmental and water perspective. This will ensure compliance with these requirements. In addition to this all projects will require annual reviews and mid-term reviews with supporting reports.

The roles and responsibilities for environmental and social assessments, as outlined in the DBSA's safeguard guidelines are provided in Table 20, below. These will be applied to all projects. In addition, a DBSA Development Results Template (DRT) will be completed for each project and reported against. An example of the template is provided in **Appendix B**.

Institution	Roles and Responsibilities						
	Element	Screening	Project	Agreement	Implementation	Closure	
DBSA	Actions	<ul> <li>Screen project according to DBSA ESSSs</li> <li>Categorise Project as per DBSA Environmental and Social risk categorisation</li> </ul>	<ul> <li>Scope and prepare project appraisal ensuring it aligns with DBSA policy, procedures and ESSSs</li> <li>Prepare a TOR and involve specialists if required and commission work</li> </ul>	<ul> <li>Ensure loan terms and conditions comply with DBSA Policy and address ESSS requirements</li> <li>Include the ESIA/ESMP and project documents in loan or grant agreement</li> </ul>	<ul> <li>Surveillance</li> <li>Monitor the Agreement &amp; ESMP</li> <li>In the event that client comply, review documents with stakeholders</li> <li>Include relevant sector analysts in site visits</li> </ul>	<ul> <li>Include relevant analysts in the completion monitoring team and prepare completion report</li> <li>Undertake desktop audits for select projects</li> <li>Evaluate select projects</li> </ul>	
	Ouptuts	<ul> <li>Screening Report to identify project scope &amp; appraisal &amp; information client needs to provide to DBSA</li> <li>DBSA &amp; Client agree on Disclosure Document (indicate DBSA intent to engage in appraisal) and place on the internet or other suitable platform.</li> </ul>	<ul> <li>Appraise Project</li> <li>Incorporate Environmental &amp; social report into DBSA Appraisal Report, monitoring plans, budget &amp; loan conditions</li> <li>Confirm categorisation</li> <li>Disclose relevant document - ESIA / ESMF on client / DBSA web or other platform</li> </ul>	<ul> <li>Final loan and grant agreement to satisfaction of Client and DBSA</li> </ul>	<ul> <li>Site visit Report for DBSA management</li> <li>Agreed summary report between DBSA and Client fordisclosure as per loan / grant agreement and ESMP / ESMF requirements</li> <li>Reports on payment drawdown for DBSA management</li> </ul>	<ul> <li>Completion Report</li> <li>Desk Audit Reports for select projects</li> <li>Commission External Independent Evaluation Report for select projects</li> </ul>	

#### Table 20: Environmental and Social Assessment responsibilities

	Estimated Timeframe	DBSA sector analysts 2 days depending on information	DBSA sector analysts 5 days depending on information	DBSA sector analysts 2 days depending on information	DBSA sector analysts 2 days depending on information	DBSA sector analysts 2 days depending on information
Client	Actions	<ul> <li>available</li> <li>Identify and prepare project Seek finances</li> <li>Utilise integrated environmental management tools and methods such as a SESA</li> <li>Ensure sound public authority</li> <li>Engage independent environmental and social specialists</li> <li>Prepare Terms of Reference (TOR) and commission work</li> </ul>	<ul> <li>available</li> <li>Provide project</li> <li>information (e.g. SESA, ESIA, ESMP).</li> <li>Follow relevant legal process to obtain authorisation / permits and licenses.</li> <li>Provide DBSA with information including Basic Assessment, Environmental Integrated Report and ESMP.</li> <li>Update interested &amp; affected party &amp; authorities' inputs.</li> </ul>	<ul> <li>example</li> <li>Ensure Loan Agreement drafted by DBSA satisfies all legal requirements, Client needs and Authority requirements</li> </ul>	<ul> <li>Available</li> <li>Monitor Project as per contract documentation.</li> <li>Timeously inform all relevant parties if project documents are insufficient to meet arising needs</li> </ul>	available
	Ouptuts	<ul> <li>Provide DBSA with baseline information as per ESSSs requirements</li> <li>Prepare Summary Reports for external interested and affected parties and authorities (such as any EIA related reports)</li> <li>Submit copy of Organisational EMS submitted to DBSA</li> </ul>	<ul> <li>ESIA / ESMP as agreed with DBSA project team</li> <li>Submit relevant reports required by legislation such as EIA Procedures, Environmental Impact, or Environmental Management Plan</li> <li>Confirm with DBSA that client meets legislative requirements (authorisations, permits and licenses)</li> </ul>	Loan Agreement signed	<ul> <li>Monitoring Reports at regular intervals and annually Audit reports as per contract documentation</li> </ul>	<ul> <li>Undertake final Closure report</li> <li>Client Project Closure Report submitted to DBSA</li> </ul>
Interested and Affected Parties	Actions	<ul> <li>Input into project concept via relevant Meetings</li> <li>Provide project input through public engagement processes, Environmental Impact Assessment (EIA) procedures.</li> </ul>	<ul> <li>Engage with client on project concept</li> <li>Participate in project public engagement processes such as SESAs / ESIA</li> </ul>	<ul> <li>Inputs into project plans via ESIA</li> <li>Participate in project client liaison structures such as Steering Committees, task teams and Forums</li> </ul>	<ul> <li>Input into project client liaison structures such as the Project Steering Committee, Monitoring Committee, Stakeholder Forum</li> </ul>	<ul> <li>Respond to project report via Project Steering Committee, Stakeholder Forum and Monitoring Committee</li> </ul>
	Outputs	<ul> <li>Participate, on Client invitation, in project</li> </ul>	<ul> <li>Comments via Client invitation</li> </ul>	<ul> <li>Comment on project as per legislation</li> </ul>	<ul> <li>Comment on project as per legislation</li> </ul>	<ul> <li>Comment on project as per legislation</li> </ul>

		engagement, design & planning Engage in strategic environmental processes	on strategic level Provide inputs on legal procedures such as ESIA regulatory requirements	governing public participation and as per Client engagement mechanisms such as Steering Committee	governing public participation and as per Client invitation to engage	governing public participation and as per Client invitation to engage
National Authority	Actions	<ul> <li>Monitor and enforce law</li> <li>Ensure project promotes</li> <li>Environmental and social policy</li> </ul>	<ul> <li>Guide and comment on applicable legislation for project as per Client invitation to engage</li> </ul>	<ul> <li>Comment on project as per legislation and as per Client invitation to engage</li> </ul>	<ul> <li>Comment on project as per legislation and as per Client invitation to engage</li> </ul>	<ul> <li>Comment on project as per legislation and as per Client invitation to engage</li> </ul>
	Outputs	<ul> <li>Comment on project as per legislation and as per Client invitation to engage National Frameworks, Policy, Legislation and Standards</li> <li>Establish Incentive mechanisms such as green and blue drop systems, etc.</li> </ul>	<ul> <li>Integrate project into government priority action plans</li> <li>Authorisation / permits and licenses</li> <li>Provide inputs to project via Steering Committee, Forums or task teams</li> </ul>	<ul> <li>Discuss with Client a staged / milestone / developmental approach to achieving required permits / licenses and authorisations</li> <li>Agree on phasing and developmental approach with key interested and affected parties</li> </ul>	<ul> <li>Permitting / licensing and authorisations</li> <li>Monitoring and enforcement</li> </ul>	<ul> <li>Comment on project impact and lessons learnt</li> <li>Ongoing Permitting / licensing and authorisations</li> <li>Monitoring and enforcement</li> <li>Enforce legislative requirements</li> </ul>
Regional and Local Authorities	Actions	<ul> <li>Ensure local Bylaws and standards Integrated Development and Sector Plans</li> </ul>	<ul> <li>As above but on a local scale</li> </ul>	<ul> <li>As above but on a local scale</li> </ul>	<ul> <li>Monitor and participate in Steering- Committee, forums and task teams as necessary</li> </ul>	<ul> <li>Comment on project impact and quality of process and lessons learnt</li> <li>Ongoing monitoring and reporting</li> </ul>
	Outputs	<ul> <li>Comment on project as per legislation and as per Client invitation to engage</li> </ul>	<ul> <li>Comment on as per legislation and as per Client invitation to engage</li> </ul>	<ul> <li>Comments on project process and or substance as per legislation and as per Client invitation to engage</li> </ul>	<ul> <li>Comment on as per legislation and as per Client invitation to engage</li> </ul>	<ul> <li>Comment on as per legislation and as per Client invitation to engage</li> </ul>

# **5 GENDER AND STAKEHOLDER ENGAGEMENT**

# 5.1 GENDER ACTION PLAN FOR THE PROGRAMME

The WRP is committed to applying a gender lens to its project design and execution. The team is also acutely aware of the possible failures that may occur when limited consideration is applied to understanding the gender inequalities in a country and at a programme level. These inequalities will hamper the effective implementation of the programme and reap unintended consequences for those most vulnerable in society if they are not adequately addressed.

Based on the Findings above, Gender integration needs to happen at two levels;

- I. **Programme Level** The Programme is to provide the broader overarching: framework and mechanisms for gender integration.
- II. **Project Level** This level should address the specific genders gaps in the localities identified.

The actions that are needed to be addressed in these levels are presented below.

## 5.1. PROGRAMME-LEVEL INTERVENTIONS

#### A. Planning and Governance

A.1. Embed gender considerations in the establishment and operationalisation of the Water Partners Office (WPO): such as targets on the percentage of women in decision-making positions at varying levels and points of programme implementation. There will also be human resource targets set to ensure that modernisation of technology does not adversely impact the economic empowerment of women. Contract documents will include gender responsive clauses outlining the contractor's responsibility for the health and safety of all workers. Enforceable accountability measures assist in the effective promotion of integration of gender considerations at the personal, unit and institutional levels.

**A.2 Engendered procurement:** This includes ensuring that procurement and contracting processes are governed by labour laws and mandates equal wages for an equal value of work. Additional considerations include:

- The programme will endeavour to procure equipment from women-led small and medium enterprises during the public procurement process and infusing gender equality throughout the supply chain.
- The programme will attempt to support corporate supply chain diversification in line with environmental, social and governance considerations.
- The programme will endeavour to procure technology that is tested with a gendered approach.
- The programme will apply gender provisions as required in BBBEE Acts and labour provisions will be adhered to and improved on where possible.

 These targets/guidelines will be included in the framework/guidelines of project specific gender action plans and the WRP will require project sponsors to look at these elements when they prepare GAPs for their projects.

**A.3. Budget for gender activities**: A ringfenced budget is implemented at the programme level that enables the listed initiatives to be realised. Without a firm financial commitment, there is a possibility that the activities will be side-lined until, or if, a budget is made available. A ringfenced budget ensures that financial parameters are set, and the activities are manageable and implemented without financial limitations. This budget needs to link to staffing, planning and operationalisation of activities.

### B. Capacity Building and Awareness

**B.1. Engender WRP brand development and communications strategies:** The public awareness campaigns during the implementation phase of the programme will consider the low uptake and buy-in from the community to water reuse. The campaigns will highlight points that will ease the various gender-related issues that may be perceived from the use of the water, e.g., menstruation, the use of chemicals at the advanced technological treatment plant etc., and how it will not adversely affect women physically, biologically, and physiologically. Throughout the design and implementation phases, the project managers from the programme management office will safeguard that GESI implications are consistently discussed and brought up as a standing point to all the meetings, both internally and with stakeholders. This will ensure legitimacy that GESI is not brought in as a 'tick box' exercise for the programme but as a key component to being analysed and discussed. This will also include the stakeholder engagement plan.

**B.2. Develop gender-focussed knowledge products**: The interventions aimed at addressing the gender specific needs of women and girls in the anticipated project areas will be identified during the initial project conceptualisation phase. Progress in the form of specific project outputs, outcomes will be measured consistently throughout all the projects falling under this programme. The team will thus develop knowledge-products that address the impacts of water insecurity on women and girls and adapt the challenges to solutions to drive gender-responsive interventions. The knowledge products will also aid in the effectiveness of different types of water projects in addressing gender inequalities related to water insecurity.

**B.3. Strengthen institutional capacity and awareness**: The programme will ensure that there is institutional awareness in the WPO and municipalities that promote gender equality. Capacity building and training programmes will aim to promote institutional awareness of the gender implications of water infrastructure. During the implementation stage, gender specialists and environmental and social experts will be secured to assist with community development and addressing gender equality issues that the project team may confront. The experts will also drive training on participation, leadership and management of sanitation, health and hygiene, microplanning, participatory learning methods, self-help group strengthening. Managerial and executive leadership training will be offered internally to support women to participate in key strategic and decision-making roles the programme.

### C. Monitoring, Evaluation and Reporting

**C.1. Design of gender framework and monitoring and reporting strategies:** The gender monitoring framework for the programme needs to be flexible enough to incorporate the varying project activities and robust enough to capture important baseline data for tracking the gender considerations at a programme level. The collection of data on both women and men enables the tracking of gender impacts and assessing the programme benefits for women and men.

**C.2.** Appoint a gender specialist: A gender specialist is required to ensure that the objectives of the programme are being translated into the project and local-level interventions. The recruitment timing of this will be dependent on the Water Partners Office establishment and having a strong portfolio of projects underway.

**C.3. Measure gender disaggregated outcomes:** This will include collating data water security, time poverty and household allocation of tasks to assist with measuring progress against meeting the gender-specific data requirements and targets.

**C.4. Undertake continuous monitoring, evaluation, and learning**: Once the programme is in its implementation phase, there will be an opportunity to refine or add activities and interventions that are more relevant and gender sensitive. Knowing the systemic issues will allow the implementation team to design more effective and sustainable outcomes, mirroring the diverse and inclusive needs with a targeted and inclusive approach and response.

# 5.2. PROJECT-LEVEL INTERVENTIONS

Based on the assessment, the following actions are required at a Project Level. Many of these will be informed by the programme-level framing and requirements. These project-level activities are not budgeted in the Gender Action Plan, as much of these costs will eb transferred to project-level budgets once they are initialised.

### A. Planning and Governance

**A.1. Alignment to programme-level gender monitoring framework**: At programme-level, guidance and tools are provided on how project-level gender mainstreaming needs to be done and what targets and indicators need to feed into the programme level gender monitoring framework.

**A.2. Map institutional/governance gender elements at project-level**: The roll out of gender related project interventions will be dependent on the institutional context which varies across the different municipalities. An institutional map of each project will help to better understand the gender elements at the specific municipal level, identify gaps and seek opportunities to align with broader programme interventions.

**A.3. Budget for gender activities**: Gender activities are appropriately resourced at project level in terms of human resources and budgets. This should be outlined in project-level Terms of Reference (ToR).

**A.4. Align to Programme Procurement:** The programme will provide strict guidance on gender-specific procurement requirements. It is important that at project-level, these are adhered to.

#### B. Capacity Building and Awareness

**B.1. Share Repository of resources, templates, and tools**: The consistent application of the same methods, templates and tools will be used to monitor, track the data that has been collected at a project level da, and allow for better integration with the programme level gender monitoring framework.

**B.2. Create Awareness:** The projects will combine social protection and water projects with initiatives to sensitise communities about unequal gender relations, encourage gender sensitive allocation of project benefits and empower women in household and community decision-making. If well designed and implemented, projects can provide an opportunity to shift gender norms and encourage behaviour changes. Women can contribute to and lead community decision-making processes, provided that their time, mobility, and social constraints are considered and addressed.

**B.3. Implement training activities**: The programme will actively recognise and address the existing and growing interactions between municipal service projects, job creation, environmental and social protection, water insecurity and gender inequalities. There are already clear areas of overlap between these issues, and the links will only become further entrenched with the increased impacts of climate change and the social exclusion of women from decision-making positions. Failure to acknowledge these links and coordinate action across sectors can reduce or reverse the intended impacts of individual programmes on poverty, vulnerability, water security or female empowerment. Accordingly, the programme will consider training programmes that address these key themes and explain them in an easy to digest and simple fashion. The training programmes will expose municipal officials and key stakeholders to gender terminology and broader consideration so that the burden for reporting and measuring progress to achieving gender equality is not strictly on women but is a requirement for all involved in the project.

### C. Monitoring, Evaluation and Reporting

**C.1. Determine the Baseline**: Information on gender and sex-disaggregated data is limited at a local level and relies heavily on work already conducted by a range of different stakeholders. Ensuring that sex-disaggregated data is collected and shared with the initiation of each project is important. This will support and feed into the Programme-Level M&E Framework. Project level ToR's should include this as an update of the gender assessment activity to be undertaken. Budgeting for this will then fall under the project implementation, and not the Programme budget.

### C.2. Report on M&E activities (with disaggregated data, where available)

Key activities include:

- Collect sex disaggregated data to track gender equality results and assess gender impacts.
- Monitor access, participation, and benefits among women and men and incorporate remedial action that redresses any gender inequalities in project implementation.

- Ensure women and men can participate in monitoring and / or evaluation processes.
- Integrate gender evaluation questions and components in the Evaluation TORs
- Identify good practices and lessons learned on project outcomes / outputs or activities that promote gender equality and / or women's empowerment.
- Consider and integrate lessons learned from previous projects with gender dimensions into project formulation where relevant.

# 5.3. RISK AND MITIGATION: INDEPENDENT GRIEVANCE MECHANISM

An Independent Grievance Redress Mechanism (IGRM)process will be established to resolve all complaints that arise from the programme. The mechanisms will be aligned with the GCF's independent redress mechanism and experiences. The DBSA has developed an IGRM with the guidelines being available at:

https://www.dbsa.org/sites/default/files/media/documents/2021-02/DBSA%20Independent%20Grievance%20Redress%20Mechanism.pdf

The DBSA provides the objective of the IGRM as being to a ensure transparent, fair, equitable and prompt resolution of complaints/grievances from aggrieved parties to increase impact, sustainability and efficiency of the DBSA funded infrastructure projects. The IGRM was designed to:

- Increase the effectiveness of the DBSA governance processes, project operations and project quality;
- Be responsive to the concerns of people adversely affected by projects and programmes funded by the DBSA;
- Provide a platform for transparent, responsive fair and equitable engagement with concerned stakeholders;
- Adopt independent and transparent approach to problem solving;
- Be cost-effective and expeditious in the delivery of just redress; and
- Be complementary to other monitoring, supervision, audit, quality control and evaluation systems of the DBSA.

The IGRM is structured around the core processes of:

- Reporting and lodging;
- Compliance review and investigation; and
- Problem solving and mediation.

While GRMs are to be established at project level, there is allowance for aggrieved parties to submit complaints about the programme through various mechanisms such as public participation community meetings, at the Municipal office and through their Ward Councillors. In addition, members could opt to use the Municipal Help Desk and Suggestion Box as located at central offices. Municipal Employees can approach their Equity Officer

and Labour Relations units through Employee Assistance Programme (under Human Resources), and their relevant trade or professional union.

While the GCF Revised Environmental and Social Policy (RESP) recognises that local or project level grievance mechanism can provide an effective and direct remedy to complainants, and encourages the use of such mechanisms whenever possible, it is noted that complainants will be given direct access to the GCF's independent Redress Mechanism. Persons who allege that they have been affected by activities that do not comply with the DBSA's own policies and procedures will have the right to access the DBSA's own grievance redress mechanisms and/or those at the project level. DBSA and the WPO will oversee these mechanisms to ensure that they are functioning effectively, efficiently, legitimately and independently. The DBSA and the WPO will ensure that grievance redress mechanisms at programme and project level are accessible, equitable, predictable, transparent and allow for continued improvement through learning and experience.

# 5.2 PROGRAMME STAKEHOLDER ENGAGEMENT

A consultation and stakeholder engagement plan is a formal strategy to communicate with key project-related stakeholders to a) keep them abreast of key developments, b) ensure that their input is considered at critical project junctures and c) ultimately obtain their support for a project. A consultation and stakeholder engagement plan should be developed during the initial phases of a project to enable the achievement of effective engagement and should include the identification of key stakeholders and the prioritisation and structuring of major engagements with key stakeholder groups.

The implementation of the WRP and the projects under the WRP requires the active cooperation and engagement of stakeholders. This will have the positive impact of ensuring that the programme and projects include the richness and diversity of inputs required to make the projects both appropriate and sustainable, but also importantly, this provides the support and cooperation that will later enable the effective and successful implementation of the projects. Noting that there are levels of mistrust with regards to water reuse, these engagement processes will serve to improve awareness and exchange knowledge.

With this in mind, a stakeholder consultation and engagement process can be seen to achieve three key objectives:

- Drawing upon a range of views and perspectives on the nature and causes of challenges, and the various possibilities and opportunities that may exist to address these challenges. Many stakeholders have important information and insights that then provides innovation and diversity that makes the planning process, and project implementation more robust.
- Fostering alignment with the various objectives, plans and activities of the various institutions and bodies so that projects are appropriate, integrated and implementable.

 Generating understanding and ownership amongst a wide range of stakeholders of the overall objectives of the progarmme and projects and how these deal with challenges and solutions, so that in effect the implementation of projects will be supported and enhanced.

The project undertaken are about addressing climate vulnerability and balancing this with that of environmental sustainability, and therefore interaction with stakeholders is essential to ensure that this integration is possible. Participation can be considered in terms of three variables, namely:

- The **scale** at which stakeholder engagement should be undertaken (national level/ catchments / local levels);
- The scope or level of management inputs of stakeholder engagement (programme/projects); and
- The **form** or the depth and extent of stakeholder interaction and input (inform, consult, involve, collaborate)

These variables guide how to conceptualise and best structure participation. Effective stakeholder participation needs to be based upon adequate mechanisms and structures at the programme and project levels, and to a certain extent requires some harmonisation in approach with regards to process to ensure consistency. In debating the appropriate scale at which participation needs to take place, careful consideration of the various implications will be key, and includes logistical issues, financial aspects, power relations and capacity differentials.

In considering the scope of inputs that stakeholders will engage upon, one has to carefully consider the appropriateness of that engagement and the benefit the process will accrue through that engagement. It muts be noted that there could be distinct advantages in gaining ownership and buy-in into decisions and approaches at the project level. Certainly, the levels of participation could vary from project to project, and from stakeholder to stakeholder.

When it comes to institutional cooperation, differing types of engagement will be needed depending on the project and institution and its own planning and project imperatives.

- **Incorporation**: The inter-relationships between planning and project processes are relatively independent but do require some form of consideration and review.
- Alignment: Roles and responsibilities are distinct and independent, and therefore do not require harmonisation, but there is a need to be aware of impacts and there needs to be alignment constructed around consultation processes.
- **Harmonisation**: There are close linkages and interfaces so that planning and projects require coherence and consistency. This then requires a more structured process of coordination.

