



PROPOSED WASTE MANAGEMENT FACILITY – WALVIS BAY Environmental Management Plan Report

Prepared for: Namwaste (Pty) Ltd.
Prepared by: Knight Piésold Consulting (Pty) Ltd.
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NamWaste (Pty) Ltd
Proposed Waste Management Facility in Walvis Bay
Environmental Management Plan

Prepared for:

NamWaste (Pty) Ltd

PO Box 30735

Pionierspark

Windhoek

Namibia

t.provender@rent-a-drum.com.na

Prepared by:

Knight Piésold Consulting (Pty) Ltd

11 Nelson Mandela Ave

Klein Windhoek

Namibia

Project Number

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PROPOSED WASTE MANAGEMENT FACILITY IN WALVIS BAY

ENVIRONMENTAL MANAGEMENT PLAN

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ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
ALARP	As Low as Reasonably Practicable
BID	Background Information Document
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
DAF	Dissolved Air Flotation
DAFU	Dissolved Air Flotation Unit
DEAF	Department of Environmental Affairs and Forestry
ECC	Environmental Clearance Certificate
EHS	Environmental Health and Safety
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
E&P	Exploration and Production
GDP	Gross Domestic Profit
GHG	Greenhouse Gas
GN	Government Notice
HDPE	High-Density Polyethylene
HIV	Human Immunodeficiency Virus
IFC	International Finance Corporation
ILO	International Labour Organization
MAWLR	Ministry of Agriculture, Water and Land Reform
MEFT	Ministry of Environment, Forestry and Tourism
MME	Ministry of Mines and Energy
MWT	Ministry of Works and Transport
NHC	National Heritage Council
NUST	Namibia University of Science and Technology
O&G	Oil and Gas
OBM	Oil Based Mud
OTL	Overhead Transmission Line
PM	Particulate Matter
PPE	Personal Protection Equipment
PSV	Platform Supply Vessel
SADC	Southern African Development Community
TCC	Thermo-mechanical cuttings cleaner
USA	United States of America
UV	Ultraviolet
WHO	World Health Organisation

1 INTRODUCTION

1.1 PROJECT OVERVIEW

Rent-A-Drum (Pty) Ltd (Rent-A-Drum) has been operating in the Namibian waste management sector for 36 years. The Rent-A-Drum Group was acquired by the Séché Environnement Group in 2023. The Séché Environnement Group owns a majority stake in the Rent-A-Drum Group, of which Namwaste (Pty) Ltd (Namwaste), is a subsidiary.

The Séché Environnement Group, an established French-owned company, which has been in operation for 40 years and operates in 16 countries throughout the world, is a major player in the circular economy and waste management, decontamination and emergency environmental services sector. The Rent-A-Drum Group currently offers integrated waste management solutions and has an operational footprint in 6 of Namibia's 14 regions, serving over 2,000 customers and employing approximately 450 full-time staff members.

The applicant for the project is Namwaste (Pty) Ltd (Namwaste), established in 2023. The company aims to develop new industrial waste treatment and disposal facilities in Namibia, which will address the pressing shortage of solutions for industrial and hazardous waste management in Namibia and will contribute to the protection of the environment whilst also creating employment opportunities and fostering economic growth.

Increased production of waste offshore Walvis Bay, existing commercial and industrial uses of the Port and the lack of suitable industrial waste treatment facilities necessitate a private sector solution to manage the waste on-shore, both from off-shore activities and port activities. Therefore, there is a need to establish suitable treatment facilities as close as possible to the source of generation.

1.2 PROJECT BACKGROUND AND MOTIVATION

Rent-A-Drum is aware that oil and gas exploration and production drilling has increased offshore Namibia in the past few years. Activity levels for exploration drilling will have 2-4 active drill rigs in Namibian waters for the next 3 years. Production drilling is set to increase above these levels. It is anticipated that at least 5 drilling rigs will be based in Walvis Bay for the next 5 years drilling at least 40 wells offshore. Should production drilling lead to production; large floating production storage and offloading (FPSOs) will be based offshore to allow oil production. Drilling and production of oil and gas reserves offshore will generate significant quantities of solid and liquid industrial waste with the possibility of hydrocarbon contamination. Increased production of waste offshore Walvis Bay, existing commercial and industrial uses of the Port and the lack of suitable industrial waste treatment facilities necessitate a private sector solution to manage the waste on-shore, both from off-shore activities and port activities.

Namwaste (Pty) Ltd identified an industrial service gap within Namibia and aim to satisfy this need through the development of waste management facilities in country, with an application for a waste treatment and disposal facility currently under construction near Arandis with an ECC granted in March 2025, and two additional proposed facilities in Lüderitz and Walvis Bay. This report is drafted for the application of an Environmental Clearance Certificate (ECC) for the proposed facility in Walvis Bay. A lease agreement will be signed between the Walvis Bay Municipality and Namwaste (Pty) Ltd once the ECC is issued for the proposed development to occur in an area of approximately 78 133 m² (7.81

hectares) on Portion 160 of the remainder of Farm 38, east-south-east of Walvis Bay and approximately 20 km from the Walvis Bay Port entrance. The site location is provided within Figure 1.

