APP-005968
OPERATIONS OF THE PAINT RELATED MANUFACTURING PLANT OF NEO PAINTS FACTORY IN BRAKWATER, WINDHOEK

UPDATED ENVIRONMENTAL MANAGEMENT PLAN

Prepared by:

Prepared for:

June 2025

Project:	**OPERATIONS OF THE PAINT RELATED MANUFACTURING PLANT OF NEO PAINTS FACTORY IN BRAKWATER, WINDHOEK**	
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Report Approval	 **André Faul** **Conservation Ecologist**	

I, Cornelius Heita, acting as representative of Neo Paints Factory (Pty) Ltd, hereby confirm that the project description contained in this report is a true reflection of the information which the Proponent provided to Geo Pollution Technologies. All material information in the possession of the Proponent that reasonably has or may have the potential of influencing any decision or the objectivity of this assessment is fairly represented in this report and the report is hereby approved.

Signed at Windhoek on the 24 day of June 2025.

Neo Paints Factory (Pty) Ltd

Reg. No. 2002/214

Business Registration/ID No.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1 BACKGROUND AND INTRODUCTION

Geo Pollution Technologies (Pty) Ltd was appointed by Neo Paints Factory (Pty) Ltd to update the existing environmental management plan (EMP) for the operations of their paint manufacturing plant in Brakwater, Windhoek. The updated EMP will be submitted to the Ministry of Environment, Forestry and Tourism (MEFT) to renew the existing environmental clearance certificate (ECC) of the facility. The ECC is a legal requirement for the continued operations of the paint manufacturing plant as per the Environmental Management Act of 2007. The update aims at including the operations and potential upgrade activities of the facility. The facility is located adjacent to Carin Park in Brakwater, Windhoek. (Figure 1-1).