• **Integration**: The institutional linkages are such that effective and efficient implementation requires common action and response. This means that there needs to be a more cooperative process of exchange almost to the extent of joint decision making to ensure integration of plans and approaches.

The participation of stakeholders can take on different forms depending on the nature of the project. This could include:

- **Informing stakeholders**: with very limited discussion or dialogue information is provided to assist the stakeholder understand the various issues and challenges as well as the necessary actions and responses.
- **Consulting stakeholders**: stakeholders get the chance to air their concerns and provide views and perspectives with regards to issues, priorities, objectives and solutions with no real discussion.
- **Involving stakeholders**: stakeholders are provided with the chance to deliberate issues so that their concerns and interests are considered and incorporated.
- **Collaborating with stakeholders**: stakeholders take on responsibilities and working together with officials work towards joint decision making.

For the programme and for each project it will be imperative to:

- Develop a Draft SEP proportionate to the project nature and scale and potential environmental and social risks and impacts and afford stakeholders the opportunity to engage and agree on the SEP to be adopted during the project implementation stage.
- Ensure that the SEP provides the rules of engagement during project preparation and implementation stages; includes the range and timing of information to be communicated to stakeholders and the type of information to be sought from them; describes measures to address potential and identified obstacles to effective community consultation and meaningful participation; and details how the views of differently affected and vulnerable groupings will be responded to.
- In consultation with the DBSA, implement the Final SEP as agreed upon with the stakeholders.

# 6 OTHER DBSA ENVIRONMENTAL AND SOCIAL SAFEGUARDS

# 6.1 DBSA ESS STANDARD 4: INDIGENOUS GROUPS

DBSA Environmental and Social Safeguard Standard 4 recognizes that Indigenous Peoples in South Africa comprise social groups distinct from mainstream society, who can include the most marginalized and economically, socially, and legally vulnerable community segments in which they reside, thus specific mitigation measure are required when members of the indigenous community are affected by a project.

The Programme will aim to avoid affecting indigenous communities in implementation of projects. However, should the situation arise where future projects impact on indigenous communities, and in such cases the following assessments and actions will need to be implemented.

In the case in which indigenous people are affected by a project, an Indigenous Peoples Plan (IPP) will be developed.

The IPP should contain the following key elements:

- Summarise project information
- Summarise the social assessment highlighting the projects positive and negative aspects
- Summarise the FPIC results with affected Indigenous Peoples' communities that led them to support the project
- A framework for ensuring FPIC with the affected Indigenous People's communities during project implementation
- An action plan of appropriate measures to ensure that the affected Indigenous Peoples receive social and economic benefits that are culturally appropriate
- Where appropriate, include measures to enhance the Client capacity to cater for Indigenous People's needs
- Where adverse effects have been identified, clear measures (adopted in consultation with the Indigenous Peoples) to avoid, minimise, mitigate or compensate for these effects
- Appropriate grievance procedures drafted and adopted in consultation with the affected Indigenous Peoples
- The cost estimates and financing plan for the IPP
- Mechanisms and benchmarks for project monitoring, evaluation, and reporting on the IPP implementation
- Undertake IPP appraisal whose depth will depend on the project nature, complexity and project components.

It should be noted that DBSA's Exclusion List (i.e. DBSA that should not finance) includes the following projects that the DBSA should not finance:

- Projects that contravene the Constitutional Rights of South Africans and in particular Indigenous Peoples rights.
- Projects that undermine Indigenous Peoples' communities' rights to land, natural resources, language, and indigenous knowledge.
- Projects that contravene applicable national and international laws.

# 6.2 DBSA ESS STANDARD 5: RESETTLEMENT FRAMEWORK

DBSA is reluctant to support projects involving resettlement, and very rarely provide financing for projects involving involuntary community displacement. The current Programme includes projects that have limited potential for negative social impacts, especially related to resettlement. Thus, the Programme should include exclusion criteria for projects which restricts access to finance to any project that might require physical resettlement situations.

# 6.3 DBSA ESS STANDARD 2: GRIEVANCE MECHANISM

As documented in the Gender Action Plan an Independent Gender Sensitive Grievance Redress Mechanism (IGRM) process will be established to resolve all complaints that arise from the programme. Specifically, the WRP will establish focused procedures to address grievance with regards to SEAH both at programme and project levels, as highlighted in other sections of this framework (see section 6.4 below). DBSA is also currently undertaking a process to update and improve its approach to gender mainstreaming and SEAH, with the inclusion of SEAH being a key component of the review and improvement process. The DBSA has provided guidance on the IGRM and this has been operational since 2018 and was reviewed in 2020.

The mechanisms for the WRP will utilise the DBSA's IGRM and will be aligned with the GCF's independent redress mechanism and experiences. The DBSA will only address complaints that meet the eligibility criteria below:

- The grievance must detail the perceived harm, risk of injustice which the Aggrieved Party wishes the DBSA to review which may inter alia include health and safety risks, physical, economic, situational (e.g., employment), and/or social losses and adverse environmental impacts in relation to DBSA funded projects and programmes;
- The grievance must pertain to an active DBSA Financed Project;
- The complaint is submitted by individuals and/or communities, or their representative, who believe that they are or may be affected by an active DBSA financed project; and
- Grievances must be genuine/legitimate and be raised without malice and in good faith.

The DBSA IGRM excludes complaints that address the below matters:

- The procedure will not apply to complaints related to unsuccessful funding outcomes.
- Anonymous complaints;
- Grievance not related to an active DBSA financed project;
- Grievance connected to a DBSA financed project submitted to the IGRM on or after whichever is the later of the following two dates: (a) within two (2) years from the date the complainant became aware of the adverse impacts or (b) within two (2) years from the closure of the DBSA funded project or programme;
- Complaints from unsuccessful bidders in any DBSA procurement process. Bidders who wish to submit queries/complaints pertaining to outcomes of procurement processes should refer to the DBSA Procurement related complaints guidelines;
- Reports of suspected crime including fraud, corruption, and gender-based violence or sexual exploitation, should please make use of DBSA whistle-blower platforms;
- A grievance or complaint regarding matters already concluded by the IGRM unless the complainant has submitted new material information or evidence that was unavailable at the time the matter was previously considered by the IGRM;
- A grievance or complaint to gain competitive advantage;
- A grievance or complaint regarding matters relating to the DBSA's activities which are unconnected to a DBSA funded project or programme, such as matters relating to administration and human resource management; and
- A grievance or complaint solely regarding the adequacy of the DBSA operational policies and procedures.

The grievance procedures and disclosures for the WRP will be in accordance with IFC WB DBSA safeguard requirements and the Stakeholder engagement plans based on GEF guidelines will be used as an additional guideline.

# 6.4 DBSA ESS STANDARD 3: GENDER MAINSTREAMING

As a Development Finance Institution, the DBSA is mandated with creating an inclusive and sustainable society through improving the quality of life of all its clients and beneficiaries. This safeguard recognises that all marginalised groups play a vital role in achieving sustainable and inclusive development and further aims to support clients in their efforts to become more gender sensitive and responsive in their work.

The safeguard objectives are to protect women's human rights and comply with international women's and human rights standards and treaties. As well as to identify and prevent potentially direct or indirect project or programme related harm on women, men, girls, and boys. The safeguard is aligned to the GCF's revised Environmental and Social Policy which considers Sexual Abuse, Sexual Exploitation and Sexual Harassment (SEAH) to avoid, and where avoidance is impossible, mitigate the risks of SEAH to people impacted by the GCF-financed activities (GCF, 2021). An initial screening of these SEAH risks is provided in Table 21.

### Table 21: Initial Screening of SEAH risks and impacts at project level

SEAH Risk	Risk	Mitigation Measures	Priority Actions				
	Rating						
Start-up Phase							
Local level consultations carried out by WRP staff, partners or consultants. This raises risks of SEAH perpetrated by those undertaking consultations coming into contact with government personnel, NGO/civil society and members of the community	Medium	Internal security procedures conducted for all staff. Ensure WRP staff understand and follow the DBSA's protocols and Standards of Conduct and Behaviour. Ensure Safeguarding wording included in contracts with external consultants - and in Terms of Reference/ selection questions at procurement stage. Perform the necessary screening/checks of consultants.	Start sensitising partners to establish a shared understanding of SEAH and inclusion principles and agree standards for the project. Raise awareness of SEAH related policies, expected standards and reporting/feedback mechanisms to communities surrounding the project and ensure they understand their rights. Start scoping gender-based violence services/networks that could support downstream SEAH prevention and response. Start gathering baseline data / abd knowledge of local SEAH issues and gender dynamics to establish an understanding of the local context.				
Should community-level consultations not take place, there is a risk that the project does not sufficiently consider the possible SEAH risks through the various project phases and the impacts to the community	Medium	Undertake a high-level assessment of the potential environmental and social contributions and risks the project would have, including a review of potential SEAH risks via the gender assessment and action plan. Ensure reporting makes explicit reference to safeguarding against SEAH, demonstrating that potential SEAH risks and mitigation are being considered as early as possible.	Undertaking robust due diligence and understanding the development impacts underpins effective alignment to safeguarding standards of GCF and DBSA from the outset. Early planning prevents SEAH from occurring and saves costs relating to unforeseen response efforts downstream. Draw upon the Social and Gender Oversight Officer to identify potential opportunities for project additionality to reduce SEAH.				
Project Preparation Phase	Project Preparation Phase						
A number of different actors will be engaging with communities and stakeholders on the ground with associated risk that these personnel could perpetrate SEAH.	Medium	Ensure that consultants/partners and organisations involved in consultations with stakeholders have undergone thorough due diligence checks and are aware of requirements. Ensure partners are using appropriate and available tools for vetting and reference checking of staff.	Start raising awareness among a wider set of stakeholders about the expected standards and behaviours with respect to SEAH, including the relevant policies and Codes of Conduct.				

Challenges may exist to accessing women, children, the elderly and people with disabilities and may prevent those most vulnerable to/at risk of SEAH from participating in consultations.	High	Specify in Terms of Reference/selection questions that consultants must demonstrate a proactive approach to deliberately accessing the vulnerable parts of communities. Specify that consultants must report gender, age, ethnicity and disability disaggregated beneficiary research data as part of the scoping of potential E&S impacts. Baseline data collection needs to reflect the key issues identified in the Inception Stage. Ensure adequate female staff as part of the consultation team.	Establish a nuanced understanding relating to the livelihood patterns and barriers to economic participation for hardest to reach groups to help optimise benefits delivered by the infrastructure investment. Engage at-risk groups provides an opportunity to sensitise them and make them aware of their rights and the reporting/feedback mechanisms that will be available to them.
Full scope of SEAH risks is not properly considered or picked up (e.g. increased risk of SEAH if project is setting up construction camps/on-site accommodation for workers and families– risks relating to women and children coming into close contact with workers (whether from within or outside community) or lack of accessible and safe facilities for women and peoples with disabilities working on site or as part of facilities management could expose vulnerable workers to SEAH risks)	Medium	Terms of Reference for feasibility studies should explicitly require gender expertise as part of the team, reporting on assessing SEAH risks, key activities require consultation with and consulting women's rights groups. Carry out scoping of potential SEAH risks as part of the ESIA scoping exercise. For projects where risks of SEAH are identified, carry out a proportional and commensurate assessment of these risks as part of a Social Impact Assessment. The assessment should include consultation with affected groups. The team responsible should have appropriate expertise – e.g. in engaging and working with vulnerable groups in a cultural context similar to that of the project. Engage/draw on local networks and representative groups, including those for survivors/GBV services, to help identify these risks. Ensure full scope of SEAH is covered as part of the ESIA when considering project options.	Undertake an early scoping of mitigation measures and mapping of GBV/survivor support services to ensure a survivor-centred approach to prevention and response to SEAH from the outset. A comprehensive assessment of the risks is necessary to estimate potential costs of safeguarding against SEAH, so these can be incorporated into the project budget and design. Assess the opportunity to increase the development impact of the project - e.g. livelihoods and skills development/economic empowerment, safety of women or marginalised groups, flexible hours, and safe/secure provision of child care.
Design Phase			
Potential need to consult representatives of children and vulnerable people to optimise the delivery plan – staff/consultant exposure to vulnerable groups presents potential SEAH risk	High	Ensure that consultants/partners and their organisations engaged for consultation activities have undergone thorough due diligence checks. and are aware of the requirements set out in the codes of conduct. Terms of Reference should include expertise in consultation with	Raise awareness amongst communities and reinforce the messaging around SEAH standards, expected behaviours and zero-tolerance policy, as well as feedback/reporting mechanisms.

		children/vulnerable people where needed.	
The design does not sufficiently and explicitly consider SEAH risks and therefore the project is not set up in a way that can adequately prevent and respond to SEAH.	Medium	SEAH should be integrated throughout the project design, including in programme governance, management and delivery. Set out a detailed approach for how the project will address gender and inclusion (including safeguarding against SEAH). Carry out the design and ESIA processes in parallel and mitigate some of the SEAH risks through improved design (e.g. gender- sensitive arrangements for construction worker accommodation)	SEAH being properly integrated at design stage (including the budget, if necessary) provides flexibility to invest further resources in prevention and response. Ensure the design is informed by the ESIA process to enable the project to provide wider benefits to the community.
Construction Phase			
Construction downstream partners do not have appropriate management approaches and systems to manage SEAH.	High	Ensure direct partners comply with the Codes of Conduct and the GCF and DBSA safeguarding, and that they are aware of their responsibility in requiring the same standards from their own downstream partners. This could include providing training/ capacity building to downstream partners, as needed. The procurement process should specify the management systems and approaches that the construction contractor will need to implement. A key element of project management will be an accessible complaint mechanism/Grievance Redress Mechanism (GRM), and the design and structure of this should be given consideration during the design phase	Ensure that expectations for management systems and approaches are clear during procurement and contracting to ensure that suppliers can be held to account.
Tendering contractors and consultants do not have adequate ability to identify and mitigate SEAH risks across the programme delivery, management and monitoring	Medium	Ensure procurement documentation includes specific requirements for managing, mitigating and responding to SEAH risks. Ensure there are clear requirements (including those relating to potential construction models) including indicators relating to SEAH prevention and response within the log-frame or Key Performance Indicators for suppliers.	Ensure that there is clear articulation of requirements and expectations in the TORs and tender documentation. Use the procurement process to repeat messaging to the market/bidders on the expected standards for SEAH risk management.
An influx of workers can expose the community to risks of sexual exploitation and abuse. The scale of the influx and absorptive capacity of	High	Ensure that implementing partners have an accessible, multi- channelled complaint mechanism/Grievance Redress Mechanism (GRM) in place for all	Stakeholder and community consultations offer an avenue to repeat messaging around SEAH and raise awareness of expected

the community are factors to consider. Large construction projects which involve an influx of predominantly male workers into a community area can expose women and vulnerable groups living in the community and providing services to risks of sexual exploitation and violence. Large and more remote construction contracts will include women who travel to live in or around the camps, who are potentially highly vulnerable because of their lack of a local support network.		project-affected persons to report SEAH without fear of reprisals. Mechanisms to ensure survivor information should be kept confidential and anonymous. Undertake proactive and ongoing awareness raising of the reporting mechanism and how to access it. Investigation and response procedures following a report are to be clear, and referral to essential services for survivors should be in place (e.g. GBV services, health services, psychosocial support, etc.). The implementing partner should conduct regular monitoring (including Third Party Monitoring) and reporting on SEAH through meaningful indicators. Stakeholder and community consultation should be ongoing. Monitoring should include careful examination of the grievance redress mechanism to ensure it is functioning. Ensure project assessment and review processes include specific monitoring of SEAH risks.	standards, behaviours and feedback/reporting mechanisms.
Access roads created by the project (e.g. for transportation of construction materials) may pass through established routes used by the community and could put children and vulnerable groups at risk, especially after dark and in remote areas.	Medium	Adequate security and safety measures should be provided, as required by the ESMP.	Assess how access routes could be planned in a way that creates benefits such as safe access routes for local communities to use.
Illegal practices undertaken off-site and near communities can put villages/settlements at greater risk of SEAH. Sex work and increased use of drugs and alcohol are often associated with a mobile and temporary workforce, such as truckers and construction workers, which can further exacerbate the risk of SEAH.	Medium	All workers need to have a contract in place. Even if this is an extremely brief document, it is essential for preventing exploitation in general, and modern slavery (which are closely linked to SEAH risks). Build awareness of Codes of Conduct into contractor training. Include negative impacts of drug use, alcohol, prostitution, etc. as part of standard training. This must be set out in the ESMP.	Undertake training to reinforce positive messaging/benefits.
Female (but also male) construction workers are vulnerable to sexual harassment and abuse, exacerbated by the traditionally male working environment. Underreporting of men experiencing sexual harassment.	High	Ensure that partners to create and maintain a safe working environment for women construction workers, free from harassment and fear of violence.	Undertake communication and capacity building interventions to demonstrate how income generating activities can serve to set precedents and change social

		If workers are accommodated, the facilities that are provided need to consider a safe space for men and women.	norms around female participation in the labour force
Modern slavery and human and sex trafficking of men, women and children has been linked to the construction sector. SEAH can be perpetrated by employees in the project supply chain and can occur on routes and truck stops associated	High	Ensure direct partners understand that they are accountable for their subcontractors/suppliers – partners should pass down their own safeguarding requirements to lower tiers and enforce them, through monitoring and penalties.	Improvements to gender equality and social inclusion norms through fair recruitment practices can help to reduce risk of SEAH over the long term.
with a project, even if not on the project site itself. Links between child/bonded labour and construction are well documented.		Fair recruitment and building an anti- trafficking prevention component into project design can help reduce vulnerability to trafficking/sexual exploitation, abuse and harassment during construction.	
		The project partner should engage with GBV services and local civil society organisations and NGO networks to get information and live reports of incidents or suspected trafficking.	
Operations Phase			
Incoming O&M staff will interact with communities – risk that they may perpetrate SEAH	Medium	Ensure agreement is in place that new O&M staff must meet required standards set out by GCF and DBSA and the project owner.	Training offers an opportunity to engage new staff on SEAH issues and raise awareness of standards and expected behaviours
		Provision of training to O&M staff on preventing SEAH, including values/principles, risk mitigation, child safeguarding, gender equality and inclusion; training should be passed through the delivery chain.	
		O&M management systems to include requirements for regular reporting on environmental and social risks, including SEAH.	
		Ensure an effective worker and community grievance mechanism is in place and raise awareness of the mechanism.	
Monitoring activities do continue to put a focus on SEAH	Medium	Ensure that management programmes are in place, and implemented, that reflect the risks identified for the O&M phase. These management programmes should set out SEAH monitoring requirements with meaningful indicators.	Provision of longer-term technical assistance can build capacity of implementing authorities to prevent SEAH, while also helping to change attitudes of authority staff and organisational culture.
Closure Phase			1

Project inadvertently contributes to SEAH or creates further exclusion, segregation and/or inequality	Medium	Ensure that the wider risk environment relating to SEAH has been properly addressed in the earlier social impact assessment and that mitigation measures have been built in and implemented throughout the project cycle.	Ensure long-term, sustainable development impact of the project and ensure that the project does no harm.
Marginalised and vulnerable groups employed for long-term maintenance work experience SEAH in the workplace	Medium	Ensure you have left the project with a safe and fair employment environment as part of the ESMP and Closure Plan requirement.	Maintenance and closure jobs offer a longer term, decent and more secure livelihood opportunity. Ensuring these are also safe, quality jobs, in an environment free of SEAH, enhances overall programme benefits.

The following considerations are addressed in the project preparation phase:

- Include an assessment as to whether women are included in decision-making process throughout the project cycle. Are women beneficiaries or investors on the project and to what extent?
- The project sponsor should ensure that the product is approved by the affected community; that women are included in decision-making committees, that meetings are held at convenient times for men and women, that women are employed on the project and that the development impact of the project is clearly stated beyond just the numbers of women employed.
- Project sponsors could also endeavour to include women investors in their partner teams.

At the project appraisal stage, a gender-responsive social assessment is required that will address the SEAH risks. This includes:

- examining the project's potential to have negative impacts on individuals who are vulnerable due to gender inequalities, and the potential for women, girls, and sexual and gender minorities to be excluded from the full positive project benefits and that this is considered in project design;
- undertaking the necessary due diligence assessments and examining areas of risk not limited to the
  possibility of economic discrimination or exploitation, increased risk of negative impacts on health due
  to lack of access to services, decreased access to education, sexual exploitation and abuse, domestic
  violence, decrease in personal safety, increase in unpaid workload, reduction or limitation of resources
  needed to secure individuals or their households livelihoods and wellbeing;
- ensuring that there is a clear organisational commitment to gender mainstreaming and to the protection from sexual exploitation, abuse and sexual harassment;
- implementing measures are outlined to ensure that safeguarding is ensured with roles and accountability being clear;
- outlining the clear expectations in terms of professional and personal conduct;

- providing effective and appropriate training and awareness on protection from sexual exploitation, abuse and sexual harassment; and
- ensuring that there are mechanisms for grievance and responding to concerns using a survivorcentred approach. This will require approved and appropriate governance arrangements, appropriate and safe protocols for reporting, signed codes of conduct for staff, monitoring plans and reporting frameworks.

It will be essential to regularly review the GRM/complaints mechanisms (particularly if uptake/reporting is low). This will ensure they are fit for purpose and accessible to those who may need them, as well as being survivor centred. The importance of enabling multiple complaint channels is understood and recognised where alternative channels are trusted, whilst understanding that all information with regards SEAH grievances must be strictly confidential. As such the tracking of such grievances and their resolution must also be confidential and such information should not be shared beyond the resolution process and the closure of the case. The review process for the GRM should carefully consider the effectiveness of the mechanism in ensuring this confidentiality.

# 6.5 DBSA EXCLUSIONS

The DBSA's ESS provide a list of Exclusions that the DBSA should not finance, as follows:

- Projects that contravene the Constitutional Rights of South Africans and in particular Indigenous Peoples rights,
- Projects that undermine Indigenous Peoples' community rights to land, natural resources, language, and indigenous knowledge,
- Natural forest harvesting or plantation development that will involve conversion or degradation of critical forest areas or related critical natural habitats, and
- Projects that will significantly convert or degrade critical natural habitats, including forests, and
- Projects that contravene applicable national and international laws.

In addition to these, a comprehensive list of exclusions has been listed in Appendix A.

