

12 December 2022

Ref: C04201-L01

Nick Fewster
 Executive Manager – Environment and Waste Services
 City of Darwin Council
 CIVIC CENTRE Harry Chan Avenue | GPO Box 84 Darwin NT 0801

RE: Audit Program Scope to Conduct an Environmental Audit of Shoal Bay Waste Management Facility in relation to requirement of EPA Section 48 Notice

Dear Nick,

The following Audit Scope has been prepared following City of Darwin Council (Council) engagement of Stephen Cambridge of EHS Support Pty Ltd in the capacity as an Environmental Auditor (appointed pursuant to the *Environment Protection Act 2017* of Victoria), to conduct an environmental audit program in relation to the requirements of Northern Territory Environment Protection Authority (NT EPA) Section 48 Notice requirements for the Shoal Bay Waste Management Facility (the site). The details of the proposed Audit Scope are provided as follows, with the site plan included in **Attachment 1**, and the Section 48 Notice included in **Attachment 2**.

Table 1 - Summary Details of Audit

Auditor	Stephen Cambridge
Qualified Person	The NT EPA has approved persons accredited under the New South Wales, Victorian, South Australian, Western Australian and Queensland Site Auditor Schemes, as a class of persons suitable to undertake Environmental Audits in the Northern Territory (NT) in accordance with Section 68 of the NT's Waste Management and Pollution Control Act 1998. Therefore, the nominated Auditor (Stephen Cambridge) is a Qualified Person able to undertake this Audit.
Name of person requesting audit	Nick Fewster
Relationship to premises/location	Executive Manager, Environment and Waste Services – City of Darwin Council
Date of request to conduct Audit	17 November 2022
Proposed completion date of the audit	Final Audit report prior to 15 December 2023 (Section 48 Notice requirement)
Reason for Audit	Requirement of Section 48 Notice (NT EPA, 27 October 2022)
Description of activity to be audited	Auditing of operations of Shoal Bay Waste Management Facility

Site / Premises name	Shoal Bay Waste Management Facility. Attached is a site location plan that illustrates the boundary of the site.
Building / complex sub-unit No	-
Street / Lot – Lower No.	Lot 03952 Town of Sanderson plan(s) S79/149A
Street / Lot – Upper No.	-
Street Name	Vanderlin
Street type (road, court, etc)	Drive
Street suffix (North, South etc)	-
Suburb	Holmes
Postcode	0812
GIS Coordinate of Site centroid¹	GDA94
Latitude (GDA94)	-12.383017
Longitude(GDA94)	130.924963
Proposed members of Audit support team	<p>The following Audit support team members are proposed to be involved with the Audit program:</p> <ul style="list-style-type: none"> • William Dillon – Environmental Scientist • Dr Rebecca Fraser – Contaminant Hydrogeologist • David Ife – Senior Principal Hydrogeologist <p>The Auditor may seek advice from other specialists during the course of the Audit if the need arises.</p>

Conflict of Interest Considerations

The nominated Auditor has conducted the following Auditing roles at the Shoal Bay Waste Management Facility:

- Audit of Cell 6 landfill liner construction;
- Audit of Stage 3 and 4 cap construction (in progress);
- Verification of Irrigation Management Plan (required as per EPA Permit #321 related to the Stage 3 and 4 landfill cap); and
- Auditor verification of the Integrated Leachate Management Program as required by Condition 88 of the EPL (#188).

In Victoria, EPA generally prohibits Auditors to undertake both Operations Audits and Construction Audits of cell liners or capping systems on the same landfill site, unless it can be demonstrated that no conflict of interest exists. EPA Victoria consider that a potential conflict of interest can exist where an Auditor has

¹ Longitude and latitude (decimal degrees) coordinates in the 1994 Geocentric Datum of Australia (GDA94) is required to six decimal places.

conducted an Audit of a landfill cell liner then conducts an operations audit (including review of monitoring data). This scenario is relevant if any contamination issues, such as leachate contamination of groundwater, may have resulted from a defect in the landfill liner during the liner construction works subject to the Audit. This could represent a potential conflict of interest, in the event that the impact to the environment was related to the cell construction activities which the same Auditor was involved with.

