

COUNCIL SUPPLEMENTARY ASSESSMENT REPORT

NORTHERN REGIONAL PLANNING PANEL

PANEL REFERENCE & DA NUMBER	PPSNTH-201 – DA 2023/006
PROPOSAL	Extension of Existing Waste Management Facility
ADDRESS	Lot 213, DP 1173230, 258 Merriwa Road, Willow Tree
APPLICANT	Shaun Lawer
OWNER	Liverpool Plains Shire Council
DA LODGEMENT DATE	17 February 2023
APPLICATION TYPE	Development Application (Integrated) (Designated)
REGIONALLY SIGNIFICANT CRITERIA	Section 2.19(1) and Clause 3 of Schedule 6 of State Environmental Planning Policy (Planning Systems) 2021 declares the proposal regionally significant development as: Council related development over \$5 million
CIV	\$10,170,000.00 (excluding GST)
CLAUSE 4.6 REQUESTS	Not Applicable
KEY SEPP/LEP	• <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> • <i>State Environmental Planning Policy (Planning Systems) 2021</i> • <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> • <i>State Environmental Planning Policy (Resources and Energy) 2021</i> • <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> • <i>Liverpool Plains Local Environmental Plan 2011</i> • <i>Liverpool Plains Development Control Plan 2012</i>
AGENCY REFERRALS	NSW Environmental Protection Authority (NSW EPA)
TOTAL & UNIQUE SUBMISSIONS KEY ISSUES IN SUBMISSIONS	The first exhibition period was from Wednesday 3 May 2023 to Wednesday 31 May 2023. The second exhibition period was from Wednesday 9 August 2023 to Monday 11 September 2023. The third exhibition period was from Wednesday, 28 February 2024 to Friday, 29 March 2024. One (1) submission was received for the proposal during this period.

DOCUMENTS SUBMITTED FOR CONSIDERATION	Supplementary Environmental Impact Statement (EIS) Draft Landfill Environmental Management Plan (LEMP) Revised Draft Conditions of Consent Design (Survey Plan, Site Plan, Staging Plans etc.) Landfill Extension Masterplan Aboriginal Due Diligence Assessment Noise and Vibration Assessment Water Impact Assessment Air Quality Assessment Environmental Noise and Vibration Assessment Traffic Assessment Odour and Dust Assessment Biodiversity Assessment Report
REPORT ATTACHMENTS	The following attachments are included: • Attachment A: Draft Conditions of consent • Attachment B: Report Addendum • Attachment C: Correspondence submitted by the Proponent (SEARs Compliance Table) • Attachment D: Design Plans
SPECIAL INFRASTRUCTURE CONTRIBUTIONS (S7.24)	Not Applicable
RECOMMENDATION	Approval, subject to conditions of consent.
PEER REVIEW	22 March 2024 - 9 April 2024
DRAFT CONDITIONS TO APPLICANT	Yes
SCHEDULED MEETING DATE	16 April 2024
PLAN VERSION	9 December 2022 Project No.12534581, Version No B
PREPARED BY	Nathan Bartlett, Town Planner
DATE OF REPORT	12 April 2024

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1. EXECUTIVE SUMMARY

This supplementary assessment report considers the additional information required to be submitted for Development Application (DA 2023/006) by the Northern Regional Planning Panel (NRPP or 'the Panel'). The Report seeks consent for the staged expansion of an existing waste management facility at the Willow Tree Waste Management Facility (WTWMF) ('the proposal') located at Lot 213, DP 1173230, Merriwa Road, Willow Tree (the site). The proposed development has previously been assessed against the relevant requirements of the *Environmental Planning and Assessment Act 1979* (EP&A Act 1979).

A meeting to determine the proposal was previously held with the NRPP on 14 November 2023, where key issues of the development were discussed. However, the Panel resolved to defer determination until further information was provided by the proponent. This report summarises and evaluates the outstanding matters which have been submitted by the applicant, as requested by the Panel.

After consideration of the proposal having regard to the matters for consideration under Section 4.15(1) of the EP&A Act 1979, the provisions of the Regulations, the Secretary's Environmental Assessment Requirements (SEARs) and other legislative requirements, it is considered the development can be approved subject to recommended draft conditions contained at **Attachment A** of this report. That is, issues identified during the meeting of 14 November 2023 are considered to be adequately addressed through the supplementary material and other additional information provided by the applicant.

2. BACKGROUND

The development application was lodged on 17 February 2023. A chronology of the development application since lodgement is outlined below in **Table 1** and includes the NRPP's involvement (briefings, deferrals etc.) with the application:

Table 1: Chronology of the DA

Date	Event
17 February 2023	DA lodged
22 February 2023	Request for information from Council to applicant to provide Cost Summary Report
6 March 2023	Additional information submitted
3 May 2023	Exhibition of the application
11 May 2023	Request to have Referral to NSW EPA reinstated due to cancellation by NSW Planning Portal
17 May 2023	DA referred to external agency (NSW EPA)
19 May 2023	Additional Information request for amended plans (boundary adjustments and construction plans for sheds, office / amenities and shelters).
19 May 2023	Staff site inspection – Council Assessing Officer
25 May 2023	NRPP briefing meeting
30 May 2023	DA referred to external agency (TfNSW)
31 May 2023	Cessation 1st Exhibition period
1 June 2023	Panel Record of Briefing issued
15 June 2023	Second request from Council to applicant for amended plans and further clarification of report
23 June 2023	Request from NSW EPA to Council for further information
23 June 2023	Request for NSW EPA information from Council to applicant
23 June 2023	Amended plans lodged with Council were not accessible. A further request was sent to applicant seeking plans in accessible format.
12 July 2023	Response from TfNSW provided to Council
18 July 2023	On-site Meeting with NRPP
18 July 2023	Plans lodged with Council (inclusion of elevations and sections of weighbridge, office and associated infrastructure)
26 July 2023	Applicant provides Council with additional information (modified Air Quality Assessment requested by NSW EPA)
27 July 2023	Additional information (modified Air Quality Assessment) from applicant referred to NSW EPA.
27 July 2023	NRPP Record of site visit issued

9 August 2023	Amended plans lodged with Council (inclusion of elevations, 3D model and sections of weighbridge, office, amenities and associated infrastructure) and accepted by Council under CI 38(1) of the Regulation.
9 August 2023	Commencement of second exhibition
11 September 2023	Cessation of 2nd exhibition period
6 October 2023	Planning Report and draft Notice of Determination uploaded to Portal
27 October 2023	Request for information from Council in response to peer review (assessment partially complete)
9 November 2023	Additional information provided by applicant incorporated into report
9 November 2023	Completed assessment of peer review received by Council
14 November 2023	Panel Determination Meeting
24 November 2023	Panel Issues deferral notice of the proposed development with request for applicant to provide further information
29 November 2023	Council requests additional information from applicant as per the NRPP requirements
19 January 2024	Revised EIS inclusive of a Draft Landfill Environmental Management Plan (LEMP) and Operational Risk Analysis (ORA) received
28 February 2024	Re-exhibition of the Proposal
29 March 2024	Cessation of 3rd exhibition period

2.1 The Proposal

The project involves the staged expansion of the existing landfill at the Willow Tree Waste Management Facility (WTWMF). The landfill extension is estimated to provide approximately 30 years of landfilling life. Construction of the project will involve 1) Site establishment and ground preparation; and 2) Construction as the key stages. The proposed expansion would facilitate increasing the capacity of the WTWMF from 4,400 tonnes per annum (tpa) up to 9,000 tpa.

2.2 Northern Regional Planning Panel Requirements

On the 24 November 2023 the NRPP resolved to defer the determination of the development until further information was provided by the proponent. The Panel advised key issues and elements of the proposal were at too conceptual a level to demonstrate operational environmental impacts could be adequately addressed. The following additional information is required to be provided to address the concerns of the Panel and Peer Reviewer:

- An updated or supplementary Environmental Impact Statement (EIS) clearly responding to each of the SEARs.
- Evidence of consultation with key agencies in the preparation of the SEARs and in the subsequent preparation of the EIS. That is, correspondence from those key agencies.
- A draft operational management plan with sufficient detail to demonstrate the safe operation of the facility in regard to its proposed layout.
- A risk analysis to inform the development of the draft operational management plan including such matters as landfill fire and bushfire, and emergency management.

2.3 Key issues from the SEARs

In accordance with the Secretary's Environmental Assessment Requirements (SEARs) and the EP&A Regulation 2021 the application was referred to the NSW Environmental Protection Authority (NSW EPA), Transport for NSW (TfNSW), NSW Rural Fire Service, Environment, Energy and Science Group, for assessment. The key issues associated with the proposal, as per the obligations of the SEARs, included:

1. *Strategic and statutory context* - The criteria against the provisions of the Regulations, planning instruments and local instruments.
2. *Waste management* - The appropriate management of ongoing operations to ensure consistency with the aims, objectives and guidelines of the *NSW Waste Avoidance and Sustainable Materials Strategy 2041*.
3. *Design, Construction and Rehabilitation during and after the operation* - of the Project and the potential for the development to have detrimental cumulative impacts on the health and safety of the community and environment.
4. *Hazards and risk, fire and incident management* - The identified potential hazards and risks and appropriate on-site management.
5. *Impact of noise, vibration and air quality* - to nearby receptors including existing commercial development, dwellings, and Willow Tree during construction and operation.
6. *Soil and water* - The potential to cause erosion, impact on stormwater, and contaminate surface and subsurface conditions.
7. *Traffic and safety* - The suitability of the road for the proposed expansion and the impact of increased traffic and vehicular movement on the existing road network.
8. *Biodiversity impacts* - The potential for impacts on flora and fauna species during the construction, operation and post stages of the development.
9. *Heritage* - The potential impacts on aboriginal and non-aboriginal cultural heritage.
10. *Visual* - The potential impacts of the proposal on adjoining receptors and public vantage points.

The applicant has provided suitable information including technical reports which adequately address these concerns. The revised Environmental Impact Statement (EIS) has also met the requirements of Part 8 Infrastructure and environmental impact assessment, Clause 192 and 193 of the Regulations.

3. CONSULTATION WITH KEY AGENCIES

3.1 Agency Referrals and Concurrence

The development application has been referred to various agencies for comment / concurrence / referral as required by the EP&A Act and outlined over the page in **Table 2**. There are no outstanding issues arising from these concurrence and referral requirements subject to the imposition of the recommended conditions of consent being imposed.

Table 2: Concurrence and Referrals to agencies

Agency	Concurrence/ referral trigger	Comments (Issue, resolution, conditions)	Resolved
Concurrence Requirements (s4.13 of EP&A Act)			
Environment Agency Head (Environment, Energy & Science Group within DPHI)	S7.12(2) - <i>Biodiversity Conservation Act 2016</i>	A Biodiversity Assessment Report (BAR) has been prepared by <i>Biodiversity Australia Pty Ltd</i> to accompany the DA. This report concluded the project is not considered likely to result in a significant impact to species or communities listed under the EPBC Act 1999, and as such a referral to the Minister of the Environment and Energy is not required (EES).	N/A
Referral/Consultation Agencies			
NSW RFS	S4.14 – EP&A Act Development on bushfire prone land	The site is bushfire prone. As the project is not defined as a Special Fire Protection Purpose development, the provisions of the <i>Rural Fires Act 1997</i> do not apply.	N/A
Northern Region Planning Panel	Section 2.19(1) and Clause 3 of Schedule 6 of State Environmental Planning Policy (Planning Systems) 2021	Referral for Assessment required as development is Council related development over \$5 million.	Y
Transport for NSW (TfNSW)	Section 2.122 – <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> Development that is deemed to be traffic generating development in Schedule 3.	TfNSW raised no objection to or identified any requirements for the proposed development. TfNSW advised traffic volumes for the WTWMF are not expected to significantly impact the operation of the New England Highway / Merriwa Road intersection.	Y
Integrated Development (S 4.46 of the EP&A Act)			
NSW Environment Protection Authority	<i>Protection of the Environment Operations Act 1997</i> , Schedule 1	An Environmental Protection Licence (EPL) is required for operation. The proposal would process up to 9,000 tonnes of general waste. The proposal is therefore, a “Scheduled Activity”, and	Y

		requires separate licensing as required by Section 39 of the POEO Act. The proposal was consequently lodged as integrated development and referred to the NSW EPA for their General Terms of Approval (GTA). The NSW EPA did not raise objection to the proposal. The NSW EPA advised they would issue an EPL to accommodate the proposal, subject to conditions.	
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3.2 Consultation by the Proponent During the Preparation of the EIS

An obligation of the SEARs involved providing details of consultation and issues raised with the following groups/bodies during the preparation of the EIS: -

- NSW Environmental Protection Authority (NSW EPA);
- Environment, Energy and Science Group;
- Transport for NSW (TfNSW);
- NSW Rural Fire Service (NSW RFS);
- Liverpool Plains Shire Council (LPSC); and
- Surrounding landholders likely to be impacted.

Each of the above government agencies were consulted during the scoping and EIS phases. During the preparation of the EIS, clarification was sought from select agencies by the applicant to confirm the requirements of the SEARs. Any outstanding matters have been resolved during preparation of the revised EIS. Each specialist report has been prepared to respond to the consultation and requirements received from each relevant government agency. As the project was delivered on behalf of LPSC, the work involved in the EIS preparation was presented and approved by LPSC, as the applicant, prior to formal DA lodgement. In addition to the consultation with the relevant government agencies, the applicant (GHD on behalf of LPSC) also sent out letters to each of the adjoining landowners prior to the preparation of the EIS. There were no issues raised from this aspect of consultation.

3.3 Community Consultation

The exhibition periods for the proposed development were from Wednesday, 3 May 2023 to Wednesday, 31 May 2023 and Wednesday, 9 August 2023 to Monday, 11 September 2023. There were no submissions received for the proposal during both exhibition periods.

The proposal was also exhibited for a period of 30 days from Wednesday, 28 February 2024 to Friday, 29 March 2024 under the advice of the Department of Planning, Housing and Infrastructure (DPHI). One (1) submission was received for the proposal during this third exhibition period. The content of the submission received has been considered by Council's Assessing Officer. The concerns raised in relation to the proposed development has been summarised and commented on in the table in **Attachment E**.

4. SUPPLEMENTARY ENVIRONMENTAL IMPACT STATEMENT

The Panel on 14 November 2023 resolved to defer determination of the proposed development until the following key issues relevant to the assessment of this application had been resolved:

4.1 Supplementary EIS addressing SEARs requirements

Issues Raised

The Record of Deferral confirmed an updated or supplementary EIS is to be provided which clearly addresses each of the SEARs requirements. It was advised in the record “...*The Panel does not accept matters required to be addressed by the SEARs can be deferred to conditions of consent.*”

Response:

The Northern Regional Planning Panel (NRPP) in a meeting dated 14 November 2023, determined part of the information submitted by the proponent was insufficient. The matter was deferred so the applicant could adequately address the outstanding matters required by the SEARs and the Panel. Subsequently, the proponent responded to Council’s request for additional information with the submission of a revised EIS document, accompanied by a Landfill Environmental Management Plan (LEMP) and Risk Analysis, as requested by the Panel. The information submitted is summarised in **Attachment B**. The report also includes correspondence by the proponent in **Attachment C**, which addressed the outstanding matters.

Issues Raised

Evidence of consultation with key agencies in the preparation of the SEARs is to be provided which includes correspondence from those key agencies in the supplementary EIS.

Response:

A supplementary EIS has been submitted to Council by the applicant at the request of the NRPP. The document and attachments have been assessed by Council as per the SEARs requirements. It is confirmed that each of the relevant government agencies and likely affected landowners were consulted during the preparation of the EIS and revised EIS phases. Details of this information are outlined in **Attachment B** and it is considered that the requirements are satisfied in this regard.

4.2 Draft Operational Management Plan

Issues Raised

A draft operational management plan is required to be provided for the proposed layout with sufficient detail to demonstrate the safe operation of the facility. The NRPP is of the view that, should the proposal be approved conditions can be appropriately drafted to mitigate the need for modifications to the development approval and thus enable sufficient flexibility in the future.

Response:

A draft Landfill Environmental Management Plan (LEMP), which includes a risk analysis, has been provided by the applicant. The LEMP provides a framework for the operation of the WTMF as a result of the proposed layout of the facility (refer Design Plans in **Appendix D**),

with a focus on safe operational practices and suitable environmental management practices. Should the proposal be supported and given this document is a draft, it will be a condition of the consent that the LEMP be reviewed, updated and finalised: -

- prior to the commencement of operation,
- every 5 years from commencement of operation; and
- prior to the commencement of each landfill cell.

It is considered this will provide flexibility for the ongoing operation of the facility and ensure suitable and efficient management practices.

4.3 Risk Analysis

Issues Raised

A risk analysis is to be provided to inform the development of the draft operational management plan, which also includes such matters as landfill fire and bushfire, and emergency management.

Response:

An Operational Risk Analysis (ORA) of the draft LEMP was submitted by the proponent. The analysis confirms the key risks and hazards during the operation of the WTWMF. Matters such as landfill fire and bushfire, and emergency management are addressed as part of the analysis. The analysis also provides key mitigation measures, which are addressed in detail throughout the LEMP.

5. CONCLUSION

A review of the supplementary EIS and all associated documentation submitted for the proposal has been undertaken. Following a thorough assessment of the material, in conjunction with all previously submitted documents it is considered that the information provided fulfils the requirements of the Panel and the proposed development can be supported.

It is considered that the key issues as outlined in Section 4 have been resolved satisfactorily through amendments to the proposal and in the recommended draft conditions included at **Attachment A**.

6. RECOMMENDATION

That Development Application No. 2023/006 for the extension of the existing Willow Tree Waste Management Facility at Lot 213, DP 1173230, 258 Merriwa Road, Willow Tree NSW 2339, be APPROVED pursuant to Section 4.16(1)(a) of the *Environmental Planning and Assessment Act 1979*, subject to the proposed conditions of consent attached to this report at **Attachment A**.

The following attachments are provided:

- Attachment A: Draft Conditions of consent
- Attachment B: Report Addendum
- Attachment C: Correspondence submitted by the Proponent (SEARs Compliance Table)
- Attachment D: Draft Landfill Environmental Management Plan and Design Plans
- Attachment E: Submissions and Planning Comments

PART A: GENERAL**A1 Approved Plans and Supporting Documentation**

The development must be implemented in accordance with the approved plans, specifications and supporting documentation listed below which have been endorsed by Council's approved stamp, except where amended by conditions of this consent:

Plan/Report Title	Reference No	Revision	Prepared by	Date
3D Design Drawings	Project No. NWI-DWG-001	1	NWI Group	25/07/2022
Site Layout Plan	12534581-SK001	A	GHD	07/12/2022
Proposed Landfill Expansion Plan	Project No. 12534581	A	GHD	16/06/2023
Proposed Staging Plan	Project No. 12534581	A	GHD	16/06/2023
Proposed Final Landform	Project No. 12534581	A	GHD	16/06/2023
Cell Arrangement Plan	Project No. 12534581	C	GHD	21/07/2023
Landfill Extension Concept Design	Project No. 12534581	B	GHD	09/12/2022
Environmental Impact Statement (EIS)	Project No. 12534581	0	GHD	12/03/2023
Supplementary EIS Material	Project No. 12534581	3	GHD	22/2/2024
Draft Landfill Environmental Management Plan (LEMP)	Project No. 12534581	Draft A	GHD	19/01/2024

In the event of any inconsistency between the conditions of this approval and the drawings/documents referred to above, the conditions prevail. In the event of any inconsistency between the approved plans and the supporting documentation, the approved plans prevail.

Reason: To ensure the development proceeds in the manner assessed by Council and all parties are aware of the approved plans and supporting documentation that applies to the development.

A2 Report Recommendations

The development must be constructed and operated in accordance with the approved specialist reports including the following key recommendations:

Plan/Report Title (incl Reference, date, author)	Recommendation(s)	Stage
Willow Tree Waste Management Facility Aboriginal Due Diligence Assessment Prepared by <i>biosis</i> 22 December 2022	Recommendations in Section 5.2 of the report relating to Aboriginal objects or suspected potential Aboriginal Ancestral Remains encountered during works or activity (refer pages 41 - 42).	Pre-construction/ Construction/ Operation

Air Quality Impact Assessment Prepared by GHD 21 July 2023 Revision 1	Management, monitoring and mitigation measures that have been identified in the report.	Construction/Operation
Noise and Vibration Assessment Prepared by GHD 1 December 2022	Mitigation measures identified in Section 8 of the report.	Pre-construction/ Construction/Operation/ Post approval
Landfill Expansion Masterplan Prepared by GHD 13 September 2021	Recommendations for capping in relation to the proposed basal liner options and management of groundwater, surface water and leachate.	Construction/Operation
Water Impact Assessment Prepared by GHD 1 December 2022	Management, monitoring and mitigation measures that have been identified in the report.	Construction/Operation
Biodiversity Development Assessment Report Prepared by Biodiversity Australia Pty. Ltd. 13 October 2022	The key recommendations from Section 9.3 of the Report regarding: • General Clearing Measures • Animal Welfare Considerations • Sedimentation and Erosion Control • Weed Control • Threatened Ecological Community Rehabilitation • Fencing be implemented to minimise potential impacts on biodiversity (refer pages 38 - 42).	Pre-construction / Construction / Operation
Landfill Environmental Management Plan (LEMP) Prepared by GHD	Management, monitoring and mitigation measures during operation that have been identified in the report.	Operation and Post-operation

A3 Signage and building works

A separate application shall be submitted to Council prior to the erection of any signage or building works unless the proposed signage / building is 'exempt development' under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any other applicable environmental planning instrument.

Reason: To ensure any signage or building is assessed in accordance with the planning controls.

A4 Compliance with the Building Code of Australia

All building work shall be carried out in accordance with the provisions of the Building Code of Australia / National Construction Code. A reference to the Building Code of Australia is a reference to that Code as in force on the date the application is made for the relevant construction certificate.

Reason: To ensure the building work complies with the relevant legislation.

A5 Lapsing of Consent

This consent is limited to a period of 5 years from the date of the Notice of Determination unless the works associated with the development have physically commenced.

Reason: To ensure compliance with Section 4.53 of the *Environmental Planning and Assessment Act 1979*

A6 Vegetation Retention and Removal

Approved vegetation removal shall be carried out by an appropriately qualified person to avoid any risk to life or damage to property and must have adequate public liability insurance. This is to occur in accordance with an approved Vegetation Management Program as per the recommendations of the Biodiversity Assessment Report prepared by *Biodiversity Australia*, October 2022.

Existing vegetation on the site is to be retained and protected from damage during work, with the exception of the vegetation (0.05 hectares) outlined within the development footprint of the proposed plans prepared by GHD.

Reason: To protect vegetation on the site to be retained.

A7 Decommissioning

The land must be returned to its pre-existing condition, as far as is practicable, (prior to use as a Waste Management Facility) and all infrastructure removed once the facility has reached life expectancy and is decommissioned. The land must be rehabilitated. The project owner or operator shall be responsible for decommissioning and rehabilitation unless there is an agreement with the 'host landowner' that clearly outlines alternate responsibilities.

Reason: To ensure the rehabilitation of the site.

A8 Construction

A copy of all stamped approved plans, specifications and documents must always be kept on site to be readily available for perusal by any officer of Council or the Principal Certifier.

Reason: To confirm and clarify the terms of approval and ensure compliance with the conditions.

A9 Requirements of Government Agencies (General Terms of Approval)

The following conditions have been imposed by the NSW Environmental Protection Authority in accordance with the provisions of Section 4.47(3) of the *Environmental Planning and Assessment Act 1979*.

Reason: To ensure compliance with Section 4.47(3) of the *Environmental Planning and Assessment Act 1979* and the conditions of Government agencies are complied with.

1 Administrative conditions

A1 What the approval/licence authorises and regulates

A1.1 This approval/licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this approval/licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Waste disposal (application to land)	Waste disposal by application to land	Any capacity

A2 Premises or plant to which this approval/licence applies

A2.1 The approval/licence applies to the following premises:

Premises Details
WILLOW TREE WASTE MANAGEMENT FACILITY 258 MERRIWA ROAD WILLOW TREE NSW 2339 LOT 213 DP 1173230

A3 Information supplied to the EPA

A3.1 Except as expressly provided by these general terms of approval, works and activities must be carried out in accordance with the proposal contained in:

- The development application DA 2023/006 submitted to Liverpool Plains Shire Council on 17 February 2023;
- Any environmental impact statement *Willow Tree Waste Management Expansion dated 22 February 2024* relating to the development; and
- All additional documents supplied to the EPA in relation to the development, including:
 - Aboriginal Due Diligence Assessment, dated 22 December 2022
 - Concept Design (Survey Plan, Site Plan, Staging Plans etc.)
 - Landfill Extension Masterplan, dated 13 September 2021
 - Water Impact Assessment, dated 1 December 2022
 - Air Quality Impact Assessment, dated 1 December 2022
 - Environmental Noise and Vibration Assessment, dated 1 December 2022
 - Traffic Assessment, dated 19 December 2022
 - Biodiversity Development Assessment Report, dated October 2022

A4 Fit and Proper Person

A4.1 The applicant must, in the opinion of the EPA, be a fit and proper person to hold a licence under the *Protection of the Environment Operations Act 1997*, having regard to the matters in s.83 of that Act.

2 Discharges to Air and Water Applications to Land

P1 Location of monitoring/discharge points and areas

P1.1 The following points referred to in the table below are identified in this approval/licence for the purposes of monitoring and/or the setting of limits for the emissions of pollutants to the air from the point.

Air

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
Exact points to be confirmed on the Environmental Protection Licence (EPL)	Air Emissions Monitoring Ambient Air Quality Monitoring Sub surface gas monitoring		The EPA intends to establish air quality monitoring points on the licence before construction and operation of the landfill commences.

P1.2 The following points referred to in the table are identified in this approval/licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

Water

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
Exact points to be confirmed on the EPL	Sediment Dam Quality Monitoring Leachate Quality Monitoring Surface water quality Monitoring Discharge quality monitoring Groundwater Quality Monitoring Ambient water quality monitoring	Discharge to waters Discharge quality monitoring Volume monitoring Surface water quality monitoring	It is the EPA's intention to add water monitoring points for leachate, surface water (clean and dirty), ambient (upstream and downstream of the landfill site) and groundwater. Water discharge points from clean area sediment dams will also be added. Controlled discharges of leachate/dirty water from the premises will not be permitted.

P1.3 The following points referred to in the table below are identified in this approval/licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.

Noise/Weather

EPA Identification Number	Type of Monitoring Point	Description of Location
W1	Meteorological Station	Meteorological Station located on the premises (exact location to be confirmed)

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this approval/licence, the proponent must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Concentration limits

L2.1 For each discharge point specified in the tables below, the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L2.2 Where a pH quality limit is specified in the Table, the specified percentage of samples must be within the specified ranges.

L2.3 To avoid any doubt, this condition does not authorise the discharge or emission of any other pollutants.

L2.4 Water and or/Land Concentration Limits

POINTS - Sediment Pond discharge limits (exact locations TBC)

Pollutant	Units of Measure	100% concentration limit
TSS	mg/L	50
Nitrogen (ammonia)	mg/L	0.9
<pH>		6.5-8.5

L2.5 The proponent is taken not to have breached the concentration limits specified in this approval/licence for the discharge of total suspended solids in condition L2.4 if:

- (a) the dams overflow is caused by a rainfall event exceeding the 5-day 90 percentile rainfall; and,
- (b) the proponent has taken all practical measures to avoid or minimise water pollution.

Note: The proponent is to confirm the rainfall depth terms in millimetres upon the application for the EPL.

L3 Waste

L3.1 The proponent must prepare a Waste Classification Report and provide it to the EPA prior to commencing operations at the premises. The Waste Classification report must accompany the EPL application.

L3.2 The proponent must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this approval/licence.

Code	Waste	Description	Activity	Other Limits
	General Solid Waste (non-putrescible)	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste disposal (application to land)	TBD
	General Solid Waste (putrescible)	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste disposal (application to land)	TBD
	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time.		TBD

Note: The total amount of waste disposed of at the premises must not exceed 10,000 tonnes per annum. The proponent must provide a break down of waste types to be disposed of at the premises as supporting information in the EPL application.

L3.4 Disposal of asbestos must be in accordance with Clause 80 of the Protection of the Environment Operations (Waste) Regulation 2014

L4 Noise limits

L4.1 Noise generated at the premises must not exceed the noise limits at the times and locations in the table below. The locations referred to in the table below are indicated by Figure 4.2 of the Willow Tree Waste Management Facility Noise and Vibration Assessment by GHD ref: 12534581, dated 1 December 2022.

Location	Noise Limits in dB(A)	
	Morning Shoulder	Day
	^L Aeq(15 minute)	^L Aeq(15 minute)
200 Merriwa Road, Willow Tree (Lot 214, DP 1173230)	36	40
104 Merriwa Road, Willow Tree (Lot 1, DP 136316)	35	40

L4.2 For the purposes of condition L4.1:

- (a) Morning Shoulder means the period from 7am to 8am Sunday and public holidays.
- (b) Day means the period from 7am to 6pm Monday to Saturday and the period from 8am to 6pm Sunday and public holidays.

L4.3 Standard Meteorological Conditions

- (a) The noise limits set out in condition L4.1 apply under the following meteorological conditions:

Assessment Period	Meteorological Conditions
Day	Stability Categories A, B, C and D with wind speeds up to and including 0.5m/s at 10m above ground level
Evening	Stability Categories A, B, C and D with wind speeds up to and including 0.5m/s at 10m above ground level
Night	Stability Categories A, B, C and D with wind speeds up to and including 0.5m/s at 10m above ground level

- (b) For those meteorological conditions not referred to in condition L4.3(a), the noise limits that apply are the noise limits in condition L4.1 plus 5dB.

L4.4 For the purposes of condition L4.3: -

- (a) The meteorological conditions are to be determined from meteorological data obtained from the site meteorological weather station identified as point W1.
- (b) Stability category shall be determined using the following method from Fact Sheet D of the *Noise Policy for Industry* (NSW EPA, 2017):
 - (i) Use of sigma-theta data (section D1.4).

L4.5 To assess compliance:

- (a) with the LAeq(15 minutes) noise limits in condition L4.1 and L4.3, the noise measurement equipment must be located:
 - (i) approximately on the property boundary, where any residence is situated 30 metres or less from the property boundary closest to premises; or where applicable,
 - (ii) in an area within 30 metres of a residence façade, but not closer than 3 metres where any residence on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable,
 - (iii) in an area within 50 metres of the boundary of a National Park or Nature Reserve,
 - (iv) at any other location identified in condition L4.1
- (b) with the LAeq(15 minutes) noise limits in condition L4.1 and L4.3, the noise measurement equipment must be located:
 - (i) at the reasonably most affected point at a location where there is no residence at the location; or,
 - (ii) at the reasonably most affected point within an area at a location prescribed by condition L4.5 (a).

L4.6 A non-compliance of conditions L4.1 and L4.3 will still occur where noise generated from the premises is measured in excess of the noise limit at a point other than the reasonably most affected point at the locations referred to in condition L4.5 (a) or L4.5 (b).

Note to L4.5 and L4.6: The reasonably most affected point is a point at a location or within an area at a location experiencing or expected to experience the highest sound pressure level from the premises.

L4.7 For the purpose of determining the noise generated from the premises, the modifying factor corrections in Table C1 in Fact Sheet C of the *Noise Policy for Industry* (NSW EPA, 2017) may be applied, if appropriate, to the noise measurements by the noise monitoring equipment.

L4.8 Noise measurements must not be undertaken where rain or wind speed at microphone level will affect the acquisition of valid measurements.

L4.9 Truck movements to and from the site be restricted to daytime hours only to minimise the impact on sleep during the night-time period.

L4.10 The proponent must prepare and implement a Noise Management Plan that covers all premises-based activities and transport operations. The plan must include but need not be limited to:

- (a) All measures necessary to satisfy the limits in Table L4.1 at all times,
- (b) A system that allows for periodic assessment of Best Management Practice (BMP) and Best Available Technology Economically Achievable (BATEA) that has the potential to minimise noise levels from the facility,
- (c) Effective implementation of identified BMP and BATEA measures, where considered feasible and reasonable,
- (d) Measures to monitor noise performance and respond to complaints,
- (e) Measures for community consultation including site contact details,

(f) Noise monitoring and reporting procedures.

L4.11 The proponent must prepare and implement a detailed Construction Noise Management Plan (CNMP), prior to commencement of construction activities, that includes but is not necessarily limited to;

- (a) Identification of each work area, site compound and access route (both private and public),
- (b) Identification of the specific activities that will be carried out and associated noise sources at the premises and access routes,
- (c) Identification of all potentially affected sensitive receivers,
- (d) The construction noise and vibration objectives identified in the Environmental Assessment,
- (e) Assessment of potential noise and vibration from the proposed construction methods (including noise from construction traffic) against the objectives identified in the Environmental Assessment,
- (f) Where the objectives are predicted to be exceeded an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise impacts,
- (g) Description of management methods and procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during construction, including the early erection of any operational noise control barriers,
- (h) Procedures for notifying residents of construction activities that are likely to affect their noise and vibration amenity,
- (i) Measures to monitor noise performance and respond to complaints.

L4.12 Subject to any express provision to the contrary in this approval/licence, measurement and analysis of noise required by this approval/licence must be done in accordance with the Approved Methods for the Measurement and Analysis of Environmental Noise in NSW.

Definitions for L4

LAeq (15 minute) - the value of the A-weighted sound pressure level of a continuous steady sound that, over a 15-minute time interval, has the same mean square sound pressure level as a sound under consideration with a level that varies with time (Australian Standard AS 1055:2018 Acoustics: description and measurement of environmental noise).

Noise Policy for Industry - the document entitled “Noise Policy for Industry” published by the NSW Environment Protection Authority in October 2017.

Noise – ‘sound pressure levels’ for the purposes of conditions L4.1 to L4.8.

L5 Hours of operation

L5.1 The proponent shall comply with the operating hours shown in the table below.

Activity	Day	Hours
Construction	Monday – Friday	7am – 6pm
Construction	Saturday	8am – 1pm
Construction	Any other time	Only with the prior written approval of the EPA and subject to any conditions that may be imposed.
Operation	Monday – Saturday	7am – 6pm
Operation	Sunday	7am – 5pm
Operation	Any other time	Only with the prior written approval of the EPA and subject to any conditions that may be imposed.

L5.2 This condition does not apply to the delivery of material outside the hours of operation permitted by condition L5.1, if that delivery is required by police or other authorities for safety reasons; and/or the operation or personnel or equipment are endangered. In such circumstances, prior notification is provided to the EPA and affected residents as soon as possible, or within a reasonable period in the case of emergency.

L5.3 The hours of operation specified in conditions L5.1 may be varied with written consent if the EPA is satisfied that the amenity of the residents in the locality will not be adversely affected.

4 Operating conditions

01 Odour

01.1 No condition in this approval/licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997 provides that the proponent must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

02 Dust

02.1 All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.

02.2 Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.

02.3 The premises must be maintained in a manner that prevents or minimises the emission of air pollutants from the premises.

03 Waste management

03.1 Surface drainage must be diverted away from any area where waste is being or has been landfilled.

03.2 There must be no incineration or burning of any waste at the premises.

03.3 The proponent must have in place and implement procedures to identify and prevent the disposal of any waste not permitted by this approval/licence to be disposed of at the premises.

03.4 The proponent must minimise the tracking of waste and mud by vehicles.

03.5 Cover material must meet the specifications within section 8 of the Environmental Guidelines: Solid Waste Landfills" (EPA, Second Edition, 2016), unless otherwise approved by the EPA and the following:

(a) Daily cover

Cover material must be applied to a minimum depth of 150 millimetres over all exposed landfilled waste prior to ceasing operations at the end of each day.

(b) Intermediate cover

Cover material must be applied to a depth of 300 millimetres over surfaces of the landfilled waste at the premises which are to be exposed for more than 90 days.

(c) Cover material stockpile

At least two weeks cover material must be available at the premises under all weather conditions. This material may be won on site, or alternatively a cover stockpile must be maintained adjacent to the tip face.

03.6 Alternative daily cover options may be considered and approved by the EPA if the proponent can demonstrate that the alternative approach can achieve the required outcomes for cover in section 8 of the "Environmental Guidelines: Solid Waste Landfills" (EPA, Second Edition, 2016).

03.7 The proponent must submit to the EPA within twelve months prior to the last load of waste to be landfilled a closure plan in accordance with Section 76 of the Protection of the Environment Operations Act 1997.

03.8 The proponent must ensure that the landfill cells are capped progressively.

03.9 The proponent must ensure that the leachate dam is constructed with:

- (a) sufficient capacity as determined in accordance with the processes detailed within section 2 of the "Environmental Guidelines: Solid Waste Landfills" (EPA, Second Edition, 2016); and
- (b) is lined in accordance with section 2.1 of the "Environmental Guidelines: Solid Waste Landfills" (EPA, Second Edition, 2016) or an alternative system approved in writing by the EPA.

03.10 The level of leachate above the basal liner in the all landfill cells must be maintained to be less than 300mm.

03.11 Water which contains or has come into contact with waste, other than Virgin Excavated Natural Material, must be managed as leachate.

03.12 The surface water and leachate management systems must be maintained to ensure that their design capacity is available for the storage and management of stormwater and leachate.

03.13 Leachate must only be disposed of by:

- (a) Evaporation;
- (b) Irrigation within the leachate dam or within the active cell of the landfill; or
- (c) Disposal of at a facility licensed to accept such waste.

03.14 Irrigation of leachate must only be undertaken:

- (a) During dry weather; and
- (b) Such that ponding or run off within the active cell does not occur and if the active tipping face is enclosed by a 300mm high earthen bund.
- (c) Spray from wastewater application must not drift beyond the boundary of the wastewater utilisation area to which it is applied.

03.16 The proponent must have in place and implement procedures to identify and prevent the disposal of any waste not permitted by this approval/license to be disposed of at the premises.

03.17 The proponent must undertake a weekly boundary litter patrol of the premises so that all windblown litter caught on the boundary fence and/or in neighbouring paddocks is collected and returned to the appropriate place of disposal.

03.18 The proponent must have in place and operate a calibrated weighbridge to record the weight in tonnes of all waste brought into the premises and to determine the occupier's Protection of the Environment Operations Act 1997 section 88 levy liability.

03.19 The proponent must pay the waste levy applicable to any waste received from the regulated area as required by section 88 of the Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (Waste) Regulation 2014.

O4. Stormwater/sediment control

O4.1 Prior to commencing construction of landfilling operations, a Site Water Management Plan (SWMP) must be prepared to the satisfaction of the EPA. The SWMP must be implemented before landfilling operation commence. The SWMP must include:

- design detail and calculations that demonstrate any clean area sediment basin associated with the landfill are constructed and will be managed in a manner that is consistent with Managing Urban Stormwater: Soils and Construction: Volume 2B Waste Landfills (Landcom, 2008);
- detail that demonstrates that any clean area sediment basins associated with the landfill have been designed on the basis of volumetric runoff coefficient of 0.9 within the affected catchments, given the nature of the site and the relatively impermeable surfaces present throughout;
- detail that demonstrates that Landcom (2008) clean sediment basin sizing, and related discharge considerations, only apply to catchments that are collecting clean sediment, i.e. areas not affected by leachate in any way; and
- detail that demonstrates that where concentrations of pollutants other than sediment are elevated in stormwater, the polluted water must be transferred to the leachate system.

O5 Emergency response

O5.1 The proponent must extinguish fires at the premises as soon as possible.

O5.2 The proponent must have in place and implement procedures to minimise the risk of fire at the premises.

O6 Processes and management

O6.1 The drainage from all areas at the premises which will liberate suspended solids when stormwater runs over these areas must be diverted into sedimentation basins.

O6.2 The proponent must take all practicable steps to control entry to the premises.

O6.3 The proponent must install and maintain a stockproof perimeter fence around the premises.

O6.4 The proponent must install and maintain lockable security gates at all access and departure locations.

O6.5 The proponent must ensure that all gates are locked whenever the landfill is unattended.

O6.6 The proponent must control pests, vermin and weeds at the premises.

O6.7 The proponent must ensure that adequately trained staff are available at the premises in order to administer the requirements of this approval/licence.

O6.8 All practicable measures must be undertaken to manage all sediment dams such that they have sufficient capacity to store run-off from the 90th percentile 5-day rainfall event. The proponent is to use the Australian Rainfall and Runoff Data and rainfall data from the Australian Bureau of Meteorology for the premises to calculate the runoff generated in a 90th percentile 5-day rainfall event.

Note: The proponent is to confirm the rainfall depth terms in millimetres upon the application for the EPL.

O6.9 The proponent must have in place and implement a litter management program.

5 Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by the EPA's general terms of approval, or a licence under the Protection of the Environment Operations Act 1997, in relation to the development must be recorded and retained as set out in conditions M1.2 and M1.3.

M1.2 All records required to be kept by the approval/licence must be:

- (a) in a legible form, or in a form that can readily be reduced to a legible form;
- (b) kept for at least 4 years after the monitoring or event to which they relate took place; and
- (c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected: the date(s) on which the sample was taken;

- (a) the time(s) at which the sample was collected;
- (b) the point at which the sample was taken; and
- (c) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point specified below (by a point number), the proponent must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The proponent must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Water and/or Land Monitoring Requirements

Points - Ground water quality monitoring points (number and location of points to be confirmed in EPL)

Pollutant	Unit of Measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	Milligrams per litre	Quarterly	Representative sample
Arsenic	Milligrams per litre	Quarterly	Representative sample
Boron	Milligrams per litre	Quarterly	Representative sample
Cadmium	Milligrams per litre	Quarterly	Representative sample
Calcium	Milligrams per litre	Quarterly	Representative sample
Carbon dioxide	Milligrams per litre	Quarterly	Representative sample
Chloride	Milligrams per litre	Quarterly	Representative sample
Chromium	Milligrams per litre	Quarterly	Representative sample
Conductivity	Micro-Siemens per centimetre	Quarterly	In situ
Copper	Milligrams per litre	Quarterly	Representative sample
Dissolved Oxygen	Milligrams per litre	Quarterly	In situ
Hardness (as calcium carbonate)	Milligrams per litre	Quarterly	Representative sample
Iron	Milligrams per litre	Quarterly	Representative sample
Iron Oxide	Milligrams per litre	Quarterly	Representative sample

Lead	Milligrams per litre	Quarterly	Representative sample
Magnesium	Milligrams per litre	Quarterly	Representative sample
Manganese	Milligrams per litre	Quarterly	Representative sample
Nitrate + Nitrite (oxidised nitrogen)	Milligrams per litre	Quarterly	Representative sample
Nitrogen (ammonia)	Milligrams per litre	Quarterly	Representative sample
Nitrogen (total)	Milligrams per litre	Quarterly	Representative sample
pH	pH	Quarterly	In situ
Potassium	Milligrams per litre	Quarterly	Representative sample
Redox Potential	Millivolts	Quarterly	In situ
Sodium	Milligrams per litre	Quarterly	Representative sample
Standing water level	metres	Quarterly	In situ
Sulfate	Milligrams per litre	Quarterly	Representative sample
Temperature	Degrees Celcius	Quarterly	In situ
Total Kjeldahl Nitrogen	Milligrams per litre	Quarterly	Representative sample
Total organic carbon	Milligrams per litre	Quarterly	Representative sample
Total Phosphorus- unfiltered sample	Milligrams per litre	Quarterly	Representative sample
Total Suspended solids	Milligrams per litre	Quarterly	Representative sample
Volumetric flow rate	kilolitres per day	Quarterly	Representative sample
Turbidity	nephelometric turbidity units	Quarterly	In situ
Zinc	Milligrams per litre	Quarterly	Representative sample

POINTS - Sediment Dam - water quality monitoring (exact points to be confirmed in the EPL)

Pollutant	Unit of Measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	Milligrams per litre	Quarterly	Grab sample
Aluminium	Milligrams per litre	Quarterly	Grab sample
Arsenic	Milligrams per litre	Quarterly	Grab sample
Boron	Milligrams per litre	Quarterly	Grab sample
Cadmium	Milligrams per litre	Quarterly	Grab sample
Calcium	Milligrams per litre	Quarterly	Grab sample
Carbon dioxide	Milligrams per litre	Quarterly	Grab sample
Chloride	Milligrams per litre	Quarterly	Grab sample
Chromium	Milligrams per litre	Quarterly	Grab sample
Conductivity	Micro-Siemens per centimetre	Quarterly	In situ

Copper	Milligrams per litre	Quarterly	Grab sample
Dissolved Oxygen	Milligrams per litre	Quarterly	In situ
Hardness (as calcium carbonate)	Milligrams per litre	Quarterly	Grab sample
Iron	Milligrams per litre	Quarterly	Grab sample
Iron Oxide	Milligrams per litre	Quarterly	Grab sample
Lead	Milligrams per litre	Quarterly	Grab sample
Magnesium	Milligrams per litre	Quarterly	Grab sample
Manganese	Milligrams per litre	Quarterly	Grab sample
Nitrate + Nitrite (oxidised nitrogen)	Milligrams per litre	Quarterly	Grab sample
Nitrogen (ammonia)	Milligrams per litre	Quarterly	Grab sample
Nitrogen (total)	Milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	In situ
Potassium	Milligrams per litre	Quarterly	Grab sample
Redox potential	millivolts	Every 6 months	In situ
Sodium adsorption ratio	Milligrams per litre	Quarterly	Grab sample
Sulfate	Milligrams per litre	Quarterly	Grab sample
Temperature	Milligrams per litre	Quarterly	Grab sample
Total Kjeldahl	Milligrams per litre	Quarterly	Grab sample
Total organic carbon	Milligrams per litre	Quarterly	Grab sample
Total Phosphorus-unfiltered sample	Milligrams per litre	Quarterly	Grab sample
Total Suspended solids	Milligrams per litre	Quarterly	Grab sample
Turbidity	nephelometric turbidity units	Quarterly	In situ
Volume	Kililitres	Quarterly	In situ
Zinc	Milligrams per litre	Quarterly	Grab sample

POINTS - Leachate Quality monitoring (exact points to be confirmed in the EPL)

Pollutant	Unit of Measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	Milligrams per litre	Quarterly	Grab sample
Arsenic	Milligrams per litre	Quarterly	Grab sample
Boron	Milligrams per litre	Quarterly	Grab sample
Cadmium	Milligrams per litre	Quarterly	Grab sample
Calcium	Milligrams per litre	Quarterly	Grab sample

Carbon dioxide	Milligrams per litre	Quarterly	Grab sample
Chloride	Milligrams per litre	Quarterly	Grab sample
Chromium (total)	Milligrams per litre	Quarterly	Grab sample
Conductivity	Micro-Siemens per centimetre	Quarterly	In situ
Copper	Milligrams per litre	Quarterly	Grab sample
Dissolved Oxygen	Milligrams per litre	Quarterly	In situ
Hardness (as calcium carbonate)	Milligrams per litre	Quarterly	Grab sample
Iron	Milligrams per litre	Quarterly	Grab sample
Iron Oxide	Milligrams per litre	Quarterly	Grab sample
Lead	Milligrams per litre	Quarterly	Grab sample
Magnesium	Milligrams per litre	Quarterly	Grab sample
Manganese	Milligrams per litre	Quarterly	Grab sample
Nitrate + Nitrite (oxidised nitrogen)	Milligrams per litre	Quarterly	Grab sample
Nitrogen (ammonia)	Milligrams per litre	Quarterly	Grab sample
Nitrogen (total)	Milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	In situ
phenols	Milligrams per litre	Quarterly	Grab sample
Polycyclic aromatic hydrocarbons	Milligrams per litre	Quarterly	Grab sample
Potassium	Milligrams per litre	Quarterly	Grab sample
Redox potential	millivolts	Quarterly	In situ
Sulfate	Milligrams per litre	Quarterly	Grab sample
Temperature	Degrees Celsius	Quarterly	In situ
Total Kjeldahl Nitrogen	Milligrams per litre	Quarterly	Grab sample
Total organic carbon	Milligrams per litre	Quarterly	Grab sample
Total Phosphorus- (unfiltered)	Milligrams per litre	Quarterly	Grab sample
Total Suspended solids	Milligrams per litre	Quarterly	Grab sample
Volatile organic compounds	Milligrams per litre	Quarterly	Grab sample
Volume	Kilolitres	Quarterly	In situ
Zinc	Milligrams per litre	Quarterly	Grab sample

POINTS - Sediment dam discharge point/s (exact points to be confirmed in the EPL)

Pollutant	Unit of Measure	Frequency	Sampling Method
Conductivity	Micro-Siemens per centimetre	Special frequency 1	In situ
Nitrate + Nitrite (oxidised nitrogen)	Milligrams per litre	Special frequency 1	Representative sample
Nitrogen (ammonia)	Milligrams per litre	Special frequency 1	Representative sample
pH	pH	Special frequency 1	In situ
Total Kjeldahl Nitrogen	Milligrams per litre	Special frequency 1	Representative sample
Total Phosphorus (unfiltered)	Milligrams per litre	Special frequency 1	Representative sample
Total Suspended solids	Milligrams per litre	Special frequency 1	Representative sample

Note: For the purpose of this condition, 'special frequency 1 ' means as soon as practicable after overflow commences and in any cases not more than 12 hours after any overflow commencing and prior to any controlled discharge from the sedimentation basin to demonstrate compliance with the concentration limits defined at condition L2.3.

