

Environmental Management Plan

**For East Arm Biosecurity and Waste Treatment Plant,
East Arm - Northern Territory**



Quality Information

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Facility:	Depot encompassing: <ul style="list-style-type: none"> ● Transfer Depot ● Waste Storage ● Recycling Depot ● Liquid Treatment Plant ● Autoclave Operations ● Baler Operations
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2. Terms and Definitions

See definitions in the [BMS Dictionary](#) - Only definitions directly pertaining to this document are included.

Table 1: Terms and Definitions

Term	Definition
Activities	Veolia services/products/processes.
Body of Water	Refers to any man made or natural collection of water that presents a potential hazard, such as dams, reservoirs, tanks, rivers and lakes.
Certificate, Licence or Permit	These are nominally external source documents being: <ul style="list-style-type: none"> • Certificate – a document attesting to the truth of certain stated facts, i.e. certificate of registration to a management system standard. • Licence - a legal document giving official permission to do something, ie. Environmental. • Permit - to allow the doing of (something); consent to.
Combustible Liquid	Any liquid with a high flash point and so is not easily ignited and therefore not classified as flammable. Combustible liquids are grouped into two types: <ul style="list-style-type: none"> • C1: a liquid having a flash point either at or above 60.5°C and equal to or less than 150°C.; • C2: a liquid with a flash point above 150°C.
Company Site	A site operated by Veolia.
Complaints	Any written or verbal expression of dissatisfaction received from a client, member of the public, interest group or other stakeholders, about the service or product supplied by Veolia or regarding the impact of these services on the community or the environment. Requests for service, such as leaks, chokes, water quality, odour reports, metre readings and payment terms are not in themselves considered complaints.
Compliance	Adhering to the requirements of laws, industry and organisational standards and codes, principles of good governance and accepted community and ethical standards.
Consultation	Refers to a means of communication in which the first step is to identify who the other key stakeholders are that you need to consult with. Example key stakeholders may be a building owner, a supplier, a contractor or the business operator next door. Before deciding on a course of action, you should contact them and: <ul style="list-style-type: none"> • discuss health and safety matters and share all relevant information that you have in relation to it; and • find out what the other stakeholders know about the health and safety risks and ways to control them, and plan what each duty holder will do to control the risks. The outcome of the consultation should be a shared understanding of what the risks are, which workers are affected and how the risks are to be controlled.
Consultant	Personnel required to provide information necessary for the effective planning, development and implementation of the deliverable/task.
Contaminant	A substance that is either present in an environment where it does not belong or is present at levels that might cause harmful effects to humans or the environment. A "Contaminant" can be: <ul style="list-style-type: none"> • a gas, liquid or solid; • an odour;

	<ul style="list-style-type: none"> • an organism (whether is alive or dead) including a virus; or • a combination of contaminants. <p>Any dust, fume, mist, vapour, biological matter, gas or other substance in liquid or solid form, the presence of which may be harmful to health and safety.</p>
Contract Manager	Veolia employee responsible for overseeing work of a contractor.
Contractor	An organisation or individual, who formally contracts to provide a service to or on behalf of Veolia. A Contractor is not an employee of Veolia, and is required to have independent workers compensation and other insurance policies. Where major work is undertaken, the initial contractor (Principal Contractor) may engage the services of subcontractors and/or suppliers.
Control	Measure modifying risk. Existing process, policy, device, practice or other action that acts to minimise or mitigate the likelihood (i.e. preventative controls) or the consequences (i.e. corrective controls) of a risk. Controls could also be implemented to enhance opportunities.
Controlled Waste	Also called Prescribed Waste or Listed Waste as per the state legislation, that can potentially impact the environment and human health.
Cultural Heritage	Cultural Heritage is the legacy of physical artefacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations. Cultural heritage includes tangible culture (such as buildings, monuments, landscapes, books, works of art, and artefacts), intangible culture (such as folklore, traditions, language, and knowledge), and natural heritage (including culturally significant landscapes, and biodiversity).
Customer Complaint	expression of dissatisfaction made to an organisation, related to its product or service, or complaint -handling process itself, where a response or resolution is explicitly or implicitly expected.
Dangerous Goods	Dangerous Goods (DG) are substances and items prescribed in the Dangerous Goods (Prescribed List) Regulations, classified under the United Nations Recommendations on the Transport of Dangerous Goods, the Australian Code for the Transport of Dangerous Goods by Road and Rail, (ADG 7).
Electrical work	<ul style="list-style-type: none"> • connecting electricity supply wiring to electrical equipment or disconnecting electricity supply wiring from electrical equipment; or • manufacturing, constructing, installing, removing, adding, testing, replacing, repairing, altering or maintaining electrical equipment or an electrical installation. Examples of electrical work; • installing low voltage electrical wiring in a building; • installing electrical equipment into an installation coupler or inter connector; • replacing a low voltage electrical component of a washing machine; and • maintaining an electricity entity's overhead distribution system
Emergency	<p>An event that arises internally, or from external sources, which may adversely affect the occupants or visitors in a facility, and which requires an immediate response.</p> <p>An unplanned or significant event which threatens life, property or the environment. This includes Fire, explosion, spills (to land and water), gas leaks (explosives, flammable, toxic), off site events (road accidents), civil disturbances (riots or bomb threats), natural disasters (earthquakes, cyclones, bushfires, floods, mudslides, tidal waves etc).</p>
Emergency Response Plan ERP	A document that describes the response actions to be employed in the event of an emergency. The plan also states roles and responsibilities for personnel during the emergency response and notification requirements to external parties.

Environment	Surroundings in which an organisation operates including air, water, land, natural resources, flora, fauna, humans and their interrelationships.
Environmental Aspect	Element of Veolia's activities, operations and services that interacts or can interact with the environment.
Environmental Condition	state or characteristics of the environment as determined at a certain point in time.
Environmental Harm	Is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.
Environmental Impact	Change to the environment, whether adverse or beneficial, wholly or partially resulting from Veolia's environmental aspects.
Environmental Management System	part of the management system used to manage environmental aspects, fulfills compliance obligations and address risk and opportunities.
Environmental Noise	Noise generated by Veolia's activities which impacts on, or potentially impacts on the surrounding community and/or environment. The exposure standards for environmental noise are defined in applicable state based laws and summarised in the annexure to this procedure.
Environmental Performance	Performance related to the management of environmental aspects
Excessive Noise	For the purpose of this procedure excessive noise is any noise which exceeds the thresholds prescribed in this procedure or relevant and applicable State Laws relating to Occupational or Environmental Noise.
Fauna	Is all of the animal life of any particular region or time.
Flora	Is the plant life occurring in a particular region or time, generally the naturally occurring or indigenous – native plant life.
Groundwater	The mass of water in the ground below the phreatic zone, occupying the total pore space in the soil or rock.
Groundwater Monitoring Well	A well placed at an appropriate location and depth for taking water samples to determine groundwater quality in the area surrounding a landfill or other site.
Groundwater Table	Level of the upper limiting surface of groundwater.
Hazard	A situation with the potential to harm a person and/or the environment and/or damage property.
Hazardous Material	Are materials that may have hazardous properties including dangerous goods, hazardous substances, scheduled poisons, hazardous wastes and environmental pollutants. These materials are classified as in accordance with the National Occupational Health and Safety Commission's Approved Criteria for Classifying Hazardous Substances [NOHSC:1008] and are also listed on the National Occupational Health and Safety Commission's List of Designated Hazardous Substances [NOHSC:10005]. They are classified on the basis of health effects that may result from them (includes both medium and long term). These include lethal and nonlethal effects, effects from prolonged exposure, irritation, corrosive effects, inflammation, sensitisation and carcinogenic,

	mutagenic and teratogenic (relating to mutation of genetic information and congenital malformations).
Hazardous Substance	Are materials that may have hazardous properties including dangerous goods, hazardous substances, scheduled poisons, hazardous wastes and environmental pollutants.
Hierarchy of Controls	Identify the risk control actions and responsibilities by identifying controls in the following specific order: <ul style="list-style-type: none"> • Eliminate the hazard; If elimination of the hazard is not reasonably practicable, minimise the risk so far as reasonably practicable by; <ul style="list-style-type: none"> • Substituting (wholly or partly) the hazard giving rise to the risk with something that gives rise to a lesser risk; • Isolating the hazard from any person exposed to it; and • Implementing engineering controls. If a risk remains, minimise the remaining risk, so far as reasonably practicable, by implementing administrative controls. If a risk still remains, minimise the remaining risk, so far as reasonably practicable, by ensuring the provision and use of suitable Personal Protective Equipment (PPE).
Internal Audit (First Party)	Audits conducted by Veolia itself for management review and other internal purposes. Independence can be demonstrated by the freedom from the responsibility for the activity being audited.
Leachate	The result of liquid seeping through a landfill and, by doing so, extracting substances from the deposited waste.
Legislation	A proposed or enacted law or group of laws
Litter	The haphazard distribution of waste on land. At landfill sites this is usually the light, windblown, fraction in household waste such as paper and plastic which escapes before the waste is compacted and covered.
Manager	Immediate line manager.
Monitoring	Continual checking/observing or determining the status in order to identify a change from the performance level required.
Non - Hazardous Solid Waste	Includes solid waste from households (residential solid wastes), commercial solid waste and non hazardous industrial solid waste.
Operation Works	means any daily works required for the site operations (including but not limited to works related to the provision of wastewater, recycled water, desalinated water and water supplies).
Plant and Equipment	Is a general name for equipment, machinery, appliances, tools and implements. It can include things as diverse as a press in a factory or a computer in an office and it can range from electric drills to lifts and escalators; from tractors to hand trolleys; cranes to commercial fishing nets and arc welding gear.
Policy (POL)	Describes Veolia ANZ's Commitment.
Polychlorinated Biphenyls(PCB)	Persistent Organic Pollutants that bioaccumulate and may adversely affect human health and environment.
Records	Information created, received and maintained as evidence, and information by an

	organisation or person, in pursuance of legal objectives or in the transaction of business.
Reference	A document is of an informative nature that needs to be available for reference and does not comply with another definition.
Regulation	A document made under an Act and contains detailed provisions. A change in system or in law/ and/or in the legislative environment that requires review from a senior manager to ensure compliance.
Regulatory Authority	Any government body or other organisation responsible for regulating or enforcing compliance with legislative and other requirements.
Responsible	Personnel required to carry out the deliverable/task.
Responsible Person	A person appointed by the site manager for each relevant site, who due to his/her knowledge, experience and qualifications is responsible for managing hazardous areas at that site.
Review	Activity undertaken to determine the suitability, adequacy, and effectiveness of the subject matter to achieve established objectives.
Risk	The effect of uncertainty on objectives. Risk is measured in terms of a combination of the consequences of an event and the associated likelihood.
Risk Analysis	Systematic use of available information to identify hazards and to estimate the risk to individuals or general public, property or the environment.
Risk Assessment	The overall process of risk identification, risk analysis and risk evaluation.
Risk Categories	Veolia ANZ's risk categories are: People (Safety), Environment, Customers, Business, Community.
Risk Consequence	The outcome or impact (positive or negative) of a risk expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain. There may be a range of possible outcomes associated with each risk.
Risk control	Refers to the process of implementing measures to reduce the risk associated with a task, as far as reasonably practicable. The control process shall follow the control hierarchy. Control measures shall not introduce new hazards, and that ongoing effectiveness of the control is monitored.
Risk Criteria	terms of reference against which the significance of a risk is evaluated.
Risk Description	Description of the risk which may eventuate – which includes four elements, these are; the source, event, causes and consequences.
Risk Identification	The process of finding, recognising and describing risks. It includes risk sources, events, causes and consequences.
Risk Likelihood	The qualitative or quantitative description of probability or frequency of something happening.
Risk Management	Coordinated activities to direct and control an organisation or activity with regard to risk.

Risk Management Process	Systematic application of policies, procedures and practises to the activities of communicating, establishing context, identifying, analysing, evaluating, treating, monitoring and reviewing risk.
Risk Register	A repository of risks, the risk register is used to record outcomes of the risk assessments and to manage risks.
RIVO	Veolia's chosen software system for reporting and investigation of all hazards/near misses and incidents. It is used to plan and record AlwaysSafe Interactions and the results of the SHEQ Internal Audit Program. Veolia has the ability to conduct Inspections in this system.
Run-off	Rain or melted snow that drains from the land surface and in the case of a landfill drains from the surface of the fill.
Safety Data Sheet (SDS)	Written or printed material concerning a hazardous chemical which is prepared in accordance with standards and regulations and should describe the chemical and physical properties of a substance and provide advice on safe handling of that substance.
Significant Aspect/Impact	Environmental Aspects which has or can have the potential to significantly and detrimentally impact the environment/business as determined through Risk Assessment.
Significant Hazard	is one which can cause serious harm or harm that is more than trivial.
Stakeholder	Person/s, Team, Business or Organisation that can affect or be affected, or perceive themselves to be affected by a decision or activity.
Supervisor	A person who may control or manage a set of operations under a manager
Third party Audit	are external audits, usually done by certification bodies, authorities or regulators or any other external party that has a formal interest in an organisation. i.e. EPA (Environmental Protection Authority), DoH (Department of Health), etc.
Trackable Waste	Non-liquid wastes classed as "Industrial" or "Hazardous" in accordance with the State EPA Guidelines, which require a Waste Data Form to be completed (unless exemptions apply). Trackable waste includes: <ul style="list-style-type: none"> ● hazardous (liquid and non-liquid); ● industrial; or ● group A liquid wastes.
Training	The development of skills, knowledge and behaviours through instruction or practice.
Treatment	Actions planned to reduce the residual level of risk to an acceptable or tolerable limit. Process to modify risk.
Veolia appointed person	An internal or external person who has been deemed suitably qualified and experienced by an authorised Veolia Manager.
Work Permit	A Work Permit authorises person(s) to undertake specific work in a designated area.

3. Abbreviations

Table 2: Abbreviations

Abbreviation	Definition
ASI	Always Safe Interaction
AS/NZS	Australia / New Zealand Standard
BMS	Business Management System
ChemAlert	Online Electronic Chemical Management System
DMS	Document Management System
DES	Department of Environment and Science - QLD
E-ASI	Environmental Always Safe Interaction
EMP	Environmental Management Plan
EPA	Environmental Protection Authority
ERP	Emergency Response Plan
FFL	From the Floor Level
GIP	Grate Inlet Pit
HASP	Hazardous Activity Sub Plan
IMT	Incident Management Team
JSEA	Job Safety & Environmental Analysis
KPI	Key Performance Indicator
PWC	Northern Territory Power and Water Corporation
SEP	Side Entry Pit
SDS	Safety Data Sheet (formerly MSDS)
SHEQ	Safety, Health, Environment & Quality
SHR	Safety and Health Representative
VANZ	Veolia Australia and New Zealand
VES	Veolia Environmental Services
WIS	Work Instruction

4. Roles and Responsibilities

Table 3: Roles and Responsibilities

<i>Role</i>	<i>Responsibility</i>
<p>Manager Resource Recovery NT</p>	<ul style="list-style-type: none"> ● Ensure that the Environmental Management System (EMS) is effectively implemented; ● Approve the Environmental Management Plan; ● Appoint/nominate the Environmental Representative and/or Site nominee; ● Report to senior management on the performance of the system and environmental breaches; ● Allocate project resources to handle environmental issues; ● Take action to resolve major non-conformances.
<p>East Arm Site Manager</p>	<ul style="list-style-type: none"> ● Implement the Environmental Management Plan on the East Arm Site; ● Report to the immediate manager on environmental issues, breaches etc.; ● Ensure that Site personnel are aware of their environmental obligations; ● Take action to resolve non-conformances, and; ● Ensure suppliers and contractors comply with requirements.
<p>Health and Safety Advisor (or nominee)</p>	<ul style="list-style-type: none"> ● Ensure that audits of the system are carried out and reported to the IMT; ● Ensure that the ERP is effectively established, implemented and maintained at the site level; ● Provide advice and support in relation to the Emergency Response Plan; ● Complete environmental site checklists; ● Complete ASI as required, and ● Collaborate to review the EMP to ensure compliance with AS/NZS ISO 14001.
<p>Environmental Compliance Advisor (or nominee)</p>	<ul style="list-style-type: none"> ● Review and update the EMP and associated documentation; ● Provide support to the team to enable them to meet their environmental commitments; ● Ensure that site personnel receive appropriate environmental awareness training; ● Ensure that environmental records and files are maintained; ● Ensure that non-conformances are recorded and actioned; ● Complete environmental site checklists; ● Complete E-ASI as required; ● Undertake annual environmental audits to establish licence compliance gaps, and ● Undertake regular site environmental inspections / monitoring regarding VES minimum standards .
<p>Contractors and Subcontractors</p>	<ul style="list-style-type: none"> ● Comply with all legal, contractual and environmental requirements; ● Comply with management / supervisory directions; and ● Participate in induction and training as directed.
<p>All Site Personnel</p>	<ul style="list-style-type: none"> ● Comply with the relevant Acts, Regulations and Standards. ● Comply with Veolia's Environmental Policy and procedures. ● Promptly report to management on any non-conformances and/or breaches of the system. ● Promptly report to management on any spills or environmental incidents; ● Undergo induction and training in environmental awareness as directed by management.