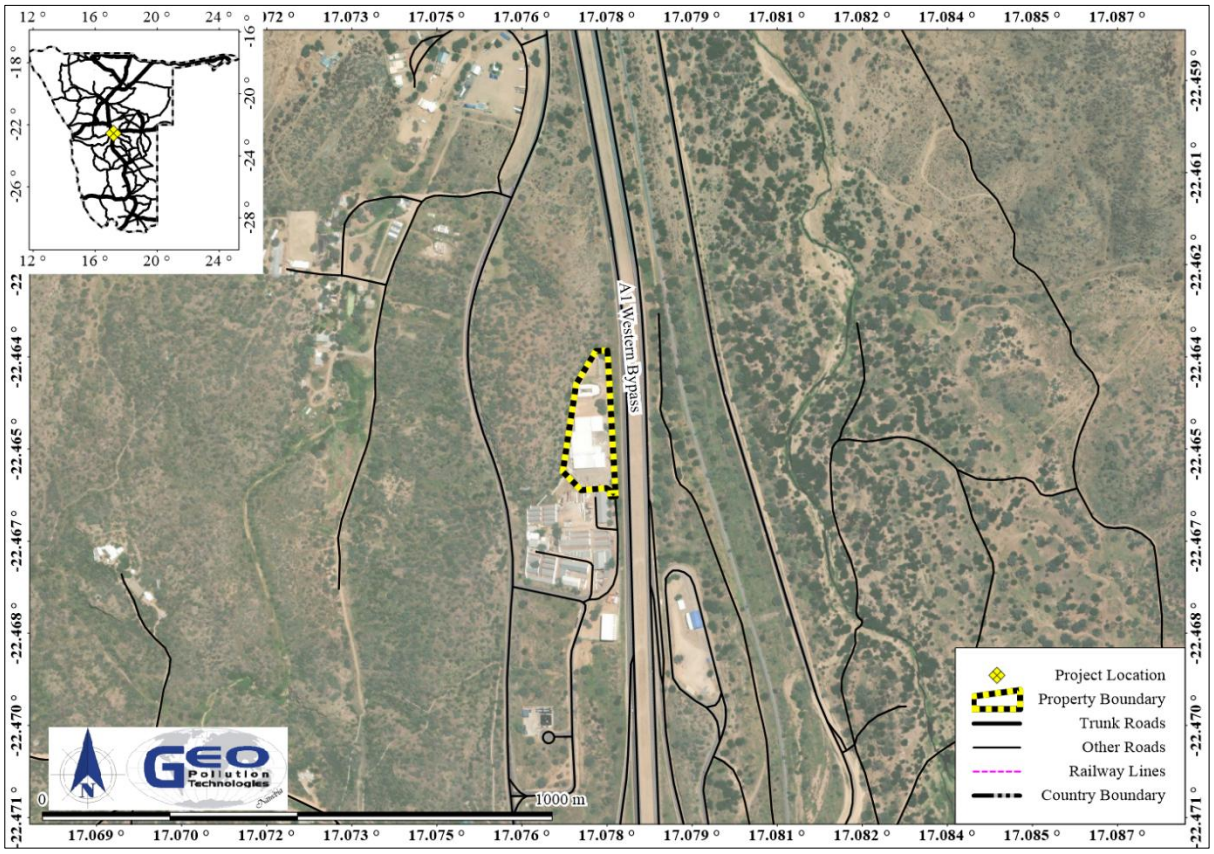

Figure 1-1 Project Location

2 SCOPE

The existing EMP is based on an environmental assessment conducted for Neo Paints in 2019 (Botha, et al. 2019). The scope of this EMP, in compliance with the requirements of EMA, is to:

- Provide a brief overview of all components of the paint manufacturing plant.
- Update the legal and regulatory framework within which the project operates.
- Where needed update the range of management actions which could mitigate the potential adverse impacts to acceptable levels.
- To provide sufficient information to the MEFT to make informed decisions regarding the renewal of the ECC.

3 PROJECT DISRIPTION

The Proponent operates a paint manufacturing facility in the Brakwater area of Windhoek. The site includes manufacturing, warehousing, administrative offices, and a retail outlet. The facility produces both water-based and solvent-based paints, with supporting infrastructure for raw material storage, finished goods warehousing, and dispatch.

Manufacturing activities are divided into four functional areas within the main factory unit. These include storage of pigments and raw materials (such as titanium dioxide), mixing and dissolving areas for each paint type, and a packaging area for filling, labelling, and dispatch of finished products. A quality control laboratory and research and development unit support compliance with product standards. Extraction systems are installed throughout the facility to control dust and solvent vapours during production.

Maintenance and mechanical services are located in a dedicated workshop and wash bay. Solvent-based pots are cleaned using methyl isobutyl ketone (MIBK), with solvents recovered via an on-site distillation system. Wash water from water-based operations is pre-treated and either reused or disposed of in accordance with the City of Windhoek's effluent discharge permit.

Operational support infrastructure includes a powder production unit for crack filler, a quality control laboratory for testing finished paint products, and a designated area for sorting and recycling solid waste. Mixing and packaging are conducted in the dedicated area equipped with permanent dust extraction systems

The site houses three underground storage tanks for turpentine, thinners and xylene, which are filled every 6 to 8 weeks. Compressed air is supplied by two compressors for use in pneumatic systems, while a backup generator with a day tank ensures continuity of operations during power outages. An electric boiler is used periodically for the production of Neo Glue.

Health and safety infrastructure includes emergency wash stations, fire extinguishers, warning signage, and protective barriers around critical equipment. The site receives power from NamPower and is secured with perimeter walls, electric fencing, and 24-hour access control.

The facility operates in accordance with all applicable municipal and national permits. Environmental management measures are in place for solvent recovery, emission control, wastewater handling, and waste disposal. Regular monitoring and compliance checks are conducted under the facility's environmental management system to ensure continued adherence to best practice standards.

4 ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

To protect the environment and achieve sustainable development, all projects, plans, programmes and policies deemed to have adverse impacts on the environment require an environmental assessment, as per the Namibian legislation. The legislation and standards provided in Table 4-1 to Table 4-3 to govern the environmental assessment process in Namibia and/or are relevant to the plant.