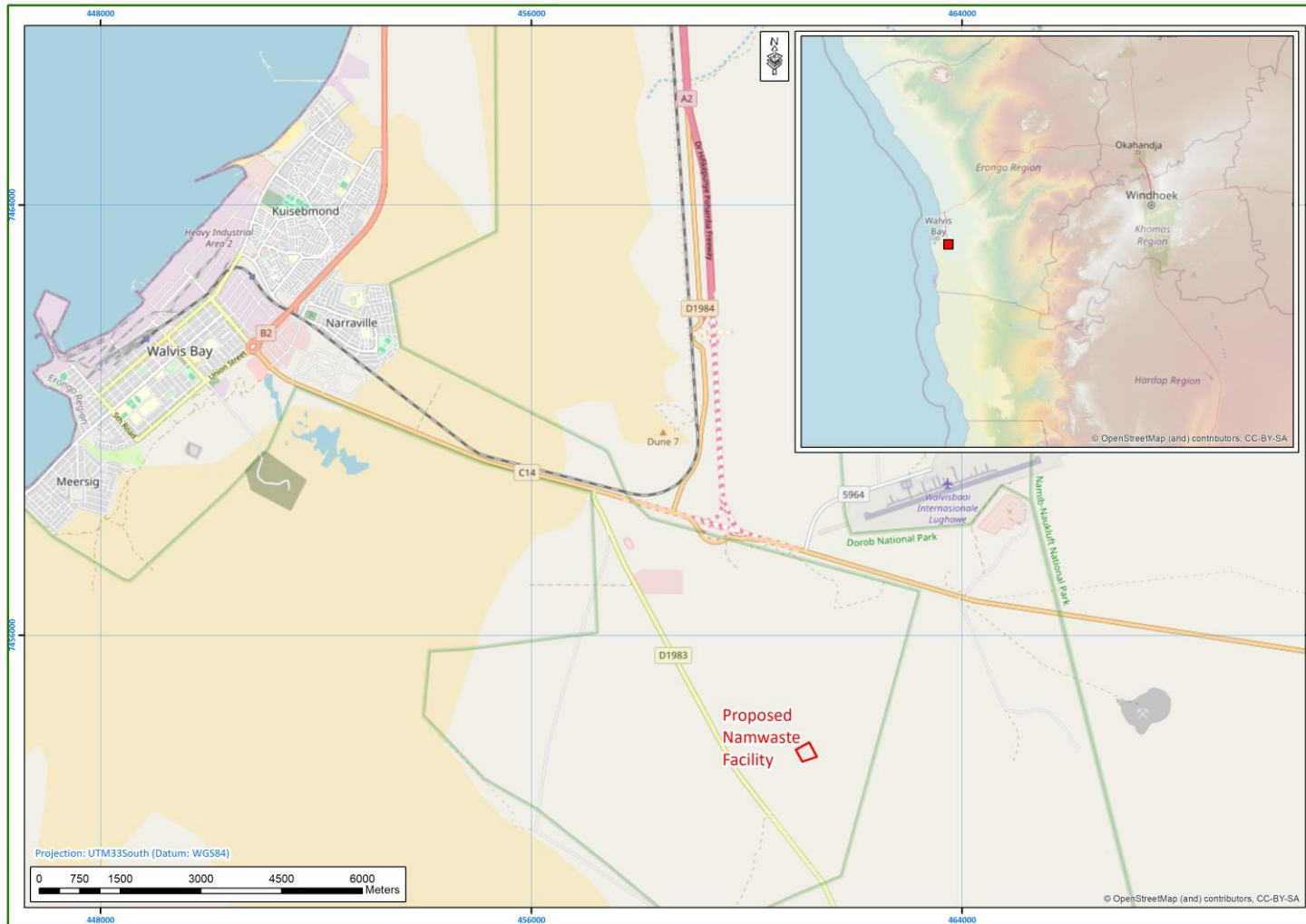


Figure 1: Project Location

2 ENVIRONMENTAL MANAGEMENT PLAN

This section provides an Environmental Management Plan (EMP) to summarise the mitigation and management actions outlined in the previous sections. This is done in order to streamline the implementation and monitoring thereof.

The applicant is to ensure full compliance not only with this EMP but also with all Namibian Legislation, and as far as possible all best practice guidelines.

The EMP is split into a Construction and Operation Phase, in Table 1 and Table 2 respectively. As no decommissioning phase is currently anticipated, it has been omitted from this Environmental Assessment Report.

Permitting requirements for the facility are provided within Table 3, with relevant monitoring requirements presented within Table 4.