5. Introduction

5.1. Purpose and Scope

The environmental management plan (EMP) prescribed in the following document is relevant to the operations of the Veolia Environmental Services (Australia) Pty Ltd (hereafter referred to as 'Veolia') owned Waste Treatment and Biosecurity Facility (hereafter referred to as 'the Site' or 'Veolia East Arm Depot') located at 42 O'Sullivan Circuit, East Arm, Northern Territory (NT). The Management Plan corresponds to the entire site.

The aim of the Management Plan is:

- to provide a Management Plan to meet the licence requirements of the Northern Territory Environment Protection Authority (NT EPA);
- Provide a guide for the interaction with relevant government authorities and other relevant stakeholders, including the local community and neighbouring businesses during the operation of the Site;
- to describe both the operation and management measures adopted to ensure the effective environmental control is achieved, and
- Provide a means of implementing and monitoring the recommended mitigation measures for the key environmental issues associated with the operation of the Site identified in the environmental risk assessment;

The scope of the subject management plan includes the various management control systems which operate simultaneously to ensure effective environmental control. In the event of failure of any one system, effective back-ups are in place to ensure that the environmental control objectives are achieved. These management control systems can be summarised as follows:

- the system for ensuring that there is a limitation on the types of waste to be treated to prevent the treatment of any waste type which would be likely to produce unacceptable environmental conditions;
- the system for design of the infrastructure including buildings, tanks and process equipment with the primary focus on environmental control;
- the operational environmental control system which includes both electronic control and specified standard operational control procedures;
- the quality management system accredited to ISO 9001, requiring that quality documentation and management procedures are adopted and continually improved;
- the environmental management system accredited to ISO 14001, requiring a commitment by management for an ever-improving standard of environmental control; and
- the system for documentation and training in readiness for any emergency situation which could conceivably arise.

This EMP is a live document and outlines the management strategies and control measures which will be reviewed and updated, where necessary, to reflect changes introduced by the Site specific outcomes, non-compliances and recommendations arising out of inspections, meetings and audits. A copy of this EMP will be kept at the Site and made available at all times.

6. Statutory and Policy Considerations

This section provides an overview of the environmental planning and statutory context for the Site during its operation, as well as the context of Veolia's management system requirements.

Veolia is committed to complying with all of its legal obligations and other voluntary commitments made by the company. Compliance to applicable regulatory requirements is achieved through:

- identifying and accessing legal and other requirements which are directly applicable to the Contracts;
- consulting and involving relevant agencies, where applicable;
- internally communicating relevant information regarding legal and other requirements;
- continually auditing, reviewing and upgrading company systems, management plans and supporting documentation; and
- providing relevant training.

6.1. Legal and Other Requirements

6.1.1. Acts and Regulations

Applicable requirements, summarised from the key environmental legislation relevant to the operation of this Site is provided in **Table 4** below.

Table 4: Key Legislation

Legislation	Purpose	Application
Environment Protection Act 2019 (and associated regulations)	<ul style="list-style-type: none"> • Environment protection and pollution reduction by regulating discharges to air, water and land, as well as preserving community amenities such as impacts from traffic, noise or odour emissions. • Provide the framework for assessing environmental impacts and seeking planning approval of development proposals or activities by public authorities in NT. • Classifying offences and issue of notices, subject to the severity of the offence. • Establish conditions and requirements for environmental audits. 	<ul style="list-style-type: none"> • Adherence to regime under new legislative requirements in force from the 28 June 2020

<p>Environmental Protection (Air) Policy (Qld Gov, 2019)</p>	<ul style="list-style-type: none"> • Designed to achieve the objectives of the Environmental Protection Act 1994 in relation to the air environment. • The purpose of the EPP (Air) is achieved by identifying environmental values to be enhanced or protected, outlining indicators and air quality objectives for enhancing or protecting these values and providing a framework for making consistent, equitable and informed decisions about the air environment. 	<ul style="list-style-type: none"> • Determine the Air Quality parameters for the autoclave emissions.
<p>Biosecurity Act 2015 (Federal)</p>	<ul style="list-style-type: none"> • This Act is about managing diseases and pests that may cause harm to human, animal or plant health or the environment. 	<ul style="list-style-type: none"> • Required management to biosecurity risks posed by diseases or pests that may be in or on goods or premises in Australian territory. Provides powers to be exercised to monitor, respond to and control those risks. • Provides for arrangements to be approved authorising and requiring biosecurity industry participants to carry out biosecurity activities to manage biosecurity risks associated with goods, premises or other things for the purposes of this Act. • Gives officers powers to ensure people are complying with this Act, to investigate non-compliance and to enforce this Act by means such as civil penalties, infringement notices, enforceable undertakings and injunctions.

<p>Waste Management and Pollution Control Act 1998</p>	<ul style="list-style-type: none"> • Environmental protection, and where practicable to restoration and enhancement of the quality of, the Territory environment by: <ul style="list-style-type: none"> ○ (i) preventing pollution; ○ (ii) reducing the likelihood of pollution occurring; ○ (iii) effectively responding to pollution; ○ (iv) avoiding and reducing the generation of waste; ○ (v) increasing the reuse and recycling of waste; and ○ (vi) effectively managing waste disposal; (b) to encourage ecologically sustainable development; and (c) to facilitate the implementation of national environment protection measures made under the National Environment Protection Council (Northern Territory) Act 1994. 	<ul style="list-style-type: none"> • Specifies the Regulations or an: <ul style="list-style-type: none"> ○ environment protection objective, ○ environment protection approval, ○ environment protection licence, ○ best practice licence, ○ environmental audit program, ○ compliance plan, ○ performance agreement or ○ pollution abatement notice. • All works undertaken are required to utilise the waste hierarchy to avoid, recover and reduce waste. • The NT EPA may exempt from environment protection approval, by notice in writing, declare that subsection (1) or (2) of the act does not apply in relation to an activity specified in Part 1 of Schedule 2 conducted at specified premises if a development permit has been granted under section 53 of the Planning Act in relation to the activity. • An EPL for transport of any trackable waste is held by the proposed tenant however, if required (refer Section 2.1.2). • General duty to immediately notify pollution incidents where material harm is caused or threatened is a requirement. • Pollution incidents such as water leakages, chemical or fuel leakages, or any other contamination that occurs whilst undertaken works must be reported.
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<p>Dangerous Goods Act 1998</p>	<p>An Act to provide for the safe storage, handling and transport of certain dangerous goods</p>	<ul style="list-style-type: none"> • Safe handling of dangerous goods and containers that are used in connection with dangerous goods, including the precautions to be observed and the methods of handling to be employed; • the classification of dangerous goods and methods for determining classifications; • manufacturing, designing, installing, repairing or carrying out any work on containers, pipelines or any plant or things that are used or are intended for use in connection with dangerous goods, • the design, construction, manufacture, installation, cleanliness, ventilation, venting, marking, placarding, labelling and maintenance of places, premises, plant, vehicles, containers, pipelines and other things that are used or intended for use in the handling of dangerous goods; • the siting, design, construction, ventilation, venting, illumination, maintenance, fittings, fixtures and management of premises, plant, buildings and structures that are used, or are intended for use, in connection with dangerous goods and the treatment of premises, plant, buildings and structures no longer required for the handling of dangerous goods; • the provision, maintenance, testing and use of safety and first aid facilities at a place, on premises or in or on a vehicle used for any purpose in connection with dangerous goods; • the making, keeping, production and inspection of records relating to dangerous goods and the providing of returns and other information relating to dangerous goods;
<p>Odour Impact Assessment from Developments Guidelines (DES, 2013)</p>	<ul style="list-style-type: none"> • Provides guidance for the assessment of potential odour impacts from new or upgraded developments on local air quality 	<ul style="list-style-type: none"> • An odour impact assessment for a new facility or an upgrade to an existing facility is required to predict the potential odour concentrations.

<p>Power and Water Corporation Act 1987</p>	<p>Creates the PWC with the following functions:</p> <ul style="list-style-type: none"> • manage, plan, develop, expand, enhance, improve and reinforce electricity networks and power systems; • acquire, store, treat, distribute, market and otherwise supply water for any purpose; • collect, store, treat, market and dispose of wastewater; • in relation to gas are to buy, sell, process, store or transport: <ul style="list-style-type: none"> (a) gas or products derived from gas; or (b) products associated with gas or the products derived from it. 	<p>Permits and contractors undertaking works on behalf of PWC to:</p> <ul style="list-style-type: none"> • enter and occupy land or a building to operate, repair, replace, maintain, remove, extend, expand, connect, disconnect, improve or • do any other things that PWC considers are necessary or appropriate to any of its works or • to construct new works and, • for these purposes, to carry out any work on, below or above the surface of the land, including the powers of entry into private property.
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6.1.2. Other Requirements (Licences and Permits)

The following regulatory approvals will be required for the development of the Site:

Table 5: Other Licences and Permits

Approval	No.	Obligations
<p>Development Permit (NT DCA)</p>	<p>DP21/0118</p>	<p>To use and develop the land for the purpose of a change of use from transport terminal to recycling depot with ancillary office, in accordance with the attached schedule of conditions and the endorsed plans. Granted 23/04/2021.</p>
<p>Environment Protection Licence (NT EPA)</p>	<p>East Arm EPL322-1</p>	<p>Scheduled activities, establish conditions for discharges, emissions and monitoring relevant to the Site for:</p> <ul style="list-style-type: none"> • collecting, transporting, storing, re-cycling, treating or disposing of a listed waste. • operating premises associated with collecting, transporting, storing, re-cycling, treating or disposing of a listed waste
<p>Approved Arrangement (Federal Department of Agriculture, Water and the Environment)</p>	<p>TBC</p>	<p>Specifies the requirements to be met for the approval, operation and audit of the relevant class of approved arrangements for the biosecurity activities relevant to the Site (class 8.3 autoclave and class 10.6 biosecurity waste transport)</p>
<p>NT WorkSafe</p>	<p>East Arm - 34047</p>	<p>Plant Item Registration - Autoclave</p>

NT WorkSafe	No. 29459	Licence to convey dangerous goods and/or explosives as described in the licence, in accordance with the Transport of Dangerous Goods by Road and Rail (National Uniform Legislation) Act and Regulations and/or the Australian Code for the Transport of Explosives by Road and Rail - 3rd Edition, and any conditions specified in the licence.
Trade Waste Agreement (PWC)	TBC	Permit to discharge trade wastewater and set conditions

6.2. Management System

Veolia has developed and implemented an integrated Business Management System (BMS), the framework of which is structured around policy, standards, procedures and templates representing the critical functional areas of the organisation.

In accordance with the BMS and as a means of continually improving environmental performance, Veolia is committed to achieving best practice in environmental management across all its activities. This commitment is demonstrated by:

- Ensuring Veolia workers (including contractors) comply with the BMS, this EMP and relevant environmental legislation, regulations and client requirements;
- Evaluating potential environmental impacts to ensure such impacts are minimised or avoided for the duration of the operation of the Site;
- Ensuring Veolia workers (including contractors) are aware of their environmental responsibilities, are trained and / or inducted to fulfil such responsibilities and are proactive in their approach to environmental management;
- Ensuring that activities relevant to the Site do not degrade the quality of the general environment;
- Minimising waste generation and consumption of resources and encouraging recycling; and
- Undertaking appropriate management and disposal of contaminated waste which may be encountered during operation.

Issues and incidents are managed through Veolia's issues and audit management system, Rivo, which also has modules for recording audits and inspections. Combined, these systems allow Veolia employees access to Veolia policies and processes. In addition, Veolia has systems and tools for contractor management, learning and development, and data management.

Veolia continually audits, reviews and upgrades company systems, management plans and supporting documentation to maintain business and best practice standards, as well as to comply with relevant legislation. To achieve this, Veolia maintains a program for independent third-party certification/ accreditation to the following standards:

Table 6: Certifications

Certification	Approval No.
Quality Management System ISO 9001- 2015	ISO 9001 – 0058465
Environmental Management System ISO 14001-2015	ISO 14001 – 0058466
Occupational Health and Safety Management System ISO 45001:2018	ISO 45001 - 0058506

6.3. Policies

Veolia has developed a variety of company-wide policies in support of the sound management of its operations. All policies have been endorsed by Veolia's executive leadership team and are reviewed periodically. All Veolia employees are required to commit to the implementation of these policies.

Veolia environmental policies support minimisation of emissions to land, air and water and the wise use of natural resources. This commitment is documented in Veolia's environmental and sustainability policies (see below).

6.3.1. VANZ Environment Policy

Veolia is committed to minimising the environmental impacts of its operations and continually improving its environmental performance within a framework of sustainable development by:

- Effectively managing our significant environmental impacts, monitoring progress and reviewing environmental performance against objectives and targets on a regular basis.
- Driving continual improvement, and meeting the requirements of ISO 14001 environmental management systems standard as part of the integrated business management system.
- Complying with applicable environmental legislation, contractual and other necessary requirements related to our activities and assisting customers and suppliers to use products and services in an environmentally sensitive way.
- Striving to ensure that our policies, objectives and achievements are communicated to all persons working for and on behalf of the business and to educate and train employees and ensure competence in environmental issues and the environmental effects of their activities.
- Preventing pollution and harm to the natural, heritage and built environments and to reduce the use of all raw materials, energy and supplies.
- Consulting with relevant stakeholders, taking into account local environmental conditions and working with local communities to achieve shared and lasting outcomes.

6.3.2. VANZ Sustainability Policy

For Veolia, sustainable development means adopting business strategies and activities that meet the needs of Veolia and its stakeholders today, while protecting, supporting and enhancing the human and natural resources that will be needed in the future. This outcome is expressed clearly in Veolia's Sustainability Policy:

- Being ethically responsible, to create value in what we do, and to use sound risk and hazard management principles in conducting our business. As part of its 'non-negotiables' Veolia will comply with all relevant legislation including pollution prevention and will strive to develop and improve our integrated business management system to support a consistent and disciplined approach to business processes. We will ensure that appropriate resources (both internally and externally) are utilised to assist in achieving our goals.
- Partnering in innovation and to understand and support our customers in achieving their business objectives.
- Attracting and retaining diverse and talented employees. This will include providing development opportunities so our employees are continually learning, communicating, providing workplace consultation, and creating an 'Always Safe' workplace, with an aspiration of no workplace injury or illness for our employees, visitors and contractors.
- Continually designing and implementing sustainable solutions to develop access to resources and to protect and replenish them. Additionally, Veolia is committed to providing environmental leadership in its operations and solutions, which includes the management of its own environmental impacts, improving waste, water, energy and carbon outcomes, as well as protecting and conserving biodiversity and natural capital.

- Working closely with local communities to achieve shared and lasting outcomes. Additionally Veolia will engage with government, policy makers, advocacy groups, industry associations and other stakeholders in the areas which we operate to create better value and outcomes in sustainable practices.

7. Site Description and Environmental Setting

7.1. Site Description

The site is identified as part of Lot 5680 (No.42) O'Sullivan Circuit, East Arm NT 0822. Land Title Information Section 5680 Hundred of Bagot, in the Survey Plan L2003/078 Site coordinates, Latitude: 12°28'21" and Longitude: 130°54'49". The total area of the site is 15,600 square metres (3,689 m² buildings) **Appendix 7**.

The site is located within the East Arm Commercial and Industrial Development Precinct. The entrance to the Site is off O'Sullivan Circuit, on the southwest corner of the property as portrayed in **Appendix 7**.

7.2. Adjacent Land Use

The immediate site boundaries are as follow:

North: O'Sullivan Circuit followed by a vacant allotment which has been used as a laydown yard.

East: A transport and logistics company "ABC Transport"

South: Vacant vegetated allotment

West: Krait Street followed by a transport and logistics company "Shaw's Darwin Transport"

Table 7 below details the closest neighbour to the site:

Table 7: Immediate Surrounding Commercial Land use

Site Neighbour	
Name of company:	ABC Transport
Type of operation:	Transport
Contact Number:	(08) 8984 3447 / (08) 8984 4652
Geographical location from Site:	East
Site Neighbour	
Name of company:	SHELL Prelude Onshore Supply Base
Type of operation:	Logistic Support Base
Contact Number:	(08) 8914 9090
Geographical location from Site:	North East
Site Neighbour	
Name of company:	TNT Express
Type of operation:	Courier Service
Contact Number:	13 11 50
Geographical location from Site:	North East
Site Neighbour	
Name of company:	Northline Darwin
Type of operation:	Freight forwarding service
Contact Number:	1300 722 534

Geographical location from Site:	South East
Site Neighbour	
Name of company:	Shaw's Darwin Transport
Type of operation:	Trucking company
Contact Number:	(08) 8947 1224
Geographical location from Site:	West
Site Neighbour	
Name of company:	Toll NQX Darwin
Type of operation:	Logistics service
Contact Number:	(08) 8944 1100
Geographical location from Site:	North West

Figure 1: Site boundaries



At a further distance from the Site, is the Darwin Passenger Rail, located approximately 1,050m west, East Arm boat ramp located approximately 1,350m south, an administrative Site Skills Training Office located

875m east and a WWII Quarantine Anti-Aircraft historical Site, approximately 470m south. The **Figure 2** below shows the closest sensitive residential receptor is located 3.5 km to the north-northeast to the site.