# 7 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The ESMP details any project measures, actions and implementation timeframes required to comply with the ESSSs and to enable the DBSA to support the project. The DBSA will assist the project client to identify appropriate methods and tools to assess and manage the potential project environmental and social risks and impacts and develop the ESMP. The WPO will develop appropriate guidance for projects to construct the ESMP for both construction and operational phases, across the various project archetypes to ensure consistency on the scope of risks and impacts identified by the programme. These guidance instruments will be developed during the programme's establishment phase. This will include guidance on ESIA required at sub-project levels, so as to inform the preparation of ESMP; to specify the acceptable technical standards applicable; and to indicate the relevant ES safeguards and timeframe.

As such the project clients will adhere to the DBSA and GCF safeguard standards which stipulate the requirements for an ESIA and ESMP, with this also being regulated by national regulatory instruments. Ensuring alignment in the understanding of these requirements and terminology with the client will be important.

During the initial stages of the project the client will have disclosed the results of the environmental screening and the ESIA, that would have led to the development of the ESMP. The Client will disclose the draft ESMP as early as possible, and before project appraisal. The ESMP will consider the environmental and social assessment findings, the DBSA' s environmental and social due diligence, and stakeholder engagement outcomes. It will provide an accurate summary of project environmental and social risks and impacts, outline material performance improvement measures, actions, and timeframes necessary to avoid, minimise, reduce or mitigate identified risks and address any gaps in meeting relevant ESS standards. The client will implement, monitor and report on progress in achieving the identified ESMP measures and actions. The WPO will consolidate the progress reporting for all projects and will present this progress reports to the WRP's Oversight Committee, which will include the Department of Water and Sanitation, National Treasury, and the DBSA. The WPO will track all projects and intervene where required to ensure corrective actions are undertaken when needed.

# 7.1 PRE-CONSTRUCTION PHASE

For the purposes of compliance monitoring, all prospective water reuse and treatment facilities should inform the Provincial Authority and the Local Authority (as appropriate, and as per any authorisations and permits) of construction commencing, 90 days prior to commencement.

Due diligence needs to have been conducted to understand what the site specific and local requirements mean in terms of authorisation or permitting needs. The ESIA undertaken in the earlier stages of the project will provide guidance on these requirements and will have guided the development of the ESMP. The ESMP consolidates the measures and actions that must fulfil to address potential project environmental and social risks and impacts in accordance with the mitigation hierarchy and ensures that the project complies with the ESSSs in a manner satisfactory to the DBSA and must be updated with any authorisation and permit conditions. The mitigation hierarchy stipulates that projects must:

- Anticipate and avoid risks and impacts;
- Where this is not possible, minimise or reduce risks and impacts to acceptable levels;
- Mitigate risks and impacts which have been minimised or reduced; and
- Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.

The due diligence process should include identification and consultation with stakeholders. A record of this must be maintained and will be presented as a report as well as the WPO maintaining a digital record of all projects and the various due diligence assessments over time, noting that these due diligence assessments will be taken at key project stage gates. The level of due diligence required will depend on the level of risk including environmental and social risk identified in the early review phase. This will include:

- Undertaking a detailed project appraisal to determine the project compliance with relevant legislation, client tools used and ability to manage environmental risk as per DBSA ESSS, project GHG screening, and project resource use.
- Identifying project affected communities, assessing level of community organisation & representation, identify project impact on affected communities and beneficiaries, and assessing community readiness to receive the project

If applicable, proof of provision for any biodiversity or wetland offsets should be provided prior to construction commencing. In accordance with GCF and DBSA protocols, activities should avoid impacts on biodiversity and ecosystem services and compensation or offsets, will be used to mitigate adverse impacts on biodiversity and ecosystems in rare cases and only as a last resort, and only in specific instances. Considerations in this regard include:

- Where all other technically feasible avoidance, minimization or restoration measures have been considered;
- Where this is supported by rigorous sound science;
- Where this is developed in consultation with independent experts; and
- Where long-term management, support, and financing have been secured.

More details regarding the DBSA's approach to offsets can be found at:

https://www.iucn.org/theme/business-and-biodiversity/our-work/business-approaches-and%20tools/biodiversityoffsets

# 7.2 CONSTRUCTION PHASE

### 7.2.1 ENVIRONMENTAL MANAGEMENT STRUCTURE AND RESPONSIBILITY

The implementation of the ESMP will be the responsibility of all parties involved with the construction activities. The Resident Engineer (RE) and the Environmental Control Officer (ECO) will be central to monitoring the Contractor in terms of implementation of the ESMP during the construction phase. Likewise the social and gender oversight officer will oversee and report upon social, gender and SEAH aspects.

All contracts will include mainstreaming environmental and social safeguards standard requirements, as well as promoting green supply chains and net positive impacts for water biodiversity ecosystem services and gender and climate (both mitigation and adaptation assessments and measures will apply). Regulatory requirements have been outlined in Table 10, earlier in this report, and contractors will need to ensure compliance with these regulatory requirements.

## **Communication Channels**

The importance of open communication between all parties mentioned above is emphasised, as the attainment of environmental quality requires a joint effort. With open communication, the role of the ECO should be a positive one - aimed at being proactive in preventing problems - rather than a negative "policing" role when negative impacts have already occurred. Internal communication shall involve interaction between the Project Beneficiary, DBSA & DWS/ WPO, the RE, the ECO and Contractor. External communication shall include discussions with the public and relevant government authorities, if required. A suggested communication structure / organogram applicable during the construction phase of the proposed projects is outlined in Figure 7. This will need to be adapted or updated with project specific requirements.



Figure 7: Communications hierarchy during the Construction Phase to ensure implementation of the EMP

Grievance procedures and disclosures will be in accordance with IFC WB DBSA safeguard requirements and stakeholder engagement plans based on GEF guidelines will be used as an additional guideline. The DBSA Environmental and Social Safeguard Standards guidance notes the following with regards to grievance.

The scope, scale and type of grievance mechanism required will be proportionate to the nature and scale of the potential project risks and impacts. The grievance mechanism may include the following:

- Different ways in which individuals and groups can submit their grievances which may include submissions in person, by phone, text message, mail, email or via a web site
- A log where grievances are registered in writing and maintained as a database
- Publicly advertised procedures, setting out the length of time users can expect to wait for acknowledgement, response and grievance resolution
- Transparency about the grievance procedure, governing structure and decision makers
- An appeals process to which grievances may be referred when their resolution has not been achieved

The approach of the DBSA to grievances and the establishment of GRM's will be the same at project level with the oversight of the DBSA and the WPO. At the outset of this phase of work it is required that each project will, using the precautionary principle:

- Fully assess SEAH risks;
- Consult SEAH risk mitigation options according to the level of risk;
- Select the appropriate mitigation measures and implement these; and
- Monitor the implementation of these mitigation and report on results.

The Client may provide mediation as an option where individuals or groups are not satisfied with the proposed resolution. For all projects, the client will:

- Establish a credible, independent, transparent, effective and empowered local grievance and redress
  mechanism to receive, facilitate and follow up on the resolution of affected people's grievances and
  concerns about the project environmental and social performance, and inform the Affected Communities
  about the mechanism during stakeholder engagement.
- Ensure that the mechanism functions well to receive, respond timeously to Affected Parties complaints
  regarding Project implementation and seek to resolve such complaints. Complaint measures will not
  substitute country dispute resolution and redress mechanisms and do not impede Affected Parties
  access to judicial or administrative remedies.
- The grievance mechanism will, in alignment with the GCF RESP:
  - Be appropriate in scale to the project risks and adverse impacts
  - o Have Affected Communities as its primary user
  - Use an understandable and transparent consultative process that is culturally appropriate and readily accessible, and at no cost and without retribution to the party that originated the issue or concern

- o Accessible to the stakeholders at all times during the project cycle
- Record all responses to grievances and include findings in project supervision reports, relevant monitoring and review reports
- Ensure affected communities are informed of the GRM and DBSA contact details in order to facilitate easy communication and submission of complaints, noting that DBSA will oversee these projects. The project owners will:
  - Designate a social and gender officer at project level to work receive and respond to complaints or disputes when required or deemed necessary by any affected parties. Due regard will be given to confidentiality and all submissions will be appropriately channelled through the project level GRM;
  - Specify the complaint mechanism to ensure ease of submission to the GRM and provide multiple communications channels to enable confidential routes for submission;
  - Ensure affected parties have information on the GCFs and DBSA's Accountability and Grievance Systems in a way that is applicable to their language and needs;
  - Build the capacity of stakeholders with regards to the requirements of ESS and SEAH and the role of the GRM is redressing complaints;
  - Notify the DBSA and WPO of any material or operational change that impacts upon the approach to managing risks as well as in the operation of the GRM;
  - Monitor and report to the DBSA through the WPO on progress, process and adaptive management responses to support continued improvement.

In order to establish effective GRMs at project level the DBSA and WPO will:

- Provide guidance to project owners and contractors in developing and implementing measures to manage the risks and impacts identified, particularly with regard to SEAH. The responsibilities of all parties will be clarified to ensure that all the necessary assessments of risks and impacts are conducted, management plans are developed and implemented, information is provided, and the necessary stakeholder engagement and communication is conducted.
- Undertake due diligence assessments at project level the environmental and social management systems and how these are applied, the effectiveness and independence of the GRM, how the disclosure of information is managed, the meaningful and timely consultations with all stakeholders, as well as how the GRM results in effective resolution of cases.
- Provide instructions as to redressive actions required to ensure improvement in the GRM with an associated action plan as needed.
- Expect all projects to monitor and report on the performance of environmental and management systems including the GRM. The DBSA and WPO will provide guidance to all projects as to the specificities and requirements. These monitoring processes are expected to be participatory in nature and the DBSA and WPO will provide oversight to ensure that these processes are implemented as

such. This will thus need to ensure the involvement of communities, local stakeholders, indigenous peoples and civil society organisations.

• Through these monitoring and reporting mechanisms any changes that are required in approach to such systems and the GRM will need to be timeously communicated to the DBSA and WPO.

## 7.2.2 ROLES AND RESPONSIBILITIES

The activity will require the services of an independent ECO to ensure that the ESMP is being complied with during the construction phase. Formal responsibilities are necessary to ensure that the ESMP is effectively implemented. Specific responsibilities of the Beneficiary, RE, ECO and the Contractor for the construction phase of the project are detailed below.

### **Responsibility of the DBSA**

As AE the DBSA will be responsible for overseeing the performance of the WPO and as such will ensure that ESMPs, and all measures to mitigate and manage environmental and social risks and impacts and to improve outcomes are implemented, monitored and continuously improved. In addition, the DBSA will thiough the WPO ensure that the progress and performance are monitored and reported to GCF and its stakeholders throughout the implementation of the GCF-financed activities, in accordance with the monitoring and accountability framework and allowing GCF or GCF-authorized third-party verification of such reports.

Key activities of DBSA as managing agent of the WPO will include:

- Assist with establishment of the WPO;
- WPO will report to the DBSA on all administrative matters;
- Facilitate with the appointment of the OC;
- Finalise the job specs for the Head of the WPO and the appointment thereof;
- Assist WPO Head with staffing organogram;
- Provide administrative and legal mechanism for the appointment of human resource;
- Assist with procurement of goods and services through DBSA SCM;
- Assist with procurement of panels for service provider;
- Enter into legal contracts on behalf of the WPO's functions (both staff and service providers);
- Manage oversight of the operating budget of the WPO, inclusive of external audit;
- Provide ring fenced bank account for WPO;
- Make payments on behalf of WPO;
- Through its Project Preparation Unit, assist the WPO with project preparation activities;

### **Responsibility of the WRP WPO**

The WRP WPO is required to adopt, support and comply with the ESMP and take up an advisory role to the project team. Importantly, the WPO has an essential oversight role to ensure that ESMPs, and all measures to mitigate and manage environmental and social risks and impacts and to improve outcomes are implemented, monitored and continuously improved. Equally, the WPO will ensure that the progress and performance are monitored and reported to GCF and its stakeholders throughout the implementation of the GCF-financed activities, in accordance with the monitoring and accountability framework and allowing GCF or GCF-authorized third-party verification of such reports. It will be incumbent on the Oversight Committee and DBSA to ensure that the WPO has the requisite capacity to perform these functions as well as oversee the performance of the WPO in ensuring effective oversight and due diligence. This will include ensuring that the needed systems to support oversight and due diligence are in place.

An important consideration will be the capacity of the project owner and the contractors to ensure the effective implementation, monitoring and reporting and as such the WPO will oversee all projects to ensure that this capacity and competency is in place.

### **Role of the Project Beneficiary**

The Project Beneficiary/Target Municipality is required to be familiar with the contents of the ESMP, adopt, support and comply with the ESMP.

### **Role of the Resident Engineer**

The RE is required to:

- Be familiar with the contents of the ESMP;
- Liaise with the ECO regarding environmental management and provide the ECO with all relevant documentation and plans;
- Assist the ECO to ensure that the conditions of the ESMP are being adhered to and implemented;
- Assist the ECO in making decisions and finding solutions to environmental problems that may arise during construction;
- Communicate to the Contractor the advice of the ECO and the contents of the ECO reports and issue site instructions giving effect to the ECO requirements, where applicable;
- Communicate to the ECO any infringements of the environmental conditions;
- Discuss with the ECO the application of any penalties and other possible enforcement measures, when necessary;
- Facilitate communication between all role-players in the interest of effective environmental management; and

• Monitor the compliance of the Contractor through the ECO reports.

### **Project Social and Gender Oversight Officer**

This officer will be independent and have expertise in conducting social and gender studies, ensuring compliance and auditing, including knowledge of the supporting legislation and regulations, guidelines and policies related to social, gender and SEAH aspects. The officer must conduct audits in terms of the ESMP and the GAP for the project. A minimum of one site inspection must be undertaken per month, for the duration of the construction activities.

The Project Social and Gender Oversight Officer will be responsible for monitoring, reviewing and verifying compliance with the ESMP and the GAP by the Contractor. Duties in this regard will include the following:

- Monitor and verify that the ESMP, GAP and programme policies are adhered to at all times and recommending necessary action if the specifications and mitigation measures are not followed;
- Monitor and verify that social and gender impacts are kept to a minimum;
- Must obtain, examine and approve Method Statements to overview processes;
- Assist the Contractor in finding socially responsible solutions to problems;
- Report back on the social and gender issues at the site meetings and other meetings that may be called regarding environmental matters, if required;
- Monitor and review the Site Diary of all activities / incidents / complaints concerning the social and gender aspects on Site;
- Inspect the Site and surrounding working areas regarding compliance with the ESMP;
- Be reachable by the public regarding matters of social and gender concerns as they relate to the development;
- Provide social and gender awareness training for site personnel;
- Recommend corrective actions to the RE and the Contractor where construction activities are not in compliance with the ESMP;
- Inform the RE immediately of the occurrence of non-compliances and recommend appropriate measures of rectification.
- Ensure that activities on Site comply with legislative and regulatory requirements; and
- Undertake monthly site visits, compile and submit monthly reports to the Beneficiary, WPO, RE and Contractor.

## **Environmental Control Officer**

The ECO must be independent and have expertise in conducting environmental compliance auditing, including knowledge of the environmental legislation and regulations, guidelines and policies related to environmental management. The ECO must conduct audits in terms of the ESMP for the project, these will be undertaken on a quarterly basis. **A minimum of one site inspection must be undertaken per month**, for the duration of the construction activities.

The ECO will be responsible for monitoring, reviewing and verifying compliance with the ESMP by the Contractor, in alignment with the requirements of this ESMF. The ECO's duties in this regard will include the following:

- Monitor and verify that the ESMP is adhered to at all times and recommending necessary action if the specifications and mitigation measures are not followed;
- Monitor and verify that environmental impacts are kept to a minimum;
- The ECO, along with the RE, must obtain, examine and approve Method Statements;
- Assist the Contractor in finding environmentally responsible solutions to problems;
- Report back on the environmental issues at the site meetings and other meetings that may be called regarding environmental matters, if required;
- Monitor and review the Site Diary of all activities / incidents / complaints concerning the environment on Site;
- Inspect the Site and surrounding working areas regarding compliance with the ESMP;
- Be reachable by the public regarding matters of environmental concerns as they relate to the development;
- Provide environmental awareness training for site personnel;
- Recommend corrective actions to the RE and the Contractor where construction activities are not in compliance with the ESMP;
- Inform the RE immediately of the occurrence of non-compliances and recommend appropriate measures of rectification, e.g. issuing of fines.
- Ensure that activities on Site comply with legislation of relevance to the environment;
- Keep a photographic record of progress on Site from an environmental perspective; and
- Undertake monthly site visits, compile and submit monthly reports to the Beneficiary, WPO, RE and Contractor.

### Contractor

The Contractor has the responsibility to:

- Be familiar with the contents of the ESMP;
- Designate a responsible person for monitoring site activities against the ESMP on a daily basis.
- Communicate to the ECO, at least ten working days in advance, any proposed actions, which may have negative impacts on the environment;
- Designate all working areas and remain within working areas at all times;
- Comply with the environmental conditions contained in this document;
- Ensure that all sub-contractors are aware of and adhere to the requirements of the ESMP at all times in consultation with the Designated Environmental Officer (DEO);
- Compile the required Method Statements in accordance with the ESMP;
- Notify the ECO and RE immediately in the event of any accidental infringements of the ESMP to enable appropriate remedial action to be taken;
- Undertake rehabilitation of all areas affected by construction activities to restore to the original states, as determined by the ECO and in accordance with the ESMP; and
- Maintain a site diary.

### **Designated Environmental Officer**

The appointed Contractor will be required to appoint a competent individual as the Contractor's on-site Designated Environmental Officer (DEO). The DEO could be the same person monitoring Health and Safety aspects on site as long as they have sufficient environmental management experience. The selected DEO must fully familiarise him-/herself with the contents of this ESMP. The DEO should furthermore possess the necessary skills to confer environmental management to all personnel involved in the contract. The DEO's duties in this regard will include the following:

- Monitor and oversee the Contractor's internal compliance with the ESMP requirements and ensure that the environmental specifications are adhered to;
- Keep a record of all on-site environmental related incidents and how these incidents were dealt with;
- Monitor and verify that environmental impacts are kept to a minimum;
- Inspect the Site and surrounding areas on a daily basis regarding compliance with the ESMP;
- Compile and maintain an incidents and complaints register with regards to environmental issues;
- Undertake environmental awareness training for all new site personnel;

- Accompany the ECO during monthly site visits; and
- Ensure all issues identified by the ECO are rectified on site in a timely manner.

### 7.2.3 REPORTING

The Contractor / DEO must generate an Environmental File for the project that must remain on site for the duration of the project and which should contain all environmental related information, such as the following:

- Copy of ESMP; and any other authorisations or permits;
- Proof / signed attendance register of all environmental training sessions;
- Method Statements;
- Emergency contact numbers;
- Complaints Register;
- Copies of monthly ECO Reports;
- Waste manifests and Safe Disposal Slips;
- Any internal environmental compliance checklists; and
- Record of any incidents on site, outlining remediation undertaken.

The ECO is to provide monthly reports after each site visit. The DEO shall monitor the site daily. Environmental Awareness Training should take place at the start of the project and for all new staff that may join the project.

Due to the length of the project, annual refresher training may be required. Training will also include training in ecological infrastructure for water security across sectors and stakeholders involved to build capacity in establishing effective feedback networks to rehabilitate areas and protect scarce water resources including catchments, watersheds, riverine systems and wetlands.

### 7.2.4 ENVIRONMENTAL TRAINING

Before any construction work commences, all the Contractor's staff shall attend an environmental training session, presented by the ECO with the assistance of the Contractor / DEO. The Contractor shall liaise with the ECO prior to the commencement date to arrange a date and venue for the training. The Contractor shall ensure that all the employees attend the training session. The ECO shall ensure that all attendees sign an attendance register and shall provide the RE with a copy of the attendance register. The Contractor will ensure that follow-up training is conducted for any new employees coming onto Site. The ECO shall provide environmental education material. The environmental training should, as a minimum, include the following:

- The importance of conformance with all environmental policies;
- The environmental impacts, actual or potential, of work activities;

- The environmental benefits of improved personal performance;
- "No-go" areas;
- Roles and responsibilities in achieving conformance with the ESMP;
- The potential consequences of departure from specified operating procedures;
- Worker conduct on-site (for example, but not limited to, no fires or no pets on-site);
- Corrective actions pertaining to non-conformance with the ESMP;
- The mitigation measures required to be implemented when carrying out work activities;
- Management of waste, including both general and hazardous waste;
- Spill clean-up management (using spill kits); and
- Firefighting (using fire extinguishers).

## 7.2.5 CONSTRUCTION PHASE ENVIRONMENTAL AUDITING

The appointed ECO shall visit the site on a monthly basis during the construction phase and produce a monthly report, outlining any non-compliances and recommending corrective actions.

The DEO shall monitor daily site activities during construction in terms of the ESMP.

### 7.2.6 EMERGENCY CONTACTS AND RESPONSE

The Contractor shall place a list of all emergency contact numbers at the site offices and at any other relevant area. All staff shall be informed of procedures to follow in the case of various emergencies (e.g. fire, hydrocarbon spill, construction incidence, etc.).

The Contractor must nominate a Health and Safety person who should be responsible for managing any emergency.

Emergency response systems will also include issues related to catchment management.

### 7.2.7 METHOD STATEMENTS

Method statements from the Contractor may be required for specific activities. A method statement forms the baseline information for work that takes place that may result in environmental impacts. Modifications of the method statements can be negotiated between the Contractor, ECO and the RE as circumstances unfold. All method statements will form part of the ESMP documentation and are subject to compliance by the Contractor. The Contractor may suggest alternative methods / measures, not included in the ESMP, which would need to be approved by the ECO and RE.

Method statements should be submitted at least 7 days prior to the activity taking place. As a minimum, the Method Statements listed in **Table 22** shall be provided by the Contractor to the RE and ECO for approval.
Oversight will be undertaken by the WPO, linked to the programme DRT. This will include the support of the DBSA's monitoring and evaluation unit. Where there are reporting and data insufficiencies the WPO will liaise with project owners (ie municipalities) to ensure that this is rectified, aligned with contractual arrangements. However, compliance at project level will be undertaken by the Project Owner's project manager, in conjunction with the project engineer, supported by the internal municipal compliance systems. Project level compliance reporting is required on a monthly basis using the programme monitoring and reporting system that the WPO will put in place during the programmes establishment phase. An example of a typical compliance reporting format is provided in Annexure K and this will be formalised but the WPO during the programme's establishment phase

Noting that the ESIA will identify any data, information and monitoring challenges that may exist, the ESMP will have identified the needed mechanisms to address such issues. In this regard, the WPO will maintain a projects dashboard that tracks all projects and progress, that flags issues requiring redress and tracks actions to ensure redress.