Table 1: Environmental Management Plan – Construction Phase

Project activity or issue	Potential impact	Mitigating action	Responsible Person	Mitigating action
<i>Climate</i>				
Construction activities	Localised GHG emissions from construction vehicles and generators	<ul style="list-style-type: none"> Ensure that vehicles and machinery utilised are in good working order to minimise carbon exhaust emissions. Ensure vehicles and generators are used only when necessary. Use low sulphur diesel. 	Contractor Environmental Compliance Officer (monitoring)	Vehicle maintenance reports Monthly inspection reports
<i>Visual</i>				
Construction activities	Alteration in site aesthetics	<ul style="list-style-type: none"> Demarcate and fence all construction areas and ensure proper housekeeping to reduce visual impact of these areas. Ensure trenches are filled and compacted to restore the surface level prior to the addition of topsoil. Rehabilitate the temporary construction areas through the application of suitable topsoil. Install encased, directional emitting light fittings that are downward facing to reduce upward light generation. Where possible, paint structures with low reflective, high absorption paints to reduce light reflection. Use dark surfaces for roads and walkways to promote light absorption and reduce upward light reflection, where possible. 	Contractor Environmental Compliance Officer (monitoring)	Monthly construction reports Monthly inspection reports
<i>Land use</i>				
Construction activities	Change of land use	<ul style="list-style-type: none"> Demarcate areas to be disturbed and keep these to a minimum. Utilise the most practical access routes and municipal connection alignments to avoid natural areas as far as possible. 	Contractor Environmental Compliance Officer (monitoring)	Monthly construction reports Monthly inspection reports
<i>Topography and Drainage</i>				
	Alteration in local topography	<ul style="list-style-type: none"> No mitigation measures necessary 	N/A	N/A
<i>Air Quality</i>				
Construction activities	Increased dust generation which may impact sensitive receptors	<ul style="list-style-type: none"> Only remove vegetation when soil stripping is required and limit it to areas required for surface infrastructure. Adequate demarcation of these areas must be undertaken on the ground. Carry out watering of unsurfaced roads and cleared areas for dust suppression. Where watering is not effective to suppress dust, implement a chemical dust palliative. Provide personal protective equipment (PPE) to prevent or minimise dust inhalation by employees who may be exposed to dust. Avoid scabbling (roughening of concrete surfaces) if possible Ensure sand and other aggregates are stored in banded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place. Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport. 	Contractor Environmental Compliance Officer (monitoring)	Monthly construction reports Monthly inspection reports

Project activity or issue	Potential impact	Mitigating action	Responsible Person	Mitigating action
		<ul style="list-style-type: none"> Record all inspections of haul routes and any subsequent action in a site logbook. Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). 		
Noise				
Construction activities	Increase in noise emissions	<ul style="list-style-type: none"> Operate vehicles and equipment only during normal working hours, i.e., from Monday to Saturday from 06:00 to 18:00. Monitoring of noise levels, both ambient and occupational, should be undertaken in the event of a complaint being received. Regularly maintain equipment and machinery to ensure minimum noise levels during construction. Avoid unnecessary revving of engines and switch off equipment when not required. Audible reversing warning systems on mobile construction vehicles should be of a type which, whilst ensuring that they give proper warning, have a minimum noise impact on persons outside sites, where possible. When reversing, mobile plant and vehicles should travel in a direction away from sensitive receptors whenever possible. Where practicable, alternative reversing warning systems should be employed to reduce the impact of noise outside sites. 	Contractor Environmental Compliance Officer (monitoring)	Monthly construction reports Monthly inspection reports
		<ul style="list-style-type: none"> Set up and maintain a complaints mechanism for affected parties to voice their concerns. Implement actions to avoid or mitigate the reasons for their grievances. 	Environmental Compliance Manager	Established grievance mechanism
Groundwater				
Construction activities	Groundwater Contamination	<ul style="list-style-type: none"> Immediately clean up all accidental pollution (oil spills, diesel spills, concrete etc.). Implement proper pollution control measures to avoid contamination of soil and seepage into groundwater. Store all hazardous materials in appropriately bunded areas. Keep all relevant Material Safety Data sheets (MSDS) on site. Store, transport, use and dispose of chemicals as per the manual / MSDS. Implement standard procedures to control and minimise surface and groundwater pollution that include: <ul style="list-style-type: none"> Maintaining oil traps; Maintaining bunding of all facilities that store hazardous materials; Maintaining washing and ablution facilities; Providing and maintaining solid waste collection facilities; Providing spill kits and monitor spills; Monitoring vehicle oil leaks. 	Contractor Environmental Compliance Officer (monitoring) Environmental Compliance Manager	Monthly construction reports Monthly inspection reports Incident reports
Soil				
Construction activities	Hazardous spillage	<ul style="list-style-type: none"> Store hazardous substances in appropriately bunded areas. 	Contractor	Monthly construction reports

Project activity or issue	Potential impact	Mitigating action	Responsible Person	Mitigating action
		<ul style="list-style-type: none"> Use a drip-tray when refuelling vehicles or machinery. If a spillage occurs, clean it up immediately and dispose soil at an appropriate site, or store on site, as hazardous waste. 	Environmental Compliance Officer (monitoring) Environmental Compliance Manager	Monthly inspection reports Incident reports
<i>Fauna</i>				
Construction activities	Loss / Disturbance of fauna	<ul style="list-style-type: none"> No animal may be injured, fed, trapped, hunted or harmed in any way. Prevent destruction of rocky habitats and associated flora which serve as habitat to various terrestrial vertebrates (and invertebrates). When encountered on site, remove and relocate important slow-moving species such as tortoises, chameleon, etc. prior to construction activities as well as when serendipitously encountered throughout the proposed development areas. Prevent and discourage indiscriminate killing of perceived dangerous species (e.g. snakes, etc.) as this would diminish and negatively affect the local fauna. No form of poaching, illegal collecting of veld foods (e.g. bird eggs, etc.), etc. should be tolerated, especially during the construction phase. Educate/inform contractors and staff on dangerous and protected species to avoid and the consequences of killing and/or illegal collection of such species. Use only existing tracks/roads when travelling in the area. 	Contractor Environmental Compliance Officer (monitoring)	Monthly inspection reports Induction materials and attendance register
		<ul style="list-style-type: none"> Construct the evaporation pond with a mesh covering to limit accessibility to avifauna. Where feasible, install water scarecrows to minimize waterfowl from approaching the evaporation pond. Where feasible, investigate and install bird deterrents such as audio or visual deterrents to minimize waterfowl from approaching the evaporation pond (ensure that additional impacts are kept minimal) 	Contractor Environmental Compliance Officer (monitoring)	Monthly construction reports Monthly inspection reports
		<ul style="list-style-type: none"> Initiate a suitable and appropriate refuse removal policy as littering could result in certain animals becoming accustomed to humans and associated activity and result in typical problem animal scenarios – e.g. crows, black-backed jackal, brown hyena, various gulls, etc. 	Contractor Environmental Compliance Officer (monitoring)	Site specific waste management plan established
		<ul style="list-style-type: none"> When encountered on site, remove and relocate perceived dangerous species (e.g. snakes) to similar undisturbed habitats in the general area. Avoid off road driving in areas prone to scarring (e.g. gravel/gypsum/salt plains/flats/pans). Avoid nocturnal driving, as this may result in the destruction of slow-moving fauna – e.g. various reptiles and other nocturnal species. Avoid and/or limit the use of lights during nocturnal activities as this influence and/or affects various nocturnal species – e.g. especially migrating Palaearctic birds, bats, owls, etc. and contribute to “light pollution”. Use focused lighting for least effect. 	Contractor Environmental Compliance Officer (monitoring) Environmental Compliance Manager	Monthly construction reports Monthly inspection reports Incident reports
		<ul style="list-style-type: none"> Installation of portable toilets as a suitable contained sewerage system for the least impact on the environment. 	Contractor Environmental Compliance Officer (monitoring)	Monthly construction reports Monthly inspection reports
<i>Flora</i>				