For this current Audit Scope, the Auditor has considered the potential for conflict of interest, and at this stage does not consider that a conflict of interest exists for conducting the Auditing works associated with the Section 48 Notice, in relation to his previous Auditing roles at the site. The reasons for this are stated as follows:

- Cell 6 was designed and constructed to best practice standards and landfilling with waste commenced in about September 2021, and therefore it is unlikely that an environmental impact would have occurred associated with this liner (i.e. such as a leachate releases to groundwater) in the expected time period of the Section 48 Audit.
- Stage 3 and 4 landfill capping works are in progress, and therefore if there was any impact to the environment associated with the completed capping works, then this would not be anticipated in the time period of this Section 48 Notice Audit, but rather would likely be associated with a legacy issue from the previous construction of the Stage 3 and 4 landfill cell liners (if any), which the Auditor was not involved with.
- The leachate irrigation plan for Stage 3 and 4, and the site-wide leachate management plan, could require amendments or updates in future as an outcome of the Section 48 Notice Audit if they are found to be deficient or require further measures to meet the requirements of the Section 48 Notice. If that were required, then the previous verification provided by the Auditor would be superseded by the S48 Notice requirements.

If at any time during the Section 48 Audit program, the Auditor identifies that a potential or actual conflict of interest has arisen (related to previous or current works being undertaken by the Auditor), then he may need to cease the Section 48 Auditing role at that time.

Audit Scope requirements in relation to Northern Territory EPA Section 48 Notice

The scope of the Audit in relation to NT EPA Section 48 Notice is detailed in Condition 1 of the Notice, and details that the Audit program is to evaluate:

- a. *the ability of management systems to manage waste or prevent, reduce, control, rectify or clean up pollution or environmental harm resulting from pollution, including but not limited to:*
 - i. *a review of environmental systems, practices and procedures in place at the premises;*
 - ii. *a review of operational environmental management systems and procedures; and*
 - iii. *a review of service agreements with contractors in relation to operational management of the premises;*
- b. *the extent to which actions are required to be undertaken, or results required to be achieved, for waste management or the prevention, reduction, control, rectification or clean up of pollution or*

environmental harm resulting from pollution have been taken or achieved, including but not limited to:

- i. assessment of the extent and nature of pollution and environmental harm at and from the premises from the operations at the premises;*
 - ii. environmental improvements necessary to comply with legislative and regulatory requirements including environment protection approval and licence conditions; and*
 - iii. actions and timeframes for implementing environmental improvements;*
- c. the extent, nature and source of wastes generated by the activities at the premises;*
- d. the likelihood of waste management problems or pollution resulting in environmental harm occurring and the adequacy of safeguards in place to prevent their occurrence or limit their impact on the environment, including but not limited to:*
- i. an audit of the operations at the premises and comparison with best practice landfill management contained in the Victorian EPA publication 788.3 Siting, design, operation and rehabilitation of landfills; and*
 - ii. an assessment of the viability and sustainability of the landfill operations at the premises in light of its location and future likely climate change and sea level rise considerations;*
- e. the types, amount, distribution and mobility of contaminants and wastes present in the environment at the premises that have the potential to cause environmental harm, including but not limited to:*
- i. the types, amount, distribution and mobility of landfill leachate present at and beyond the premises including surface waters and groundwater modelling; and*
 - ii. the types, amount, distribution and mobility of landfill gases present at and beyond the premises including surface waters and groundwater*

Based on the prescribed scope items, the following detailed Audit scope is provided in the following sections.

Audit Objectives

The objective of the Audit program is to identify and, where possible, quantify the actual or potential risk of any possible harm or detriment to the environment caused by operation or aftercare management of the waste management facility, inclusive of any legacy issues associated with historical landfill operations.

Activities to be Audited

The activities to the Audited include:

- the operations of the waste management facility, including the operational landfill cells and associated infrastructure, including the leachate management system; and
- aftercare management activities associated with closed landfill cells.

Component(s) of the activity to be Audited

The Audit program scope includes consideration of all aspects of the waste management facility operation and aftercare management, and appraisal of the potential and actual environmental risks associated with the landfill.

Components of the activity to be considered include:

- Waste disposal operations at the site including nature of the waste stream and short-term cell cover/completion practices;
- Environmental engineering at the site including construction of cell lining and capping systems;
- Leachate management;
- Leachate, surface water, and groundwater monitoring;
- Landfill gas (LFG) management/monitoring measures;
- Surface water control/management measures;
- Progressive rehabilitation;
- Aftercare management; and
- General environmental management measures including noise/dust/odour suppression, litter control, fire control, waste acceptance protocols, vermin and weed control and chemical/fuel handling.

