

Development Consent

Section 4.38 of the Environmental Planning and Assessment Act 1979

As delegate of the Minister for Planning and Public Spaces under delegation executed on 9 March 2020, I approve the Development Application referred to in Schedule 1, subject to the conditions specified in Schedule 2.

These conditions are required to:

- prevent, minimise, or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development

Sydney

2020

File: EF19/12328

SCHEDULE 1

Application Number:	SSD 7187
Applicant:	Shoalhaven City Council
Consent Authority:	Minister for Planning and Public Spaces
Site:	Lot 1 in DP 1104402, Part Lot 1 in DP 1018193, Part Lot 1 in DP 847203 and Part Lot 1 in DP 870268, 120 Flatrock Road, Mundamia
Development:	<p>West Nowra Landfill Extension, including:</p> <ul style="list-style-type: none">• progressive excavation, landfilling and rehabilitation of six new landfill sub-cells (Stage 4 landfill extension)• receiving 1.38 million cubic metres of additional waste <p>Step 1, being</p> <ul style="list-style-type: none">○ operation of the Stage 4 landfill for 10 years <p>Step 2, being</p> <ul style="list-style-type: none">○ further extension of operational lifespan of the landfill, as required

TABLE OF CONTENTS

DEFINITIONS	III
Obligation to Minimise Harm to the Environment.....	6
Terms of Consent	6
Limits of Consent	6
Notification of Commencement.....	7
Evidence of Consultation	7
Staging, Combining and Updating Strategies, Plans or Programs	7
Compliance.....	7
Operation of Plant and Equipment.....	7
Utilities and Services	7
Applicability of Guidelines	7
PART B SPECIFIC ENVIRONMENTAL CONDITIONS.....	8
Waste Management.....	8
Landfill Cell Design and Construction	8
Surface Water and Groundwater	9
Leachate	10
Independent Audit of the Leachate and Water Management System.....	11
Odour and Air Quality	11
Biodiversity	12
Fire Management.....	13
Noise	13
Traffic.....	15
Aboriginal Heritage	15
Hazards and Risk	15
Signage and Fencing.....	15
Landfill Gas	16
Rehabilitation, final landform and closure	16
PART C ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING	17
Environmental Management.....	17
Landfill Environmental Management Plan	17
Revision of Strategies, Plans and Programs	18
Reporting and Auditing	18
Access to Information	19
APPENDIX 1 DEVELOPMENT LAYOUT PLANS	20
APPENDIX 2 APPLICANT'S MANAGEMENT AND MITIGATION MEASURES	33
APPENDIX 3 INCIDENT NOTIFICATION AND REPORTING REQUIREMENTS	40

DEFINITIONS

Applicant	Shoalhaven City Council, or any person carrying out any development to which this consent applies
BC Act	<i>Biodiversity Conservation Act 2016</i>
Certifier	A person who is authorised by or under section 6.5 of the EP&A Act to issue Part 6 certificates
Calendar year	A period of 12 months commencing 1 January
Conditions of this consent	Conditions contained in Schedule 2 of this document
Construction	The carrying out of works for the purpose of the development, including vegetation clearing, bulk earthworks and other infrastructure permitted by this consent.
Council	Shoalhaven City Council
Day	The period from 7 am to 6 pm on Monday to Saturday, and 8 am to 6 pm on Sundays and Public Holidays
Department	NSW Department of Planning, Industry and Environment
Development	The development described in the EIS and Response to Submissions, including the works and activities of the six new landfill sub cells (Stage 4 landfill extension) as modified by the conditions of this consent.
Development layout	The plans at Appendix 1 of this consent
Dol	(former) Department of Industry, Lands and Water Division
Earthworks	Bulk earthworks, site levelling, import and compaction of fill material, excavation for installation of drainage and services to prepare the site for construction
EIS	The Environmental Impact Statement titled West Nowra Landfill Extension prepared by Arcadis Australia Pacific Pty Limited dated 31 May 2019 submitted with the application for consent for the development, including any additional information provided by the Applicant in support of the application
EES	Environment, Energy and Science Group (former Office of Environment and Heritage)
ENM	Excavated Natural Material
Environment	Includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings
EPA	NSW Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6 pm to 10 pm
General solid waste (non-putrescible)	Has the same meaning as the definition of the term in the Dictionary to the POEO Act
General solid waste (putrescible)	Has the same meaning as the definition of the term in the Dictionary to the POEO Act
Heritage	Encompasses both Aboriginal and historic heritage including sites that predate European settlement, and a shared history since European settlement
Heritage item	An item as defined under the <i>Heritage Act 1977</i> , and assessed as being of local, State and/ or National heritage significance, and/or an Aboriginal Object or Aboriginal Place as defined under the <i>National Parks and Wildlife Act 1974</i> , the World Heritage List, or the National Heritage List or Commonwealth Heritage List under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth), or anything identified as a heritage item under the conditions of this consent
Incident	An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance Note: "material harm" is defined in this consent