Project activity or issue	Potential impact	Mitigating action	Responsible Person	Mitigating action
Construction activities	Loss / Disturbance of flora	<ul style="list-style-type: none"> • Avoid all areas not directly targeted for development infrastructures. • Prevent and discourage illegal collection of flora as this would diminish and negatively affect the local flora. • Use only existing tracks/roads when travelling in the area. • Avoid off road driving in areas prone to scarring (e.g. gravel/gypsum/salt plains/flats/pans) or dominated by lichens. • If any landscaping is to be undertaken, incorporate only indigenous vegetation. • Educate/inform contractors and staff on protected species to avoid and the consequences of illegal collection of such species. • Prohibit the use of any pesticides or herbicides. 	Contractor Environmental Compliance Officer (monitoring)	Monthly construction reports Monthly inspection reports
Alien Invasive Plant Species				
Construction activities	Establishment of alien invasive species	<ul style="list-style-type: none"> • Prevent the planting of potentially alien invasive plant species for ornamental purposes as part of the landscaping should this be thought necessary. • Remove and destroy all invasive alien plants encountered in the project area. • Implement a policy of “no tolerance” towards any invasive alien plant species encountered in future in the area. This should include the removal and destruction of these species throughout the proposed development areas. • Limit land clearing activities at the site and infrastructure areas to prevent random soil disturbances favouring invasive alien plant species. • Do not use chemicals to eradicate alien spp. but rather conduct manual methods. • Ensure that vehicles accessing the route are free of vegetation, especially if contractors are used which also use their vehicles in urban areas. • Do not plant any invasive alien plant species as part of the landscaping. • • Conduct annual maintenance (alien plant removal) after rainy season. 	Contractor Environmental Compliance Officer (monitoring) Environmental Compliance Manager	Induction materials and attendance register Monthly construction reports Monthly inspection reports Establishment of a site-specific alien and invasive management plan
			Environmental Compliance Manager	Bi-annual EMP compliance reporting
Socio-economic				
Construction activities	Increased Traffic	<ul style="list-style-type: none"> • Implement a traffic management plan to regulate movement of heavy vehicles within the facility. • Coordinate construction vehicle movements to ensure efficient flow, particularly between 08:00 and 17:00. • Implement signage and speed control measures on site to improve road safety for both construction vehicles and other road users. • Schedule regular maintenance of impacted roads on site, particularly the gravel sections, to address wear and tear caused by heavy construction vehicles. • Promptly repair any road damage on site to ensure safe and smooth traffic flow during construction. 	Contractor Environmental Compliance Officer (monitoring)	Establishment of a site-specific traffic management plan Vehicle maintenance records