METHOD STATEMENT	DETAIL/CONTENT REQUIREMENTS			
Site establishment and	Location, preparation and layout of the Contractor's camp must be			
material handling	provided prior to establishment on site. Methods of handling use and			
	storage of construction materials, spoil and material stockpiles, as well as			
	location for all stockpiling.			
	Search and Rescue Plan (if appropriate)			
Cement / concrete mixing	Cement powder has a high pH. Spillage of dry cement powder and			
	concrete slurry may adversely affect both soil and water pH. Careless			
	handling of cement products resulting in spillage could have serious			
	detrimental effects on the surrounding environment. Therefore, the			
	following information is required:			
	<ul> <li>Location, layout and preparation of cement / concrete mixing facilities, including the methods employed for the mixing of concrete and the management of runoff water from such areas.</li> </ul>			
Dust and noise	Details on how dust and noise generation will be minimised and managed			
	on site.			
Handling and management	The following must be detailed by the Contractor:			
of hazardous substances	<ul> <li>Methods of handling and the storage of hazardous materials;</li> <li>Emergency spill procedures and compounds to be used for clean-up/remediation, i.e. oil spill kits;</li> <li>Material Safety Data Sheets (MSDS) are to be included for all hazardous chemicals stored on site;</li> <li>Methods and procedures for handling hazardous spills.</li> </ul>			

#### Table 22: Method Statements required

METHOD STATEMENT	DETAIL/CONTENT REQUIREMENTS
Integrated waste	Methods to record, manage, store, handle and dispose of waste
management	generated on site, this includes both general and hazardous waste. Waste
	management should also include measures for recycling and re-use of
	materials.
Management of	Methods for the management, handling and disposal of wastewater
Contaminated Water	generated on site.
(Wastewater and Effluent)	
Emergency Response Plan	Procedures to follow in the case of various emergencies and manage
	environmental impacts.

### 7.2.8 CORRECTIVE ACTION

The implementation table sets out roles and responsibilities for managing any non-compliance and detailing measures to prevent negative impacts. These have also been detailed in Table 20. The project client will designate senior officials to compile regular project monitoring reports to submit to the DBSA as per the ESMP specifications. Based on the monitoring results, the client will identify any necessary corrective and preventive actions, and incorporate these in an amended ESMP or the relevant management tool, in a manner acceptable to the DBSA. The project client will implement the agreed corrective and preventive actions in accordance with the amended ESMP or relevant management tool, and monitor and report on these actions.

Any avoidable non-compliance with the requirements of the ESMP shall be considered sufficient grounds for the imposition of a penalty in consultation with the RE. Possible offences, which could result in the issuing of a penalty, include, but are not limited to:

- Unauthorised entrance into no-go areas.
- Improper management of hydrocarbons/hazardous materials leading to large spills or leaks.
- Improper management and cleaning of ablution facilities where the environment is impacted by spills.
- Insufficient solid waste management (e.g. unauthorised dumping, incorrect disposal, etc.).
- Insufficient fire control and unauthorised fires.

These penalties will be outlined in the contractual arrangements between the DBSA and the project owner, indicating liabilities where offences occur.

### 7.2.9 GENERIC CONSTRUCTION PHASE IMPLEMENTATION AND MANAGEMENT PLAN

This will be augmented and detailed as applicable for each project dependent on nature of risks, site-specific impacts and scale of project. The risk rating will be required to be updated in accordance with the risk assessment.

This section outlines the potential environmental impacts, the risk ratings, the recommended control measures, responsible parties and monitoring frequency. Where relevant, this table would be updated by the ECO in consultation with the RE and Contractor to ensure that the project activities and responsibilities are correctly assigned once the project commences.

Construction Ph	ase: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING
VISUAL IMPACT	S	Contractor	Low/ Medium/ High
Potential Impact:	Impact on aesthetics of the site due to change in landscape and land use.		
Environmental Objectives	• The development of the facility would result in visual impact to the site.		
ES Safeguard	Standard 1: General Overview: Assessment and Management of Environmental and	Social Risks and Impacts	
Standard	<ul> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> </ul>		
Mitigation	<ul> <li>Good housekeeping and maintenance to reduce potential negative visual impacts.</li> </ul>		
Measures	<ul> <li>Roadways must be maintained, accessible and kept clean on a daily basis.</li> </ul>		
	<ul> <li>Visual screening of the site – wall or fence and vegetation around the perimeter.</li> </ul>		
CONSTRUCTIO	I CAMP ESTABLISHMENT	Contractor / DEO	Low/ Medium/ High
Potential Impact:	• Disturbance to operational activities if the facility is located at an existing facility.		
Environmental Objectives	<ul> <li>Ensure location of site camp and material laydown area is located in previously disturbuted existing on-site activities, area covered with natural vegetation.</li> </ul>	bed areas and away fron	n sensitive receptors, e.g.
ES Safeguard	Standard 1: General Overview: Assessment and Management of Environmental and	Social Risks and Impacts	
Standard	<ul> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> </ul>		
	<ul> <li>Standard 3: Gender Mainstreaming (including SEAH)</li> </ul>		
	Standard 4: Indigenous Peoples		
	Standard 6: Labour		
	Standard 7: Community Health and Safety		
Mitigation	<ul> <li>Location of site camp to be approved by RE and ECO prior to establishment.</li> </ul>		
Measures	<ul> <li>Incident and complaints register to be generated for project.</li> </ul>		
	Site camp to be suitably demarcated.		
	<ul> <li>Fencing to include signage displaying relevant warning information and contact numb</li> </ul>	ers.	
	Suitable eating areas shall be provided for staff, including safe drinking water and refu	use bins with lids.	

Construction Pr	se: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES RESPONSIBLE RISK RATING RESPONSIBLE RISK RATING				
	<ul> <li>Stormwater management measures must be implemented to ensure water does not drain through the site.</li> </ul>				
	• Sufficient toilets shall be provided (1 toilet per 15 staff). Toilets to be regularly maintained and properly secured. If chemical toilets are				
	used, ensure no spillage occurs during emptying.				
	Fires for heating, cooking or burning of any materials will not be permitted.				
	• Non-potable water to be used for construction activities, as far as possible. Non-potable water to be responsibly sourced and used.				
	Approvals may be required for borehole use or abstraction from a water source.				
	<ul> <li>Contractor to implement water saving measures on site to limit water wastage.</li> </ul>				
Evidence	Method Statement.				
	Incident and complaints register.				
SITE / WORKING	AREA ESTABLISHMENT Contractor / Low/ Medium/ High				
Potential	Disturbance to operational activities if located at an existing facility				
Impact:					
Environmental	Ensure that all construction activities remain within the approved working areas.				
Objectives	Ensure any no-go areas are clearly demarcated and staff are made aware of these areas for the duration of the project.				
ES Safeguard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environmental and Social Risks and Impacts</li> </ul>				
Standard	Standard 2: Stakeholder Engagement and Information Disclosure				
	Standard 3: Gender Mainstreaming (including SEAH)				
	Standard 4: Indigenous Peoples				
	Standard 6: Labour				
	Standard 7: Community Health and Safety				
	<ul> <li>Standard 9: Biodiversity Conservation and Sustainable Management of Living Natural Resources and Resilience</li> </ul>				
	<ul> <li>Standard 10: Resource Efficiency and Pollution Prevention and Management</li> </ul>				
Mitigation	<ul> <li>Contractor to demarcate the working area, as required, prior to construction activities.</li> </ul>				
Measures	<ul> <li>All construction activities, stockpiling, etc., to remain within identified and approved working areas.</li> </ul>				
	<ul> <li>Suitable signage to be erected to keep the public outside of construction areas.</li> </ul>				
	Any excavations to be adequately demarcated and signposted.				
	<ul> <li>Site to be clearly demarcated and sign posted for road users. Contractor to limit delays to traffic as far as possible.</li> </ul>				
	Restrict construction impact to site footprint. Demarcate no-go areas.				
	Existing facility vehicles to have right of way over construction vehicles (including delivery vehicles and subcontractors).				
SOLID WASTE	ANAGEMENT Contractor / Low/ Medium/ High DEO				
Potential	Contamination of soil, surface water and groundwater if not properly handled and disposed of.				
Impact:	Impact on the environment as a result of littering.				
Environmental	Properly manage all waste types on site and encourage recycling and re-use of materials as far as possible.				
Objectives	<ul> <li>Ensure correct disposal of all waste generated on site and reduce volume of waste requiring disposal.</li> </ul>				

Construction Ph	nase: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING
ES Safeguard	Standard 1: General Overview: Assessment and Management of Environmental ar	nd Social Risks and Impacts	
Standard	Standard 2: Stakeholder Engagement and Information Disclosure		
	Standard 3: Gender Mainstreaming (including SEAH)		
	Standard 4: Indigenous Peoples		
	Standard 6: Labour		
	Standard 7: Community Health and Safety		
	Standard 9: Biodiversity Conservation and Sustainable Management of Living Nature	ural Resources and Resilience	e
	Standard 10: Resource Efficiency and Pollution Prevention and Management		
Mitigation Measures	<ul> <li>Compile Method Statement outlining how waste will be managed on site, temporary methods of disposal.</li> </ul>	y storage areas, waste types	to be recycled, as well as
	<ul> <li>No on-site burying, burning or dumping of waste is allowed.</li> </ul>		
	<ul> <li>Different waste types to be stored separately.</li> </ul>		
	<ul> <li>Contractor to investigate options of "take-back" policies for any materials, packagin</li> </ul>	ig, etc., not used on site. Exa	mples could include used
	pallets, plastic wrapping, etc., prior to recycling materials.		
	General Solid Waste		
	The site must be kept neat and tidy and free of litter and waste at all times.		
	Solid waste to be temporarily stored in refuse bins with lids, skips, or other suitable	enclosed containers.	
	<ul> <li>Waste containers to be weather/windproof and animal proof.</li> </ul>		
	<ul> <li>Solid waste to be disposed of once storage containers are full.</li> </ul>		
	Solid waste to be disposed of at a registered landfill site. Disposal slips to be retain	ned.	
	Hazardous Waste		
	<ul> <li>Hazardous waste to be stored in a demarcated area (i.e. impermeable area) prior t</li> </ul>	to disposal.	
	<ul> <li>Hazardous waste includes contaminated hydrocarbon soils, oily rags, etc.</li> </ul>		
	<ul> <li>Hazardous waste to be disposed of at a registered landfill site and proof of safe dis</li> </ul>	sposal slips retained.	
Evidence	Method Statement		
	Safe disposal slips		
SOIL, SURFACE	AND GROUNDWATER MANAGEMENT	Contractor / DEO	Low/ Medium/ High
Potential Impact:	Impact to groundwater and surface water quality.		
Environmental	Prevent contaminated water from entering stormwater channels and groundwater.		
Objectives	Contain all contaminated / polluted construction water on-site for safe disposal.		
	Prevent soil contamination.		
	Prevent upstream and/or downstream impacts to the catchment.		

Construction Ph	ase: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING
ES Safeguard	Standard 1: General Overview: Assessment and Management of Environmental	and Social Risks and Impacts	
Standard	Standard 2: Stakeholder Engagement and Information Disclosure		
	<ul> <li>Standard 3: Gender Mainstreaming (including SEAH)</li> </ul>		
	Standard 4: Indigenous Peoples		
	Standard 6: Labour		
	Standard 7: Community Health and Safety		
	Standard 8: Cultural Heritage		
	Standard 9: Biodiversity Conservation and Sustainable Management of Living Na	atural Resources and Resilien	ce
	Standard 10: Resource Efficiency and Pollution Prevention and Management		
Mitigation	Disposal of wastewater		
Measures	<ul> <li>Compile a Method Statement outlining how wastewater (water containing cement</li> </ul>	t, chemicals, hydrocarbons, pa	ints, etc) will be managed
	on site, as well as method of disposal.		
	Set-up a contaminated wastewater management system.		
	No contaminated water may be released into the natural ground or off-site. Waster	ewater shall be removed to a	icensed disposal site.
	Contractor to notify ECO of any pollution incidents on site.		
Evidence	Method Statements.		
	Proof of disposal of contaminated wastewater.		
DUST MANAGE	MENT	Contractor / DEO	Low/ Medium/ High
Potential Impact:	<ul> <li>Impact on visibility for driving, walking, operational activities on-site (if applicable)</li> </ul>	) etc.	
Environmental	Limit dust impacts as far as possible and to an acceptable level.		
Environmental Objectives	Limit dust impacts as far as possible and to an acceptable level.	and Casial Disks and Imposts	
Environmental Objectives ES Safeguard Standard	<ul> <li>Limit dust impacts as far as possible and to an acceptable level.</li> <li>Standard 1: General Overview: Assessment and Management of Environmental a Standard 2: Stakeholder Engagement and leformation Displaceure</li> </ul>	and Social Risks and Impacts	
Environmental Objectives ES Safeguard Standard	<ul> <li>Limit dust impacts as far as possible and to an acceptable level.</li> <li>Standard 1: General Overview: Assessment and Management of Environmental a Standard 2: Stakeholder Engagement and Information Disclosure</li> </ul>	and Social Risks and Impacts	
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Environmental Objectives ES Safeguard Standard Mitigation Measures	<ul> <li>Limit dust impacts as far as possible and to an acceptable level.</li> <li>Standard 1: General Overview: Assessment and Management of Environmental - Standard 2: Stakeholder Engagement and Information Disclosure</li> <li>Standard 6: Labour</li> <li>Standard 7: Community Health and Safety</li> <li>Standard 9: Biodiversity Conservation and Sustainable Management of Living Na</li> <li>Exposed surfaces to be limited and monitored for dust.</li> <li>Maintain groundcover for as long as possible to reduce the total surface area exp</li> <li>Loose material stockpiles (topsoil, sand, etc.) to be located in sheltered areas awa</li> </ul>	and Social Risks and Impacts atural Resources and Resilien posed to wind.	ce
Environmental Objectives ES Safeguard Standard Mitigation Measures	<ul> <li>Limit dust impacts as far as possible and to an acceptable level.</li> <li>Standard 1: General Overview: Assessment and Management of Environmental set Standard 2: Stakeholder Engagement and Information Disclosure</li> <li>Standard 6: Labour</li> <li>Standard 7: Community Health and Safety</li> <li>Standard 9: Biodiversity Conservation and Sustainable Management of Living National Standard 9: Biodiversity Conservation and Sustainable Management of Living National Standard 9: Biodiversity Conservation and Sustainable Management of Living National Standard 9: Biodiversity Conservation and Sustainable Management of Living National Standard 9: Biodiversity Conservation and Sustainable Management of Living National Standard 9: Biodiversity Conservation and Sustainable Management of Living National Standard 9: Biodiversity Conservation and Sustainable Management of Living National Standard 9: Biodiversity Conservation and Sustainable Management of Living National Standard 9: Biodiversity Conservation and Sustainable Management of Living National Standard 9: Biodiversity Conservation and Sustainable Management of Living National Standard 9: Biodiversity Conservation and Sustainable Management of Living National Standard 9: Biodiversity Conservation and Sustainable Management of Living National Standard 9: Biodiversity Conservation and Standard 1: Conservation and Standard 9: Biodiversity Conservation and Standard 1: Conservation and 1: Conservation and 1: Conservation</li></ul>	and Social Risks and Impacts atural Resources and Resilience bosed to wind. ay from roads or dust control me	ce easures, such as covering
Environmental Objectives ES Safeguard Standard Mitigation Measures	<ul> <li>Limit dust impacts as far as possible and to an acceptable level.</li> <li>Standard 1: General Overview: Assessment and Management of Environmental a Standard 2: Stakeholder Engagement and Information Disclosure</li> <li>Standard 6: Labour</li> <li>Standard 7: Community Health and Safety</li> <li>Standard 9: Biodiversity Conservation and Sustainable Management of Living Na</li> <li>Exposed surfaces to be limited and monitored for dust.</li> <li>Maintain groundcover for as long as possible to reduce the total surface area exp</li> <li>Loose material stockpiles (topsoil, sand, etc.) to be located in sheltered areas awa or wetting, shall be implemented.</li> <li>Non-potable water to be used for dust suppression.</li> </ul>	and Social Risks and Impacts atural Resources and Resiliend posed to wind. ay from roads or dust control me	ce easures, such as covering
Environmental Objectives ES Safeguard Standard Mitigation Measures	<ul> <li>Limit dust impacts as far as possible and to an acceptable level.</li> <li>Standard 1: General Overview: Assessment and Management of Environmental a Standard 2: Stakeholder Engagement and Information Disclosure</li> <li>Standard 6: Labour</li> <li>Standard 7: Community Health and Safety</li> <li>Standard 9: Biodiversity Conservation and Sustainable Management of Living Na</li> <li>Exposed surfaces to be limited and monitored for dust.</li> <li>Maintain groundcover for as long as possible to reduce the total surface area exp</li> <li>Loose material stockpiles (topsoil, sand, etc.) to be located in sheltered areas awa or wetting, shall be implemented.</li> <li>Non-potable water to be used for dust suppression.</li> <li>Restrict working hours to existing facility operational hours and working hours if reduced to the store of the st</li></ul>	and Social Risks and Impacts atural Resources and Resilien posed to wind. by from roads or dust control me residential areas are located ne	ce easures, such as covering earby.
Environmental Objectives ES Safeguard Standard Mitigation Measures	<ul> <li>Limit dust impacts as far as possible and to an acceptable level.</li> <li>Standard 1: General Overview: Assessment and Management of Environmental a Standard 2: Stakeholder Engagement and Information Disclosure</li> <li>Standard 6: Labour</li> <li>Standard 7: Community Health and Safety</li> <li>Standard 9: Biodiversity Conservation and Sustainable Management of Living Na</li> <li>Exposed surfaces to be limited and monitored for dust.</li> <li>Maintain groundcover for as long as possible to reduce the total surface area exp Loose material stockpiles (topsoil, sand, etc.) to be located in sheltered areas awa or wetting, shall be implemented.</li> <li>Non-potable water to be used for dust suppression.</li> <li>Restrict working hours to existing facility operational hours and working hours if re Ensure vehicle speed limits on site are kept to a minimum and below 20 km/hour</li> </ul>	and Social Risks and Impacts atural Resources and Resilient posed to wind. ay from roads or dust control mo esidential areas are located no	ce easures, such as covering earby.

Construction Ph	ase: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBL PERSON(S)	.Е	RISK RATING
NOISE		Contractor DEO	1	Low/ Medium/ High
Potential	Noise impacts on people working on site.			
Impact:	<ul> <li>Noise impacts on neighbours/residential areas near site.</li> </ul>			
Environmental Objectives	Ensure that noise levels are managed.			
ES Safeguard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environmental and So</li> </ul>	cial Risks and Impa	acts	
Standard	<ul> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> </ul>			
	Standard 6: Labour			
	Standard 7: Community Health and Safety			
Mitigation	Limit noise levels (e.g. install and maintain silencers on machinery)			
Measures	Comply with Occupational Health and Safety Act (No. 85 of 1993) regulations regarding	noise.		
	<ul> <li>Restrict working hours to regulated working hours in terms of local by-law if residential a</li> </ul>	ireas are located n	earb	у.
MATERIALS MA	NAGEMENT AND HANDLING	Contractor DEO	/	Low/ Medium/ High
Potential Impact:	Loss of materials and equipment due to poor management.			
Environmental	<ul> <li>Ensure proper management and handling of all materials and equipment.</li> </ul>			
Objectives	<ul> <li>Prevent wastage by poor storage and planning, for example.</li> </ul>			
ES Safeguard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environmental and So</li> </ul>	cial Risks and Impa	acts	
Standard	<ul> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> </ul>			
	Standard 3: Gender Mainstreaming (including SEAH)			
	Standard 4: Indigenous Peoples			
	Standard 6: Labour			
	Standard 7: Community Health and Safety			
	Standard 8: Cultural Heritage     Standard 9: Biodiversity Concernation and Susteinable Management of Living Natural B	anauroon and Pasi	liona	
	Standard 9. Biodiversity Conservation and Sustainable Management of Living Natural K     Standard 10: Resource Efficiency and Pollution Prevention and Management	esources and Resi	lient	
Mitigation	Delivery vehicles to be instructed of offloading areas, no-go areas, etc.			
Measures	<ul> <li>All materials to be secured during transit.</li> </ul>			
	<ul> <li>Loads including, but not limited to, sand, asphalt, stone chip and waste materials, shall</li> </ul>	have appropriate	cove	er to prevent them spilling
	from the vehicle during transit.			
	All roads must be kept clean of construction materials at all times.			
	All vehicles must adhere to all road rules and speed limits. Construction activities must n	ot cause delays or	inco	nvenience to surrounding
	users.			
	All manufactured or imported materials shall be stored within the Contractor's site camp	, where possible.		