POINTS - leachate pond discharge point/s (exact points to be confirmed in the EPL)

Pollutant	Units of Measure	Frequency	Sampling Method
Conductivity	Micro-Siemens per centimetre	Special frequency 2	In situ
Nitrate + Nitrite (oxidised nitrogen)	Milligrams per litre	Special frequency 2	Representative sample
Nitrogen (ammonia)	Milligrams per litre	Special frequency 2	Representative sample
pH	pH	Special frequency 2	In situ
Total Kjeldahl	Milligrams per litre	Special frequency 2	Representative sample
Total Phosphorus (unfiltered)	Milligrams per litre	Special frequency 2	Representative sample
Total Suspended solids	Milligrams per litre	Special frequency 2	Representative sample

Note: For the purpose of this condition, 'special frequency 2' means as soon as practicable after overflow commences and, in any cases, not more than 12 hours after any overflow commencing.

Point Ambient surface water monitoring (exact points to be confirmed in EPL)

Pollutant	Units of Measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	Milligrams per litre	Quarterly	Grab sample
Aluminium	Milligrams per litre	Quarterly	Grab sample
Arsenic	Milligrams per litre	Quarterly	Grab sample

Boron	Milligrams per litre	Quarterly	Grab sample
Cadmium	Milligrams per litre	Quarterly	Grab sample
Calcium	Milligrams per litre	Quarterly	Grab sample
Carbon dioxide	Milligrams per litre	Quarterly	Grab sample
Chloride	Milligrams per litre	Quarterly	Grab sample
Chromium	Milligrams per litre	Quarterly	Grab sample
Conductivity	Micro-Siemens per centimetre	Quarterly	In situ
Copper	Milligrams per litre	Quarterly	Grab sample
Dissolved Oxygen	Milligrams per litre	Quarterly	In situ
Hardness (as calcium carbonate)	Milligrams per litre	Quarterly	Grab sample
Iron	Milligrams per litre	Quarterly	Grab sample
Iron Oxide	Milligrams per litre	Quarterly	Grab sample
Lead	Milligrams per litre	Quarterly	Grab sample
Magnesium	Milligrams per litre	Quarterly	Grab sample
Manganese	Milligrams per litre	Quarterly	Grab sample
Nitrate + Nitrite (oxidised nitrogen)	Milligrams per litre	Quarterly	Grab sample
Nitrogen (ammonia)	Milligrams per litre	Quarterly	Grab sample
Nitrogen (total)	Milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	In situ
Potassium	Milligrams per litre	Quarterly	Grab sample
Redox potential	millivolts	Every 6 months	In situ
Potassium	Milligrams per litre	Quarterly	Grab sample
Sodium adsorption ratio	Milligrams per litre	Quarterly	Grab sample
Sulfate	Milligrams per litre	Quarterly	Grab sample
Temperature	Milligrams per litre	Quarterly	Grab sample
Total Kjeldahl	Milligrams per litre	Quarterly	Grab sample
Total organic carbon	Milligrams per litre	Quarterly	Grab sample
Total Phosphorus-unfiltered sample	Milligrams per litre	Quarterly	Grab sample
Total Suspended solids	Milligrams per litre	Quarterly	Grab sample
Turbidity	nephelometric turbidity units	Quarterly	In situ
Volume	Kilolitres	Quarterly	estimate
Zinc	Milligrams per litre	Quarterly	Grab sample

M2.3 Air Monitoring Requirements (exact locations TBC)

Pollutant	Units of measure	Frequency	Sampling Method
Methane	percent by volume	Quarterly	Special Method 3

For the purposes of the above table(s), Special Method 3 means methane monitoring in accordance with Section 5.2 Landfill gas surface emissions monitoring, and Section 5.4 Gas accumulation monitoring in enclosed structures as defined in the Environmental Guidelines: Solid Waste Landfills, 2nd edition 2016.

Note: "Special Method 3" means methane monitoring must be performed on the gas within the landfill subsurface monitoring well before any admixture or purging of air into that well. The gas detector must: a) have a current calibration certificate b) a minimum level of detection and minimum resolution of 1% (v/v) methane c) be capable of accurately measuring methane in a reduced oxygen atmosphere d) be tested with an in-date calibration gas before and after the testing to ensure that all sensors are functional and accurate. Subsurface gas monitoring must be performed following the procedures in benchmark techniques 15 and 16 in the EPA's Environmental Guidelines: Solid Waste Landfills.

Note: The Protection of the Environment Operations (Clean Air) Regulation 2021 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW". Where the "Approved Method" refers to a standard that has been updated the updated standard can be used, (AM-19 refers to AS 3580.10.1-1991 which has now been updated to AS 3580.10.1-2016).

Note: the monitoring requirements may be varied by the EPA subject to ongoing review and assessment of monitoring results.

M3 Testing methods - concentration limits

M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by the EPA's general terms of approval, or a licence under the Protection of the Environment Operations Act 1997, in relation to the development or in order to comply with a relevant local calculation protocol must be done in accordance with:

- (a) any methodology which is required by or under the POEO Act 1997 to be used for the testing of the concentration of the pollutant; or
- (b) if no such requirement is imposed by or under the POEO Act 1997, any methodology which the general terms of approval or a condition of the licence or the protocol (as the case may be) requires to be used for that testing; or
- (c) if no such requirement is imposed by or under the POEO Act 1997 or by the general terms of approval or a condition of the licence or the protocol (as the case may be), any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The Protection of the Environment Operations (Clean Air) Regulation 2022 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".)

M3.2 Subject to any express provision to the contrary in this approval/licence, monitoring for the concentration of a pollutant discharged to waters must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Weather Monitoring

M4.1 At the point(s) identified below, the proponent must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1 of the table below, using the corresponding sampling method, units of measure, averaging period and sampling frequency, specified opposite in the Columns 2, 3, 4 and 5 respectively.

Point W1

Parameter	Sampling Method	Units of measure	Averaging period	Frequency
Rainfall	M-4	millimetres per hour	1 hour	continuous
Wind speed at 10 metres	AM-2 & M-4	metres per second	15 minutes	continuous
Wind direction at 10 metres	AM-2 & M-4	Degrees in a clockwise direction from True North	15 minutes	continuous
Temperature at 2 metres	M-4	degrees Celsius	15 minutes	continuous
Temperature at 10 metres	M-4	degrees Celsius	15 minutes	continuous
Sigma Theta	M-4	Degrees in a clockwise direction from True North	15 minutes	continuous
Total Solar Radiation	M-4	Watts per square metre	15 minutes	continuous

M5 Requirement to monitor volume or mass

M5.1 For each discharge point or utilisation area specified below, the licensee must monitor:

- (a) the volume of liquids discharged to water or applied to the area;
- (b) the mass of solids applied to the area;
- (c) the mass of pollutants emitted to the air; at the frequency and using the method and units of measure, specified below.

Discharge Points (exact locations TBC)

Frequency	Unit of Measure	Sampling Method
Continuous during discharge	Kilolitres per day	By calculation (volume flow rate or pump capacity multiplied by operating time)

6 Reporting conditions

R1 Annual Return

R1.1 The proponent must provide an annual return to the EPA in relation to the development as required by any licence under the Protection of the Environment Operations Act 1997 in relation to the development. In the return the applicant must report on the annual monitoring undertaken (where the activity results in pollutant discharges), provide a summary of complaints relating to the development, report on compliance with licence conditions and provide a calculation of licence fees (administrative fees and, where relevant, load based fees) that are payable.

7 General Conditions

G1 Pollution Incident Response Management Plan

G1.1 The proponent must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises in accordance with section 153(A) of the Protection of the Environment Operations Act 1997. The proponent must keep the PIRMP on the premises at all times. The PIRMP must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. If a current PIRMP does not exist at the date on which this condition is attached to the licence, the proponent must develop a PIRMP within one month of that date.

G1.2 A notification protocol for downstream water users must be generated in consultation with downstream water users and the adjoining Willow Tree Gravels Quarry, should the EPL water quality limits be exceeded.

G2 Signage

G2.1 Each monitoring and discharge point must be clearly marked by a permanent sign that indicates the EPA point identification number.

8 Special conditions

E1 Detailed Design Report

E1.1 Prior to commencing construction activities, the proponent must provide to the EPA for approval a detailed design report addressing the requirements of the Environmental Guidelines: Solid Waste Landfills (EPA, 2016). This report must be prepared by an appropriately qualified and experienced person as defined in the Landfill Guidelines. The report must contain:

- (a) Detailed designs of the cell lining and leachate barrier system in accordance with Minimum Standards Part 1 of the Landfill Guidelines. If alternative designs are proposed, for example on the quarry walls, the design report must contain an assessment of the soundness of the in situ geology as per the requirements of Part 1.10.
- (b) Detailed designs of final capping in accordance with Minimum Standards Part 9 of the Landfill Guidelines. If a phytocap is proposed as an alternative to an engineered barrier cap, the design report must address the design requirements for phytocaps set out in Minimum Standards Part 9.4.
- (c) Construction Quality Assurance (CQA) Plans for all proposed construction works in accordance with Minimum Standards Part 11 of the Landfill Guidelines. The CQA Plans must include procedures to cover the proposed staged or incremental quarry wall lining technique (called the 'shingle' approach in the EIS).
- (d) Water quality monitoring programs in accordance with Minimum Standards Part 4 of the Landfill Guidelines. These programs must include proposals to characterise existing (background) groundwater and surface water quality at and near the site before landfilling commences.

E2 Final Capping Requirements

E2.1 Six months prior to commencing progressive final capping, the proponent must submit the detailed design and quality assurance/quality control plan for the capping to the EPA. Final capping must not be undertaken until written approval for the design and QA/QC is received from the EPA. Where the final capping design does not conform to design specifications in EPA's Environmental Guidelines: Solid Waste Landfill, the proponent must provide supporting information that the alternative design will meet the environmental goals defined in the Guidelines.

Attachment B – Mandatory Conditions for all EPA licences

Administrative conditions

Activities must be carried out in a competent manner

Licensed activities must be carried out in a competent manner.

This includes:

- (a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- (b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the act

Maintenance of plant and equipment

All plant and equipment installed at the premises or used in connection with the licensed activity:

- (a) must be maintained in a proper and efficient condition; and
- (b) must be operated in a proper and efficient manner.

Monitoring and recording conditions

Recording of pollution complaints

The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

The record must include details of the following:

- the date and time of the complaint;
- the method by which the complaint was made;
- any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- the nature of the complaint;
- the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- if no action was taken by the licensee, the reasons why no action was taken.

The record of a complaint must be kept for at least 4 years after the complaint was made.

The record must be produced to any authorised officer of the EPA who asks to see them.

Telephone complaints line

The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint. This condition does not apply until 3 months after this condition takes effect.

Reporting conditions

Annual Return documents

What documents must an Annual Return contain?

The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

1. a Statement of Compliance,
2. a Monitoring and Complaints Summary,
3. a Statement of Compliance - Licence Conditions,
4. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
5. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
6. a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.

A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

An Annual Return must be prepared in respect of each reporting, except as provided below

Note: The term “reporting period” is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

Where this licence is transferred from the licensee to a new licensee,

- (a) the transferring licensee must prepare an annual return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- (b) the new licensee must prepare an annual return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an annual return in respect of the period commencing on the first day of the reporting period and ending on

- (a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- (b) in relation to the revocation of the licence – the date from which notice revoking the licence operates.

Deadline for Annual Return

The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the ‘due date’).

Notification where actual load cannot be calculated

(Licences with assessable pollutants)

Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the

licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date.

The notification must specify:

- (a) the assessable pollutants for which the actual load could not be calculated; and
- (b) the relevant circumstances that were beyond the control of the licensee.

Licensee must retain copy of Annual Return

The licensee must retain a copy of the annual return supplied to the EPA for a period of at least 4 years after the annual return was due to be supplied to the EPA.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- (a) the licence holder; or
- (b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

A person who has been given written approval to certify a Statement of Compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review this licence.

Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act

Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Written report

Where an authorised officer of the EPA suspects on reasonable grounds that:

- (a) where this licence applies to premises, an event has occurred at the premises; or
- (b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,

and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

The request may require a report which includes any or all of the following information:

- (a) the cause, time and duration of the event;
- (b) the type, volume and concentration of every pollutant discharged as a result of the event;
- (c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; and
- (d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- (e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;

- (f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event;
- (g) any other relevant matters.

The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

General conditions

Copy of licence kept at the premises or on the vehicle or mobile plant

A copy of this licence must be kept at the premises or on the vehicle or mobile plant to which the licence applies.

The licence must be produced to any authorised officer of the EPA who asks to see it.

The licence must be available for inspection by any employee or agent of the licensee working at the premises or operating the vehicle or mobile plant.

Reporting of fires

In the event of a fire at the facility the applicant must record:

- (a) the time and date when the fire was deliberately started or reported;
- (b) whether the fire was authorised by the applicant, and, if not, the circumstances which ignited the fire;
- (c) the time and date that the fire ceased and whether it burnt out or was extinguished;
- (d) the location of fire (e.g. clean timber stockpile, putrescible garbage cell, etc);
- (e) the prevailing weather conditions;
- (f) any observations made in regard to smoke direction and dispersion;
- (g) the amount of waste that was combusted by the fire; and
- (h) the action taken to extinguish the fire.

The applicant or its employees or agents must notify the EPA in accordance with the above section 'Notification of environmental harm' of all fires at the premises within 7 days of the date on which the incident occurred.

Reporting of leachate discharge

Whenever leachate is discharged to surface waters from the premises the licensee must notify the event to the EPA in accordance with above section 'Notification of environmental harm'. The licensee must provide a written report of any leachate discharge(s) which exit the premises to the EPA within 7 days of the date on which the incident occurred.

The report must include the following information:

- (a) the volume of the leachate discharged and over what time period the discharge occurred;
- (b) the date and time of the commencement of the overflow;
- (c) the weather conditions at the time of the discharge, specifying the amount of rainfall on a daily basis that had fallen: - on the day(s) of the discharge; and - for the one week period prior to the discharge.
- (d) the most recent monitoring results of the chemical composition of the leachate;
- (e) an explanation as to why the discharge occurred;
- (f) the location(s) of the discharge; and
- (g) a plan of action to prevent a similar discharge in the future.

B1 Construction Certificate

Building work, demolition or excavation in accordance with the Notice of Determination must not be commenced until a Construction Certificate required by s.6.3 of 'the Act' for the relevant part of the works has been issued in accordance with the provisions of 'the Act' and 'the Regulation'.

Reason: To ensure compliance with the *Environmental Planning and Assessment Act 1979* and appropriate safeguarding measures are in place prior to the commencement of any building work or excavation.

B2 Construction Plans

Prior to submission of the Construction Certificate application to a Private Certifier, all construction/site layout plans associated with the development are to be finalised and provided to Council for review and approval and must identify the following:-

- (a) the finished surfaces (must be appropriate to prevent soil contamination);
- (b) bay size, capacity and construction details for each type of material stored;
- (c) road markings for single direction travel within public drop-off area; and
- (d) a bunded area for temporary storage of contaminated waste.

Reason: To ensure the intent of the approved development has been addressed.

B3 Final Landfill Environmental Management Plan

A Final Landfill Environmental Management is to be submitted to Council for approval. This document is to be reviewed and updated prior to the commencement of operation, every 5 years from commencement of operation and prior to the commencement of each landfill cell.

Reason: To ensure the intent of the approved development has been addressed.

B4 Construction Environmental Management Plan

Prior to the issue of a Construction Certificate, a Construction Environmental Management Plan for the development must be prepared by the Applicant and submitted for approval by Council or an accredited private certifier. The Construction Environmental Management Plan shall be prepared in consultation with Council and address all relevant matters as set out in this consent unless the item is addressed as a standalone document. At a minimum, it shall include the following information:

- (a) Description of the proposed construction works and work program;
- (b) Identification of relevant statutory requirements and conditions of consent that apply to the construction phase of the development;
- (c) Set standards and performance measures for each of the relevant environmental matters associated with construction work;
- (d) Description of what actions and measures will be implemented to mitigate the potential impacts of the construction works and ensure such works will comply with the relevant standards and performance measures;
- (e) Description of what measures and procedures will be implemented to:
 - (i) Manage construction traffic;
 - (ii) Register and respond to complaints during construction works;
 - (iii) Mitigate any potential environmental impacts, including but not limited to noise, flora and fauna, dust, stormwater and visual impacts;
 - (iv) Respond to the discovery of any items of indigenous or non-indigenous heritage significance. This shall incorporate the recommendations from the Aboriginal Due Diligence Assessment prepared by Biosis Pty Ltd (dated 22 December 2022);

- (v) Respond to emergencies, including bushfire events; and,
- (vi) Ensure the health and safety of construction workers;
- (vii) Nominated construction traffic route, identifying the specific roads.
- (f) Explanation of how the environmental performance of the construction works will be monitored, and what actions will be taken if any non-compliance is detected;
- (g) Description of the role, responsibility, authority accountability, and reporting of key personnel involved in the construction of the development.
- (h) Preparation of a dust control protocol for Dust and Mitigation Management to detail management measures, a method for recording dust complaints and monitoring requirements.

The Construction Environmental Management Plan must also be prepared so that it addresses the following matters:-

- (a) On days with forecast and actual high winds (i.e. over 10 m/s) reduce work effort accordingly if wind-blown dust is observed to be leaving the site boundary.
- (b) Plant and equipment should be maintained in good condition to minimise ignition risk, spills and air emissions that may cause nuisance.
- (c) Dust suppression should be undertaken as required using water sprays, water extension agents, soil stabilising polymers or other media on:
 - (i) Unpaved work areas subject to traffic or wind;
 - (ii) During the loading and unloading of dust generating materials.
 - (iii) Unpaved access tracks
- (d) If the works are creating levels of dust which may significantly impact on residential amenity, works should be modified or stopped until the dust hazard is reduced to an acceptable level.
- (e) On days with high background dust levels (due to fire or offsite dust events for example), increase dust mitigation in the form of watering or reduce dusty construction activities.
- (f) Vehicles with potential for loss of loads (such as dust or litter) should be covered when using public roads.

Reason: To ensure that appropriate environmental management practices are implemented during the construction of the proposed development.

B5 Access Report

An Access Consultant's Report from an accredited consultant will be required to be submitted to Council for approval prior to the issue of a Construction Certificate.

Reason: To ensure safe, practical and legal access is provided to the site.

B6 Draft Fire Safety Schedule

A Draft Fire Safety Schedule from a Registered Fire Engineer or consultant will be required to be submitted to Council prior to the issue of a Construction Certificate.

Reason: Prescribed by legislation.

B7 Other Approvals

The following approvals are required:

Section 68 of the Local Government Act 1993 – Approvals required under Section 68 include installation of an: -

- (a) Onsite Sewerage Management System; and
- (b) Plumbing and Drainage.

Reason: To ensure all work complies with relevant legislation.

B8 Servicing

In relation to services, the following must be undertaken by the applicant where relevant: -

- (a) **Adequate services** – the applicant must demonstrate that adequate services for water, electricity and wastewater are available to the site,
- (b) **Dial before your dig** - the applicant shall contact “Dial Before You Dig on 1100” to obtain a Service Diagram. The sequence number obtained from “Dial Before You Dig” shall be forwarded to the Principal Certifier (PC) and Council for their records.

Details shall be provided with the Construction Certificate application.

Reason: To ensure work is carried out having regard to existing services and underground infrastructure for safety and efficiency.

B9 Vehicle Access Requirements

Entry and exit points are to be clearly signposted and visible from both the street and the site at all times. All required works are to be completed in accordance with Council/Transport for NSW standards prior to the commencement of construction works on the site. Details must be provided on the Construction Certificate plans.

Reason: To ensure safe, practical and legal vehicle access is provided to the site.

B10 External Lighting

Any lighting used on the site in connection with the development is to comply with AS 4282 – *Control of the obtrusive effects of Outdoor lighting*. The applicant must minimise off-site lighting impacts arising from the development and any external lighting is installed as low intensity lighting except where required for safety or emergency purposes. Details are to be shown on the Construction Certificate plans.

Reason: To protect the amenity of the surrounding area.

B11 Internal Access and Car Parking

Areas Accessed by the General Public

All driveways, access ramps, vehicular crossings and car parking spaces, access by the general public, up to and including the transfer stations areas shall be designed and constructed in accordance with the current version of Australian Standards, AS 2890.1-2004: *Parking Facilities - Off-street Car Parking* and AS 2890.2:2018 - *Parking facilities Off-street commercial vehicle facilities*. This is to be a bitumen sealed all-weather surface with appropriate line marking and signage.

Staff Parking

All car parking for the operation of the Willow Tree Waste Management Facility is to be provided on a bitumen sealed surface and line marked for a minimum of five (5) vehicles.

All other Internal Access Roads

All other internal areas of access for the development will require the formation of a minimum 3-metre-wide all-weather access road using dust suppressed ridge gravel in accordance with Council's Subdivision and Development Guidelines.

Details for the above mentioned are to be provided with the Construction Certificate application for Council approval.

Reason: To ensure driveways, access ramps, vehicular crossings, internal access roads and car parking complies with the relevant Australian Standards.

PART C: PRIOR TO WORKS COMMENCING

C1 Appointment of Principal Certifier

Prior to the commencement of work, the person having the benefit of the development consent and a Construction Certificate shall:

- (a) Appoint a Principal Certifier and notify the Council of the appointment (if Council is not appointed); and
- (b) Notify Council of their intention to commence building work (at least 2 days' notice is required).

Reason: To ensure compliance with the *Environmental Planning and Assessment Act 1979*.

C2 Signs on site

A sign must be erected in a prominent position on any site on which building work or demolition work is being carried out:

- (a) showing the name, address and telephone number of the principal certifier for the work, and
- (b) showing the name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours, and
- (c) stating that unauthorised entry to the work site is prohibited.

Any such sign is to be maintained while the building work or demolition work is being carried out but must be removed when the work has been completed.

Reason: Prescribed Condition under Clause 70(2) and (3) of the *Environmental Planning and Assessment Regulation 2021*.

C3 Sediment and Erosion Control

Where construction or excavation activity requires the disturbance of the soil surface and existing vegetation, adequate measures for erosion and sediment control must be provided. As a minimum, control techniques are to be in accordance with The Blue Book published by Landcom provisions on Erosion and Sediment Control.

All required erosion and sedimentation techniques must be properly installed prior to the commencement of any 'site' 'works' and maintained in a functional and effective condition throughout the construction activities until the 'site' is stabilised.

The installation is to be approved by the 'Principal Certifier' prior to any further commencement of 'site' 'works'.

Reason: To protect the environment from the effects of sedimentation and erosion from development sites.

C4 Construction and Operational Environmental Management Plan

Prior to works commencing, the applicant must provide a final copy of the following Plans: -

- (a) Landfill Environmental Management Plan; and
- (b) Construction Environmental Management Plan.

These must describe the mitigation and management measures identified in the Environmental Impact Statement and accompanying Reports.

Reason: To ensure environmental protection throughout the operation of the development.

C5 Toilet Facilities during Construction

Toilet facilities must be provided on the work site during construction at the rate of one toilet for every 20 persons or part of 20 persons employed at the work site. Each toilet provided must:

- (a) Be a standard flushing toilet, or
- (b) If connection to a public sewer is not available, to an on-site effluent disposal system approved by the council, or
- (c) A portable toilet.

Reason: To provide appropriate on-site amenities during demolition and construction work.

C6 Preparation of a Traffic Noise Management Strategy

A Traffic Noise Management Strategy is to be developed by the proponent, prior to commencement of construction and operation activities to ensure that feasible and reasonable noise management strategies for vehicle movements associated with the facility are identified and applied, that include but are not necessarily limited to the following:

- (a) driver training to ensure that noisy practices such as the use of compression engine brakes are not unnecessarily used near sensitive receivers,
- (b) best noise practice in the selection and maintenance of vehicle fleets,
- (c) movement scheduling where practicable to reduce impacts during sensitive times of the day,
- (d) communication and management strategies for non-licensee/proponent owned and operated vehicles to ensure the provision of the Traffic Noise Management Strategy are implemented,
- (e) a system of audited management practices that identifies non-conformances, initiates and monitors corrective and preventative action (including disciplinary action for breaches of noise minimisation procedures) and assesses the implementation and improvement of the Traffic Noise Management Strategy,
- (f) specific procedures for drivers to minimise impacts at identified sensitive receivers,
- (g) clauses in conditions of employment, or in contracts, of drivers that require adherence to the noise minimisation procedures and facilitate effective implementation of the disciplinary actions for breaches of the procedures.

Reason: To ensure measures that will protect the public, and the surrounding environment, during site works, construction and operation are implemented prior to works commencing on the site.

C7 Landscaping

Prior to works commencing a suitable landscaping plan is to be provided and approved by the Principal Certifier for the areas surrounding the weighbridge, staff parking, site office and amenities landscaping, with drought tolerant and frost hardy species. The location and type is to be to the satisfaction of the Principal Certifier.

Reason: To ensure amenity of area.

D1 Earthworks

Any earthworks (including any structural support or other related structure for the purposes of the development) must: -

- (a) not cause a danger to life or property or damage to any adjoining building or structure on the lot or to any building or structure on any adjoining lot;
- (b) not redirect the flow of any surface or ground water or cause sediment to be transported onto an adjoining property;
- (c) in the first instance be reused on 'site';
- (d) ensure that any fill brought to the 'site' contains only Virgin Excavated Natural Material as defined in Part 3 of Schedule 1 to the *Protection of the Environment Operations Act 1997* or any other waste-derived material the subject of a resource recovery exemption;
- (e) ensure that any excavated soil to be removed from the 'site' is be disposed of in accordance with any requirements under the *Protection of the Environment Operations (Waste) Regulation 2005*;
- (f) ensure that documentation verifying the lawful disposal of all waste is to be kept by the applicant and provided to 'Council' on request.
- (g) not permit fill to change existing ground levels at the property boundary. Cutting and filling is to be restricted to that described in the submitted documentation. Any further cutting or filling will require separate approval.
- (h) ensure that any excavation is carried out in accordance with *Excavation Work: Code of Practice* (ISBN 978-0-642-785442), published in October 2013 by Safe Work Australia.

Reason: To ensure structural safety and to ensure excavation and fill are handled correctly.

D2 Discovery of Aboriginal Objects

While excavation, demolition or building work is being carried out, all such works must cease immediately if a relic or Aboriginal object is unexpectedly discovered. The applicant must notify the *Heritage Council of NSW* in respect of a relic and notify the Secretary of the *Department of Planning and Environment* and the *Heritage Council of NSW* in respect of an Aboriginal object. Building work may recommence at a time confirmed by either the *Heritage Council of NSW* or the Secretary of the *Department of Planning, Housing and Infrastructure*.

Note: In this condition: -

- "relic" means any deposit, artefact, object or material evidence that:
 - (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
 - (b) is of State or local heritage significance; and
- "Aboriginal object" means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction and includes Aboriginal remains.

Reason: To ensure the protection of objects of potential significance during works.

D3 Discovery of Contamination

Should any unexpected contaminated, scheduled, hazardous or asbestos material be discovered before or during construction works, the applicant and contractor shall ensure the appropriate

regulatory authority is notified and that such material is contained, encapsulated, sealed, handled or otherwise disposed of to the requirements of such Authority.

Reason: To ensure contamination discovered during construction is dealt with as quickly as possible and to protect the health of the community and the environment.

D4 Critical Stage Inspections

Building work must be inspected on the occasions set out in clause 162A (Critical stage inspections for building work) under the *Environmental Planning and Assessment Regulation 2021*.

Reason: To require approval to proceed with building work following each critical stage inspection and comply with the Regulation.

D5 Clearing Vegetation

There must be no removal or disturbance of native vegetation except as outside of the development footprint as authorised by this consent, including canopy trees, understorey and ground cover vegetation without the prior written consent of Council.

Reason: To ensure vegetation is maintained on the site.

PART E: PRIOR TO THE ISSUE OF THE OCCUPATION CERTIFICATE

E1 Waste Management

Prior to the commencement of operation, a Landfill Environmental Management Plan is to be prepared to incorporate operational waste handling and management. The Landfill Environmental Management Plan will ensure that waste management conforms to the requirements of relevant guidance documents and adheres to the waste management hierarchy principles contained in the *Waste Avoidance and Resource Recovery Act 2001*. The Landfill Environmental Management Plan must include, but not be limited to, the following:

- (a) Expected types, quantities and classifications of waste received on-site;
- (b) Waste receipt, screening, handling, management procedures;
- (c) Procedures for identifying and managing unacceptable and non-conforming waste delivery
- (d) Waste classification procedures and details of how all waste streams would be recycled or disposal of in accordance with the Waste Classification Guidelines Part 1: Classifying waste (NSW EPA, 2014) and the waste provisions contained within the *Protection of the Environment Operations Act 1997*, Waste Regulation and other relevant legislative and policies; and
- (e) Record keeping and reporting requirements.

Reason: To ensure the intent and objectives of the *Waste Avoidance and Sustainable Materials Strategy 2041* are satisfied.

E2 Prior to commencement of Operation

The final Landfill Environmental Management Plan is to be approved by Council prior to the commencement of operations on the site and updated to incorporate the following:

- (a) All targets for monitoring and timeframes rather than by reference to other documents/approvals/licencing.

- (b) Detail the types of material intended for recycling, the methodology for sorting and the location for storage, with bin size, capacity and location shown on an amended plan, along with methodology for removal of materials from the site post-sorting.
- (c) A waste stream table identifying maximum tonnage on a per week, month and yearly basis.
- (d) Details of the size and volume of stockpiles and their arrangements to minimise fire spread (outside of the main cells ie in the recyclable and tyre storage areas).
- (e) Technical information of the environmental protection equipment to be installed and the location of the equipment.
- (f) Details of the onsite processes to limit the extent of waste in landfill through diversion, reuse or recycle.
- (g) Details to identify wastes intended for diversion, reuse or recycle along with onsite processes for receipt, handling, sorting and removal from site.

Reason: To ensure the intent and objectives of the *Waste Avoidance and Sustainable Materials Strategy 2041* are satisfied.

E3 Occupation Certificate

Occupation and operation of the Willow Tree Waste Management Facility is not to occur until all work has been completed, all of the conditions of consent have been satisfied and an Occupation Certificate has been issued by the Principal Certifier pursuant to Section 6.10 of the *Environmental Planning and Assessment Act 1979*.

Reason: To ensure compliance with the *Environmental Planning and Assessment Act 1979*.

E4 Completion of Public Utility Services

Before the issue of the relevant Occupation Certificate, the principal certifier must ensure any adjustment or augmentation of any public utility services including water, on-site sewer, electricity, required as a result of the development, and is completed to the satisfaction of the relevant authority. Before the issue of the Occupation Certificate, the certifier must request written confirmation from the relevant authority that the relevant services have been completed.

Reason: To ensure required changes to public utility services are completed, in accordance with the relevant agency requirements, before occupation.

E5 Emergency Management Plan

An Emergency Management Plan shall be prepared for the life of the operation of the development and shall be updated if required.

Reason: To ensure the protection of human life, the environment and adjoining property in the event of fire or other emergency generated by the development.

E6 Bushfire

Prior to the issue of an Occupation Certificate, a Bushfire Emergency Management and Operations Plan shall be submitted to Council or an accredited private certifier for endorsement. The Plan shall be prepared in accordance with the requirements of *Planning for Bushfire Protection 2019* and the NSW Rural Fire Service's *Guide to Developing a Bushfire Emergency Management Plan*.

Reason: To protect people and property from bushfire.

E7 Vehicle Access Requirements

Entry and exit points, and internal access areas are to be clearly signposted and visible from the street, the site and within the site at all times. All required signage is to be completed in accordance with Council / Transport for NSW standards prior to the commencement of operation on the site.

Reason: To ensure safe, practical and legal vehicle access is provided to the site.

E8 New and Replacement Fencing

New fencing is required to be installed along the boundary where it does not exist. Any existing fencing that is dilapidated is required to be repaired or replaced. The occupier of the premises is to maintain the fencing in a good state of repair at all times.

Reason: Security and safety purposes and to protect the amenity of the area while the facility is in operation.

E9 Landscaping

For the areas surrounding the weighbridge, staff parking, site office and amenities landscaping is to be provided, with drought tolerant and frost hardy species as per the approved Landscaping Plan. The location and type are to be to the satisfaction of the Principal Certifier.

Reason: To ensure amenity of area.

PART F: OPERATIONAL CONDITIONS

F1 Waste Limit

The receipt of waste for landfill shall be limited to a maximum of 9,000 t/yr.

Reason: To confirm and clarify the terms of approval and ensure compliance with the conditions.

F2 Category of Waste

The types of waste permitted to be handled onsite shall be limited to those identified in the Waste Classification Report approved by the EPA.

Reason: To confirm and clarify the terms of approval and ensure compliance with the conditions.

F3 Decommission Management Plan

A Concept Decommission Plan must be prepared by a suitably qualified consultant and provided to Council (or relevant approval authority) for review and approval no later than 12 months prior to the proposed cessation of operations or requirements of the NSW Environmental Protection Authority. It must include, but not be limited to, the following:

- (a) Expected timeline for rehabilitation completion;
- (b) Decommissioning of the Willow Tree Waste Management Facility and any other structures or infrastructure relating the approved development;
- (c) Programme of site restoration to ensure the land is returned to its previous state prior to use as a Waste Management Facility, with the retention of landscaping; and
- (d) Details on waste management and recycling of all materials arising from the operation of the development.

Reason: To ensure the decommissioning of the Waste Management Facility occurs in an orderly and sustainable manner, that the amenity of the area is maintained while the Willow Tree Waste Management Facility is being decommissioned and to ensure the site can be returned to its original condition, or as far as is practicable.

F4 Vehicle Management

The premises shall be operated in accordance with the following vehicle management requirements:

- (a) All loading and unloading of vehicles must be undertaken wholly within the site and all vehicles must enter and leave the site a forward direction.
- (b) Sufficient car parking is to be provided on the site, with no car parking to occur on the public road network in the vicinity of the site.
- (c) The vehicle entry and exit points are to be clearly signposted and visible from both the street and the site at all times and must be maintained in good condition for the life of the development.

Reason: To ensure the operation of the Willow Tree Waste Management Facility does not adversely affect the surrounding road network and has adequate car parking provided on the site.

F5 Operation of Plant and Equipment

The Applicant must ensure that all plant and equipment used on the site or in connection with the development is maintained and operated in a proper and efficient condition and manner.

Reason: To ensure all plant and machinery on the site is in good working order and is operated in a safe manner.

F6 Storage of Hazardous Materials

The applicant must store and handle all dangerous and hazardous materials on site in accordance with AS 1940-2004: *The storage and handling of flammable and combustible liquids*. The storage of any dangerous and hazardous materials must be provided in a suitably bunded and impervious area and in such a way as to minimise spills of hazardous materials or hydrocarbons. Clean up any spills must occur as soon as possible.

Reason: To minimise harm to the environment.

F7 Maintenance of Wastewater and Stormwater Treatment Device

During occupation and ongoing use of the amenities building, the applicant must ensure all wastewater and stormwater treatment devices (including drainage systems, sumps and traps, and on-site detention) are regularly maintained, to remain effective and in accordance with any positive covenant (if applicable).

Reason: To protect sewerage and stormwater systems.

F8 Noise Control During Operation

Any noise generated from the operation of the Waste Management Facility, including noise from any associated infrastructure, must not be intrusive or constitute offensive noise as defined by the *Protection of the Environment Operations Act 1997* at any private residential receiver.

The operation of the Waste Management Facility must satisfy the NSW EPA maximum noise criteria pursuant to the NSW Environmental Protection Authority's *Noise Policy for Industry (2017)*. If, at any time, these levels are exceeded, operation of the Waste Management Facility

shall immediately be modified, including suspension of operations, if necessary, to ensure compliance.

Reason: To protect the amenity of the area while the facility is in operation.

F9 Mitigation and Management of Odour

The following is to be included in the operation plan for the mitigation and management of odour:

- (a) Establish 24-hour emergency maintenance agreements with equipment manufacturers to limit the impact of equipment failures
- (b) If the works are emitting odour concentrations which may significantly impact the nearby receptors, the works should be modified or stopped until the hazard is reduced to an acceptable level
- (c) Minimise the size of the active landfill face, considering the practicalities, safety, access, traffic management, etc
- (d) Cover odorous wastes as soon as possible after delivery
- (e) Train staff (internal and contractors) on odour management strategy and all relevant procedures.

Reason: To protect the amenity of the area while the facility is in operation.

F10 Operational Maintenance

The approved development footprint of the Willow Tree Waste Management Facility is to be kept in an organised and tidy manner at all times (e.g. free from plastic bags and other forms of refuse along the fence line).

Reason: To keep the Waste Management Facility in an organised and tidy manner and ensure amenity of the area.

F11 Security

Whilst the Willow Tree Waste Management Facility is not in operation the site access should be physically closed to restrict vehicle movements from the public.

Reason: To keep the Waste Management Facility secure outside of operating hours.

PART G: CONDITIONS TO BE COMPLIED WITH AT ALL TIMES

G1 Impact on the Amenity of the Locality

At all times the implementation and intensity of this development must not adversely affect the amenity of the locality by reason of the emission of noises, noxious fumes, odours, waste and traffic generation.

Reason: To ensure that the amenity of the surrounding locality is not adversely affected by the nature of the approved activity.

G2 Occupant Safety

All persons entering the premises must comply with the relevant requirements of Workcover NSW and the *Work Health and Safety Act 2011* at all times.

Reason: To ensure the safety of all persons entering the premises.

PART H: POST OPERATION PERIOD

H1 Site Restoration

At the end of the Waste Management Facilities life the land must, as far as is practicable, be restored to the condition in which it was before the commencement of the use.

This restoration must occur as detailed in a Decommission Management Plan approved by Council.

Reason: To ensure the land is restored to the condition in which it was before the commencement of the use.

PART I: ADVISORY INFORMATION

- (a) Prior to commencing any building, or associated constructions works, the following provisions of the *Environmental Planning and Assessment Act 1979* are to be complied with:
 - (i) A Construction Certificate is to be obtained in accordance with Section 6.3 of *Environmental Planning and Assessment Act 1979* and all structures to be built on site are to comply with the Building Code Australia / National Construction Code.
 - (ii) A Principal Certifier is to be appointed and Council is to be notified of the appointment in accordance with Section 6.6 of the *Environmental Planning and Assessment Act 1979*.
 - (iii) Council is to be notified at least two (2) days of the intention to commence building works, in accordance with Section 6.6(2)(a) of the *Environmental Planning and Assessment Act 1979*.
- (b) Prior to any 'Work' commencing on 'site' all services should be clearly located and identified by contacting "Dial before you Dig" by telephoning 1100 or utilising www.1100.com.au

Requirements of the NRPP Meeting and SEARS		
Strategic and statutory context	Applicants Response	Assessment
The following are required to be addressed in the EIS: • A detailed justification for the proposal and suitability of the site for the development • A demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, development control plans (DCPs), or justification for any inconsistencies • A list of any approvals that must be obtained under any other Act or law before the development may lawfully be carried out. • A description of how the proposed expansion integrates with existing onsite operations • A description of any amendments to and / or additional licence(s) or approval(s) required to carry out the proposed development	Addressed in revised EIS: • Sections 4 and 5 (p.24 & 26) • Section 6 (p.47) • Section 6.1.7 (p.59) • Section 5 (p.26) & Appendix B • Section 6.1.7 (p.59)	Comments: The Northern Regional Planning Panel (NRPP) in a meeting dated 14 November 2023, determined that only part of the information submitted by the proponent was satisfactory. The matter was deferred so the applicant could adequately address the outstanding matters required by the Secretary's Environmental Assessment Requirements (SEARs) and the Panel. Subsequently, the proponent responded to Council's request for additional information with the submission of a revised EIS document, accompanied by a Landfill Environmental Management Plan (LEMP) and Risk Analysis as requested by the Panel. The revised EIS and other information were also referred to the NSW EPA for review to determine whether the documents would require amendments to the General Terms of Approval (GTA). On Friday, 22 March 2024, NSW EPA advised no amendments were required to the GTA's. It is considered the information provided both meets the requirements of the SEARs and the NRPP. Conclusion: Satisfactory
Waste Management	Applicants Response	Assessment
The following are required to be addressed in the EIS: • Details of the type, quantity and classification of waste to be received at the site	The matters identified in the SEARs have been addressed in the revised EIS in the following sections: • Details of the type, quantity and classification of waste to be received at the site are identified in Section 5.3.2 (Page 32), S.5.3.4 (Page 34), S. 8.9.and Appendix B	Comments: The EIS provides the following information: - • <i>Type:</i> Community recycling – glass, plastic, paper containers; Domestic waste - tyres, concrete, timber, steel, green waste, bulky wastes, general etc.; and Construction waste • <i>Classifications:</i> 6 types - Special waste, Liquid waste, Hazardous waste, Restricted solid waste, General solid waste (putrescible), General solid waste (non- putrescible) • <i>Quantity:</i> The WMF is expected to receive up to 96 tonnes of landfill waste per day.