These will be evaluated by:

- Reviewing records and/or management systems relevant to the management of the site, including the nature of wastes deposited; containment systems installed; leachate management; and rehabilitation works for areas where landfilling has been completed;
- Reviewing documentation relating to groundwater occurrence and behaviour at the site;
- Reviewing all reports, measurements and other data provided in regard to groundwater, leachate, surface water and LFG monitoring;
- Collecting and reviewing any other data or information that was considered relevant;
- Visiting the site to observe first-hand the operating standards and practices that have been adopted together with the recording of observations and results of inspections of the site.

Segment of the environment to be considered

The segments of the environment to be included in the Audit program include any areas of the environment potentially affected by emissions to air at the site, subsurface geology, groundwater beneath the site, any surface water on or near the site or linked hydrogeologically to the site, and the environment surrounding the site to which the activity may pose a risk.

Elements of the environment to be considered

Groundwater, surface water, land, air, and noise.

Beneficial Uses to be considered

As defined by the NT EPA as relevant to the receiving environments, such as the Beneficial Uses of water relevant to the site and surrounds, as defined in the *Water Act 1992* (Northern Territory of Australia). Where there are no Beneficial Uses defined in the NT legislation, it is proposed to adopt the Beneficial Uses (now called Environmental Values) referred to in the Victorian Government *Environmental Reference Standard* 26 May 2021.

Risk assessment to be conducted

Risk assessment(s) will be undertaken to determine whether a potential or actual risk of harm to the environment exists at the site. At this stage the type of risk assessment(s) to be undertaken are not fully known as the site data has not been reviewed, however risk assessment approaches may consist of the following:

- **Qualitative risk assessment:** using the approach of consequence and likelihood, and resultant qualitative risk ranking, for all environmental values relevant to the site. The qualitative risk assessment will follow the approach HB 436:2013 *Risk management guidelines – Companion to AS/NZS ISO 13000: 2009* and using the risk assessment definitions for consequence and likelihood as detailed in EPA Victoria Publication 1321.2 *Licence Assessment Guidelines* (EPA, 2012).
- **Tier 1 risk assessment:** an initial screening assessment of risk to environmental values will be undertaken in accordance with the approach as detailed in the *National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM) 1999 (amended 2013)*. This will include screening monitoring data against published or site-specific criteria for the relevant media (e.g. groundwater, surface water, air).
- **Tier 2 quantitative risk assessment:** at this stage it is not known whether a quantitative assessment of risk, beyond the Tier 1 Risk Assessment will be required. Determination of whether a quantitative risk assessment is required will be conducted as part of the Audit program and would depend upon the results of the Tier 1 Risk Assessment, combined with the development of a Conceptual Site Model and modelling of contaminant migration where considered necessary. Where the Conceptual Site Model indicates there may be complete exposure pathway for human or environmental receptors for contaminants at concentrations of potential concern, then a quantitative assessment of human health and/or ecological risk may be necessary.
- **Landfill gas risk assessment:** landfill gas risk assessment will be conducted by a combination of qualitative assessment Tier 1 risk assessment (i.e. comparison of monitoring results to published criteria) and utilising the approach as detailed in the NSW EPA *Assessment and management of hazardous ground gases – Contaminated Land Guidelines* May 2020, including calculation of Gas Screening Values (GSVs) for the site where appropriate.

Period of time over which the audit is to be conducted

The Audit program will be conducted over the period from Audit Scope submission to NT EPA (i.e. 13 January 2023) through to the completion of the Audit Report (15 December 2023) and will consider any current and historical data considered relevant to meet the Audit objectives. It is noted that in practice, monitoring data will only be able to be considered up to a certain point in time during the Audit, to allow sufficient time for consideration and reporting of data in the Audit report. Therefore the Audit program will consider monitoring data up to 30 September 2023.

Exclusions from the scope of the audit

No specific exclusions, however, if any items are identified as being excluded from the Audit during the course of the Audit program, this will be reported in the Interim and Final Audit reports.