Construction Pl	ase: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING		
	<ul> <li>All stockpiling areas to be agreed upon by the RE and ECO.</li> </ul>				
	Topsoil				
	Where applicable, topsoil shall be stripped before bulk earthworks commences and stockpiled separately.				
	Topsoil must not be compacted and should be protected from wind and rain (e.g. wettin	ng, covering, etc.).			
	<ul> <li>Topsoil stockpiles should not exceed 2 m in height.</li> </ul>				
	<ul> <li>Monitor stockpiles for weeds and remove as and when they appear.</li> </ul>				
	<ul> <li>Topsoil should be used again during rehabilitation of the site.</li> </ul>				
	<u>Spoil</u>				
	<ul> <li>Spoil stockpiles to be protected from wind and rain (e.g. wetting, covering, etc.).</li> </ul>				
	<ul> <li>Spoil stockpiles to be clearly separated from topsoil stockpiles.</li> </ul>				
	Excess spoil to be disposed of if no alternative options for its use have been identified.				
HAZARDOUS S	JBSTANCES	Contractor / DEO	Low/ Medium/ High		
Potential	<ul> <li>Impact on stormwater systems if any spills occur which are not contained.</li> </ul>				
Impact:	Impact on workers handling hazardous substances				
Environmental	Ensure the proper handling, storage and management of hazardous substance to prevent	ent impacts to the natur	al environment.		
Objectives	Ensure correct use of personal protective equipment.				
ES Safeguard	Standard 1: General Overview: Assessment and Management of Environmental and So	ocial Risks and Impacts			
Standard	<ul> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> </ul>				
	Standard 3: Gender Mainstreaming (including SEAH)				
	Standard 6: Labour				
	Standard 7: Community health and safety				
	Standard 10: Resource Efficiency and Pollution Prevention and Management				
Mitigation	Compile a Method Statement detailing hazardous substances, fuels, oils, etc., to be	e brought to site, stora	age measures, quantities,		
Measures	refuelling details and disposal methods, as well as a spill response plan and procedure	s for any spills / inciden	ces.		
	<ul> <li>Applicable signage must be in place at all storage areas.</li> </ul>				
	<ul> <li>Staff handling hazardous materials to be trained and provided with correct personal pro</li> </ul>	tective equipment.			
	Hazardous Chemicals				
	<ul> <li>Hazardous chemical substances (as defined in Regulations for Hazardous Chemical S</li> </ul>	ubstances GN 1179 (19	995) and the Occupational		
	Health and Safety Act 181 of 1993) used during construction shall be stored in designa	ted storage areas, whe	n not in use.		
	Relevant Material Safety Datasheets (MSDS) must be available on site for all hazardou	is substances.			
	• Storage areas must be enclosed with lockable access to control and limit access.				
	• The surface under the storage area shall be protected against spills (i.e. impermeable)	to the satisfaction of the	e RE and ECO.		
	Fuels and Oils				
	The Contractor shall ensure that all liquid fuels and oils are stored in containers/jerrycal	ns with lids, which are k	ept firmly shut.		

Construction Ph	ase: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES RESPONSIBLE PERSON(S) RISK RATING		
	• Areas for the storage of fuels and other flammable materials shall comply with standard fire safety regulations. All empty and externally		
	dirty containers/jerrycans, etc., shall be sealed and stored on a waterproof/impermeable surface.		
	Adequate precautions shall be provided to prevent spillage during re-fuelling on site and work areas, e.g. making use of drip trays during		
	re-fuelling.		
	Drip trays to be provided for stationary plant.		
	<ul> <li>Old oil to be collected for recycling and stored on an impermeable surface prior to collection by a service provider.</li> </ul>		
Evidence	Method Statement.		
	Proof of oil recycling, if applicable.		
	Contractor / Low/ Medium/ High		
	DEO		
Potential Impact:	Fire leading to damage to equipment, properties, and leading to injuries, etc.		
Environmental	Prevent damage caused by fire by quick response times.		
Objectives	Ensure staff are trained in how to react should a fire breakout.		
	Ensure proper management of hazardous materials.		
ES Safeguard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environmental and Social Risks and Impacts</li> </ul>		
Standard	Standard 2: Stakeholder Engagement and Information Disclosure		
	Standard 3: Gender Mainstreaming		
	Standard 6: Labour		
	Standard 7: Community Health and Safety		
	<ul> <li>Standard 9: Biodiversity Conservation and Sustainable Management of Living Natural Resources and Resilience</li> </ul>		
Mitigation	<ul> <li>Contractor to appoint a fire addate officer who shall be reasonable for appuring immediate and appropriate actions in the event of a fire</li> </ul>		
Measures	<ul> <li>Contractor to appoint a me safety oncer who shall be responsible for ensuring infinediate and appropriate actions in the event of a me.</li> <li>Basic and appropriate firefighting equipment must be on site at all times that is approved by the local fire services and easily accessible.</li> </ul>		
	<ul> <li>Dasic and appropriate mengining equipment must be on site at an times that is approved by the local file services and easily accessible.</li> <li>Fire extinguishers to be located in bazardous and fuel storage areas and any other applicable areas.</li> </ul>		
	<ul> <li>Staff must be trained to use the firefighting equipment</li> </ul>		
	<ul> <li>Designated smoking areas must be allocated with containers for cigarette butts</li> </ul>		
	<ul> <li>Belevant contact numbers for local firefighting services must be included on the emergency list</li> </ul>		
EMERGENCY P	ROCEDURES Contractor / Low/ Medium/ High		
	DEO		
Environmental	Protection of the biophysical environment from hazardous spills.		
Objectives	<ul> <li>Prevent injury or loss of life as a result of construction activities.</li> </ul>		
	Ensure all staff are aware of emergency procedures.		
ES Safeguard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environmental and Social Risks and Impacts</li> </ul>		
Standard	Standard 2: Stakeholder Engagement and Information Disclosure		

Construction Ph	nase: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING	
	Standard 3: Gender Mainstreaming (including SEAH)			
	Standard 6: Labour			
	Standard 7: Community Health and Safety			
	Standard 9: Biodiversity Conservation and Sustainable Management of Living Natural Resources and Resilience			
	Standard 10: Resource Efficiency and Pollution Prevention and Management			
Mitigation Measures	General     Contractor to compile an Emergency Response Plan, including all emergency contain manage different potential emergencies.     O Ensure inclusion of potential issues related to catchment management impact.	ct numbers, and identifyin	ng key designated staff to	
	Hydrocarbon Spills			
	<ul> <li>Compile a Method Statement outlining how hydrocarbon spills will be managed, containing how hydrocarbon spills will be managed.</li> </ul>	ined and removed.		
	The site shall have a supply of absorbent material readily available to absorb any inci-	dental emergency hydroc	arbon spills.	
	• In the event of a spill the source of the spillage shall be isolated, contained using abso	orbent materials.	·	
	• The clean-up of spills and any damage caused by the spill shall be for the Contractor'	s account.		
	• Employees to be aware of procedures to be followed in the event of a spill or leak.			
	RE and/or ECO to be notified of significant spills.			
	All spills to be reported to DEO and actions undertaken recorded in an incidents and of	complaints register.		
	<ul> <li>Safe disposal slips to be obtained once contaminated area remediated.</li> </ul>			
Evidence	Emergency Response Plan (list of emergency contact details and appointed responsi	ble person(s)).		
	Method Statement for hydrocarbon management.			
	Safe disposal slips.			
EROSION CONT	ROL	Contractor / DEO	Low/ Medium/ High	
Potential Impact:	Loss of topsoil, construction materials.			
Environmental	To effectively manage stormwater on site to prevent erosion.			
Objectives	• To prevent upstream and/or downstream impacts to the catchment.			
ES Safeguard	Standard 1: General Overview: Assessment and Management of Environmental and S	Social Risks and Impacts		
Standard	<ul> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> </ul>			
	Standard 9: Biodiversity Conservation and Sustainable Management of Living Natural	Resources and Resilien	ce	
	Standard 10: Resource Efficiency and Pollution Prevention and Management			
Mitigation	Areas susceptible to erosion shall be protected by installing temporary or permanent	nt drainage works as so	on as possible to prevent	
weasures	scouring / washing away of slopes or other areas.			
	All runnels or erosion channels developed during construction to be backfilled, compa	cted and restored to a re	asonable condition.	
	<ul> <li>Stormwater run-off to be properly managed within all working areas and site camp(s).</li> </ul>			

Construction Ph	ase: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING	
	Contractor to determine appropriate erosion protection measures, if needed, in constant of the second	sultation with the ECO.		
	No polluted run-off must leave the site.			
CEMENT AND C		Contractor / DEO	Low/ Medium/ High	
Potential Impact:	<ul> <li>Impacting natural ground pH balance, which could also negatively impact on ground the stormwater system.</li> </ul>	dwater and surface water if	cement or concrete enter	
Environmental Objectives	<ul><li>Proper handling and management of cement and cement wastewater.</li><li>Prevent wastage.</li></ul>			
ES Safeguard	Standard 1: General Overview: Assessment and Management of Environmental and Social Risks and Impacts			
otanuaru	Standard 6: Labour			
	Standard 9: Biodiversity Conservation and Sustainable Management of Living Nature	ral Resources and Resilien	ce	
	Standard 10: Resource Efficiency and Pollution Prevention and Management			
Mitigation	Cement must not be mixed directly onto natural ground.			
Weasures	Cement must be mixed on an impermeable surface that is large enough to contain t	the cement and any cemen	t wastewater.	
	All wastewater resulting from cement mixing must be disposed of via a wastewater	management system.		
	Cement wastewater storage areas must not be allowed to overflow.			
	<ul> <li>Empty cement bags must be stored in weatherproof containers to prevent windblown cement dust and potential stormwater and surface water contamination.</li> </ul>			
	<ul> <li>Cement bags to be disposed of at a licensed waste disposal facility.</li> </ul>			
	Cleaning of equipment and flushing of cement mixers must not result in the pollution of the surrounding environment. All contaminated			
	wastewater must be collected and carefully disposed of in a manner approved by th	e ECO.		
TEMPORARY C	LOSURE	Contractor / DEO	Low/ Medium/ High	
Environmental Objectives	• To ensure that all materials are properly secured, waste is removed, and the site is	clean and tidy.		
ES Safeguard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environmental and</li> </ul>	d Social Risks and Impacts		
Standard	<ul> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> </ul>			
	Standard 6: Labour			
	Standard 7: Community Health and Safety			
Mitigation Measures	Should the site be temporarily closed for longer than 4 days, the ECO must check the site report in terms of compliance.	to ensure the following con	ditions are inspected and	
	Fuels / flammables / hazardous material stores			
	Fuel stores are as low in volume as possible;			
	There are no leaks;			
	• The store is secure and locked;			
	• Fire extinguishers are serviced and accessible;			

Construction Ph	ase: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING
	The area is secure from accidental damage through vehicle collision and the likes; and		
	Emergency contact numbers are available and displayed.		
	Safety		
	<ul> <li>There is an inspection schedule and log for use by security or contracts staff;</li> </ul>		
	All trenches are secured, where applicable;		
	• Fencing and barriers are in place in accordance with the Occupational Health and Safety A	Act (No. 85 of 1993);	
	<ul> <li>Applicable notice boards are in place and secured;</li> </ul>		
	<ul> <li>Security personnel have been briefed and have the facilities to contact or be contacted personnel;</li> </ul>	ed by relevant man	agement and emergency
	Night hazards such as reflectors, lighting, traffic signage, etc., have been checked; and		
	Material stockpiles are secured.		
	Water contamination and pollution		
	<ul> <li>Hazardous fuel stores are secure;</li> </ul>		
	<ul> <li>Cement and materials stores are secure;</li> </ul>		
	<ul> <li>Toilets are empty and secured. Refuse bins are empty and secured;</li> </ul>		
	Drip trays are empty and secure.		
Evidence	Temporary Closedown Checklist.		

The positive impacts related to the construction phase are presented below. This includes recommendations for enhancing/maintaining the positive nature of the impacts.

POSITIVE IMPACTS						
Impact	Recommendations	Responsible person(s) to implement recommendations	ES Safeguard Standard			
Gender Impact	<ul> <li>Apply quotas to female participation in construction phase</li> <li>Integrating a monitoring system with gender monitoring indicators.</li> <li>Ensuring a 30-40% target for the beneficiaries of the program to be women.</li> <li>Compliance with the GAP</li> </ul>	Contractor	Standard 3: Gender Mainstreaming			
Job Creation	<ul> <li>Source labour from local community</li> <li>Construction to include training and upskilling of local labour</li> </ul>	DBSA/WRP	Standard 6: Labour			

# 7.3 OPERATIONAL PHASE

## 7.3.1 ENVIRONMENTAL MANAGEMENT RESPONSIBILITY

The implementation of the ESMP will be the responsibility of all parties involved with the operational activities i.e, the Project Owner, Target Municipality and the Facility Operator. This will need to be determined and the Operational Phase Implementation and Management Plan updated with these details to ensure that responsibility is assigned accordingly.

### 7.3.2 ENVIRONMENTAL AUDITING

The environmental monitoring and auditing requirements are listed below:

#### Monitoring and inspection

- Effluent tanks and storage containers as well as waste storage containers must be inspected on a regular basis;
- The stormwater management or containment system, where applicable, must be inspected weekly or after each significant rainfall event to ensure that the system is free from debris, and other materials.
- The site must be inspected on a weekly basis to ensure early detection and addressing of environmental pollution.
- Should the preliminary findings indicate that the groundwater underneath and adjacent to the facility is vulnerable and that systems to prevent groundwater pollution are required, then a groundwater and soil monitoring network must be established.
- The volume of water being treated must be monitored and recorded on an ongoing basis and the records thereof must be safely kept at the facility or company office for a period of 5 years.
- Treated Effluent Quality to be monitored on a regular basis.

#### **Auditing**

- Internal audits must be conducted bi-annually by the facility owner and on each occasion a report must be compiled for record purposes.
- External audits of the facility must be conducted every twelve (12) months by an independent auditor and the auditor must prepare an official audit report documenting the audit findings. The external audit report must be submitted to the Local and/or Provincial Authority (as applicable) upon request.
- A competent authority, should there be any licensing requirements, may prescribe auditing formats and methodologies to be applied by the external auditor.
- The External Audit report must:
  - a) Detail the extent of compliance with the conditions of the ESMP and any other permits or authorisations for the reporting period;

- b) Specify non-compliances identified and rectified prior to the audit;
- c) Contain recommendations regarding non-compliance or potential non-compliance;
- d) Specify target dates for the implementation for the recommendations and whether corrective action taken for the previous audit non-compliances was adequate;
- e) Confirm any major environmental incidents that occurred and details of the manner the incidents were addressed; and
- f) Confirm that hazardous waste is separated from general waste and that such waste is removed by a registered waste handling company for either recycling or disposal at licenced disposal facility.
- g) A complaints register and incident report must be made available to the external auditor.

# <u>Competent authority audits and inspections</u> (if applicable and where authorisation / permit has been issued):

- A competent authority may reserve the right to audit and/or inspect the facility without prior notification at any time.
- Any records or documentation pertaining to the management of the facility must be made available to the competent authority upon request, as well as any other information that may be required.
- Records must be kept for a minimum of five years and must also be available for inspection by the competent authority.
- A complaints register and incident report must be made available to the competent authority.
- A record of any finding of non-compliance and how the manner of such non-compliances were addressed must be kept in a file and produced upon request by any relevant competent authority.

It should be noted that any authorisation or permit that has been issued may contain additional conditions for audits and inspections which must be adhered to.

#### **Reporting**

- Monitoring reports on month to month operational effectiveness and efficiency and progress in terms
  of all safeguards (both DBSA and GCF standards), adherence and alignment to policies (both DBSA
  and GCF including the RESP), aspects relating to SEAH and progress with the GRM, and progress
  against key indicators in terms of the DBSA's Development Results Template.
- Compliance reporting with regards to adherence to regulatory requirements. Operational tracking of compliance using an agreed upon format (see example in Table 23).
- All incidents occurring at the facility, excluding those that fall within the ambit of Section 30 of the National Environmental Management Act, 1998 must be reported to the competent authority.

#### Table 23: Example of operational compliance monitoring to support reporting

Legal requirement	Authority responsible to issue	Timelines for requirement of authorisation/ permit or licence	Activities are compliant	Client has provided document on DBSA shared folder	Authorisation date	Notes on amendments or version tracking's	Status (including dates	Compliance plan of action
		before					no	
		construction of		draft	3 months time	version 2	anticipated	
e.g ESIA	DEFF	x activity	yes	provided	or less	reviewed by	delays	n/a
ESMP	DEFF							
EMSS	DEFF							
Water use licence	DWS							

#### **DBSA Development Results Template**

A DBSA Development Results Template (DRT) will be completed for each project and reported against every 6 months. The DRT sets baselines, targets and provides development impact indicators, see Appendix B for an example of the DRT.

#### 7.3.3 ENVIRONMENTAL TRAINING

Before operation of the site commences, the responsible party for Operating the facility (Operator) shall ensure that all employees attend an environmental training session. The Operator shall ensure that all attendees sign an attendance register and shall retain it on site. The Operator shall ensure that follow-up training is conducted for any new employees coming onto Site.

The environmental training should, as a minimum, include the following:

- Facility management and operation;
- Health and safety requirements including the importance of personal protective equipment;
- Response to complaints and emergency incidents;
- The importance of conformance with all environmental policies;
- The environmental impacts, actual or potential, of work activities;
- The environmental benefits of improved personal performance;
- "No-go" areas;
- Roles and responsibilities in achieving conformance with the ESMP;
- The potential consequences of departure from specified operating procedures;
- Worker conduct on-site (for example, but not limited to, no fires or no pets on-site);

- Corrective actions pertaining to non-conformance with the ESMP;
- The mitigation measures required to be implemented when carrying out work activities;
- Management of both general and hazardous waste, including the identification of hazardous and unacceptable waste materials;
- Storage requirements relevant to the specific waste streams;
- Spill clean-up management (using spill kits); and
- Firefighting (usage of fire extinguishers).

Training will also include training in ecological infrastructure for water security across sectors and stakeholders involved to build capacity in establishing effective feedback networks to rehabilitate areas and protect scarce water resources including catchments, watersheds, riverine systems and wetlands.

Restoration projects will include training on sustaining a desired dynamic state of natural systems and ensuring capacity to manage the rehabilitation programme is built amongst key role players once these have been completed.

## 7.3.4 GENERIC OPERATIONAL PHASE IMPLEMENTATION AND MANAGEMENT PLAN

This section outlines the potential environmental impacts, the risk ratings, the recommended control measures, responsible parties and monitoring frequency during the operational phase of the project. These will be augmented to include project specific requirements and the risk rating must be updated.

OPERATIONAL	PHASE: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING			
VISUAL IMPAC	S	Operator	Low/ Medium/ High			
Potential Impact:	Visual impacts of the facility.					
Environmental Objectives	Ensure that site is well managed and maintained.	Ensure that site is well managed and maintained.				
ES Safeguard Standard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environment</li> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> </ul>	tal and Social Risks	and Impacts			
Mitigation Measures	<ul> <li>Mitigation Measures</li> <li>Good housekeeping and maintenance to reduce potential negative visual impacts.</li> <li>Roadways must be maintained, accessible and kept clean on a daily basis.</li> <li>Visual screening of the site, if applicable – wall or fence and vegetation around the perimeter which is maintained on a consistent basis.</li> </ul>					
NOISE		Operator	Low/ Medium/ High			
Potential Impact:	<ul> <li>Noise impacts on people working on site.</li> <li>Noise impacts on neighbours/residential areas near site.</li> </ul>					
Environmental Objectives	Ensure that noise levels are managed.					
ES Safeguard Standard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environment</li> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> <li>Standard 6: Labour</li> <li>Standard 7: Community Health and Safety</li> </ul>	tal and Social Risks	and Impacts			
Mitigation Measures	<ul> <li>Limit noise levels (e.g. install and maintain silencers on machinery).</li> <li>Comply with Occupational Health and Safety Act (Act No. 85 of 1993) regulation</li> </ul>	ons regarding noise	9.			
SOLID WASTE I	<b>IANAGEMENT</b>	Operator	Low/ Medium/ High			
Potential Impact:	<ul> <li>Contamination of soil, surface water and groundwater if not properly handled a</li> <li>Impact on the environment as a result of littering.</li> </ul>	and disposed of.				
Environmental Objectives	<ul> <li>Properly manage all waste types on site and encourage recycling and re-use</li> <li>Ensure correct disposal of all waste generated on site and reduce volume of waste</li> </ul>	of materials as far a vaste requiring disp	as possible. osal.			

OPERATIONAL	PHASE: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING			
ES Safeguard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environmental and Social Risks and Impacts</li> </ul>					
Standard	<ul> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> </ul>					
	<ul> <li>Standard 3: Gender Mainstreaming (including SEAH)</li> </ul>					
	Standard 4: Indigenous Peoples					
	Standard 6: Labour					
	Standard 7: Community Health and Safety					
	Standard 9: Biodiversity Conservation and Sustainable Management of Livin	ng Natural Resources	and Resilience			
	Standard 10: Resource Efficiency and Pollution Prevention and Management	nt				
Mitigation	Compile Waste Management Plan to be incorporated in the operating man	ual outlining how was	ste will be managed on site, temporary			
Measures	storage areas, waste types to be recycled, as well as methods of disposal.					
	<ul> <li>No on-site burying, burning or dumping of waste is allowed.</li> </ul>					
	<ul> <li>Different waste types to be stored separately.</li> </ul>					
	<ul> <li>Operator to investigate options of "take-back" policies for any containers, druge</li> </ul>	ums, materials, pack	aging, etc., for materials not re-used on			
	site. Examples could include used pallets, plastic wrapping, etc., prior to rec	ycling materials.				
	Waste shall be collected in a skip or bins on site and disposed of periodically at a municipal landfill – skip/bins must emptied before it is					
	full to prevent overflowing.					
	General Solid Waste					
	The site must be kept neat and tidy and free of litter and waste at all times.					
	• The facility including the operational area must be kept clean of any waste d	uring or produced as	part of the processing.			
	Solid waste to be stored in refuse bins with lids, skips, or other suitable enclo	osed containers. Soli	id waste to be disposed of once storage			
	containers are full. Solid waste to be disposed of at a registered landfill site.	Disposal slips to be	retained.			
	Hazardous Waste					
	Hazardous waste to be stored in a demarcated area (i.e. impermeable area)	prior to disposal.				
	Hazardous waste includes contaminated hydrocarbon soils, oily rags, etc.	<b>, , , , , , ,</b>				
	Hazardous waste to be disposed of at a registered landfill site and proof of s	afe disposal slips ret	ained.			
	No hazardous waste may be processed at the facility unless it has the neces	ssary authorisation to	0 d0 s0.			
Evidence	Safe disposal slips.	-				
SOIL, SURFACE	E AND GROUNDWATER MANAGEMENT	Operator	Low/ Medium/ High			
Potential	Impact to groundwater and surface water quality.					
Environmental	Prevent contaminated water from entering stormwater channels and ground	water.				
Objectives	Contain all contaminated / polluted water on-site for safe disposal.					
	Prevent Soil Contamination					
	Prevent upstream and/or downstream impacts to the catchment.					