Table 4-1 Namibian Law Applicable to the Paint Manufacturing Plant

Law	Key Aspects
The Namibian Constitution	♦ Promote the welfare of people ♦ Incorporates a high level of environmental protection ♦ Incorporates international agreements as part of Namibian law
Environmental Management Act Act No. 7 of 2007, Government Notice No. 232 of 2007	♦ Defines the environment ♦ Promote sustainable management of the environment and the use of natural resources ♦ Provide a process of assessment and control of activities with possible significant effects on the environment
Environmental Management Act Regulations Government Notice No. 28-30 of 2012	♦ Commencement of the Environmental Management Act ♦ List activities that requires an Environmental Clearance Certificate ♦ Provide Environmental Impact Assessment Regulations

Law	Key Aspects
Water Resources Management Act Act No. 11 of 2013	♦ Provide for management, protection, development, use and conservation of water resources ♦ Prevention of water pollution and assignment of liability
Local Authorities Act Act No. 23 of 1992, Government Notice No. 116 of 1992	♦ Define the powers, duties and functions of local authority councils ♦ Regulates discharges into sewers
Public and Environmental Health Act Act No. 1 of 2015, Government Notice No. 86 of 2015	♦ Provides a framework for a structured more uniform public and environmental health system, and for incidental matters ♦ Deals with Integrated Waste Management including waste collection disposal and recycling; waste generation and storage; and sanitation.
Labour Act Act No 11 of 2007, Government Notice No. 236 of 2007	♦ Provides for Labour Law and the protection and safety of employees ♦ Labour Act, 1992: Regulations relating to the health and safety of employees at work (Government Notice No. 156 of 1997)
Atmospheric Pollution Prevention Ordinance Ordinance No. 11 of 1976	♦ Governs the control of noxious or offensive gases ♦ Prohibits scheduled process without a registration certificate in a controlled area ♦ Requires best practical means for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process
Hazardous Substances Ordinance Ordinance No. 14 of 1974	♦ Applies to the manufacture, sale, use, disposal and dumping of hazardous substances as well as their import and export ♦ Aims to prevent hazardous substances from causing injury, ill-health or the death of human beings
Pollution Control and Waste Management Bill (draft document)	♦ Not in force yet ♦ Provides for prevention and control of pollution and waste ♦ Provides for procedures to be followed for licence applications

Table 4-2 Municipal By-laws, Guidelines and Regulations

Municipal By-laws, Guidelines or Regulations (City of Windhoek)	Key Aspects
Groundwater Protection Regulations	♦ Provides for the protection of groundwater, landscape and vegetation sensitivity ♦ Requires an EIA and EMP for projects that may potentially impact on groundwater ♦ Identifies three groundwater control zones: medium, high and very high.
Windhoek Environmental Structure Plan and Environmental Policy	♦ Integrates spatial planning decision-making, environmental planning and environmental impact management
Town Planning Scheme	♦ Enables the comprehensive management of all property and related public sector functions across the city. ♦ Provides for the protection of groundwater and the environment.
Sewerage and Drainage Regulations	♦ Regulates discharges into sewer systems. ♦ Provides standards to which effluents entering a sewer system must adhere.

	♦ Regulates storm water run-off.

Table 4-3 Relevant Multilateral Environmental Agreements for Namibia and the Development

Agreement	Key Aspects
Stockholm Declaration on the Human Environment, Stockholm 1972.	♦ Recognizes the need for a common outlook and common principles to inspire and guide the people of the world in the preservation and enhancement of the human environment.
1985 Vienna Convention for the Protection of the Ozone Layer	♦ Aims to protect human health and the environment against adverse effects from modification of the Ozone Layer are considered. ♦ Adopted to regulate levels of greenhouse gas concentration in the atmosphere.
United Nations Framework Convention on Climate Change (UNFCCC)	♦ The Convention recognises that developing countries should be accorded appropriate assistance to enable them to fulfil the terms of the Convention.
Convention on Biological Diversity, Rio de Janeiro, 1992	♦ Under article 14 of The Convention, EIAs must be conducted for projects that may negatively affect biological diversity.

4.1 ENVIRONMENTAL MANAGEMENT PLAN

The EMP provides management options to ensure impacts of the plant is minimised. An EMP is a tool used to take pro-active action by addressing potential problems before they occur. This should limit the corrective measures needed, although additional mitigation measures might be included if necessary. The environmental management measures are provided in the tables and descriptions below. These management measures should be adhered to during the various phases of the operation of the plant. This section of the report can act as a stand-alone document. All personnel taking part in the operations of the plant should be made aware of the contents in this section, so as to plan the operations accordingly and in an environmentally sound manner.

The objectives of the EMP are:

- to include all components of construction activities and operations of the plant;
- to prescribe the best practicable control methods to lessen the environmental impacts associated with the project;
- to monitor and audit the performance of operational personnel in applying such controls; and
- to ensure that appropriate environmental training is provided to responsible operational personnel.