Project activity or issue	Potential impact	Mitigating action	Responsible Person	Mitigating action
Construction activities	Employment Opportunities	<ul style="list-style-type: none"> Require contractors to adhere to local recruitment policies. Contractors should actively liaise with the Walvis Bay Municipality, local job centres and community groups to identify and recruit potential candidates from Walvis Bay. Ensure that all contractors comply with national labour laws, including fair wages, working conditions, and non-discriminatory practices. This compliance should be regularly monitored and enforced. Contractors to provide pre-construction training programmes to equip construction workers with the necessary skills for construction work. This can include basic construction skills, safety training, and specialised skills for operating machinery. Contractors to implement targeted recruitment strategies to encourage the participation of women in the construction workforce. This includes offering training programmes tailored to women, providing flexible working conditions, and ensuring a safe working environment. 	Contractor Procurement Manager	Training materials and attendance registers Local employment requirements incorporated into contractor appointment
		<ul style="list-style-type: none"> Promote the involvement of local SMEs by providing them with opportunities to supply goods and services to the construction project. This can include subcontracting work to local construction firms and purchasing materials from local suppliers. 	Contractor Procurement Manager	Engagement with local SMEs
		<ul style="list-style-type: none"> Conduct comprehensive health and safety training for all construction workers. This should cover the use of personal protective equipment (PPE), safe handling of materials, and emergency response procedures. Establish a system for monitoring and reporting on the employment of local workers. This should include regular updates on the number of local hires, the types of jobs they are performing, and any training they have received. 	Contractor Health, Safety and Environment Manager (monitoring)	Induction materials and attendance register PPE register Reporting on number of local employees
Construction activities	Health and Safety - Exposure to hazards	<ul style="list-style-type: none"> Develop, implement and maintain comprehensive health and safety protocols, including regular safety training for all workers. Ensure the use of personal protective equipment (PPE) for all workers on-site. Ensure that all workers involved in material transfer are trained in safe handling practices. Establish designated routes for the transportation of building materials to minimise the risk of accidents. 	Contractor Health, Safety and Environment Manager (monitoring)	Induction materials and attendance register PPE register
		<ul style="list-style-type: none"> Use covered trucks for transporting materials to minimise dust emissions. Conduct regular maintenance and inspection of machinery and equipment to prevent malfunctions and accidents. Clearly mark hazardous areas and restrict access to authorised personnel only. Implement safe handling practices for the transfer of building materials, including the use of appropriate lifting equipment and techniques. 	Contractor Environmental Compliance Officer (monitoring)	Monthly construction reports Monthly inspection reports Vehicle maintenance records
		<ul style="list-style-type: none"> Apply dust suppression techniques, such as regular watering of construction areas and roads. 	Contractor Environmental Compliance Officer (monitoring)	Monthly inspection reports

Project activity or issue	Potential impact	Mitigating action	Responsible Person	Mitigating action
Archaeology				
Construction Activities	Destruction of undiscovered archaeological heritage	<ul style="list-style-type: none"> Engage with the National Heritage Council (NHC) of Namibia regarding the proposed project. Educate all staff on the provisions of the National Heritage Act 27 of 2004 with regard to the protection of all archaeological sites and the need to report any new finds. Should a possible or suspected site be discovered (e.g. a grave), immediately stop work, cordon the area off and photograph the area/site; immediately inform the project manager/supervisor, and contact an Archaeologist and the NHC of Namibia. Should a grave site be discovered, the Namibian Police should be contacted together with the NHC. Under no circumstances are archaeological and/or cultural heritage sites to be disturbed or any relics to be removed from such a site. 	Contractor Environmental Compliance Officer (monitoring)	Induction materials and attendance register Incident Reports

Table 2: Environmental Management Plan – Operational Phase

Project activity or issue	Potential impact	Mitigating action	Responsible Person	Mitigating action
<i>Climate</i>				
Operational activities	Increased GHG emissions	<ul style="list-style-type: none"> Ensure that vehicles and machinery utilised are in good working order to minimise carbon exhaust emissions. Ensure vehicles and generators are used only when necessary. Use low sulphur diesel. 	Operations Manager Health, Safety and Environment Manager (monitoring)	Vehicle maintenance reports Fuel logs
<i>Visual</i>				
Operational activities	Light generation	<ul style="list-style-type: none"> Maintain all painted surfaces and repaint regularly (as needed). Monitor, maintain and where feasible upgrade light sources as new and more efficient technologies become available. 	Operations Manager	Maintenance inspections and reports
<i>Air Quality</i>				
Operational activities	Increased emissions	<ul style="list-style-type: none"> Keep vehicles in good working order. Use low sulphur diesel. Provide personal protective equipment (PPE) to prevent or minimise dust inhalation by employees who may be exposed to dust. 	Operations Manager Health, Safety and Environment Manager (Monitoring)	Vehicle maintenance reports Fuel logs PPE register
		<ul style="list-style-type: none"> Set up a network of dust gauges to determine dust fallout at areas with intensive activity and also close to sensitive receptors. 	Environmental Compliance Manager	Monthly air quality reports
<i>Noise</i>				
Operational activities	Increase in noise emissions	<ul style="list-style-type: none"> Should any complaints be received, monitor noise levels within operational areas. Both ambient and occupational exposure levels should be measured and corrective actions implemented to reduce any observed exceedances. Regularly maintain equipment and machinery to ensure minimum noise levels during operations. Avoid unnecessary revving of engines and switch off equipment when not required. Keep internal access routes well maintained and avoid steep gradients. Where practicable, start-up plant and vehicles sequentially rather than all together. The movement of plant equipment onto and around the site should have regard to the normal operating hours of the site or surrounding environment. Audible reversing warning systems on mobile plant and vehicles should be of a type which, whilst ensuring that they give proper warning, have a minimum noise impact on persons outside sites, where possible. When reversing, mobile plant and vehicles should travel in a direction away from sensitive receptors whenever possible. Where practicable, alternative reversing warning systems should be employed to reduce the impact of noise outside sites. 	Operations Manager Health, Safety and Environment Manager (monitoring)	Vehicle maintenance reports Routine access route checks
		<ul style="list-style-type: none"> Set up and maintain a complaints mechanism for affected parties to voice their concerns. Implement actions to avoid or mitigate their grievances. 	Environmental Compliance Manager	Established grievance mechanism