• details of any resource outputs and any additional processes for residual waste • details of waste handling including, transport, identification, receipt, stockpiling and quality control • the measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the NSW Waste Avoidance and Sustainable Materials Strategy 2041.	• Details of any resource outputs and any additional processes for residual waste are addressed in Sections 5.3.15 and 5.3.16 (Page 44) • Details of waste handling including, transport, identification, receipt, stockpiling and quality control are addressed in Sections 5.3.15 and 5.3.16 (Page 44) 5.3.17, 5.3.18, 5.3.19 and 5.3.20 (Page 45) • The measures implemented to ensure the proposed development is consistent with the aims, objectives and guidelines in the NSW Waste Avoidance and Sustainable Materials Strategy 2041 is detailed in Section 3.1.1 (Page 20) and Section 5.3 (Page 32)	• Waste Screening program and Unacceptable waste procedure is to be put in place and is discussed in detail. • Details relating to waste handling, waste deposition, transport identification, stockpiling and quality control, recording, and reporting are discussed in sections. The stockpiles will not exceed 2m high with 45-degree batters and 200m³ volume. • The EIS discusses Management Strategies, which aligns with Council's Waste Management Strategy and the NSW Strategy 2041. Mitigation measures in the Landfill Environmental Management Plan (LEMP) are also discussed and is consistent with the strategy. The imposition of <i>Condition E8 Waste Management</i> – (Pg. 44 of the Supplementary Assessment Report) would also ensure the intent and objectives of the <i>NSW Waste Avoidance and Sustainable Materials Strategy 2041</i> are satisfied. The GTA by NSW EPA have also required a Waste Classification Report which will identify types, nature & volume of waste, to be prepared and provided to the EPA prior to the Issue of the EPL and the commencement of any operations - proposed <i>Condition L3.1 Waste</i> - Pg. 17 Final Supplementary Assessment Report. The facilities proposed include Weighbridge, site office and amenities, resource recovery area small vehicles transfer station, landfill cells and landfill supporting infrastructure. Conclusion: Satisfactory and meets Council's requirements.
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Landfill Design and Rehabilitation	Applicants Response	Assessment
The following are required to be addressed in the EIS: • details of the consistency of the proposal with the Environmental Guidelines: Solid Waste Landfills, second edition (EPA, 2016) • description of the proposed cell design and integrity • details of proposed leachate and gas management and monitoring • consideration of proposed water quality control and monitoring • description and justification of proposed daily waste covering • details of the proposed final capping, closure measures and rehabilitation of the site, including its final land use.	The matters identified have been addressed in the revised EIS in the following sections: • Section 5.1 (p.26), 5.3 (p.32) • Section 5.2.8 (p.30), 5.2.9 (p.31), 5.3.3 (p.33), 5.3.9 (p.39) and Appendix C • Section 5.3.14 (p.39) • Section 5.3.14 (p.39), 5.3.19 (p.45) • Section 5.3.18 (p.45) • Section 5.3.5 & 5.3.6 (p.34), 5.3.10 & 5.3.11 (p.36)	Comments: The applicant has adequately addressed all outstanding matters through the submission of additional information in the revised EIS document, which includes a Landfill Environmental Management Plan (LEMP) and Risk Analysis as requested by the Panel. It is considered the provided information both meets the requirements of the SEARs and the NRPP. • Details on cell design and integrity are addressed. Matters regarding earthworks and stockpiling and basal liners and other infrastructure to facilitate the development are also discussed. Appendix C identifies the expansion plans for the development in detail. • Details are provided on leachate and gas management and monitoring and are satisfactory. The draft LEMP document (Appendix D) also provides this information. • Details are provided on water management and monitoring and are satisfactory. The draft LEMP document (Appendix D) also addresses this information. • Description provided on daily and intermediate covering for the active landfill area with justification for depth of covering. • Details on capping profile provided with selected options to utilise. Page 38 of the draft LEMP document also confirms that a landfill closure plan will be submitted no later than 12 months before completion of operations. The LEMP confirms matters to be addressed in the closure Plan. These are the requirements of the NSW EPA. To ensure compliance during the operation of the project, the matters as listed have also been addressed by proposed conditions of development consent listed within the General Terms of Approval (GTA) from the NSW EPA who will be undertaking the monitoring. Conclusion: Satisfactory

Hazards and risk	Applicants Response	Assessment
The following are required to be addressed in the EIS: • A preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011) • An assessment of the risk of bushfire, including addressing the requirements of Planning for Bush Fire Protection 2019 (RFS Any proposed Asset Protection Zones must not adversely affect environmental objectives (e.g. buffers). • Any geotechnical limitations that may occur on the site and if necessary, appropriate design considerations to address this	Addressed in Revised EIS as per discussion of the NRPP meeting deferral 24/11/2023. • Section 8.10.3 (p.122) • Section 8.10.3.2 (p.124) and Appendix K • Section 2.4.2 (p.13), 8.4.2 (p.93) and Appendix B	The following information is provided: - Comments: • Preliminary risk screening of construction and operational risks was undertaken to determine if a preliminary hazard analysis is required. The project is not considered to be 'potentially offensive', and the provisions of R&H SEPP 2021 do not apply. The draft LEMP contains a risk analysis that informed its development and addresses such matters as landfill fire and bushfire, and emergency management. Preparation of an emergency preparedness and response management procedure is provided in the draft LEMP. Details of the full mitigation and management measures to be implemented are identified to minimise the potential of fire at the site. • Hazard and risk identification are provided. A Bushfire hazard assessment has also been prepared. Six (6) recommendations are provided in response to this assessment and are discussed in Appendix K of the revised EIS (P.125). The recommendations relate to the provision of APZs in accordance with NSW RFS requirements. • Details relating to existing limitations are provided (e.g. existing geotechnical conditions including subsurface rock, existing landfill area, and former quarry areas). Design considerations are discussed to overcome limitations. Conclusion: Satisfactory
Fire incident management	Applicants Response	Assessment
The following are required to be addressed in the EIS:	Addressed in Revised EIS as per discussion of the NRPP meeting deferral record 24/11/2023.	Comment:

• Technical information on the environmental protection equipment to be installed on the premises such as air, water and noise controls, spill clean-up equipment, fire management (including the location of fire hydrants and water flow rates at the hydrants) and containment measures • Details of the size and volume of any stockpiles and their arrangements to minimise fire spread and facilitate emergency vehicle access.	• Section 5.3.14 (p.39), Appendix D • Section 5.3.17.2 (p.45)	• The revised EIS is accompanied by a draft operational environmental management plan which includes a risk analysis and addresses air, water and noise controls, spill clean-up equipment, and fire management. • The waste is ideally placed in lifts not exceeding 3,000 mm in uncompacted depth, in a working face with a slope between 1V:3H and 1V:4H, which allows for optimum compaction effect. Any stockpiles would not exceed 2m high with 45-degree batters and 200m³ volume. Council Assessment: Satisfactory
Air Quality and Odour	Applicants Response	Assessment
The following are required to be addressed in the EIS: • A quantitative assessment of the potential air quality, dust and odour impacts of the development, during both construction and operation, in accordance with relevant Environment Protection Authority guidelines • A description and appraisal of air quality and odour impact mitigation and monitoring measures, in line with International Best Practice	Addressed in revised EIS: • Section 8.2.3 (p.73) and Appendix E • Section 8.2.4 (p.84)	Comment: • The Air Quality Assessment (AQA) Report indicated dust and odour emissions from the expansion will be largely unchanged compared to current site operations. Odour and dust emissions are not expected to cause significant impacts at the nearby sensitive receptors. These matters were considered satisfactorily addressed by the NRPP in the meeting dated 14 November 2023. • Mitigation and monitoring measures for both odour and dust are discussed in detail. Council Assessment: Satisfactory

Noise and Vibration	Applicants Response	Assessment
The following are required to be addressed in the EIS: • A noise description of all potential noise and vibration sources during construction and operation, including noise associated with any blasting, machinery and plant movements, and road traffic noise and vibration assessment in accordance with the relevant Environment Protection Authority guidelines • A description and appraisal of noise and vibration mitigation and monitoring measures	Addressed in revised EIS: • Section 8.2.3 (p.73) and Appendix F • Section 8.2.3 (p.73) and Appendix F • Section 8.2.4 (p.84)	Comment: • The application was accompanied by a Noise & Vibration Assessment report prepared by GHD, dated 1 December 2022. The noise and vibration modelling indicates compliance is predicted at all sensitive receptor locations. These matters were considered satisfactorily addressed by the NRPP in the meeting dated 14 November 2023. • Mitigation and management measures to be implemented during construction and operation are discussed in detail. Conclusion: Satisfactory and adequately addressed by the EIS.
Soil and water	Applicants Response	Assessment
The following are required to be addressed in the EIS: • A description of local soils, topography, drainage and landscapes • Details of water usage for the proposal including existing and proposed water licencing requirements in accordance with the Water Act 1912 and/or the Water Management Act 2000 • An assessment of potential impacts on floodplain and stormwater management and any impact to flooding in the catchment • Details of sediment and erosion controls • A detailed site water balance • An assessment of potential impacts on the quality and quantity of surface and groundwater resources	Addressed in revised EIS: • Section 8.4.2 (p.93) • Section 8.4.2 (p.93) and 8.5.3 (p.101) • Section 8.5.3.2 (p.106) • Section 8.5.3.1 (p.101) • Section 8.5.3.1 (p.103) • Section 8.5.3.2 (p.105)	Comment: The revised EIS, plans, specialist studies and LEMP demonstrate the intent of the development and an impact assessment is provided for both soil and water. The proponent also provides suitable mitigation and management strategies for both. Details of licencing requirements are addressed. Management strategies relating to groundwater, leachate, water, landfill gas, stormwater, wastewater, fire protection are addressed in the revised EIS. The draft LEMP document (Appendix D) provides comprehensive detail relating to the landfill design, and addresses erosion, contamination stormwater and wastewater management systems (p.18-19) Conclusion: Satisfactory and adequately addressed by the revised EIS and Landfill Environmental Management Plan documents.

• Details of the proposed stormwater and wastewater management systems (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts • Characterisation of the nature and extent of any contamination on the site and surrounding area • A description and appraisal of impact mitigation and monitoring measures	• Section 5.3.14 (p.39) and 8.5.3.1 (p.101) • Section 8.4.3 (p.95) • Section 8.5.4 (p.107)	
Traffic and transport	Applicants Response	Assessment
The following are required to be addressed in the EIS: • Details of road transport routes and access to the site • Road traffic predictions for the development during construction and operation • Swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site • An assessment of impacts to the safety and function of the road network and the details of any road upgrades required for the development • A traffic impact assessment (TIA) in accordance with Transport for NSW's requirements	Addressed in revised EIS: • Section 8.8.2 (p.115) • Section 8.8.3 (p.117) • Section 8.8.3 (p.117) • Section 8.8.3 (p.115) and Appendix J • Section 8.8.3 (p.115) and Appendix J	Comment: The Traffic Impact Assessment (TIA) submitted with the EIS indicated the proposed operational volumes are minor and are expected to fall within typical fluctuations of daily traffic movements on the adjoining road network. TfNSW also raised no objection to or requirements for the proposed development. Conclusion: Satisfactory and adequately addressed by the EIS. These matters were considered satisfactory by the NRPP in the meeting dated 14 November 2023.
Biodiversity	Applicants Response	Assessment
The following are required to be addressed in the EIS: • Accurate predictions of any vegetation clearing on site or for any road upgrades • A detailed assessment of the potential impacts on any threatened species, populations, endangered	Addressed in revised EIS: • Section 8.3.3 (p.91) and Appendix G • Section 8.3.3 (p.91) and Appendix G	Comment: The direct and indirect impacts on fauna and flora species are addressed and discussed. Mitigation and management measures for biodiversity are also identified in detail. The Biodiversity Report prepared for the proposal determined that a

ecological communities or their habitats, groundwater dependent ecosystems and any potential for offset requirements in accordance with the current Environment, Energy and Science Group legislation and guidelines • Details of weed management during construction and operation in accordance with existing State, regional or local weed management plans or strategies • A detailed description of the measures to avoid, minimise, mitigate and/or offset biodiversity impacts	• Section 8.3.4 (p.91) • Section 8.3.4 (p.91)	Biodiversity Development Assessment Report (BDAR), or referral to the EESG for approval under the EPBC Act was not required. The report also concluded the vegetation to be removed to accommodate the development is not likely to have a significant impact on existing threatened species. Conclusion: Satisfactory and adequately addressed by the EIS. These matters were also considered satisfactory by the NRPP in the meeting dated 14 November 2023.
Visual	Applicants Response	Assessment
The following are required to be addressed in the EIS: • an impact assessment at private receptors and public vantage points.	Addressed in revised EIS: • Section 8.11.3 (p.130)	Comment: • The development site is within an area that is enclosed and screened by trees and / or undulating hills. The impacts on the landscape character and visual amenity of the area have been assessed as low to negligible. These matters were adequately addressed as confirmed by the NRPP in the meeting dated 14 November 2023. Conclusion: Satisfactory and adequately addressed by the EIS.
Heritage	Applicants Response	Assessment
The following are required to be addressed in the EIS: • including Aboriginal and non-Aboriginal cultural heritage.	Addressed in revised EIS: • Section 8.6 (p.111) & 8.7 (p.113)	Comment: • It was determined there is a low likelihood of Aboriginal cultural heritage with archaeological (scientific) value occurring within the site. The scientific significance of the site, in relation to Aboriginal cultural heritage, is therefore assessed as low. There are also no items of heritage significance on the subject site. Conclusion: Satisfactory and adequately addressed by the EIS. These matters were adequately addressed as confirmed by the NRPP in the meeting dated 14 November 2023.

Environmental Planning Instruments	Applicants Response	Assessment
The EIS must assess the proposal against the relevant environmental planning instruments, including but not limited to: • State Environmental Planning Policy (Infrastructure) 2007 • State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 • State Environmental Planning Policy (Koala Habitat Protection) 2020 • State Environmental Planning Policy No. 33 – Hazardous and Offensive Development • State Environmental Planning Policy No. 55 – Remediation of Land • Liverpool Plains Local Environmental Plan 2011 • Relevant development control plans and section 7.11 plans.	Addressed in revised EIS: Section 6.1 (p.47) • Section 6.1.3.2 (p.52) • Section 6.1.3.4 (p.54) • Section 6.1.3.4 (p.54) • Section 6.1.3.3 (p.53) • Section 6.1.3.3 (p.53) • Section 6.1.6 (p.58) • Section 6.1.6 (p.58)	Comment: • An adequate assessment against Clauses 2.122 and 2.157 of SEPP (Transport and Infrastructure) 2021 is provided. A draft LEMP is included to adopt best practice landfill design and operation. • An adequate assessment is provided against State Environmental Planning Policy (Biodiversity and Conservation) 2021. • An adequate assessment is provided against State Environmental Planning Policy (Biodiversity and Conservation) 2021. • An adequate assessment is provided against State Environmental Planning Policy (Resilience and Hazards) 2021. • An adequate assessment is provided against State Environmental Planning Policy (Resilience and Hazards) 2021. • An adequate assessment against the LPLEP 2011 is provided. • An adequate assessment against the LPDCP 2012 is provided. Conclusion: Satisfactory and adequately addressed by the EIS.

Pre-consultation (During Preparation of EIS)	Assessment
During the preparation of the EIS, consultation must occur with the relevant local, State and Commonwealth government authorities, service providers and community groups, and any issues that may be raised in the EIS must be addressed. Consultation should be carried out with: • Department of Planning and Environment, specifically the Environment, Energy and Science Group, Environment Protection Authority • Transport for NSW • NSW Rural Fire Service • Liverpool Plains Shire Council • The surrounding landowners and occupiers that are likely to be impacted by the proposal.	Each of the government agencies listed below were consulted during the preparation of the EIS and revised EIS phases. • Copies of correspondence received from BCSG and NSW EPA are attached to Appendix A of the revised EIS. Correspondence received from: - BCSG on 24/1/2024; and - NSW EPA on 5/10/2023 • Letter received by Council on 12/07/23 and resent to GHD on 25/01/23 is attached to Appendix A of the revised EIS. • Emails received from NSW RFS on 29/01/2024 are attached to Appendix A of the revised EIS. • LPSC were consulted prior to DA lodgment in the form of meetings and teleconferences with Barry Strichen. Pre-DA meeting held with Libby Cummings, LPSC consultant planner on 11/10/2022. Numerous subsequent telephone calls / meetings held with Council planners. • For the preparation of the revised EIS those likely to be impacted by the development (adjoining landowners and occupiers) were consulted for a period of fourteen (14) days from 6/2/2024 to 21/2/2024. Comment: During the preparation of the EIS the proponent has undertaken consultation with the relevant government authorities, and landowners likely impacted by the development, meeting the SEARs. There were no comments / feedback received during the consultation with adjoining landowners and occupiers. Details of all correspondence are attached in Appendix A of the revised EIS. Conclusion: Consultation during the preparation of the EIS is satisfactory and complies with the SEARs.

Draft Landfill Environmental Management Plan (LEMP)		Assessment
The following was required as an outcome of the NRPP meeting 14 November 2023: • A draft operational management plan with sufficient detail to demonstrate the safe operation of the facility vis-a-vis the proposed layout of the facility.	• A draft Landfill Environmental Management Plan (LEMP), which includes a risk analysis, has been provided.	Comment: • The draft LEMP provides a framework for the operation of the Waste Management Facility as a result of the proposed layout of the facility, with a focus on safe operational practices and suitable environmental management practices. The document addresses the following matters: <i>Facility Design</i> Each of the facilities of the project are reviewed. Access to each of the facilities is also identified in detail. This section also addresses the staging of the landfill with reference to Cell Arrangement. The Management Plan also refers to the following and addresses each in detail during operation: - Surface Water Management - Leachate Management - Landfill Gas Management <i>Facility operations</i> This part of the Operation Management Plan provides details on the management and maintenance of the operation and refers to: - Health and safety procedures - Waste acceptance - Waste screening - Procedures for unacceptable waste - Waste handling, deposition and compaction - Covering waste - Operating during wet weather - Recording and reporting <i>Environmental management measures</i> This section of the Plan describes the environmental management measures for the operational environmental risks identified in the EIS and are listed as follows: - Surface Water

		- Groundwater - Leachate - Landfill Gas - Litter, Pests and Vermin - Dust, Odour and Noise - Weed Management - Hazardous Materials and substances - Fire control and emergency preparedness - Bushfire <i>Environmental monitoring</i> The plan addresses the monitoring to be undertaken during operation and includes: - Groundwater, surface water and leachate monitoring - Landfill gas monitoring - Recording of pollution complaints - Record keeping (Further details in the final LEMP) <i>Site closure and rehabilitation</i> The Plan refers to the requirements for site closure and rehabilitation, which includes: - - Landfill closure plan - Site capping and revegetation - Post closure environmental monitoring <i>Reporting</i> This aspect of the operation plan addresses annual and incident reporting and is in accordance with the Environmental Protection Licence (EPL) issued by the NSW EPA. The applicant has advised further details are to be provided in the final LEMP. Conclusion: The draft LEMP is satisfactory. Should the proposal be supported Council will require the final LEMP which addresses the full details of the operation as discussed in the draft document.
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Risk Analysis	Assessment
The following was raised as an outcome of the NRPP meeting 14 November 2023: • A risk analysis is to inform the development of the draft operational management plan and include matters such as landfill fire and bushfire, and emergency management.	• Key risks are identified as part of the risk analysis, and these are addressed in Table 5.1 in the LEMP. Comment: • An Operational Risk Analysis is identified in Section 5, Pages 11-13 of the Landfill Environmental Management Plan (LEMP) and confirms the key risks and hazards during the operation of the Waste Management Facility. Matters such as landfill fire and bushfire, and emergency management are addressed. The analysis also provides key mitigation measures, which are addressed in detail throughout the LEMP. For example, one of the Hazard/s during operation include Bushfire or fire onsite. The risk identified is injury to on-site workers, loss of assets. The key mitigation measures include: - maintenance of vegetation, - preparation of emergency preparedness and response management procedure, - training, - load inspections, - waste separation, - stockpile limits, - fuel free zones, - water supply, - emergency access. These mitigation measures for on-site fire and bushfire are further discussed in Sections 6.2, 8.13 and 8.14 of the LEMP. Conclusion: The Risk Analysis is considered satisfactory and adequately addresses the risks associated with the operation of the development.

Attachment C: Correspondence by the Proponent

SEARs Compliance Table

Response to Additional Information

Your ref: DA10/006/2023
Our ref: 12534581

30 January 2024

Nathan Bartlett
Liverpool Plains Shire Council
60 Station Street
Quirindi NSW 2343

DA10/006/2023 – Willow Tree Waste Management Facility Expansion

Dear Nathan

In response to Council's request for further information, please find outlined below a table outlining the SEARs relevant to the Willow Tree WMF Expansion and how they have been addressed in the EIS (dated 30 January 2024).

Table 1 SEARS

SEARs requirement	Where addressed in EIS
General requirements	
The environmental Impact Statement (EIS) must meet the minimum form and content requirement in clauses 6 and 7 of schedule 2 of the Environment and Assessment Regulation 2000.	
Key issues	
Strategic and statutory context – including:	
– A detailed justification for the proposal and suitability of the site for the development	Sections 4 and 5
– A demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, development control plans (DCPs), or justification for any inconsistencies	Section 6
– A list of any approvals that must be obtained under any other Act or law before the development may lawfully be carried out.	Section 6.1.7
– A description of how the proposed expansion integrates with existing onsite operations	Section 5 and Appendix B
– A description of any amendments to and/ or additional licence(s) or approval(s) required to carry out the proposed development	Section 6.1.7
Waste management – including:	
– Details of the type, quantity and classification of waste to be received at the site	Section 5.3.2, 5.3.4, and Appendix B
– Details of any resource outputs and any additional processes for residual waste	Section 5.3.15, 5.3.16

SEARs requirement	Where addressed in EIS
Details of waste handling including, transport, identification, receipt, stockpiling and quality control	Section 5.3.15, 5.3.16, 5.3.17, 5.3.18, 5.3.19 and 5.3.20
The measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the NSW Waste Avoidance and Sustainable Materials Strategy 2041.	Section 3.1.1 and Section 5.3
Landfill design and rehabilitation – including:	
Details of the consistency of the proposal with the Environmental Guidelines: Solid Waste Landfills, second edition (EPA, 2016)	Section 5.1, 5.3
Description of the proposed cell design and integrity	Section 5.2.8, 5.2.9, 5.3.3, 5.3.9 and Appendix C
Details of proposed leachate and gas management and monitoring	Section 5.3.14
Consideration of proposed water quality control and monitoring	Section 5.3.14, 5.3.19
Description and justification of proposed daily waste covering	Section 5.3.18
Details of the proposed final capping, closure measures and rehabilitation of the site, including its final landuse	Section 5.3.5, 5.3.6, 5.3.10, 5.3.11
Hazards and risk – including:	
A preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011)	Section 8.10.3
An assessment of the risk of bushfire, including addressing the requirements of Planning for Bush Fire Protection 2019 (RFS). Any proposed Asset Protection Zones must not adversely affect environmental objectives (e.g. buffers)	Section 8.10.3 and Appendix K
Any geotechnical limitations that may occur on the site and if necessary, appropriate design considerations to address this	Section 2.4.2, 8.4.2 and Appendix B
Fire and incident management – including:	
Technical information on the environmental protection equipment to be installed on the premises such as air, water and noise controls, spill clean-up equipment, fire management (including the location of fire hydrants and water flow rates at the hydrants) and containment measures	Section 5.3.14
Details of the size and volume of any stockpiles and their arrangements to minimise fire spread and facilitate emergency vehicle access	Section 5.3.17.2
Air quality and odour – including:	
A quantitative assessment of the potential air quality, dust and odour impacts of the development, during both construction and operation, in accordance with relevant Environment Protection Authority guidelines	Section 8.2.3 and Appendix E
A description and appraisal of air quality and odour impact mitigation and monitoring measures, in line with International Best Practice	Section 8.2.4

SEARs requirement	Where addressed in EIS
Noise and vibration – including:	
– A noise A description of all potential noise and vibration sources during construction and operation, including noise associated with any blasting, machinery and plant movements, and road traffic noise	Section 8.2.3 and Appendix F
– and vibration assessment in accordance with the relevant Environment Protection Authority guidelines	Section 8.2.3 and Appendix F
– A description and appraisal of noise and vibration mitigation and monitoring measures	Section 8.2.4
Soil and water – including:	
– A description of local soils, topography, drainage and landscapes	Section 8.4.2
– Details of water usage for the proposal including existing and proposed water licencing requirements in accordance with the Water Act 1912 and/or the Water Management Act 2000	Section 8.5.3
– An assessment of potential impacts on floodplain and stormwater management and any impact to flooding in the catchment	Section 8.5.3
– Details of sediment and erosion controls	Section 8.5.3
– A detailed site water balance	Section 8.5.3
– An assessment of potential impacts on the quality and quantity of surface and groundwater resources	Section 8.5.3
– Details of the proposed stormwater and wastewater management systems (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts	Section 5.3.14 and 8.5.3.1
– Characterisation of the nature and extent of any contamination on the site and surrounding area	Section 8.4.3
– A description and appraisal of impact mitigation and monitoring measures	Section 8.5.4
Traffic and transport – including:	
– Details of road transport routes and access to the site	Section 8.8.2
– Road traffic predictions for the development during construction and operation	Section 8.8.3
– Swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site	Section 8.8.3
– An assessment of impacts to the safety and function of the road network and the details of any road upgrades required for the development	Section 8.8.3 and Appendix J
– A traffic impact assessment (TIA) in accordance with Transport for NSW's requirements	Section 8.8.3 and Appendix J
Biodiversity – including:	
– Accurate predictions of any vegetation clearing on site or for any road upgrades	Section 8.3.3 and Appendix G
– A detailed assessment of the potential impacts on any threatened species, populations, endangered ecological communities or their habitats, groundwater dependent ecosystems and any potential for offset requirements in accordance with the current Environment, Energy and Science Group legislation and guidelines	Section 8.3.3 and Appendix G

SEARs requirement	Where addressed in EIS
– Details of weed management during construction and operation in accordance with existing State, regional or local weed management plans or strategies	Section 8.3.4
– A detailed description of the measures to avoid, minimise, mitigate and/or offset biodiversity impacts	Section 8.3.4
Visual – including an impact assessment at private receptors and public vantage points.	Section 8.11.3
Heritage – including Aboriginal and non-Aboriginal cultural heritage.	Sections 8.6 and 8.7
The EIS must assess the proposal against the relevant environmental planning instruments, including but not limited to:	Section 6.1
– State Environmental Planning Policy (Infrastructure) 2007	Section 6.1.3.2
– State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017	Section 6.1.3.4
– State Environmental Planning Policy (Koala Habitat Protection) 2020	Section 6.1.3.4
– State Environmental Planning Policy No. 33 – Hazardous and Offensive Development	Section 6.1.3.3
– State Environmental Planning Policy No. 55 – Remediation of Land	Section 6.1.3.3
– Liverpool Plains Local Environmental Plan 2011	Section 6.1.6
Relevant development control plans and section 7.11 plans.	Section 6.1.6
During the preparation of the EIS, you must consult the relevant local, State and Commonwealth government authorities, service providers and community groups, and address any issues they may raise in the EIS. Consultation should be carried out with:	
– Department of Planning and Environment, specifically the Environment, Energy and Science Group, Environment Protection Authority	Copies of correspondence received from BCS and EPA are attached to Appendix A of EIS
– Transport for NSW	Letter received by Council on 12/07/23 and resent to GHD on 25/01/23 is attached to Appendix A of EIS.
– NSW Rural Fire Service	Emails received from RFS on 29/01/24 and attached to Appendix A of EIS
– Liverpool Plains Shire Council	LPSC were consulted prior to DA lodgement in the form of meetings and teleconferences with Barry Strichen. Pre-DA meeting held with Libby Cummings, LPSC consultant planner on 30/09/22. Numerous subsequent telephone calls/ meetings held with Council planners for RFIs during DA assessment.

SEARs requirement	Where addressed in EIS
– The surrounding landowners and occupiers that are likely to be impacted by the proposal.	LPSC has confirmed as part of the public exhibition of DA10/006/2023 that adjoining landowners were notified and no responses were received. A copy of the email confirming this is attached to Appendix A of EIS
Details of the consultation carried out and issues raised must be included in the EIS.	Revised EIS uploaded to portal on 30/1/24

We are of the view that as the proposal has not changed from that originally presented and as forwarded to the relevant government agencies and the community there should be no reason to readvertise the DA. Feedback received from all stakeholders has not resulted in any changes to that presented to Council under DA10/006/2023.

Regards



Shaun Lawer
Technical Director – Planning and Environment

02 66505605
Shaun.lawer@ghd.com

Copy to: Nathan Skelly, Director Infrastructure and Environmental Services

Your ref: DA 10/006/2023
Our ref: 12534581

19 January 2024

Nathan Bartlett
Liverpool Plains Shire Council
PO Box 152
Quirindi NSW 2343

DA 10/006/2023 - Proposed expansion of existing Waste and Resource Management Facility Property: Lot 213, DP 1173230, 258 Merriwa Road Willow Tree NSW 2339

Dear Nathan

Reference is made to the Northern Regional Planning Panel's decision to defer the above development application at its meeting on 24 November 2023. The reasons for the deferral was the need to provide additional information. The following outlines the requirements of the Panel:

- “• An updated or supplementary EIS clearly responding to each of the SEARs. The Panel does not accept that matters required to be addressed by the SEARs can be deferred to conditions of consent.*
- Evidence of consultation with key agencies in the preparation of the SEARs and in the subsequent preparation of the Environmental Impact Statement. That is, correspondence from those key agencies.*
- A draft operational management plan with sufficient detail to demonstrate the safe operation of the facility vis-a-vis the proposed layout of the facility. The Panel is of the view that, should the proposal be approved, conditions can be appropriately drafted to mitigate the need for modifications to the development approval and thus enable sufficient flexibility in the future.*
- A risk analysis to inform the development of the draft operational management plan including such matters as landfill fire and bushfire, and emergency management.”*

In response, please find attached the following information:

- A revised EIS that identifies the relevant SEARs applicable to each environmental factor and where the SEARs are specifically addressed in the EIS document - see link below. Revisions have also been made to clear up any confusion around the capacity of the proposed expansion and the impacts associated with the proposed expansion.
- The provision of SEARs from the Department of Planning and Environment provides evidence of consultation prior to the preparation of the EIS. GHD have addressed the requirements from the SEARs and sought clarifications if any issues were unclear but GHD did not consult with the agencies during the exhibition of the DA/EIS. We have since sent copies of the EIS to NSW Rural Fire Service, NSW Department of Climate Change, Energy, Environment and Water and Transport for NSW to seek comment. General Terms of Approval have been received from the EPA (attached).
- A draft Landfill Environmental Management Plan (LEMP) has been prepared (attached) to provide Council and the Panel with confidence that sufficient mitigation and management measures can be implemented to mitigate against any environmental impact.
- The draft LEMP contains a risk analysis that informed its development and addresses such matters as landfill fire and bushfire, and emergency management.

Should you require any additional information please don't hesitate to contact the undersigned.

Regards



Shaun Lawer

Technical Director – Planning and Environment

0402092310

shaun.lawer@ghd.com

Copy to: Nathan Skelly

Attachment: Link to <https://ghd.sendthisfile.com/N14Iz7wMtAzHL6k5qmf1eF4F>

Appendix 1: Terms of Approval
for L M

General Terms of Approval - Issued

Notice No: 1629867



Liverpool Plains Shire Council
60 Station Street
QUIRINDI NSW 2343

Attention: Mr Nathan Bartlett

Notice Number 1629867
Date 11-Apr-2024

**Re: Expansion of an Existing Waste Management Facility at Lot 213 DP 1173230, 258 Merriwa Road
WILLOW TREE 2339**

Issued pursuant to Section 4.46 Environmental Planning and Assessment Act 1979

I refer to the development application and accompanying information provided for the Willow Tree Waste Management Facility Extension received by the Environment Protection Authority (EPA) on 17 May 2023.

The EPA has reviewed the information provided and has determined that it is able to issue a licence for the proposal, subject to a number of conditions. The applicant will need to make a separate application to EPA to obtain this licence.

The general terms of approval for this proposal are provided at **Attachment A**. If Liverpool Plains Shire Council grants development consent for this proposal these conditions should be incorporated into the consent. Mandatory environment protection licence conditions are also provided for your information at **Attachment B**.

These general terms relate to the development as proposed in the documents and information currently provided to EPA. In the event that the development is modified either by the applicant prior to the granting of consent or as a result of the conditions proposed to be attached to the consent, it will be necessary to consult with EPA about the changes before the consent is issued. This will enable EPA to determine whether its general terms need to be modified in light of the changes.

It is the EPA's expectation that the proposed landfill must be constructed and operated in accordance with the minimum requirements of its *Environmental Guidelines: Solid Waste Landfills* (EPA, 2016).

Waste Levy

Clause 12 of the *Protection of the Environment Operations (Waste) Regulation 2014* (the Waste Reg) will require the proponent (as the occupier of a scheduled waste facility) to pay a contribution in respect to any waste received at the facility for disposal from within the Metropolitan Levy Area (MLA) or the Regional Levy

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Area (RLA). The RLA, as defined at clause 7 of the Waste Reg, incorporates the local government areas to the immediate south of the Liverpool Plains Shire where the facility is located. There is therefore a reasonable likelihood, that some waste from within the waste regulated area (defined as the MLA and RLA) will find its way to the proposed Willow Tree facility.

To ensure the proponent complies with the requirements of Part 2 of the Waste Reg, the EPA has incorporated conditions O3.18 and O3.19 in these General Terms of Approval.

Noise

The EPA has reviewed the Willow Tree Waste Management Facility Noise and Vibration Assessment ("NIA" by GHD ref: 12534581, dated 1 December 2022) and notes the following:

- a) The proposed expansion of the landfill includes formation of access roads, buildings and landfill cells. The NIA states that blasting is not anticipated as excavation of the cells will be minimal, therefore blasting is not to be undertaken on the premises.
- b) The NIA discusses the corrections for annoying characteristics that are contained in the Noise Policy for Industry (NPfI), however no assessment of the characteristics has been included in the NIA. Given the predicted noise levels are below the minimum criteria under the NPfI, the EPA considers that it would be reasonable to set noise limits at the minimum level (40 dBA), which may include a tolerance for any annoying characteristics.
- c) Construction noise mitigation measures are listed in section 8 of the NIA. The EPA recommends that a noise management plan is prepared to help implement the measures listed in the NIA.

The EPA requires that a Traffic Noise Management Strategy (TNMS) be developed by the proponent, prior to commencement of construction and operation activities, to ensure that feasible and reasonable noise management strategies for vehicle movements associated with the facility are identified and applied, that include but are not necessarily limited to the following:

- a) driver training to ensure that noisy practices such as the use of compression engine brakes are not unnecessarily used near sensitive receivers,
- b) best noise practice in the selection and maintenance of vehicle fleets,
- c) movement scheduling where practicable to reduce impacts during sensitive times of the day,
- d) communication and management strategies for non licensee/proponent owned and operated vehicles to ensure the provision of the TNMS are implemented,
- e) a system of audited management practices that identifies non conformances, initiates and monitors corrective and preventative action (including disciplinary action for breaches of noise minimisation procedures) and assesses the implementation and improvement of the TNMS,
- f) specific procedures for drivers to minimise impacts at identified sensitive receivers,
- g) clauses in conditions of employment, or in contracts, of drivers that require adherence to the noise minimisation procedures and facilitate effective implementation of the disciplinary actions for breaches of the procedures.

Waste

The Willow Tree Waste Management Facility Expansion Environmental Impact Statement ("EIS" by GHD ref: 12534581, dated 12 January 2023) does not provide an assessment or classification of waste material in accordance with the EPA's *Waste Classification Guidelines* (2014) to determine the specific types of

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waste that will be received at the premises. This information is required to support the Environment Protection Licence application. The EPA requires the proponent to prepare a Waste Classification Report prior to commencing operations at the premises. The Waste Classification Report must include the following;

- a) the types of waste to be received at the premises;
- b) the estimated quantities of each type of waste to be received at the premises;
- c) be conducted in accordance with the *Waste Classification Guidelines* (EPA, 2014); and;
- d) be provided to the Armidale EPA office with the Environment Protection Licence application for the premises.

To address the lack of waste classification in the application, the EPA has added a condition to its General Terms of Approval at Attachment A (condition L3.1) requiring the applicant to prepare a waste classification report and provide it to the EPA prior to commencing operations at the premises. The EPA requires this information to issue an Environment Protection Licence to appropriately condition the development.

Detailed Design Report

Any licence application to the EPA must contain a detailed design report addressing the requirements of the *Environmental Guidelines: Solid Waste Landfills* (EPA, 2016). This report must be prepared by an appropriately qualified and experienced person as defined in the Landfill Guidelines. The report must contain:

- a) Detailed designs of the cell lining and leachate barrier system in accordance with Minimum Standards Part 1 of the Landfill Guidelines. If alternative designs are proposed, for example on the quarry walls, the design report must contain an assessment of the soundness of the in situ geology as per the requirements of Part 1.10.
- b) Detailed designs of final capping in accordance with Minimum Standards Part 9 of the Landfill Guidelines. If a phytocap is proposed as an alternative to an engineered barrier cap, the design report must address the design requirements for phytocaps set out in Minimum Standards Part 9.4.
- c) Construction Quality Assurance (CQA) Plans for all proposed construction works in accordance with Minimum Standards Part 11 of the Landfill Guidelines. The CQA Plans must include procedures to cover the proposed staged or incremental quarry wall lining technique (called the 'shingle' approach in the EIS).
- d) Water quality monitoring programs in accordance with Minimum Standards Part 4 of the Landfill Guidelines. These programs must include proposals to characterise existing (background) groundwater and surface water quality at and near the site before landfilling commences.

If you have any questions, or wish to discuss this matter further please contact Lindsay Fulloon on 02 6773 7000.

Yours sincerely

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A handwritten signature in black ink, appearing to read 'Lindsay Fulloon', written over a horizontal dotted line.

Lindsay Fulloon

Manager

Environment Protection Authority

(by Delegation)

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Notice No: 1629867

1 Administrative conditions

A1 What the approval/licence authorises and regulates

A1.1 This approval/licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this approval/licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Waste disposal (application to land)	Waste disposal by application to land	Any capacity

A2 Premises or plant to which this approval/licence applies

A2.1 The approval/licence applies to the following premises:

Premises Details
WILLOW TREE WASTE MANAGEMENT FACILITY 258 MERRIWA ROAD WILLOW TREE NSW 2339 LOT 213 DP 1173230

A3 Information supplied to the EPA

A3.1 Except as expressly provided by these general terms of approval, works and activities must be carried out in accordance with the proposal contained in:

- The development application *DA 2023/006* submitted to Liverpool Plains Shire Council on 17 February 2023;
- Any environmental impact statement *Willow Tree Waste Management Expansion dated 12 January 2023* relating to the development; and
- All additional documents supplied to the EPA in relation to the development, including:
 - Aboriginal Due Diligence Assessment, dated 22 December 2022
 - Concept Design (Survey Plan, Site Plan, Staging Plans etc.)
 - Landfill Extension Masterplan, dated 13 September 2021
 - Water Impact Assessment, dated 1 December 2022
 - Air Quality Impact Assessment, dated 1 December 2022
 - Environmental Noise and Vibration Assessment, dated 1 December 2022
 - Traffic Assessment, dated 19 December 2022
 - Biodiversity Development Assessment Report, dated October 2022

A4 Fit and Proper Person

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A4.1 The applicant must, in the opinion of the EPA, be a fit and proper person to hold a licence under the Protection of the Environment Operations Act 1997, having regard to the matters in s.83 of that Act.

2 Discharges to Air and Water Applications to Land

P1 Location of monitoring/discharge points and areas

P1.1 The following points referred to in the table below are identified in this approval/licence for the purposes of monitoring and/or the setting of limits for the emissions of pollutants to the air from the point.

Air

EPA identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
Exact points to be confirmed on the Environmental Protection Licence (EPL)	Air Emissions Monitoring Ambient Air Quality Monitoring Sub surface gas monitoring		The EPA intends to establish air quality monitoring points on the licence before construction and operation of the landfill commences.

P1.2 The following points referred to in the table are identified in this approval/licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

Water

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
Exact points to be confirmed on the EPL	Sediment Dam Quality Monitoring Leachate Quality Monitoring Surface water quality monitoring Discharge quality monitoring Groundwater Quality Monitoring Ambient water quality monitoring	Discharge to waters Discharge quality monitoring Volume monitoring Surface water quality monitoring	It is the EPA's intention to add water monitoring points for leachate, surface water (clean and dirty), ambient (upstream and downstream of the landfill site) and groundwater. Water discharge points from clean area sediment dams will also be added. Controlled discharges of leachate/dirty water from the premises will not be permitted.

P1.3 The following points referred to in the table below are identified in this approval/licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.

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Noise/Weather

EPA Identification Number	Type of Monitoring Point	Description of Location
W1	Meteorological Station	Meteorological Station located on the premises (exact location to be confirmed)

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this approval/licence, the proponent must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Concentration limits

L2.1 For each discharge point specified in the tables below, the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L2.2 Where a pH quality limit is specified in the Table, the specified percentage of samples must be within the specified ranges.

L2.3 To avoid any doubt, this condition does not authorise the discharge or emission of any other pollutants.

L2.4 Water and or/Land Concentration Limits

POINTS - Sediment Pond discharge limits (exact locations TBC)

Pollutant	Units of measure	100% concentration limit
TSS	mg/L	50
Nitrogen (ammonia)	mg/L	0.9
<pH>		6.5-8.5

L2.5 The proponent is taken not to have breached the concentration limits specified in this approval/licence for the discharge of total suspended solids in condition L2.4 if:

- a) the dams overflow is caused by a rainfall event exceeding the 5 day 90%ile rainfall; and,
- b) the proponent has taken all practical measures to avoid or minimise water pollution.

Note: The proponent is to confirm the rainfall depth terms in millimetres upon the application for the EPL.

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L3 Waste

L3.1 The proponent must prepare a Waste Classification Report and provide it to the EPA prior to commencing operations at the premises. The Waste Classification report must accompany the EPL application.

L3.2 The proponent must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this approval/licence.

Code	Waste	Description	Activity	Other Limits
	General Solid Waste (non-putrescible)	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste disposal (application to land)	TBD
	General Solid Waste (putrescible)	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste disposal (application to land)	TBD
	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time.		TBD

Note: The total amount of waste disposed of at the premises must not exceed 10,000 tonnes per annum. The proponent must provide a break down of waste types to be disposed of at the premises as supporting information in the EPL application.

L3.4 Disposal of asbestos must be in accordance with Clause 80 of the Protection of the Environment Operations (Waste) Regulation 2014

L4 Noise limits

L4.1 Noise generated at the premises must not exceed the noise limits at the times and locations in the table below. The locations referred to in the table below are indicated by Figure 4.2 of the Willow Tree Waste Management Facility Noise and Vibration Assessment by GHD ref: 12534581, dated 1 December 2022.

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Location	Noise Limits in dB(A)	
	Morning Shoulder	Day
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)
200 Merriwa Road, Willow Tree (Lot 214, DP 1173230)	36	40
104 Merriwa Road, Willow Tree (Lot 1, DP 136316)	35	40

L4.2 For the purposes of condition L4.1:

- a) Morning Shoulder means the period from 7am to 8am Sunday and public holidays.
- b) Day means the period from 7am to 6pm Monday to Saturday and the period from 8am to 6pm Sunday and public holidays.

L4.3 Standard Meteorological Conditions

- a) The noise limits set out in condition L4.1 apply under the following meteorological conditions:

Assessment Period	Meteorological Conditions
Day	Stability Categories A, B, C and D with wind speeds up to and including 0.5m/s at 10m above ground level
Evening	Stability Categories A, B, C and D with wind speeds up to and including 0.5m/s at 10m above ground level
Night	Stability Categories A, B, C and D with wind speeds up to and including 0.5m/s at 10m above ground level

- b) For those meteorological conditions not referred to in condition L4.3(a), the noise limits that apply are the noise limits in condition L4.1 plus 5dB.

L4.4 For the purposes of condition L4.3: -

- a) The meteorological conditions are to be determined from meteorological data obtained from the site meteorological weather station identified as point W1
- b) Stability category shall be determined using the following method from Fact Sheet D of the *Noise Policy for Industry* (NSW EPA, 2017):
 - (i) Use of sigma-theta data (section D1.4).

L4.5 To assess compliance:

- a) with the L_{Aeq}(15 minutes) noise limits in condition L4.1 and L4.3, the noise measurement equipment must be located:
 - (i) approximately on the property boundary, where any residence is situated 30 metres or less from the property boundary closest to premises; or where applicable,
 - (ii) in an area within 30 metres of a residence façade, but not closer than 3 metres where any residence on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable,
 - (iii) in an area within 50 metres of the boundary of a National Park or Nature Reserve,
 - (iv) at any other location identified in condition L4.1

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b) with the $L_{Aeq}(15 \text{ minutes})$ noise limits in condition L4.1 and L4.3, the noise measurement equipment must be located:

- (i) at the reasonably most affected point at a location where there is no residence at the location; or,
- (ii) at the reasonably most affected point within an area at a location prescribed by condition L4.5 (a).

L4.6 A non-compliance of conditions L4.1 and L4.3 will still occur where noise generated from the premises is measured in excess of the noise limit at a point other than the reasonably most affected point at the locations referred to in condition L4.5 (a) or L4.5 (b).

Note to L4.5 and L4.6: The reasonably most affected point is a point at a location or within an area at a location experiencing or expected to experience the highest sound pressure level from the premises.

L4.7 For the purpose of determining the noise generated from the premises, the modifying factor corrections in Table C1 in Fact Sheet C of the *Noise Policy for Industry* (NSW EPA, 2017) may be applied, if appropriate, to the noise measurements by the noise monitoring equipment.

L4.8 Noise measurements must not be undertaken where rain or wind speed at microphone level will affect the acquisition of valid measurements.

L4.9 Truck movements to and from the site be restricted to daytime hours only to minimise the impact on sleep during the night time period.

L4.10 The proponent must prepare and implement a Noise Management Plan that covers all premises based activities and transport operations. The plan must include but need not be limited to:

- a) All measures necessary to satisfy the limits in Table **L4.1** at all times,
- b) A system that allows for periodic assessment of Best Management Practice (BMP) and Best Available Technology Economically Achievable (BATEA) that has the potential to minimise noise levels from the facility,
- c) Effective implementation of identified BMP and BATEA measures, where considered feasible and reasonable,
- d) Measures to monitor noise performance and respond to complaints,
- e) Measures for community consultation including site contact details,
- f) Noise monitoring and reporting procedures.

L4.11 The proponent must prepare and implement a detailed Construction Noise Management Plan (CNMP), prior to commencement of construction activities, that includes but is not necessarily limited to;

- a) Identification of each work area, site compound and access route (both private and public),
- b) Identification of the specific activities that will be carried out and associated noise sources at the premises and access routes,
- c) Identification of all potentially affected sensitive receivers,
- d) The construction noise and vibration objectives identified in the Environmental Assessment,
- e) Assessment of potential noise and vibration from the proposed construction methods (including noise from construction traffic) against the objectives identified in the Environmental Assessment,
- f) Where the objectives are predicted to be exceeded an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise impacts,
- g) Description of management methods and procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during construction, including the early erection of any operational noise control barriers,
- h) Procedures for notifying residents of construction activities that are likely to affect their noise and vibration amenity,
- i) Measures to monitor noise performance and respond to complaints.

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L4.12 Subject to any express provision to the contrary in this approval/licence, measurement and analysis of noise required by this approval/licence must be done in accordance with the Approved Methods for the Measurement and Analysis of Environmental Noise in NSW.

Definitions for L4

L_{Aeq} (15 minute) - the value of the A-weighted sound pressure level of a continuous steady sound that, over a 15 minute time interval, has the same mean square sound pressure level as a sound under consideration with a level that varies with time (Australian Standard AS 1055:2018 *Acoustics: description and measurement of environmental noise*).

Noise Policy for Industry - the document entitled “*Noise Policy for Industry*” published by the NSW Environment Protection Authority in October 2017.

Noise – ‘sound pressure levels’ for the purposes of conditions L4.1 to L4.8.

L5 Hours of operation

L5.1 The proponent shall comply with the operating hours shown in the table below.

Activity	Day	Hours
Construction	Monday – Friday	7am – 6pm
Construction	Saturday	8am – 1pm
Construction	Any other time	Only with the prior written approval of the EPA and subject to any conditions that may be imposed.
Operation	Monday – Saturday	7am – 6pm
Operation	Sunday	7am - 5pm
Operation	Any other time	Only with the prior written approval of the EPA and subject to any conditions that may be imposed.

L5.2 This condition does not apply to the delivery of material outside the hours of operation permitted by condition L5.1, if that delivery is required by police or other authorities for safety reasons; and/or the operation or personnel or equipment are endangered. In such circumstances, prior notification is provided to the EPA and affected residents as soon as possible, or within a reasonable period in the case of emergency.

L5.3 The hours of operation specified in conditions L5.1 may be varied with written consent if the EPA is satisfied that the amenity of the residents in the locality will not be adversely affected.

4 Operating conditions

01 Odour

01.1 No condition in this approval/licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997 provides that the proponent must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with

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the conditions of a licence directed at minimising odour.

02 Dust

02.1 All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.

02.2 Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.

02.3 The premises must be maintained in a manner that prevents or minimises the emission of air pollutants from the premises.

03 Waste management

03.1 Surface drainage must be diverted away from any area where waste is being or has been landfilled.

03.2 There must be no incineration or burning of any waste at the premises.

03.3 The proponent must have in place and implement procedures to identify and prevent the disposal of any waste not permitted by this approval/licence to be disposed of at the premises.

03.4 The proponent must minimise the tracking of waste and mud by vehicles.

03.5 Cover material must meet the specifications within section 8 of the Environmental Guidelines: Solid Waste Landfills" (EPA, Second Edition, 2016), unless otherwise approved by the EPA and the following:

a) Daily cover

Cover material must be applied to a minimum depth of 150 millimetres over all exposed landfilled waste prior to ceasing operations at the end of each day.

b) Intermediate cover

Cover material must be applied to a depth of 300 millimetres over surfaces of the landfilled waste at the premises which are to be exposed for more than 90 days.

c) Cover material stockpile

At least two weeks cover material must be available at the premises under all weather conditions. This material may be won on site, or alternatively a cover stockpile must be maintained adjacent to the tip face.

03.6 Alternative daily cover options may be considered and approved by the EPA if the proponent can demonstrate that the alternative approach can achieve the required outcomes for cover in section 8 of the "Environmental Guidelines: Solid Waste Landfills" (EPA, Second Edition, 2016) .

03.7 The proponent must submit to the EPA within twelve months prior to the last load of waste to be landfilled a closure plan in accordance with Section 76 of the Protection of the Environment Operations Act 1997.

03.8 The proponent must ensure that the landfill cells are capped progressively.

03.9 The proponent must ensure that the leachate dam is constructed with:

a) sufficient capacity as determined in accordance with the processes detailed within section 2 of the "Environmental Guidelines: Solid Waste Landfills" (EPA, Second Edition, 2016); and

b) is lined in accordance with section 2.1 of the "Environmental Guidelines: Solid Waste Landfills" (EPA, Second Edition, 2016) or an alternative system approved in writing by the EPA.

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O3.10 The level of leachate above the basal liner in the all landfill cells must be maintained to be less than 300mm.

O3.11 Water which contains or has come into contact with waste, other than Virgin Excavated Natural Material, must be managed as leachate.

O3.12 The surface water and leachate management systems must be maintained to ensure that their design capacity is available for the storage and management of stormwater and leachate.

O3.13 Leachate must only be disposed of by:

- a) Evaporation;
- b) Irrigation within the leachate dam or within the active cell of the landfill; or
- c) Disposal of at a facility licensed to accept such waste.