Audit Criteria and Guidelines

Audit criteria will be derived principally from the following guidelines and standards:

1. **Waste management and operational compliance criteria:** *Environment Protection Licence EPL188 – 03.*
2. **Water quality:** Australian and New Zealand Guidelines for Fresh and Marine Water Quality (nominally 90% protection level).
3. **Land and groundwater contamination:** *National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM) 1999 (amended 2013).*
4. **Landfill gas criteria:** *Victorian EPA publication number 788.3 – Siting, design, operation and rehabilitation of landfills.*
5. **PFAS specific criteria:** *PFAS National Environmental Management Plan Version 2.0 – January 2020 (or as amended).*

Additional guidelines and standards will be referenced as part of the Audit and may include:

- i. *Northern Territory Contaminated Land Guideline (CLG) 2017;*
- ii. *Victorian EPA publication number 1490.1 – Closed landfill guidelines;*
- iii. *Victorian EPA publication number 1323.3 – Landfill licencing guidelines including but not limited to Appendix 6: Scope for audit of landfill operation;*
- iv. *Victorian EPA publication number 2041 – Guidelines for conducting environmental audits;*
- v. *Victorian EPA publication number 1684 – Landfill gas fugitive emissions monitoring guideline;*
- vi. *Victorian EPA publication number 2001 – Guidance for the clean-up and management of contaminated groundwater.*
- vii. *NSW EPA (May 2020) - Assessment and management of hazardous ground gases*

Conducting the Audit Program

The tasks required to conduct the Audit program are broadly outlined in the following table.

Table 2 - Summary of Audit Schedule and Tasks

Task	Description
1	Audit scope preparation.
2	Works to inform interim Audit Report, inclusive of the following tasks:
	a. Review of existing information to inform site inspection including monitoring and Operations Audit reports, environmental systems, practices and procedures, and relevant service agreements with contractors (e.g. Veolia).
	b. Site inspection #1 (Wet Season), including review of site activities on site
	c. Groundwater and leachate fate and transport assessment, including analytical modelling if required.
	d. Site inspection #2 (Dry Season), follow up inspection for review of site activities on site
3	Preparation of Interim Audit Report: it is anticipated that the interim Audit report will include the Auditor’s review and appraisal of the site operations, based on site inspections and document review, and also an interim appraisal of the risk to the environment and draft recommendations.
4	Review further data obtained from Interim Audit Report recommendations, and address feedback from Council and NT EPA on interim Audit report. Update groundwater fate and transport model (if required), with off-site monitoring data.
5	Preparation of Final Audit Report

Environmental Audit Report

The Environmental Audit Report will be prepared in general accordance with the format and content specified in Appendix 6 of the EPA Victoria publication number 1323.3 *Landfill licensing guidelines*, and Appendix 5 of EPA Victoria publication number 1490.4 *Closed landfill guidelines*, and where appropriate, in accordance with the EPA Victoria publication number 2041 – *Guidelines for conducting environmental audits*.

Specific inclusion of the items detailed in the NT EPA Section 48 Notice within the Audit report will be conducted, as follows:

***Condition 8:** The **Environmental Audit Report** must include an assessment of actual environmental harm and the potential risk of environmental harm from contaminants and wastes present in the environment at and beyond the premises;*

***Condition 9:** The **Environmental Audit Report** must include an assessment of current management systems and the suitability of the management systems to mitigate environmental impacts;*

Condition 10: *The **Environmental Audit Report** must assess the actual and potential risk of environmental harm from activities conducted at the premises, as determined by:*

- a. review of systems, plans, procedures, monitoring programs, data, records, reports or information that is relevant to the scope of the audit as the auditor sees fit;*
- b. review of activities, processes, plant and equipment at the premises that is relevant to the scope of the audit as the auditor sees fit; and*
- c. collection and/or modelling of data that is that relevant to the scope of the audit as the auditor sees fit;*

Condition 11: *The **Environmental Audit Report** must:*

- a. consider all relevant guidance documents (see list above);*
- b. determine if the activities conducted at the premises have caused environmental harm or give rise to a potential risk of any possible harm or adverse impact to the environment;*
- c. recommended measures necessary to reduce the actual harm and risk of harm to an acceptable level where actual harm or risk of possible harm to the environment has been identified;*
- d. propose a timetable for the implementation of all recommended measures to address the findings of the Audit; and*
- e. identify the likely environmental monitoring requirements that will be required to manage the ongoing and future environmental impacts from the premises post the cessation of waste disposal at the premises.*

The Section 48 Notice also requires an assessment of *the long-term viability and sustainability of waste management operations at the premises.*

If you have any questions or comments regarding this proposed Audit program scope, please contact the undersigned.