Project activity or issue	Potential impact	Mitigating action	Responsible Person	Mitigating action
Groundwater				
Operational activities	Groundwater Contamination	<ul style="list-style-type: none"> • Immediately clean up all accidental pollution (oil spills, diesel spills, concrete etc.). • Implement proper pollution control measures to avoid contamination of soil and seepage into groundwater. • Keep all relevant Material Safety Data sheets (MSDS) on site. • Store, transport, use and dispose of chemicals as per the manual / MSDS. • Implement standard procedures to control and minimise surface and groundwater pollution that include: <ul style="list-style-type: none"> - Maintaining oil traps; - Maintaining bunding of all facilities that store hazardous materials; - Maintaining washing and ablution facilities; - Providing and maintaining solid waste collection facilities; - Providing spill kits and monitor spills; and - Monitoring vehicle oil leaks. • Establishing a regular schedule for groundwater sampling, typically bi-annually, to track changes over time. • Follow standardised procedures for purging and sampling to minimise contamination and ensure accurate results. • Analyse samples for various parameters, including major ions, organic, and hydrocarbons. • Water levels in the boreholes should be monitored monthly. • Analyse collected data and report identified trends, potential contamination events, and compliance with regulatory standards. 	Operations Manager Health, Safety and Environment Manager (monitoring) Environmental Compliance Manager	Incident reports Monthly groundwater level database Biannual groundwater analysis reports
Soil				
Operational activities	Hazardous spillage	<ul style="list-style-type: none"> • Store hazardous substances in appropriately bunded areas. • Use a drip-tray when refuelling vehicles or machinery. • If a spillage occurs, clean it up immediately and dispose soil at an appropriate site, or store on site, as hazardous waste. 	Operations Manager Health, Safety and Environment Manager (monitoring)	Vehicle maintenance records Incident reports
Fauna				
Operational activities	Loss / Disturbance of fauna	<ul style="list-style-type: none"> • No animal may be injured, fed, trapped, hunted or harmed in any way. • Remove and relocate important slow-moving species such as tortoises, chameleon, etc. when serendipitously encountered throughout the proposed development areas. • Prevent and discourage indiscriminate killing of perceived dangerous species (e.g. snakes, etc.) as this would diminish and negatively affect the local fauna. No form of poaching, illegal collecting of veld foods (e.g. bird eggs, etc.), etc. should be tolerated, especially during the construction phase. • Educate/inform contractors and staff on dangerous and protected species to avoid and the consequences of killing and/or illegal collection of such species. 	Operations Manager Health, Safety and Environment Manager (monitoring)	Induction materials and attendance register

Project activity or issue	Potential impact	Mitigating action	Responsible Person	Mitigating action
		<ul style="list-style-type: none"> Maintain avifaunal deterrents for the evaporation pond. Record and monitor bird sightings associated with the site. 	Operations Manager Environmental Compliance Manager	Maintenance reports Incident reports
		<ul style="list-style-type: none"> Initiate a suitable and appropriate refuse removal policy as littering could result in certain animals becoming accustomed to humans and associated activity and result in typical problem animal scenarios 	Operations Manager Environmental Compliance Manager	Established waste management plan
		<ul style="list-style-type: none"> Remove and relocate perceived dangerous species (e.g. snakes) to similar undisturbed habitats in the general area, when encountered on site. Avoid all areas, especially rocky areas on the eastern/southeastern boundary, not directly targeted for development infrastructures. Use only existing tracks/roads when travelling in the area. Avoid off road driving in areas prone to scarring (e.g. gravel/gypsum/salt plains/flats/pans). Avoid nocturnal driving, as this may result in the destruction of slow-moving fauna – e.g. various reptiles and other nocturnal species. Avoid and/or limit the use of lights during nocturnal activities as this influence and/or affects various nocturnal species – e.g. especially migrating Palaearctic birds, bats, owls, etc. and contribute to “light pollution”. Use focused lighting for least effect. 	Operations Manager Health, Safety and Environment Manager (monitoring) Environmental Compliance Manager	Incident reports Groundwater level monitoring reports
<i>Flora</i>				
Operational activities	Loss / Disturbance of flora	<ul style="list-style-type: none"> Avoid off road driving in areas prone to scarring (e.g. gravel/gypsum/salt plains/flats/pans) or dominated by lichens. Prevent and discourage illegal collection of flora as this would diminish and negatively affect the local flora. Educate/inform contractors and staff on protected species to avoid and the consequences of illegal collection of such species. Prohibit the use of any pesticides or herbicides. 	Operations Manager Health, Safety and Environment Manager (monitoring)	Visual observations/checklists Induction materials and attendance register
Alien Invasive plant species				
Operational activities	Establishment of alien invasive species	<ul style="list-style-type: none"> Prevent the planting of potentially alien invasive plant species for ornamental purposes as part of the landscaping should this be thought necessary. Implement a policy of “no tolerance” towards any invasive alien plant species encountered in future in the area. This should include the removal and destruction of these species throughout the proposed development areas. Remove and destroy all invasive alien plants encountered in the project area. Do not use chemicals to eradicate alien spp. but rather conduct manual methods. Ensure that vehicles accessing the route are free of vegetation, especially if contractors are used which also use their vehicles in urban areas. Do not plant any invasive alien plant species as part of the landscaping. 	Environmental Compliance Manager Operations Manager Health, Safety and Environment Manager (monitoring) Environmental Compliance Manager	Visual observations/checklists Establishment of a site-specific alien and invasive management plan