O3.14 Irrigation of leachate must only be undertaken:

- a) During dry weather; and
- b) Such that ponding or run off within the active cell does not occur and if the active tipping face is enclosed by a 300mm high earthen bund.
- c) Spray from waste water application must not drift beyond the boundary of the waste water utilisation area to which it is applied.

O3.16 The proponent must have in place and implement procedures to identify and prevent the disposal of any waste not permitted by this approval/license to be disposed of at the premises.

O3.17 The proponent must undertake a weekly boundary litter patrol of the premises so that all wind blown litter caught on the boundary fence and/or in neighbouring paddocks is collected and returned to the appropriate place of disposal.

O3.18 The proponent must have in place and operate a calibrated weighbridge to record the weight in tonnes of all waste brought into the premises and to determine the occupier's Protection of the Environment Operations Act 1997 section 88 levy liability.

O3.19 The proponent must pay the waste levy applicable to any waste received from the regulated area as required by section 88 of the Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (Waste) Regulation 2014.

O4. Stormwater/sediment control

O4.1 Prior to commencing construction of landfilling operations, a Site Water Management Plan (SWMP) must be prepared to the satisfaction of the EPA. The SWMP must be implemented before landfilling operation commence. The SWMP must include:

- design detail and calculations that demonstrate any clean area sediment basin associated with the landfill are constructed and will be managed in a manner that is consistent with Managing Urban Stormwater: Soils and Construction: Volume 2B Waste Landfills (Landcom, 2008);
- detail that demonstrates that any clean area sediment basins associated with the landfill have been designed on the basis of volumetric runoff coefficient of 0.9 within the affected catchments, given the nature of the site and the relatively impermeable surfaces present throughout;
- detail that demonstrates that Landcom (2008) clean sediment basin sizing, and related discharge considerations, only apply to catchments that are collecting clean sediment, i.e. areas not affected by leachate in any way; and

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- detail that demonstrates that where concentrations of pollutants other than sediment are elevated in stormwater, the polluted water must be transferred to the leachate system.

O5 Emergency response

O5.1 The proponent must extinguish fires at the premises as soon as possible.

O5.2 The proponent must have in place and implement procedures to minimise the risk of fire at the premises.

O6 Processes and management **O6.1** The drainage from all areas at the premises which will liberate suspended solids when stormwater runs over these areas must be diverted into sedimentation basins.

O6.2 The proponent must take all practicable steps to control entry to the premises.

O6.3 The proponent must install and maintain a stockproof perimeter fence around the premises.

O6.4 The proponent must install and maintain lockable security gates at all access and departure locations.

O6.5 The proponent must ensure that all gates are locked whenever the landfill is unattended.

O6.6 The proponent must control pests, vermin and weeds at the premises.

O6.7 The proponent must ensure that adequately trained staff are available at the premises in order to administer the requirements of this approval/licence.

O6.8 All practicable measures must be undertaken to manage all sediment dams such that they have sufficient capacity to store run-off from the 90th percentile 5 day rainfall event. The proponent is to use the Australian Rainfall and Runoff Data and rainfall data from the Australian Bureau of Meteorology for the premises to calculate the run off generated in a 90th percentile 5 day rainfall event.

Note: The proponent is to confirm the rainfall depth terms in millimetres upon the application for the EPL.

O6.9 The proponent must have in place and implement a litter management program.

5 Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by the EPA's general terms of approval, or a licence under the Protection of the Environment Operations Act 1997, in relation to the development must be recorded and retained as set out in conditions M1.2 and M1.3.

M1.2 All records required to be kept by the approval/licence must be:

- a) in a legible form, or in a form that can readily be reduced to a legible form;
- b) kept for at least 4 years after the monitoring or event to which they relate took place; and
- c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected: the date(s) on which the sample was taken;

- a) the time(s) at which the sample was collected;
- b) the point at which the sample was taken; and
- c) the name of the person who collected the sample.

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M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point specified below (by a point number), the proponent must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The proponent must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Water and/or Land Monitoring Requirements

Points - Ground water quality monitoring points (number and location of points to be confirmed in EPL)

Pollutant	Unit of Measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	Milligrams per litre	Quarterly	Representative sample
Arsenic	Milligrams per litre	Quarterly	Representative sample
Boron	Milligrams per litre	Quarterly	Representative sample
Cadmium	Milligrams per litre	Quarterly	Representative sample
Calcium	Milligrams per litre	Quarterly	Representative sample
Carbon Dioxide	Milligrams per litre	Quarterly	Representative sample
Chloride	Milligrams per litre	Quarterly	Representative sample
Chromium	Milligrams per litre	Quarterly	Representative sample
Conductivity	Micro-Siemens per centimetre	Quarterly	In situ
Copper	Milligrams per litre	Quarterly	Representative sample
Dissolved Oxygen	Milligrams per litre	Quarterly	In situ
Hardness (as calcium carbonate)	Milligrams per litre	Quarterly	Representative sample
Iron	Milligrams per litre	Quarterly	Representative sample
Iron Oxide	Milligrams per litre	Quarterly	Representative sample
Lead	Milligrams per litre	Quarterly	Representative sample
Magnesium	Milligrams per litre	Quarterly	Representative sample
Manganese	Milligrams per litre	Quarterly	Representative sample
Nitrate + Nitrite (oxidised nitrogen)	Milligrams per litre	Quarterly	Representative sample
Nitrogen (ammonia)	Milligrams per litre	Quarterly	Representative sample

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Nitrogen (total)	Milligrams per litre	Quarterly	Representative sample
pH	pH	Quarterly	In situ
Potassium	Milligrams per litre	Quarterly	Representative sample
Redox Potential	Millivolts	Quarterly	In situ
Sodium	Milligrams per litre	Quarterly	Representative sample
Standing water level	meters	Quarterly	In situ
Sulfate	Milligrams per litre	Quarterly	Representative sample
Temperature	degrees Celsius	Quarterly	In situ
Total Kjeldahl Nitrogen	Milligrams per litre	Quarterly	Representative sample
Total organic carbon	Milligrams per litre	Quarterly	Representative sample
Total Phosphorus - unfiltered sample	Milligrams per litre	Quarterly	Representative sample
Total Suspended solids	Milligrams per litre	Quarterly	Representative sample
Volumetric flow rate	kilolitres per day	Quarterly	Representative sample
Turbidity	nephelometric turbidity unity	Quarterly	In situ
Zinc	Milligrams per litre	Quarterly	Representative sample

POINTS - Sediment Dam - water quality monitoring (exact points to be confirmed in the EPL)

Pollutant	Units of measure	Frequency	Sampling method
Alkalinity (as calcium carbonate)	Milligrams per litre	Quarterly	Grab sample
Aluminium	Milligrams per litre	Quarterly	Grab sample
Arsenic	Milligrams per litre	Quarterly	Grab sample
Boron	Milligrams per litre	Quarterly	Grab sample
Cadmium	Milligrams per litre	Quarterly	Grab sample
Calcium	Milligrams per litre	Quarterly	Grab sample
Carbon dioxide	Milligrams per litre	Quarterly	Grab sample
Chloride	Milligrams per litre	Quarterly	Grab sample
Chromium	Milligrams per litre	Quarterly	Grab sample

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Conductivity	Micro-Siemens per centimetre	Quarterly	In situ
Copper	Milligrams per litre	Quarterly	Grab sample
Dissolved Oxygen	Milligrams per litre	Quarterly	In situ
Hardness (as calcium carbonate)	Milligrams per litre	Quarterly	Grab sample
Iron	Milligrams per litre	Quarterly	Grab sample
Iron Oxide	Milligrams per litre	Quarterly	Grab sample
Lead	Milligrams per litre	Quarterly	Grab sample
Magnesium	Milligrams per litre	Quarterly	Grab sample
Manganese	Milligrams per litre	Quarterly	Grab sample
Nitrate + Nitrite (oxidised nitrogen)	Milligrams per litre	Quarterly	Grab sample
Nitrogen (ammonia)	Milligrams per litre	Quarterly	Grab sample
Nitrogen (total)	Milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	In situ
Potassium	Milligrams per litre	Quarterly	Grab sample
Redox potential	millivolts	Every 6 months	In situ
Sodium adsorption ratio	Milligrams per litre	Quarterly	Grab sample
Sulfate	Milligrams per litre	Quarterly	Grab sample
Temperature	Milligrams per litre	Quarterly	Grab sample
Total Kjeldahl	Milligrams per litre	Quarterly	Grab sample
Total organic carbon	Milligrams per litre	Quarterly	Grab sample
Total Phosphorus- unfiltered sample	Milligrams per litre	Quarterly	Grab sample
Total Suspended solids	Milligrams per litre	Quarterly	Grab sample
Turbidity	nephelometric turbidity units	Quarterly	In situ
Volume	Kilitres	Quarterly	In situ
Zinc	Milligrams per litre	Quarterly	Grab sample

POINTS - Leachate Quality monitoring (exact points to be confirmed in the EPL)

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Pollutant	Units of measure	Frequency	Sampling method
Alkalinity (as calcium carbonate)	Milligrams per litre	Quarterly	Grab sample
Arsenic	Milligrams per litre	Quarterly	Grab sample
Boron	Milligrams per litre	Quarterly	Grab sample
Cadium	Milligrams per litre	Quarterly	Grab sample
Calcium	Milligrams per litre	Quarterly	Grab sample
Carbon Dioxide	Milligrams per litre	Quarterly	Grab sample
Chloride	Milligrams per litre	Quarterly	Grab sample
Chromium (total)	Milligrams per litre	Quarterly	Grab sample
Conductivity	Micro-Siemens per centimetre	Quarterly	In situ
Copper	Milligrams per litre	Quarterly	Grab sample
Dissolved oxygen	Milligrams per litre	Quarterly	In situ
Lead	Milligrams per litre	Quarterly	Grab sample
Magnesium	Milligrams per litre	Quarterly	Grab sample
Manganese	Milligrams per litre	Quarterly	Grab sample
Nitrate + Nitrite (oxidised nitrogen)	Milligrams per litre	Quarterly	Grab sample
Nitrogen (ammonia)	Milligrams per litre	Quarterly	Grab sample
Nitrogen (total)	Milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	in situ
phenols	Milligrams per litre	Quarterly	Grab sample
Polycyclic aromatic hydrocarbons	Milligrams per litre	Quarterly	Grab sample
Potassium	Milligrams per litre	Quarterly	Grab sample
Redox Potential	millivolts	Quarterly	in situ
Sulfate	Milligrams per litre	Quarterly	Grab sample
Temperature	degrees celsius	Quarterly	In situ
Total Kjeldahl Nitrogen	Milligrams per litre	Quarterly	Grab sample

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Total organic carbon	Milligrams per litre	Quarterly	Grab sample
Total Phosphorus (unfiltered)	Milligrams per litre	Quarterly	Grab sample
Total Suspended solids	Milligrams per litre	Quarterly	Grab sample
Volatile organic compounds	Milligrams per litre	Quarterly	Grab sample
Volume	kilolitres	Quarterly	In situ
Zinc	Milligrams per litre	Quarterly	Grab sample

POINTS - Sediment dam discharge point/s (exact points to be confirmed in the EPL)

Pollutant	Units of measure	Frequency	Sampling method
Conductivity	Micro-Siemens per centimetre	Special frequency 1	In situ
Nitrate + Nitrite (oxidised nitrogen)	Milligrams per litre	Special frequency 1	Representative sample
Nitrogen (ammonia)	Milligrams per litre	Special frequency 1	Representative sample
pH	pH	Special frequency 1	In situ
Total Kjeldahl Nitrogen	Milligrams per litre	Special frequency 1	Representative sample
Total Phosphorus (unfiltered)	Milligrams per litre	Special frequency 1	Representative sample
Total Suspended solids	Milligrams per litre	Special frequency 1	Representative sample

Note: For the purpose of this condition, 'special frequency 1' means as soon as practicable after overflow commences and in any cases not more than 12 hours after any overflow commencing and prior to any controlled discharge from the sedimentation basin to demonstrate compliance with the concentration limits defined at condition L2.3.

POINTS - leachate pond discharge point/s (exact points to be confirmed in the EPL)

Pollutant	Units of measure	Frequency	Sampling method
Conductivity	Micro-Siemens per centimetre	Special frequency 2	In situ
Nitrate + Nitrite (oxidised)	Milligrams per litre	Special frequency 2	Representative sample

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nitrogen)			
Nitrogen (ammonia)	Milligrams per litre	Special frequency 2	Representative sample
pH	pH	Special frequency 2	In situ
Total Kjeldahl	Milligrams per litre	Special frequency 2	Representative sample
Total Phosphorus (unfiltered)	Milligrams per litre	Special frequency 2	Representative sample
Total Suspended solids	Milligrams per litre	Special frequency 2	Representative sample

Note: For the purpose of this condition, 'special frequency 2' means as soon as practicable after overflow commences and in any cases not more than 12 hours after any overflow commencing.

Point Ambient surface water monitoring (exact points to be confirmed in EPL)

Pollutant	Units of measure	Frequency	Sampling method
Alkalinity (as calcium carbonate)	Milligrams per litre	Quarterly	Grab sample
Aluminium	Milligrams per litre	Quarterly	Grab sample
Arsenic	Milligrams per litre	Quarterly	Grab sample
Boron	Milligrams per litre	Quarterly	Grab sample
Cadmium	Milligrams per litre	Quarterly	Grab sample
Calcium	Milligrams per litre	Quarterly	Grab sample
Carbon dioxide	Milligrams per litre	Quarterly	Grab sample
Chloride	Milligrams per litre	Quarterly	Grab sample
Chromium	Milligrams per litre	Quarterly	Grab sample
Conductivity	Micro-Siemens per centimetre	Quarterly	In situ
Copper	Milligrams per litre	Quarterly	Grab sample
Dissolved Oxygen	Milligrams per litre	Quarterly	In situ
Hardness (as calcium carbonate)	Milligrams per litre	Quarterly	Grab sample
Iron	Milligrams per litre	Quarterly	Grab sample
Iron Oxide	Milligrams per litre	Quarterly	Grab sample
Lead	Milligrams per litre	Quarterly	Grab sample

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Magnesium	Milligrams per litre	Quarterly	Grab sample
Manganese	Milligrams per litre	Quarterly	Grab sample
Nitrate + Nitrite (oxidised nitrogen)	Milligrams per litre	Quarterly	Grab sample
Nitrogen (ammonia)	Milligrams per litre	Quarterly	Grab sample
Nitrogen (total)	Milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	In situ
Potassium	Milligrams per litre	Quarterly	Grab sample
Redox potential	millivolts	Every 6 months	In situ
Sodium adsorption ratio	Milligrams per litre	Quarterly	Grab sample
Sulfate	Milligrams per litre	Quarterly	Grab sample
Temperature	Milligrams per litre	Quarterly	Grab sample
Total Kjeldahl	Milligrams per litre	Quarterly	Grab sample
Total organic carbon	Milligrams per litre	Quarterly	Grab sample
Total Phosphorus- unfiltered sample	Milligrams per litre	Quarterly	Grab sample
Total Suspended solids	Milligrams per litre	Quarterly	Grab sample
Turbidity	nephelometric turbidity units	Quarterly	In situ
Volume	Kilolitres	Quarterly	estimate
Zinc	Milligrams per litre	Quarterly	Grab sample

M2.3 Air Monitoring Requirements (exact locations TBC)

Pollutant	Units of measure	Frequency	Sampling Method
Methane	percent by volume	Quarterly	Special Method 3

M2.4 For the purposes of the above table(s), Special Method 3 means methane monitoring in accordance with Section 5.2 Landfill gas surface emissions monitoring, and Section 5.4 Gas accumulation monitoring in enclosed structures as defined in the Environmental Guidelines: Solid Waste Landfills, 2nd edition 2016.

Note: "Special Method 3" means methane monitoring must be performed on the gas within the landfill subsurface monitoring well before any admixture or purging of air into that well. The gas detector must: a) have a current calibration certificate b) a minimum level of detection and minimum resolution of 1% (v/v) methane c) be capable of accurately measuring methane in a reduced oxygen atmosphere d) be tested with an in-date calibration gas before and after the

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testing to ensure that all sensors are functional and accurate. Subsurface gas monitoring must be performed following the procedures in benchmark techniques 15 and 16 in the EPA's Environmental Guidelines: Solid Waste Landfills.

Note: The Protection of the Environment Operations (Clean Air) Regulation 2021 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW". Where the "Approved Method" refers to a standard that has been updated the updated standard can be used, (AM-19 refers to AS 3580.10.1-1991 which has now been updated to AS 3580.10.1-2016).

Note: the monitoring requirements may be varied by the EPA subject to ongoing review and assessment of monitoring results.

M3 Testing methods - concentration limits

M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by the EPA's general terms of approval, or a licence under the Protection of the Environment Operations Act 1997, in relation to the development or in order to comply with a relevant local calculation protocol must be done in accordance with:

- any methodology which is required by or under the POEO Act 1997 to be used for the testing of the concentration of the pollutant; or
- if no such requirement is imposed by or under the POEO Act 1997, any methodology which the general terms of approval or a condition of the licence or the protocol (as the case may be) requires to be used for that testing; or
- if no such requirement is imposed by or under the POEO Act 1997 or by the general terms of approval or a condition of the licence or the protocol (as the case may be), any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The Protection of the Environment Operations (Clean Air) Regulation 2022 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".)

M3.2 Subject to any express provision to the contrary in this approval/licence, monitoring for the concentration of a pollutant discharged to waters must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Weather Monitoring

M4.1 At the point(s) identified below, the proponent must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1 of the table below, using the corresponding sampling method, units of measure, averaging period and sampling frequency, specified opposite in the Columns 2, 3, 4 and 5 respectively.

Point W1

Parameter	Sampling Method	Units of measure	Averaging period	Frequency
Rainfall	AM-4	millimetres per hour	1 hour	continuous
Wind speed at 10 meters	AM-2 & AM-4	meters per second	15 minutes	continuous
Wind direction at 10 meters	AM-2 & AM-4	Degrees in a clockwise direction from True North	15 minutes	continuous
Temperature at 2	AM-4	degrees Celsius	15 minutes	continuous

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meters

Temperature at 10 meters	AM-4	degrees Celsius	15 minutes	continuous
Sigma Theta	AM-4	Degrees in a clockwise direction from True North	15 minutes	continuous
Total Solar Radiation	AM-4	Watts per square meter	15 minutes	continuous

M5 Requirement to monitor volume or mass

M5.1 For each discharge point or utilisation area specified below, the licensee must monitor:

- a) the volume of liquids discharged to water or applied to the area;
- b) the mass of solids applied to the area;
- c) the mass of pollutants emitted to the air; at the frequency and using the method and units of measure, specified below.

Discharge Points (exact locations TBC)

Frequency	Unit of Measure	Sampling Method
Continuous during discharge	Kiloliters per day	By calculation (volume flow rate or pump capacity multiplied by operating time)

6 Reporting conditions

R1 Annual Return

R1.1 The proponent must provide an annual return to the EPA in relation to the development as required by any licence under the Protection of the Environment Operations Act 1997 in relation to the development. In the return the applicant must report on the annual monitoring undertaken (where the activity results in pollutant discharges), provide a summary of complaints relating to the development, report on compliance with licence conditions and provide a calculation of licence fees (administrative fees and, where relevant, load based fees) that are payable.

7 General Conditions

G1 Pollution Incident Response Management Plan

G1.1 The proponent must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises in accordance with section 153(A) of the Protection of the Environment Operations Act 1997. The proponent must keep the PIRMP on the premises at all times. The PIRMP must document systems and procedures to deal with all types of incidents (e.g spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. If a current PIRMP does not exist at the date on which this condition is attached to the licence, the proponent must develop a PIRMP within one month of that date.

G1.2 A notification protocol for downstream water users must be generated in consultation with downstream water users and the adjoining Willow Tree Gravels Quarry, should the EPL water quality limits be exceeded.

G2 Signage

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G2.1 Each monitoring and discharge point must be clearly marked by a permanent sign that indicates the EPA point identification number.

8 Special conditions

E1 Detailed Design Report

E1.1 Prior to commencing construction activities, the proponent must provide to the EPA for approval a detailed design report addressing the requirements of the *Environmental Guidelines: Solid Waste Landfills* (EPA, 2016). This report must be prepared by an appropriately qualified and experienced person as defined in the Landfill Guidelines. The report must contain:

- a) Detailed designs of the cell lining and leachate barrier system in accordance with Minimum Standards Part 1 of the Landfill Guidelines. If alternative designs are proposed, for example on the quarry walls, the design report must contain an assessment of the soundness of the in situ geology as per the requirements of Part 1.10.
- b) Detailed designs of final capping in accordance with Minimum Standards Part 9 of the Landfill Guidelines. If a phytocap is proposed as an alternative to an engineered barrier cap, the design report must address the design requirements for phytocaps set out in Minimum Standards Part 9.4.
- c) Construction Quality Assurance (CQA) Plans for all proposed construction works in accordance with Minimum Standards Part 11 of the Landfill Guidelines. The CQA Plans must include procedures to cover the proposed staged or incremental quarry wall lining technique (called the 'shingle' approach in the EIS).
- d) Water quality monitoring programs in accordance with Minimum Standards Part 4 of the Landfill Guidelines. These programs must include proposals to characterise existing (background) groundwater and surface water quality at and near the site before landfilling commences.

E2 Final Capping Requirements

E2.1 Six months prior to commencing progressive final capping, the proponent must submit the detailed design and quality assurance/quality control plan for the capping to the EPA. Final capping must not be undertaken until written approval for the design and QA/QC is received from the EPA. Where the final capping design does not conform to design specifications in EPA's *Environmental Guidelines: Solid Waste Landfill*, the proponent must provide supporting information that the alternative design will meet the environmental goals defined in the Guidelines.

Attachment B – Mandatory Conditions for all EPA licences

Administrative conditions

Activities must be carried out in a competent manner

Licensed activities must be carried out in a competent manner.

This includes:

- a. the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b. the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

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Maintenance of plant and equipment

All plant and equipment installed at the premises or used in connection with the licensed activity:

- a) must be maintained in a proper and efficient condition; and
- b) must be operated in a proper and efficient manner.

Monitoring and recording conditions

Recording of pollution complaints

The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

The record must include details of the following:

- the date and time of the complaint;
- the method by which the complaint was made;
- any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- the nature of the complaint;
- the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- if no action was taken by the licensee, the reasons why no action was taken.

The record of a complaint must be kept for at least 4 years after the complaint was made.

The record must be produced to any authorised officer of the EPA who asks to see them.

Telephone complaints line

The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

This condition does not apply until 3 months after this condition takes effect.

Reporting conditions

Annual Return documents

What documents must an Annual Return contain?

The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

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1. a Statement of Compliance,
2. a Monitoring and Complaints Summary,
3. a Statement of Compliance - Licence Conditions,
5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
7. a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.

A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

An Annual Return must be prepared in respect of each reporting, except as provided below

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

Where this licence is transferred from the licensee to a new licensee,

- a. the transferring licensee must prepare an annual return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b. the new licensee must prepare an annual return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an annual return in respect of the period commencing on the first day of the reporting period and ending on

- a. in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- b. in relation to the revocation of the licence – the date from which notice revoking the licence operates.

Deadline for Annual Return

The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

Notification where actual load can not be calculated

(Licences with assessable pollutants)

Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date.

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The notification must specify:

- a. the assessable pollutants for which the actual load could not be calculated; and
- b. the relevant circumstances that were beyond the control of the licensee.

Licensee must retain copy of Annual Return

The licensee must retain a copy of the annual return supplied to the EPA for a period of at least 4 years after the annual return was due to be supplied to the EPA.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- a. the licence holder; or
- b. by a person approved in writing by the EPA to sign on behalf of the licence holder.

A person who has been given written approval to certify a Statement of Compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review this licence.

Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act

Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Written report

Where an authorised officer of the EPA suspects on reasonable grounds that:

- a. where this licence applies to premises, an event has occurred at the premises; or
- b. where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,

and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

The request may require a report which includes any or all of the following information:

- a. the cause, time and duration of the event;
- b. the type, volume and concentration of every pollutant discharged as a result of the event;

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- c. the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; and
- d. the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- e. action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
- f. details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event;
- g. any other relevant matters.

The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

General conditions

Copy of licence kept at the premises or on the vehicle or mobile plant

A copy of this licence must be kept at the premises or on the vehicle or mobile plant to which the licence applies.

The licence must be produced to any authorised officer of the EPA who asks to see it.

The licence must be available for inspection by any employee or agent of the licensee working at the premises or operating the vehicle or mobile plant.

Reporting of fires

In the event of a fire at the facility the applicant must record:

- a) the time and date when the fire was deliberately started or reported;
- b) whether the fire was authorised by the applicant, and, if not, the circumstances which ignited the fire;
- c) the time and date that the fire ceased and whether it burnt out or was extinguished;
- d) the location of fire (eg. clean timber stockpile, putrescible garbage cell, etc);
- e) the prevailing weather conditions;
- f) any observations made in regard to smoke direction and dispersion;
- g) the amount of waste that was combusted by the fire; and
- h) the action taken to extinguish the fire.

The applicant or its employees or agents must notify the EPA in accordance with the above section 'Notification of environmental harm' of all fires at the premises within 7 days of the date on which the incident occurred.

Reporting of leachate discharge

Whenever leachate is discharged to surface waters from the premises the licensee must notify the event to the EPA in accordance with above section 'Notification of environmental harm'. The licensee must provide a written report of any leachate discharge(s) which exit the premises to the EPA within 7 days of the date on which the incident occurred.

The report must include the following information:

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- (a) the volume of the leachate discharged and over what time period the discharge occurred;
- (b) the date and time of the commencement of the overflow;
- (c) the weather conditions at the time of the discharge, specifying the amount of rainfall on a daily basis that had fallen: - on the day(s) of the discharge; and - for the one week period prior to the discharge.
- (d) the most recent monitoring results of the chemical composition of the leachate;
- (e) an explanation as to why the discharge occurred;
- (f) the location(s) of the discharge; and
- (g) a plan of action to prevent a similar discharge in the future.

Definitions

Attachment D: Draft Landfill Environmental Management Plan and Design Plans



Willow Tree Waste Management Facility

Landfill Environmental Management Plan

Liverpool Plains Shire Council

19 January 2024



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Glossary

Acronym/Terms	Definition
APZ	Asset Protection Zone
CRG	Community Reference Group
EIS	Environmental Impact Statement
EMR	Environmental Management Representative
EPA	Environment Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EPL	Environment Protection Licence
GSV	Gas Screening Value
HDPE	High density polyethylene
LEMP	Landfill Environmental Management Plan
LFG	Landfill Gas
LGA	Local Government Area
LPSC	Liverpool Plains Shire Council
OEMP	Operational Environmental Management Plan
OU	Odour Units
PE	Polyethylene
PoEO Act	<i>Protection of the Environment Operations Act 1997</i>
SOP	Standard Operating Procedure
UV	Ultraviolet
WHS	Work, Health and Safety
WHS Act	<i>Work Health and Safety Act 2011</i>
WTWMF	Willow Tree Waste Management Facility

1. Introduction

1.1 Background

Liverpool Plains Shire Council (LPSC or Council) is proposing to expand the Willow Tree Waste Management Facility (WTWMF) (the project) at Lot 213 DP 1173230, Merriwa Road, Willow Tree (the site) within the Liverpool Plains Local Government Area (LGA).

The staged expansion of the existing landfill at the WTWMF will occur in three stages. Stage 1 would involve construction of the Stage 1 basal and side wall liners, leachate barrier system and leachate basin as well as installation of a weighbridge, site office and amenities, resource recovery area including a community recycling centre, and drop-off locations for domestic customers for tyres, concrete, steel, green waste, bulky wastes, etc and small vehicles transfer station for domestic customers, for transfer by the site operator or collections contractor to the landfill cells.

1.2 Purpose

The purpose of this draft Landfill Environmental Management Plan (LEMP) is to provide a framework for site personnel for the operation of the landfill, with a focus on safe operational practices and suitable environmental management practices.

This draft version of the LEMP has been prepared to support the development application for the expansion – supplementary to the Environmental Impact Statement (GHD, 2023) (EIS), and specifically to demonstrate the safe operation of the facility as a result of the proposed layout of the facility.

1.3 Scope of this plan

Specifically, this plan includes:

- Overview of relevant regulatory guidance and compliance.
- Overview of site setting.
- Overview of historical and future landfill development.
- Description of landfill facility design.
- Description of landfill facility operations, including roles and responsibilities for employees involved in operation.
- Identification of potential key environmental performance issues.
- Overview of incident and contingency management procedures.
- Overview of environmental management, monitoring and reporting measures.

1.4 Revisions and updates

This LEMP is not a static document. It is a working document that requires regular review and updating to ensure ongoing suitability and effectiveness for environmental management at the WTWMF.

This LEMP shall be reviewed and updated regularly:

- To remain consistent with relevant regulations and guidelines.
- Should improvements to the management measures be required.
- To take advantage of new technologies, innovations and methodologies that are superior to the management measures presented in the current version of the LEMP.
- After changes are made with regards to landfill operations that may affect management measures in the current version of the LEMP.

Changes made to the LEMP, as well as the reasons for the changes made, will be documented as part of the review process. Copies of the original LEMP, as well as all future versions of the LEMP, shall be retained by Council and made available at prominent locations such as the weighbridge office, staff amenities etc.

At a minimum, this document will be reviewed and updated prior to the commencement of operation, every 5 years from commencement of operation and prior to the commencement of each landfill cell.

1.5 Limitations

This plan has been prepared by GHD for Liverpool Plains Shire Council and may only be used and relied on by Liverpool Plains Shire Council for the purpose agreed between GHD and Liverpool Plains Shire Council as set out in Section 1.2 of this plan.

GHD otherwise disclaims responsibility to any person other than Liverpool Plains Shire Council arising in connection with this plan. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the plan.

The opinions, conclusions and any recommendations in this plan are based on conditions encountered and information reviewed at the date of preparation of the plan. GHD has no responsibility or obligation to update this plan to account for events or changes occurring subsequent to the date that the plan was prepared.

The opinions, conclusions and any recommendations in this plan are based on assumptions made by GHD described throughout this plan. GHD disclaims liability arising from any of the assumptions being incorrect.

2. Site setting

2.1 Site location

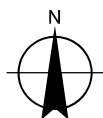
A summary of key site location details is provided in Table 2.1. The site locality and surrounding land is shown in Figure 2.1 and Figure 2.2.

Table 2.1 *Site information summary*

Item	Details
Address	Merriwa Road, Willow Tree, NSW, 2339
Land title	Lot 213, DP 1173230
Site landowner	Liverpool Plains Shire Council
Land zoning	SP1: Special Activities RU1: Primary Production
Overview of site location and surrounds	The site is surrounded by rural land with the Willow Tree township located 2 km northeast of the site. A privately run gravel quarry (Willow Tree Gravel Quarry) is located adjacent to the landfill site. Access to the site is provided off Merriwa Road. Merriwa Road is the only access route by road and connects the site directly to the township of Willow Creek Tree and the New England Highway. This highway is a major state road providing a direct transit route between the outer suburbs of Newcastle to the Queensland border.



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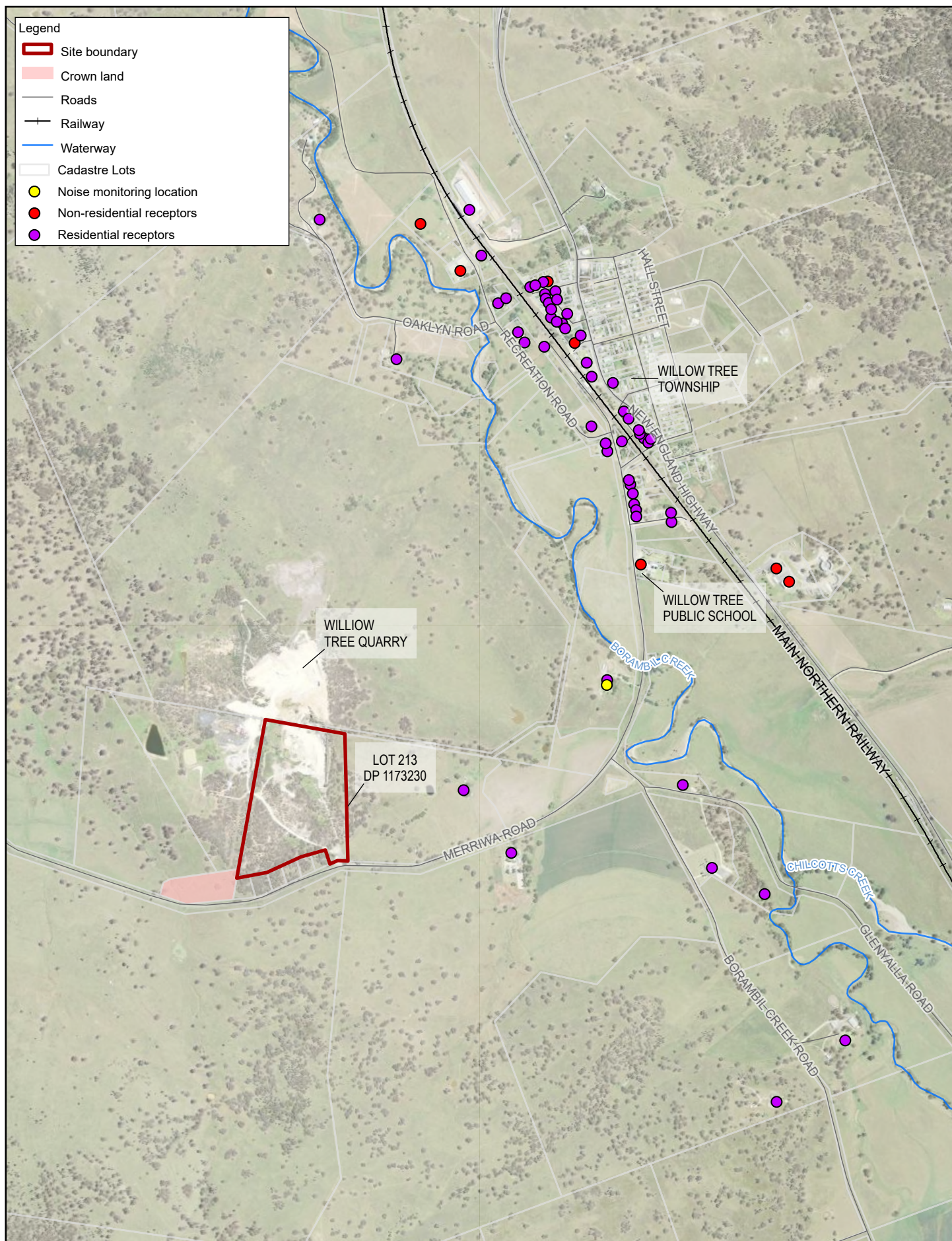
Liverpool Plains Shire Council
Willow Tree Waste Management Facility Expansion
Environmental Impact Statement

Project No. 12534581
Revision No. 0
Date 1/12/2022

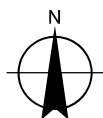
Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

Regional location

FIGURE 2.1



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0 200 400
Metres



Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

Liverpool Plains Shire Council
Willow Tree Waste Management Facility Expansion
Environmental Impact Statement

Project No. 12534581
Revision No. 0
Date 12/7/2022

Site context

FIGURE 2.2

2.2 Topography and hydrology

A roughly north-south trending ridge forms a central portion with an unsealed access track along it. The northern part of this ridge has been removed by quarrying such that the high point is now near the central western area of the site. The land slopes away from this high point in all directions.

The northern portion of the site has been modified by quarrying and landfilling whereas the southern portion is largely undisturbed. The northern portion generally drains towards a number of ponds that are central to this area and were likely formed during the quarrying activities. The southern and eastern portions sheet flow away in all directions from the high point, with an intermittent waterbody present in the southwestern corner of the site.

2.3 Hydrogeology and geology

2.3.1 Geological setting

Reference to the NSW Seamless Geology dataset (accessed via MinView) indicates the site is situated on lower Triassic age Banks Wall Sandstone [Tnrb] as shown in Figure 2.3.

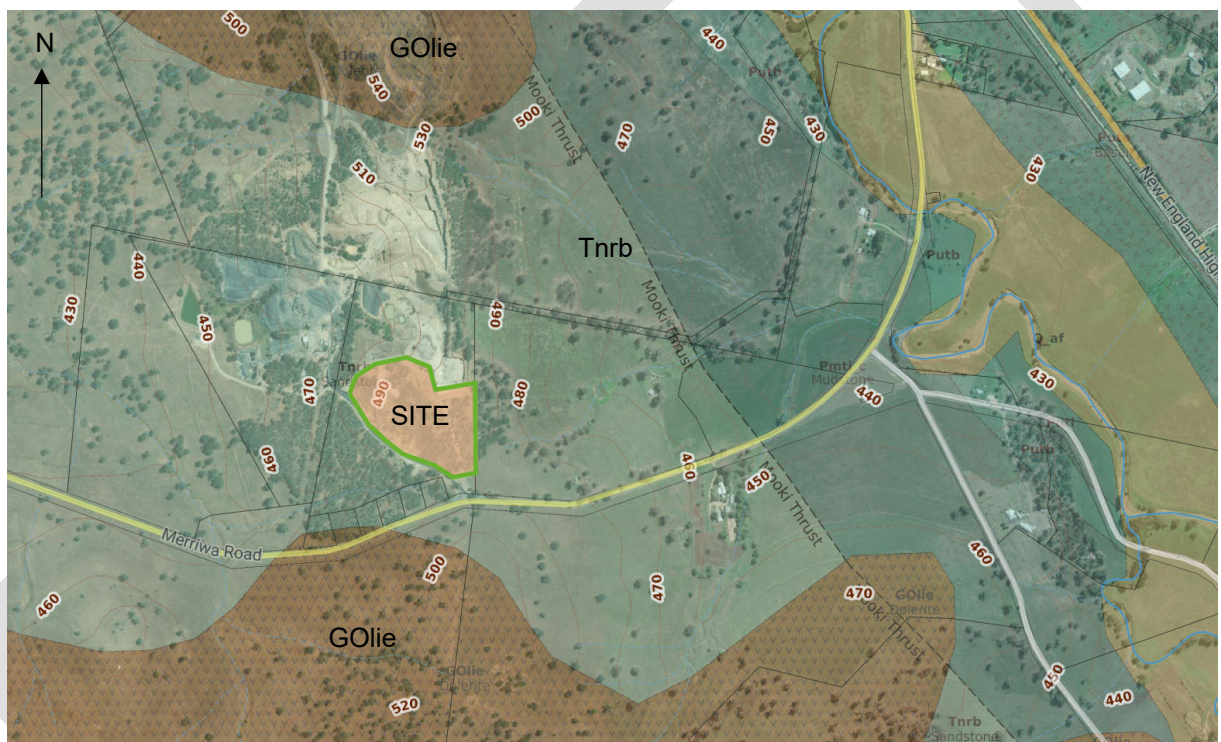


Figure 2.3 Geological setting

The superseded 1:250,000 scale Geological Series Sheet for Tamworth indicates that the site is situated on the Digby Conglomerate of the Narrabeen Group [Rrd].

As observed from bedrock outcrops on the site, this unit has bedding generally dipping toward a bearing of about 190° to 230° at 12° to 18° dip. The local lithology was observed to comprise conglomerate, pebbly sandstone and sandstone beds.

The Mooki thrust fault is located about 500 m to the north-east and dolerite capped hills, mapped as Liverpool East Basalt [GOlie], are about 1 km to the north of the site and south of Merriwa Road.

Willow Tree Gravel Quarry adjacent to the site quarries both the Liverpool East Basalt and Banks Wall Sandstone units to produce a variety of road and rail construction materials.

2.3.2 Soil landscape

Reference to the 1:100,000 scale Soil Landscapes of the Murrurundi map indicate that the site has a Ferrosol and Kandosol soil landscape. The soil landscape is characterised by undulating to rolling low hills with slopes ranging 5-15%. Slopes are typically 375-625 m long with elevation ranging from 400-460 m. Total relief is less than 50 m and a local relief of less than 30 m with minor to moderate erosion hazards. The typical soil profile consists of fine sandy loam to silt loam, overlying a loamy clay to clay.

2.3.3 Hydrogeology

Limited information is available on the hydrogeological conditions at the site. A review of nearby registered groundwater monitoring bores suggests groundwater levels significantly below the existing surface level.

2.4 Climate

Climate data for the site was obtained from the Bureau of Meteorology and is presented in Table 2.2 and Figure 2.4. Precipitation and temperature data was sourced from Murrurundi Gap AWS (Station no. 061392), located 11.8 km away from Willow Tree, NSW. Evaporation data was sourced from Lostock Dam (Station no. 061288), located 105 km away from the site.

Table 2.2 Climate statistics¹

Time period	Mean monthly rainfall (mm) (Murrurundi Gap AWS, no. 061392)	Mean monthly maximum temperature (°C) (Murrurundi Gap AWS, no. 061392)	Mean monthly minimum temperature (°C) (Murrurundi Gap AWS, no. 061392)	Mean monthly ² evaporation (mm) Lostock Dam, no. 061288)
January	65.9	28.5	16.6	189.1
February	68.9	27.2	15.7	145.6
March	79.1	24.4	14.2	124.0
April	32.4	20.9	11.2	96.0
May	34.7	16.7	8.1	77.5
June	63.9	13.0	5.9	66.0
July	47.5	12.6	5.0	77.5
August	42.3	14.7	5.8	108.5
September	46.2	18.4	8.5	138.0
October	55.7	21.7	11.0	167.4
November	86.8	24.3	13.0	174.0
December	83.6	26.4	14.7	207.7

¹ Climate data accessed 8 January 2024

² Calculated by multiplying daily evaporation by the number of days in that month, 28 days used for February.

Time period	Mean monthly rainfall (mm) (Murrurundi Gap AWS, no. 061392)	Mean monthly maximum temperature (°C) (Murrurundi Gap AWS, no. 061392)	Mean monthly minimum temperature (°C) (Murrurundi Gap AWS, no. 061392)	Mean monthly ² evaporation (mm) Lostock Dam, no. 061288)
Annual (total for rainfall/evaporation and average for temperature)	718.2	20.7	10.8	1,569.5

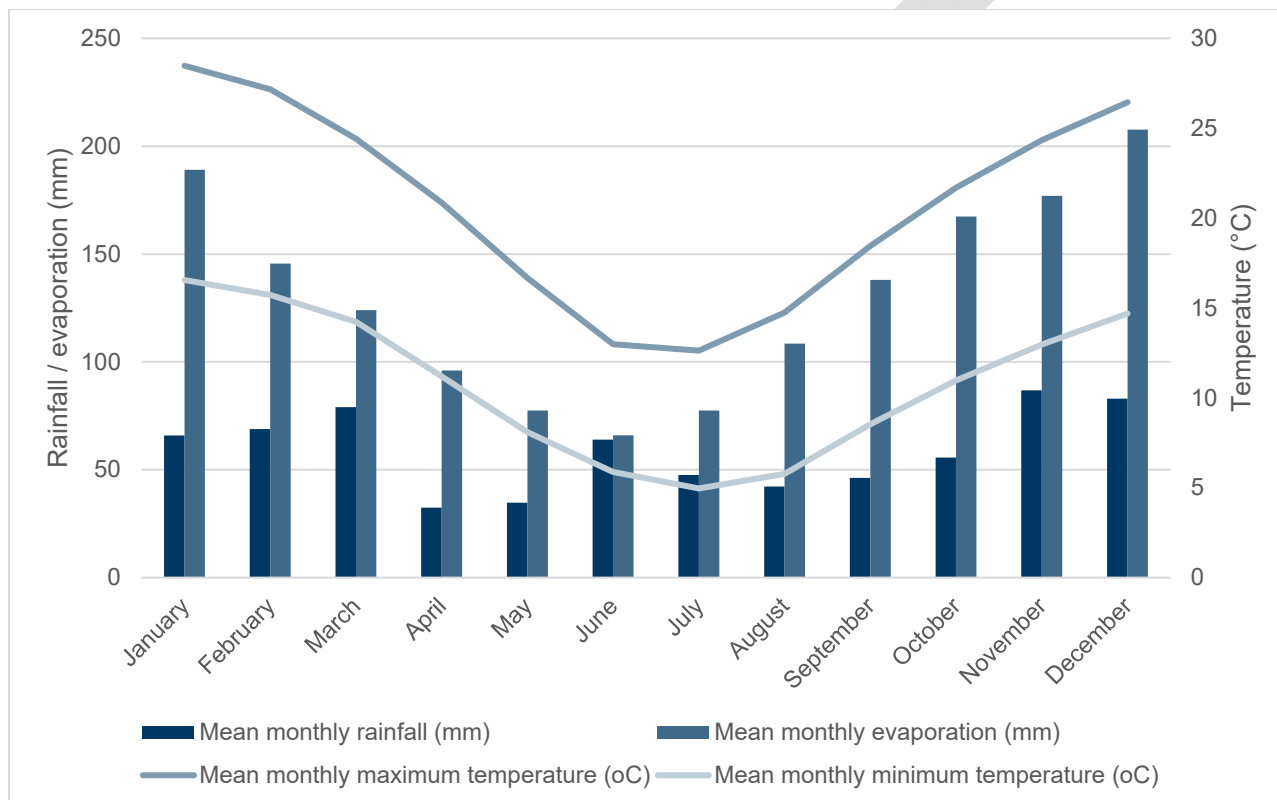


Figure 2.4 Climate statistics

The data shown above indicates the following:

- Mean monthly maximum and minimum temperatures are lowest during winter months (June - August) and highest during the summer months (December - February).
- Mean monthly rainfall varies across the year with the lowest during autumn and spring (April-May and July-October) and highest during summer and early autumn months (November-March).
- Estimated monthly evaporation is lowest during the late autumn and early winter months (May-July) and highest during late spring and summer months (September-February).
- Estimated monthly evaporation exceeds mean monthly rainfall for all months and estimated annual evaporation exceeds the estimated annual rainfall.

3. Regulatory guidance and compliance

3.1 General

The following key regulatory guidance documents have been considered in preparing this plan:

- Conditions of the Development Consent.
- Site Environment Protection Licence (EPL).
- NSW EPA (2016), Environmental Guidelines: Solid Waste Landfills, Second Edition (Landfill Guidelines).

These documents are discussed further below.

3.2 Conditions of consent

This section will be updated to consider the conditions of the Development Consent once issued following approval of the development application.

3.3 Environment Protection Licence

This section will be updated to consider the conditions of the site EPL once issued following approval of the development application.

3.4 Landfill Guidelines

The Landfill Guidelines provide guidance for the environmental management of landfills in NSW by specifying a series of 'Minimum Standards'. They involve a mix of design and construction techniques, effective site operations, monitoring and reporting protocols, and post-closure management. These guidelines have been considered with reference to the design and operation of the WTWMF, including the relevant environmental management measures.

4. Roles and responsibilities

The roles and responsibilities of key personnel are identified below in Table 4.1, in the context of this LEMP. If required, the same personnel may be utilised for multiple roles.

Table 4.1 *Roles and responsibilities*

Title	Role
Site manager	Overall responsibility for the management of the site and implementation of this LEMP.
Site supervisor	Supervision of site-based operational activities in accordance with this LEMP.
Site staff, including contractors	Day-to-day implementation of site-based operational activities in accordance with this LEMP.
Environmental management representative (EMR)	The EMR is responsible for overseeing the environmental management for the site and supervision of environmental activities. The EMR has the authority to stop work if an adverse impact on the environment has occurred or is likely to occur. The EMR will: - Be responsible for the presentation or certification of all environmental management plans and procedures. - Be responsible for considering and advising on matters specified in the conditions of this consent and compliance with such matters. - Oversee the receipt and response to complaints about the environmental performance of the site. - Facilitate an introduction and training program for all persons involved with operational activities.
Compliance officer	Council will employ or nominate a compliance officer for the WTWMF. The compliance officer will: - Be in charge of establishment and management of environmental monitoring contracts, wet weather monitoring and ad-hoc sampling as required and interpretation and management of monitoring data. - Report on results to relevant stakeholders, such as the site manager and NSW EPA if required.