Yours Sincerely,
For and on behalf of EHS Support Pty Ltd



Stephen Cambridge
Environmental Auditor
Mobile – 0400 349 009
Stephen.cambridge@ehs-support.com

Attachments:

- 1. Site location plan**
- 2. Section 48 Notice**

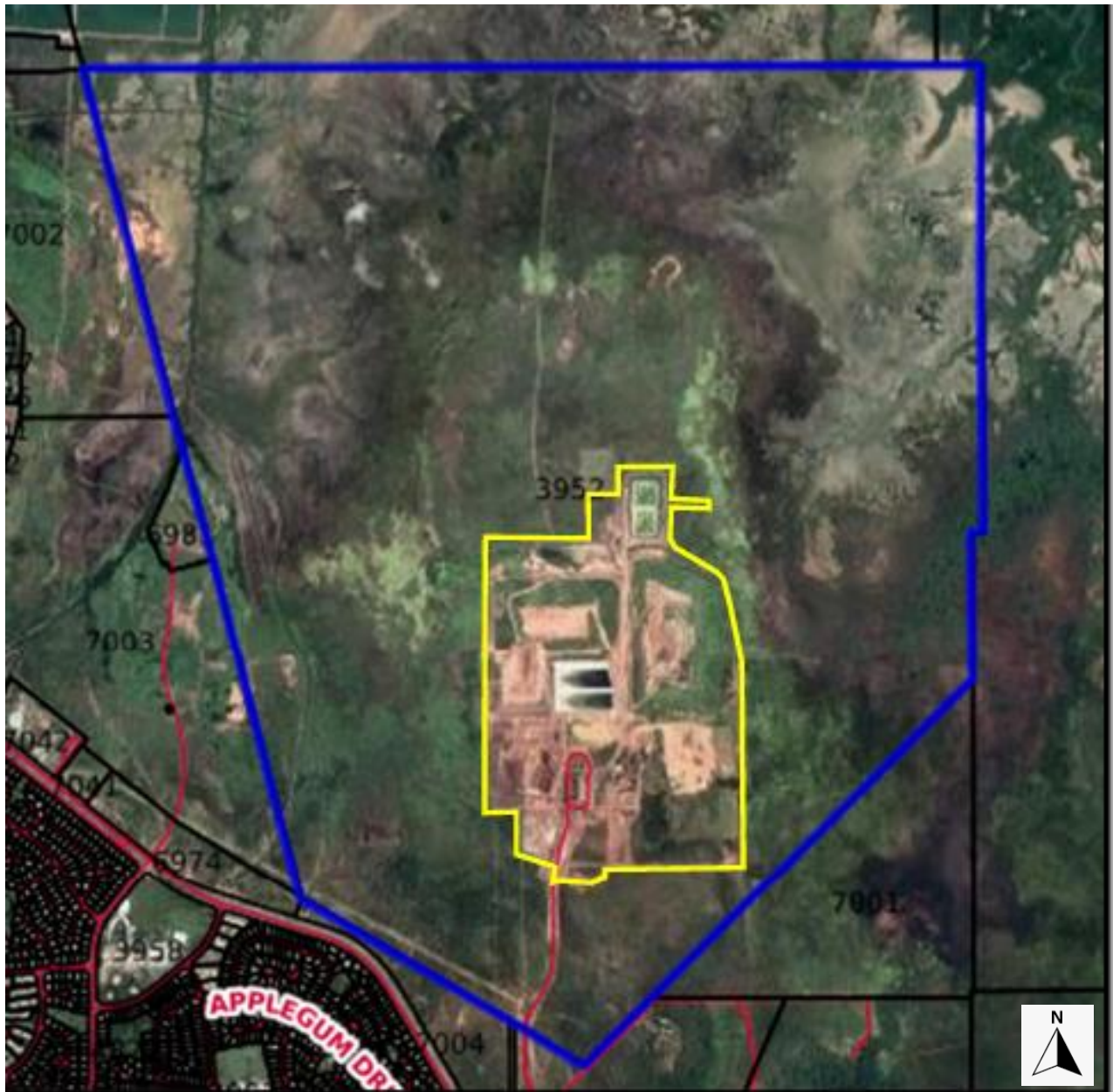
Attachment 1 – Site Plan

Site plan and Audit Area (from Section 48 Notice)

Facility (site boundary shown in yellow).

Leased area boundary shown in blue.

Not to scale.