Various potential and definite impacts will emanate from the construction, operations and decommissioning phases. The majority of these impacts can be mitigated or prevented. The impacts, risk rating of impacts as well as prevention and mitigation measures are listed below.

4.1.1 Planning

During the phases of planning for future operations, construction and decommissioning of the plant, it is the responsibility of the Proponent to ensure they are and remain compliant with all legal requirements. The Proponent must also ensure that all required management measures are in place prior to and during all phases, to ensure potential impacts and risk are minimised. The following actions are recommended for the planning phase and should continue during various other phases of the project:

- Ensure that all necessary permits from the various ministries, local authorities and any other bodies that governs the construction activities and operations of the project remains valid.

- Ensure all appointed contractors and employees are enter into an agreement which includes the EMP. Ensure that the contents of the EMP are understood by the contractors, sub-contractors, employees and all personnel present or who will be present on site.
- Make provisions to have a Health, Safety and Environmental Coordinator to implement the EMP and oversee occupational health and safety as well as general environmental related compliance at the site.
- Have the following emergency plans, equipment and personnel on site where reasonable to deal with all potential emergencies:
    - Risk management / mitigation / EMP/ Emergency Response Plan and HSE Manuals
    - Adequate protection and indemnity insurance cover for incidents;
    - Comply with the provisions of all relevant safety standards;
    - Procedures, equipment and materials required for emergencies.
- If one has not already been established, establish and maintain a fund for future ecological restoration of the project site should project activities cease and the site is decommissioned and environmental restoration or pollution remediation is required.
- Establish and / or maintain a reporting system to report on aspects of construction activities, operations and decommissioning as outlined in the EMP.
- Keep monitoring reports on file for submission with environmental clearance certificate renewal applications where needed.
- Appoint a specialist environmental consultant to update the EA and EMP and apply for renewal of the environmental clearance certificate prior to expiry.

4.1.2 Employment

Continuous operations and maintenance of the facility require a permanent employee base and periodic appointment of contractors. Both can include skilled and unskilled employees to perform various tasks. Employment increases individual and societal economic resilience through, not only the payment of wages, but also contributions to social security and fringe benefits.

Desired Outcome: Remuneration of temporary and permanent employees and contractors as per the Labour Act. Continued contributions to social security.

Actions

Enhancement:

- The Proponent must employ local Namibians from the area where possible.
- Develop and maintain a contractor management program, inclusive of compliance reviews of service level agreements etc.

Responsible Body:

- Proponent

4.1.3 Skills, Technology and Development

Training is continuously provided to a portion of the workforce to maintain and operate various features of the plant. Skills are transferred to previously unskilled personnel for the execution of general tasks. The technology used at the plant is new to the local industry and contributes to improved operational efficiency. The development of people and technology remains central to economic progress. All employees receive training on emergency and evacuation procedures, while supervisors and designated personnel are trained in fire-fighting.

Desired outcome: To see an increase in skills of local Namibians, as well as development and technology advancements in the industry.

Actions

Mitigation:

- If the skills exist locally, contractors must first be sourced from the town, then the region and then nationally. Deviations from this practice must be justified.
- Skills development and improvement programs to be made available as identified during performance assessments.
- Employees to be informed about parameters and requirements for references upon employment.
- The proponent must employ Namibians where possible. Deviations from this practise should be justified appropriately.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Record should be kept of training provided.
- Ensure that all training is certified or managerial reference provided (proof provided to the employees) inclusive of training attendance, completion and implementation.

4.1.4 Revenue Generation

The operations of the facility changed the way revenue is generated and paid to the national treasury. The sale of various products contributes to the national gross domestic product, towards a positive trade balance and the economic resilience of Namibia.

Desired Outcome: Contribution to the national treasury and payment of fees and taxes in accordance with the laws of Namibia.

Actions

Enhancement:

- Adhere to the relevant Namibian legislation pertaining to the payment of salaries, taxes, fees, etc.
- Prioritise and set targets for local procurement.

Responsible Body:

- Proponent

4.1.5 Demographic Profile and Community Health

The facility is situated away from densely populated areas, which reduces public exposure to potential health and safety risks. As a result, operations are expected to have a positive impact on community health by limiting the likelihood of public interaction with industrial activities and associated hazards. The demographic profile of the local community is not anticipated to be affected.