Project activity or issue	Potential impact	Mitigating action	Responsible Person	Mitigating action
		<ul style="list-style-type: none"> Conduct annual maintenance (alien plant removal) after rainy season 	Operations Manager Health, Safety and Environment Manager (monitoring) Environmental Compliance Manager	Bi-annual EMP compliance reporting
<i>Socio-economic</i>				
Operational activities	Increased Traffic	<ul style="list-style-type: none"> Implement a traffic management plan to monitor the impact of additional vehicles and minimise congestion within the facility. Schedule truck movements to avoid peak traffic times and ensure efficient flow, particularly between 08:00 and 17:00 on weekdays (i.e., Monday - Friday). Implement safety protocols, including speed control measures and clear signage on site. Conduct regular safety audits and training for truck drivers. Schedule noisy activities during less sensitive hours to minimise disruption to residents, specifically between 08:00 and 17:00 on weekdays (Monday to Friday). On Saturdays, operations should occur from 07:00 to 13:00. On public holidays and Sundays, operations should be limited, with noise generating activities limited. Schedule regular maintenance of impacted roads at the site, particularly the current gravel sections, to address wear and tear caused by heavy vehicles. Promptly repair any road damage at the site to ensure safe and smooth traffic flow during operations. 	Operations Manager Health, Safety and Environment Manager (monitoring)	Establishment of a site-specific traffic management plan Induction materials and attendance register Vehicle maintenance records Road inspection and maintenance records
Operational activities	Employment Opportunities	<ul style="list-style-type: none"> Implement policies that prioritise hiring from within Walvis Bay, from within the Erongo Region and then within Namibia. Collaborate closely with local job centres, community groups, and educational institutions to identify and recruit qualified individuals. Where possible, develop strategies to promote gender equality in recruitment and hiring practices. This includes actively encouraging applications from women and implementing policies that ensure fair treatment and advancement opportunities for both genders. Partner with local organisations and initiatives that support women's empowerment and workforce integration. Where possible, forge partnerships with reputable institutions such as Namibia University of Science and Technology (NUST) to design and implement tailored training programmes. These initiatives should equip Namibian residents, including women, with essential technical and managerial skills crucial for careers in the waste management sector and the circular economy. Establish structured internship and apprenticeship programmes aimed at providing practical experience to local residents, including recent graduates and students from Namibian educational institutions. Offer support to ongoing education and certification opportunities to employees participating in the workforce, with a focus on promoting 	Human Resources Public Relations Manager	Internal recruitment policies focusing on local employment and promoting gender equality Memorandum of understanding with relevant partnerships Internal policies promoting career development and enhancement

Project activity or issue	Potential impact	Mitigating action	Responsible Person	Mitigating action
		gender balance in training initiatives. This ensures continuous skill development and supports long-term career growth within the sector.		
Operational activities	Health and Safety - Exposure to hazards	<ul style="list-style-type: none"> Conduct regular safety training for all workers, focusing on the safe handling of hazardous materials and chemicals and the operation of machinery. Ensure continuous use of personal protective equipment (PPE) for all workers, including respiratory protection, gloves, and safety goggles. Implement dust suppression techniques, such as regular watering of operational areas and roads if applicable. Use covered trucks for transporting waste materials to minimise dust emissions. Install air quality monitoring stations around the site to manage pollutant levels and ensure compliance with environmental standards. Perform regular maintenance and inspection of machinery and equipment to prevent accidents and ensure safe operation. Clearly mark hazardous areas with restricted access and provide appropriate signage and safety barriers. Develop, implement and maintain comprehensive emergency response plans, including procedures for handling spills, fires, and other emergencies both on site and along transport routes. Conduct regular emergency drills to ensure readiness and familiarise workers with emergency protocols. Implement strict protocols for the storage, handling, and disposal of hazardous materials to prevent accidents and exposure. 	Operations Manager Health, Safety and Environment Manager	Induction materials and attendance register PPE register Established emergency response and preparedness plan Emergency drills attendance registers
Operational activities	Economic Opportunities	<ul style="list-style-type: none"> Where possible, prioritise local suppliers and contractors for services and supplies needed for the facility's operations. Where possible, invest in community development projects, such as infrastructure, healthcare, and education, as part of the CSR initiatives to improve the wellbeing of local residents. Support improvements in waste value-chain operations, including sorting at source, recycling, and reuse, to promote sustainability and local economic opportunities. 	Procurement Manager Public Relations Manager	Internal policies promoting local suppliers and contractors Internal corporate social responsibility initiatives
<i>Archaeology</i>				
Operational activities	Destruction of undiscovered archaeological heritage	<ul style="list-style-type: none"> Educate all staff on the provisions of the National Heritage Act 27 of 2004 with regard to the protection of all archaeological sites and the need to report any new finds. Should a possible or suspected site be discovered (e.g. a grave), immediately stop work, cordon the area off and photograph the area/site; immediately inform the project manager/supervisor, and contact an Archaeologist and the NHC of Namibia. Under no circumstances are archaeological and/or cultural heritage sites to be disturbed or any relics to be removed from such a site. 	Operations Manager Health, Safety and Environment Manager (monitoring)	Induction materials and attendance register Incident Reports