Figure 2: Zoning and Sensitive Residential Receptor Locations*



*Source: Veolia East Arm Depot - Air Quality Impact Assessment , SLR Consulting 620.30678-R01-v01-20211123

7.3. Hydrogeology and Geology

7.3.1. Local Hydrogeology and Water Courses

Groundwater in the Darwin area is typically encountered in low transmissive fractured rock aquifers of the Burrell Creek Formation, with yields of 0.5–5.0 litres/sec. Depths to groundwater vary significantly with the seasons, during the wet season months the water table can be at ground level dropping to 10 to 15 m below ground level (bgl) during the dry season months.

A search of the [NT - Department of Environment and Natural Resources - KNOW YOU BORE](#) indicated that no registered bores were located within 0.5 km radius of the Site.

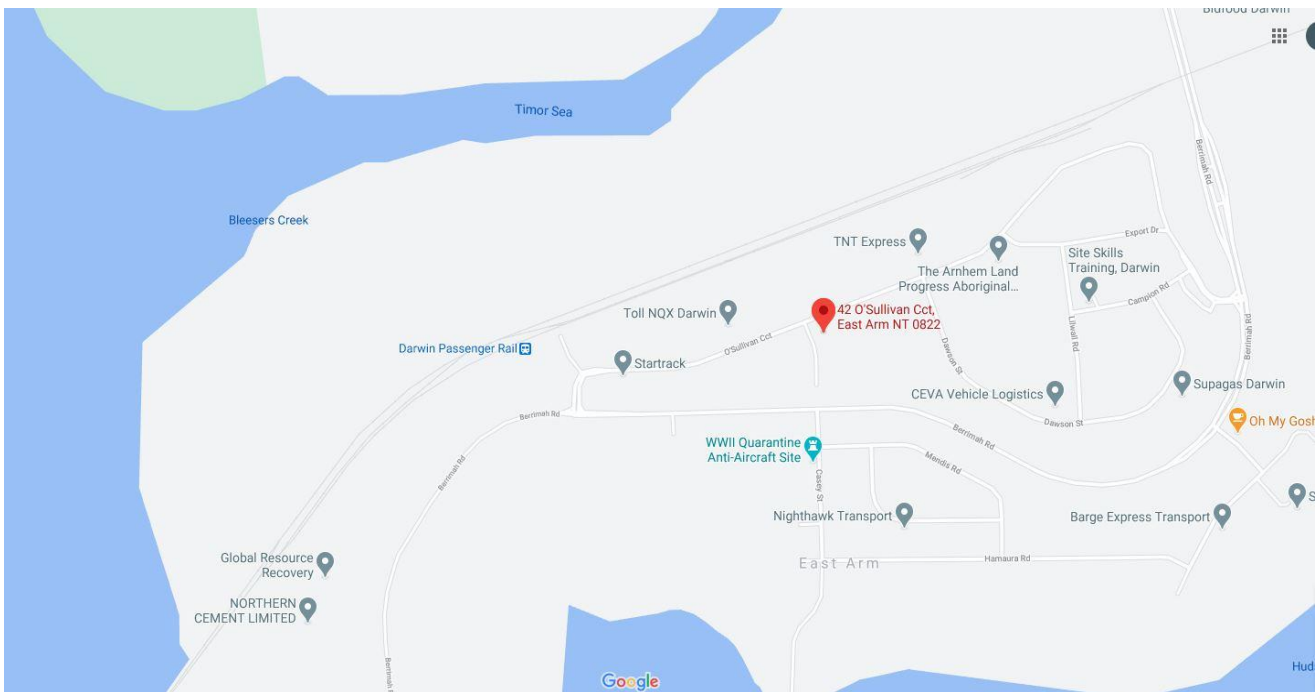
Groundwater beneath the Site is likely to flow in approximately a northerly direction, ultimately discharging to the Timor Sea. The Site is fully sealed with concrete/bitumen/asphalt apart from garden beds which are all curbed and all stormwater sheet feeds to the rear of the Site to the existing stormwater system.

The 1:100,000 scale 'Darwin' (1983) Geological Survey of Northern Territory Map, Sheet No. 5073, indicates that the geology underlying the Site is likely to include:

- Sediments of the Cainozoic Era, comprising of two types of soil, CZs (unconsolidated sand, clayey sand, ferruginous clayey sand soil, commonly containing limonite pisolates) and CZL (nodular, concretionary, pisolitic and vermicular mottled laterite: ferricrete: in situ and reworked remnants of standard laterite profile); and
- Underlying is the Proterozoic Era, Burrell Creek Formation of the Finnis River Group, comprising siltstone; shale; sandstone (quartz arenite, sublitharenite); quartz pebbles conglomerate; metamorphosed to lower greenschist facies.
- The characteristic topography for the peninsula comprises areas of general hinterland landforms dissected upland terrain, low strike-ridges and hills (approximately 15-40 m high) mostly along the southern coastline.

The water courses surrounding the Site are located to the south and north and are the main water discharge points. These are linked as man-made drains that flow towards Bleesers Creek to the north-west and eventually to the Timor Sea (refer **Figure 3** below).

Figure 3: Site location overview



7.4. Water Balance

According to the Australian Bureau of Meteorology (BoM), the East Arm Weather Station (014260) is the closest station to the Site. However, it was established in 1992 and therefore doesn't have much data (see **Tables 8, 9, 10, and 11 below**). All tables sourced via the Australia Bureau of Meteorology - BoM.

Table 8: Australian Bureau of Meteorology (BoM), East Arm Weather Station (014260)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1992	300.3	119.8	193.7	162.3	6.0			2.0	9.0	210.4	165.8		
1995			694.8										
2000		707.8	427.1	334.8		0.0	0.0	0.0	3.0	75.1	32.7	286.2	
2001	261.8	509.4	340.0	76.3	3.0	0.0	15.0	0.0	0.0	85.3			
2002	123.0	378.0	246.5	51.5	8.5	0.0	0.0	0.0	51.0		203.5		
2003	513.0			0.0	0.0	0.0	0.0	3.0	2.0		273.0	391.0	
2004	412.5	393.0	408.0	6.0	53.5	26.0	0.0	0.0	0.0	31.0		256.5	
2005	424.0	208.0	155.4	33.5	0.0	0.0	0.0	0.0	6.3	49.4	158.1		
2006	437.9		492.8		16.0	0.0	0.0	0.0	0.5	39.6	47.4		
2007	259.3	380.3		16.2	53.0	1.0	0.0	0.0	31.0	17.4		335.0	
2008	447.5	555.2		0.0	0.0	0.0	0.0	0.0	3.0		107.1	303.6	
2009	355.7	473.1	127.5		11.0	1.9	0.0	0.0	11.0	37.5	63.7	494.2	
2010	789.2	429.8	214.4		6.0	0.0	2.0	0.0			197.7	407.4	
2011	673.7	991.8								102.0	130.0	290.7	
2019		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0
2021	502.0												

Table 9: Statistics for East Arm Station calculated over all years of data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Lowest	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Highest	789.2	991.8	694.8	334.8	53.5	26.0	15.0	3.0	51.0	210.4	273.0	494.2	

On the other hand, we have Darwin Airport Weather Station (014015) which is also close to East Arm precinct , situated approximately 7.3 km to the north-west of the Site. Darwin Airport Station has data from 1941 onwards and it is what will be used (see table 10 below).

Table 10: Statistics for Darwin Airport Weather Station calculated over all years of data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean	431.4	370.1	314.3	101.7	20.9	1.7	1.1	4.5	16.5	70.7	142.0	250.3	1723.0
Lowest	136.1	103.3	88.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	17.2	18.8	1024.7
5th percentile	173.1	137.4	114.5	8.6	0.0	0.0	0.0	0.0	0.0	1.8	40.9	68.5	1120.0
10th percentile	208.8	157.9	127.7	17.5	0.0	0.0	0.0	0.0	0.0	5.9	58.3	94.6	1223.4
Median	418.6	358.4	278.8	76.3	4.8	0.0	0.0	0.0	6.1	52.8	142.6	223.6	1729.1
90th percentile	660.4	630.7	509.2	198.1	59.9	2.8	3.5	8.1	44.1	155.0	219.4	416.7	2203.0
95th percentile	788.6	670.2	602.0	248.5	75.9	4.7	6.1	35.4	66.8	169.2	248.1	541.4	2388.6
Highest	940.4	1110.2	1013.6	396.2	298.9	50.6	26.6	83.8	129.8	338.7	370.8	664.5	2776.6

The mean annual rainfall for the Darwin area is 1,723 mm with the highest rainfall being registered in February (1,110.2mm).

Table 11: Official records for Northern Territory in February (Records valid as 19/11/2019)

Rank	Value (mm)	Date	Station Name	Station Number
1	510.0	18 February 1976	Port Keats Police	14905
2	367.6	16 February 2011	Darwin Airport	14015
3	367.0	16 February 2011	Wagait Beach	14238
4	363.2	15 February 2011	Geriatric Park	14013
5	346.7	05 February 1942	Timber Creek Police	14822
6	345.6	20 February 2008	Dum In Mirrie AWS	14277
7	344.2	16 February 2011	Leanyer	14246
8	343.0	16 February 2011	Fort Hill Wharf	14050
9	330.0	16 February 2011	East Arm	14260
10	327.0	17 February 2011	Territory Wildlife Park	14264

Historically, the highest rainfall in one day for the area was recorded in Darwin Airport on 16 February 2011 - 367.6mm and in East Arm on 17 February 2011 - 327.0 mm.

Considering the total area of the Site is 15,600 m² and the highest rainfall occurring at Darwin Airport is 367.6mm, the potential water runoff from the Site would be **5,735 kL** in one day. The existing stormwater network at the Site has sufficient capacity to manage this flow rate of receiving since the site has been designed to 1 in 100 years storm event.

In addition, waste activities are undertaken undercover and/or within bunded areas, which will also be undercover or enclosed, and hence would not be subject to stormwater inflow and/or mixing.

7.4.1. Bin and Vehicles Washing Bays Holding Capacity

The bin washing bay and vehicles washing bay are located outside of the main warehouse building and protected by a softcover as can be observed on **Appendix 9**. It would, potentially, have an occasional inflow of stormwater either by incoming rain or excess stormwater runoff trespassing the 100mm perimeter bund.

The bin washing bay measures 6.1m x 8.0m and has a perimeter rollover bund of 100mm height. It also has a central drain measuring 0.6m x 0.6m x 0.9m. This would allow it to hold 5.20m³ (5,200 litres / 5.2kL).

Table 12: Bin Washing bay holding capacity.

Dimensions (m)				Holding Capacity (m ³)
Bay area	8.00	6.10	0.10	4.88
Sump	0.60	0.60	0.90	0.32
Total				5.20

The vehicle's washing bay measures 12.0m x 7.4m and it also has a perimeter rollover bund of 100mm height. It also has a central drain measuring 10.0m x 0.3m x 0.3m. This would allow it to hold 9.78m³ (9,780 litres / 9.78kL).

Table 13: Vehicle Washing bay holding capacity

Dimensions (m)				Holding Capacity (m ³)
Bay area	10.00	12.20	0.10	12.20
Drain	9.40	0.30	0.30	0.85
Sump	0.60	0.60	0.90	0.32
Total				13.37

Both bin washing and vehicle washing bays have a total holding capacity of approximately 15kL. In addition to it, they both are connected to the existing underground holding tank with capacity to hold another 15kL of wastewater (underground tank can be observed on **Appendix A11**). The underground tank will have an outlet above ground for emptying via sump pump or vacuum truck. The contents will be transported to the liquid treatment plant on site for disposal and has full capacity to treat any incidental water ingress into the bunded areas.

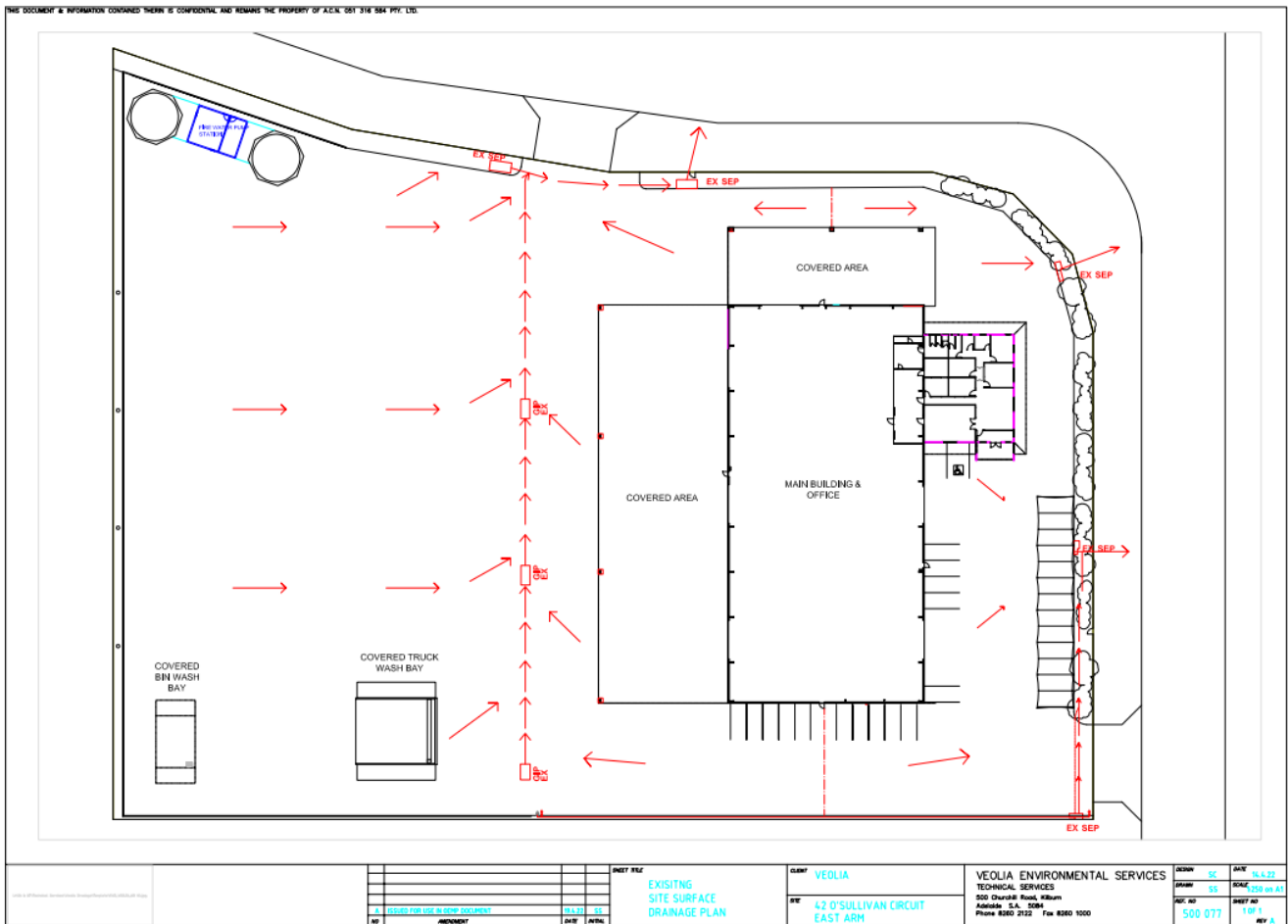
7.4.2. Site Surface, Drainage and Connections

The overall surface of the Site is sealed with concrete inside the covered areas and a combination of concrete and asphalt/bitumen to outside/traffic areas. The location for the bins and vehicles washing bays were designed to allow the least possible amount of stormwater runoff to threaten to inflow into the washing bays.

Surface water flow on the Site is as follows:

- Water flowing from the southern boundary fence flows north to the drainage line that is located parallel to the warehouse and from there, west to the southwest drain outside the property;
- Water flowing from the southern side of the warehouse flows south to the drainage line that is located parallel to the warehouse and from there, west to the southwest drain outside the property;
- Water flowing from the east of the warehouse flows to the northeast corner of the Site; and
- Water flowing from the north of the warehouse flows in a northerly direction to the drainage line/ man made channel located inside the northern boundary fence. The water from this drainage line/ man made channel flows offsite to the northwest drain.

Figure 4: Site stormwater flow path



Stormwater sheet feeds across sealed hardstand areas and is collected in a series of side entry and graded inlet pits, and discharged into the stormwater system running along Krait Street and O'Sullivan Circuit.

The Site has existing and approved connections to electricity, water and sewerage. There are no easements located within the lot.