OPERATIONAL	PHASE: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING			
ES Safeguard	Standard 1: General Overview: Assessment and Management of Enviror	mental and Social Risks	and Impacts			
Standard	Standard 2: Stakeholder Engagement and Information Disclosure					
	Standard 3: Gender Mainstreaming (including SEAH)					
	Standard 4: Indigenous Peoples					
	Standard 6: Labour					
	Standard 7: Community Health and Safety					
	Standard 8: Cultural Heritage					
	Standard 9: Biodiversity Conservation and Sustainable Management of L	iving Natural Resources	and Resilience			
	Standard 10: Resource Efficiency and Pollution Prevention and Manager	nent				
Mitigation Measures	Any wastewater generated from the processing of effluent must comply v	vith required discharge/c	lisposal standards.			
	Disposal of wastewater, effluent, brine, by-products and sludges					
	<ul> <li>Compile an Operational Plan outlining how wastes/effluent and by-produ</li> </ul>	cts will be managed on s	site, as well as method of disposal.			
	<ul> <li>Set-up a contaminated wastewater management system.</li> </ul>					
	If wastewater is stored on site, it must be undertaken in leak resistant containers which must be inspected weekly for early detection of					
	leaks.					
	<ul> <li>No contaminated water may be released into the natural ground or any s</li> </ul>	tormwater channel, strea	am, etc			
	Stormwater management					
	Monitor stormwater management system.					
	Continual monitoring for contamination.					
	Prevent all contaminated water from leaving the site.					
	The operational area must be hard surfaced/impermeable where there is	potential for significant	surface or groundwater contamination.			
Evidence	Operational Plan for the management of wastes/effluent and by-products	;				
	<ul> <li>Proof of disposal of contaminated wastewater.</li> </ul>					
	Incident register					
DUST MANAGE	MENT	Operator	Low/ Medium/ High			
Potential	Dust resulting from vehicles.					
Impact:	<ul> <li>Impact on visibility for driving, walking, etc.</li> </ul>					
Environmental Objectives	• Limit dust impacts as far as possible and to an acceptable level.					
ES Safeguard	Standard 1: General Overview: Assessment and Management of Environ	mental and Social Risks	and Impacts			
Standard	Standard 2: Stakeholder Engagement and Information Disclosure					
	Standard 6: Labour					
	Standard 7: Community Health and Safety					
	Standard 9: Biodiversity Conservation and Sustainable Management of L	iving Natural Resources	and Resilience			

OPERATIONAL	PHASE: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING					
Mitigation	<ul> <li>Exposed surfaces to be limited and monitored for dust.</li> </ul>		'					
Measures	Non-potable water to be used for dust suppression.							
	• Ensure vehicle speed limits on site are kept to a minimum and below 20	km/hour.						
	•							
ODOUR AND PE	ST MANAGEMENT	Operator	Low/ Medium/ High					
Potential Impact:	Impact on staff as well as neighbouring areas/facilities.							
Environmental Objectives	Limit odours and pests as far as possible.							
ES Safeguard	Standard 1: General Overview: Assessment and Management of Enviror	mental and Social Risks	s and Impacts					
Standard	Standard 2: Stakeholder Engagement and Information Disclosure							
	Standard 6: Labour							
	Standard 7: Community Health and Safety							
	<ul> <li>Standard 9: Biodiversity Conservation and Sustainable Management of L</li> </ul>	iving Natural Resources	and Resilience					
Mitigation	Minimise on-site storage times for effluent and any waste.							
WiedSulleS	Use closed containers for the storage of effluent or waste.							
	<ul> <li>If applicable, provision shall be made for odour control, these controls r direction at the site.</li> </ul>	nust be positioned strat	egically considering the prevailing wind					
	Direction at the site.							
	<ul> <li>Fest control systems shall be installed.</li> <li>Train staff on incident reporting procedures and emergency measures to</li> </ul>	address adour and nes	te					
HAZARDOUS S	IBSTANCES	Operator	Low/ Medium/ High					
		operater						
Potential Impact:	Impact on stormwater systems if any spills occur which are not contained	I.						
Environmental Objectives	Ensure the proper handling, storage and management of hazardous sub	stance to prevent impac	ts to the natural environment.					
ES Safeguard	Standard 1: General Overview: Assessment and Management of Enviror	mental and Social Risks	s and Impacts					
Standard	Standard 2: Stakeholder Engagement and Information Disclosure							
	<ul> <li>Standard 3: Gender Mainstreaming (including SEAH)</li> </ul>							
	Standard 6: Labour							
	Standard 7: Community Health and Safety							
	<ul> <li>Standard 10: Resource Efficiency and Pollution Prevention and Manager</li> </ul>	nent						
Mitigation	Compile an Operational Plan detailing hazardous substances, fuels, oils, e	etc., to be brought to site,	storage measures, quantities, refuelling					
Weasures	details and disposal methods, as well as a spill response plan and proce	dures for any spills / inci	dences.					
	Applicable signage must be in place at all storage areas.							
	Hazardous Chemicals							

OPERATIONAL	PHASE: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING			
	Hazardous chemical substances (as defined in Regulations for Hazardous Ch	emical Substances	GN 1179 (1995) and the Occupational			
	Health and Safety Act 181 of 1993) used during construction shall be stored in designated storage areas, when not in use.					
	Relevant Material Safety Datasheets (MSDS) must be available on site for all hazardous substances.					
	<ul> <li>Storage areas must be enclosed with lockable access to control and limit acce</li> </ul>	ess.				
	• The surface under the storage area shall be protected against spills (i.e. imper	rmeable).				
	Fuels and Oils					
	<ul> <li>The Operator shall ensure that all liquid fuels and oils are stored in containers.</li> </ul>	/jerrycans with lids,	which are kept firmly shut.			
	<ul> <li>Areas for the storage of fuels and other flammable materials shall comply with</li> </ul>	n standard fire safet	y regulations. All empty and externally			
	dirty containers/jerrycans, etc., shall be sealed and stored on a waterproof/imp	permeable surface.				
	<ul> <li>Adequate precautions shall be provided to prevent spillage during re-fuelling of</li> </ul>	on site and work are	eas, e.g. making use of drip trays during			
	re-fuelling.					
	Drip trays to be provided for stationary plant.					
	<ul> <li>Old oil to be collected for recycling and stored on an impermeable surface price</li> </ul>	or to collection by a	service provider.			
Evidence	<ul> <li>Operational Plan outlining management of hazardous substances.</li> </ul>					
	Proof of oil recycling, if applicable.					
	Incident register					
	Training records					
FIRE CONTROL		Operator	Low/ Medium/ High			
Potential Impact:	• Fire causing damage to equipment, properties, and leading to injuries, etc.					
Environmental	<ul> <li>Prevent damage caused by fire by quick response times.</li> </ul>					
Objectives	<ul> <li>Ensure staff are trained in how to react should a fire breakout.</li> </ul>					
	<ul> <li>Ensure proper management of hazardous materials.</li> </ul>					
ES Safeguard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environment</li> </ul>	tal and Social Risks	and Impacts			
Standard	<ul> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> </ul>					
	<ul> <li>Standard 3: Gender Mainstreaming (including SEAH)</li> </ul>					
	Standard 6: Labour					
	Standard 7: Community Health and Safety					
	Standard 9: Biodiversity Conservation and Sustainable Management of Living	Natural Resources	and Resilience			
Mitigation	A fire management plan/strategy (as part of the Emergency Response Plan) must be	e in place and mus	t be in accordance with the applicable			
Measures	legislation and local by-laws and at a minimum contain the following:					
	Sufficient fire-fighting equipment that is kept in good working conditions and av	vailable at the facilit	y.			
	<ul> <li>Identified sources of fires that may result at the facility and appropriate opera control</li> </ul>	tional procedures t	o be undertaken to bring the fire under			
	<ul> <li>A firebreak or barrier constructed around the perimeter of the site to avoid the</li> </ul>	spread of fires				
	A model of barrier constructed around the perimeter of the site to avoid the	Sp. 644 61 11 66.				

OPERATIONAL	PHASE: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING				
	Clear signs must be in place and should inform the public that flammable liquids are not permitted on the site						
	Operator to appoint a fire safety officer who shall be responsible for ensuring immediate and appropriate actions in the event of a fire.						
	• Fire extinguishers to be located in hazardous and fuel storage areas and a	iny other applicable are	as.				
	• Staff must be trained to use the firefighting equipment.						
	Designated smoking areas must be allocated with containers for cigarette	butts.					
	Relevant contact numbers for local firefighting services must be included o	on the emergency list.					
Evidence	Fire management plan/strategy (as part of the Emergency Response Plan)	)					
EMERGENCY P	ROCEDURES	Operator	Low/ Medium/ High				
Environmental	Diretaction of the biophysical environment from becardous spills						
Objectives	<ul> <li>Protection of the biophysical environment from hazardous spins.</li> <li>Prevent injury or loss of life as a result of operational activities</li> </ul>						
-	Finsure all staff are aware of emergency procedures						
	<ul> <li>Prevent upstream and/or downstream impacts to the catchment.</li> </ul>						
ES Safeguard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environn</li> </ul>	nental and Social Risks	and Impacts				
Standard	Standard 2: Stakeholder Engagement and Information Disclosure						
	<ul> <li>Standard 3: Gender Mainstreaming (including SEAH)</li> </ul>						
	Standard 6: Labour						
	Standard 7: Community Health and Safety						
	Standard 9: Biodiversity Conservation and Sustainable Management of Liv	ving Natural Resources	and Resilience				
Mitigation	Standard 10: Resource Efficiency and Pollution Prevention and Manageme	ent					
Measures	Operator to compile an Emergency Response Plan, including all emerge	ency contact numbers,	and identifying key designated staff to				
	manage different potential emergencies.						
	<ul> <li>Emergency incidents must be dealt with in accordance with section 30 of</li> </ul>	f the National Environm	nental Management Act, 1998 (Act No.				
	107 of 1998).						
	Hydrocarbon Spills						
	Compile an Emergency Response Plan outlining how hydrocarbon spills w	/ill be managed, contai	ned and removed.				
	The site shall have a supply of absorbent material readily available to absorb	orb any incidental emer	gency hydrocarbon spills.				
	<ul> <li>In the event of a spill the source of the spillage shall be isolated, contained</li> </ul>	l using absorbent mate	rials.				
	• The clean-up of spills and any damage caused by the spill shall be for the	Contractor's account.					
	Employees to be aware of procedures to be followed in the event of a spill	or leak.					
	All spills to be and actions undertaken to remedy spills must be recorded in	n an incidents and com	plaints register.				
	<ul> <li>Sare disposal slips to be obtained once contaminated area remediated.</li> </ul>						

OPERATIONAL	PHASE: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING
Evidence	<ul> <li>Emergency Response Plan which must include the following:</li> <li>a) Emergency response plan</li> <li>b) Remedial actions; and</li> <li>c) Preventative measures</li> <li>Safe disposal slips.</li> </ul>		
EROSION CONT	IROL	Operator	Low/ Medium/ High
Potential Impact:	Loss of topsoil.		
Environmental Objectives	<ul> <li>To effectively manage stormwater on site to prevent erosion.</li> <li>Prevent upstream and/or downstream impacts to the catchment.</li> </ul>		
ES Safeguard Standard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environm</li> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> <li>Standard 9: Biodiversity Conservation and Sustainable Management of Livi</li> <li>Standard 10: Resource Efficiency and Pollution Prevention and Management</li> </ul>	iental and Social Risks ing Natural Resources ent	s and Impacts and Resilience
Mitigation Measures	<ul> <li>Monitor stormwater infrastructure to ensure its operational efficiency.</li> <li>No polluted run-off must leave the site</li> </ul>		
mousures	• No politica full-on musi leave the site.		
MEASURING, R	EPORTING AND VERIFICATION	Operator	Low/ Medium/ High
MEASURING, RI Potential Impact:	<ul> <li>No pointed full-on must leave the site.</li> <li>EPORTING AND VERIFICATION</li> <li>Monitoring / measuring not accurate due to poor data availability</li> <li>Difficulty assessing the effectiveness of management actions and to und environment.</li> </ul>	Operator lerstand the actual re	Low/ Medium/ High
MEASURING, RI Potential Impact: Environmental Objectives	<ul> <li>No pointed full-on must leave the site.</li> <li>EPORTING AND VERIFICATION         <ul> <li>Monitoring / measuring not accurate due to poor data availability</li> <li>Difficulty assessing the effectiveness of management actions and to und environment.</li> <li>Monitoring is a critical component of managing the facility and process.</li> </ul> </li> </ul>	Operator	Low/ Medium/ High
MEASURING, RI Potential Impact: Environmental Objectives ES Safeguard Standard	<ul> <li>No pointed furtion must leave the site.</li> <li>EPORTING AND VERIFICATION         <ul> <li>Monitoring / measuring not accurate due to poor data availability</li> <li>Difficulty assessing the effectiveness of management actions and to und environment.</li> <li>Monitoring is a critical component of managing the facility and process.</li> </ul> </li> <li>Standard 1: General Overview: Assessment and Management of Environm</li> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> <li>Standard 3: Gender Mainstreaming (including SEAH)</li> <li>Standard 4: Indigenous Peoples</li> <li>Standard 6: Labour</li> <li>Standard 7: Community Health and Safety</li> <li>Standard 8: Cultural Heritage</li> <li>Standard 9: Biodiversity Conservation and Sustainable Management of Liv</li> </ul>	Operator lerstand the actual re lental and Social Risks	Low/ Medium/ High sidual impact of the operations on the a and Impacts
MEASURING, RI Potential Impact: Environmental Objectives ES Safeguard Standard	<ul> <li>No pointed furtient must leave the site.</li> <li>EPORTING AND VERIFICATION         <ul> <li>Monitoring / measuring not accurate due to poor data availability</li> <li>Difficulty assessing the effectiveness of management actions and to und environment.</li> <li>Monitoring is a critical component of managing the facility and process.</li> </ul> </li> <li>Standard 1: General Overview: Assessment and Management of Environment Standard 2: Stakeholder Engagement and Information Disclosure</li> <li>Standard 3: Gender Mainstreaming (including SEAH)</li> <li>Standard 4: Indigenous Peoples</li> <li>Standard 6: Labour</li> <li>Standard 7: Community Health and Safety</li> <li>Standard 8: Cultural Heritage</li> <li>Standard 9: Biodiversity Conservation and Sustainable Management of Live</li> <li>Standard 10: Resource Efficiency and Pollution Prevention and Management</li> </ul>	Operator lerstand the actual re lental and Social Risks ing Natural Resources	Low/ Medium/ High sidual impact of the operations on the s and Impacts

OPERATIONAL	PHASE: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES	RESPONSIBLE PERSON(S)	RISK RATING				
	<ul> <li>Regular Internal Audits and Annual external audits to take place to verify compliance with the ESMP.</li> </ul>						
	Adhere to the monitoring, auditing and reporting requirements set out in the ESMP as a minimum.						
EXCESS EFFLU	ENT FOR TREATMENT/ EXCESS TREATED EFFLUENT FOR REUSE (PRODUCT)	Operator	Low/ Medium/ High				
Potential	<ul> <li>No/low demand for pre-treated outputs could result in operational issues and nuisance on site.</li> </ul>						
	<ul> <li>Poor management, monitoring and measuring may also result in poor process</li> </ul>	management.					
Environmental Objectives	Protection of the biophysical environment from the excess effluent (treated and	d untreated).					
ES Safeguard	<ul> <li>Standard 1: General Overview: Assessment and Management of Environment</li> </ul>	al and Social Risks	and Impacts				
Stanuaru	Standard 2: Stakeholder Engagement and Information Disclosure						
	Standard 3: Gender Mainstreaming (including SEAH)						
	Standard 4: Indigenous Peoples						
	• Standard 6: Labour						
	Standard 7: Community Health and Sarety						
	Standard 8: Cultural Heritage	Network Deservation					
	Standard 9: Biodiversity Conservation and Sustainable Management of Living     Standard 40: Deservation and Pallutian Drevention and Management	Natural Resources	and Resilience				
Mitigation	Standard To. Resource Enciency and Pollution Prevention and Management     The guestitics of incoming and processed offluent must at all times not even	the decige require	mente of the facility				
Measures	Operational measures must be put in place to manage throughout	a the design require	ements of the facility.				
	<ul> <li>Operational measures must be put in place to manage throughput.</li> <li>Municipality to have hypass/operational plan in place to deal with excess input</li> </ul>	and outputs					
		Operator	Low/ Medium/ High				
		operator					
Potential	Health impacts on consumers						
Impact:	<ul> <li>Environmental impacts of using poor quality effluent.</li> </ul>						
	Loss of consumer/customer confidence.						
Environmental Objectives	• To ensure the treated effluent meets the required standards for re-use without	posing any enviror	nmental or health risk.				
ES Safeguard	Standard 1: General Overview: Assessment and Management of Environment	al and Social Risks	and Impacts				
Standard	<ul> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> </ul>						
	<ul> <li>Standard 3: Gender Mainstreaming (including SEAH)</li> </ul>						
	Standard 4: Indigenous Peoples						
	Standard 6: Labour						
	Standard 7: Community Health and Safety						
	Standard 8: Cultural Heritage						
	Standard 9: Biodiversity Conservation and Sustainable Management of Living	Natural Resources	and Resilience				
	Standard 10: Resource Efficiency and Pollution Prevention and Management						

OPERATIONAL	PHASE: ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES RESPONSIBLE PERSON(S) RISK RATING
Mitigation Measures	<ul> <li>Regular testing of treated effluent quality .</li> <li>External/Independent monitoring and testing</li> <li>Interpretation/interrogation of test results to ensure the standards are being met i.e. staff to demonstrate a thorough understanding.</li> <li>Emergency Response Plan to divert effluent not meeting the quality and prevent distribution.</li> <li>Adequate training of staff to manage effluent quality and emergency responses.</li> <li>Communication strategy in the event that quality does not meet standards and effluent cannot be supplied.</li> </ul>
Evidence	<ul><li>Test results and analysis with interpretation reports.</li><li>Emergency Response Plan</li></ul>

The positive impacts related to the operational phase are presented below. This includes recommendations for enhancing/maintaining the positive nature of the impacts.

POSITIVE IMPACTS						
Impact	Recommendations	Responsible person(s) to implement recommendations	ES Safeguard Standard			
<ul> <li>Climate Change Adaption:</li> <li>Transition to a low carbon emission pathway</li> <li>Climate change mitigation</li> <li>Resilience</li> </ul>	<ul> <li>Monitor and report on climate adaption criteria of projects</li> <li>Skills training to ensure awareness and understanding amongst operators and beneficiaries of projects e.g municipalities.</li> </ul>	Municipality/ WRP	<ul> <li>Standard 1: General Overview: Assessment and Management of Environmental and Social Risks and Impacts</li> <li>Standard 2: Stakeholder Engagement and Information Disclosure</li> <li>Standard 7: Community Health and Safety</li> <li>Standard 9: Biodiversity Conservation and Sustainable Management of Living Natural Resources and Resilience</li> <li>Standard 10: Resource Efficiency and Pollution</li> </ul>			

POSITIVE IMPACTS			
Impact	Recommendations	Responsible person(s) to implement recommendations	ES Safeguard Standard
			Prevention and Management
Gender Impact	<ul> <li>Apply quotas to female participation in sanitation policies for water committee members, Boards and agencies.</li> <li>Integrating a monitoring system with gender monitoring indicators.</li> <li>Ensuring a 30-40% target for the beneficiaries of the program to be women.</li> <li>Raising Public awareness campaigns aimed at creating an appreciation and understanding of the benefits of water reuse.</li> <li>Enabling all water stakeholders—from the implementing agencies to the beneficiaries to build requisite skills and knowledge for gender-sensitive services and management.</li> <li>Compliance with the GAP</li> <li>Strategies will be needed to implement greater gender balance at Senior Management level in Municipalities by putting the Employment Equity Act into practice with accompanying set targets and top-level oversight to monitor progress.</li> <li>Workshops will be required to create greater awareness of women's rights and equality amongst municipal staff and operator.</li> <li>Community groups to be integrated into education and awareness initiatives and campaigns with regards to climate change and responsible water resource use.</li> </ul>	WRP	<ul> <li>Standard 3: Gender Mainstreaming</li> </ul>
<ul> <li>Ecological Infrastructure</li> <li>Ecosystem impact and ecosystem services impacts</li> <li>Access to resources and shared benefits</li> <li>Effective use of land resources and capability</li> </ul>	<ul> <li>Ensure projects comply with the Do No Harm Principle</li> <li>Long term rehabilitation of wetlands and watercourses with a net positive impact on catchments.</li> <li>Training to include EI aspects as well as catchment management.</li> <li>Completion of DBSA Development Results Template to monitor</li> <li>Compliance with the ESMP, ESMF and GAP.</li> </ul>	DBSA/WRP	<ul> <li>Standard 9: Biodiversity Conservation and Sustainable Management of Living Natural Resources and Resilience</li> <li>Standard 10: Resource Efficiency and Pollution Prevention and Management</li> </ul>

## 7.4 DECOMMISSIONING

This section provides high-level and generic requirements to be taken into consideration should any project be decommissioned. Each project will require a closure plan with the roles and responsibilities as outlined below. The Closure Plan will be developed using the project ESIA and ESMP as guidance, but ultimately is guided by the objectives and vision set out in the Closure Plan.

The decommissioning requirements that should be included as a minimum are as follows:

- 1. A facility to be discontinued, for whatever reasons, must be rehabilitated to the satisfaction of the Local and Provincial Authority, as applicable and legislative requirements.
- 2. A decommissioning plan may be required by the competent authority
- 3. A closure and a rehabilitation plan for the facility, including the indication of end-use of the area may be required to be developed and submitted to Local and/or Provincial Authority (as applicable) for approval.
- 4. The site must be rehabilitated according to the closure and the rehabilitation plan approved by the Competent Authority.
- 5. The rehabilitation plan shall consider and address the EI impacts of decommissioning and ensure no activities have a negative impact. Decommissioning to result in a nett positive impact.
- 6. All equipment must be removed from the site, unless motivation is provided for the equipment to remain with proof that it will not have the potential to cause environmental impacts and is required for subsequent use of the site.
- 7. The Local Municipality and/or the facility manager will remain responsible for any adverse impacts on the environment, even after operations have ceased.
- 8. The facility owner must also identify and inform the Local and/or Provincial Authority (as applicable) of the future end use of the site.
- 9. Should the land be contaminated as a result of the activities, the owner of the facility must comply with all relevant legislation dealing with remediation of contaminated land.
- 10. In the advent of change of ownership, the registered owner of the facility must notify the Local and/or Provincial Authority (as applicable) in writing, within one month of such change.

The objectives of the rehabilitation, decommissioning and closure plan are to:

- provide the vision, objectives, targets and criteria for final rehabilitation, decommissioning and closure of the project;
- explain the risk assessment approach and outcomes and link closure activities to risk rehabilitation;
- detail the closure actions that clearly indicate the measures that will be taken to mitigate and/or manage identified risks and describes the nature of residual risks that will need to be monitored and managed post closure;

- commit to a schedule, budget, roles and responsibilities for final rehabilitation, decommissioning and closure of each relevant activity or item of infrastructure;
- detailing the full closure costs for the life of project; and
- outlining monitoring, auditing and reporting requirements.