Desired Outcome: To discourage socially deviant behaviour and reduce exposure to health and safety risks.

Actions:

Enhancement:

- Adhere to all municipal by-laws relating to environmental health.
- Educational programmes for employees on HIV/AIDs and general upliftment of employees' social status.
- Appointment of reputable contractors.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Plant inspection sheet for all areas which may present environmental health risks, kept on file.
- Bi-annual summary report based on educational programmes and training conducted.
- Bi-annual report and review of employee demographics.

4.1.6 Traffic

Delivery trucks are accommodated on-site, eliminating the need to park in public roads or off-load within traffic. This arrangement reduces congestion and lowers the risk of traffic-related incidents and accidents in the surrounding area.

Desired Outcome: Minimum impact on traffic and no transport or traffic related incidents.

Actions

Prevention:

- Erect clear signage regarding access points at the plant. Clear indications of solvent deliveries.

Mitigation:

- Tanker trucks delivering solvents should not be allowed to obstruct any traffic in Carin Park.
- If any traffic impacts are expected, traffic management should be performed to prevent these.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Any complaints received regarding traffic issues should be recorded together with action taken to prevent impacts from repeating itself.
- A report should be compiled of all incidents reported, complaints received, and action taken.

4.1.7 Health, Safety and Security

All activities associated with the operational phase rely on human labour and therefore expose individuals to health and safety risks. Employees are exposed to hazards related to the handling of hazardous substances, as well as general risks associated with machinery operation and routine factory tasks. Security risks include the potential for unauthorised entry, theft, and sabotage.

Desired Outcome: To prevent injury, health impacts and theft.

Actions

Prevention:

- Clearly label dangerous and restricted areas as well as dangerous equipment and products.
- Equipment that will be locked away on site must be placed in a way that does not encourage criminal activities (e.g. theft).
- Provide all employees with required and adequate personal protective equipment (PPE).
- Ensure that all personnel receive adequate training on operation of equipment / handling of hazardous substances.
- All health and safety standards specified in the Labour Act should be complied with as well as all product Material Safety Data Sheets (MSDS).
- Implementation of maintenance register for all equipment and fuel/hazardous substance storage areas.

Mitigation:

- Selected personnel should be trained in first aid and a first aid kit must be available on site. The contact details of all emergency services must be readily available.
- Implement and maintain an integrated health and safety management system, to act as a monitoring and mitigating tool, which includes: colour coding of pipes, operational, safe work and medical procedures, permits to work, emergency response plans, housekeeping rules, MSDS's and signage requirements (PPE, flammable etc.).
- Strict security that prevents unauthorised entry during construction phases.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Any incidents must be recorded with action taken to prevent future occurrences.
- A report should be compiled of all incidents reported. The report should contain dates when training were conducted and when safety equipment and structures were inspected and maintained.
- A report should be compiled of all health and safety audits that are conducted.

4.1.8 Fire

Various flammable and hazardous substances are handled and stored on site in varying quantities. Some substances, such as solvents, are highly flammable and pose a vapour cloud explosion risk. Chemical fire and explosion risks are primarily associated with the main plant and chemical storage areas. Waste materials contaminated with such substances also carry a risk of spontaneous combustion if not disposed of in accordance with safety standards. In addition to chemical fire risks, operations reliant on electricity are exposed to risks associated with electrical circuits. Factors such as dust accumulation, water ingress, faulty outlets, or outdated appliances are among the primary causes of electrical fires.

Desired Outcome: To prevent property damage, possible injury and impacts caused by uncontrolled fires.

Actions:

Prevention:

- Ensure all chemicals are stored according to MSDS.
- Maintain regular site, mechanical and electrical inspections and maintenance.
- Clean all spills / leaks.
- Solvent storage and handling to be conducted as per industry best practice.
- Control all ignition sources.

Mitigation:

- A holistic fire protection and prevention plan is needed. This plan must include an emergency response plan, firefighting plan and spill recovery plan.
- Maintain firefighting equipment, good housekeeping and personnel training (firefighting, fire prevention and responsible housekeeping practices).
- Eliminate all ignition sources (no smoking, flares, sparks or flames in the immediate area). All equipment used when handling the product must be grounded.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A register of all incidents must be maintained on a daily basis. This should include measures taken to ensure that such incidents do not repeat themselves.
- A report should be compiled every 6 months of all incidents reported. The report should contain dates when fire drills were conducted and when fire equipment was tested and training given.