7.5. Waste Management Activities and Supporting Infrastructure

The main process/storage tanks and equipment are situated in areas surrounded by raised concrete bunds. The bund height is deemed sufficient to avoid loss of wastewater in the event of an emergency situation, such as leakage or spillage of wastewater from tanks or equipment. Transfer of waste material shall be limited to within bunded areas.

The office is located on the northern side (O'Sullivan Circuit) of the warehouse and has a total constructed area of 315m². The car park access is directly to the office which provides clear and safe access to car parking for the disabled zone, staff and visitor parking.

The warehouse is divided into 4 areas to suit the operational and functional requirements of the Recycling Depot. This includes:

1. Recycling Baler and Conveyor area.
2. Bunded Liquid Treatment and Tank Farms:

- Dissolved Air Flotation Oily Water Treatment Process.
- 3. Bunded Biosecurity & Clinical Waste Operations Area and Vehicle Washing:
 - Steam Sterilising and Autoclave Processing.
- 4. Bunded Dangerous Goods Storage.

The remaining area of the site is used for the following activities:

- Vehicles and Bin Washing Bays.
- Wash Bay.
- Trucks parking area.
- LPG Gas tanks.

7.5.1. Recycling Baler and Conveyor

Dry and wet cardboard is delivered to the Site for recycling, this will be sorted and compacted in the Baler area with any moisture originated from the wet cardboards to be captured in a blind sump for pump out and treatment in the adjacent liquid treatment plant as required. **Figure 5** below shows the baler equipment.

Figure 5: Cardboard Recycling Baler and Conveyor



7.5.2. Liquid Treatment and Storage

The Liquid Treatment Plant (LTP) consists of three main areas; unloading bay, liquid process area and treated tank storage area.

The unloading bay is located on the western side of the shed (**Appendix 7**). This area is bunded holding capacity of 110% of the largest tank in the area and is under cover. The area is approximately 360 square metres in size (12m x 30m) holding approximately 36 kL of liquid. This area will be used to unload and load liquid trucks via pumps or a sloped pit. The bund on the south side of the area will be a rollover so all vehicles being loaded or unloaded will be conducted in the bunded area.

If the waste is predominantly liquid, it will be pumped through a 3mm screen and then to the liquid processing area. The sloped pit will be for unloading hydrocarbon waste containing high amounts of solids. This pit will be designed to separate solids from liquids. The solids will undergo processing where they will then be tested to determine final disposal facilities. The liquid portion will be pumped to our liquid process area. Any liquid being loaded into trucks will be accomplished via pumping or vacuum systems.

The liquid processing area is adjacent to the unloading bay and has its separate bund holding 110% of the largest tank in the area. This area is approximately 600 square metres in size (20m x 30m) holding approximately 60 kL of liquid. Five conical tanks will be used to gravity separate the hydrocarbon waste removing the bulk free oil and solids that will settle (**Appendix 7**). Chemicals will be added during this process to aid in the separation rates and effectiveness. Following gravity separation, a dissolved air flotation (DAF) system will be used to remove emulsified solids and oils. A different set of chemicals will be used to assist in demulsifying the contaminants improving separation. Post DAF the waste is predominantly clarified water with minor contaminants. The water will be pumped through micron filters and media filters for final polishing of the water. The polished water will then be transferred to the treated water storage area.

The treated tank storage area consists of two vertical self bunded 100 kilolitre (kL) tanks and one horizontal self bunded 100 kL tank. The vertical tanks will be used for treated water storage. The horizontal tank will be used for treated oil storage.

The vertical tanks will be plumbed into the Power and Water Corporation (PWC) sewer network. All treated water must be tested and approved to PWC trade waste agreement requirements prior to release into the PWC sewer. This will be discharged at an agreed and controlled rate. PWC have been notified of the proposed works and forthcoming trade waste application.

7.5.3. Fixation Ramp

The site will operate a waste fixation process to aid in the treatment and handling of contaminated sludges, soils and liquid waste. This process will take place in the 25m³ ramp located in the liquid plant unloading bay. The ramp will consist of three compartments as shown in **Appendix 9** and described below.

7.5.3.1. Compartment 1 - Solid Settling and Stabilisation

Waste will be unloaded into the first compartment which will allow solids to settle while liquid passes through to the second compartment. The baffle wall between compartments 1 and 2 will have three 100 millimetre openings at different heights. The openings will have valves on them to control what level of liquid can pass through the baffle wall. This will also control the amount of solids entering the second compartment.

When the liquid has been removed, compartment 1 will mainly consist of sludge. Saw dust will be added to the

content using a loader to dry the sludge content creating a spadable solid. The spadable solid will be tested for pH and if required can be increased by adding hydrated lime and magnesium oxide. Chemically, metal oxides are formed, most of which are insoluble and will not leach in the landfill. The solids will undergo laboratory testing which will determine the best disposal location.

7.5.3.2. Compartment 2 - Oil and Water Gravity Separation

The second compartment will be primarily liquid. The liquid will settle over time separating water and oil layers. The water component will flow into the third compartment through a low level opening in the baffle.

7.5.3.3. Compartment 3 - Liquid Removal

The final liquid product will be emptied from the third compartment. This will be treated through the liquid treatment plant to recover emulsified oil and polish the water for trade waste disposal.

7.5.4. Autoclave Sterilisation Treatment of Biosecurity Waste

The Steam Sterilising Autoclave process is bunded to contain any accidental spills and have the minimum of 110% capacity of the largest vessel stored in the specified areas.

Waste is received at the facility and stored within the bunded area or refrigerator container when required before processing. The waste received is typically in a condition that is not odorous.

The Autoclave area is a fully biosecure area and the procedures for this operation are strictly followed as they are in other approved facilities.

Wash-down water from the Autoclave area during the handling of biosecurity and medical waste is captured in a blind sump and transferred to the designated screen wash bay area where it is treated through an approved oily water separator and filtration system. Once this has been treated it can be disposed of directly to PWCs sewer network. All wastewater produced from the autoclave sterilisation process is transferred to the adjacent liquid treatment plant.

The autoclave is a batch process and operates over a cycle time of 1 to 2 hours. During the cycle, emissions to air only occur during the venting phases of the cycle. These occur for a total of 3-5 minutes only (separated over three events during the cycle). The autoclave has a water shower condenser suppressing odours and heat emitted to the environment see **Appendix 6**. This is a significant control leading to compliant emission records for the zoned area. The condensate is stored in an underground tank which can then be either reused as condenser water, pumped to the liquid process area or pumped directly to the liquid storage area. During the remainder of the cycle, there is no significant discharge. The operating hours are from 6 am to 6 pm Monday to Friday (and sometimes on Saturdays). With approximately 2 hours for each autoclave cycle, up to five cycles are typically processed per day. In some instances night shift has been required which results in 24 hour operation and a total of approximately 10 cycles.

Exhaust stacks are part of the installation for the autoclave and shown in plan view on **Appendix 11** and elevation **Appendix 16** as Discharge Points to Air DPA1, DPA2, DPA3 and DPA4.

- DPA1 - Autoclave condenser sterilised steam flue diameter 150mm and 10m from FFL (ref: apex of building 8.5m);
- DPA2 - Steam boiler exhaust flue diameter 300mm and 10m from FFL;
- DPA3 - Steam boiler blowdown exhaust pipe. 150mm diameter and 5m high; and
- DPA4 - Autoclave vessel door sterilised steam duct 700mm square and 10m from FFL.

Furthermore, an autoclave boiler LPG fuel tank will be installed in accordance with applicable standard and

regulation inclusive of line marked exclusion zones and traffic barriers. The boiler provides the steam to the autoclave enabling it to sterilise waste **Appendix 7**.

The autoclave will be initially transported and installed at the new site and commissioned at a later date and communicated with NT-EPA.

7.5.5 Autoclave Odour Emissions

In order to determine the potential impacts regarding odour generation, Veolia commissioned SLR to undertake an Air Quality Impact Assessment for 42 O'Sullivan Street, East Arm based on dispersion modelling for any flue stacks proposed at the relocated autoclave facility. The change in location involves a relocation of the existing Beaton Road autoclave installation only. An improvement will be implemented at East Arm where the autoclave storage tank will be connected to the activated carbon filter to remove any potential odours generated in the tank air space.

The Northern Territory EPA is currently developing a number of environmental assessment guidelines related to the implementation of the Environmental Assessment Act 1982 and the Waste Management and Pollution Control Act 1998. At this stage there is no draft guideline released for air quality assessment. In the absence of a Territory-specific assessment guideline, the Queensland air quality assessment guidelines and assessment criteria are referred to (Environmental Protection (Air) Policy (Qld Gov, 2019)).

7.5.5.1 Guidelines to Assess Odour Impact from Developments

According to the SLR report Veolia East Arm Depot - Air Quality Impact Assessment commissioned for this site, the assessment of potential odour impacts from new or upgraded developments on local air quality was based on the Odour Impact Assessment from Developments Guideline (DES, 2013) referred to as the Guideline. The Guideline includes the following relevant requirements, definitions and assessment criteria:

- A new facility or an upgrade to an existing facility must not generate odours that cause environmental harm at any odour sensitive receiver.
- Odour sensitive receivers include residences, schools, hospitals, caravan parks, national parks, shops and business premises that may be affected by odour.
- An odour impact assessment for a new facility or an upgrade to an existing facility is required to predict the potential odour concentrations.
- The predicted odour concentrations at the most exposed existing or likely future off-site sensitive receptors should be compared to the 99.5th percentile 2.5 odour units (ou), one hour average, for ground-level sources.

A summary of the air quality criteria used in this assessment is provided in **Table 14** below.

Table 14: Air Quality Criteria Used in the Emission Modelling Study*

Air Quality Indicator	Averaging Time	Assessment Criteria	Reference
Odour	1-hour (99.5th %ile)	2.5 ou	DES Odour Guideline, 2013
Nitrogen dioxide (NO2)	1-hour	250 µg/m3	EPP (Air) 2019
	Annual	62 µg/m3	
Carbon monoxide (CO)	8-hour	11,000 µg/m3	
Particulate matter less than 10 µm in aerodynamic diameter (PM10)	24-hour	50 µg/m3	
	Annual	25 µg/m3	

Particulate matter less than 2.5 µm in aerodynamic diameter (PM2.5)	24-hour	25 µg/m3	
	Annual	8 µg/m3	

*Source: Veolia East Arm Depot - Air Quality Impact Assessment , SLR Consulting 620.30678-R01-v01-20211123

The assessment included a background data study using data from the Northern Territory EPA air quality monitoring station (AQMS) located in Palmerston for 2019 since its set of data showed the most conservative (highest) data over the years reviewed and was also the same year as the meteorological data used for the assessment. **Table 15** below, shows the background data used in the assessment.

Table 15: Background Concentrations Applied for Cumulative Assessment of Boiler Combustion Exhaust*

Air Quality Indicator	Averaging Time	Background Concentration (µg/m3)	Statistic
NO ₂	1-hour	4.6	70 th Percentile
	Annual	3.8	Annual Average
CO	8-hour	472	70 th Percentile
PM ₁₀	24-hour	25.9	70 th Percentile
	Annual	22.0	Annual Average
PM _{2.5}	24-hour	12.0	70 th Percentile
	Annual	9.8	Annual Average

*Source: Veolia East Arm Depot - Air Quality Impact Assessment , SLR Consulting 620.30678-R01-v01-20211123

The report's desktop review of other industrial activities in the surrounding areas of the project site identified no significant sources of odour or other activities that would not be adequately accounted for in the conservatively estimated background values presented above.

7.5.5.2 Assessment Methodology

The **Table 16** below summarises the assessment methodology used for the assessment which are detailed on Chapter 5 of the report.

Table 16: Assessment Methodology Used

Methodology	
Model Selection	Emissions from the identified emission sources have been modelled using the US EPA's CALPUFF modelling system.
Meteorological Data Year	Wind data for Darwin Airport was reviewed for the five most recent years and 2019 was selected as a suitable and representative year for assessment.
TAPM	The TAPM prognostic model, developed by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) was used to generate the site representative meteorological data. The TAPM data was further processed by CALMET for use in the dispersion modelling.

CALMET	CALMET is a meteorological model that develops hourly wind and other meteorological fields on a three-dimensional gridded modelling domain that are required as inputs to the CALPUFF dispersion model.
Meteorological Data Used in the Modelling	<ul style="list-style-type: none"> • Wind Speed and Direction • Atmospheric Stability • Mixing Heights

7.5.5.3 Stack and Emission Data

Stack parameters and odour emission rates used in the dispersion modelling were compiled based on stack test data from the current operations at Berrimah facility location for the period 2017 to 2021.

To account for the variability in the emissions data and to consider the range in the odour concentrations data, especially the high results from 2019, the autoclave stack emissions were estimated based on averages of the stack test emissions data. A summary of the stack test data is presented in **Table 17** and the estimated emission rates used in the model are presented in **Table 18** below.

Table 17: Stack Test Emissions Data*

Year of Testing	Stack	Test Average Odour Concentration (ou/m ³)	Test Average Odour Emission Rate (ou/m ³)	Reference / Comments
2017	Autoclave	770,000	3,100,000	(EKTIMO, 2017)
2017	Carbon Filter	2,000	13,000	(EKTIMO, 2017)
2018	Autoclave	480,000	4,200,000	(EKTIMO, 2018)
2019	Autoclave	10,000,000	110,000,000	(EKTIMO, 2019) No comments provided in the test report on the deviation in the odour concentration results compared to previous tests.
2020	Autoclave	58,000	270,000	(EKTIMO, 2020)
2021	Autoclave	61,000	540,000	(EKTIMO, 2021)

*Source: Veolia East Arm Depot - Air Quality Impact Assessment , SLR Consulting 620.30678-R01-v01-20211123

Table 18: Modelled Odour Emission Rates*

Source	Emission Rate (ou/s)	Hour of Emissions	Comments
Autoclave Stack Vent	32,808	Operation hours: 6 am to 4 pm	Emission rate calculated based on 5 minutes of venting occurring each hour.
Carbon filter stack	2,816	Continuous	

*Source: Veolia East Arm Depot - Air Quality Impact Assessment , SLR Consulting 620.30678-R01-v01-20211123

Emissions for the gas boiler were estimated using National Pollutant Inventory (NPI) emission factors(NPI, 2010) and the boiler LPG consumption data. The site operations are from 6 am to 4 pm. However, for a conservative assessment, the boiler combustion emissions were applied as continuous in the modelling. The data used for the emissions estimation and estimated emission rates are presented in **Table 19** below.

Table 19: Emissions Data Boiler Combustion Gases*

Parameter	Value	Comments
Boiler Fuel Input	4,500 MJ/hr	1 MW boiler,(Veolia, 2021), (East Coast Steam, 2021)
LPG Unit Conversion	49 MJ per 1 kg	(ELGAS, 2021)
Boiler LPG Consumption	91.8 kg/hr	
Emission Factors		
CO Emission Factor	0.75 kg/t gas burned	(NPI, 2010)
NOx Emission Factor	4.46 kg/t gas burned	
PM ₁₀ Emission Factor	0.26 kg/t gas burned	
PM _{2.5} Emission Factor	0.08 kg/t gas burned	
Estimated Emissions Rates		
CO	0.019 g/s	
NO ₂	0.011 g/s	Assuming 10% NO ₂ /NO _x conversion rate for near source maximum ground level impacts (Jansen et al, 1988).
PM ₁₀	0.007 g/s	
PM _{2.5}	0.007 g/s	

*Source: Veolia East Arm Depot - Air Quality Impact Assessment , SLR Consulting 620.30678-R01-v01-20211123

The stack parameters for the three sources included in the modelling are presented in **Table 20** below.