## 7.4.1 ROLES AND RESPONSIBILITIES

The activity will also require the services of an independent ECO to ensure that the Closure Plan is being complied with during the closure phase. Formal responsibilities and accountability are necessary to ensure that the Closure Plan is effectively implemented during this critical phase.

### **Responsibility of the DBSA**

As AE the DBSA will be responsible for overseeing the closure and decommissioning of projects through the WPO and as such will ensure that Closure Plans are adhered to during this important stage, As such the DBSA will ensure that all measures to mitigate and manage environmental and social risks and impacts and to improve outcomes are implemented, monitored and continuously improved. In addition, the DBSA will through the WPO ensure that the progress and performance are monitored and reported to GCF and its stakeholders throughout the closure of the GCF-financed activities, in accordance with the monitoring and accountability framework and allowing GCF or GCF-authorized third-party verification of such reports.

Key activities of DBSA will include:

- Ensuring the inclusion of relevant analysts in the completion monitoring team and prepare completion reports,
- Undertake desktop audits for select projects, and
- Undertake evaluations of select projects dependent on the scale of impact and levels of associated risk.

From this the DBSA will produce a project Completion Report, desk-based Audit Reports for select projects, and will commission external independent evaluation reports for selected projects.

#### **Responsibility of the WRP WPO**

The WRP WPO is required to adopt, support and comply with the Closure Plan and ensure that the closure and decommissioning of projects is aligned to the Closure Plan, is consistent with GCF and DBSA environmental and social safeguards and policies, and is compliant with the required environmental and social regulations. The WPO will undertake compliance checks to ensure processes are in accordance with the Closure Plan and the various regulatory requirements.

Importantly, the WPO has an essential oversight role to ensure that Closure Plans, and all measures to mitigate and manage environmental and social risks and impacts and to improve outcomes are implemented, monitored and continuously improved. Equally, the WPO will ensure that the progress and performance are monitored and reported to GCF and its stakeholders throughout the closure of the GCF-financed activities, in accordance with the monitoring and accountability framework and allowing GCF or GCF-authorized third-party verification of such reports.

### **Role of the Project Beneficiary**

The Project Beneficiary/Target Municipality is required to be familiar with the contents of the Closure Plan, adopt, support and comply with the Closure Plan and oversee the project closure process. As such they will produce the project closure report that will outline all steps taken to ensure long-term environmental and social safety and that in there are not ongoing impacts upon both environment and society. This will include long term monitoring protocols including participative monitoring approaches that will enable communities, stakeholders and civil society organisations to provide inputs and comments on aspects of project closure.

## **Role of the Resident Engineer**

The RE is required to technically oversee the closure process and will provide inputs into the project closure reports based upon this oversight role. Tasks include:

- Be familiar with the contents of the Closure Plan with regards to project closure and the longer-term implications to environment and society;
- Liaise with the ECO regarding environmental management and provide the ECO with all relevant documentation and plans;
- Assist the ECO to ensure that the conditions of the Closure Plan are being adhered to and are implemented during project closure;
- Assist the ECO in making decisions and finding solutions to environmental problems that may arise during closure;
- Communicate to the Contractor the advice of the ECO and the contents of the ECO reports and issue site instructions giving effect to the ECO requirements, where applicable;
- Communicate to the ECO any infringements of the environmental conditions;
- Discuss with the ECO the application of any penalties and other possible enforcement measures, when necessary;
- Advise and engage with the social and gender officer with regards to possible societal implications from project closure;
- Facilitate communication between all role-players in the interest of effective environmental and social management; and
- Monitor the compliance of the Contractor through the ECO reports.

## Project Social and Gender Oversight Officer

The Project Social and Gender Oversight Officer will be responsible for monitoring, reviewing and verifying compliance with the Closure Plan by the Contractor during project closure. The officer must conduct audits in terms of the Closure Plan during the project closure. A minimum of one site inspection must be undertaken per month, for the duration of the closure activities.

Duties in this regard will include the following:

 Monitor and verify that the Closure Plan and programme policies are adhered to at all times and recommending necessary action if the specifications and mitigation measures are not followed;

- Monitor and verify that social and gender impacts are kept to a minimum;
- Must obtain, examine and approve Method Statements to overview processes;
- Assist the Contractor in finding socially responsible solutions to problems during project closure;
- Report back on the social and gender issues at the site meetings and other meetings that may be called regarding environmental matters, if required;
- Monitor and review the Site Diary of all activities / incidents / complaints concerning the social and gender aspects on Site, during the closure process;
- Inspect the Site and surrounding working areas regarding compliance with the Closure Plan;
- Be reachable by the public regarding matters of social and gender concerns as they relate to the project closure process;
- Recommend corrective actions to the RE and the Contractor where closure activities are not in compliance with the Closure Plan;
- Inform the RE immediately of the occurrence of non-compliances and recommend appropriate measures of rectification.
- Ensure that activities on Site comply with legislative and regulatory requirements; and
- Undertake monthly site visits, compile and submit monthly reports to the Beneficiary, WPO, RE and Contractor.

### **Environmental Control Officer**

The ECO must be independent and have expertise in conducting environmental compliance auditing, including knowledge of the environmental legislation and regulations, guidelines and policies related to environmental management. The ECO must conduct audits in terms of the ESMP for the project, these will be undertaken on a quarterly basis. **A minimum of one site inspection must be undertaken per month**, for the duration of the closure activities.

The ECO will be responsible for monitoring, reviewing, and verifying compliance with the Closure Plan by the Contractor, in alignment with the requirements of this ESMF. The ECO's duties in this regard will include the following:

- Monitor and verify that the Closure Plan is adhered to at all times and recommending necessary action if the specifications and mitigation measures are not followed;
- Monitor and verify that environmental impacts are kept to a minimum during the closure process;
- The ECO, along with the RE, must obtain, examine and approve Method Statements;
- Assist the Contractor in finding environmentally responsible solutions to problems during project closure;
- Report back on the environmental issues at the site meetings and other meetings that may be called regarding environmental matters, if required;
- Monitor and review the Site Diary of all activities / incidents / complaints concerning the environment on Site;

- Inspect the Site and surrounding working areas regarding compliance with the Closure Plan;
- Be reachable by the public regarding matters of environmental concerns as they relate to the project . closure
- Provide environmental awareness training for site personnel concerning long term aspects of project closure:
- Recommend corrective actions to the RE and the Contractor where construction activities are not in compliance with the Closure Plan;
- Inform the RE immediately of the occurrence of non-compliances and recommend appropriate measures of rectification, e.g. issuing of fines.
- Ensure that activities on Site comply with legislation of relevance to the environment;
- Keep a photographic record of progress on Site from an environmental perspective; and
- Undertake monthly site visits, compile and submit monthly reports to the Beneficiary, WPO, RE and • Contractor.

#### Contractor

The Contractor has the responsibility to:

- Be familiar with the contents of the Closure Plan and project closure processes; .
- Designate a responsible person for monitoring site activities against the Closure Plan on a daily basis. •
- Communicate to the ECO, at least ten working days in advance, any proposed actions, which may • have negative impacts on the environment;
- Designate all working areas and remain within working areas at all times; •
- Comply with the environmental conditions contained in this ESMF;
- Ensure that all sub-contractors are aware of and adhere to the requirements of the Closure Plan at all • times in consultation with the Designated Environmental Officer (DEO);
- Compile the required Method Statements in accordance with the Closure Plan;
- Notify the ECO and RE immediately in the event of any accidental infringements of the Closure Plan • to enable appropriate remedial action to be taken;
- Undertake rehabilitation of all areas affected by the project to restore to the original states, as determined by the ECO and in accordance with the Closure Plan; and
- Maintain a site diary.

#### **Designated Environmental Officer**

The appointed Contractor will be required to appoint a competent individual as the Contractor's on-site Designated Environmental Officer (DEO). The DEO could be the same person monitoring Health and Safety aspects on site as long as they have sufficient environmental management experience. The selected DEO must fully familiarise him-/herself with the contents of the Closure Plan and understand the various environmental and social implications of project closure. The DEO should furthermore possess the necessary National Water Reuse Programme: DBSA Final 129 skills to confer environmental management to all personnel involved in the project closure process. The DEO's duties in this regard will include the following:

- Monitor and oversee the Contractor's internal compliance with the Closure Plan and project closure requirements and ensure that the environmental specifications are adhered to;
- Keep a record of all on-site environmental related incidents and how these incidents were dealt with;
- Monitor and verify that environmental impacts are kept to a minimum throughout the closure process;
- Inspect the Site and surrounding areas on a daily basis regarding compliance with the Closure Plan and project closure requirements;
- Compile and maintain an incidents and complaints register with regards to environmental issues;
- Accompany the ECO during monthly site visits; and
- Ensure all issues identified by the ECO are rectified on site in a timely manner.

### 7.4.2 REPORTING

The Contractor / DEO will during the project closure process maintain the Environmental File for the project that must be handed over to the project owner once the project is formally closed. This file will not only contain all environmental related information, as well as a record of all closure processes. This would include such aspects as:

- Copy of ESMP; and any other authorisations or permits;
- Proof / signed attendance register of all environmental training sessions;
- Method Statements;
- Emergency contact numbers;
- Complaints Register;
- Copies of monthly ECO Reports;
- Waste manifests and Safe Disposal Slips;
- Any internal environmental compliance checklists;
- Record of any incidents on site, outlining remediation undertaken;
- Record of processes to close the project (including site clearance, removal of equipment, waste disposal, re-grading of land, vegetation replanting etc) and ensure long-term minimisation of impacts on environment and society; and
- Guidance on site maintenance requirements into the future

The project owner will submit a project closure report to the WPO. An outline of the Closure Report is provided in Annexure L.

# 8 CONCLUSIONS

The WRP will work synergistically with other critical water management interventions in the Master Plan and the National Water Conservation and Water Demand Management Programme, its primary focus is to support climate change adaptation through water reuse.

This will significantly improve resource use efficiencies by promoting climate smart designs that result in improved services to vulnerable communities, and the optimising of scarce water resources especially in light of South Africa's drier future and increase likelihood of multi-year droughts.

The proposed Programme will have an overall positive impact on the environment in terms of more sustainable water resource management, climate adaption and provide municipalities with a more resilient water and climate future. The negative impacts can be addressed and mitigated by implementation and compliance with the requirements of the ESMF and ESMP. The negative impacts could include:

- Potential to hold or channel water and alter natural water pathways on the landscape
- Deliver sediment to streams,
- Impact on local surface water quality;
- Impact groundwater quality;
- Alter habitats and influence biodiversity;
- Impact on soil structure and soil chemistry; and
- Present safety hazards to humans and animals

## 8.1 GENDER AND SOCIAL CONCLUSION

The Programme as a whole is identified as a GEM2 in terms of the UNCT GEM Requirements as the overall intent is that gender equality is significantly mainstreamed into the broader work planned, as detailed in the GAP. As such the GAP outlines approaches and actions are outlined at both programme and project levels, with efforts at the programme level providing the broader overarching: framework and mechanisms for gender integration and the management of SEAH across the WRP, while at project level ensuring that gender and SEAH is mainstreamed and managed within projects and localities identified. Baseline assessments at the initiation of projects will be essential and will provide the basis for interventions. Noting that the WRP is aiming to address local vulnerabilities and water insecurity these assessments and supporting due diligence reviews will be an essential part of monitoring and evaluation for the programme.

The activities outlined in the GAP for the Programme aim to address the current social and gender inequalities that will impact upon the success of the Programme. Some of the initiatives include:

• Applying quotas in female participation in sanitation policies for water committee members, Boards and agencies.

- Integrating a monitoring system with gender monitoring indicators, include gender responsive budgeting.
- Ensuring a 30-40% target for the beneficiaries of the program to be women.
- Raising Public awareness campaigns aimed at creating an appreciation and understanding of the benefits of water reuse.
- Enabling all water stakeholders—from the implementing agencies to the beneficiaries to build requisite skills and knowledge for gender-sensitive services and management.

Ultimately, gender disparity is not only a challenge in South Africa but across the globe. Through programmes like the WRP, some of these issues can be intricately addressed while avoiding exacerbating existing social inequalities. As the WRP scales and evolves, greater in-depth research will need to be conducted to complement this current gender assessment report in the future.

# 8.2 ENVIRONMENTAL CONCLUSION

As part of the response to South Africa's vulnerability to climate change, the WRP supports a low-carbon and climate adaptive development pathway. The core aims of the Programme are to:

- Encourage the scaled development of water reuse projects at municipal level;
- Support municipalities with the scaling of their reuse projects by providing support in the identification, conceptualization and prioritization of large-scale water reuse projects, in the project preparation and the development of implementation-ready plans, and in the development of blended finance options to fund implementation;
- Assist municipalities to develop diversified projects that not only support water reuse but have extended beneficiation from aspects such as water reclamation through nature –based solutions, sludge management and beneficiation as well as energy generation from biogas.
- Create a new asset class around water reuse infrastructure.
- Assist municipalities to counter the adverse effects of climate change in the water and wastewater services sector.
- Ensure Climate adaptation as a principle objective of the programme.
- Mainstreaming climate resilience into the water use and reuse sector.
- Improve Ecological infrastructure for water security and to meet climate mitigation strategic objectives.

The proposed Programme will have an overall positive impact on the environment in terms of more sustainable water resource management, climate adaption and provide municipalities with a more resilient water and climate future. The negative impacts, as listed above, can be addressed and mitigated by implementation and compliance with the requirements of the ESMF and ESMP, and in the longer-term in the project Closure Plan.

The Programme will also provide indirect positive social impacts including job creation. The negative impacts, which have been described, will be mitigated in the planning, design, planning, construction and operation of the facilities.

## 8.3 OVERALL CONCLUSION

In terms of the safeguards, the projects to be undertaken would be categorised as Category 2 projects and the WRP will establish a dedicated WPO to manage the programme level compliance to GCF environmental and social standards.

The aim of the ESMF is to avoid and minimise negative environmental and social (E&S) impacts and to enhance positive aspects of the Programme. The proposed Programme will have an overall positive impact on the environment in terms of more sustainable water resource management, climate adaption and provide municipalities with a more resilient water and climate future.

The Programme will also provide indirect positive social impacts including job creation. The negative impacts, which have been described, will be mitigated in the planning, design, planning, construction and operation of the facilities by implementation and compliance with the requirements of the ESMF and ESMP.

The WRP will contribute to South Africa's efforts on climate change adaptation and accelerate the transition to climate-resilient sustainable development. The interventions undertaken in the WRP will support the implementation of South Africa's National Climate Change Adaptation Strategy.

# APPENDIX A EXCLUSION LIST

The following types of projects will not be financed under this Programme:

- 1. Projects that contravene the Constitutional Rights of South Africans and in particular Indigenous Peoples rights,
- 2. Projects that undermine Indigenous Peoples' community rights to land, natural resources, language and indigenous knowledge,
- 3. Natural forest harvesting or plantation development that will involve conversion or degradation of critical forest areas or related critical natural habitats, and
- 4. Projects that will significantly convert or degrade critical natural habitats, including forests, and
- 5. Projects that contravene applicable national and international laws.
- 6. No new marine outfalls or expansion of existing ones. Need to find alternatives to marine outfalls.
- 7. Category 1 Projects as defined by ESS policy Projects with the potential for diverse, unique, irreversible or otherwise significant adverse environmental or social impacts.
- 8. Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements.
- 9. Production or trade in ozone depleting substances subject to international phase out.
- 10. Production, trade, storage, or transport of significant volumes of hazardous chemicals, or commercial scale use of hazardous chemicals.
- 11. Projects located within a critical biodiversity area or any other natural area that has been designated for conservation may only be considered if there is existing infrastructure and the development footprint will not be increased and the project results in an improvement and restoration as well as a nett positive impact on the catchment and ecological infrastructure.
- 12. Projects that require fundamental changes in social arrangements in order for benefits to be realized.
- 13. Projects that negatively affect specific socio-economic groups such as ethnic groups, women, minorities, etc., their basic needs (e.g. reducing income and food supply) and strategic needs (e.g. limiting agency and decision-making power). This would include projects listed as GEM0.
- 14. Projects that lead to the dislocation or resettlement of households or economic activities.
- 15. Projects that are likely to intensify discriminatory practices particularly against women, including gender-based violence.
- 16. Projects that involve harmful or exploitive forms of forced and/or child labour.
- 17. Projects with high biodiversity risk that potentially result in irreparable damage to terrestrial, soil and aquatic biodiversity including identified threatened species and habitats;
- 18. Project with high social risk that potentially result in significant socio-economic impacts, that result potential for loss, conflict or societal instability.
## APPENDIX B DRT COMMON INDICATORS (example of DBSA indicators to use as a guide noting this is regularly updated)

DRT COMMON INDICATORS – COLOUR CODED

Applicable to green bond metric requirements for best alignment with DBSA Green Bond Policy. Sometimes not all of these will be relevant but most of the time most of them will be
Indicators may in some form even adjusted form be applicable
All other indicators may or may not be relevant depending on project itself

Location			National		
Link to GIS					
Total Project Value	(EUR 1000)				
DBSA Contribution					
Average DBSA Funding %					
Contribution of other IDFC members		(EUR '000)			
Contribution of non-IDFC members (sp private)	ecify if its public or				
		·		Total	DBSA
	-	Energy: Municipal tra	ansmission		
	-	Energy: Municipal dis	stribution		
	-	Energy: Non municip	al		
		Oil and gas			
		Water services: Bulk			
		Water services: Reticulation (Municipal/WBs)			
		Water resource development			
		Sanitation: Municipal	bulk/outfalls		
		Sanitation: Municipal	reticulation		
Sector Breakdown ('000)		Roads and drainage:	Municipal		
		Roads and drainage:	Non-municipal		
		Commercial			
		Communications			
	-	Education			
	-	Information Analysis and Advice			
	-	Institution Building			
	-	Policy			
		Residential Facilities			
		Social Infrastructure			
		Transportation			
Investment Type			Select		
Environmental social institutional and o	climate principle and	I strategic objectives	3		

Final

DEVELOPMENT IMPACT INDICATOR (DII)					
MANDATORY INDICATORS		Anticipate Project T	d Total arget	Anticipated DBSA Contribution Targe	
		Source of Informatio n	Targe t	Source of Informatio n	Targ t
1. Employment opportunities created/sustained (FTEs)					
1.1 Total No. of direct construction jobs created					
1.1.1 No. of women employed					
1.1.2 No. of youth employed					
1.2 Total No. of direct operational phase jobs created/sustaine	d				
1.2.1 No. of women employed					
1.2.2 No. of youth employed					
2a. Households benefitting from reticulation services (Num	ber):				
2.1 Water services					
2.2 Sanitation services	New				
2.2 Electricity convises	New and				
2.3 Electricity services	New				
2.4 Roads and drainage	New				
2b. Households benefitting from bulk services (Number):			1		
2.1 Water services					
2.2 Sanitation services	New				
2.3 Electricity services	refurbishment				
2.4 Roads and drainage	New				
		Anticipate Project T	d Total	Anticipated	DBSA
3. Broad Based Black Economic Empowerment (BBBEE)			arget	Contribution	rarge
3.1 Percentage of black women shareholder in the transaction			1		
3.2 Client's BBBEE spend on empowering black suppliers (%)	/R '000				
3.3 Client's BBBEE spend on empowering suppliers that are w '000	omen-owned (%)/R				
3.4 Value of Debt to Local community trust and SMMEs (Rand)					
3.5 Value of Subordinated Debt leveraged to Local community t	rust (Rand)				
4.2 Funding spent on climate initigation activities (000)					
4.2 Funding spent on climate adaptation activities (1000)					
4.3 Funding allocated to both mitigation and adaptation not ac above('000)	counted for				

Total Green Climate Finance ('000)	0%		
Funding allocated to biodiversity activities related to Rio-markers ('000)			
Green Climate and Biodiversity mapping completed			
Is this a GCF, CFF or Green Bond project?	GCF		
Is this a GEF project?			
Is this project partially or fully allocated to a line of credit?			
If yes, indicate which one?			
Does the technology choice meet green infrastructure standards?			
If yes, indicate which?			
5. Impact on GDP (Modelled)	(EUR '000)		
5.1 Direct impact			
5.2 Direct and indirect			
6. Impact on household income (Modelled)	(EUR '000)		
6.1 Low income households			
6.2 Total income to households			
PROJECT-SPECIFIC INDICATORS		Anticipated Total	Anticipated DBSA
		Project Target	Contribution Target
WATER:		Project Target	Contribution Target
WATER: Increase in water yield (Mm <sup>3</sup> /a)		Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)		Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)		Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)		Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served		Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served         Number of new water connections		Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served         Number of new water connections         Number of new households served with water		Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served         Number of new water connections         Number of new households served with water         Length of water mains installed (new/refurbished/replaced/upgraded) (km)	Select	Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served         Number of new water connections         Number of new households served with water         Length of water mains installed (new/refurbished/replaced/upgraded) (km)         Reduction in household water backlog (No.)	Select	Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served         Number of new water connections         Number of new households served with water         Length of water mains installed (new/refurbished/replaced/upgraded) (km)         Reduction in household water backlog (No.)         Water savings - decrease in the annual absolute (gross) water use	Select	Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served         Number of new water connections         Number of new households served with water         Length of water mains installed (new/refurbished/replaced/upgraded) (km)         Reduction in household water backlog (No.)         Water savings - decrease in the annual absolute (gross) water use         Reduction in non-revenue water (%)	Select	Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served         Number of new water connections         Number of new households served with water         Length of water mains installed (new/refurbished/replaced/upgraded) (km)         Reduction in household water backlog (No.)         Water savings - decrease in the annual absolute (gross) water use         Reduction in non-revenue water (%)         Number of people with access to clean drinking water	Select	Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served         Number of new water connections         Number of new households served with water         Length of water mains installed (new/refurbished/replaced/upgraded) (km)         Reduction in household water backlog (No.)         Water savings - decrease in the annual absolute (gross) water use         Reduction in non-revenue water (%)         Number of people with access to clean drinking water	Select	Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served         Number of new water connections         Number of new households served with water         Length of water mains installed (new/refurbished/replaced/upgraded) (km)         Reduction in household water backlog (No.)         Water savings - decrease in the annual absolute (gross) water use         Reduction in non-revenue water (%)         Number of people with access to clean drinking water         SANITATION:         Additional capacity of outfall sewers (Mℓ/day)	Select	Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served         Number of new water connections         Number of new households served with water         Length of water mains installed (new/refurbished/replaced/upgraded) (km)         Reduction in household water backlog (No.)         Water savings - decrease in the annual absolute (gross) water use         Reduction in non-revenue water (%)         Number of people with access to clean drinking water         SANITATION:         Additional capacity of outfall sewers (Mℓ/day)         Increased capacity of wastewater treatment works (Mℓ/day)	Select	Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served         Number of new water connections         Number of new households served with water         Length of water mains installed (new/refurbished/replaced/upgraded) (km)         Reduction in household water backlog (No.)         Water savings - decrease in the annual absolute (gross) water use         Reduction in non-revenue water (%)         Number of people with access to clean drinking water         SANITATION:         Additional capacity of outfall sewers (Mℓ/day)         Increased capacity of wastewater treatment works (Mℓ/day)         Number of new sewer connections/households served	Select	Project Target	Contribution Target
WATER:         Increase in water yield (Mm³/a)         Additional capacity of bulk water mains (Mℓ/day)         Increase in water storage capacity (Mℓ)         Increased capacity of water treatment works (Mℓ/day)         Number of new water standpipes served         Number of new water connections         Number of new households served with water         Length of water mains installed (new/refurbished/replaced/upgraded) (km)         Reduction in household water backlog (No.)         Water savings - decrease in the annual absolute (gross) water use         Reduction in non-revenue water (%)         Number of people with access to clean drinking water         SANITATION:         Additional capacity of outfall sewers (Mℓ/day)         Increased capacity of wastewater treatment works (Mℓ/day)         Number of new sewer connections/households served         Reduction in household sanitation backlog (No.)	Select	Project Target	Contribution Target