4.1.9 Air Quality

Pigment grinding and milling activities emit particulate matter, which may contain heavy metals and other toxic air pollutants. Fine powders, such as titanium dioxide and other raw materials used in the powder production plant, can become suspended in the air during handling. However, all material handling takes place within enclosed areas and in the presence of extractor fans to limit emissions.

Mixing and cleaning operations may release limited amounts of toxic air pollutants and volatile organic compounds, which can contribute to ground-level ozone formation. Additional potential air pollutants include minor vapour releases during solvent handling and greenhouse gas (GHG) emissions from vehicle use. While the volume of emissions during the operational phase is minimal, there may be a cumulative impact on the Windhoek airshed. Windhoek's location in a valley can lead to air inversions, particularly during winter, which may trap pollutants. Nonetheless, the facility is situated outside the main urban centre and contributes negligible levels of pollution to the airshed.

Desired Outcome: To prevent health impacts, limit dust generation and greenhouse gas emissions.

Actions

Prevention:

- Extractor fans must be maintained in a good working order and switched on during operational areas.
- Eliminate the use of heavy metals such as chromium, lead and mercury in coating mixtures.
- Cover tanks during blending, mixing, and while waiting to transfer the paint or coating into packaging.
- Mandate a "clean as you go" policy to reduce the amount of solvent needed for removing heavy build-up.
- Set up, or participate in, a paint exchange program where customers return unused paint that can be reworked into future products.
- Reduce emissions of particle pollution by using a baghouse to collect dust.
- Grind or mix raw ingredients with bead mills instead of ball mills.
- Ensure all relevant requirements of the Labour Act are met and operational precautions are employed to minimise risks identified in MSDSs.

Mitigation:

- Personnel issued with appropriate masks where excessive dust or vapours are present.
- A complaints register should be kept for any dust related issues and mitigation steps taken to address complaints where necessary e.g. dust suppression.
- Employees should be trained in the dangers of hazardous material vapours.
- Vent pipes must be properly placed as per SANS requirements.
- All fuel driven vehicles and machines to be kept in a good working order.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Any complaints received regarding dust or vapours should be recorded with notes on action taken.
- All information and reporting to be included in a report.

4.1.10 Noise

Noise generated during operations is largely limited to the use of machinery and vehicles on site. The site is naturally buffered by solid topographical features, including the adjacent hill, which helps reduce noise transmission. The primary noise receptors remain the two businesses located along the southern boundary of the site. However, operational activities are not inherently noisy and are not expected to cause significant disturbance.

Desired Outcome: To prevent any nuisance and hearing loss due to noise generated.

Actions

Prevention:

- All machinery must be regularly serviced to ensure minimal noise production.
- The City of Windhoek council resolution (215/09/2006) guidelines on maximum noise levels for commercial areas should be adhered to.

Mitigation:

- Hearing protectors as standard PPE for workers in situations with elevated noise levels

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- City of Windhoek Guidelines.
- Maintain a complaints register.
- Report on complaints and actions taken to address complaints and prevent future occurrences.

4.1.11 Waste

Waste generated during operations includes a variety of streams, notably waste water effluent, solvent sludge, domestic waste, and general manufacturing waste. An effluent discharge permit had previously been obtained allowing discharge into the City of Windhoek's sewer system, with regular monitoring carried out in accordance with permit conditions. However, the permit has since expired and could not be renewed due to changes in municipal requirements. A local pre-treatment plant is now required onsite. This project has been initiated and the plant is currently in the commissioning and optimisation phase. At the new site, however, wastewater effluent is now reused in the manufacturing process, thereby enhancing the site's overall environmental performance.

Solvent sludge is disposed of at the Kupferberg waste handling facility in Windhoek and an authorised dumping site is also used for sludge disposal. Due to its combustible value, the proponent is exploring alternative uses for the material to reduce disposal needs and further improve environmental outcomes. The increased space at the new site also supports value-added recycling through improved sorting of general waste. While recyclable waste was previously combined and recovered by a contractor, the current setup allows for on-site sorting according to contractor specifications. The contractor has committed to purchasing sorted materials, which contributes positively to the plant's financial viability.

The site is equipped with an established septic tank and soak-away (French drain) system, capable of handling sewage generated during all operational activities.