Table 20: Stacks Parameters Used in the Modelling*

Parameter	Autoclave	Carbon Filter	Boiler
Location coordinates (kmE, kmN)	707.961, 8,620.460	707.957, 8,620.455	707.963, 8,620.468
Stack height (m)	10 m	10 m	10 m
Stack diameter (m)	0.15 m	0.10 m	0.30 m
Exit velocity (m/s)	8.6 m/s	15.5 m/s	6.0
Temperature (°C)	60 °C	34 °C	100 °C
Vertical momentum	Yes	No (rain cap)	Yes
Building wakes (from facility main building)	Yes	Yes	Yes

*Source: Veolia East Arm Depot - Air Quality Impact Assessment , SLR Consulting 620.30678-R01-v01-20211123

7.5.5.4 Dispersion Modelling

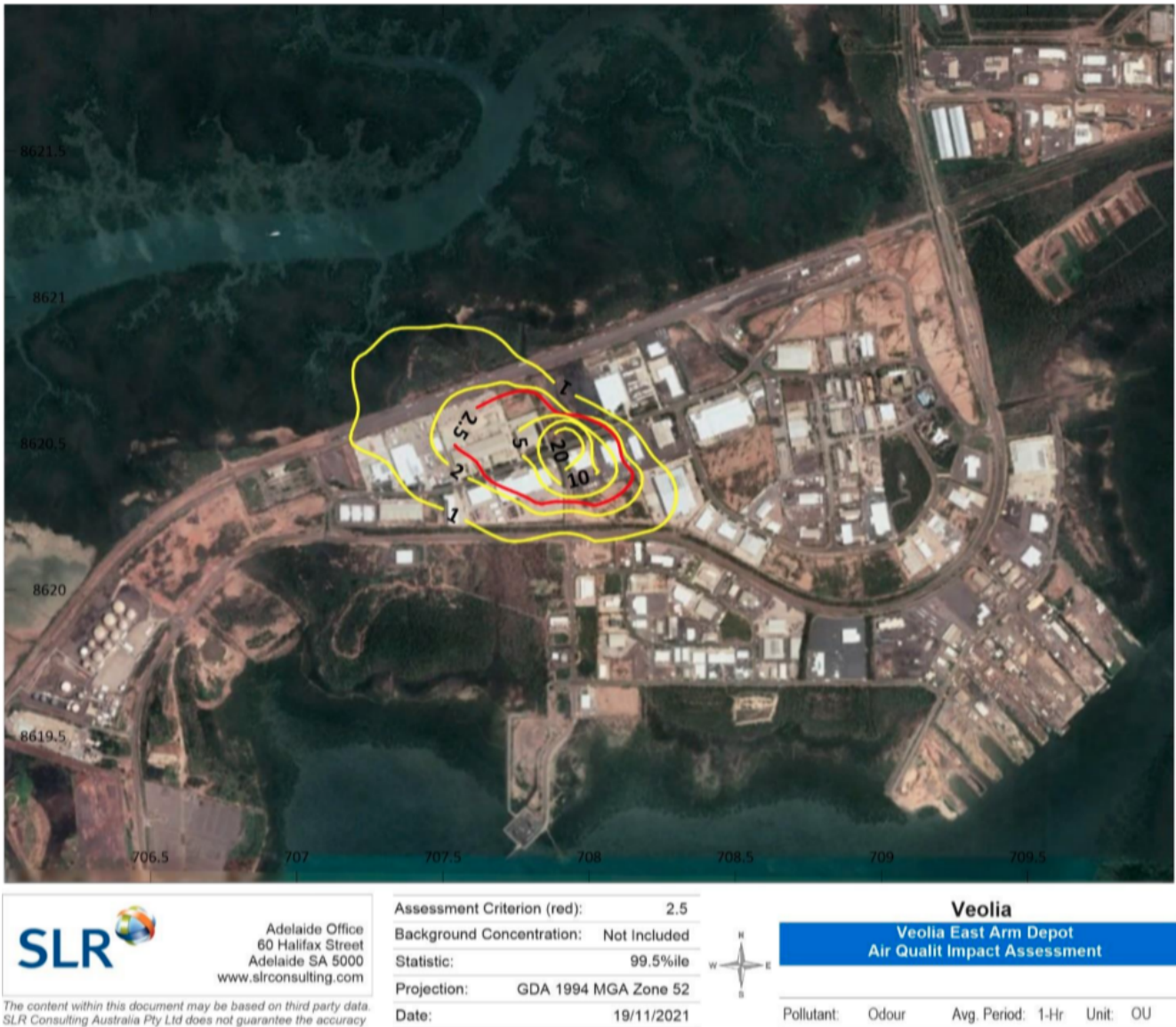
7.5.5.4.1 Odour

The results of the odour dispersion modelling are presented in **Figure 6** below , which shows that the odour footprint extends the furthest to the west-northwest and that the assessment criterion of 2.5 ou is reached at a

distance of approximately 400 m, within the surrounding industrial land. Due to the absence of southwesterly winds in the meteorological dataset, the odour footprint does not extend far to the north northeast, in the direction of the nearest sensitive receptors.

The additional results presented in Appendix C of the Veolia East Arm Depot - Air Quality Impact Assessment , SLR Consulting 620.30678-R01-v01-20211123 report, show that there are no exceedances predicted at any of the nearest sensitive receptor areas for any of the sensitivity analysis scenarios.

Figure 6: Odour Concentrations*



*Source: Veolia East Arm Depot - Air Quality Impact Assessment , SLR Consulting 620.30678-R01-v01-20211123

7.5.5.4.2 Products of Gas Combustion

The **Table 21** below presents the maximum predicted ground level concentrations (anywhere in th4e modelling domain).

Table 21: Maximum Predicted Ground Level Concentrations – Boiler Emissions*

Pollutant	Averaging Period	Assessment Criteria ($\mu\text{g}/\text{m}^3$)	Background Concentration ($\mu\text{g}/\text{m}^3$)	Maximum Ground Level Concentration Anywhere in the Modelling Domain ($\mu\text{g}/\text{m}^3$)	
				Incremental	Cumulative
NO ₂	1-hour	250	4.6	14	18
	Annual	62	3.8	2	6
CO	8-hour	11,000	472	20	492
PM ₁₀	24-hour	50	25.9	6	31
	Annual	25	22.0	1	23
PM _{2.5}	24-hour	25	12.0	2	14
	Annual	8	9.8	0.4	10.2

*Source: Veolia East Arm Depot - Air Quality Impact Assessment, SLR Consulting 620.30678-R01-v01-20211123

Exceedances are only predicted for the PM_{2.5} annual average, which is due to the background concentration exceeding the assessment criterion. As can be seen the PM_{2.5} annual average incremental contribution is predicted to be small.

7.5.5.5 Conclusions

The assessment showed a local exceedance of the odour assessment criterion in the industrial area in the near vicinity of the new facility. The PM_{2.5} annual average assessment criterion was also exceeded. However, this was due to the background concentration exceeding the assessment criterion. The PM_{2.5} annual average incremental contribution is predicted to be small.

With the closest residential area at a distance of 3.5 km it is not expected that the new facility location is going to have any adverse air quality impacts on any existing odour sensitive receivers.

Once the Autoclave has been commissioned and in full operation, Veolia is committed to commission an odour assessment report to validate this modelling study.

7.5.6 Biosecurity & Clinical Waste Operations Area

Biosecurity and clinical waste operations shall be undertaken within an enclosed area segregated by Colorbond steel fence 2.1m high with barbed security wire as portrayed in **Appendix 10** and **Appendix 11**. This area has been designed to be undertaken within a fully bunded area to enable containment of any spills or wash down water.

The transportation vehicles load/unload bins within the area as well as accessing the vehicle wash facility. There is a 15m² area allocated for bin wash and vehicle wash facilities enclosed by 3.5m high splash walls. A 100 micron filtration & oily water/solids separator treats the water captured by the blind sump/soil trap placed in the bin wash and vehicle wash facility. All solids from filtration and screening devices are collected and treated through the autoclave process prior to disposal.

Biosecurity and clinical waste bins will have designated storage areas including separate refrigerator containers.

Areas will be marked out with floor marking and clear signage.

Biosecurity waste is managed at the Site in accordance with the requirements of relevant Approved Arrangements issued by the federal Department of Agriculture, Water and the Environment.

Clinical Waste will be treated by autoclave in accordance with the Department of Environment and Science - QLD, ESR/2015/1571 Guideline: Clinical and related waste.

The licensee must perform efficacy testing in line with the recommendations in the Guideline for approval method to treat Clinical Waste from the Department of Health, NSW.

Where unrefrigerated, biosecurity waste can be stored for a maximum period of two working days, prior to treatment or refrigeration. If refrigerated, Veolia will store biosecurity waste for a maximum period of 90 days before treatment. Biosecurity waste is typically treated within two business days of receipt at the current Depot. Veolia intends to adopt the same procedure at the Site.

7.5.7. Dangerous Goods Storage

For waste designated to be transferred offsite, there is a dedicated dangerous goods (DG) storage container on site, within the Liquid Waste Treatment Area, for the purpose of storing DG and hazardous chemicals.

In an area of 500m² (25m x 20m), this storage area is designed to contain any spills within the container and can be used as segregated storage for different classes of DG. In addition, our vehicles are licenced to convey dangerous goods.

Veolia transports this waste to our liquid treatment facility located in South Australia, via rail.

7.5.8. Wash Bays

There are two wash bays located at the southeastern corner of the site. One is designated for bin washing and maintenance (Bin Wash Bay) and the other for vehicle washing and maintenance (Truck Wash Bay). Both wash bays will have a concrete base with a sump and roll over bunding to capture all wash water. The sumps will drain to a 15,000 litre underground tank. The underground tank will have a high level alarm and flashing light to indicate when it is nearly at capacity. The sump can be emptied via vacuum truck directly from the underground tank or from the drain port at the south east corner of the shed **see Appendix 10**. The wash bays will utilise shipping containers and dome shelter canopies to protect operators from harsh weather conditions as well as reduce rainfall into the bunded area. Details on the wash bay dimensions and bund capacities can be found in **Tables 12 and Table 13**.

7.5.9. Heavy Vehicles Unloading and Parking

The truck parking areas indicated in the site layout meet the requirements of Veolia current fleet but allow for future expansion.

All existing carpark and driveway areas are sealed levels and have a gradient fall to collection points. There are designated entry and exit points into Site for both Light and heavy rigid vehicles. Car parking areas allow two-way traffic and functional access to every car parking space. All car parking spaces are a minimum 2.5m

wide x 5.5m long and easily visible from driveway locations.

Designated loading areas are located in front of 6x6m roller doors to allow access to the warehouse under the existing awning. These are fully contained with bunding (with the exception of the baler storage area).

The external surface drainage and hardstand sealing will remain unaltered. The Hardstand is currently fully sealed and should be fed to a series of Side Entry and Grated Inlet pits and discharged into the Transport Infrastructure and planning department stormwater system running along Krait Street and O'sullivan circuit. No change to the stormwater collection and discharge will occur as part of these works.

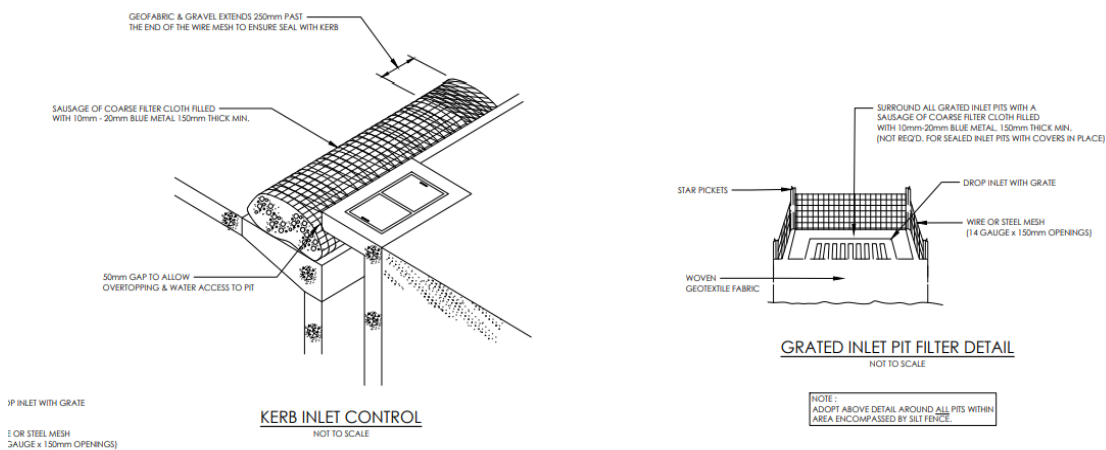
7.5.10. Stormwater Flow path and Water Quality

The **Appendix 8 - Site Surface Drainage Plan** details the stormwater flow path through the site. The location for the bins and vehicles washing bays were designed to allow the least possible amount of stormwater runoff to threaten to inflow into the washing bays.

Uncontrolled discharge of stormwater during the operation is very unlikely given the existing works and how the stormwater sheet feeds on the site. The site manager has the responsibility to monitor for severe weather events. For a severe weather event there is normally at least 4 days' notice which gives plenty of time to check all stormwater systems for faults..

The existing stormwater drains are equipped with grate inlet pits (GIP's) and side entry pits (SEP's) to prevent run off materials entering the stormwater drainage system (**Figure 6** below).

Figure 7: Standard detail for GIP and SEP



The existing grated inlet pits (GIP's) and side entry pits (SEP's) are proved to cope with all stormwater generated on site.

8. Waste Characteristics

8.1. Waste Types

Schedules of waste types, which are permitted and/or prohibited are specified in **Table 22** below, according to the Environment Protection Authority licence for the East Arm Site (EPL-322-2).

Table 22: Waste Types accepted at the Site

Waste Code	Listed Waste	Collection	Transport	Storage	Treatment	Recycling	Disposal
A100	Waste resulting from surface treatment of metals and plastics	✓	✓	✓	✗	✗	✗
B100	Acidic solutions or acids in solid form	✓	✓	✓	✗	✗	✗
C100	Basic solutions or bases in solid form	✓	✓	✓	✗	✗	✗
D100	Metal carbonyls	✓	✓	✓	✗	✗	✗
D110	Inorganic fluorine compounds excluding calcium fluoride	✓	✓	✓	✗	✗	✗
D120	Mercury, mercury compounds	✓	✓	✓	✗	✗	✗
D130	Arsenic, arsenic compounds	✓	✓	✓	✗	✗	✗
D140	Chromium compounds that are hexavalent or trivalent	✓	✓	✓	✗	✗	✗
D150	Cadmium, cadmium compounds	✓	✓	✓	✗	✗	✗
D160	Beryllium, beryllium compounds	✓	✓	✓	✗	✗	✗
D170	Antimony, antimony compounds	✓	✓	✓	✗	✗	✗
D180	Thalium, thallium compounds	✓	✓	✓	✗	✗	✗
D190	Copper compounds	✓	✓	✓	✗	✗	✗
D200	Cobalt compounds	✓	✓	✓	✗	✗	✗
D210	Nickel compounds	✓	✓	✓	✗	✗	✗
D220	Lead, lead compounds	✓	✓	✓	✗	✗	✗

D230	Zinc compounds	✓	✓	✓	✗	✗	✗
D240	Selenium, selenium compounds	✓	✓	✓	✗	✗	✗
D250	Tellurium, tellurium compounds	✓	✓	✓	✗	✗	✗
D270	Vanadium compounds	✓	✓	✓	✗	✗	✗
D290	Barium compounds other than barium sulphate	✓	✓	✓	✗	✗	✗
D300	Non-toxic salts	✓	✓	✓	✗	✗	✗
D310	Boron compounds	✓	✓	✓	✗	✗	✗
D330	Inorganic sulphides	✓	✓	✓	✗	✗	✗
D340	Perchlorates	✓	✓	✓	✗	✗	✗
D350	Chlorates	✓	✓	✓	✗	✗	✗
D360	Phosphorus compounds other than mineral phosphates	✓	✓	✓	✗	✗	✗
E100	Wastes containing peroxides other than hydrogen peroxide	✓	✓	✓	✗	✗	✗
F100	Waste from the production, formulation and use of inks, dyes, pigments, paints, lacquers and varnish	✓	✓	✓	✗	✗	✗
F110	Waste from the production, formulation and use of resins, latex, plasticisers, glues and adhesives	✓	✓	✓	✗	✗	✗
G100	Ethers and highly flammable hydrocarbons	✓	✓	✓	✗	✗	✗
G110	Non halogenated organic solvents	✓	✓	✓	✗	✗	✗
G150	Halogenated organic solvents	✓	✓	✓	✗	✗	✗
G160	Waste from the production, formulation and use of organic solvents	✓	✓	✓	✗	✗	✗
H100	Waste from the production, formulation and use of biocides and phytopharmaceuticals	✓	✓	✓	✗	✗	✗
H110	Organic phosphorus compounds	✓	✓	✓	✗	✗	✗
H170	Waste from the manufacture, formulation and use of wood preserving chemicals	✓	✓	✓	✗	✗	✗
J100	Waste mineral oils unfit for their original intended use	✓	✓	✓	✓	✗	✗

J120	Waste mixtures, or waste emulsions, of oil and water or hydrocarbon and water	✓	✓	✓	✓	✗	✗
J160	Waste tarry residues arising from refining, distillation and any pyrolytic treatment	✓	✓	✓	✗	✗	✗
K100	Animal effluent and residues	✓	✓	✓	✗	✗	✗
K110	Grease trap waste	✓	✓	✓	✗	✗	✗
K120	Vegetables oils & derivatives, other liquid food waste	✓	✓	✓	✗	✗	✗
K130	Sewage sludge and residues including nightsoil and septic tank sludge	✓	✓	✓	✗	✗	✗
K140	Tannery wastes (including leather dust, ash sludges and flours)	✓	✓	✓	✗	✗	✗
K190	Wool scouring waste	✓	✓	✓	✗	✗	✗
M150	Phenols, phenol compounds including chlorophenols	✓	✓	✓	✗	✗	✗
M160	Organohalogen compounds that are not otherwise specified in this Schedule	✓	✓	✓	✗	✗	✗
M170	Polychlorinated dibenzo-furan (any cogener)	✓	✓	✓	✗	✗	✗
M180	Polychlorinated dibenzoo-p-dioxin (any cogener)	✓	✓	✓	✗	✗	✗
M230	Triethylamine catalysts for setting foundry sands	✓	✓	✓	✗	✗	✗
M250	Surface active agents (surfactants) that contain principally organic constituents and that may contain metals and inorganic materials	✓	✓	✓	✗	✗	✗
N100	Containers that are contaminated with residues of a listed waste	✓	✓	✓	✗	✗	✗
N120	Soils contaminated with a listed waste	✓	✓	✓	✓	✗	✗
N140	Fire debris and fire washwaters	✓	✓	✓	✗	✗	✗
N150	Fly ash	✓	✓	✓	✗	✗	✗
N190	Filter cake	✓	✓	✓	✗	✗	✗
N205	Residue from industrial waste treatment or disposal operations	✓	✓	✓	✗	✗	✗
N220	Asbestos	✓	✓	✓	✗	✗	✗
R100	Clinical and related wastes	✓	✓	✓	✓	✗	✗

R120	Waste pharmaceuticals, waste drugs and waste medicines	✓	✓	✓	✗	✗	✗
R140	Waste from the production and preparation of pharmaceutical products	✓	✓	✓	✗	✗	✗
R150	Biosecurity Waste	✓	✓	✓	✓	✗	✗
T100	Waste chemical substances arising from research and development or teaching activities, including those substances which are not identified and/or are new and the effects of which on human health and/or the environment are not known	✓	✓	✓	✗	✗	✗
T120	Waste from the production, formulation and use of photographic chemicals and processing materials	✓	✓	✓	✗	✗	✗
T140	Tyres	✓	✓	✓	✗	✗	✗

8.2. Waste Volumes

As per the Depot's EPL 202-1, the materials to be stored on the Site, once it is operational, will comply with the following condition:

"The licensee must ensure that all materials that are likely to cause environmental harm are handled and stored in areas with a containment system in accordance with the relevant Australian Standard. Where no relevant Australian Standard exists, the containment system must be sized to contain 110% of the volume of the largest container within the area."