Attachment 2 - Section 48 Notice

NOTICE TO CARRY OUT ENVIRONMENTAL AUDIT PROGRAM

(Issued pursuant to section 48(1) of the *Waste Management and Pollution Control Act 1998*)

ISSUED TO: City of Darwin ("You")

OF: 1 HARRY CHAN AVENUE
Darwin NT 0800

WHEREAS the Northern Territory Environment Protection Authority (NT EPA) is satisfied for the reasons stated in **Attachment A** to this notice that you are a person required to carry out an Environmental Audit Program in relation to the Shoal Bay Waste Management Facility (SBWMF) located on that part of Lot 03952 Town of Sanderson, Northern Territory as delineated in **yellow** in **Attachment C** (the premises), comprising an environmental audit, within the meaning of s47(a), (b), (c), (d) and (f) of the *Waste Management and Pollution Control Act 1998*, to evaluate:

- i. the ability of management systems to manage waste or prevent, reduce, control, rectify or clean up pollution or environmental harm resulting from pollution; and
- ii. the extent to which actions required to be undertaken, or results required to be achieved, for waste management or the prevention, reduction, control, rectification or clean-up of pollution or environmental harm resulting from pollution have been taken or achieved; and
- iii. the extent, nature and source of wastes generated by an activity, premises or process; and
- iv. the likelihood of waste management problems or pollution resulting in environmental harm occurring and the adequacy of safeguards in place to prevent their occurrence or limit their impact on the environment; and
- v. the types, amount, distribution and mobility of contaminants and wastes present in the environment at the premises that have the potential to cause environmental harm;

NOW TAKE NOTICE that you are required to comply with each of the requirements specified in **Attachment B** to this notice on and from the date of issue of this notice or such later date as may be specified in this notice.

ISSUE DATE: 27 October 2022



.....
AMY DENNISON
EXECUTIVE DIRECTOR
ENVIRONMENTAL REGULATION
DELEGATE OF THE NT EPA

Important Notice

Failure to comply with this notice is an offence under section 52 of the *Waste Management and Pollution Control Act 1998* (the Act) and may incur significant penalties and/or other statutory action.

This notice takes effect on the date on which it is served upon you. Pursuant to section 108 of the Act, **you have the right to apply for a review of the decision to issue you with this Notice to carry out an Environmental Audit Program. If you intend to apply for a review, YOU MUST MAKE AN APPLICATION WITHIN 28 DAYS after the day on which this notice of the decision was given.** For information on how to lodge an application for review, contact the Northern Territory Environment Protection Authority, telephone (08) 8924 4218.

Pursuant to section 112 of the Act the person issued with this notice must fulfil certain obligations before selling, leasing, sub-leasing, giving or exchanging land, premises, a vehicle or business, which is the subject of this Notice.

ATTACHMENT A
REASONS FOR ISSUING THIS NOTICE

1. City of Darwin (CoD) occupies and controls the parcel of land located at Lot 03952 Town of Sanderson plan(s) S 79/149A (the lot) delineated in **blue** in **Attachment C**;
2. Within this parcel is the Shoal Bay Waste Management Facility (SBWMF) delineated in **yellow** in **Attachment C** (the premises);
3. SBWMF commenced operation on 1 April 1987 and licensing under the *Waste Management and Pollution Control Act 1998* (the Act) commenced in 2001;
4. CoD have previously been issued Environment Protection Licences (EPLs): EPL188 from 1 July 2016 to 30 June 2021, with amendments EPL188-01 and EPL188-02);
5. CoD is currently operating the premises for the purpose of providing waste and recycling management services to the Greater Darwin region;
6. The lot contains and is surrounded by sensitive wetland habitats that are immediately adjacent to the premises including and described by:
 - a. Shoal Bay – Micket Creek nationally recognised wetland area (Directory of Important Wetlands in Australia NT032);
 - b. Shoal Bay Site of Conservation Significance; and
 - c. Darwin Area Primary Storm Surge Inundation Zone;
7. The premises is near to potentially sensitive receptors including but not limited to:
 - a. residential properties 0.6km to the southwest and within 2km to the northwest;
 - b. Darwin Harbour Region Declaration of Beneficial Uses and Objectives area;
 - c. Holmes Jungle Nature Park within 1km to the south; and
 - d. Buffalo Creek Management Area within 2km to the north;
8. While CoD has maintained control of the premises, a number of commercial operators have previously been issued EPLs to conduct licensed activities at the premises on behalf of CoD;
9. On 2 July 2021, EPL188-03 was issued to the CoD pursuant to section 34 of the Act and is set to expire on 1 July 2026;

10. Table 1 of EPL188-03 authorises the following activities involving listed wastes at the premises:

Table 1.