Desired Outcome: To reduce the amount of waste produced, and prevent pollution, contamination and littering.

Actions

Prevention:

- Waste reduction measures should be implemented and all waste that can be re-used / recycled must be kept separate.
- Ensure adequate disposal storage facilities are available.
- Ensure waste cannot be blown away by wind.
- Special care must be taken to prevent spillage or leakage of solvents and fuels. Regular inspection and maintenance of equipment is required and all spillages must be cleaned.
- Hazardous substances should not be allowed to enter the environment.
- Effluent standards (from the paint manufacturing process) must meet the City of Windhoek's limits on concentrations of physical and chemical pollutants for Industries draining to the Ujams industrial waste water treatment facility. Adhere to Wastewater Discharge Permit conditions.
- Maintenance of the soak away system for grey and blackwater should be conducted as per the requirements of a disposal permit, to be obtained from the City of Windhoek.

Mitigation:

- Waste should be disposed of regularly and at appropriately classified disposal facilities, this includes hazardous material (empty chemical containers, contaminated rugs, paper water and soil).
- The spill catchment traps and oil water separator should be cleaned regularly and waste disposed of appropriately.
- See the material safety data sheets available from suppliers for disposal of contaminated products and empty containers.
- Liaise with the municipality regarding waste and handling of hazardous waste.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A register of hazardous waste disposal should be kept. This should include type of waste, volume as well as disposal method/plant.

- Any complaints received regarding waste should be recorded with notes on action taken.
- The oil water separator must be regularly inspected and all hydrocarbons removed once detected. Outflow water must comply with effluent quality standards.
- All information and reporting to be included in a report.

4.1.12 Ecosystem and Biodiversity

The site is an established industrial area, and no additional impact on biodiversity is expected. Given the nature of the operational activities, the likelihood of creating suitable habitat for the establishment of flora and fauna is low. Environmental impacts are therefore primarily associated with potential pollution rather than habitat disturbance.

Desired Outcome: To avoid pollution of and impacts on the ecological environment.

Actions.

Mitigation:

- Report any extraordinary sightings to the Ministry of Environment and Tourism.
- Mitigation measures related to waste handling and the prevention of groundwater, surface water and soil contamination should limit ecosystem and biodiversity impacts.
- Avoid scavenging of waste by fauna.
- The establishment of habitats and nesting sites at the plant should be avoided where possible.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- All information and reporting to be included in a report.

4.1.13 Groundwater, Surface Water and Soil

Operations involve the storage and handling of various hazardous materials, such as solvents, which pose a risk of environmental contamination. Contamination may occur due to failing storage infrastructure or spills and leaks during handling. These substances have the potential to affect surface water, soil, and groundwater. However, the facility is equipped with modern infrastructure specifically designed to minimise the risk of leaks and spillages, thereby reducing the likelihood of environmental contamination.

Desired Outcome: To prevent the contamination of water and soil.

Actions

Prevention:

- All handling should be conducted on surfaces provided for this purpose. E.g. Concrete slabs with regularly maintained seals between slabs.
- Ensure all requirements of the Labour Act are met and ensure handling and storage of chemicals to reduce risks as identified in the MSDS.
- The procedures followed to prevent environmental damage during service and maintenance, and compliance with these procedures, must be audited and corrections made where necessary.
- Proper training of operators must be conducted on a regular basis.

Mitigation:

- Spill clean-up means must be readily available on site as per the relevant MSDS.
- Any spill must be cleaned up immediately.
- The spill catchment traps and oil water separator should be cleaned regularly and waste disposed of at a suitably classified hazardous waste disposal plant.
- Surfactants (soap) may not be allowed to enter the oil water separator e.g. soap usage on spill control surfaces.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A report should be compiled of all spills or leakages reported. The report should contain the following information: date and duration of spill, product spilled, volume of spill, remedial action taken, comparison of pre-exposure baseline data (previous pollution conditions survey results) with post remediation data (e.g. soil/groundwater hydrocarbon concentrations).

4.1.14 Visual

The nature of the facility contrasts with the existing natural landscape character. However, it is situated within an area designated by the City of Windhoek for industrial development and is adjacent to other established industrial operations. Most of the facility's activities are screened from surrounding receptors by the natural topography, including an adjacent hill, as well as the boundary wall enclosing the property.