5. Risk analysis

5.1 General

To guide the content of this LEMP, a risk analysis was completed for the operation of the landfill site, as guided by the EIS. It is noted that this is an overall risk analysis for the site operations rather than every specific activity that may occur. Risk assessments on a task/project level will be required for each operational activity, building on the guidance provided in this LEMP, as described in Section 5.2.

The key risks identified as part of this risk analysis, and the relevant section of the LEMP which addresses these risks are covered in Table 5.1.

5.2 Project or site-based risk assessment

Risk assessments on a task/project level will be required for each operational activity in terms of:

- Safe work methods: Safe work method statements shall be prepared for each operational activity. This should include a risk assessment to identify the relevant risks and guide the development of appropriate mitigation measures.
- Other: Project or site-based risk assessments may be carried out to assist in identifying additional environmental risks that may not have been assessed in the preparation of this LEMP. Examples include:
 - A change in legislation requires a change in operational practices and processes
 - Additional processes or activities are introduced that may increase the level of environmental risk.
 - When new and additional information concerning an environmental hazard becomes available.
 - When required by existing legislative requirements/

Table 5.1 *Operational risk analysis*

Hazard/s	Risk	Key mitigation measures
Poor air quality from dust and odour generated from vehicles and waste	Loss of amenity for neighbouring properties and sensitive receptors, fines	Maintenance of plant and equipment in good condition, dust suppression measures, minimise the size of the active landfill face, cover odorous waste, training. Refer to Sections 8.7 and 8.10 .
Noise levels above project noise trigger levels	Complaints from sensitive receptors, injury to on-site workers	Noise levels are predicted to be below the project noise trigger levels and within 2 dB of current levels with relevant precautionary measures in place. Refer to Section 8.11.
Native vegetation loss	Long-term impacts to habitat	None. Insignificant impacts expected to species or communities listed under the EPBC Act, with allowance for offsetting if required to be completed separate to this LEMP.
Contamination of surface water and groundwater receptors	Impaired surface water and groundwater receptors and associated ecosystems	Regular monitoring of surface water, discharges and groundwater, appropriate erosion controls, sediment pond management including discharges, leachate management controls. Refer to Sections 8.1, 8.3, 8.4 and 9.
Loss of culturally valuable items	Impacts to understanding/conservation of Aboriginal cultural heritage	None. No Aboriginal sites, no areas of potential archaeological deposit, low scientific significance of the site. Unexpected finds protocol to consider this item in separate construction environmental management plan documentation.
Loss of culturally valuable items	Impacts to understanding/conservation of non-Aboriginal cultural heritage	None. No archaeological features, low archaeological potential of the study area. Unexpected finds protocol to consider this item in separate construction environmental management plan documentation.
Poor traffic, transport and access management	Injury to on-site workers due to vehicle collision	Operational traffic management plan, speed limits, signage, separation of light and heavy vehicles. Refer to Sections 6.2 and 7.2.2.
Various safety risks from working at a landfill site, including working nearby quarry walls, shared traffic routes, working near water bodies, working with waste materials.	Injury due to fall/collision/exposure	Project or site-based risk assessments to be completed to generate suitable SWMS for the various site activities. Refer to Sections 5.2 and 7.5.
Modified landscape and impacts to visual amenity	Loss of amenity and complaints from nearby sensitive receptors	None. Low to negligible impacts on landscape character and visual amenity of the area
Storage and disposal of hazardous materials	Injury to on-site workers, environmental contamination and fines	Maintenance of hazardous material register, appropriate storage and labelling of hazardous materials. Refer to Section 8.12.

Hazard/s	Risk	Key mitigation measures
Bushfire or fire	Injury to on-site workers, loss of assets	Maintenance of vegetation, preparation of emergency preparedness and response management procedure, training, load inspections, waste separation, stockpile limits, fuel free zones, water supply, emergency access. Refer to Sections 6.2, 8.13 and 8.14.
Litter, residual waste	Environmental contamination, loss of amenity and fines	Routine checks, maintenance of equipment, covering of loads, litter collection. Refer to Sections 7.9 and 8.6.
Negative socio-economic impacts	Complaints from community	None. Expected positive impact on the local economy, social impacts are minimised due to distance from near neighbours.

6. Facility design

6.1 Facility layout

Table 6.1 summarises the various facilities that comprise the landfill expansion.

Table 6.1 Landfill facilities summary

Facility	Summary
Weighbridge, site office and amenities	Single weighbridge for vehicles entering and exiting the facility, including gatehouse for use as a site office and associated amenities, plus staff and visitor parking.
Resource recovery area	General area for resource recovery, may be utilised for community recycling, and drop-off locations for domestic customers for tyres, concrete, steel, green waste, bulky wastes, etc.
Small vehicles transfer station	Area for waste disposal by domestic customers, for transfer by the site operator or collections contractor to the landfill cells.
Landfill cells	Engineered landfill cells for waste disposal.
Landfill supporting infrastructure	Infrastructure to support the landfill cell operations, specifically the leachate pond and sediment pond.

The traffic and facility layout will be arranged such that the domestic customers can conduct their activities in a single traffic loop, and commercial vehicles can conduct their activities with safe delineation. It allows site users to drive-by and stop at the individual drop-off facilities, and to park their vehicles in designated areas where required. A domestic vehicle traffic route has been adopted to maximise waste diversion and recycling prior to domestic access to waste drop-off areas for landfilling. A conceptual arrangement for this is shown in Figure 6.1, noting this may evolve over time based on the recycling and drop off requirements of the community.

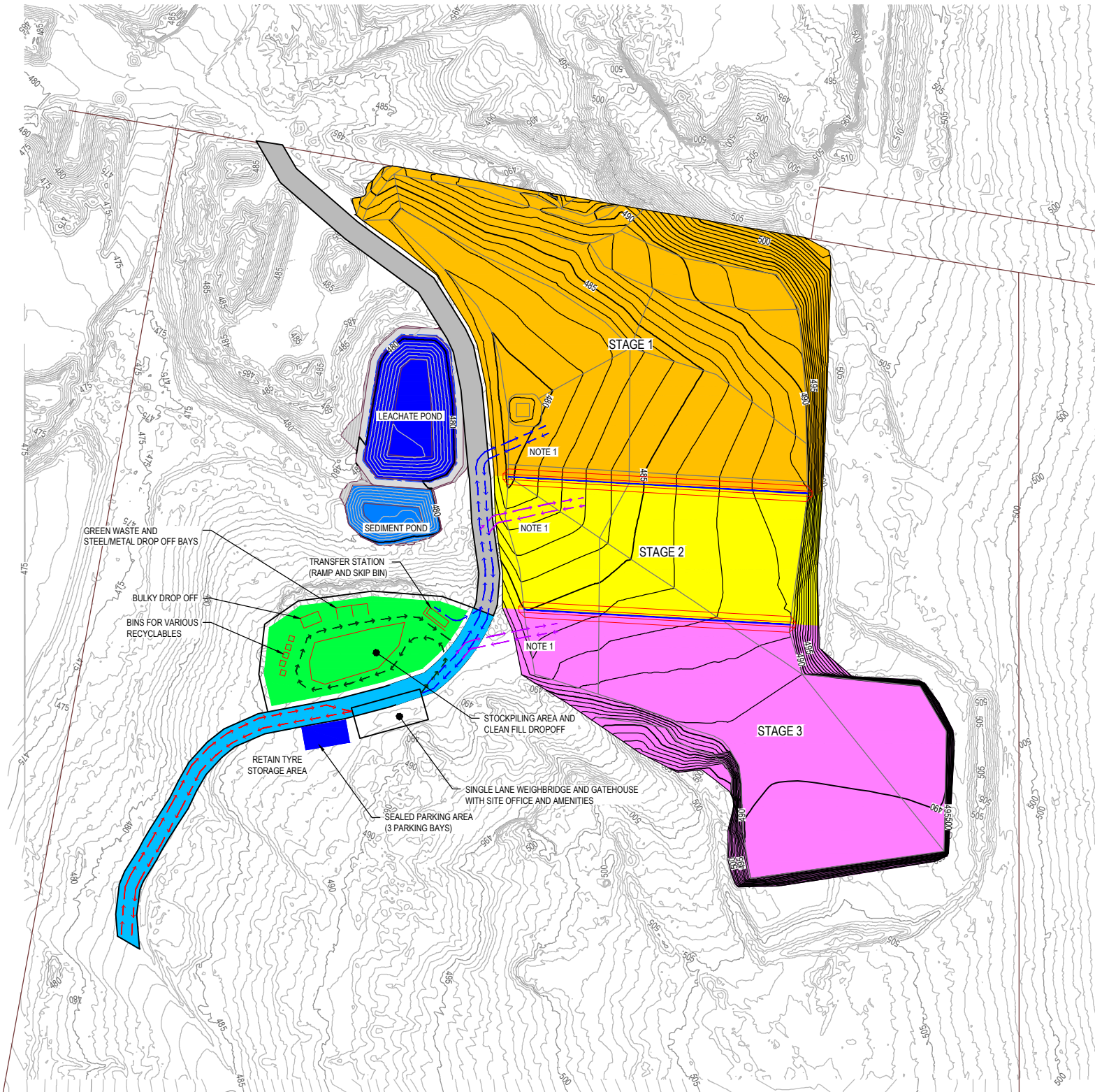
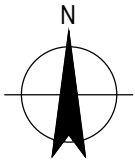
Provision has also been made for sufficient parking space for site staff, with safe access to the office and amenities buildings.

6.2 Access

Access arrangements would comprise the following:

- Access from the Merriwa Road via formalisation of the existing access track running through the site for both domestic and commercial vehicles.
- Combined access to the weighbridge for domestic and commercial vehicles, followed by delineation of these vehicles to separate routes.
- Access road for domestic vehicles to the resource recovery areas (to promote resource recovery in the first instance), followed by access to the small vehicles transfer station for residual waste disposal, and then access to the site exit route.
- Access road for commercial vehicles directly to the landfill cells, and then access to the site exit route. Safety measures to be implemented where commercial vehicles re-join and share domestic vehicle routes. Additional access for commercial vehicles to the small vehicles transfer station for waste transfer to the landfill cells.
- Access to the landfill cells will change as the different stages are brought online, shown in Figure 6.1. All three stages will utilise the existing unsealed access road, but will require a temporary road to the active tipping face, where the vehicles will utilise the landfill area as a turnaround bay.
- The access arrangements can also be utilised by emergency response vehicles to facilitate quick access in the event of an emergency, with additional access points via the adjacent quarry and directly to the south from Merriwa Road if needed.

A traffic management plan will be developed and implemented based on the above and included in the final LEMP, including safety measures such as vehicle route delineation, signage, speed limits, etc.



FACILITY LAYOUT
SCALE 1:1000

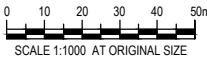
LEGEND:

	EXISTING CONTOURS
	DESIGN SUBGRADE CONTOURS
	CADASTRE
	DOMESTIC VEHICLES
	COMMERCIAL VEHICLES
	SHARED ROUTE
	FUTURE COMMERCIAL ACCESS TO STAGE 2/3
	UNSEALED ACCESS ROAD
	NEW SEALED ROAD

NOTES:

1. COMMERCIAL VEHICLES WILL UTILISE THE LANDFILL STAGE AREA FOR MANOEUVRING AND TURNAROUND DURING LANDFILL OPERATIONS.
2. SUITABLE RAMP TO BE INSTALLED FOR ACCESS INTO LANDFILL STAGE AT THE INITIATION OF EACH STAGE.
3. CONCEPTUAL ARRANGEMENT ONLY, SUBJECT TO DETAILED DESIGN.
4. ALL LOCATIONS ARE APPROXIMATE.

A	FOR APPROVAL	CN	JR	19/01/24
Rev	Description	Checked	Approved	Date
Author	R. LOPEZ	Drafting Check		
Designer	M. LE	Design Check		



Plot Date: 19 January 2024 - 4:31 PM Plotted by: Chris Nivison-Smith

File Name: \\ghdnet\ghd\PH\Cebu\Projects\21\12534581\CADD\Drawings\FOR CONSTRUCTION\12534581-FIG 6.1.dwg



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Project No.
12534581

Client	LIVERPOOL PLAINS SHIRE COUNCIL
Project	WILLOW TREE WASTE MANAGEMENT FACILITY
Status	FOR APPROVAL

Drawing Title
FACILITY LAYOUT

Status Code
S0

Drawing No.
12534581-FIG 6.1

Size
A1

Rev
A

6.3 Landfill staging

The expansion will occur in three stages that have been developed to facilitate ongoing access, leachate management and surface water management. The overall staging is shown in the Cell Arrangement Plan (Drawing No. 12534581-C003), with details on Stage 1 and 2 shown on Drawings C005 and C006 (see Appendix A).

6.4 Final landform

The final landform will be assumed to contain maximum approximately 1V:4H slopes with a minimum of 5% batters. As there is no specified future land use at present, the design sought to maximise landfill capacity across the expansion area. The final landform is shown in Drawing 12534581-C004 (see Appendix A).

6.5 Landfill design

For the landfill expansion, three leachate barrier systems will be utilised. Details are summarised in the following sections.

6.5.1 Basal liner

The basal liner is to be used for the cell base area which has minimum 1% grade toward the leachate sump. The basal liner profile is shown in Figure 6.2.

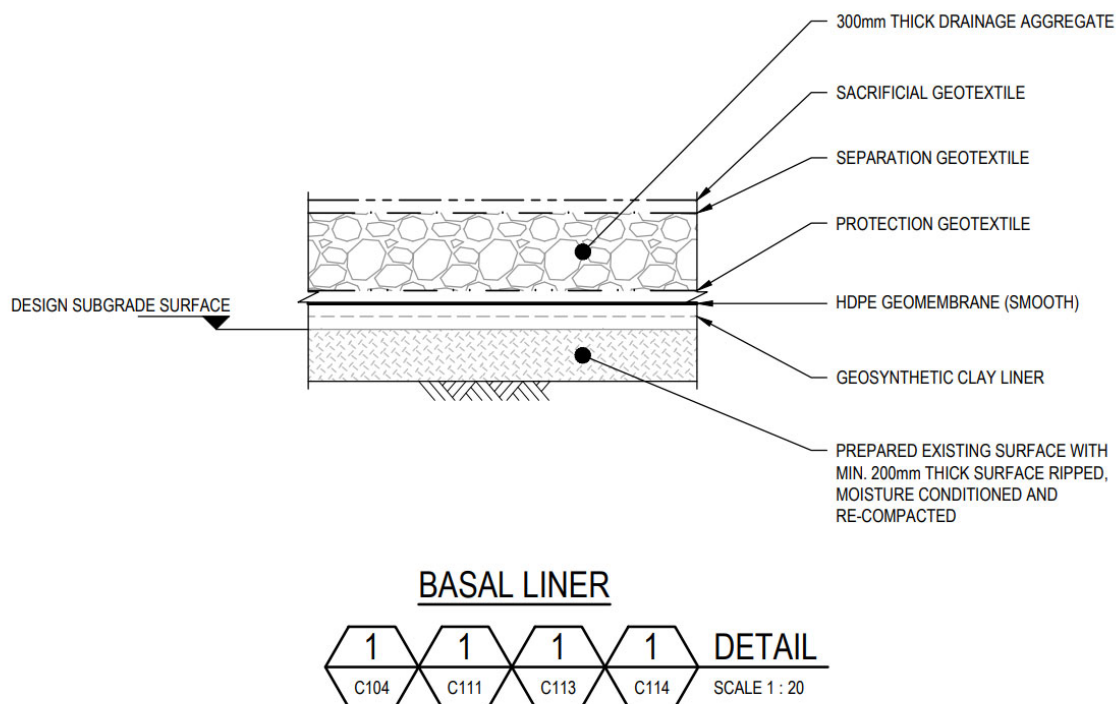


Figure 6.2 Proposed base area liner

The leachate barrier and collection system for the cell base area consists of a composite geosynthetic liner comprised of (from top to bottom):

- Sacrificial geotextile: A woven polyester geotextile will be utilised to prevent UV damage to the underlying geotextile.
- Separation geotextile: A non-woven polyester geotextile will be utilised between the drainage aggregate and waste layer.

- Drainage aggregate: A 300 mm thick layer of aggregate with PE pipework collects and conveys leachate to the leachate management system.
- Protection geotextile: A non-woven polyester geotextile will be utilised to protect the HDPE geomembrane sealing layer.
- HDPE geomembrane: A smooth HDPE geomembrane will be utilised for the base liner geomembrane. Smooth HDPE is preferred for use where strains allow, as it provides maximum durability and resistance to chemical degradation.
- Geosynthetic clay liner: A layer of sodium bentonite clay encapsulated between two geotextiles that are needle punched together for having consistent, very low permeability.

6.5.2 Batter liner

The batter liner is to be used for the cell area which has typically 1V:3V slope, connecting the basal and sidewall line systems. The batter area liner profile is shown in Figure 6.3.

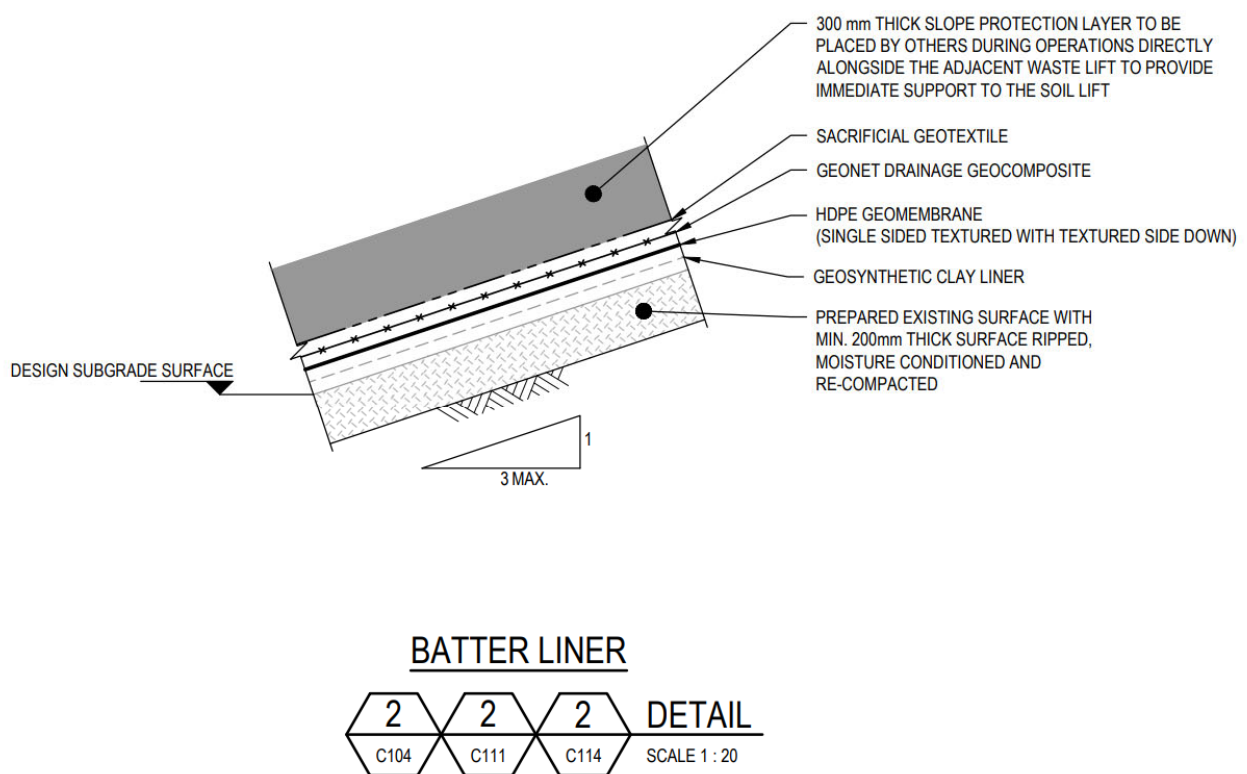


Figure 6.3 Proposed batter area liner

The leachate barrier and collection system consists of a composite geosynthetic liner comprised of (from top to bottom):

- Slope protection layer: A 300 mm thick layer sourced from off-site or the excess excavated material.
- Sacrificial geotextile: Same material as proposed for the basal liner.
- Geonet drainage geocomposite: A bi-planar geonet drainage geocomposite will be utilised as an alternative to drainage aggregate for improved constructability.
- HDPE geomembrane (single sided textured): A textured HDPE geomembrane will be utilised for the batter liner for additional slope stability.
- Geosynthetic clay liner: A layer of sodium bentonite clay encapsulated between two geotextiles that are needle punched together for having consistent, very low permeability.

6.5.3 Sidewall liner

The sidewall liner consists of progressively installed compacted clay berms. This provides a minimum 1 m thick clay liner across the steep existing quarry walls.

The proposed sidewall area liner is shown in Figure 6.4.

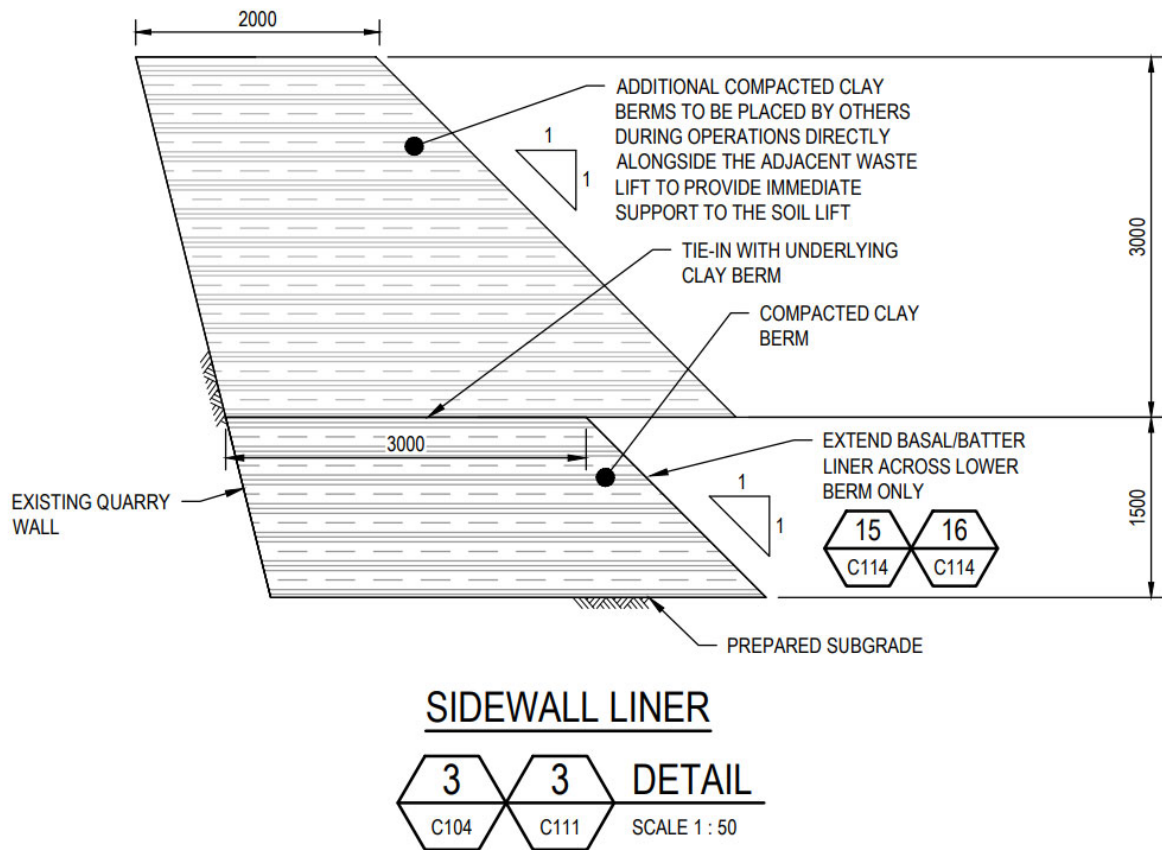


Figure 6.4 Proposed sidewall area liner

6.6 Surface water management

Incoming clean surface water flowing from surrounding terrain will be diverted around the landfill expansion area via diversion drains/banks.

Where possible, rainfall falling onto the footprint of the landfill cell would be prevented from coming into contact with waste via the application of soil (or other inert) cover materials. Sediment laden water would be opportunistically collected and/or diverted to the sediment pond for storage and settling prior to discharge.

The existing pond to be augmented to a sediment basin with a volume of 1,400 kL, based on the proposed landfill staging and sized in accordance with Landcom (2004), Manual Managing Urban Stormwater: Soils and Construction (Volume 1 and 2B). The basin naturally overflows to the west, via an open channel and would eventually discharge to Warrah Creek as the receiving water. Discharges will only occur in accordance with the site EPL, with consideration to the appropriate design storm event from Landcom (2004), including monitoring in accordance with Section 9.1.2. The water intercepted by the sediment pond will be reused for dust suppression where possible as part of site operations.

6.7 Leachate management

A leachate collection layer was included as part of the liner profile described above, including collection pipework in line with the Landfill Guidelines.

Leachate will be collected and transferred to the leachate pond for disposal via a sump riser and pump system. The leachate pond will be formed from an existing pond, with a leachate storage capacity of 3,200 kL based on infiltration and water balance modelling with consideration to the proposed landfill staging.

The leachate pond will be lined with a single sealing layer. Given potential issues with ongoing confinement and limited clay availability, a HDPE geomembrane sealing layer is utilised, with a geonet drainage geocomposite to allow for underdrainage and mitigate uplift. The pond liner profile is as follows (from top to bottom):

- HDPE geomembrane.
- Geonet drainage geocomposite.
- Prepared existing surface with min. 200 mm thick surface ripped, moisture conditioned and re-compacted.

6.8 Landfill gas management

Once sufficient waste is emplaced at the site, an assessment (pumping trial or similar) will be made as to whether landfill gas extraction is viable and relevant measures implemented, such as extraction pipework and flaring and/or LFG engines.

7. Facility operations

7.1 Hours of operation

The facility would operate from 7 am to 6 pm, 7 days per week.

7.2 Management, supervision and staffing

7.2.1 Staff structure

The site will be operated by suitably trained and experienced personnel as necessary to manage, supervise, operate and maintain the facility. Up to 5 staff would be employed at the site at any given time.

This shall include provision of staff to undertake the following activities:

- Provision of safe access and work areas.
- Planning of the staging of the landfilling operation.
- Overall management, supervision, operation and maintenance of the site and its waste management operations. This shall include personnel experienced in the operation of a solid waste management facility/landfilling operation.
- Maintenance of all site roads.
- Supervision of the active tipping face of any waste disposal area.
- Managing cover material at the site, including separation from incoming waste materials. Stockpiling, and transporting on-site using appropriate landfilling/earthworks equipment.
- Spreading, compacting and covering of the deposited waste using appropriate landfilling equipment/earthmoving equipment.
- Management, supervision, operation and maintenance of the recycling area/facilities.
- Management, operation and maintenance of all environmental management measures/controls at the site.
- Management, operation and maintenance of all other facilities and structures at the site including monitoring boreholes, fencing, gatehouse etc.
- Reporting of incoming vehicles including waste quantity, type and source.
- Securing the site to prevent unauthorised access.
- Maintaining signage.
- Responding to emergency situations.
- Reporting, as required by the EPL and to Council as required.

7.2.2 Traffic management

The site supervisor will maintain effective control of traffic at the site, and in particular in the active waste disposal area. The site supervisor will ensure that the equipment engaged in the movement, spreading, compaction and covering of deposited waste in the vicinity of any active tipping face is not operated in such a way as to constitute a risk to persons disposing of waste. Waste delivery vehicles and other contractor vehicles will be appropriately separated from operational traffic.

7.2.3 Logbook

An operator's daily logbook will be maintained for recording activities and incidents that occur during the operation of the site.

The activities and occurrences to be recorded should include, but are not limited to:

- Breaches of the site boundary fence, or any other incidents related to site security.
- Rejection of unacceptable wastes or waste loads.
- Incidents relating to health and safety of staff, visitors, contractors or customers.
- Incidents resulting in, or with the potential to cause environmental impacts.
- Malfunction or failure of plant and machinery.
- Malfunction or failure of controls and equipment for environmental management and monitoring.
- Complaints relating to site activities.
- Adverse weather conditions.
- Any failure of power supply or other utilities.

7.2.4 Training

Training will be undertaken to ensure that site staff operate the site in accordance with this LEMP, the EPL and other relevant guidelines and legislation, and will include training to ensure the following:

- All operators of plant and equipment are skilled in undertaking all required tasks.
- All staff inspecting incoming wastes are skilled in recording data accurately, and identifying unacceptable wastes.

In addition, regular training to all operative and managerial staff will be provided on the following topics:

- Waste identification and classification.
- Waste management / landfill practices.
- Waste management legislation and guidelines.
- Environmental requirements for landfilling, garden waste processing and recycling operations.
- Work health and safety regulations and practices.
- Fire control and management.
- First aid.

7.3 Equipment

Appropriate machinery, plant and equipment that is required for operation of this facility, in accordance with the requirements of this LEMP, will be maintained and/or engaged. This will include, but is not limited to, equipment for:

- Spreading, compaction and covering of deposited waste.
- Compacting, trimming, shaping, grading and levelling of cover layers.
- Any other operation required for the proper and efficient operation of the site, including managing the recycling wall.

All machinery, equipment, and plant will be operated in a proper and efficient manner and maintained in a proper and efficient working condition. In the event of equipment or plant failure, replacement plant or equipment will occur as soon as practical to ensure the requirements of the development consent and licence are fully complied with at all times.

7.4 Security

Outside operating hours the access gates will be locked by the site supervisor. Coded locks and/or keys will be provided by the site supervisor to contractors as required, and only Council provided locks will be used for access gates.

Keys to gates and buildings will only be kept by site employees and contractors required to access the site outside of normal working hours. Approval will be required from the site manager for issue of new keys to any party.

7.5 Health and safety procedures

All necessary precautions will be undertaken to ensure the safety of all personnel, users and visitors to the site. The supervising staff at the landfill will undergo a full induction prior to commencing work at the site. Inductions for operational staff or contractors conducting site works may be conducted by the inducted site supervisor.

The site manager will ensure that all employees are instructed concerning potential hazards at the landfill and that safe working practices are observed by all contractor staff.

First aid treatment facilities will be provided and maintained at the landfill and the site will have a person trained in first aid on site during all operating times.

It is Council's and its contractor's responsibility to be familiar with the provisions of the *Work Health and Safety Act 2011* ("the WHS Act") and regulations. The duties and all other obligations that the WHS Act places on an employer will be properly discharged by Council and its contractors, so that all employees are aware of their responsibilities under the WHS Act.

All necessary protective clothing and safety equipment will be made available and/or issued to all employees, is maintained in good condition, and is used where necessary.

Site infrastructure will be maintained such that it is adequate to meet the WHS requirements of Council and contractor personnel, as well as the general public. This includes ensuring large drops in ground level are appropriately barricaded.

All contractors employed at the site comply with applicable insurance and health & safety requirements. These companies include (but are not limited to) waste collection contractors, revegetation & landscaping companies, recycling contractors and environmental consultants.

Signage relating to safety on site will be clearly displayed for the public, staff and contractors visiting the site ensuring that safety precautions are adhered to. The types of signage include but not limited to:

- The types of wastes not accepted on site, e.g. combustible materials, unauthorised chemical drums.
- Location of first aid and fire extinguishers.
- Excluded or barricaded areas, e.g. around active tipping areas and basins.

7.6 Waste acceptance

The expanded WTWMF would receive a range of wastes, including:

- Landfill waste from LPSC 'red bin' garbage collection.
- 'Clean fill' (such as soil, sand, gravel, bricks or other excavated or hard material).
- Solid or liquid organic materials.

7.7 Waste screening program

All material accepted at the site for disposal or recovery are to be inspected and identified by site staff at the site entrance. All staff involved in acceptance of waste at the site entrance or in the relevant operational areas shall be appropriately trained in the identification and classification of solid waste.

Waste screening activities will typically comprise the following:

- Daily inspection of vehicles entering the landfill. Any consignments suspected to contain unacceptable wastes will be refused permission to deposit waste until the waste is verified as being acceptable. If applicable site staff shall require and collect appropriate evidence from the driver of the vehicle as verification that the waste is acceptable. This may include test certificates or approvals.
- Directing vehicles with unacceptable wastes to an appropriate disposal facility.
- Monitoring and inspection of wastes as they are discharged from vehicles at the waste disposal areas. Any waste suspected of being unacceptable shall be segregated and inspected closely to verify whether or not it is acceptable.
- Recording all incidents of identification of unacceptable wastes in the daily log, including:
 - Details of the waste e.g., type.
 - Source of the waste e.g., vehicle identification, driver identification and generator of the waste.
 - Recommended waste management facility(s).
 - Result(s) of contacting the waste management facility.
 - Date contacted EPA.

7.8 Unacceptable waste procedure

In the event that unacceptable waste is identified in an incoming vehicle, the vehicle will be refused entry, re-directed, and details of the incident recorded as described below. Site personnel will advise the driver of the vehicle of appropriate waste management facilities, or to contact the EPA for advice on appropriate management of the unacceptable waste.

In the event that unacceptable waste is identified during deposition by a vehicle, staff will immediately segregate and contain the waste away from the active landfilling area or recycling area. Site personnel will record the details of the waste, such as type, the source, and the vehicle and driver identification. Site personnel will advise the driver of the vehicle that the waste is not acceptable and may load the waste back onto the vehicle where practical and safe to do so. The vehicle will then be escorted from the landfill by site personnel. Site personnel will advise the driver of the vehicle to contact the EPA for advice on the appropriate management of the unacceptable waste.

In the event that unacceptable waste is identified during the spreading and compacting of deposited waste or stockpiling at the site, site personnel will segregate and contain the waste away from the active waste disposal or recycling areas. Site personnel will make all practical efforts to identify the source of the waste, including:

- Inspecting the waste for possible identification labels on containers.
- Identifying the type of waste and consequently the possible sources.

Site personnel will contact the EPA to confirm appropriate management options and will document the final disposition of the unacceptable waste in accordance with the EPA's requirements.

7.9 Waste handling, deposition and compaction

7.9.1 Waste handling

All handling of waste at the site will be in a safe manner and will be carried out with waste handling equipment where possible. Manual handling will be limited to a necessary minimum.

Site staff will be observant with regard to wastes that might be on fire or smouldering during all waste handling activities, in particular during unloading of waste consignments.

7.9.2 Waste deposition

Waste delivered by domestic customers in small vehicles will be deposited in the appropriate bunkers at the transfer station. From here the waste will be transferred to the landfill working area by internal Council vehicles. Loads in large trucks will by-pass the transfer station and access the working area of the landfill directly.

The waste is ideally placed in lifts not exceeding 3,000 mm in uncompacted depth, in a working face with a slope between 1V:3H and 1V:4H, which allows for optimum compaction effect.

During placement, the machine operators will be alert to any potentially dangerous objects that may not have been detected during screening. This may include gas bottles and pressurised spray containers, or any other objects or containers that may potentially explode or ignite when compacted. Any such objects will be removed from the working area prior to compaction of the waste, as well as any unsuitably large or hollow bulky items that may cause voids within the waste mass.

7.10 Daily and intermediate cover

The following measures will be implemented during placement of daily and intermediate cover:

- Daily cover will be placed on the active landfill area to a minimum thickness of 150 mm or application of approved alternative cover material.
- Intermediate cover will be placed in any waste-filled areas that have not been landfilled for more than 90 days to a minimum of 300 mm thickness.

7.11 Wet weather operation

Council will ensure that the landfill is able to accept solid waste under all reasonable weather conditions without compromising the environmental management of the site. This may include placing adequate broken rocks, bricks, concrete or road-base type materials at the filling area to facilitate access. If access issues are encountered during wet weather, waste may be deposited near the front of the waste disposal area and pushed to the back of this area by waste handling equipment.

7.12 Waste recording and reporting

All vehicles leaving the site will have a receipt completed and issued by the weighbridge operator using the proprietary weighbridge software. The receipt will include the vehicle registration and waste classification, and destination of the material exported. The weighbridge at the site will be manned by Council at all times during operating hours to ensure that all vehicles are recorded.

The following records should be kept and retained at the landfill operations office:

- A copy of this LEMP, and its various attachments and addendums.
- Logbook.
- Operator procedures manual.
- Worksite WHS manual.
- Copies of all licences, approvals and permits.

8. Environmental management measures

8.1 General

The following section describes environmental management measures for the operational environmental risks identified in the EIS and the risk analysis in Section 5. Should specific management plans be required in addition to the management strategies described below, these will be prepared and included in the final version of this LEMP.

8.2 Surface water

8.2.1 Environmental goals and principles

The environmental goals for surface water management on site are:

- To minimise erosion.
- Reduce the sediment load of stormwater discharge from site.

8.2.2 Management strategy

The following mitigation and management measures would be implemented:

- Erosion and sediment control measures and planning.
- Appropriate sediment pond management, including controlled discharges where warranted.
- Ongoing monitoring of surface water quality.

In addition, other management measures stipulated in this LEMP will support surface water management, including:

- Leachate minimisation, containment, collection, storage and disposal measures.

8.2.3 Performance indicators/targets

- Meet the requirements of Section 120 of the POEO Act 1997
- Surface water will be monitored as required in Section 9.1.2, to ensure water discharged offsite meets the license limits and does not cause environmental harm.

8.2.4 Reporting and review

Reporting will be as per the EPL, which is likely to include:

- Reporting in the event of any exceedances.
- Annual reporting to the NSW EPA as part of licence requirements.

8.3 Groundwater

8.3.1 Environmental goals and principles

The environmental goals for groundwater management on site are:

- No significant impacts on groundwater quality.
- No significant impacts to groundwater users.

8.3.2 Management strategy

The following mitigation and management measures would be implemented:

- Ongoing monitoring of groundwater quality.

In addition, other management measures stipulated in this LEMP will support groundwater management, including:

- Leachate minimisation, containment, collection, storage and disposal measures.

8.3.3 Performance indicators/targets

- Meet the requirements of Section 120 of the POEO Act 1997
- Groundwater will be monitored as required in Section 9.1.1, to ensure no environmental harm is being evidenced in the nearby groundwater table.

8.3.4 Reporting and review

Reporting will be as per the EPL, which is likely to include:

- Reporting in the event of any exceedances.
- Annual reporting to the NSW EPA as part of licence requirements.

8.4 Leachate

8.4.1 Environmental goals and principles

The environmental goals for leachate management on site are:

- To prevent the contamination of surface water and groundwater over the life of the landfill
- Prevention of the degradation of local amenity

8.4.2 Management strategy

The following mitigation and management measures would be implemented:

- Lining of the landfill cells to prevent contamination of water resources.
- Collection infrastructure within the landfill cells to transfer leachate to the evaporation pond.
- Covering and capping of waste to minimise leachate generation.
- Storage of leachate in a lined evaporation pond with sufficient freeboard prior to disposal via evaporation.
- Routine monitoring.

8.4.3 Performance indicators/targets

- Meet the requirements of Section 120 of the POEO Act 1997.
- Leachate will be monitored as required in Section 9.1, to ensure leachate complies with the licence and is not impacting the quality of surface water and groundwater.

8.4.4 Reporting and review

Reporting will be as per the EPL, which is likely to include:

- Reporting in the event of any exceedances.
- Daily logs.

8.5 Landfill gas

8.5.1 Environmental goals and principles

The environmental goals for landfill gas on site are:

- Minimise emissions of untreated landfill gas to air and through sub-surface strata and services.
- Minimise greenhouse gas emissions.
- Minimise emissions of offensive odour.
- Minimise the explosive risk to humans from gas build-up in confined spaces.
- Ensure that, wherever feasible, landfill gas is sustainably utilised for energy recovery.
- Minimise emissions of air pollutants from the combustion of landfill gas in flaring or electricity-generating equipment.

8.5.2 Management strategy

The following mitigation and management measures would be implemented:

- Surface, sub-surface and building monitoring as required.
- Installing infrastructure to contain, collect and treat landfill gas, depending on a site-specific assessment.

8.5.3 Performance indicators/targets

- No detectable sub-surface off-site migration of landfill gas.
- No detectable surface emissions of landfill gas or accumulation in enclosed structures above assessment criteria.

8.5.4 Reporting and review

Reporting will be as per the EPL, which is likely to include:

- Reporting in the event of any exceedances.
- Annual reporting to the NSW EPA as part of licence requirements.

8.6 Litter

8.6.1 Environmental goals and principles

Based on the Landfill Guidelines, litter control aims to:

- Prevent degradation of local amenities by litter from the landfill or by mud and litter attached to vehicles leaving the landfill.
- Prevent contamination of on-site water bodies.

8.6.2 Management strategy

The following mitigation and management measures would be implemented:

- Regular application of daily cover in accordance with Section 7.10.
- Routine checks at waste sorting and storage areas for cleanliness, hygiene and WHS issues and contaminated waste materials.
- Weekly inspection of perimeter fences and clearing of litter as required.
- Avoiding servicing bulk bins from the transfer station during periods of high wind.
- Regular litter collection by site staff / labour hire.

- Covering all loads entering the site and during transit within the WTWMF.
- Prompt, efficient placement, continuous compaction and covering of waste when unloading.
- Proper management, transportation and disposal of rejects and other contaminated waste (including contaminated materials, hazardous materials and liquid wastes if any) in accordance with licensing requirements.

8.6.3 Performance indicators/targets

- No litter arising from the landfill operations.
- No litter arising from the transportation of waste to and from the WTWMF.

8.6.4 Reporting and review

Reporting will be as per the EPL, which is likely to include:

- Reporting in the event of any incidents.
- Annual reporting to the NSW EPA as part of EPL requirements.

8.7 Dust

8.7.1 Environmental goals and principles

Based on the Landfill Guidelines, dust control is aimed at:

- Prevention of dust and other particulate matter beyond landfill boundaries.
- Prevention of the degradation of local amenity.

8.7.2 Management strategy

The following mitigation and management measures would be implemented:

- On days with forecast and actual high winds (i.e over 10 m/s) reduce work effort accordingly if wind-blown dust is observed to be leaving the site boundary.
- Plant and equipment should be maintained in good condition to minimise ignition risk, spills and air emissions that may cause nuisance.
- Dust suppression should be undertaken as required using water sprays, water extension agents, soil stabilising polymers or other media on:
 - Unpaved work areas subject to traffic or wind.
 - During the loading and unloading of dust generating materials.
 - Unpaved access tracks.
- If the works are creating levels of dust which may significantly impact on residential amenity, the works should be modified or stopped until the dust hazard is reduced to an acceptable level.
- On days with high background dust levels (due to fire or offsite dust events for example), increase dust mitigation in the form of watering or reduce dusty construction activities.
- Vehicles with potential for loss of loads (such as dust or litter) should be covered when using public roads.
- Wetting down unsealed trafficable areas.

In addition, other management measures stipulated in this LEMP will support dust control, including:

- Waste handling and deposition in accordance with Section 7.9.1 and 7.9.2.
- Enforced site speed limits.
- Regular maintenance of site plant and equipment (including washdowns).

8.7.3 Performance indicators/targets

- Meet the requirements of Sections 124, 125 or 126 of the POEO Act 1997.
- No visible dust from the site beyond the boundary of the site.
- All on site staff adequately trained in dust minimisation procedures and techniques.
- No complaints from neighbouring landholders.

8.7.4 Reporting and review

Reporting will be as per the EPL, which is likely to include:

- Reporting in the event of any exceedances.
- Annual reporting to the NSW EPA as part of licence requirements.

Additionally, a site environmental checklist will be maintained.

8.8 Pests and vermin

8.8.1 Environmental goals and principles

Based on the Landfill Guidelines, pest and vermin control aims:

- To minimise the sources of food and habitat,
- To employ professional exterminators if an outbreak is detected,

8.8.2 Management strategy

The following mitigation and management measures would be implemented:

- Compaction and covering of deposited waste.
- The site will be maintained in a clean and tidy condition at all times.
- The use of insecticides and pesticides, as required. Where chemicals are used, site staff will ensure that these do not enter the surface water management system and/or present a significant risk of environmental pollution.

8.8.3 Performance indicators/targets

- No pest and vermin on the site.
- No domestic customer complaints.

8.8.4 Reporting and review

Issues should be reported at site meetings and a site environmental checklist should be maintained.

8.9 Weed management

8.9.1 Environmental goals and principles

Based on the Landfill Guidelines, weed control aims to achieve:

- No spread of weeds off site to surrounding areas.

8.9.2 Management strategy

Weed and pathogen management will be undertaken in accordance with a Weed and Pathogen Management Plan (to be developed as part of the finalisation of this LEMP). It is likely to include the use of pesticides, as required.

Where chemicals are used, site staff will ensure that these do not enter the surface water management system and/or present a significant risk of environmental pollution.

8.9.3 Performance indicators/targets

- No weeds on the site.
- No evidence of high nutrient sediment runoff.

8.9.4 Reporting and review

Issues should be reported at site meetings and a site environmental checklist should be maintained.

8.10 Odour

8.10.1 Environmental goals and principles

Based on the NSW EPA Landfill Guidelines, odour control on site is aimed at:

- Prevention of degradation of local amenity.
- Prevention of landfill gas emissions.
- Achieving no detectable odours at the nearest residential receptor.
- If warranted, gas capture and destruction.

8.10.2 Management strategy

The following mitigation and management measures would be implemented:

- Minimising the size of the active landfill face.
- Establishing 24 hour emergency maintenance agreements with equipment manufacturers to limit the impact of equipment failures.
- Priority compaction and covering of any wastes with significantly odorous potential.
- Staff training.

8.10.3 Performance indicators/targets

- Meet the requirements of Section 129 of the POEO Act 1997.
- Achieving no detectable odours at the nearest residential receptor.
- No odour complaints.

8.10.4 Reporting and review

Reporting will be as per the EPL, which is likely to include:

- Reporting in the event of any exceedances.
- Annual reporting to the NSW EPA as part of licence requirements.

8.11 Noise

8.11.1 Environmental goals and principles

Based on the Landfill Guidelines, noise control aims to:

- Prevent noise pollution.
- Avoid significant impacts on the community or environment.

8.11.2 Management strategy

The following mitigation and management measures would be implemented:

- Maintaining all landfill plant and machinery in proper working order.
- Ensuring all vehicles accessing the site use the designated access roadways.
- Operating plant and equipment within specified working hours.
- If required, plant and equipment shall be fitted with silencers.

8.11.3 Performance indicators/targets

- Within noise criteria in the NSW Industrial Noise Policy, NSW Road Noise Policy and Assessing Vibration: A Technical Guide as applicable.
- No noise complaints from surrounding landholders.

8.11.4 Reporting and review

Reporting will be as per the EPL, which is likely to include:

- Reporting in the event of any exceedances.
- Annual reporting to the NSW EPA as part of licence requirements.

8.12 Hazardous materials and substances

8.12.1 Environmental goals and principles

Hazardous material management aims to:

- Prevent injury to on-site staff and the public.
- Prevent environmental contamination.