National Water Reuse Programme: Environmental and Social Management Framework and Plan

Households connected to on-site sanitation (VIPs, septic tanks, etc.) (No.)			
Length of sewers installed (new) (km)			
Length of sewers installed (replaced/refurbished) (km)			
Length of sewers installed (upgraded) (km)			
Additional capacity of treated effluent (Mt/day)			
Annual absolute (gross) amount of raw/untreated sewage sludge that disposed of (%)	t is treated and		
Annual absolute (gross) amount of raw/untreated sewage sludge that disposed of (tonnes)	t is treated and	0	0
Annual absolute (gross) amount of sludge that is reused (%)			
Annual absolute (gross) amount of sludge that is reused (tonnes)	1		
Percentage increase in the annual absolute (gross) amount of wastewater treated, reused or avoided	Select		
Increase in the annual absolute (gross) amount of wastewater treated, reused or avoided (Mt/day)	Select		
WASTE:			
Capacity of landfill created (km <sup>2</sup> )			
Waste to landfill avoided (tonnes p.a.)			
Waste to landfill recycled (tonnes p.a.)			
Waste to landfill reused (tonnes p.a.)			
ENERGY:			
Number of new electricity connections (No.)			
Energy Generated (MV/A)			
Reduction in household electricity backlog (No.)			
Length of electricity network constructed (km)			
Reduction in electricity losses p.a. (R)			
Renewable energy installed capacity (MW)			
Renewable energy plant capacity rehabilitated (MW)			
Annual renewable energy production in MWh (electricity)			
Total energy savings (KWh)			
Energy production (MWh/annum)			
OIL AND GAS:	OIL AND GAS:		
Oil reserves (barrels of oil / bbl)			
Quantitiy of oil extracted (barrels p/d)			
Quantitiy of oil extracted (barrels p/d)       Gas reserves (m <sup>3</sup> p/d)			

Length of oil pipeline constructed (km)			
Capacity of oil pipeline constructed (diameter in meter)			
Length of gas pipeline constructed (km)			
Capacity of gas pipeline constructed (diameter in meter)			
TRANSPORT, ROADS & DRAINAGE:		-	-
Length of tarred roads constructed (km)			
Length of tarred roads resurfaced (km)			
Length of tarred roads rehabilitated (km)			
Length of gravel roads surfaced (km)			
Passenger capacity added (number)			
Cargo capacity added (TEU per annum)			
Number of people switched to a lower carbon intensive transport mod	le		
Number of additional passengers using low-carbon transport			
EDUCATION:			
Number of student residences constructed/rebabilitated (No.)			
Number of new on-campus student beds (No.)			
Transport cost savings to the university n.a. (R)			
SOCIAL AND GOVERNANCE:			
Are the following effective environmental and social governance mechanisms in place?			
ESMP/F as applicable			
Legal compliance as applicable			
Grievance redress mechanism applicable			
Management system			
Project steering committee or similar as applicable			
NQF credit-bearing training opportunities provided (No.)			
NQF credit-bearing training opportunities for women (No.)			
NQF credit-bearing training opportunities for youth (No.)			
Noncredit-bearing training opportunities provided (No.)			
Noncredit-bearing training opportunities for women (No.)			
Noncredit-bearing training opportunities for youth (No.)			
Improved gender diversity - % of women beneficiaries (direct)	Improved gender diversity - % of women beneficiaries (direct)		
Improved gender diversity - % of women at senior management leve	I		
Value of funds to Local community trust and SMMEs (Rands)			
ENVIRONMENTAL:			
Carbon emissions screening categories (tonnes CO2 e.)			
Carbon emissions for projects > 20 000 tonnes of CO2 e.			
Annual GHG emissions reduced/avoided in tonnes of CO2 equivalent	Select		
Annual energy savings in MWh (electricity)	Select		

Ecosystems restored, under new protection measures and/or improve management systems (Ha's)	ed sustainable		
Hectares of land or forests under improved and effective managemer contributes to CO2 emission reductions	t that		
Marine, ground/surface water catchment systems restored or under n measures and/or improved sustainable management practices (Mm <sup>3</sup> /	ew protection a)		
Number of people benefiting from measures to <i>mitigate</i> the conseque climate change (e.g. access to renewable energy)	nces of		
Number of people benefiting from measures to <i>adapt</i> to the conseque climate change (e.g. extreme weather - e.g. drought, heat waves, floor erosion, fires, etc)	ences of ids, coastal		
Number of enterprises/institutions benefiting from improved environm social management capacity - structures, policies, plans and manage	ental and ment systems		
Number of people benefiting from environmental and social management processes/activities	Select		
Number of males reached by [or total geographic coverage of] climate warning systems and other risk reduction measures established/stree	e related early gthened		
Number of females reached by [or total geographic coverage of] clima early warning systems and other risk reduction measures established	ate related /strengthened		
Number of males made aware of climate threats and related appropriate responses			
Number of females made aware of climate threats and related appropresponses	priate		
Number of Projects approved under the programme			
Number of Projects approved under the programme (Solar PV)			
Number of Projects approved under the programme (Wind)			
Total value of Funding Approved for the Programme (excluding GCF) (USD)			
Value of Funding Approved for the Programme, Solar PV (excluding GCF) (USD)			
Value of Funding Approved for the Programme, Wind (excluding GCF) (USD)			
Financing leveraged through the facilities (USD)			
Value of subordinated debt provided to sub-projects (including GCF Component 1 (USD)	) —		
Mitigation performance			
Fund-level Impacts			
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Project/Programme Outcomes	 -
Number of technologies and innovative solutions transferred or licensed to support low-emission development as a result of Fund support.	
Change in the percentage of low-emission power supply in a jurisdiction or market	
MWs of low emission energy capacity installed, generated and/or rehabilitated as a result of GCF support	
Adaptation performance	
Fund-level Impacts	 
Change in expected losses of lives due to the impact of project addressing the extreme climate-related disasters in the geographic area	
Change in expected losses of economic assets (US\$) due to the impact of project addressing extreme climate-related disasters in the geographic area	
Percentage change in expected losses of economic assets due to the impact of the project adressing extreme climate-related disasters in the geographic area	
Number of people benefiting from the adoption of diversified, climate resilient livelihood options (including fisheries, agriculture, tourism, etc.)	
Number of Fund funded projects/programmes that supports effective adaptation to fish stock migration and depletion due to climate change	
Number of people benefiting from introduced health measures to respond to climate-sensitive diseases	
Number of food-secure households (previously at risk in areas/periods of climate change impacts)	
Number of people with year round access to reliable and safe water supply despite climate shocks and stresses	
Value of physical assets made more resilient to climate variability and change, (tech note consider human benefits) (US\$)	
Value (US\$) of ecosystem services generated or protected in response to climate change	
Number of technologies and innovative solutions transferred or licensed to promote climate resilience as a result of GCF support.	
OTHER:	
Economically displaced individuals	

## APPENDIX C: DRAFT OUTLINE OF E&S SCOPING REPORT

A Scoping Report must be prepared by the Project Owner managing the process. The Scoping process commences at the start of the environmental assessment process and focuses on a broad range of issues.

The Scoping Report must provide sufficient information to facilitate an understanding of these issues.

### **Contents of the Scoping Report**

The National Regulations (National Environmental Management Act, Act 107 of 1998) stipulate that the Scoping Report must include the following:

- Details and expertise of the Environmental Assessment Practioner who prepared the report.
- A description of the proposed activity.
- A description of feasible and reasonable alternatives including the advantages and disadvantages that the proposed activity and the alternatives may have on the environment.
- A description of the property on which the activity is to be undertaken and the location of the activity. If it is a linear activity then a description of the route should be detailed.
- A description of the environment that may be affected by the proposed activity and the manner in which the various aspects of the environment may be impacted.
- All legislation and guidelines that have been considered in the preparation of the report.
- A description of environmental issues and potential impacts, including cumulative impacts that have been identified.
- Details of the public participation process that has been conducted including:
  - the steps taken to notify I&APs.
  - o proof of noticeboards, advertisements and notices notifying I&APs.
  - a list of all persons, organisations and organs of state who were registered as I&APs in relation to the application.
  - $\circ$  a summary of the issues raised by the I&APs and the responses of the EAP.
- A description of the need and desirability of the proposed activity.
- A description of any identified alternatives and the advantages and disadvantages that these and the proposed activity may have on the environment and community.
- Any representations or comments received in respect of the Scoping Report.

- The minutes of any meetings held by the EAP with I&APs and other role-players which record the views of the participants and the associated responses of the EAP.
- A plan of study for EIA which includes:
- A description of the tasks to be undertaken as part of the EIA process including any specialist studies.
- An indication of the stages at which the CA will be consulted.
- A description of the proposed method of assessing the environmental issues and alternatives.
- Particulars of the Public Participation Process that will be conducted during the EIA process.
- Any specific information required by the CA.

### **APPENDIX D: DRAFT OUTLINE OF ESIA REPORT**

Annotated Table of Contents is provided below.

	Item	Brief description
0	Executive summary	
1	Introduction	Purpose of the report
		Structure of the report
		Brief introduction of the Applicant / Beneficiary
2	Presentation of the proposed project	Brief presentation of the project, introducing the technical elements proposed as investments
		Brief description of project area of influence, including project boundaries and limitations
3	Regulatory and policy framework	National legislation and environmental permitting process
	3.1. Environmental	Brief presentation of environmental and social safeguards applicable for this project – DBSA and
	3.2. Social (including gender)	GCF
		Identify gaps between National legislation and DBSA / GCF safeguards
4	ESIA methodology	Briefly describe the methodology for: - screening - data collection - assessing impacts, their significance, magnitude, etc, cumulative impacts - engagement of relevant stakeholders during ESIA, disclosure of ESIA package - risks and uncertainties
5	Assessment of potential	Brief description of
	alternatives	Alternative 0 – no project Alternative 1. Other investments
		Alternative 2. The project Methodology of alternative analysis
		Outcomes of the assessment – brief justification why the project investment are needed
5	Environmental	Introduce the environmental conditions in the
	conditions	project area
		- air quality
		- water quality

		<ul> <li>soil</li> <li>groundwater</li> <li>geology</li> <li>hydrology</li> <li>Biodiversity</li> <li>climate change indicators</li> <li>etc.</li> <li>also to introduce the current environmental performance of the waste management system at municipal level</li> </ul>	
6.	Socio-economic conditions	Introduce the socio-economic conditions in the project area: - Population - Waste management practices and level of access to service - land use - public infrastructure available in the project area - employment - livelihood – sources of incomes - public health - cultural heritage - indigenous groups – if any - social disadvantaged groups - gender gap analysis (this could be a sub-chapter and could reference the stand alone document – Gender Assessment – that needs to be prepare) - stakeholder analysis – briefly present the main stakeholders relevant for the project - etc. - also to introduce the current environmental performance of the waste management system at municipal level	
7	Environmental impact assessment (including climate change mitigation and adaptation assessment)	For both, environmental and social impact assessment we could use a tabular format where to describe: - positive impacts - negative impacts - mitigation measures envisaged for negative	
8	Social impact assessment (including gender assessment – this could be a sub- chapter – this could be a summary of the stand- alone document Gender	<ul> <li>impacts (including gender actions)</li> <li>residual impacts , if any</li> <li>cumulative impacts , if any</li> </ul>	

	assessment that needs to be prepared)		
9	Consultation, disclosure and grievance mechanism	Briefly introduce what has been done during national EIA procedure in terms of engagement, consultations, disclosure	
		Brief description of engagement during ESIA disclosure – outcome of public disclosure session – to be filled in the end of the process	
		Introduce further actions that are needed during project implementation process , including actions for gender mainstreaming (cross- reference here with the stand alone document – Gender Action Plan – that needs to be prepared)	
10	Conclusions	Summarising the main impacts and how to address them	

### **APPENDIX E: DRAFT OUTLINE OF ESMP REPORT**

Annotated Table of Contents is provide below.

	Item	Brief description
1	Introduction	Purpose of the report
		Structure of the report
		Brief description of the project
2	Approach to environmental and social management	National, regional, local regulations and management systems applicable to this project
	-	International standards required for proper:
		-Operations management
		Priorities for this project:
		- example: fair employment or gender balanced
		employment, health and safety regulations, etc.
3	Management of Environmental, Health and Safety and Social commitments	Tabular format where we should present: - the mitigation measures identified in ESIA - actions which will help to implement the mitigation measures - responsible for implementing the mitigation measures - estimated costs - estimated timeframe for implementation - monitoring indicators
		<ul> <li>management plans that need to be further</li> <li>developed by sub-contractors / entities that will</li> <li>implement the project</li> <li>cross reference Gender Action Plan – since this is a</li> </ul>
4	Environmental and	- reporting requirements
	Social monitoring	<ul> <li>frequency of monitoring</li> <li>key performance indicators</li> </ul>
5	Conclusions	Summarising the main impacts and how to address them

### APPENDIX F: DRAFT OUTLINE OF A STAKEHOLDER ENGAGEMENT PLAN

Annotated Table of Contents is provided below.

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	Item	Brief description
1	Introduction	Purpose of the report
		Structure of the report
		Brief description of the project and the importance of stakeholder engagement
2	Designing the Engagement Process	Stakeholder engagement principles
		Outlining the types of engagement required
		Stakeholder mapping and analysis noting the differing levels of engagement required
		Current participative processes and platforms
3	Stakeholder Engagement Implementation Plan	Structuring engagement
		Programming engagements
		Communications and awareness
		Budgeting for engagements
4	Reporting and monitoring	Reporting requirements
		Feedback mechanisms
		Frequency of monitoring
		Stakeholder database management
5	Conclusions	Summarising key steps to ensure effective engagement

## APPENDIX G: DRAFT OUTLINE OF AN INDIGENOUS PEOPLES PLAN

#### Annotated Table of Contents is provided below.

	Item	Brief description
1	Introduction	Purpose of the report Structure of the report Brief description of the project and the importance of engaging with Indigenous People
2	Description of the Project	Purpose of the project, providing objectives and outcomes Geographic location and spatial context Stakeholder mapping and analysis Current participative processes and platforms
3	Baseline Information	Policy and legal frameworks Description of the Indigenous Peoples including a summary of the socio-economic, health, education and environmental profile of the indigenous community, their circumstances, livelihoods, capacities, natural resources, social norms, tangible and intangible cultural heritage. Include natural features or objects that embody cultural values, social and economic structures, mechanisms and institutions, political and/or administrative structures and procedures, the position of the indigenous community within society, its relations with government and with other communities in the area, and national laws relating to Indigenous Peoples
4	Consultation	<ul> <li>Processes undertaken to ensure engagement including outcomes from each engagement to date</li> <li>Outline of ongoing engagement processes as the project is undertaken</li> <li>Overview of findings from the engagement process and outline of how these will be addressed</li> </ul>
5	Project Impacts	Overview of potential impacts and opportunities

		Agreed culturally appropriate measures to mitigate adverse impacts and enhance opportunities and benefits
		Develop plan with targets with interim milestones and an agreed schedule and responsibilities for implementation
		Outline of grievance redress mechanisms and response approaches
		Communications and awareness approaches
5	Monitoring and Evaluation	Outline of processes and procedures to monitor and report on the implementation of the plan
		Reporting frameworks and feedback to communities
		Evaluation process and approaches to ensure adaptive management
		Review processes including the frequency and timing of the plan review

## APPENDIX H: DRAFT OUTLINE OF AN RESETTLEMENT ACTION PLAN

An outline of the contents of a resettlement action plan is provided below.

	Item	Brief description
1	Introduction	Purpose of the report
		Structure of the report
		Brief description of the project
2	Project Description and Impacts	Identification of project impacts and affected population
		Mapping, census and inventory of affected assets
		Socio economic assessment
		Consultation processes
3	Legal Framework	Policy and legal frameworks
		Procedures for land acquisition
4	Valuation and Compensation Framework	Valuation procedures
		Compensation approach
		Eligibility for assistance
		Responsibility and schedule for compensation payments
5	Resettlement Assistance and Livelihoods	Selection and preparation of the resettlement site
		Influx management
		Relocation schedule and assistance
		Replacement of services and enterprises
		Livelihood restoration
		Treatment of cultural property
		Special assistance for women and vulnerable groups

5	Budget and Implementation Schedule	Outline of processes and procedures to monitor and report on the implementation of the plan
		Financial requirements
6	Organisational Responsibilities	Establishing structures and committees
		Roles and responsibilities
7	Consultation and Engagement	Framework for structured engagement and feedback
		Awareness creation and information exchange
8	Grievance Redress Mechanisms	Processes and procedures, as well as institutional arrangements
		Mechanisms for adjudicating grievances
		Approaches to monitor and report
9	Monitoring and Evaluation	Monitoring of performance against the plan
		Evaluation and impact review
		Final audit

### APPENDIX I: DRAFT OUTLINE OF A CULTURAL HERITAGE SITE MANAGEMENT PLAN

An outline of the contents of a cultural heritage site management plan is provided below.

	Item	Brief description
1	Introduction	Purpose of the report
		Structure of the report
		Brief description of the project
2	Site Description	Statement of site significance (including values)
		Site description, including environmental setting
		History of the site
		Present and past uses of the site
		Site condition and history of conservation, including SWOT analysis
3	Consultation and	Framework for structured engagement and feedback
	Engagement	Awareness creation and information exchange
4	Legal Framework	Policy and legal frameworks
		Management context
5	Strategic Framework	Guiding principles
		Objectives and strategies
		Action plan including impact management, site conservations and safety
		Alteration approvals and processes
6	Monitoring and Evaluation	Monitoring of performance against the plan
		Evaluation and impact review

## APPENDIX J: DRAFT OUTLINE OF A BIODIVERSITY ACTION PLAN

An outline of the contents of a biodiversity action plan is provided below.

	Item	Brief description
1	Introduction	Importance of conserving biodiversity Purpose of the report
		Structure of the report Brief description of the project
2	Outline of the Biodiversity Action Plan Process	Outline of policy and legal frameworks
		The biodiversity audit
		Evaluating and prioritising habitats and species
		History of the site
		Setting objectives, targets and indicators
		Implementation processes
		Monitoring, reporting and reviewing processes
3	Biodiversity Audit	Introduction and approach
		Current plans
		Biodiversity audit boundary and method
		Sources of data (habitat and species)
4	Biodiversity Assessment	Geology, hydrology and landscapes
		Nature conservation sites (national and local)
		Habitat audit summary
		Species audit summary
5	Implementation Plan	Strategic goals objectives

		Action plan including budgets, targets, milestones and indicators
		Procedures and processes
		Roles and responsibilities
6	Monitoring and Evaluation	Monitoring of performance against the plan, including reporting frameworks
		Evaluation and impact review

## APPENDIX K: ENVIRONMENTAL AND SOCIAL COMPLIANCE REPORT

An outline of the contents of an environmental and social compliance reporting format is provided below.

	Item	Brief description
1	Introduction	Importance of environmental and social compliance
		Purpose of the report
		Structure of the report
		Brief description of the project
		Project Implementation Arrangements
		Project Implementation Status
2	Summary of ESS and	Outline of Environmental and Social Safeguards
	Regulatory Requirements	Outline of Regulatory Requirements
		Summary of Monitoring Actions
		Reporting and reviewing processes
3	Compliance Progress and Actions	GCF and DBSA Environmental and Social Safeguards
		Regulatory Requirements
4	Participative Monitoring	Engagement Framework
		Summary of Engagements
		Comments Register
		Identified Corrective Actions
5	Recommendations	Key Issues
		Prioritised Actions

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# **APPENDIX L: PROJECT CLOSURE REPORT**

An outline of the contents of a project closure report is provided below.

	Item	Brief description
1	Introduction	Background of the Project Brief description of the project Importance of environmental and social compliance Purpose of the report Structure of the report Project Implementation Arrangements and Status
2	Outline of the Project Works	Site location and geographic aspects Overview of the Assets Plants design, capacity, flow regimes and loading dynamics Operational history Performance of the Asset in terms of Regulatory Requirements and Environmental and Social Safeguard Standards
3	Decommissioning Processes	Description of the Future Use of the Site Overview of the Decommissioning Plan Decommissioning Process Site Plan and Status Post Closure Closure Adherence to Regulatory Requirements and Environmental and Social Safeguard Standards Record of Stakeholder Engagements and Comments
4	Environmental Impact	Overview of Geology, hydrology, environment and landscapes Environmental Impacts from Project Closure Outline of Future Long-Term Impacts

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		Environmental Impact Minimisation Plan
5	Social Impact	Overview of Local Social Economy
		Social Impacts of Project Closure
		Outline of Future Long-Term Impacts
		Social Impact Minimisation Plan
6	Future Management and	Management and Maintenance Requirements
	Monitoring	Safety Plans
		Site Monitoring and Regulatory Compliance
		Reporting Requirements

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