In addition to the waste types, provided in **Table 22**, received in varying quantities at the Site, it is required that the Site will not store more than specified volume of those listed wastes in the **Table 23** and **Table 24** below.

Table 23: Biosecurity & Clinical Waste Storage Volumes

Area	Kilolitres
Waste Storage Area (inside Shed)	60
Waste Storage Area (biosecurity refrigerator container)	20
Waste Storage Area (clinical waste refrigerator container)	20

Table 24: Listed Wastes Volume per Annum

Listed Waste	Waste Code	UOM	Total
AFFF	M270	kl	120
Asbestos waste	N220	M3	142
Avtur	J110	kl	103
Basic solutions or bases in solid form	C100	kl	150
Biosecurity	R150	M3	3,034
Clinical waste	R100	M3	152
Containers with residue	N100	Ea	144
Cooking Oil	K150	kl	38
Grease trap waste	K110	kl	767
Mercury; mercury compounds	D120	KG	117
Organic solvents excluding halogenated solvents	G110	M3	60
Pharmaceutical waste	R120	M3	79
Sewage waste from the reticulated sewerage system	K130	kl	2,632
Tyre waste	T140	M3	986
Waste Mineral Oil	J100	kl	1,724
Waste oil/hydrocarbons mixtures/emulsions in water	J120	kl	3,935

Waste	Waste Code	UOM	Total
Paper & Cardboard	NA	M3	34,007
Concrete waste	NA	M3	187
Deep burial	NA	M3	151
General waste	NA	M3	217,270
Green waste	NA	M3	84
Scrap metal	NA	M3	6,870
Timber waste	NA	M3	874
Green waste	NA	M3	105
Commingle	NA	M3	3,190
E-waste	NA	M3	29

8.3. Waste Transportation and Delivery to Site

Most waste transport vehicles utilising the Sitel have a rigid frame, non articulated and have varying capacities. Tankers are fitted with "vacuuming" or "pump loading" facilities to transfer liquid waste from various tanks. The transportation of listed waste is only undertaken using company-registered vehicles. It also ensures that each vehicle used for the transportation of listed waste is included in the company vehicle fleet manifest and where appropriate covered by any requirements of the NT Dangerous Goods (Road and Rail Transport) Act.

All EPA approved vehicles will be listed and updated on EPA online Portal.

On average Veolia receives 50m³ of waste per day. However this can vary depending on the schedule of work and third party deliveries to the facility. Volumes can be as high as 200m³ per day in special circumstances.

8.3.1. Waste Collection

The key hazardous activity of Waste Collection relates to:

- Collection and removal of waste from customer sites and transport of waste inter-site or to landfill locations within the area of operation; and
- Replacement of waste collection bins and supporting activities directly required to complete these task(s).

8.3.1.1. Types of Equipment

Typical classes of plant and equipment used to undertake Waste Collection are, but not limited to **Table 25**:

Table 25: Classes of Equipment Used for Waste Collection

Equipment Type	Purpose
Front Lift	A waste removal system to assist with the collection and disposal of waste from customer sites. The front lift operation is used for general waste, plastics and cardboard collecting the waste using a frontward motion and placing the waste in the rear of the Waste Collection truck. The front lift vehicle is designed for use in the collection of compressible waste material from waste containers.
Side Lift	A waste removal system to assist with the collection and disposal of waste from customer sites. The side lift operation is used for the collection of general household waste either manually or with the assistance of a robotic arm and claw, used to automatically lift and tip the bins into the hopper.
Rear Lift	A waste removal system to assist with the collection and disposal of waste from customer sites. The rear lift vehicle has 3 basic operations: container loading using hydraulics, compaction of waste and ejection of waste into a landfill facility.
Hook Lift	A waste removal system to assist with the collection and disposal of waste from customer sites. The hook lift operation services selected bins for delivery, collection and transfer of waste to landfill facilities.
Skip Lift	A waste removal system to assist with the collection and disposal of waste from customer sites. The skip lift operation services selected bins for delivery, collection and transfer of waste to landfill facilities.

Liquid Tanker	Assists with the bulk collection and disposal of liquid waste from customer sites, which includes but is not limited to, the pumping and transporting of bulk liquid waste and sludge.
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8.3.1.2. Activity Requirements

Waste Collection can be categorised in the following activities:

Table 26: Activities definitions

Activity	Definition
Quarantine Waste	Waste which includes: <ul style="list-style-type: none"> ● Material used to pack or stabilise cargo; ● Galley and food waste; ● Human, animal or plant waste; ● Refuse or sweepings from the holds or decks of a vessel or installation; ● Any other waste or material, which comes into contact with Quarantine Waste; ● Contents of airport amnesty bins; ● Articles seized by AQIS and/or not collected by clients.
Controlled Waste	<ul style="list-style-type: none"> ● A - Plating and Heat Treatment; ● B - Acids; ● C - Alkalis; ● D - Inorganic Chemicals; ● E - Reactive Chemicals; ● F - Paints, resins, Inks and Organic Sludges; ● G - Organic Solvents; ● H - Pesticides; ● J - Oils; ● K - Putrescible and Organic Wastes; ● L - Industrial Wash Water; ● M - Organic Chemicals; ● N - Soils and Sludge; ● O - Clinical and Pharmaceutical; and ● P - Miscellaneous – research and development, photographic chemicals, used tyres.
Hazardous Waste	<ul style="list-style-type: none"> ● Explosives; ● Flammable Liquids/Solids; ● Poisonous; ● Toxic; ● Ecotoxic; ● Infectious Substances Flammable Liquids; ● Resins/Glues; ● Thinners/Solvents; ● Tars; ● Compressed Gas/Cylinders; and ● Fuels.

General Waste	<ul style="list-style-type: none"> ● General <ul style="list-style-type: none"> ○ Food Waste; ○ Wax Cardboard; ○ Plastic Wrap; ○ Strapping ties; ○ Ink Cartridges; ○ Light globes; and ○ Tissue Paper. ● Paper /Cardboard <ul style="list-style-type: none"> ○ Office Paper; ○ Cardboard; ○ Envelopes; ○ Magazines; ○ Phone Books; ○ Folders; ○ Reports; and ○ Coloured Paper. ● Commingled <ul style="list-style-type: none"> ○ Plastic Bottles and Containers; ○ Glass Bottles and Jars; ○ Aluminium Cans; and ○ Steel Cans. ● Food/Organics <ul style="list-style-type: none"> ○ Fruit and Vegetable Waste; and ○ Bread and Baked Goods. ● Secure Destruction <ul style="list-style-type: none"> ○ Confidential paper and cardboard; and ○ Confidential reports.
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8.3.2. Acceptance of Waste Deliveries

Liquid and packaged waste deliveries received by the Site will have a Waste Manifest Form (WFM) from the customer, accompanied with a Safety Data Sheet (SDS), or sourced from the online electronic chemical management system (ChemAlert), for all relevant substances to enable appropriate personal protective equipment use, safe handling and storage.

8.4. Trade Waste Management

Veolia has a Trade Waste Agreement with Power and Water Corporation (PWC) which permits the discharge of treated liquid wastewater via the PWC sewerage services infrastructure. The trade waste agreement outlines the discharge limits and conditions set by PWC to be an approved trade waste discharger. These conditions include; testing and sampling requirements, flow rate into the sewer and maximum volume discharged.

8.4.1. Discharge Monitoring

Veolia will periodically sample, test and control flow to verify compliance with the discharge criteria. The frequency, characteristics and procedures will be defined in the Trade Waste Agreement issued for the Site, as well as the reporting requirements to Power and Water Corporation.

8.4.2. Rates and Standards of Discharge

Veolia is currently permitted to discharge “no more than 100 kL of trade waste per day; and no trade waste volume greater than 4167 litres per hour; or rate than 70 litres per minute”, with the following limits:

- Solids: no discharge of trade waste containing any fibrous material likely to cause obstructions in a drain or sewer and must pass through a 13mm bar screen.

- Oils, fat and grease: no discharge of trade waste containing any free or floating layer of oil, fat or grease.
- Mononuclear aromatic hydrocarbon: no discharge of trade waste containing a mononuclear hydrocarbon listed in a concentration greater than as listed below:
- Benzene: Maximum concentration of 1.0mg/L
- Ethylbenzene: Maximum concentration of 2.0mg/L
- Toluene: Maximum concentration of 2.0mg/L
- Total Xylenes: Maximum concentration of 2.0mg/L
- Aliphatic hydrocarbons: no discharge of trade waste containing aliphatic hydrocarbons C6-C9 at a concentration greater than 1.0mg/L.
- Inhibitory chemicals: no discharge of trade waste, which when diluted to a 5 per cent solution with sewage, would inhibit the microbiological sewage treatment process applicable to that trade waste by more than 20 per cent.

Veolia may additionally be allowed to discharge trade waste containing any other substance not otherwise mentioned in the agreement above, in a concentration no greater than 1 ug/L. Further information on guideline limits are provided in **Appendix 13**.

9. Operations Impacts

Veolia's operation environmental impacts for the Site were identified and assessed, and are presented in the NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab), see **Appendix 14**. This included potential impacts based on the hours of operation, movements of personnel and the plant and equipment utilised. A summary of all environmental parameters that were considered in the NT Waste Risk Register - East Arm, with predicted impacts from the operation of the Site are highlighted below. Additional information, including mitigation measures to ensure air and water quality, traffic and noise disturbances do not contribute to the degradation of the local amenity during the Site normal operation are also included in the **Appendix 14** NT Waste Risk Register - East Arm.

9.1. Land

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 3 potential risks of environmental impact to the site. All 3 deemed Low or Medium after control actions applied.

9.1.1. Discharge offsite (sediment laden waters) - downstream impacts

The risk is deemed Low after the following control actions are applied:

- existing site design - concrete sealed hardstand (internal), bitumen/concrete (external)
- weather forecast monitoring (for windy/wet conditions)

9.1.2. Soil washed on site - tracked offsite

The risk is deemed Medium after the following control actions are applied:

- Site design - hardstand (no tracking of materials offsite)
- Mesh/barb wire perimeter fencing
- Bunding
- Housekeeping
- Weather forecast monitoring (for windy/wet conditions)
- Stormwater drain with grate
- Recycling activities all processed inside undercover areas

9.1.3. Waste not contained within the bin or body of the vehicle resulting in discharge during transportation

The risk is deemed Medium after the following control actions are applied:

- Driver vehicle induction and training
- Waste awareness training
- Contained tank/space are used for general waste that open when tipping and unloading waste
- Front Lift, Rear Lift, Hook Lift Operating Procedure
- Provision of tarps, restrain units, ropes and other equipment required to cover load (Hook Lift)
- 3rd party maintenance provider

9.1.4. Flooding

The risk is deemed Low since the site is not located in a flood zone:

- Site designed for monsoon events
- Location on high side of the road

9.2. Air Quality

An assessment of the predicted air quality impacts during the operation of the site was undertaken in the NT Waste Risk Register - East Arm. The risk assessment indicated that the identified air quality pollutant emissions from the operation processes are unlikely to have any significant or prolonged effect at any off-Site sensitive receptors or local amenity, where the identified mitigation measures would be effectively implemented.

9.2.1. Dust

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 2 potential risks of environmental impact to the site. All 2 deemed Low after control actions applied.

9.2.1.1. Dust from fixation plant/ramp and chemical used

The risk is deemed Low after the following control actions are applied:

- Undercover operations within a predominantly enclosed area
- Biosecurity comes in sealed containers and remains sealed during the treatment process
- Balers inside

9.2.1.2. Emptying bin

The risk is deemed Low after the following control actions are applied:

- Operators trained according to manufacturer's operating manual for safe operation of plant
- Appropriate PPE to be worn by operators (dust mask, safety goggles/shield)
- Incident / Hazard reporting (RIVO)
- Cardboard bins are in a controlled environment

9.2.2. Odour

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified two potential risks of environmental impact to the site. Both risks are deemed Low after control actions are applied.

9.2.2.1. Biosecurity waste and Hydrocarbon waste (filters/rags etc)

The risk is deemed Low after the following control actions are applied:

- Biosecurity waste regulated under 8.3 approved arrangement
- Liquid plant and autoclave have odour filter (Carbon Activated installed)
- Keep hydrocarbon waste covered
- All tanks are covered
- Liquid Treatment Plant is an enclosed system except for the receipt

9.2.2.2. Odour created by site operational activities

The risk is deemed Low after the following control actions are applied:

- Enclosed area
- Liquid plant has odour prevention system
- Autoclave shed fitted with deodorizer system and odour prevention system
- Modelling report shown no sensitive receptors around the site
- Waste stored in transit fully contained in a closed vented system
- Driver training packages developed including the importance and use of pre-start checklists and vehicle maintenance

- Preventative maintenance scheduled to include frequent truck washing, to ensure all waste residues are cleaned regularly
- Vehicle pre-start checklists to be filled out daily to ensure all SHEQ issues associated with vehicle are recorded and remediated
- Work instructions stipulating requirement for waste to be emptied from truck prior to end of shift

9.2.3. Visual Emissions

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It was deemed Medium after control actions applied.

9.2.3.1. Flue stacks, Trucks, Minor plant equipment and Autoclave steam

The risk is deemed Medium after the following control actions are applied:

- Boiler meets Australian Standard design
- Trucks preventive maintenance
- Minor equipment preventive maintenance
- Autoclave with shower condenser

9.3. Water

An assessment of the predicted water quality impacts during the operation of the site was undertaken in the NT Waste Risk Register - East Arm. The risk assessment indicated that the identified water quality pollutant emissions from the operation processes are unlikely to have any significant or prolonged effect at any off-Site sensitive receptors or local amenity, where identified mitigation measures would be effectively implemented.

9.3.1. Surface Water Run Off

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It is deemed Low after control actions are applied.

9.3.1.1. Liquid waste undertake

The risk is deemed Medium after the following control actions are applied:

- Liquid waste receipt only on designated bunded area
- Identified stormwater drains
- Drain/discharge points protected
- Triple interceptor installed

9.3.2. Stormwater

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It is deemed Low after control actions are applied.

9.3.2.1. Discharge offsite (sediment laden waters) - downstream impacts

- Historical knowledge of the site

- Sweeper to keep access road clean to prevent tracking of muddy material to stormwater system or offsite
- Arrestor baskets in stormwater pits to trap gross pollutants. Final stormwater pit with grit screen/oily water separator. Pump out of the system periodically
- Spill kits located in close proximity to the work area (in the maintenance shed)

9.3.3. Groundwater

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It is deemed Low after control actions are applied.

9.3.3.1. Groundwater contamination

- Sealed site - no infiltration to underlying groundwater
- Internal - protected by roofing
- External - impervious surface
- Monitoring inclement weather
- Historical knowledge of site

9.3.4. Leachate

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It is deemed Low after control actions are applied:

9.3.4.1. Leachate generation

- No waste disposal on site

9.4. Noise

An assessment of the predicted noise impact during the operation of the site was undertaken in the NT Waste Risk Register - East Arm. The risk assessment indicated that the identified Noise emissions from the operation processes are unlikely to have any significant or prolonged effect at any off-Site sensitive receptors or local amenity, where identified mitigation measures would be effectively implemented.