8.12.2 Management strategy

The following mitigation and management measures would be implemented:

- All hazardous substances that may be required for operation would be stored, managed, maintained and handled in accordance with the *Code of practice for the storage and handling of dangerous goods* (WorkCover NSW, 2005) and the *Hazardous and Offensive Development Application Guidelines: Applying SEPP 33 (DoP, 2011)*, *Safe Working Method Statement*.
- The storage and disposal of hazardous materials, and refuelling/maintenance of construction plant and equipment, would consider the following:
 - Storage and disposal would be undertaken in clearly marked designated areas that are designed to contain spills and leaks.
 - The storage and disposal of hazardous materials and dangerous goods would be undertaken in accordance with all relevant Australian Standards and regulatory requirements.
 - Fuels, chemicals and liquids would be appropriately stored on an impervious base that must be able to withstand fuel or chemical spills without degradation.
 - The fuels and chemicals stored must be compatible (i.e. will not react with each other). The safety data sheets would be consulted in this regard.
 - For liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume, within the bund.
 - The storage facility would be undercover.
 - All containers would be labelled with the details of the contents.
 - Safety data sheets would be available at the site.

- The fuel/ oil storage facility would be inspected for compliance to the above requirements.
- Spill kits would be kept at fuel, oil and chemical storage locations.

8.12.3 Performance indicators/targets

- No spills beyond the boundary of the site.
- All on site staff adequately trained in clean-up procedures.

8.12.4 Reporting and review

Reporting will be as per the EPL, which is likely to include:

- Reporting in the event of any incidents.
- Annual reporting to the NSW EPA as part of licence requirements.

8.13 Fire control and emergency preparedness

8.13.1 Environmental goals and principles

Fire control and emergency preparedness on site aims to:

- Minimise risk to any on-site staff and the public.
- Controlling any incidents to minimise injury and damage to equipment, property and the environment.

8.13.2 Management strategy

The following mitigation and management measures would be implemented:

- Preparation of an emergency preparedness and response management procedure (to be included in the final LEMP). This will include procedures, training, emergency services notifications and evacuation plans to ensure site personnel and equipment is incident ready.
- Provision of suitable firefighting equipment, including automatic fire sprinkler systems, fire hoses and/or fire extinguishers in buildings and other nominated areas.
- Monitoring, testing and maintenance of firefighting equipment on a regular and programmed basis.
- Provision of full capacity water tanks dedicated to firefighting purposes. Based on the facility layout, these would be located at the site entrance and nearby the active landfill cell based on the filling stage.
- Weekly visual inspection and six-monthly certification of fire response supplies.
- Training of site personnel to extinguish small fires and fire suppression.
- Education and understanding of site fire drills by employees.
- No lighting of fires or burning of materials will be allowed, with fire ban warning signs displayed on site.
- Inspection of incoming loads for potential fire sources.
- Separation of combustible materials include tyres, wood and vegetation.
- Storage of processed materials in dedicated areas/stockpiles and limited in height to 3 metres.
- Daily cover materials used onsite are to be non-combustible.
- Restrictions to smoking on site.
- Where possible, maintaining water within basins on-site for use in emergency fire suppression if required.
- Accessibility for emergency response vehicles to the site.

In addition, other management measures stipulated in this LEMP will support fire control and emergency preparedness, including:

- Regular application of daily or intermediate cover in accordance with Section 7.10.
- Having suitable earthmoving machinery on-site to facilitate fire control. Earthmoving machinery (and operators) such as site excavators, compactors, tractors and a 10 m³ water cart (and driver/operator) can be

utilised to attend to fires in emergency situations. Fire suppression using earthmoving machinery and a mobile water cart is successful in extinguishing most surface landfill fires if fires are detected and responded to early, while they are small. The water cart with a fire water hose dispersion system should be able to project water at least 50 m in distance from the truck. Installation of fire suppression systems for plant should be implemented.

8.13.3 Performance indicators/targets

- All on site staff adequately trained in emergency procedures.
- Adequate control of an emergency situation by on-site staff.

8.13.4 Reporting and review

Reporting will be as per the EPL, which is likely to include:

- Reporting in the event of any incident.
- Annual reporting to the NSW EPA as part of licence requirements.

8.14 Bushfire

8.14.1 Environmental goals and principles

Bushfire control on and adjacent to the site aims to:

- Minimise risk to any on-site staff and the public.
- Controlling any incidents to minimise injury and damage to equipment, property and the environment.

8.14.2 Management strategy

The following mitigation and management measures would be implemented:

- Asset Protection Zones (APZ) and fuel breaks (i.e. a fuel free zone) are to be provided where warranted and APZ landscaping is to be managed by the site staff.
- Static water supplies are to be accessible, in the form of water storage tanks at the site entrance and nearby the active landfill cell.

In addition, other management measures stipulated in this LEMP will support bushfire control, including:

- Preparation of an emergency preparedness and response management procedure (to be included in the final LEMP) in accordance with Section 8.13. This will include procedures, training, emergency services notifications and evacuation plans to ensure site personnel and equipment is incident ready. It will also include evacuation plans and consider multiple access routes for evacuation and/or emergency response vehicles.
- Stockpile management as per Section 8.13.

9. Environmental monitoring

9.1 Groundwater, surface water and leachate monitoring

9.1.1 Groundwater

Groundwater monitoring will be undertaken in accordance with the requirements of the site EPL and any relevant consent conditions to ensure the site's operation is not causing a detrimental environmental impact. This section will be updated to reflect those documents once issued. It is expected that these will largely reflect the commitments of the EIS (GHD, 2023), which was derived from the NSW Landfill Guidelines (EPA, 2016).

A minimum of three groundwater monitoring wells will be installed (one upgradient and two downgradient of the landfill) and for monitored for the parameters listed in Table 9.1. Relevant assessment criteria will be established as part of the finalisation of this LEMP.

Table 9.1 Groundwater monitoring program

Parameter	Units	Frequency	Sampling method
pH, Redox potential, temperature	various	Quarterly	Probe
Standing water level	m AHD		In situ
Electrical conductivity, total dissolved solids	various		Grab sample
Major cations and anions	mg/L		
Alkalinity	mg/L		
Total organic carbon	mg/L		
Ammonia and nutrients	mg/L		
Dissolved metals	mg/L	Annually	
Organic contaminants	mg/L		

9.1.2 Surface water

Surface water monitoring will be undertaken in accordance with the requirements of the site EPL and any relevant consent conditions to ensure the site's operation is not causing a detrimental environmental impact. This section will be updated to reflect those documents once issued. It is expected that these will largely reflect the commitments of the EIS (GHD, 2023), which was derived from the NSW Landfill Guidelines (EPA, 2016).

Monitoring locations will include the sediment basin, upstream on Warrah Creek, and downstream on Warrah Creek. Warrah Creek surface water monitoring locations will be determined on suitability and access requirements. These will be monitored on a quarterly basis for the parameters listed in Table 9.2. Relevant assessment criteria will be established as part of the finalisation of this LEMP.

Table 9.2 Surface water monitoring program

Parameter	Units	Sampling method
pH	pH units	Probe
Dissolved oxygen	mg/L	Probe
Electrical conductivity	µS/cm	Probe
Turbidity	NTU	Onsite meter or grab sample
Total suspended solids	mg/L	Grab sample
Total dissolved solids	mg/L	

Major cations (calcium, magnesium, sodium, potassium)	mg/L
Bicarbonate as CaCO ₃	mg/L
Sulfate (filtered)	mg/L
Chloride	mg/L
Total organic carbon	mg/L
Thermotolerant coliforms	cfu/100 mL
Nitrogen – ammonia	mg/L
Nitrate as N	mg/L
Total Kjeldahl nitrogen as N	mg/L
Total phosphorus as P	mg/L
Reactive phosphorus as P	mg/L

In addition to the above, surface water will be monitored at the wet weather overflow point for the sediment pond following a discharge event for the parameters set out in Table 9.3. Leachate indicators have been included to identify if any leachate enters the surface water system such that any relevant issues can be identified and rectified. The frequency of monitoring and assessment criteria will be agreed as part of the EPL application process and reflected in the finalised LEMP.

Table 9.3 Wet weather overflow monitoring program

Parameter	Units	Sampling method
pH	pH units	Probe
Dissolved oxygen	mg/L	Probe
Electrical conductivity	µS/cm	Probe
Oil and grease	mg/L	Grab sample
Total suspended solids	mg/L	Grab sample
Nitrogen – ammonia	mg/L	Grab sample

9.1.3 Leachate

Leachate monitoring will be undertaken in accordance with the requirements of the site EPL and any relevant consent conditions to assess leachate quality/quantity over time. This section will be updated to reflect those documents once issued. It is expected that these will largely reflect the recommendations from the NSW Landfill Guidelines (EPA, 2016).

Monitoring locations will include the leachate pond and landfill cell sumps. These will be monitored for the parameters listed in Table 9.4. Relevant assessment criteria will be established as part of the finalisation of this LEMP.

Table 9.4 Leachate monitoring program

Parameter	Units	Frequency	Sampling method
Electrical conductivity	µS/cm	Quarterly	Probe
pH	pH units		Probe
Standing water level (leachate head in sump)	m AHD		In situ
Volume	m ³	Continuous	Via flow meters or pumping records
Total dissolved solids	mg/L	Yearly	Grab sample
Total suspended solids	mg/L		Grab sample

Parameter	Units	Frequency	Sampling method
Major cations and anions (calcium, magnesium, potassium, sodium, chloride, fluoride and sulfate)	mg/L		Grab sample
Alkalinity (bicarbonate and carbonate)	mg/L		Grab sample
Dissolved organic matter (total organic carbon, biochemical oxygen demand, chemical oxygen demand)	mg/L		Grab sample
Ammonia and nutrients (nitrate, nitrite, and phosphorus)	mg/L		Grab sample
Metals (aluminium, arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, zinc)	mg/L		Grab sample
Organic contaminants: – phenols – petroleum hydrocarbons – monoaromatic hydrocarbons (in particular benzene, toluene, ethylbenzene and xylene) – organochlorine and organophosphate pesticides – polycyclic aromatic hydrocarbons	mg/L		Grab sample

9.2 Landfill gas monitoring

9.2.1 Surface emissions monitoring

LFG surface emissions monitoring will be undertaken on a frequency as required by the site EPL. As the site does not currently operate under an EPL, monitoring is expected to be in line with the requirements in the NSW Landfill Guidelines (EPA, 2016), which includes monthly testing for methane in the atmosphere 5 centimetres above the landfill surface in areas with intermediate or final cover/capping, conducted in a grid pattern at 25-metre spacings. Depressions in the cover material, or surface fissures away from the sampling grid, should also be investigated.

9.2.2 Subsurface monitoring

The need for LFG subsurface monitoring will be confirmed via a landfill gas risk assessment for the site, in accordance with the NSW Landfill Guidelines (EPA, 2016). This will be prepared and refined as part of the site operations once suitable data is available to inform this assessment.

9.2.3 Gas accumulation monitoring

LFG accumulation monitoring will be undertaken on a frequency as required by the site EPL. As the site does not currently operate under an EPL, monitoring is expected to be in line with the requirements in the NSW Landfill Guidelines (EPA, 2016), which includes monthly methane monitoring in all buildings and other enclosed structures within 250 metres of deposited waste or leachate storage, or at frequencies and locations justified by a site-specific landfill gas risk assessment that is regularly reviewed and updated.

9.3 Recording of pollution complaints

Council must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

The record must include details of the following:

- Name of complainant.

- Contact details of complainant.
- Date and time of complainant.
- Name of person receiving the complainant.
- Nature and details of the complainant.
- Names of other relevant project people advised and instruction given.
- Details of investigation and proposed corrective action.
- Details of action taken and any other comments.
- The relevant details of each complaint should also be included in the complaints register.

The register of all complaint must be kept on site. Further recording requirements may be required as part of the site EPL, and this will be captured as part of the finalisation of the LEMP.

9.4 Record keeping

The results of all monitoring will be recorded and retained as required by the site EPL. Further details will be provided in the finalised LEMP.

10. Site closure and rehabilitation

10.1 Landfill closure plan

As per the NSW Landfill Guidelines (EPA, 2016), a landfill closure plan is usually required to be submitted to the EPA no later than 12 months before the completion of a landfill's waste receipt operations.

The closure plan will address the following in detail:

- Final landform, land use and landscaping / revegetation.
- Final capping.
- Post closure management and maintenance.
- Post closure environmental management e.g., leachate, stormwater and landfill gas.
- Post closure environmental reporting and monitoring.

10.2 Site capping and revegetation

As final levels are reached, the landfill will be progressively capped and revegetated. The final site contours and landscaping are outlined in Section 6.4. Further details on final capping and revegetation requirements will be captured in the landfill closure plan (refer Section 10.1).

10.3 Post closure environmental monitoring

Council will ensure that all leachate and stormwater collection and monitoring, gas monitoring and existing controls will be maintained after the operational life of the landfill until such time as agreed with NSW EPA that there is no likelihood of environmental harm. Post closure environmental monitoring and maintenance measures will be captured in the landfill closure plan (refer Section 10.1).

11. Reporting

11.1 Annual reporting

Council will prepare an Annual Return for each required reporting period in accordance with the site EPL. Further details will be provided in the finalised LEMP.

11.2 Incident reporting

Incident reporting will be in accordance with the site EPL. This is expected to include:

- The cause, time and duration of the incident.
- The type, volume and concentration of every pollutant discharged as a result of the incident.
- The name, address and business hours telephone number of employees of WTWMF or other witnesses.
- Actions taken by the WTWMF in relation to the incident.
- Details of any measure taken or proposed to be taken to prevent, or mitigate the likelihood for, a recurrence of such an incident.
- Any additional reporting obligations as required.

Further details will be provided in the finalised LEMP.

12. References

Bureau of Meteorology [BOM] (2023) Climate data online. Retrieved from <http://www.bom.gov.au/climate/data/index.shtml>

GHD (2021). Willow Tree Waste Management Facility – Landfill Expansion Masterplan.

GHD (2022). Willow Tree Regional Landfill Facility –Landfill Extension Concept Design Report.

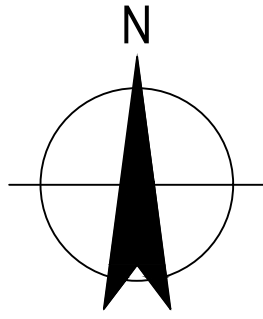
GHD (2023). Willow Tree Waste Management Facility Expansion – Environmental Impact Statement

NSW EPA (2016). Environmental Guidelines: Solid Waste Landfills, Second Edition

Appendices

Appendix A

Drawings



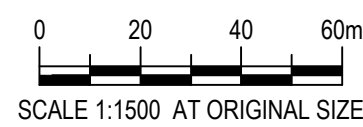
LEGEND

	EXISTING CONTOURS
	FINAL LANDFORM DESIGN CONTOURS
	APPROXIMATE LANDFILL BOUNDARY
	CADASTRE
	LEACHATE POND LINER
	SEDIMENT POND

NOTES:

- SURFACE WATER DIVERSION MEASURES AROUND LANDFORM AND COLLECTION MEASURES ON LANDFORM SURFACE NOT SHOWN, TO BE CONFIRMED IN DETAILED DESIGN.
- ALL LOCATIONS ARE APPROXIMATE.

Rev	Description	Checked	Approved	Date
B	FOR APPROVAL			09/12/22
A	INITIAL ISSUE			09/09/22
Author	R. LOPEZ	Drafting Check		
Designer	M. LE	Design Check		



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12534581

Client	LIVERPOOL PLAINS SHIRE COUNCIL
Project	WILLOW TREE WASTE MANAGEMENT FACILITY
Status	FOR APPROVAL

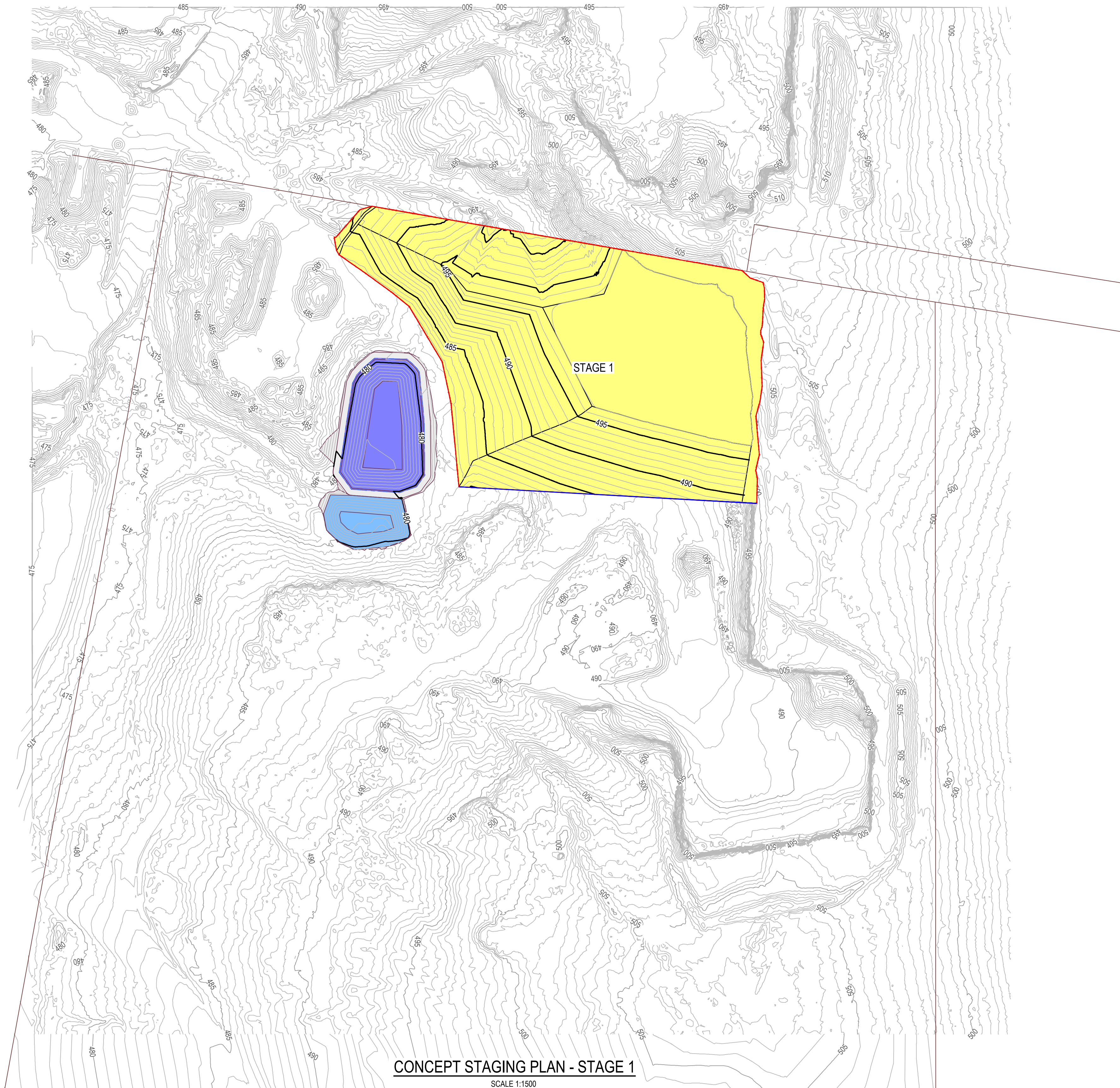
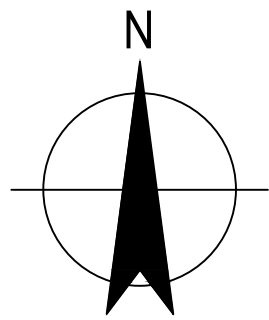
Drawing Title
LANDFILL EXTENSION CONCEPT DESIGN
FINAL LANDFORM PLAN

Status Code
S4

Drawing No.
12534581-C004

Size
A1

Rev
B



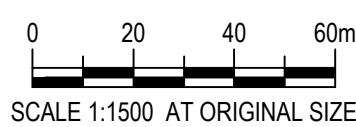
LEGEND

	EXISTING CONTOURS
	FINAL LANDFORM DESIGN CONTOURS
	APPROXIMATE LANDFILL BOUNDARY
	STAGING BOUNDARY
	CADASTRE
	LEACHATE POND LINER
	SEDIMENT POND

NOTES:

1. SURFACE WATER DIVERSION MEASURES AROUND LANDFORM AND COLLECTION MEASURES ON LANDFORM SURFACE NOT SHOWN, TO BE CONFIRMED IN DETAILED DESIGN.
2. INTERIM WASTE BATTERS TO BE ESTABLISHED AT 1V:3H AT STAGE INTERFACE LOCATIONS.
3. ALL LOCATIONS ARE APPROXIMATE.

Rev	Description	Checked	Approved	Date
B	FOR APPROVAL			09/12/22
A	INITIAL ISSUE			09/09/22
Author	R. LOPEZ	Drafting Check		
Designer	M. LE	Design Check		



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Project No.
12534581

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Project	WILLOW TREE WASTE MANAGEMENT FACILITY
Status	FOR APPROVAL

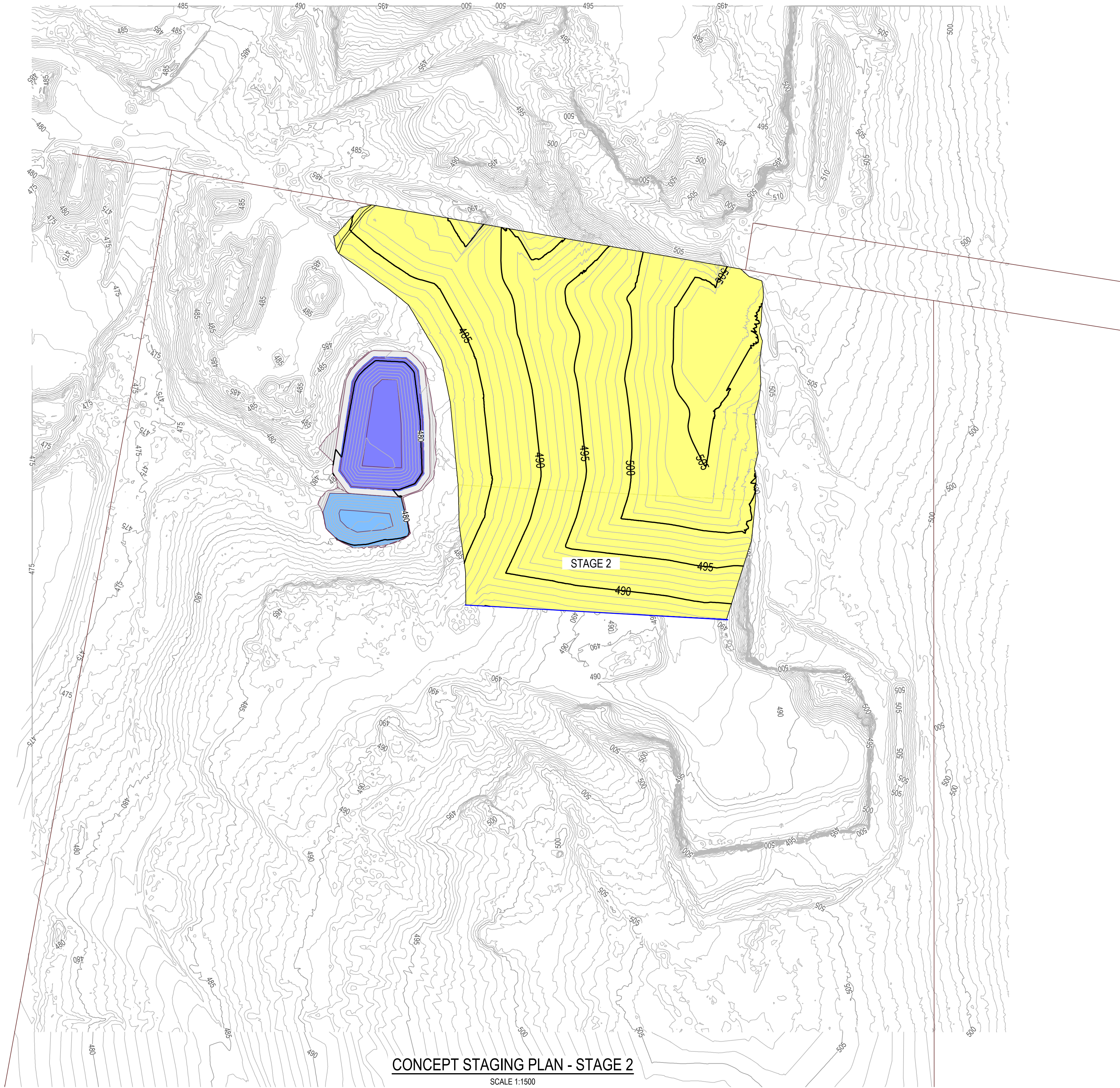
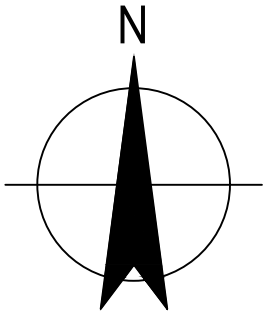
Drawing Title	LANDFILL EXTENSION CONCEPT DESIGN CONCEPT STAGING PLAN SHEET 1 OF 2
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Status Code
S4

Drawing No.
12534581-C005

Size
A1

Rev
B



LEGEND

- EXISTING CONTOURS
- FINAL LANDFORM DESIGN CONTOURS
- APPROXIMATE LANDFILL BOUNDARY
- STAGING BOUNDARY
- CADASTRE
- LEACHATE POND LINER
- SEDIMENT POND

NOTES:

- SURFACE WATER DIVERSION MEASURES AROUND LANDFORM AND COLLECTION MEASURES ON LANDFORM SURFACE NOT SHOWN, TO BE CONFIRMED IN DETAILED DESIGN.
- INTERIM WASTE BATTERS TO BE ESTABLISHED AT 1V:3H AT STAGE INTERFACE LOCATIONS.
- ALL LOCATIONS ARE APPROXIMATE.

B FOR APPROVAL09/12/22			
A INITIAL ISSUE09/09/22			
Rev	Description	Checked	Approved Date
Author	R. LOPEZ	Drafting Check	
Designer	M. LE	Design Check	



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Project No.
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Client LIVERPOOL PLAINS SHIRE COUNCIL
Project WILLOW TREE WASTE MANAGEMENT FACILITY
Status FOR APPROVAL

Drawing Title
LANDFILL EXTENSION CONCEPT DESIGN
CONCEPT STAGING PLAN
SHEET 2 OF 2

Status Code

S4

Drawing No.
12534581-C006

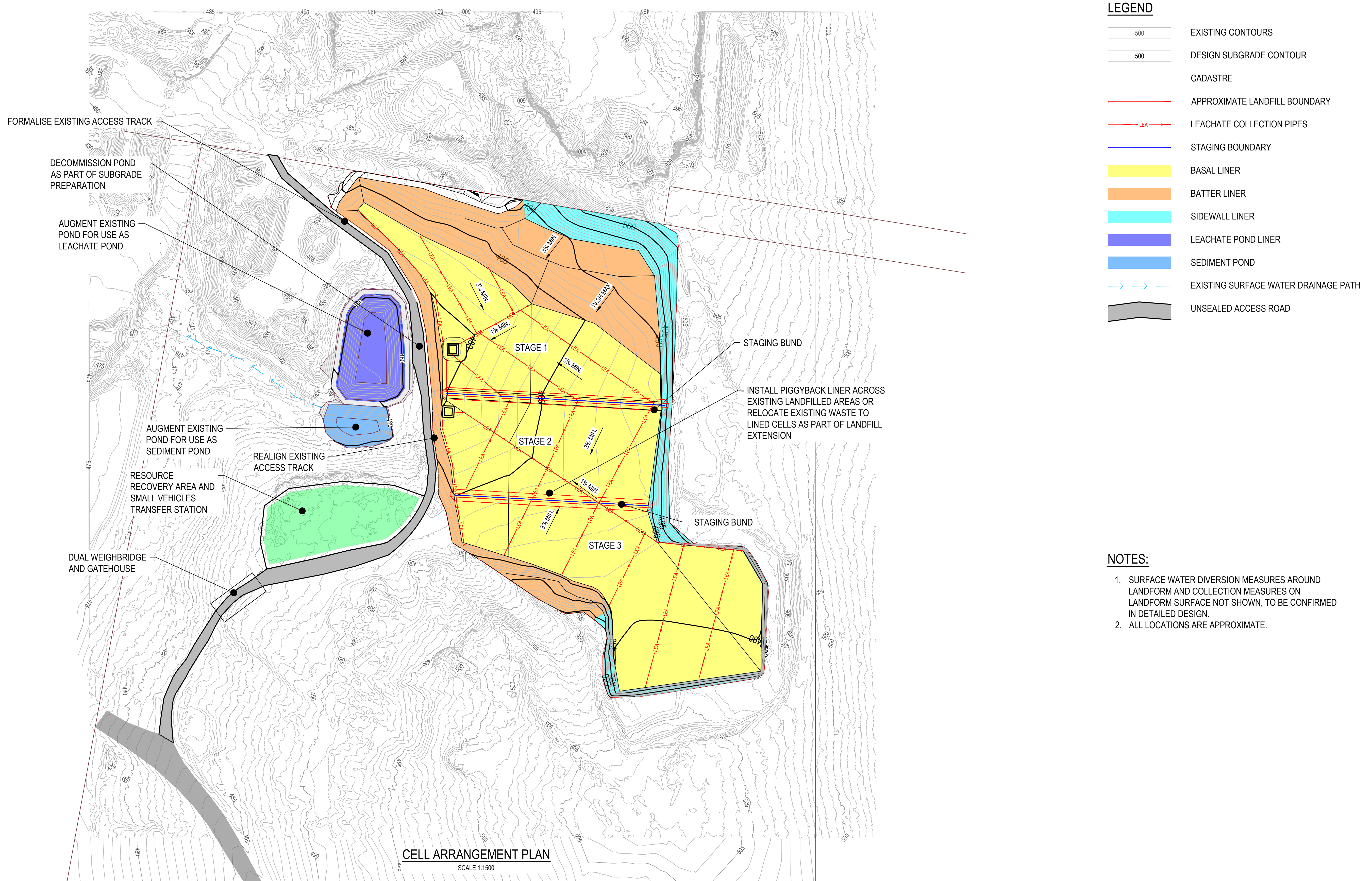
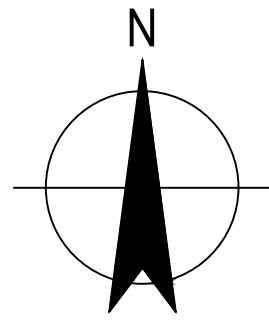
Size
A1

Rev
B



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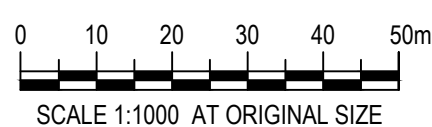
LEGEND

	EXISTING CONTOURS
	DESIGN SUBGRADE CONTOUR
	CADASTRE
	APPROXIMATE LANDFILL BOUNDARY
	LEACHATE COLLECTION PIPES
	STAGING BOUNDARY
	BASAL LINER
	BATTER LINER
	SIDEWALL LINER
	LEACHATE POND LINER
	SEDIMENT POND
	EXISTING SURFACE WATER DRAINAGE PATH
	UNSEALED ACCESS ROAD

NOTES:

- SURFACE WATER DIVERSION MEASURES AROUND LANDFORM AND COLLECTION MEASURES ON LANDFORM SURFACE NOT SHOWN, TO BE CONFIRMED IN DETAILED DESIGN.
- ALL LOCATIONS ARE APPROXIMATE.

Rev	Description	Checked	Approved	Date
B	FOR APPROVAL			12/09/22
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Author	R. LOPEZ	Drafting Check		
Designer	M. LE	Design Check		



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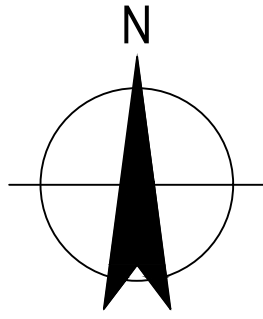
Drawing Title
LANDFILL EXTENSION CONCEPT DESIGN
CELL ARRANGEMENT PLAN

Status Code
S4

Drawing No.
12534581-C003

Size
A1

Rev
B



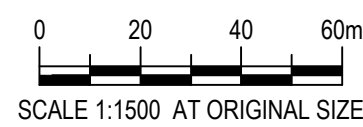
LEGEND

	EXISTING CONTOURS
	FINAL LANDFORM DESIGN CONTOURS
	APPROXIMATE LANDFILL BOUNDARY
	CADASTRE
	LEACHATE POND LINER
	SEDIMENT POND

NOTES:

- SURFACE WATER DIVERSION MEASURES AROUND LANDFORM AND COLLECTION MEASURES ON LANDFORM SURFACE NOT SHOWN, TO BE CONFIRMED IN DETAILED DESIGN.
- ALL LOCATIONS ARE APPROXIMATE.

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Author	R. LOPEZ	Drafting Check		
Designer	M. LE	Design Check		



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Project No.
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Client	LIVERPOOL PLAINS SHIRE COUNCIL
Project	WILLOW TREE WASTE MANAGEMENT FACILITY
Status	FOR APPROVAL

Drawing Title
LANDFILL EXTENSION CONCEPT DESIGN
FINAL LANDFORM PLAN

Status Code
S4

Drawing No.
12534581-C004

Size
A1

Rev
B

LIVERPOOL PLAINS SHIRE COUNCIL

WILLOW TREE WASTE MANAGEMENT FACILITY

LANDFILL EXTENSION STAGE 1

12534581



LOCALITY PLAN

SCALE NTS

DRAWING LIST

DRG No.	DRAWING TITLE
12534581-C101	COVER SHEET, LOCALITY PLAN AND DRAWING LIST
12534581-C102	EXISTING SITE PLAN
12534581-C103	GENERAL ARRANGEMENT PLAN
12534581-C104	LEACHATE DRAINAGE LAYOUT PLAN
12534581-C105	SURFACE WATER LAYOUT PLAN
12534581-C106	LEACHATE POND LAYOUT PLAN
12534581-C108	SETOUT PLAN
12534581-C111	LONG SECTIONS
12534581-C112	TYPICAL SECTIONS AND DETAILS SHEET 1 OF 4
12534581-C113	TYPICAL SECTIONS AND DETAILS SHEET 2 OF 4
12534581-C114	TYPICAL SECTIONS AND DETAILS SHEET 2 OF 4
12534581-C115	TYPICAL SECTIONS AND DETAILS SHEET 4 OF 4

NOTES:

- DRAWINGS SHALL BE CONSIDERED A SET BASED ON THE DRAWING LIST PROVIDED.
- DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION. WHERE THE DRAWINGS AND SPECIFICATION DO NOT AGREE, THE CONTRACTOR SHALL SEEK CLARIFICATION FROM THE SUPERINTENDENT.

FOR CONSTRUCTION

1	REISSUE FOR CONSTRUCTION	CN*	JR*	10/10/2023
0	ISSUE FOR CONSTRUCTION	CN*	JR*	08/03/2023
Rev	Description	Checked	Approved	Date
Author	R. LOPEZ	Drafting Check		
Designer	R. HUYNH	Design Check		

Plot Date: 10 October 2023 - 9:05 AM Plotted by: Riken Joshua Lopez

File Name: \\ghdnet\ghd\PH\Cebu\Projects\21\12534581\CADD\Drawings\FOR CONSTRUCTION\12534581-C101.dwg



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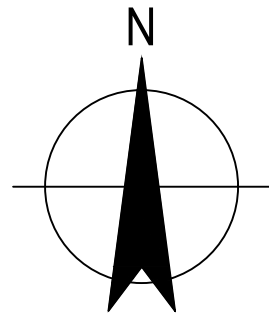


Project No.
12534581

Client	LIVERPOOL PLAINS SHIRE COUNCIL
Project	WILLOW TREE WASTE MANAGEMENT FACILITY
Status	FOR CONSTRUCTION

Drawing Title	LANDFILL EXTENSION STAGE 1 COVER SHEET, LOCALITY PLAN AND DRAWING LIST
Drawing No.	12534581-C101
Rev	1

Size
A1



LEGEND

- EXISTING CONTOURS
- CADASTRE
- FENCE LINE
- SEALED ROAD
- UNSEALED ROAD
- EXISTING PONDS
- EXISTING SURFACE WATER DRAINAGE PATH

NOTES:

- EXISTING CONTOURS BASED ON SURVEY SUPPLIED BY BATH STEWART ASSOCIATES DATED 14 MAY 2020 AND DIOSPATIAL DATED 19 MAY 2022.
- AERIAL PHOTOGRAPHY SUPPLIED BY DIOSPATIAL DATED 19 MAY 2022 AND SOURCED FROM GOOGLE EARTH DATED 2021.
- EXISTING SURFACE WATER DRAINS ARE INDICATIVE ONLY.

EXISTING SITE PLAN
SCALE 1:1000

FOR CONSTRUCTION

Rev	Description	Checked	Approved	Date
1	REISSUE FOR CONSTRUCTION	CN*	JR*	10/10/2023
0	ISSUE FOR CONSTRUCTION	CN*	JR*	08/03/2023
Author R. LOPEZ Drafting Check				
Designer R. HUYNH Design Check				



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Project No.
12534581

Client	LIVERPOOL PLAINS SHIRE COUNCIL
Project	WILLOW TREE WASTE MANAGEMENT FACILITY
Status	FOR CONSTRUCTION

Drawing Title
LANDFILL EXTENSION STAGE 1
EXISTING SITE PLAN

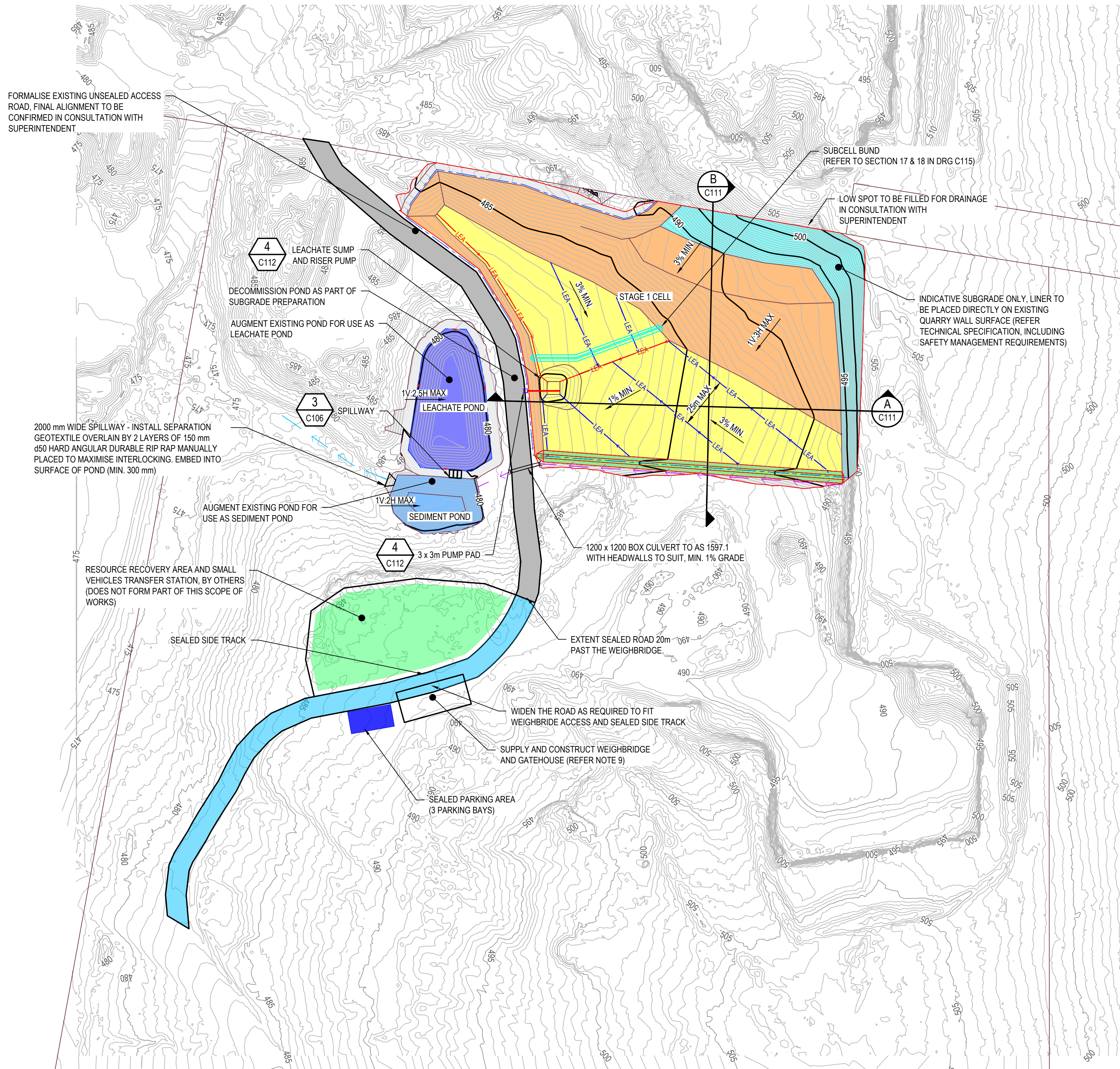
Status Code

S4

Drawing No.
12534581-C102

Size
A1

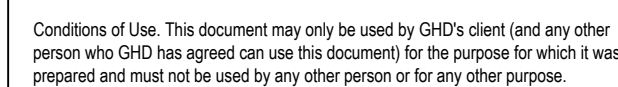
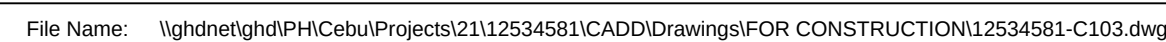
Rev
1



	EXISTING CONTOURS
	DESIGN SUBGRADE CONTOURS
	CADASTRE
	STAGE 1 BOUNDARY
	PRIMARY LEACHATE PIPE
	SECONDARY LEACHATE PIPE
	ANCHOR TRENCH
	RISER PIPE
	SUBGRADE
	BASAL LINER
	BATTER LINER
	SIDEWALL LINER
	LEACHATE POND LINER
	SEDIMENT POND
	INTERCELL BUND
	SURFACE WATER DRAIN
	UNSEALED ACCESS ROAD
	NEW SEALED ROAD
	EXISTING SURFACE WATER DRAINAGE PATH
	GAS VENT

1. ALL SERVICES MAY NOT BE SHOWN ON THE DRAWINGS. CONTRACTOR TO CONFIRM THE LOCATION, EXTENT AND DEPTH OF ALL ABOVE AND BELOW GROUND SERVICES PRIOR TO COMMENCEMENT OF WORKS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND LOCATE ALL SERVICES. EXISTING SERVICES TO REMAIN IN SERVICE AND TO BE PROTECTED FROM DAMAGE FOR DURATION OF WORKS. ALL COSTS TO RECTIFY DAMAGE TO EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DECOMMISSION AND REMOVE ALL SERVICES WITHIN THE WORKS AREA IF REQUIRED, INCLUDING ABANDONED SERVICES. REFER ANY CONFLICT BETWEEN NEW WORKS AND EXISTING SERVICES TO THE SUPERINTENDENT.
3. VERIFY SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED.
4. CONTRACTOR COMPOUND AND LAYDOWN AREA TO BE CONFIRMED WITH SUPERINTENDENT.
5. FINAL STOCKPILING AREAS TO BE CONFIRMED WITH SUPERINTENDENT. THE CONTRACTOR IS RESPONSIBLE FOR SETTING UP ALL REQUIRED EROSION AND SEDIMENT CONTROLS FOR THESE STOCKPILING AREAS.
6. EXTENT OF CLEARING AND STRIPPING SHALL NOT EXCEED BEYOND THE BOUNDARY OF THE WORKS AREA / CONSTRUCTION FOOTPRINT.
7. ACCESS RAMP TO BE EXTENDED INTO THE CELL BY OTHERS (TO BE ARRANGED BY THE PRINCIPAL) USING MIN 2 m THICK WASTE LAYER. ALIGNMENT TO BE CONFIRMED PRIOR TO WASTE PLACEMENT.
8. CONTRACTOR TO ENGAGE SUITABLY QUALIFIED GEOTECHNICAL ENGINEER OR ENGINEERING GEOLOGIST APPROVED BY THE SUPERINTENDENT TO DIRECT SCALING OF LOOSE MATERIAL AND TO FURTHER ASSESS THE STABILITY OF EXISTING QUARRY WALLS BASED ON ANY NEWLY EXPOSED DEFECTS AND LITHOLOGY.
9. REFER CONTRACT DOCUMENTS FOR FURTHER INFORMATION ON SITE OFFICE.
10. DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWINGS. UNLESS OTHERWISE NOTED.
 - a. ALL DETAILS DIMENSIONS ARE MILLIMETERS
 - b. ALL CHAINAGES ARE IN METRES
11. DRAWINGS TO BE PLOTTED IN COLOUR.