Table 3: Permitting Requirements

Legislation	Regulatory Authority	Permit/Approval	Contact Details
Nature Conservation Ordinance 4 of 1975 (and amendments) (and the Regulations Relating to Nature Conservation 1976 and the amended Regulations)	Ministry of Environment, Forestry and Tourism (MEFT)	A permit is required prior to the picking, cutting/chopping/picking off, taking, gathering, uprooting, damaging or destroying, or transporting any protected plant.	Mr Johnson Ndokosho Director, Directorate of Forestry Tel: 081-9528544 (Permit Reception) E-mail: johnson.ndokosho@mef.gov.na
Petroleum Products and Energy Act 1990 (and amendments) and the Petroleum Products Regulations 2000 (and amendments)	Ministry of Industries, Mines and Energy (MIME)	Consumer Installation Certificate	Mr Andreas Sheehama Chief Petroleum Inspector Tel: 284 8300 Email: Andreas.Sheehama@mme.gov.na Email: Andreassheehama77@gmail.com
National Heritage Act 27 of 2004 (as amended by the State-owned Enterprises Governance Act 2 of 2006, later re-named the Public Enterprises Governance Act 2 of 2006, and the Abolition of Payment by Cheque Act 16 of 2022 (and the National Heritage Regulations 2005)	Ministry of Education, Arts and Culture	Inform the National Heritage Council of Namibia should any archaeological material be found during the construction/operational phases.	Ms Erica Ndalikokule Acting Director 52 Robert Mugabe Avenue Windhoek Tel: 061-244375 Email: info@nhc-nam.org

Legislation	Regulatory Authority	Permit/Approval	Contact Details
Environmental Management Act 7 of 2007 (and the Environmental Impact Assessment Regulations 2012)	Ministry of Environment, Forestry and Tourism (MEFT), Directorate of Environmental Affairs and Forestry (DEAF)	Environmental Clearance Certificate	Mr Timoteus Mufeti Environmental Commissioner Tel. 081-9528609 (Environmental Affairs Reception) Email: Timoteus.Mufeti@meft.gov.na
Labour Act 11 of 2007 (as amended by the Labour Amendment Act 2 of 2012, the Whistleblower Protection Act 10 of 2017, and the Abolition of Payment by Cheque Act 16 of 2022) (and the Regulations relating to the Health and Safety of Employees at Work 1997, the General Regulations 2008, and the Regulations relating to Domestic Workers 2017)	Ministry of Justice and Labour Relations	Permission is needed to run 12-hour shifts (should it be required)	Ms Kyllikki Sihlahla Labour Commissioner Tel. 061-2066800 Email: Kyllikki.Sihlahla@mol.gov.na
Water Resources Management Act 11 of 2013 (and the Water Resources Management Regulations 2023 and the Regulations relating to appeals to Water Tribunal 2023)	Ministry of Agriculture, Fisheries, Water and Land Reform (MAFWLR)	Water Licenses	Mr Teofilus Nghitila Executive Director/Water and Marine Resources Accounting Officer Tel: 061-2087691 Email: ED-TNPA@mawlr.gov.na

Table 4: Monitoring Requirements

Type	Parameter	Frequency
Air Quality	Dust fallout, NO ₂ , SO ₂	Monthly from the onset of construction activities and throughout the life of the facility
Groundwater levels	Groundwater levels	Monthly from the onset of construction activities and throughout the life of the facility, dependent on the conditions of Licenses issued by MAFWLR
Groundwater quality	Groundwater quality (standard parameters, metals, major ions, pesticide and fertilizer traces)	Biannually from the onset of construction phase throughout the life of the facility, dependent on the conditions of Licenses issued by MAFWLR
Consumer Fuel Installation	As per the MIME's conditions to the Consumer Installation Certificate	
Hazardous materials management	Hydrocarbon spills of more than 200 litres	<i>Ad hoc</i> ; inform the Minister, MIME by completing form PP/11 (Petroleum Products Regulations 2000)
Stormwater and soil erosion	Soil erosion rates	<i>Ad hoc</i> (rainy season)
Invasive plant species	Identification, uprooting and destruction of any alien and invasive plants in the site boundaries and along access routes.	Annually from onset of the construction activities and throughout the life of the facility
Environmental Management Plan (EMP)	Implement and observe the EMP; Environmental performance / corrective measures to be taken as or when required	Environmental Monitoring Reports to be submitted to the Directorate of Environmental Affairs and Forestry (DEAF), Ministry of Environment, Forestry and Tourism (MEFT) every six (6) months

3 CONCLUSION

This Environmental Management Plan report will be submitted to the MEFT for review, and for a decision whether to grant or refuse the ECC application.

The way forward for the scoping phase are as follows:

- Submission of final Report to MEFT for review
- MEFT to provide a record of decision
- Notify registered I&APs of the final outcome.

The Environmental Assessment Report is considered to have sufficiently identified the potential impacts associated with the proposed integrated waste management facility. Mitigation measures were identified for the promotion of positive impacts and minimisation of negative impacts, as provided for within the EMP.

Negotiations with the Walvis Bay Municipality are still currently underway to secure service provision for the proposed project. It is recommended that once consent from the Municipal Council has been received, that an assessment of the available municipal water supply be undertaken with consideration of the future demand for the town of Walvis Bay to ensure adequate supply will be available for the project.

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5 CERTIFICATION

This report was prepared and reviewed by the undersigned.

Prepared:

Lloyd Lynch, Senior Environmental Scientist
Knight Piésold (Pty) Ltd



Joseph Mulders, Senior Environmental Scientist
Knight Piésold (Pty) Ltd



Lima Maartens, Environmental Assessment Practitioner
LM Environmental Consulting



Reviewed: _____
Amelia Briel, Section Manager: Environmental
Knight Piésold (Pty) Ltd

Approved:



Cilliers Mostert, Managing Director
Knight Piésold Consulting (Pty) Ltd

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