9.4.1. Operation noise

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It is deemed Low after control actions are applied:

9.4.1.1. During working hours

- Maintenance and operation of machinery / equipment / vehicles to be undertaken and maintained during the normal working hours
- Most of the equipment and operation works are performed inside the warehouse
- 24 hour operations permitted in zoning (Industrial) and within background levels of surrounds
- Action away from sensitive receptors.

- In the unlikely event of a significant noise generating activity, work practices will be reviewed and adjusted accordingly

9.5. Waste

An assessment of the predicted waste impact during the operation of the site was undertaken in the NT Waste Risk Register - East Arm. The risk assessment indicated that the identified waste pollutant emissions from the operation processes are unlikely to have any significant or prolonged effect at any off-Site sensitive receptors or local amenity, where identified mitigation measures would be effectively implemented.

9.5.1. Operation Waste

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 2 potential risks of environmental impact to the site. All 2 deemed Low or Medium after control actions applied.

9.5.1.1. Office waste

- Recycling and reuse using a reputable (licenced) recycling facility

9.5.1.2. Exposure to hazardous / biosecurity waste

- Storage segregation as per ADG Code 7.7
- Operation following procedures for biosecurity waste regulated under 8.3 approved arrangement
- Bunding
- Fully stocked spill kit
- Spill response training
- Operator trained according to manufacturer's operating procedures for equipment use,
- Manual handling course conducted as part of driver training
- Near miss / Hazard reporting (RIVO)
- Operating Procedure

9.5.2. Trade Waste

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It was deemed Low after control actions applied.

9.5.2.1. Licence breach

- Operation under the Trade Waste licence conditions
- Regular sampling and monitoring of the Trade Wastewater before discharge to PWC

9.6. Biodiversity

An assessment of the predicted biodiversity impact during the operation of the site was undertaken in the NT Waste Risk Register - East Arm. The risk assessment indicated that the identified biodiversity impacts from the operation processes are unlikely to have any negative effect at any off-Site sensitive receptors or local amenity, where identified mitigation measures would be effectively implemented.

9.6.1. Flora and/or fauna species

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It was deemed Low after control actions applied.

9.6.1.1. *Threatened flora or fauna species, endangered flora populations or endangered ecological communities*

- No threatened flora or fauna species, endangered flora populations or endangered ecological communities were recorded in the area
- Site long established and in an industrial zoned area

9.6.2. Indigenous heritage

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 2 potential risks of environmental impact to the site. All 2 deemed Low or Medium after control actions applied.

9.6.2.1. *Discovery of Aboriginal and Macassan archaeological places at the site*

- It is unlikely to find Aboriginal and Macassan archaeological places if the land: is reclaimed, has been cleared or disturbed before or has been built over. (In these examples, it is likely you will not need to take action)
- If an Aboriginal and Macassan archaeological place of significance or suspected significance is discovered during operation, all work in the vicinity of the area will cease and the Environmental Representative for Veolia East Arm Depot will be contacted as soon as possible to determine the subsequent course of action
- In the event that suspected human skeletal remains are discovered, all work will cease and the NT Police and the NT Coroner's office will be contacted. If the burial is identified as being of Aboriginal origin a heritage professional and NT Office of Environment and Heritage will be contacted to determine the subsequent course of action

9.6.2.2. *Possible impact to WWII Quarantine Anti-Aircraft historical site located around 500m southern to the site*

- Documented and awareness

9.7. Weather

An assessment of the predicted Weather impact during the operation of the site was undertaken in the NT Waste Risk Register - East Arm. The risk assessment indicated that the identified weather impacts from the operation processes are unlikely to have any negative effect at any off-Site sensitive receptors or local amenity, where identified mitigation measures would be effectively implemented.

9.7.1. Wind

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It was deemed Low after control actions applied.

9.7.1.1. Cyclone, Potential for emissions off site

- Enclosed works
- Weather monitoring
- Business continuity plan to include severe weather conditions

9.7.2. Storms

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It was deemed Low after control actions applied.

9.7.2.1. Cyclone, Potential for emissions off site and stormwater contamination

- Enclosed works
- Weather monitoring
- Business continuity plan to include severe weather conditions

9.7.3. Bushfires

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It was deemed Low after control actions applied.

9.7.3.1. Potential for emissions off site, Potential for facilities damages

- Not located in a bushfire zone

9.8. Environmental Incidents

An assessment of the predicted Environmental Incident impact during the operation of the site was undertaken in the NT Waste Risk Register - East Arm. The risk assessment indicated that the identified environmental incident impacts from the operation processes are unlikely to have any negative effect at any off-Site sensitive receptors or local amenity, where identified mitigation measures would be effectively implemented.

9.8.1. Spills

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 9 potential risks of environmental impact to the site. All 9 deemed Low or Medium after control actions applied.

9.8.1.1. Hydraulic and chemical spill , concrete , painting

- Emergency preparedness training
- Documentation check Emergency Response Plan
- Inductions
- Reporting
- Emergency control devices
- Agree to get checked/ approved contractor
- ER drills

- Meeting and tool boxes talks
- Report to regulators as required
- Use of portable bunding

9.8.1.2. Crack in compactor / bin body or Seal damage of compactor / bin door

- Driver vehicle induction and training
- Contained tank/space are used for general waste that open when tipping and unloading waste
- Front Lift , Rear Lift, Hook Lift Operating Procedure
- Provision of tarps, restrain units, ropes and other equipment required to cover load (Hook Lift)
- Spill Response Training
- Fully stocked Spill Kit on vehicle
- Bin Condition report
- Vehicle inspection
- Regular preventative maintenance on vehicle body and truck to ensure structural integrity

9.8.1.3. Potential release / spillage of waste while manoeuvring bins to position

- Education material provided to drivers and clients on safe handling of bins
- Spill Response Training
- Provision of lidded bins to contain waste while tipping manoeuvring and lifting
- Fully stocked spill kits provided in every vehicle
- Bins positioned to allow minimal manual handling/manoeuvring of bins
- Chemical Spill Response Procedure
- Spill Response Flowchart
- Regular preventative maintenance scheduled to repair any leakages or identify damages

9.8.1.4. Incorrect disposal

- EPA waste tracking document
- Fully stocked spill kit
- Spill response training

9.8.1.5. Overloaded bins (above waterline)

- Client Contracts to establish bin load requirements
- Education material provided to drivers and clients on safe handling of bins
- Spill Response Training
- Fully stocked spill kits provided in every vehicle
- Chemical Spill Response Procedure
- Spill Response Flowchart
- Optimise maintenance schedule for bins and trucks to minimise potential for waste build up / spillage

9.8.1.6. Fuel tank leakage

- Spill Response Training
- Regular preventative maintenance scheduled to repair any leakages or identify damages
- Fully stocked Spill Kits in every vehicle
- Pre-start checklists developed to identify and report any damages, leakages or issues with vehicle

9.8.1.7. Compacting hopper

- Spill Response Training
- Regular preventative maintenance scheduled to repair any leakages or identify damages
- Fully stocked Spill Kits in every vehicle
- Pre-start checklists developed to identify and report any damages, leakages or issues with vehicle

9.8.1.8. Loading / Unloading bins onto lifter (Hook Lift)

- Spill Response Training
- Regular preventative maintenance scheduled to repair any leakages or identify damages
- Fully stocked Spill Kits in every vehicle
- Pre-start checklists developed to identify and report any damages, leakages or issues with vehicle

9.8.1.9. Hydraulic fluid hose eruptions

- Operators perform pre start / post work vehicle check (DVR)
- Regular preventative maintenance scheduled to repair any leakages or identify damages
- Operators trained in spill response
- Fully stocked Spill kits located on vehicles

9.8.2. Fire

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It was deemed High after control actions applied.

9.8.2.1. Electrical / Gas tank installation / welding / hot work

- Emergency preparedness training + documentation check ERP
- Inductions
- Reporting
- Emergency control devices
- Agree to get checked/ approved contractor
- ER drills
- Meeting and tool boxes
- Report to regulators as required
- Portable bunding
- Work Permits specific for works carried out
- Hot Work Permit specifically

9.8.3. Regulatory non compliance

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It was deemed Medium after control actions applied.

9.8.3.1. Licence breach / Regulatory action (notices/warnings/penalties)

- Legal and other requirements addressed
- Risk register

- EMP
- Work documentation
- Report to regulators as required
- Monitoring and sampling as required

9.8.4. Reputation, community relationships

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It was deemed Low after control actions applied.

9.8.4.1. Negative social media/media attention

- Site location (industrial zoning) - less impact on sensitive receptors
- Existing site (not greenfield site)
- Existing operations have 24/7 permissions (transport etc)
- Signage installed at front of site (public notice/exhibition)

9.9. Other

An assessment of Other factors that could impact during the operation of the site was undertaken in the NT Waste Risk Register - East Arm. The risk assessment indicated that the other identified impacts from the operation processes are unlikely to have any negative effect at any off-Site sensitive receptors or local amenity, where identified mitigation measures would be effectively implemented.d.

9.9.1. Visual Amenity

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It was deemed Low after control actions applied.

9.9.1.1. Windblown litter, material tracking offsite and stockpile waste

- Housekeeping inspections to ensure litter controlled and visual amenity not impacted
- Supply a bin for litter control
- Induction, training
- Most enclosed activities

9.9.2. Socio-economic

The NT Waste Risk Register - East Arm (Environmental Aspect & Impacts tab) assessment has identified 1 potential risk of environmental impact to the site. It was deemed Low after control actions applied.

9.9.2.1. Noise and traffic impact to local residents / Action on Council

- No local residents, only commercial/industrial
- <95dBa (day time activities from Tailor Made) day time operations only (hours to be confirmed) 5 am start for concreting
- 24 hour operations permitted in zoning and within background levels of surrounds Action (worker PPE - noise protection >84dBa for 8 hours)

10. Implementation of this EMP

It is essential that all personnel associated with the operation of the Site comply with the legal, contractual and environmental requirements presented by Veolia and addressed in this EMP.

Veolia's BMS is certified to AS/NZS ISO 14001:2004 Environmental Management Systems (EMS) to ensure that environmental issues are identified and managed throughout the company's operations. The EMS is implemented based on the standard Plan, Do, Check, Act model as follows:

- Planning and environmental issues identification;
- Development of corporate and operational documents including corporate policies, project planning strategies, environmental performance indicators, management plans, procedures and guidelines and project specific documentation;
- Implementation of environmental management programs, with adequate resourcing and training;
- Setting of environmental objectives and targets;
- Measurement and evaluation against key performance indicators; and
- Conducting management review for continual improvement.

All relevant conditions of licences, permits, consents and approvals are to be adhered to during the operation of the Site. Copies of all licences, consents, permits and approvals will be held on Site.

This section describes the implementation requirement of this EMP. The environmental management requirements and monitoring program are presented in Chapter 11.

10.1. Environmental Training

Upon commencement, all contractors shall be made aware of their environmental responsibilities and shall familiarise themselves with the requirements of this EMP.

All contractors will receive induction/training in the following areas:

- Environmental Policy;
- EMP and related documents;
- Significant site aspects, impacts and controls;
- Emergency procedure and response;
- Understanding the site legal obligations;
- Personnel performing tasks that can cause significant environmental impacts shall be competent on the basis of appropriate education, training and/or experience, and;
- All inductions and on-going training, if required, shall be recorded.

10.1.1. Specific Training

In addition to the above, specific training related to environmental requirements, may include awareness of the following:

- Legal obligations and facility or activity specific environmental approvals (EPA licences etc)
- Individual authorities and responsibilities;
- Contract specific significant aspects, impacts and controls;
- Contract specific environmental objectives and targets,;
- Consequences of departure from procedures and contract requirements;
- Contract specific emergency procedure and response procedures; and
- Contract specific reporting and notification processes.

Veolia also uses a variety of mechanisms for ongoing awareness training, including face to face refreshers,

publishing information on the company intranet, One to One, and issuing toolbox topics to be utilised at operational meetings. A SHEQ Alert is also distributed for any serious incidents as a lessons learnt opportunity.

10.1.2. Contractor Training

Contractors engaged in activities pertaining to the Contracts will undergo training prior to starting work. Competency expectations for Contractors are communicated during the prequalification and selection process to align with contract requirements. This includes a request of necessary experience, qualifications, competencies and training records. Veolia's Contractor Handbook outlines its expectations. Environmental awareness training is delivered as part of the Contracts expectations.

10.1.3. Visitor Inductions

All visitors to Sites where work under the Contracts is occurring must be accompanied by a Veolia authorised worker who has been fully inducted as per requirements. In addition, visitors must undergo the following training:

- General Site induction;
- Familiarisation with any Site specific emergency requirements; and
- Familiarisation with Site features and hazard awareness, including issue reporting requirements.

10.2. Communication and Consultation

Veolia is committed to meaningful stakeholder engagement and works in collaboration with relevant government agencies and the local community in the areas where the Site operates to receive feedback and/or resolve issues that result from the operational activities.

10.2.1. External Stakeholders

External stakeholders relevant to the Site operation include, but are not limited to:

- Power and Water Corporation;
- Local Council in which the Site operates;
- Regulatory authorities (such as NT-EPA, local councils etc.);
- Emergency services;
- Other asset owners/operators;
- Nearby residents and businesses; and
- Any sensitive receivers, including businesses, schools etc. if identified where the works are being undertaken.

Veolia liaises with appropriate regulatory authorities via meetings and/or correspondence.

10.2.2. Community Engagement

Veolia will endeavour to keep neighbouring businesses informed in a proactive and responsive manner. Veolia's communications may include signage, written notification, or personal calls.

Early engagement helps Veolia to make neighbours aware of the works being undertaken, as well as to provide an opportunity to address concerns, where feedback is received by the Site manager.

When feedback is received, the Site manager will notify the relevant stakeholders to properly address the feedback received.

10.2.3. Complaints Handling

A sign will be displayed at the Site to inform neighbouring businesses or the public who to contact for complaints. The contact person is the Site manager through the phone number: (08) 89478947. The Site manager will be available for receiving public feedback, including complaints. The following process is to be followed on receipt of complaints:

- All complaints received (either written or verbal) will be documented to record and the following information is required:
 - Date and time of the complaint;
 - Date and time of the occurrence of matters causing the complaint;
 - Nature and extent of the complaint;
 - Details of all related factors including location, dates, frequency, duration, Site conditions and effects of the complaint
 - Method by which the complaint was made;
 - Name and position of the person receiving the complaint;
 - Name and address of complainant (if known);
 - Action taken in response to the complaint;
 - Action taken to prevent a re-occurrence of the circumstances leading to the complaint; and
 - Action(s) taken to address the complaint including follow up contact with the complainant.
- Complaints pertaining to environmental issues are to be reported to Veolia Resources Recovery Manager NT (Nick Walker mobile: 0447 969 847 or email nick.walker@veolia.com) immediately, and escalated to the appropriate Manager.
- The complaints are to be logged in RIVO. Any substantial complaint will be addressed as a non conformance with the Contracts.
- Records of all complaints will be kept for at least 3 (three) years after the complaint was made.
- All complaints will be acknowledged as soon as practicable following receipt.
- The Veolia Project Manager, or their nominee, shall investigate and determine appropriate corrective/preventive actions to be taken to address complaints and avoid any recurrence or minimise the reported (and verified) adverse effects.
- Where no action is taken the reasons why are to be recorded.

10.3. Incident and Emergency Response

A key objective of this EMP is to identify potential risks, and to develop, and maintain measures to manage them. Notwithstanding this, Veolia recognises that unforeseen incidents can arise.

Veolia operates under an Emergency Response Plan (ERP) whenever a major incident, emergency or crisis could lead to public health, safety or environmental issues.

Veolia's approach to incident and emergency response management includes:

- Risk Analysis - The identification of hazards and risks that could impact the community, environmental and operational implications.
- Prevention – The planning and documentation of prevention and mitigation activities for all major hazards, and allocation of responsibility for their implementation.
- Preparedness – The development, implementation and review of specific incident management plans and processes to manage identified risks, the training of staff, and establishment of facilities to ensure the company can respond effectively to an incident.
- Response – The issue of warnings and establishment of processes for effective notification of incidents, and mobilisation of resources to combat the incident or threat.
- Recovery – The return to normal operations, management of debriefs, and implementation of lessons

learnt from the response process.

The following priorities are adopted when combating an incident / crisis:

- Protection of human life and welfare;
- Protection of the environment; and
- Protection of Veolia's assets.

Potential threats to the environment or public health that may arise as a result of the construction works at the Site include:

- Fire;
- Spills;
- Structural damage;
- Power or other utility failure;
- Natural disaster;
- Air/water quality contamination;
- Traffic incidents;
- Medical emergencies

The ERP aims to minimise the risk to all personnel in an emergency and control any incident or emergency to minimise damage to the environment, plant, equipment, and property. The ERP outlines:

- Facility/contact description, site plans and maps;
- Information on potential pollutants;
- Information on hazardous materials, including safety data sheets and spill containment materials, type and location (ie. on Site or on a vehicle);
- Incident identification and notification process;
- Emergency contact details;
- Emergency response personnel roles, responsibilities and procedures;
- Procedures to follow to minimise/control environmental incidents; and
- Testing and training requirements.