1	REISSUE FOR CONSTRUCTION			CN*	JR* 10/10/2023
0	ISSUE FOR CONSTRUCTION			CN*	JR* 08/03/2023
Rev	Description			Checked	Approved Date
Author	R. LOPEZ	Drafting Check			
Designer	R. HUYNH	Design Check			



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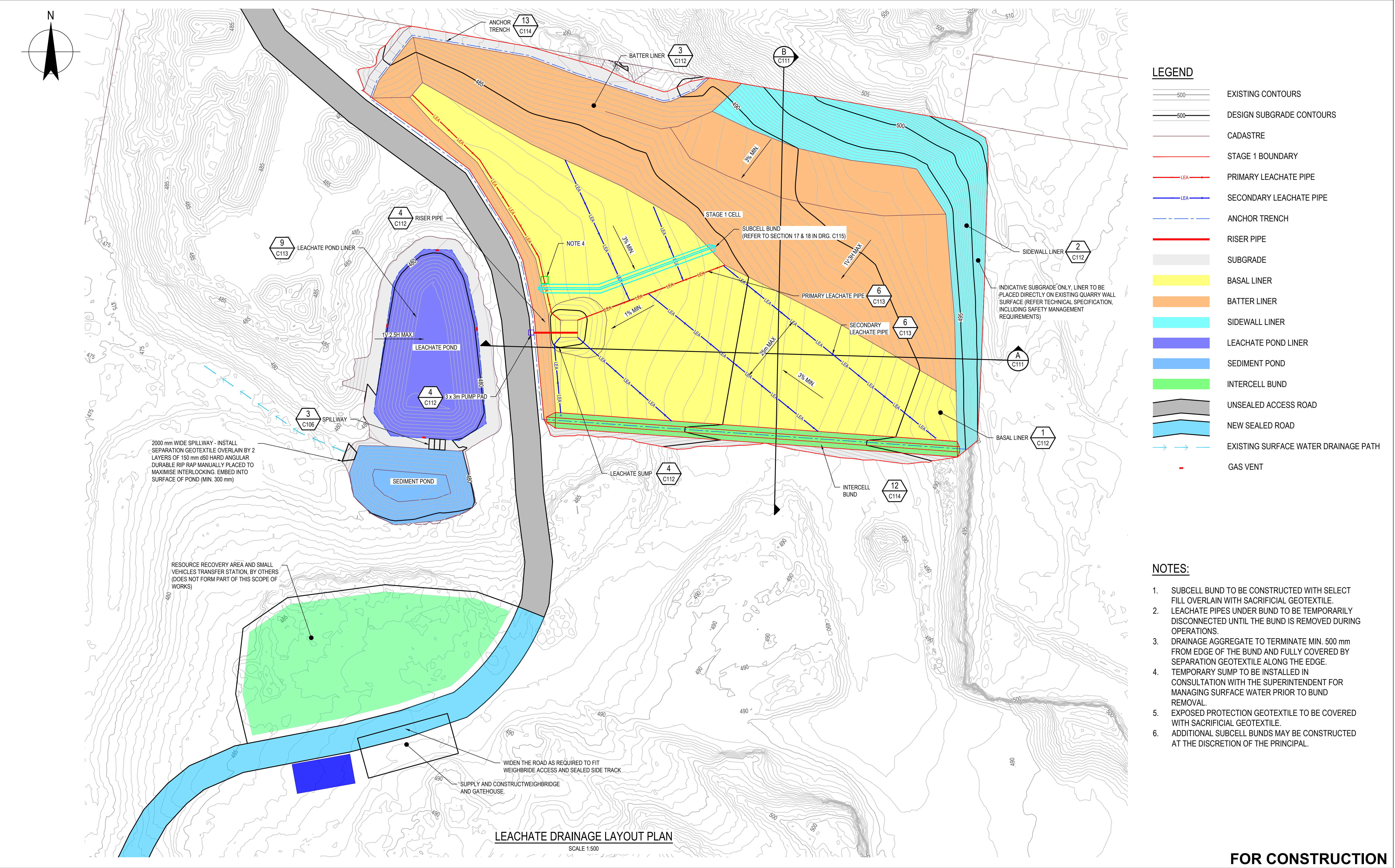
Project No.
12534581

Status	FOR CONSTRUCTION
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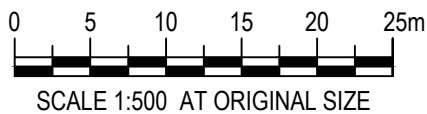
Drawing No.
12534581-C103

A1

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1	REISSUE FOR CONSTRUCTION	CN*	JR*	10/10/2023
0	ISSUE FOR CONSTRUCTION	CN*	JR*	08/03/2023
Rev	Description	Checked	Approved	Date
Author	R. LOPEZ	Drafting Check		
Designer	R. HUYNH	Design Check		



Plot Date: 10 October 2023 - 10:45 AM

Plotted by: Riken Joshua Lopez

File Name: \\ghdnet\ghd\PH\Cebu\Projects\21\12534581\CADD\Drawings\FOR CONSTRUCTION\12534581-C104.dwg



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Client LIVERPOOL PLAINS SHIRE COUNCIL

Project WILLOW TREE WASTE MANAGEMENT FACILITY

Status FOR CONSTRUCTION

Status Code S4

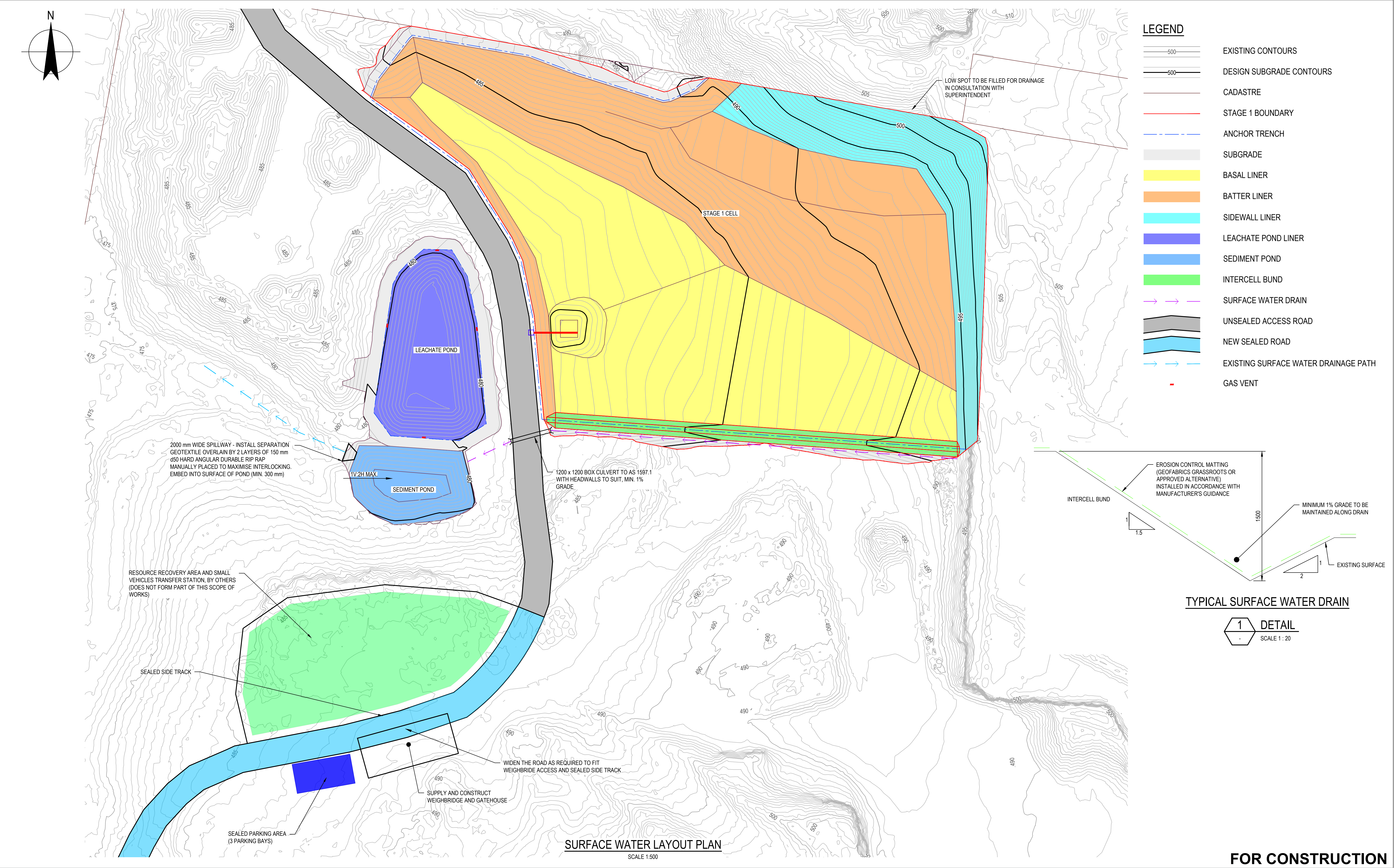
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LEACHATE DRAINAGE LAYOUT PLAN

Drawing No.
12534581-C104

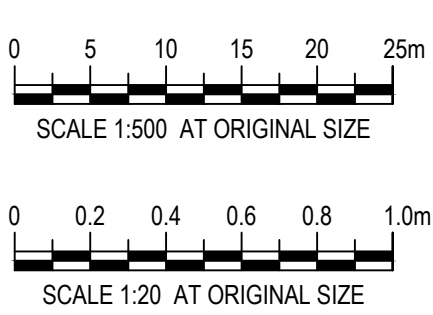
Size
A1

Rev
1

FOR CONSTRUCTION



1	REISSUE FOR CONSTRUCTION	CN*	JR*	10/10/2023
0	ISSUE FOR CONSTRUCTION	CN*	JR*	08/03/2023
Rev	Description	Checked	Approved	Date
Author	R. LOPEZ	Drafting Check		
Designer	R. HUYNH	Design Check		



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Client LIVERPOOL PLAINS SHIRE COUNCIL

Project WILLOW TREE WASTE MANAGEMENT FACILITY

Status FOR CONSTRUCTION

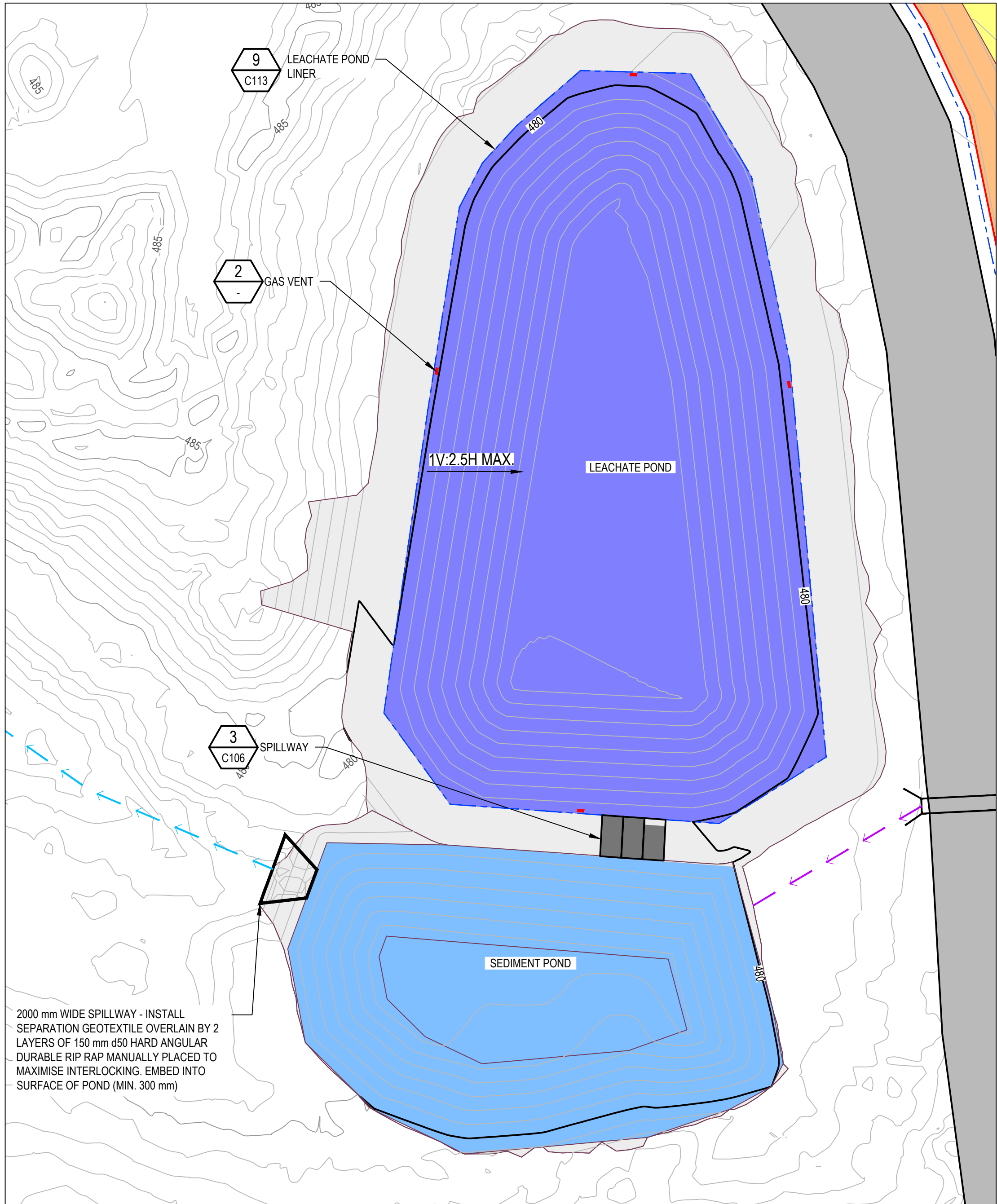
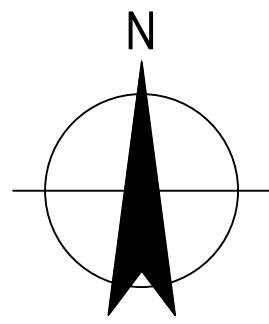
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SURFACE WATER LAYOUT PLAN

Drawing No. 12534581-C105

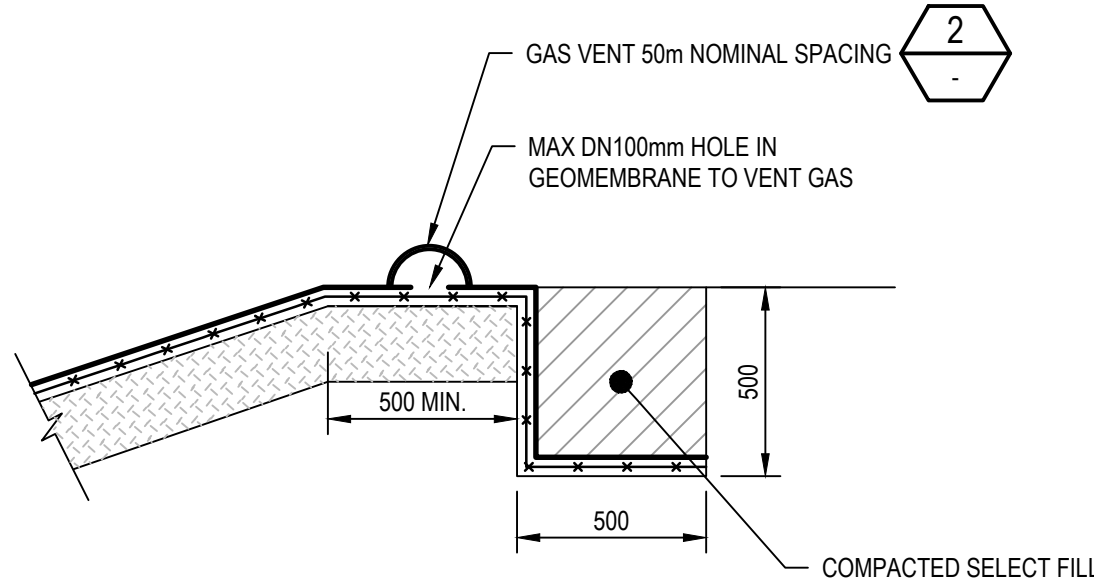
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Size A1

Status Code S4

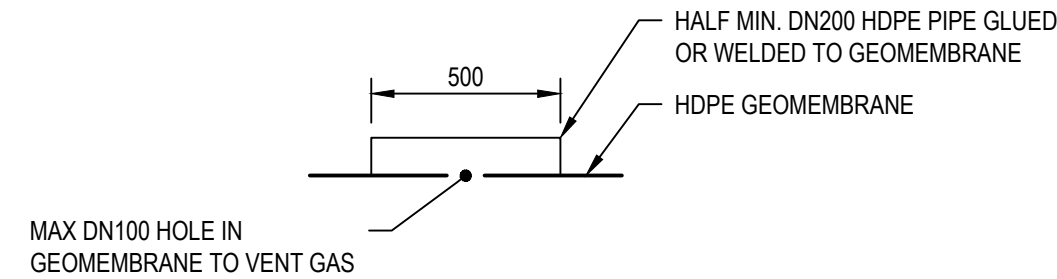


LEACHATE POND LAYOUT PLAN
SCALE 1:250



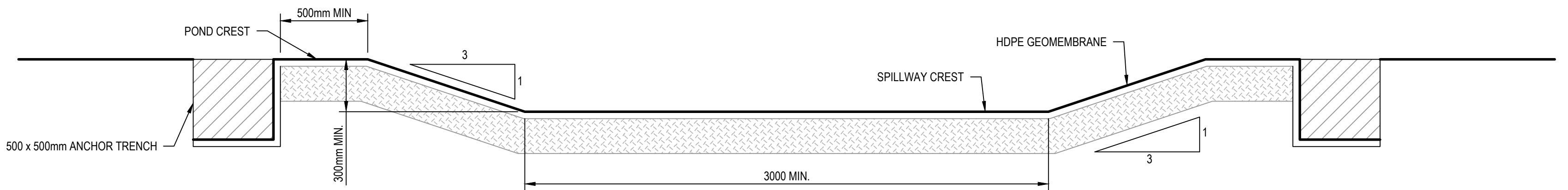
TYPICAL LEACHATE POND ANCHOR TRENCH

1 DETAIL
SCALE 1:20



TYPICAL GAS VENT DETAIL

2 DETAIL
SCALE 1:20



LEACHATE POND SPILLWAY TYPICAL SECTION

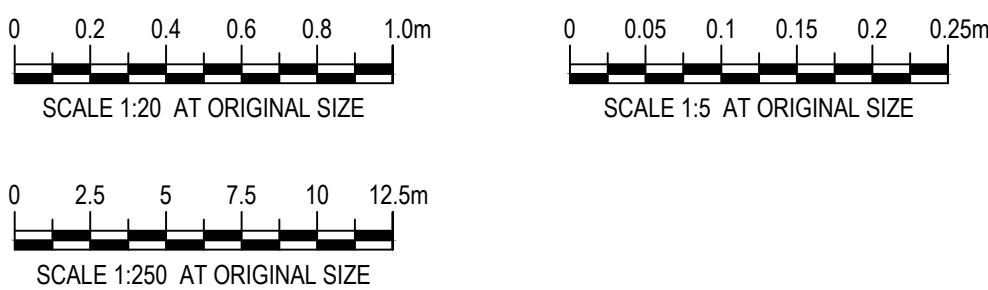
3 3 3 DETAIL
C103 C104 SCALE 1:20

LEGEND

- EXISTING CONTOURS
- DESIGN SUBGRADE CONTOURS
- CADASTRE
- STAGE 1 BOUNDARY
- ANCHOR TRENCH
- SUBGRADE
- LEACHATE POND LINER
- SEDIMENT POND
- INTERCELL BUND
- SURFACE WATER DRAIN
- GAS VENT
- UNSEALED ACCESS ROAD
- EXISTING SURFACE WATER DRAINAGE PATH

FOR CONSTRUCTION

Rev	Description	Checked	Approved	Date
1	REISSUE FOR CONSTRUCTION	CN*	JR*	10/10/2023
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Author	R. LOPEZ	Drafting Check		
Designer	R. HUYNH	Design Check		



Project No.
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Client LIVERPOOL PLAINS SHIRE COUNCIL
Project WILLOW TREE WASTE MANAGEMENT FACILITY
Status FOR CONSTRUCTION

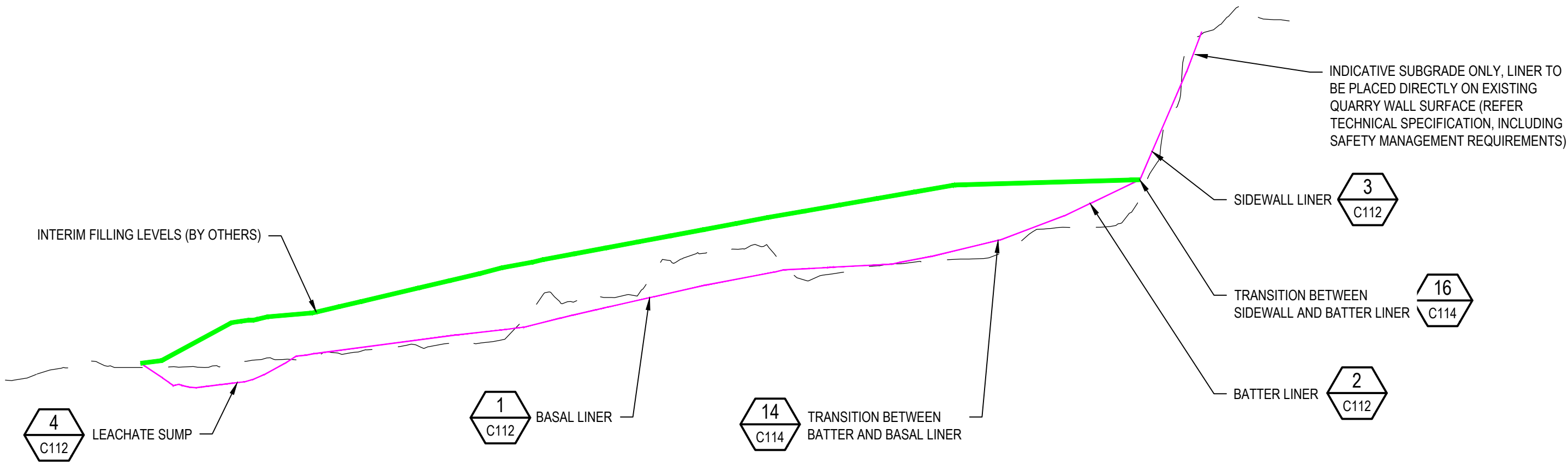
Status Code
S4

Drawing Title
LANDFILL EXTENSION STAGE 1
LEACHATE POND LAYOUT PLAN

Drawing No.
12534581-C106

Size
A1

Rev
1

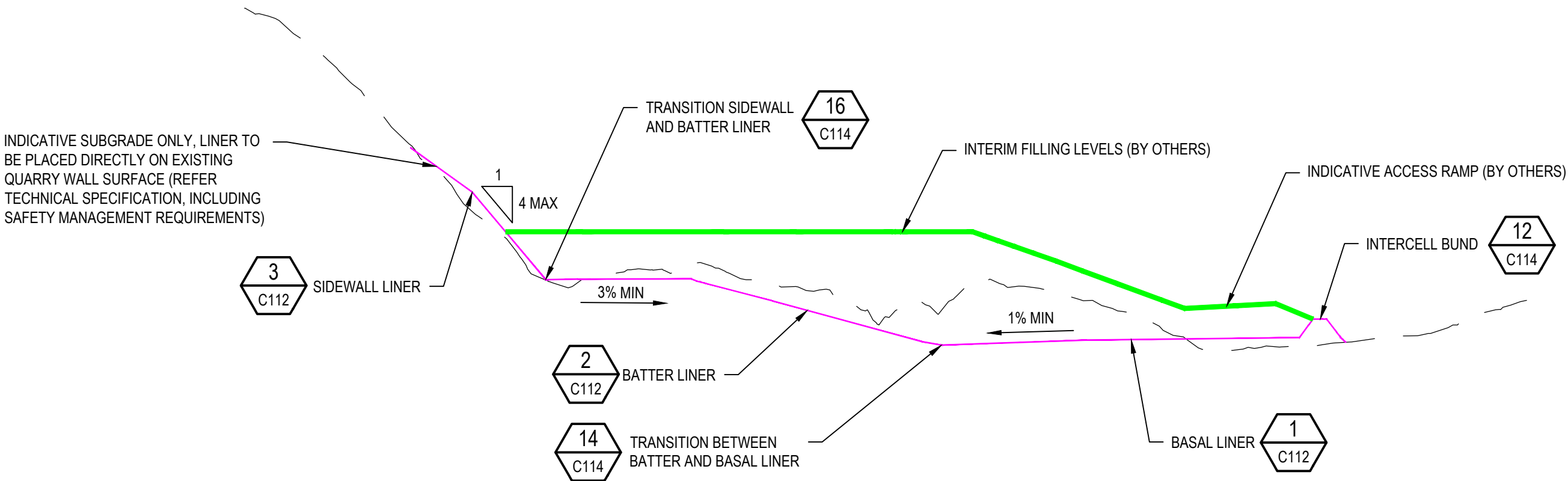


DATUM RL. 472.00

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DESIGN CELL SUBGRADE									
	480.25	480.28	482.26	483.52	485.70	487.32	488.92	495.55	
EXISTING SURFACE LEVEL									
	480.25	481.20	482.25	482.87	484.97	486.94	488.01	497.88	502.25
CHAINAGE	0.00	20.00	40.00	60.00	80.00	100.00	120.00	140.00	155.59

LONG SECTION - EAST WEST

A SECTION
C103/C104 SCALE 1000H : 500V



DATUM RL. 477.00

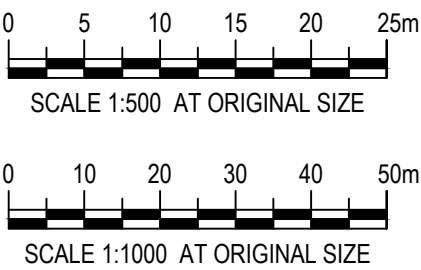
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DESIGN CELL SUBGRADE									
	480.25	480.28	482.26	483.52	485.70	487.32	488.92	495.55	
EXISTING SURFACE LEVEL									
	480.25	481.20	482.25	482.87	484.97	486.94	488.01	497.88	502.25
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LONG SECTION - NORTH SOUTH

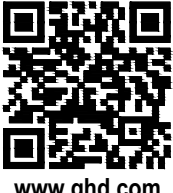
B SECTION
C103/C104 SCALE 1000H : 500V

FOR CONSTRUCTION

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Client LIVERPOOL PLAINS SHIRE COUNCIL
Project WILLOW TREE WASTE MANAGEMENT FACILITY
Status FOR CONSTRUCTION

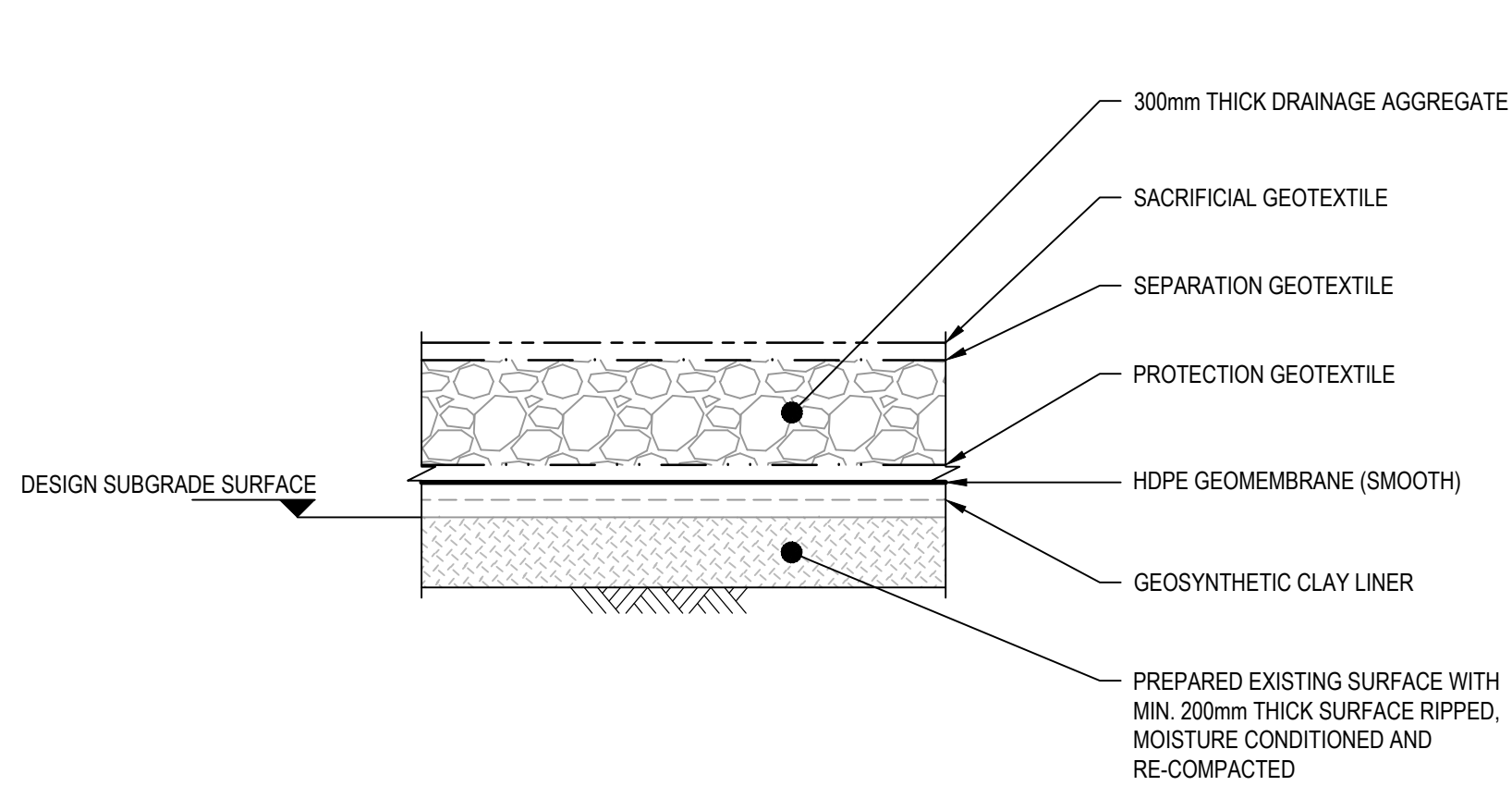
Drawing Title LANDFILL EXTENSION STAGE 1
LONG SECTIONS

Status Code S4

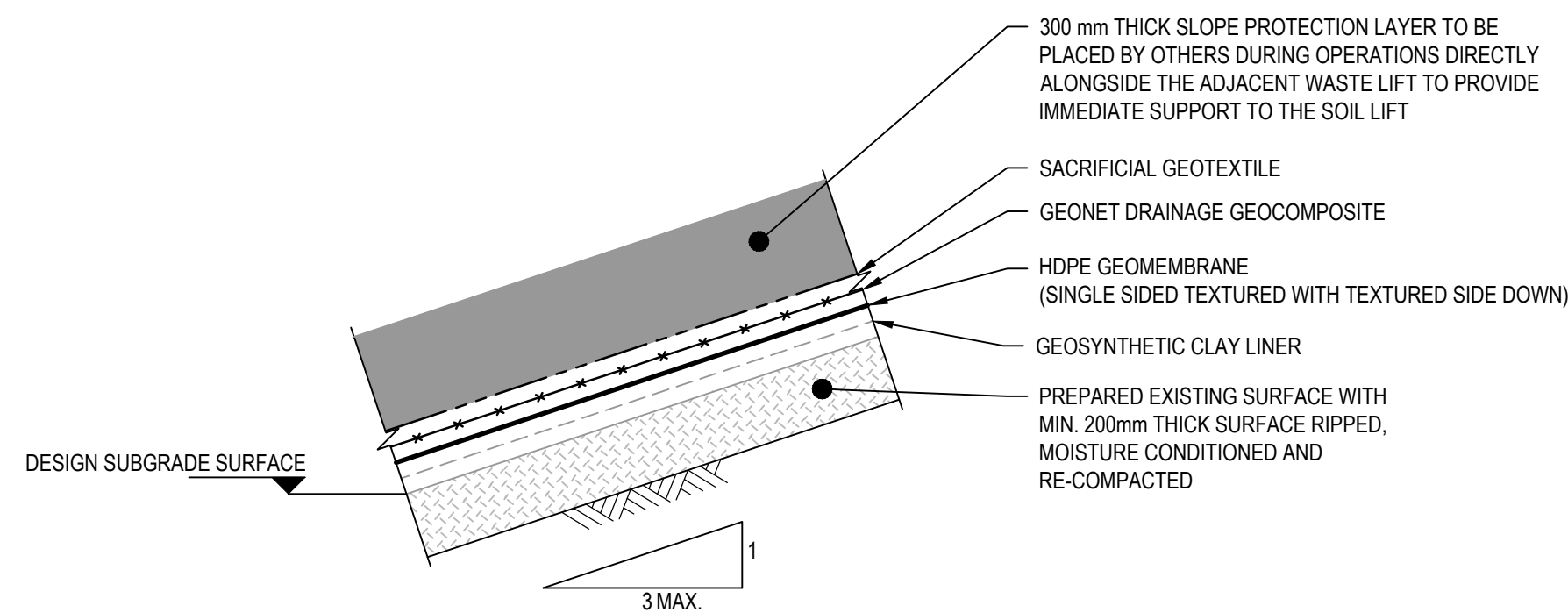
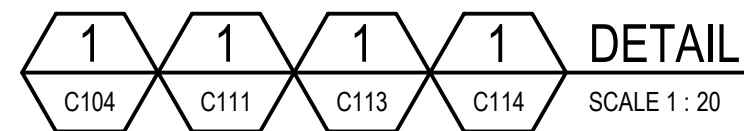
Drawing No.
12534581-C111

Size
A1

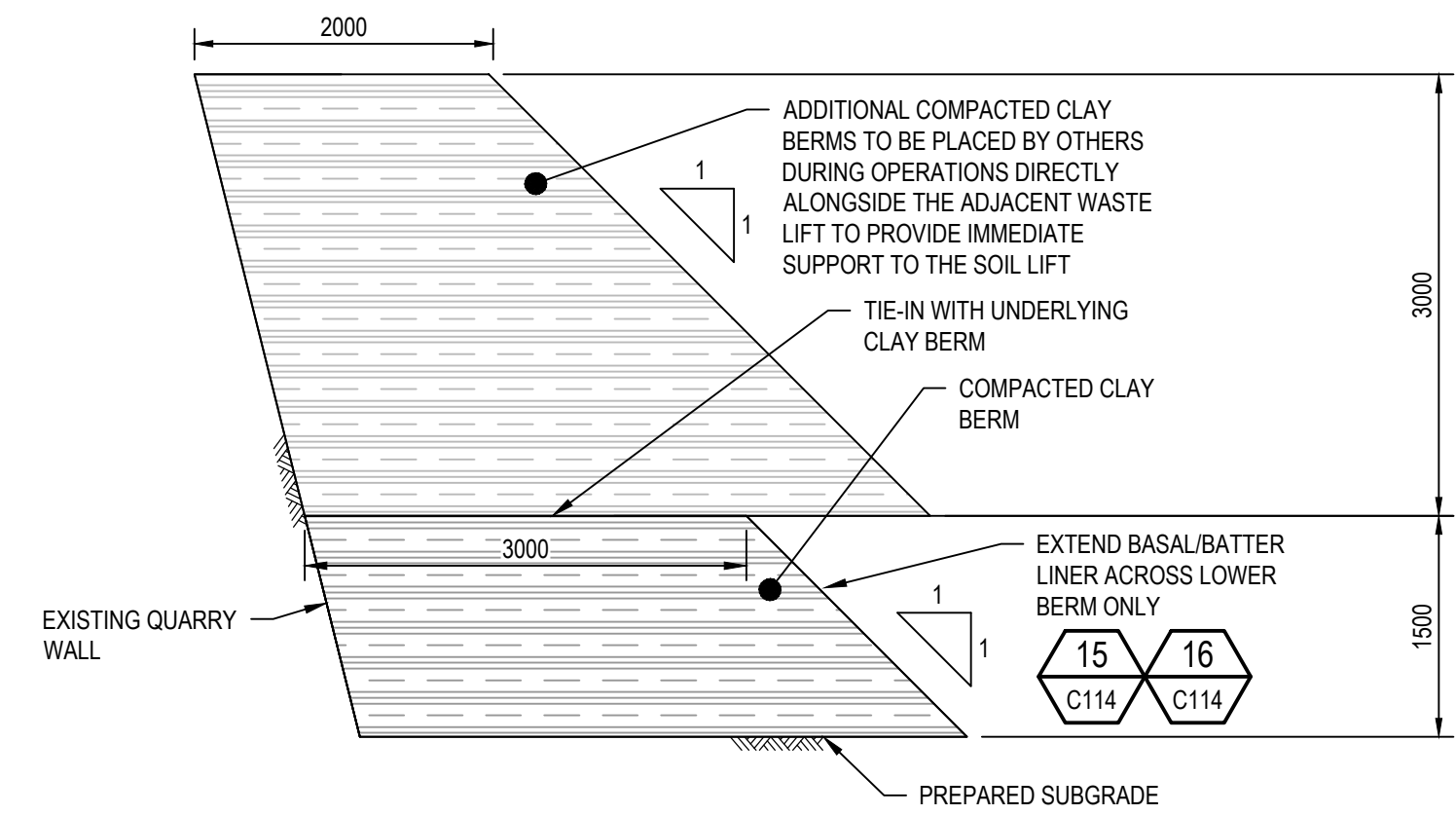
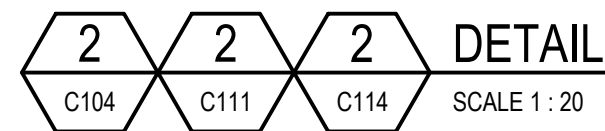
Rev
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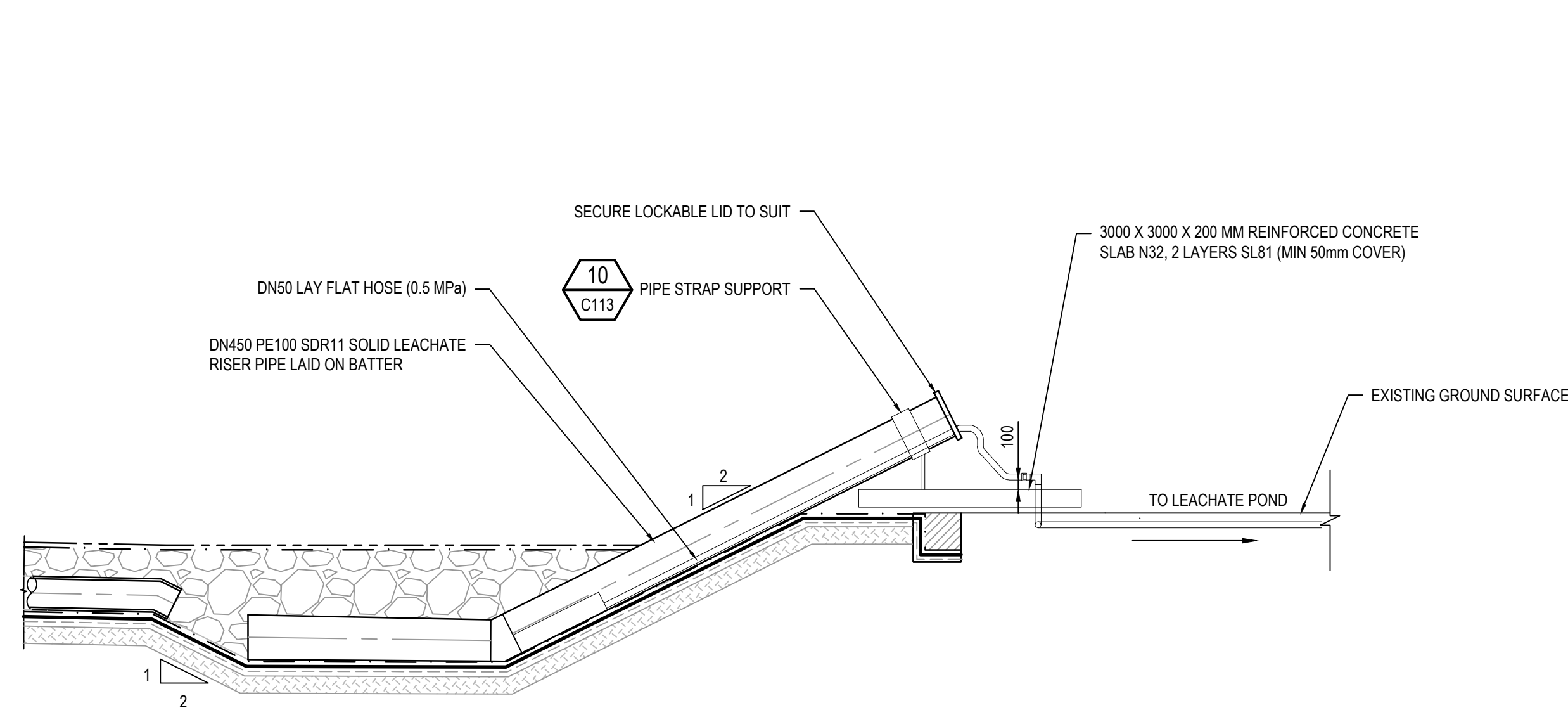
BASAL LINER



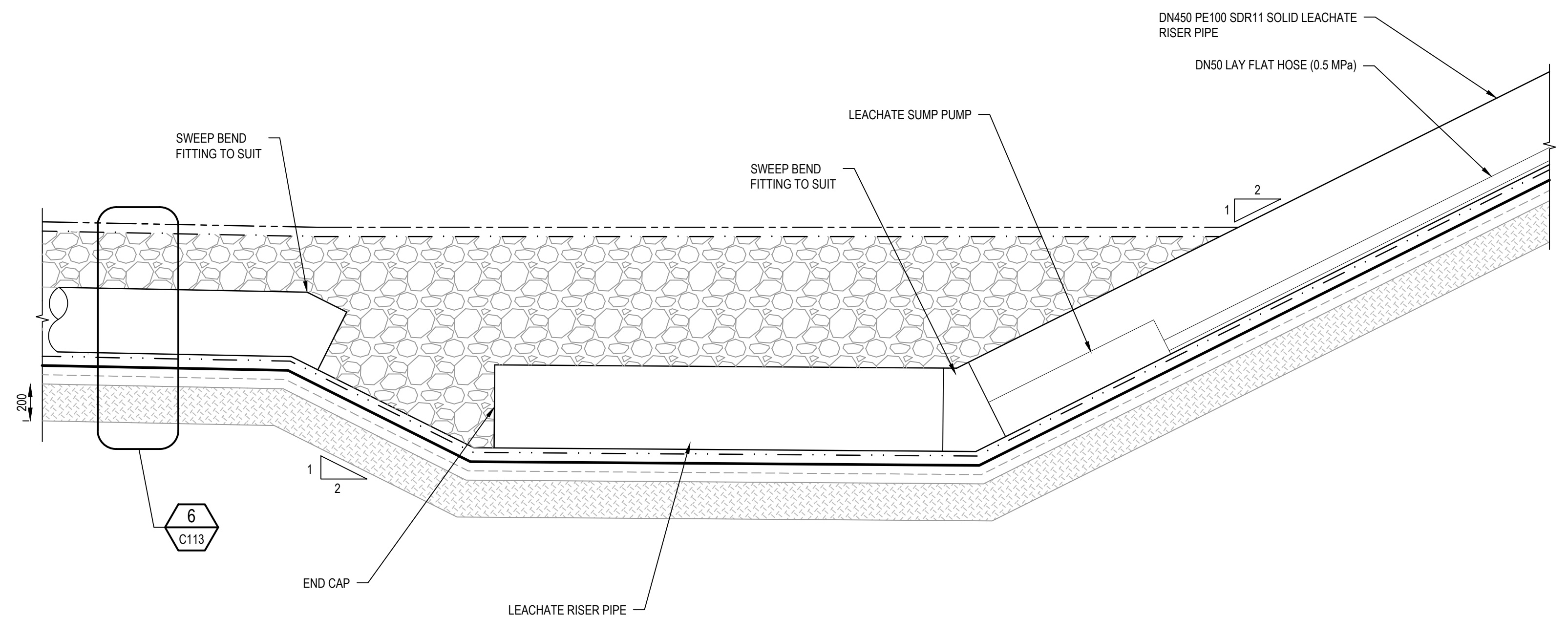
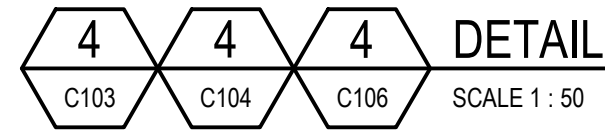
BATTER LINER



SIDEWALL LINER



LEACHATE SUMP



LEACHATE SUMP DETAIL



NOTES:

1. ALL ANCHOR TRENCHES TO BE KEPT DRY DURING ONSTRUCTION AND LANDFILLING OPERATIONS. ANY PONDING OR STANDING WATER SHOULD BE REMOVED IMMEDIATELY.