Listed Waste	Collection	Transport	Storage	Treatment	Recycling	Disposal
Animal effluent and residues	X	X	X	X	X	✓
Asbestos	X	X	X	X	X	✓
Clinical and related wastes	X	X	X	X	X	✓
Lead, lead compounds	X	X	✓	X	X	X
Sewage sludge and residues including nightsoil and septic tank sludge	X	X	X	X	X	✓
Soils contaminated with a listed waste	X	X	X	X	X	✓
Tyres	X	X	✓	✓	✓	✓
Waste from the production, formulation and use of inks, dyes, pigments, paints, lacquers and varnish	X	X	✓	X	X	X
Acidic solutions or acids in solid form	X	X	✓	X	X	X
Waste mineral oils unfit for their original intended use	X	X	✓	X	X	X

✓ Activity authorised by this licence

X Activity not authorised by this licence

11. EPLs issued for activities at the premises include requirements to undertake monitoring programs and submit reports, annual returns and audits to the Northern Territory Environment Protection Authority (NT EPA);

12. Reports submitted to the NT EPA (in accordance with EPL188-03 conditions) indicate some non-compliances with EPL188-03 conditions that can or have the potential to cause harm to the environment including:

- a. prior to March 2022 insufficient leachate management and storage capability;
- b. prior to January 2022 insufficient contaminated surface water management and/or storage capability; and
- c. prior to January 2022 insufficient measures to prevent contamination of groundwater and potentially surface water from the migration of leachate;

13. Annual returns submitted to the NT EPA in accordance with EPL188-03 detail CoD's non-compliances with licence conditions, including:

- a. prior to December 2021, some instances of failure to report non-compliances at all or within the required timeframe when non-compliances have been identified;

- b. prior to January 2022 failure to conduct a surface water quality monitoring program in accordance with licence condition requirements; and
 - c. prior to January 2022 failure to conduct appropriate groundwater quality monitoring in accordance with licence condition requirements;
14. As a result of CoD's non-compliance with its licence conditions, NT EPA have taken various compliance and enforcement actions to address some of the immediate and ongoing environmental concerns at the premises and to mitigate environmental harm;
15. The following issues at the premises give rise to concerns that historical activities are causing detrimental impacts at and beyond the premises:
- a. historically inadequate leachate management and storage systems;
 - b. suspected integrity issues of the landfill cell and/or pond lining systems built prior to 2015; and
 - c. suspected inadequate environmental risk assessment of cumulative impacts at and beyond the premises;
16. The full nature and extent of pollution and contamination at and beyond the premises is unknown;
17. The cumulative impacts from the operations at the premises are unknown and hence the environmental audit program will enable the cumulative impacts to be understood and assessed;
18. An Environmental Audit program will enable:
- a. any data deficiencies to be addressed, existing data consolidated and analysed resulting in an improved understanding of any environmental impacts as a result of current activities at the SBWMF;
 - b. a review of all current practices to ensure that they are sufficient to minimise any future environmental harm;
 - c. identification of targeted and risk based remediation actions as may be required; and
 - d. a detailed evidence-supported plan for SBWMF operations and activities for the medium and long term.