A copy of the ERP is to be kept where construction works are being performed and made available at all times.

10.3.1. Emergency Response Management

The Emergency Response Plan - NT Waste (ERP) appended to this EMP (refer **Appendix 17**) identifies and responds to potential incidents and emergencies at the Site. It describes the general policy and approach that should be followed when dealing with an emergency or incident. It aims to:

- Address various types of emergencies, including fire, spills, medical emergency etc;
- Minimise the risk to all personnel in an emergency;
- Control any incident to minimise damage to plant, equipment, property and the environment.

Incidents and emergencies will be managed in accordance with the ERP. This includes external and internal notification, recording, reporting and response processes.

The **Table 27** below summarises the potential hazards/ incidents associated with the operation of the Site, based on the preliminary environmental risk assessment that was undertaken and outlined in the NT Waste Risk Register - East Arm **Appendix 14**.

Table 27: Site Potential Hazard/ Incident

	Potential Hazard / Incident
1	Fire – Electrical, Chemical etc.
2	Spills – Liquid (Bursting Hydraulic Oils etc.)
3	Environmental Pollution – Uncontrolled discharge from Site (contaminated water)

10.3.1.1. Fire or Explosion

In the event of a fire or explosion at the Site, the emergency response plan is outlined below and the contacts provided in Section 10.3.2 of this plan.

10.3.1.2. Spills

In the event of a liquid spill during construction of the Site, the emergency response, outlined in the Emergency Response Plan - NT Waste appended to this EMP and the contacts provided in Section 10.3.2 of this plan.

10.3.1.3. Environmental Pollution - Uncontrolled Stormwater Discharge

In the event of an uncontrolled stormwater discharge observed during the operation of the Site, the emergency response is outlined in the Emergency Response Plan - NT Waste appended to this EMP and the contacts provided in Section 10.3.2 of this plan or **Table 20** below.

10.3.1.4. Bunding of Chemicals

Veolia's East Arm Depot operations are designed to ensure that appropriate bunding of chemicals, lubricants and other liquids which have the potential to cause material or serious environmental harm are stored and banded in accordance with the SA EPA 080/16 Bunding and spill management guidelines.

10.3.2. Emergency Contacts

A list of personnel to be contacted during any Site or environmental emergencies has been compiled and presented in **Table 28** below:

Table 28: Site Contacts

Name	Role	Mobile	Email
Nick Walker	Manager Resource Recovery NT	0447 969 847	nick.walker@veolia.com
Rick Barton	Site Manager	0427 927 723	rick.barton@veolia.com
Tim Vollmer	Health & Safety Advisor - Waste NT	0467 657 900	tim.vollmer@veolia.com

Paulo Castro	Environmental Compliance Advisor - NT	0429 670 102	paulo.castro@veolia.com
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10.3.3. Incident Notification

The Site will have a set of procedures to ensure that all incidents are effectively reported, recorded, investigated and acted upon wherever possible. Notifications will be in accordance with the ERP.

The ERP provides guidance on the identification, reporting and escalation of incidents and emergencies that have affected or have the potential to affect the environment and/or health and safety of a worker or a visitor at the Site.

Incidents will be logged in RIVO, Veolia's issues management system, and managed in the following sequence:

- Log incident;
- Investigate incident;
- Close incident;

If further action is required, this is also logged in RIVO, assigned for action to specific Veolia personnel. Corrective action can then be implemented to minimise the risk of recurrence of the incident.

10.3.3.1. Notifiable Environmental Incident

A notifiable environmental incident is an incident arising from a regulated activity that has caused or has the potential to cause material or serious environmental harm. Any notifiable environmental incidents are to be reported immediately to the Senior Management, to the Environmental Compliance AdvisorPeople and to the Health and Safety Advisor.

10.3.3.2. Environmental Incidents

An environmental incident includes a leak, spill or escape of a substance or circumstances where this is likely to occur. Material harm includes onsite and offsite actual or potential harm to:

- The health or safety of humans;
- The environment; or
- Property damage resulting in significant costs to remediate

If the circumstances giving rise to environmental harm or potential environmental harm occurs, communication with the appropriate regulatory authority (NT-EPA) is to be via the Environmental Compliance Advisor and/or nominee, and provide the following information:

- the identity of the person giving notice;
- the time and date of the circumstance;
- the circumstance causing or threatening to cause environmental harm;
- the place where the circumstance occurred or is likely to occur;
- how the environmental harm occurred, is occurring or may occur; and
- action taken to prevent, reduce control, rectify, or clean up the pollution or resultant environmental harm caused or threatening to be caused by the circumstances

If instructed by the Environmental Compliance Advisor and/or nominee, the following authorities must be notified immediately, as relevant (see **Table 29**):

- NT Fire and Rescue Service

- NT EPA;
- NT WorkSafe;
- Local Council (where the incident has occurred).

Table 29: Notification authorities

Contacts	Function	Contact Number
Police	Emergency Attendance	000 131 444
Fire	Emergency Bushfire Hotline	000 1300 362 361
Ambulance	Emergency	000
NT EPA	Pollution Hotline	1800 064 567
NT WorkSafe	Notifiable Incidents	1800 019 115
City of Darwin	24 Hour service	08 8930 0300
State Emergency Services	Emergency	132 500
Power Emergencies and Faults	Emergency/Faults - 24 Hours	1800 245 090

The most likely form of potential or actual environmental incidents at the Site during operation are considered to be fire and/pollution of waterways. Internal and external emergency contacts details are listed in the ERP, with guidance on what to report. The reporting required, in accordance with relevant regulations may include but is not limited to as described in the section below.

10.3.3.2.1. Incident Reporting

Veolia Manager must notify the Northern Territory Rates Act Area, EPA, and any other relevant agencies or stakeholders of incidents causing or threatening material harm to the environment or human health as soon as practical after they become aware of the incident. Notification will initially be made via telephone. The contact telephone numbers are presented in **Table 29**.

A written report will be provided within 7 days of the incident occurring to the EPA.

Veolia will provide a written report, at the request of any authorised EPA officer, in relation to an event that has caused, is causing or is likely to cause material harm to the environment.

10.3.3.2.2. Licence Non-Compliance Reporting

Veolia must notify the NT EPA of any non-compliance with the EPA 322 approval by completing the Non-Compliance Notification via NT EPA Online (or by emailing waste@nt.gov.au), as soon as practicable after (and in any case within 24 hours after) first becoming aware of the non-compliance.

The following information must be included in the notification of non-compliance to the NT-EPA:

1. when the non-compliance was detected and by whom;
2. the date and time of the non-compliance;
3. the actual and potential causes and contributing factors to the non-compliance;
4. the risk of environmental harm arising from the non-compliance;
5. the action(s) that have or will be undertaken to mitigate any environmental harm arising from the non-compliance;
6. corrective actions that have or will be undertaken to ensure the non-compliance does not reoccur;
7. if no action was taken, why no action was taken; and
8. a date when an incident investigation report will be submitted to the NT EPA.

11. Environmental Management

11.1. Performance Measures

The **Table 30** outlines the environmental objectives and targets that will be adopted for the Site. These targets will be reviewed and amended based on any environmental impact and risk assessments undertaken, as well as any specific approval conditions and/or any other requirements imposed from external sources. The assessment and reporting of the data related to incidents, regulatory breaches, fines or penalties will be regularly reviewed by Veolia and, where reportable, notified to relevant authorities.

Table 30: Objectives and Targets

Environmental Parameter	Objectives	Target / Performance Measure
Soil and Water Quality	<ul style="list-style-type: none"> • Effective management of Site surface water and unsealed areas to minimise soil erosion and sediment • Effective handling and management of onsite chemicals storage • Effective identification and protection of stormwater drain/discharge points 	<ul style="list-style-type: none"> • Zero externally reportable incidents relating to sediment or sewage release and water quality impacts • Zero externally reportable incidents relating to chemical, fuels and oil spills • Resolution of soil and water quality issues identified through visual inspections, as part of general site housekeeping
Noise	<ul style="list-style-type: none"> • Limit < 95dBa for day time activities from Tailor Made. • Day time operations only (hours to be confirmed) except 5 am start for concreting. • 24 hour operations permitted in zoning and within background levels of surrounds (limit < 84dBa for 8 hours). • Implement a complaint line to respond to noise complaints 	<ul style="list-style-type: none"> • No works outside standard hours unless for concreting. • All noise related complaints to be responded to by prescribed timeframe.
Air Quality	<ul style="list-style-type: none"> • No ongoing dust issues created as a result of project activities • Implement a complaint line to respond to dust or odour complaints. 	<ul style="list-style-type: none"> • Areas of dust or odour issues observed during environmental monitoring during construction and post-construction • Number of complaints relating to dust or odour closed out within the prescribed time frame
Traffic and Access	<ul style="list-style-type: none"> • Avoid traffic disruptions • Avoid impacts on private property access 	<ul style="list-style-type: none"> • No traffic complaints associated with the project

Waste Generation, Resource Use and Energy Use	<ul style="list-style-type: none"> • Maximum recycling of project wastes • Minimise waste generation 	<ul style="list-style-type: none"> • Evidence of recycling of materials where possible • Reuse of existing plants and equipment
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11.2. Inspection, Testing, Maintenance and Monitoring

11.2.1. Monitoring

An annual monitoring programme is in place at Veolia’s facility at Beaton Road. This requirement will be reviewed and adopted as per risk register and in consultation with NT EPA for the operational phase of the Site, subject to its EPL conditions.

Sampling and monitoring of wastewater prior discharge to certify wastewater within PWC parameters.

Sampling and monitoring of Clinical Waste to perform efficacy testing in line with the recommendations in the Guideline for approval method to treat Clinical Waste from the Department of Health, NSW.

11.2.2. Inspections

Regular inspections will be undertaken at the Site , as per the **Table 31** below, to ensure that nominated environmental controls identified in the EIAR have been implemented, meet specification, and are being maintained in accordance with the Site’s inspection and testing schedule:

Table 31: Inspections

Item	Type of Inspection/ Testing	Frequency of Inspection	Responsibility
Prestarts/Take 5’s	Hazard Identification	Daily	Workers
Always Safe Interactions	Visible leadership and task observation	Weekly Monthly	Supervisors Managers
Environmental Site Checklist	Inspection	Monthly or With changed environmental conditions (such as after significant rainfall events)	Supervisor/ Project Manager
Environmental & Safety Inspection and Audits	Verification	Annual, or as required	Contractors or Veolia People and Safety team
Veolia Asset Management System (VAMS)	Preventative maintenance inspections and checks	As required	Engineering

11.2.3. Records

The following records will be kept in accordance with appropriate regulatory, contractual and business retention periods to demonstrate environmental due diligence and compliance with the Site's Environmental Management Plan (EMP):

- Environmental permits such as licences as relevant;
- Completed inductions and training;
- Completed environmental checklists, categorisations and assessments;
- Environmental audit reports and audit findings;
- Non-conformances identified;
- Completed corrective actions;
- Complaints received;
- Environmental incidents and rectification actions taken;
- Waste tipping dockets;
- Plant and equipment registers and daily checks;
- Safety Data Sheets and chemical registers;

11.2.4. Reporting

At completion of each inspection, records are to be maintained and any findings logged in Veolia's issues and audit management system, Rivo. This system enables non-conformances and opportunities for improvement, identified through internal and external audit processes or inspections to be recorded, reported and responded, with corrective actions assigned to the responsible person(s).

Performance and compliance reporting will be undertaken as required, to produce systematic, comprehensive and informative reports on the environmental performance of the Site.

11.2.5. Auditing

Environmental audits will be undertaken as per Veolia's governance program to verify that the Site meets its compliance objectives during the normal operation, as well as to support continuous improvement. The audits will assess the environmental performance of the Site based on:

- compliance with Veolia policies, relevant legislative requirements and industry standards;
 - whether the measures and/corrective actions carried out conform to the objectives of the EMP and as identified in the NT Waste Risk Register - East Arm Appendix 14;
 - the adequacy of implemented controls to minimise high risk environmental issues; and
 - areas for continuous improvement.
- Audit findings will be reported to Veolia management and logged in Rivo.

11.2.6. Non Conformances, Corrective and Preventative Actions

Environmental non-conformances shall be recorded in Rivo, by the East Arm Site manager, Health & Safety advisor or the Environmental Compliance advisor.

Allocated corrective actions and preventive actions shall be generated and completed in accordance with Veolia requirements, including required reporting timeframes as summarised on **Table 32** below.

Table 32: Non Conformances, Corrective and Preventative Actions

Priority	Action	Time Frame
Low	May not require immediate action. Monitor the situation and schedule control action.	Action typically required within 15 to 29 days.
Medium	Control action as soon as possible	Action typically required within 7 to 14 days.
High	Significant and immediate control	Action typically required within 1 to 7 days.

Environmental incidents and/or source of non-compliances will be investigated as per Veolia's Incident Management Procedure or on a case by case basis, depending on the severity of the incident as per Veolia's Risk Management Procedure. The **Table 33** below summarises the investigation level.

Table 33: Investigation Levels

Incident Classification	Investigator
<ol style="list-style-type: none"> 1. Insignificant 2. Minor 3. Moderate 	A suitable competent person from the organisational unit or functional area where the incident occurred.
<ol style="list-style-type: none"> 4. Major 5. Catastrophic (Crisis) 	Appropriately independent qualified person appointed as Lead Investigator.

11.3. Management Review

Management review of this EMP will be undertaken to assess the continuing suitability, adequacy and effectiveness of the implemented environmental management measures.

The inputs to the management review process will include (but not be limited to):

- incidents management and investigation of non-conformance events, incidents, near misses and management of all complaints received;
- changes in Site conditions or scope of works; and
- implementation of all compliance and legislative changes as identified at a corporate level;

Reviews may also be carried out by consulting documents such as the contractor documentation (as required), work instructions, variation to scope of works, completed inspection check sheets, and inspection and test plans

as appropriate.

The output of management review will include any decisions and actions related to:

- possible changes to the EMP, associated work instructions, practices, objectives and targets associated with the environmental management of the works under the Contracts;
- improvement of the effectiveness of the Veolia management system and its processes; and
- resource needs.

In addition to the management review, periodic meetings will be conducted to review all Site specific key performance indicators pertaining to the environment and relevant business systems. This will include reviews, and if necessary, revision of the EMP following any major incident or series of complaints, or any modifications to the consent.

Changes to the EMP will be recorded and issued as per the document control at the start of this EMP. The review will adequately address all sections of the EMP and action them appropriately.

The following forums will form part of the management review process under the Contracts, conducted periodically by the Project Managers and supervisors, in conjunction with operators and/or the People and Safety team as required:

- Meetings;
- Toolbox talks;
- Hazard review groups;
- Serious incident reviews; and
- Miscellaneous environmental workshops

The following processes will be used for continual improvement:

- root cause identification and correction of incidents, complaints and issues of non-conformance
- root cause identification and prevention of potential incidents and nonconformances
- process/performance review, and
- enhancement of processes and generation of new initiatives.

12. Compliance Links

Table 34: Compliance Links

ISO 9001 - 0058465
ISO 14001 - 0058466
ISO 45001 - 0058506
Planning Act 1999 (NT)
Environment Protection Act 2019 (NT)
Biosecurity Act 2015 (Federal)
Waste Management and Pollution Control Act 1998 (NT)
Dangerous Goods Act 1998 (NT)
Power and Water Corporation Act 1987

13. Reference and Related Documents

Table 35: Reference and Related Documents

Document Code/ Reference	Document Name
POL-10	Environmental Policy
POL-3-5	Sustainability Policy
PRO-34	Environment Management Procedure
STA-31	Environment Management Standard

14. Appendices

Table 36: Appendices Index

<i>Appendix</i>	<i>Process</i>
1.	DCA Approval DP21/0118
2.	EPL-322 - construction
3.	Site drawings - Aus-Veolia-Autoclave BTT6X13 - Install-1-condenser
4.	Site drawings - 500064-R1-SHT1 Site Layout Plan
5.	Site drawings - 500077-Rev A Site Surface Drainage Plan
6.	Site drawings - 500071-R2 Fixation Ramp
7.	Site drawings - Wash Bays (As shown on 500064-R1-SHT4 Construction Works Plan)
8.	Site drawing - 500064-R1-SHT2 Autoclave Area
9.	Veolia East Arm Depot - Air Quality Impact Assessment - SLR 620.30678-R01-v1.0-20211123
10.	NT Waste Risk Register - East Arm - Environmental Aspects & Impacts.pdf
12.	Site drawings - 500064-R1-SHT3 Liquid Plant Area
13.	Site drawings - 500072-R1 Autoclave Discharge Point Elevations
14.	Emergency Response Plan - NT Waste
15.	CQAP Stage 1 Building Works - 27-01-22 Rev A (2) (1)
16.	Biosecurity Approved Arrangement (TBC)
17.	Trade Waste Agreement PWC (TBC)