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Designer	R. HUYNH	Design Check		



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Project No.
12534581

Client	LIVERPOOL PLAINS SHIRE COUNCIL
Project	WILLOW TREE WASTE MANAGEMENT FACILITY
Status	FOR CONSTRUCTION

Drawing Title	LANDFILL EXTENSION STAGE 1 TYPICAL SECTIONS AND DETAILS SHEET 1 OF 4
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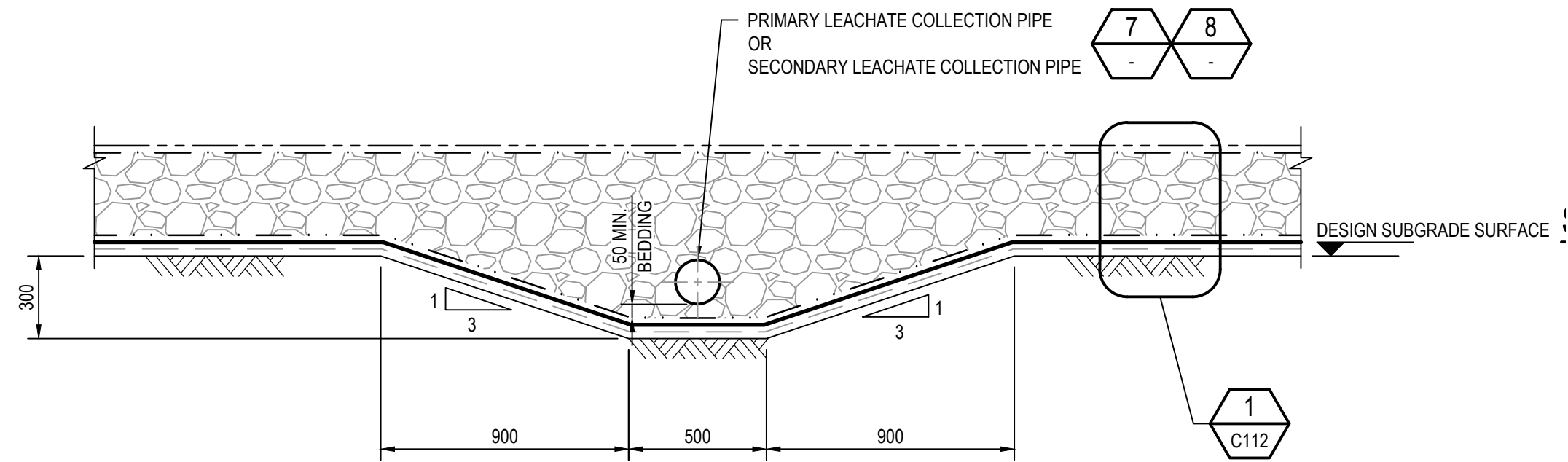
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Drawing No.
12534581-C112

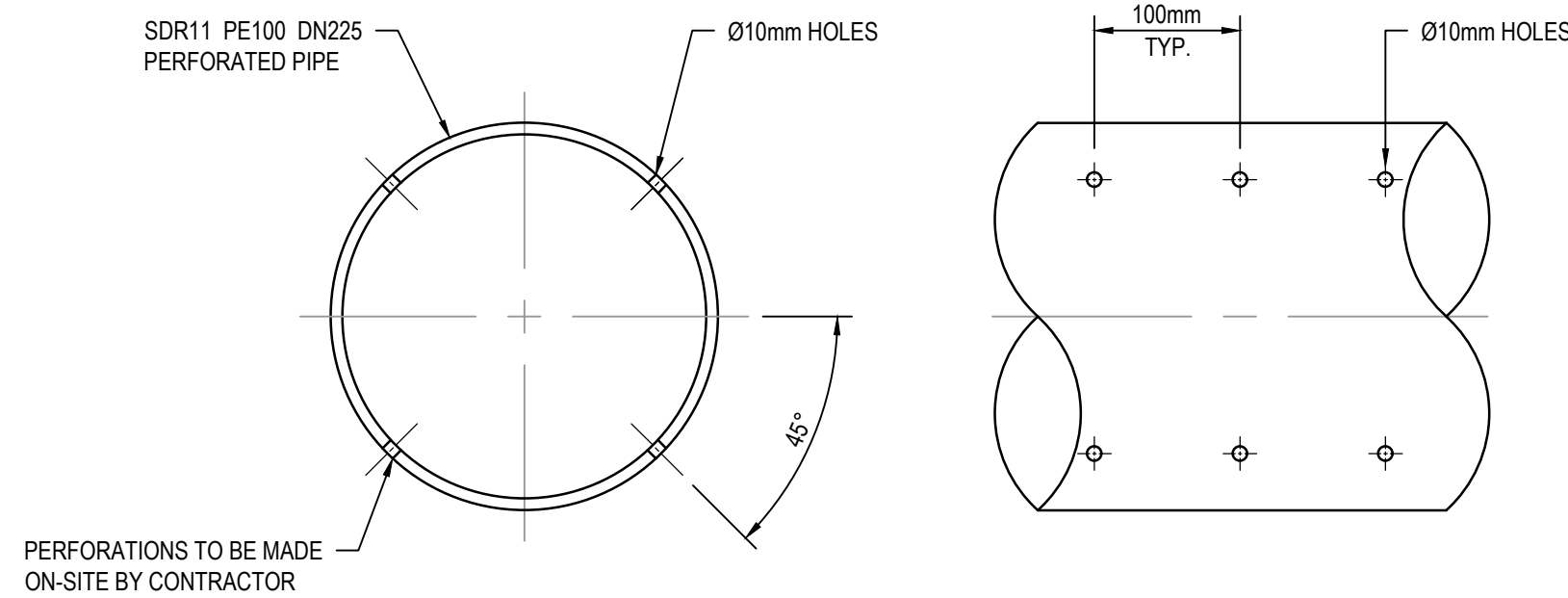
Size
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Rev
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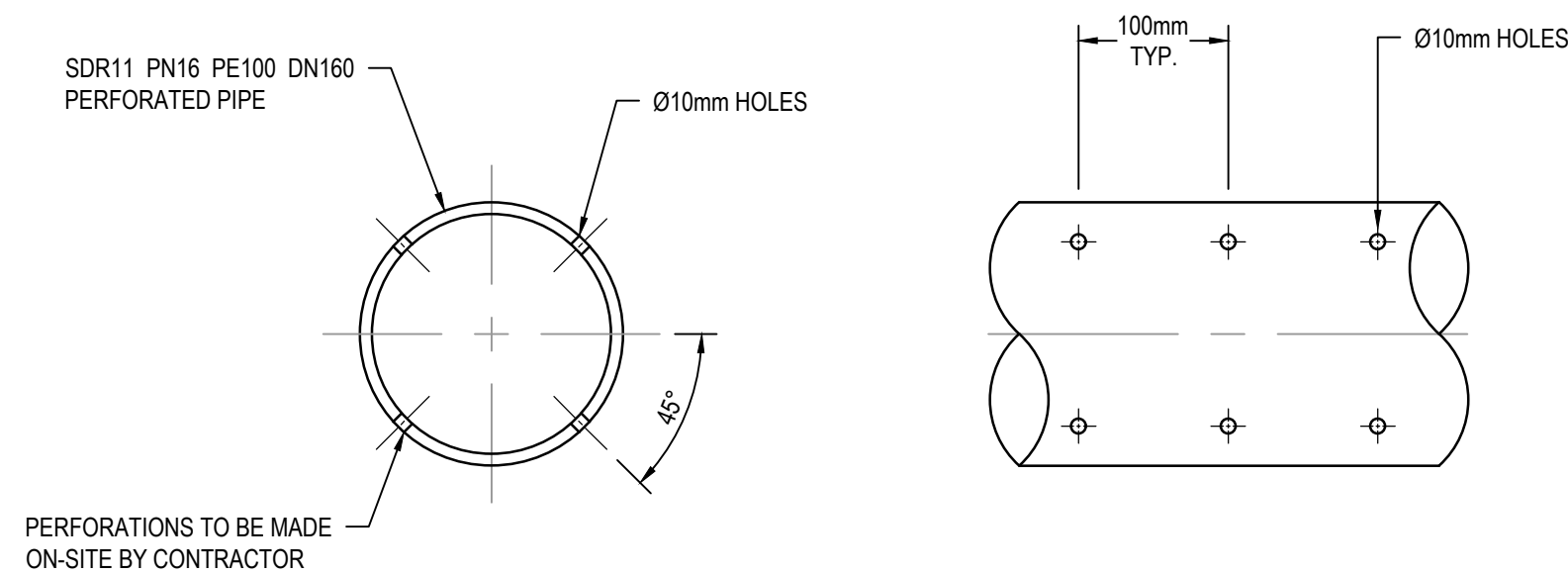
LEACHATE DRAINAGE PIPE TRENCH

6 6 DETAIL
C104 C112 SCALE 1 : 20



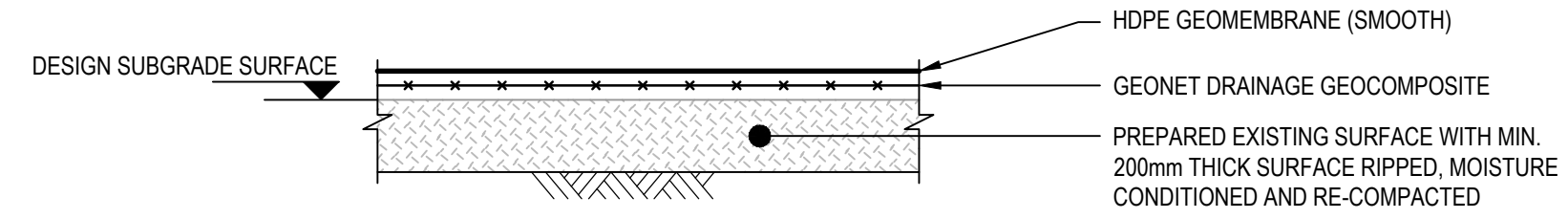
PRIMARY LEACHATE DRAINAGE PIPE PERFORATION

7 DETAIL
SCALE 1 : 5



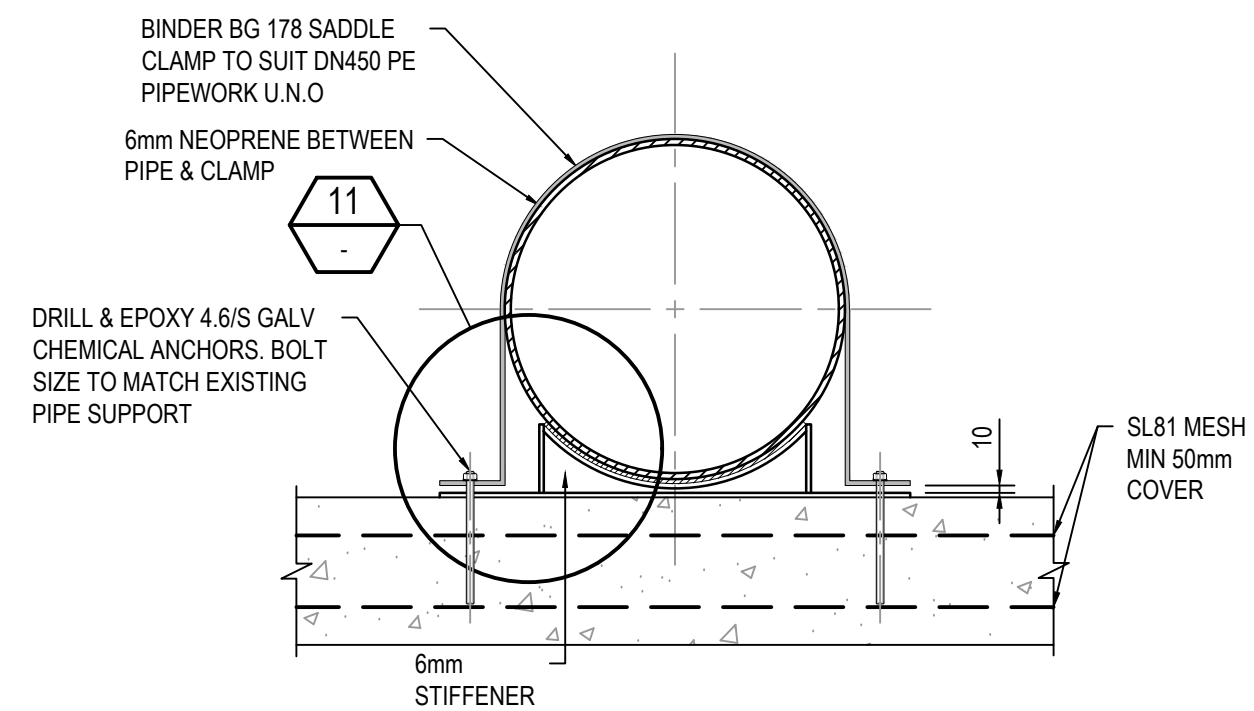
SECONDARY LEACHATE COLLECTION PIPE PERFORATION

8 DETAIL
SCALE 1 : 5



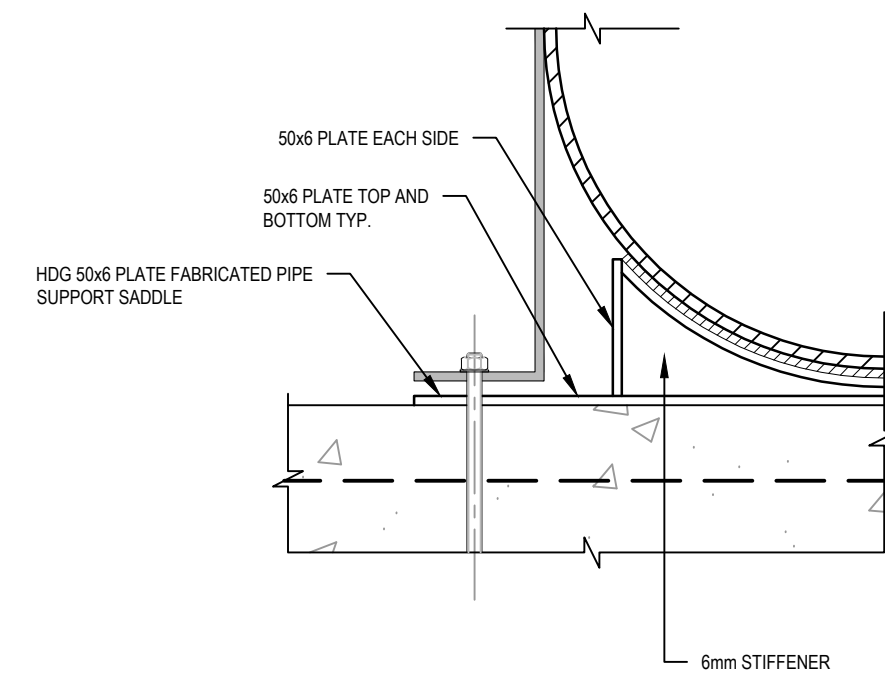
LEACHATE POND LINER

9 9 DETAIL
C105 C106 SCALE 1 : 20



PIPE STRAP SUPPORT

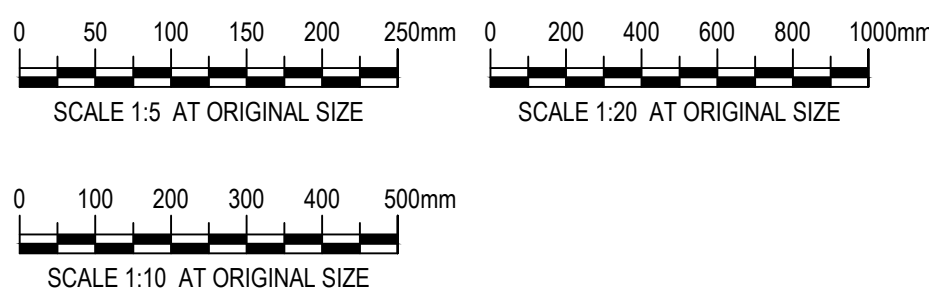
10 DETAIL
C112 SCALE 1 : 10



11 DETAIL
SCALE 1 : 5

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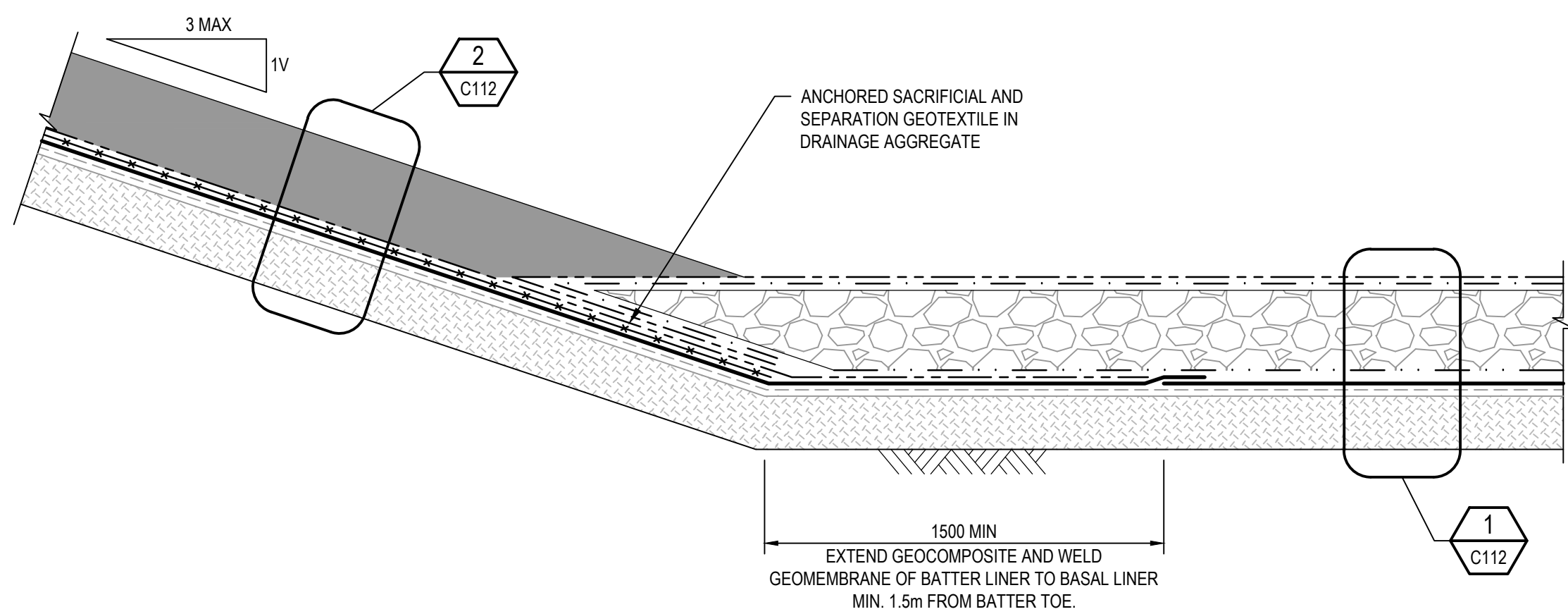
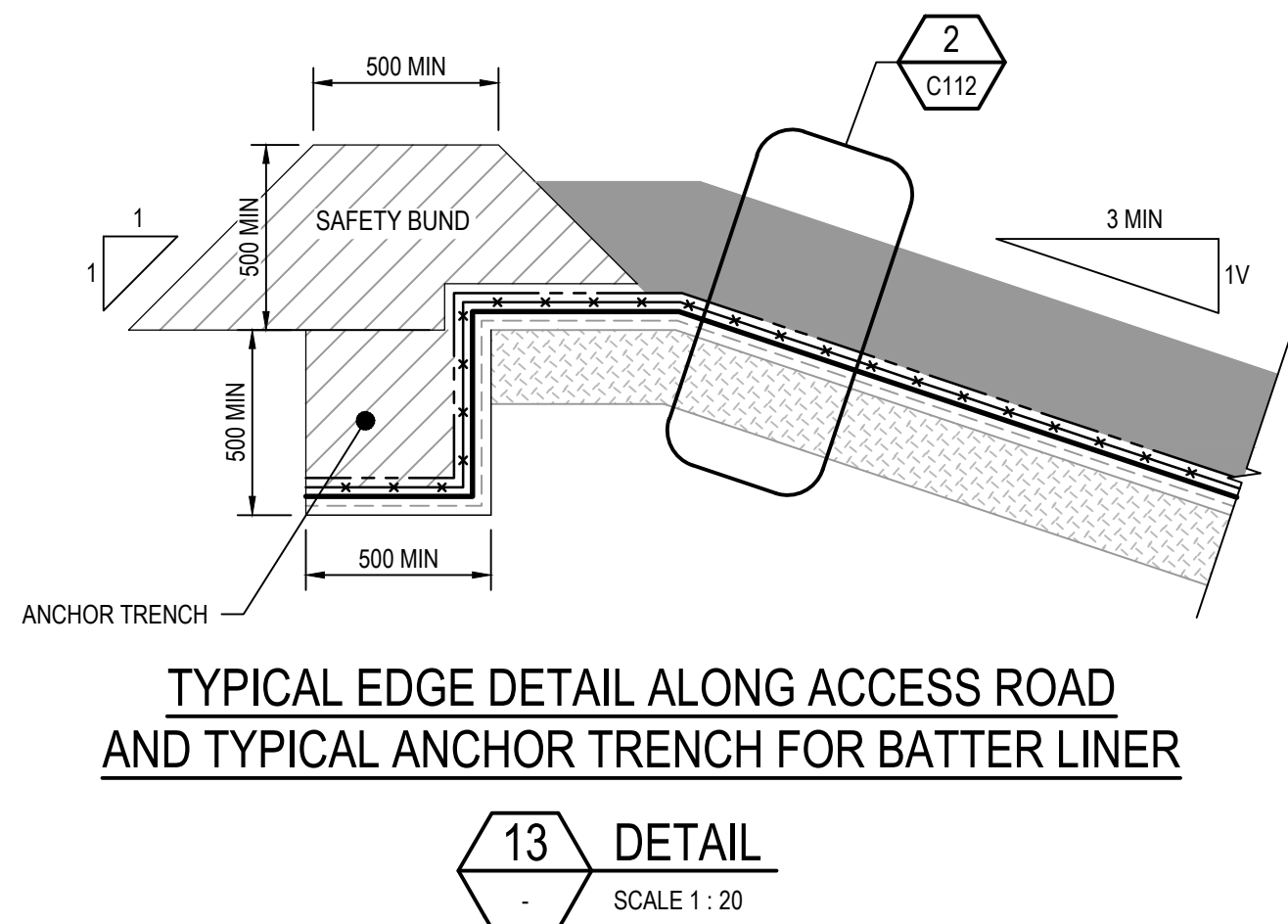
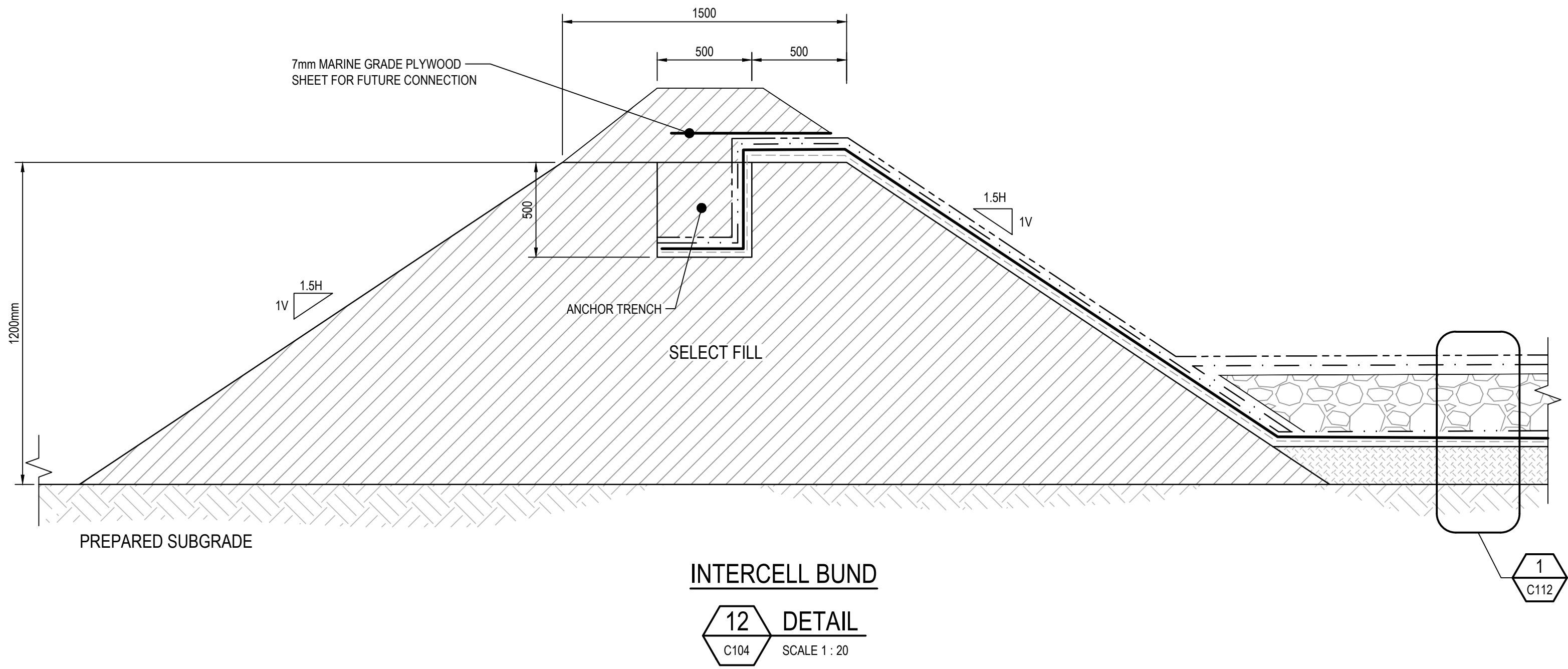
Client	LIVERPOOL PLAINS SHIRE COUNCIL
Project	WILLOW TREE WASTE MANAGEMENT FACILITY
Status	FOR CONSTRUCTION

Drawing Title
LANDFILL EXTENSION STAGE 1
TYPICAL SECTIONS AND DETAILS
SHEET 2 OF 4

Size
A1

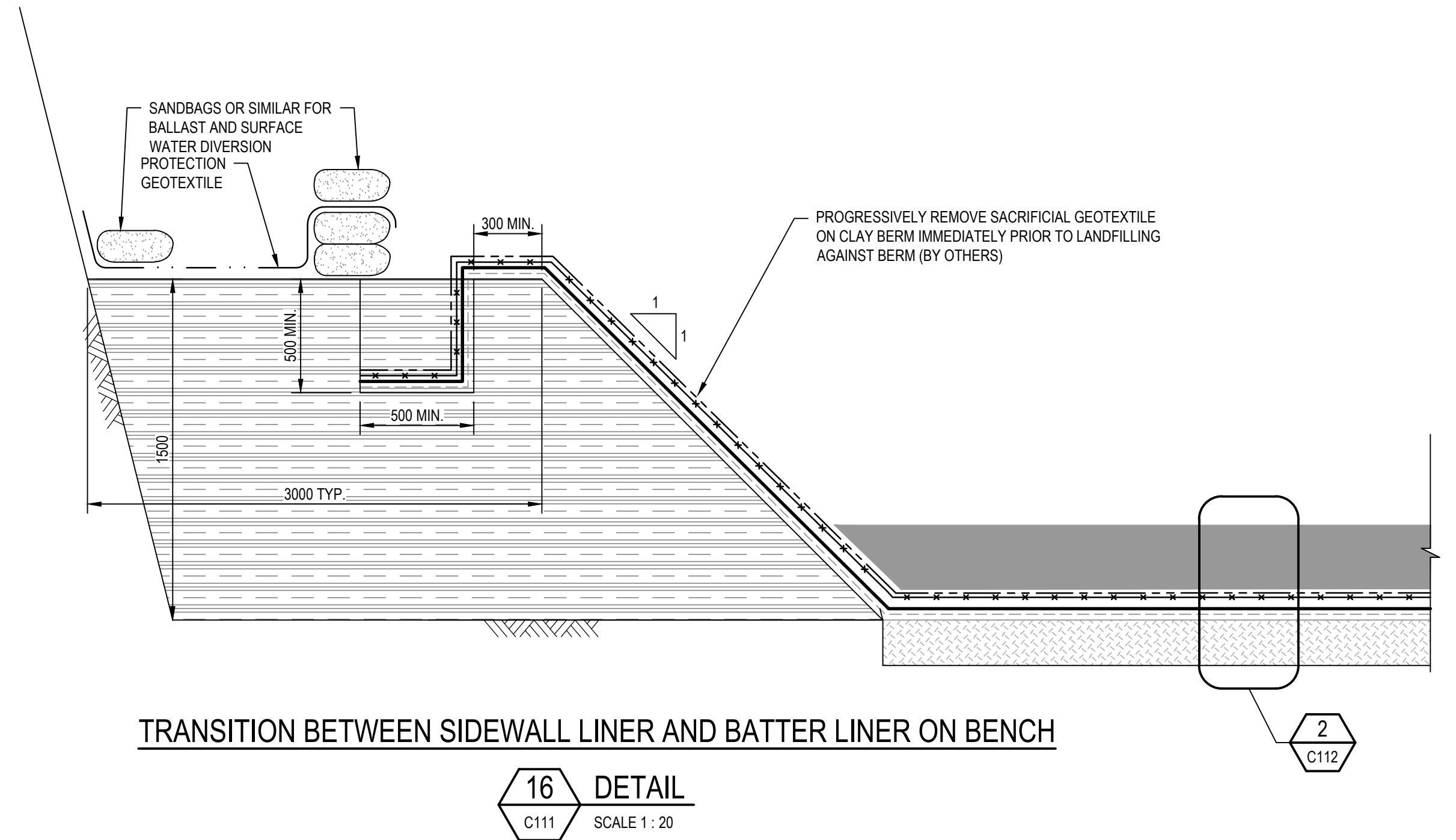
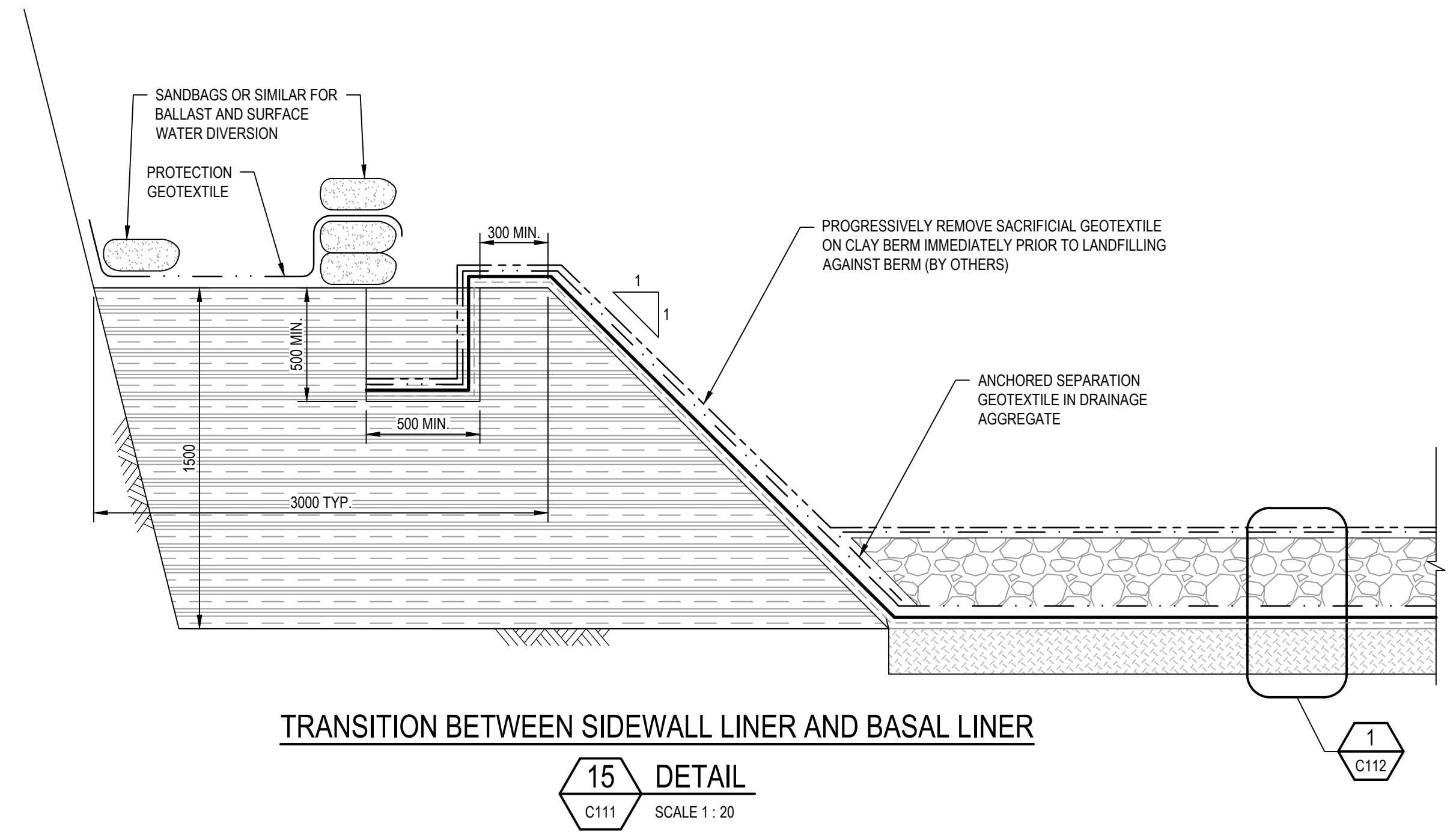
Rev
1

Drawing No.
12534581-C113



NOTES:

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TRANSITION BETWEEN BATTER AND BASAL LINER

14 DETAIL

C111 SCALE 1 : 20

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Project WILLOW TREE WASTE MANAGEMENT FACILITY

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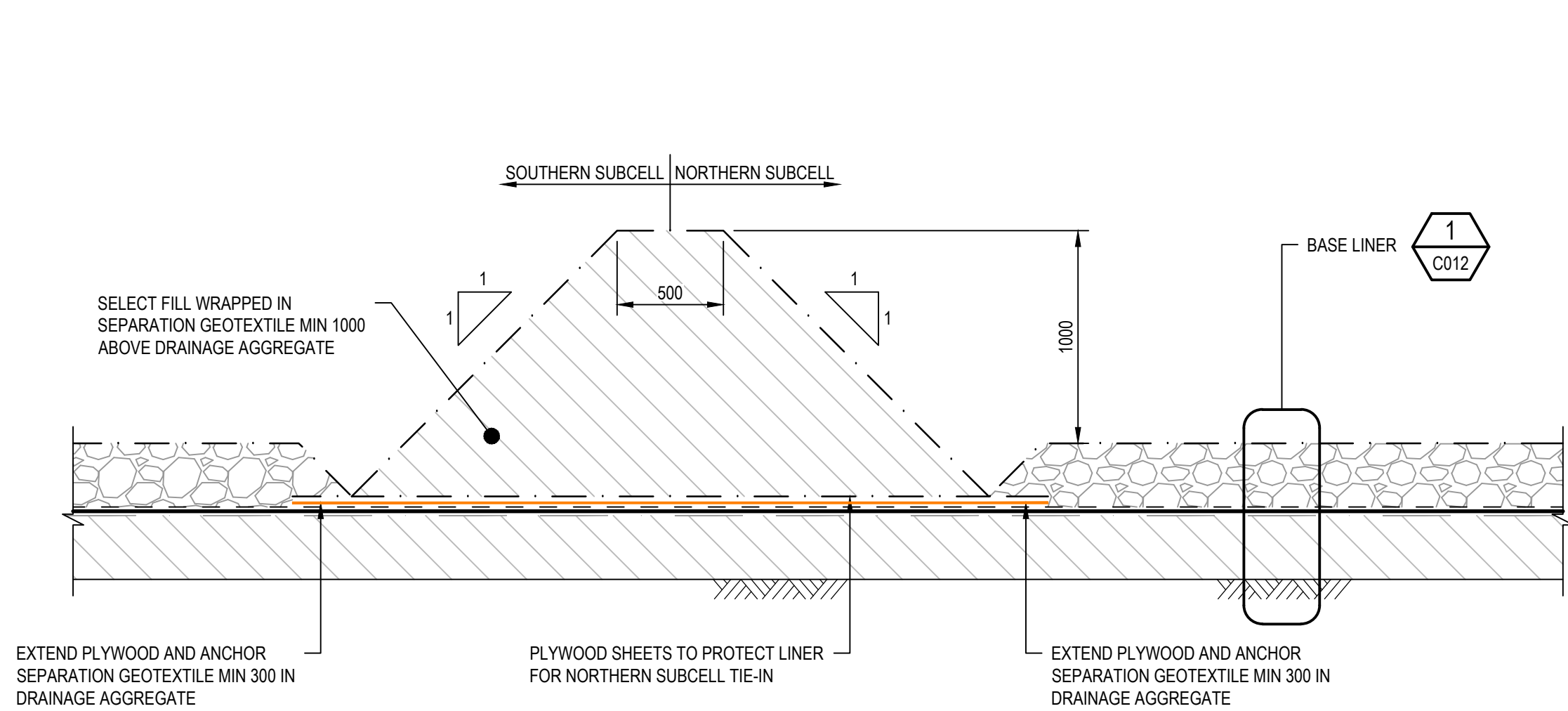
Drawing Title LANDFILL EXTENSION STAGE 1
TYPICAL SECTIONS AND DETAILS
SHEET 3 OF 4

FOR CONSTRUCTION

Size
A1

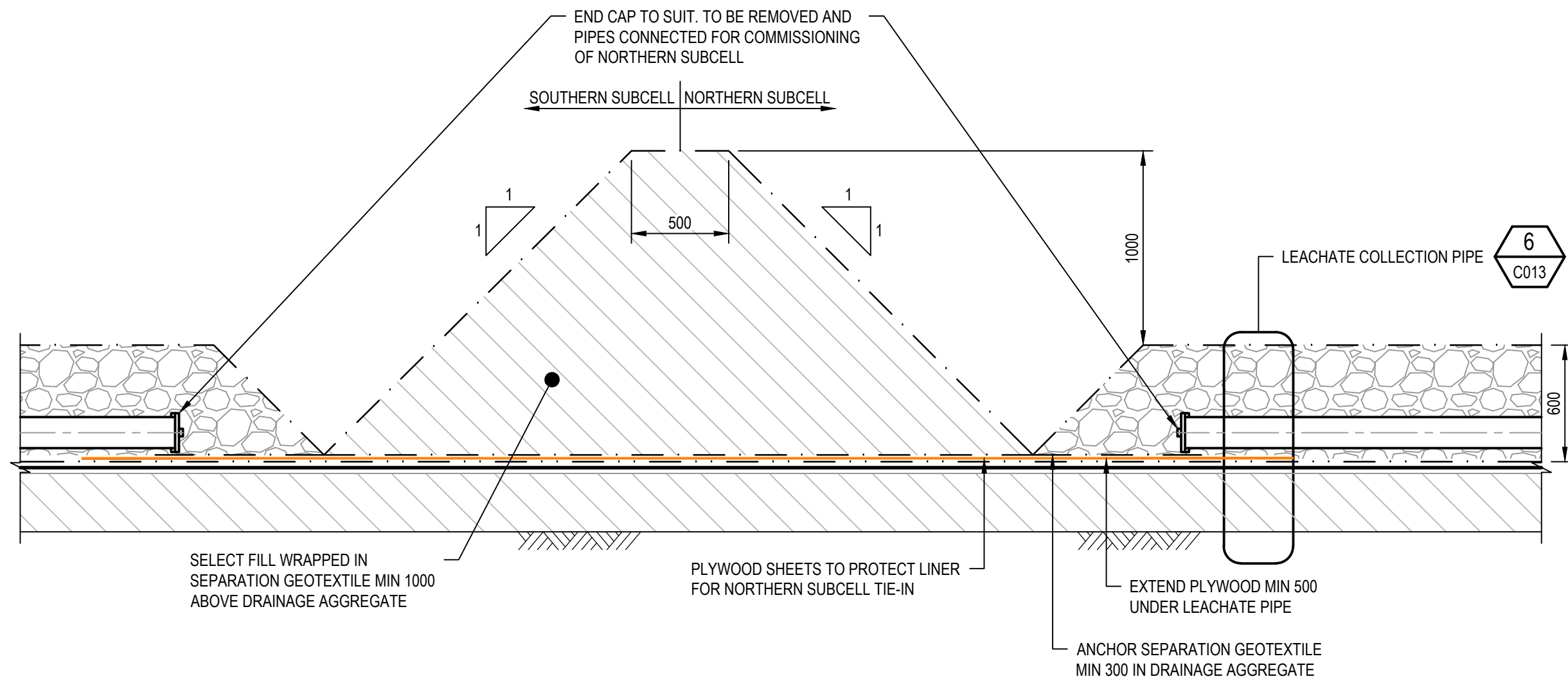
Drawing No.
12534581-C114

Rev
1



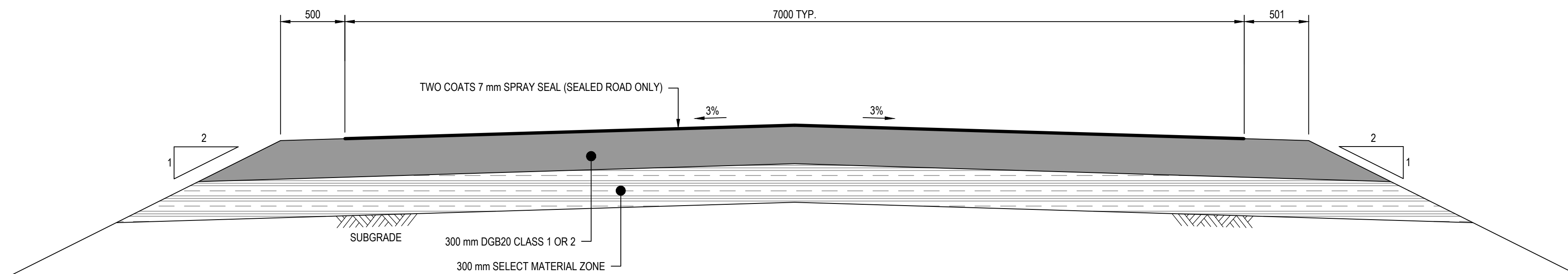
TYPICAL SECTION THROUGH SUBCELL BUND ON CELL BASE

17 DETAIL
SCALE 1 : 25



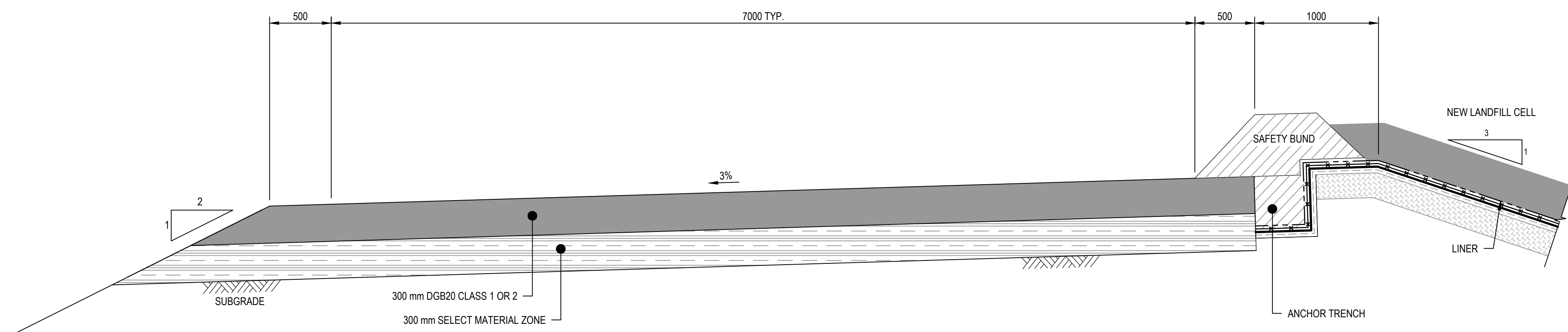
TYPICAL SECTION THROUGH SUBCELL BUND AT LEACHATE PIPE ON CELL BASE

18 DETAIL
SCALE 1 : 25



TYPICAL SECTION THROUGH SUBCELL BUND AT LEACHATE PIPE ON CELL BASE

19 DETAIL
SCALE 1 : 25



TYPICAL SECTION THROUGH SUBCELL BUND AT LEACHATE PIPE ON CELL BASE

20 DETAIL
SCALE 1 : 25

NOTES:

- SUBGRADE TO BE RIPPED AND RECOMPACTED 150mm DEPTH IN-SITU AT OPTIMUM MOISTURE CONTENT (OMC -3% +1%) COMPACTED TO 100% STANDARD DENSITY.
- SELECT MATERIAL ZONE TO TINSW SPECIFICATION D&C 3071 AND R44 (MIN. SOAKED CBR 15%) TO BE LAID IN TWO EQUAL LAYERS, COMPACTED TO 102% STANDARD DENSITY DGB20 CLASS 1 OR 2 TO TINSW SPECIFICATION D&C 3051 AND R71, TO BE LAID IN TWO EQUAL LAYERS COMPACTED TO 102% STANDARD DENSITY
- SPRAY SEAL TO TINSW SPECIFICATION D&C R106 OR R107.

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0 250 500 750 1000 1250mm
SCALE 1:25 AT ORIGINAL SIZE



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Project No.
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Client LIVERPOOL PLAINS SHIRE COUNCIL
Project WILLOW TREE WASTE MANAGEMENT FACILITY
Status FOR CONSTRUCTION

Drawing Title LANDFILL EXTENSION STAGE 1
TYPICAL SECTIONS AND DETAILS
SHEET 4 OF 4

Status Code S4

Drawing No.
12534581-C115

Size A1
Rev 1

Attachment E: Submissions and Planning Comments

Submission Issue	Comment
<i>Liverpool Plains Shire Council Waste Management Strategy 2018 and Site Suitability for Expansion</i> - The recommendations of the strategy that informed the decision to expand the Willow Tree Waste Management Facility are based on inaccurate input figures and outdated information from the 2012 landfill survey prepared by Bath Stewart. - The survey by Bath Stewart reported to Council management in 2012 the Quirindi Waste and Recycling site would run out of landfill capacity by 2018. This report was not provided to Councilors after it had been requested. - In 2017 MRA Consulting Group was engaged to investigate available options for LPSC, which included expanding the Quirindi Landfill or developing the Willow Tree landfill as the primary landfill for the shire. In 2018 the report by MRA Consulting Group was tabled at the February 2018 Council meeting and the option to expand the Quirindi Landfill was not discussed. - The Quirindi Landfill site is the more appropriate and cost-effective location for the Project. - There are concerns for the cost of the Project.	<i>Response:</i> In May 2018, Liverpool Plains Shire Council (Council) resolved to adopt a 10-year Waste Management Strategy (WMS) for the ongoing management of waste within the Local Government Area (LGA) (MRA, 2018). Landfilling forms an essential part of the WMS, along with the waste avoidance and reduction, increased recycling, and diversion of waste from landfill. The WMS proposed to rationalise the landfilling operations across the region by establishing the Willow Tree Waste Management Facility (WMF) as the primary landfill serving the LGA with an expansion of this existing landfill site. Along with establishing Willow Tree WMF as the LGA's primary landfill, thus replacing Quirindi landfill, an action plan was prepared as part of the WMS to achieve Council's immediate strategy objectives including: conduct a competitive tender process for new collection and processing contracts; review Council's waste charge and landfill fees to optimise waste costs and secure funds for undertaking the proposed actions; introduce a waste transfer system to improve accessibility and ease of use of waste facilities and restrict public access to the tip-face; rehabilitate the landfills; and introduce practical measures to improve resource recovery, beginning with bulky waste when the other system changes have been successfully implemented and received. GHD were subsequently engaged by Council in 2021 to undertake a masterplan for the Willow Tree WMF including a concept design for the Willow Tree WMF expansion. The masterplan included: - Review of site setting and masterplan inputs. - Development of a facility arrangement and design basis for the landfill expansion, including relevant regulatory requirements and a review of options for cell geometry and lining/capping materials. - Preliminary 3D modelling for the development of landfill airspace estimates for cell. - Preliminary cost estimation for the landfill expansion. - Identification of supplementary assessments and investigations required for the subsequent phases of the project.

	– Provision of a report alongside preparation of concept design drawings to support preliminary cost estimates for the expansion valued at approximately \$10 million for 3 stages, noting the initial stage is approximately \$3 million. A number of initial assessments and investigations were completed to inform the masterplan in relation to site suitability. An initial desktop review was completed by GHD to assess the suitability of the site for expansion of the landfill, with consideration to the principals and procedures outlined in the EIS Guideline – Landfilling (NSW Department of Urban Affairs and Planning (1996). This is documented in GHD (2021) and the review concluded that the expansion of landfill operations at the site appears feasible with no severe constraints identified. However, a number of items were identified for further consideration in the next phases of the project. Where relevant, these have been considered as part of this masterplan. The EIS for the Willow Tree WMF expansion has been prepared on the basis of a number of environmental assessments which have found that the project can be undertaken without any significant environmental impacts provided mitigation measures are implemented.
<i>Operating Costs for the Development and Impact on Ratepayers</i> • Council should not proceed with the Project as ratepayers are currently paying high rates and are likely to in the future as a result of the Quipolly Water Treatment Plant. • Council must disclose the budgeted operational costs for the Willow Tree Waste Management Facility and transport to the transfer stations, should this proceed, to determine the impact on ratepayers. • Householders cannot afford the increase in fees from the operation of the Project. • Council should be cautious with capital expenditure and operating costs as the Project has not had the appropriate due diligence and should not proceed.	<i>Response:</i> Comments relating to current rate levies and the impact of the Quipolly Water Treatment Plant on future levies are not a relevant consideration for determining development applications under Section 4.15 of the <i>Environmental Planning and Assessment Act 1979</i>. The recommended and appropriate path in obtaining this information is through a request to Council under the <i>Freedom of Information Act 1982</i>. Fees and charges levied on the community is not a relevant consideration for determining development applications under Section 4.15 of the <i>Environmental Planning and Assessment Act 1979</i>. The EIS confirms the investigations and assessments undertaken by GHD to determine the feasibility and potential environmental impacts of the Project at the selected site. In this regard, it is considered due diligence has been applied.

<i>Community Consultation</i> • The community consultation undertaken by the applicant in 2022 was insufficient and all residents should have the opportunity to question the proposal and raise concerns. • The statement in the Environmental Impact Assessment (EIS) relating to the community's support for a local recyclable materials facility is inaccurate as Liverpool Plains Shire Council has been operating a recycling facility for 20 years.	<i>Response:</i> Community Consultation has complied with all legislation protocols including the <i>Local Government Act 1993</i>, <i>Environmental Planning and Assessment Act 1979</i> and the <i>Liverpool Plains Shire Council Community Engagement and Participation Plan</i>. A Materials Recovery Facility is currently operating at Quirindi under contract to Liverpool Plains Shire Council. The application allows for one to be developed on site to undertake this process into the future should it be beneficial to do so.
<i>Road Maintenance</i> • The maintenance of roads in Liverpool Plains Shire Council is deficient.	<i>Response:</i> Comments relating to the maintenance of roads is not a relevant consideration for determining development applications under Section 4.15 of the <i>Environmental Planning and Assessment Act 1979</i>.
<i>Future Aquatic Centre</i> • Rate payers have raised concerns regarding the completion of the new Aquatic Centre within the proposed budget.	<i>Response:</i> This comment is not a relevant consideration for determining development applications under Section 4.15 of the <i>Environmental Planning and Assessment Act 1979</i>.