ATTACHMENT B
NOTICE REQUIREMENTS

1. Pursuant to section 48 of the *Waste Management and Pollution Control Act 1998* (the Act), the City of Darwin is required to carry out an environmental audit program (the program) at and beyond the premises (as delineated in **yellow** in **Attachment C**) to evaluate:
 - a. the ability of management systems to manage waste or prevent, reduce, control, rectify or clean up pollution or environmental harm resulting from pollution, including but not limited to:
 - i. a review of environmental systems, practices and procedures in place at the premises;
 - ii. a review of operational environmental management systems and procedures; and
 - iii. a review of service agreements with contractors in relation to operational management of the premises;
 - b. the extent to which actions are required to be undertaken, or results required to be achieved, for waste management or the prevention, reduction, control, rectification or clean-up of pollution or environmental harm resulting from pollution have been taken or achieved, including but not limited to:
 - i. an assessment of the extent and nature of pollution and environmental harm at and from the premises caused by operations at the premises;
 - ii. the environmental improvements necessary to comply with legislative and regulatory requirements including environment protection approval and licence conditions; and
 - iii. actions and timeframes for implementing environmental improvements;
 - c. the extent, nature and source of wastes generated by the activities at the premises;
 - d. the likelihood of waste management problems or pollution resulting in environmental harm occurring and the adequacy of safeguards in place to prevent their occurrence or limit their impact on the environment, including but not limited to:
 - i. an audit of the operations at the premises and comparison with best practice landfill management contained in the Victorian EPA publication 788.3 Siting, design, operation and rehabilitation of landfills; and
 - ii. an assessment of the viability and sustainability of the landfill operations at the premises in light of its location and future likely climate change and sea level rise considerations;
 - e. the types, amount, distribution and mobility of contaminants and wastes present in the environment at the premises that have the potential to cause environmental harm, including but not limited to:
 - i. the types, amount, distribution and mobility of landfill leachate present at and beyond the premises including surface waters and groundwater modelling; and
 - ii. the types, amount, distribution and mobility of landfill gases present at and beyond the premises including surface waters and groundwater;

2. The audit program must be performed by a qualified person registered under section 68 of the Act (the auditor);
3. By **22 November 2022**, you must engage the auditor(s), accredited under section 68 of the Act to undertake the program at the premises;
4. You must provide the details of the auditor commissioned to conduct the works to the NT EPA via email to pollution@nt.gov.au within **10 business days** of engagement;
5. By **13 January 2023**, you must submit to the NT EPA via email to pollution@nt.gov.au the scope of works for the program prepared by the auditor, prior to commencing the program;
6. By **12 May 2023**, you must submit to the NT EPA via email to pollution@nt.gov.au an Interim Environmental Audit Report prepared by the person referred to in requirement 3 above;
7. By **15 December 2023** you must submit to the NT EPA via email to pollution@nt.gov.au the results of the program in the form of an **Environmental Audit Report** prepared by the auditor;
8. The **Environmental Audit Report** must include an assessment of actual environmental harm and the potential risk of environmental harm from contaminants and wastes present in the environment at and beyond the premises;
9. The **Environmental Audit Report** must include an assessment of current management systems and the suitability of the management systems to mitigate environmental impacts;
10. The **Environmental Audit Report** must assess the actual and potential risk of environmental harm from activities conducted at the premises, as determined by:
 - a. review of systems, plans, procedures, monitoring programs, data, records, reports or information that is relevant to the scope of the audit as the auditor sees fit;
 - b. review of activities, processes, plant and equipment at the premises that is relevant to the scope of the audit as the auditor sees fit; and
 - c. collection and/or modelling of existing, available and any new data that is relevant to the scope of the audit as the auditor sees fit;
11. The **Environmental Audit Report** must:
 - a. consider all relevant guidance including, but not limited to:
 - i. the National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM) 1999 (amended 2013);
 - ii. the Northern Territory Contaminated Land Guideline (CLG) 2017;
 - iii. Victorian EPA publication number 788.3 – Siting, design, operation and rehabilitation of landfills;
 - iv. Victorian EPA publication number 1490.1 – Closed landfill guidelines;

- v. Victorian EPA publication number 1323.3 – Landfill licencing guidelines including but not limited to Appendix 6: Scope for audit of landfill operation;
 - vi. Victorian EPA publication number 952.5 – Guideline for the preparation of environmental audit reports on risk to the environment;
 - vii. Victorian EPA publication number 953.2 – Environmental auditor guidelines for conducting environmental audits;
 - viii. Victorian EPA publication number 1684 – Landfill gas fugitive emissions monitoring guideline;
 - ix. Victorian EPA publication number 840.2 – The clean-up and management of polluted groundwater; and
 - x. long term viability and sustainability of waste management operations at the premises;
- b. determine if the activities conducted at the premises have caused environmental harm or give rise to a potential risk of any possible harm or adverse impact to the environment;
 - c. recommend measures necessary to reduce the actual harm and risk of harm to an acceptable level where actual harm or risk of possible harm to the environment has been identified;
 - d. propose a timetable for the implementation of all recommended measures to address the findings of the Audit; and
 - e. identify the likely environmental monitoring requirements that will be required to manage the ongoing and future environmental impacts from the premises post the cessation of waste disposal at the premises.

ATTACHMENT C
THE PREMISES