Desired Outcome: To minimise aesthetic impacts associated with the plant.

Actions

Mitigation:

- Regular waste disposal, good housekeeping and routine maintenance on infrastructure will ensure that the longevity of structures are maximised and a low visual impact is maintained.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A report should be compiled every 6 months of all complaints received and actions taken.

4.1.15 Cumulative Impact

Possible cumulative impacts associated with the operational phase of the facility include those related to air quality, occupational health and safety, economic activity, wastewater, and traffic. Greenhouse gas (GHG) emissions are generated through standard operational activities, though these remain within expected industrial levels. Potentially harmful particulate matter is effectively managed within enclosed areas, with dust collectors installed at all key operational points to minimise atmospheric release.

The handling of hazardous substances, such as solvents, as well as the generation of particulate matter, presents occupational health and safety risks to employees. These exposures may contribute to cumulative health impacts within the broader workforce if not properly managed.

Positive cumulative impacts include improved traffic safety through on-site logistics handling, thereby reducing congestion and off-loading activities on public roads. The facility also contributes to local economic growth through employment and procurement across multiple sectors. Wastewater generated on site is partially reused in the production process, which reduces the volume requiring external treatment and supports improved environmental performance.

Desired Outcome: To minimise cumulative all impacts associated with the plant.

Actions

Mitigation:

- Addressing each of the individual impacts as discussed and recommended in the EMP would reduce the cumulative impact.
- Reviewing annual reports for any new or re-occurring impacts or problems would aid in identifying cumulative impacts and help in planning if the existing mitigations are insufficient

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Annual summary report based on all other impacts must be created to give an overall assessment of the impact of the operational phase.

4.2 DECOMMISSIONING AND REHABILITATION

Decommissioning is not foreseen during the validity of the environmental clearance certificate. Decommissioning was however assessed as construction activities include modification and decommissioning. Should decommissioning occur at any stage, rehabilitation of the area may be required. Decommissioning will entail the complete removal of all infrastructure including buildings and underground infrastructure. Any pollution present on the site must be remediated. The impacts associated with this phase include noise and waste production as structures are dismantled. Noise must be kept City of Windhoek standards and waste should be contained and disposed of at an appropriately classified and approved waste plant and not dumped in the surrounding areas. Future land use after decommissioning should be assessed prior to decommissioning and rehabilitation. The Environmental Management Plan for the plant will have to be reviewed at the time of decommissioning to cater for changes made to the site and implement guidelines and mitigation measures.

4.3 ENVIRONMENTAL MANAGEMENT SYSTEM

The proponent could implement an Environmental Management System (EMS) for their operations. An EMS is an internationally recognised and certified management system that will ensure ongoing incorporation of environmental constraints. At the heart of an EMS is the concept of continual improvement of environmental performance with resulting increases in operational efficiency, financial savings and reduction in environmental, health and safety risks. An effective EMS would need to include the following elements:

- A stated environmental policy which sets the desired level of environmental performance;
- An environmental legal register;
- An institutional structure which sets out the responsibility, authority, lines of communication and resources needed to implement the EMS;
- Identification of environmental, safety and health training needs;
- An environmental program(s) stipulating environmental objectives and targets to be met, and work instructions and controls to be applied in order to achieve compliance with the environmental policy; and
- Periodic (internal and external) audits and reviews of environmental performance and the effectiveness of the EMS.
- The Environmental Management Plan

5 CONCLUSION

The plant contributes positively to both Windhoek and the broader regional construction sector. It supports local employment, skills development, and ongoing training, thereby enhancing the capacity of the local workforce during its operational phase.

Potential negative impacts can be effectively mitigated through strict adherence to applicable Namibian legislation, SANS standards, and international best practices. Fire prevention measures must be sufficient, and all health and safety protocols should be implemented in accordance with relevant regulations and recognised operational standards. All waste generated on site must be removed and either appropriately disposed of, re-used, or recycled. Hazardous waste must be disposed of at an authorised hazardous waste facility.

The EMP must serve as a reference guide for all operational activities at the plant. Any parties found to be in breach of the EMP should be held accountable for the necessary rehabilitation measures. The proponent is encouraged to apply an internal Health, Safety, Security and Environment (HSSE) Management System in alignment with the EMP. All operational personnel must receive training on the contents and requirements of these documents to ensure ongoing compliance and responsible site management.