Land	Has the same meaning as the definition of the term in section 1.4 of the EP&A Act
LP	Landfill Plan
Material harm	Is harm that: <ul style="list-style-type: none"> • involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or • results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment)
Minister	NSW Minister for Planning and Public Spaces (or delegate)
Mitigation	Activities associated with reducing the impacts of the development prior to or during those impacts occurring
Monitoring	Any monitoring required under this consent must be undertaken in accordance with section 9.40 of the EP&A Act
Night	The period from 10 pm to 7 am on Monday to Saturday, and 10 pm to 8 am on Sundays and Public Holidays
Non-compliance	An occurrence, set of circumstances or development that is a breach of this consent
OEMP	Operational Environmental Management Plan
Operation	The progressive landfilling and rehabilitation of the six new landfill sub-cells (Stage 4) excluding preliminary site establishment works such as access track, drainage, fencing, installation of ground monitoring bores and minor excavation to obtain daily cover for the existing landfill
Planning Secretary	Planning Secretary under the EP&A Act, or nominee
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Reasonable	Means applying judgement in arriving at a decision, taking into account: mitigation benefits, costs of mitigation versus benefits provided, community views, and the nature and extent of potential improvements.
Registered Aboriginal Parties	Means the Aboriginal persons identified in accordance with the document entitled <i>"Aboriginal cultural heritage consultation requirements for proponents 2010"</i> (DECCW)
Rehabilitation	Capping and revegetating of the landfill cells to achieve to achieve the final landform as shown in Figure 12, Appendix 1.
RRP	The proposed resource recovery park (SSD-9887) located at Flatrock Road, Mundamia (Lot 342 DP 25751) processing up to 130,000 tonnes per year of general solid waste (putrescible) including the: waste reception hall, shredding and sterilisation operations including 16 autoclaves, a materials recovery facility associated infrastructure.
Response to Submissions	The Applicant's response to issues raised in submissions received in relation to the application for consent for the development under the EP&A Act and includes the document titled West Nowra Landfill Extension Response to Submissions prepared by Arcadis Australia Pacific Pty Limited dated 16 October 2019, West Nowra Landfill RTS - Further Clarification on Traffic Assessment prepared by Arcadis Australia Pacific Pty Limited dated 12 December 2019 and West Nowra Landfill Extension RTS – Response to Further EPA comments on Air Quality Assessment prepared by Arcadis Australia Pacific Pty Limited dated 23 January 2020
Site	The land defined in Appendix 1.
Stage 1	The Stage 1 landfill cell shown as Stage 1 in Figure 2 of Appendix 1
Stage 2	The Stage 2 landfill cell shown as Stage 2 in Figure 2 of Appendix 1
Stage 3	The Stage 3 landfill cell shown as Stage 3 in Figure 2 of Appendix 1
Stage 4	The landfill cell (including sub cells) shown as Stage 4 in Figure 1 of Appendix 1
VENM	Virgin Excavated Natural Material
Waste	Has the same meaning as the definition of the term in the Dictionary to the POEO Act

VMP	Vegetation Management Plan
WNWMF	West Nowra Waste Management Facility
Year	A period of 12 consecutive months

SCHEDULE 2
PART A ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

- A1. In addition to meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.

TERMS OF CONSENT

- A2. The development may only be carried out:
- (a) in compliance with the conditions of this consent;
 - (b) in accordance with all written directions of the Planning Secretary;
 - (c) in accordance with the EIS and Response to Submissions;
 - (d) in accordance with the Development Layout in Appendix 1; and
 - (e) in accordance with the management and mitigation measures in Appendix 2.
- A3. Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to:
- (a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Planning Secretary; and
 - (b) the implementation of any actions or measures contained in any such document referred to in condition A3(a).
- A4. The conditions of this consent and directions of the Planning Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document listed in condition A2(c). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition A2(c), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.

Note: For the purposes of this condition, there will be an inconsistency between documents if it is not possible to comply with both documents, or in the case of a condition of consent or direction of the Planning Secretary, and a document, if it is not possible to comply with both the condition or direction, and the document.

LIMITS OF CONSENT

Lapsing

- A5. This consent lapses five years after the date from which it operates, unless the development has physically commenced on the land to which the consent applies before that date.

Staging of Development

- A6. The development is limited to operation of the Stage 4 landfill for a period of 10 years from the commencement of emplacement of waste, in accordance with the EIS (Step 1). The Applicant must obtain further approval from the Minister to extend the operational lifespan of the Stage 4 landfill (Step 2).

To obtain approval for Step 2 of the development, the Applicant must prepare a Landfill Plan (LP) detailing the proposed increase in operational lifespan to the satisfaction of the Planning Secretary. The LP must:

- (a) justify the increase in landfill lifespan;
- (b) include updated Stage 4 landfill life expectancy modelling; and
- (c) demonstrate that impacts for Step 2 can be managed, in particular for dust, odour, noise, and traffic, taking into consideration cumulative impacts from the proposed Resource Recovery Park (RRP) (if approved).

Note: *This development does not require a further development application or modification application to be made as part of seeking the approval of the Minister for Step 2. However, any such approval will be subject to the Applicant preparing additional information to the satisfaction of the Planning Secretary, in consultation with the EPA. The additional information may utilise existing information from the EIS for the development as well as information from the EIS for the proposed RRP (SSD 9887), should this be approved.*

Landfill Capacity Limit

- A7. The Applicant must not receive more than:
- (a) 160,000 tonnes of general solid waste (putrescible and non-putrescible) per annum on site for landfill disposal; and
 - (b) the quantity of waste required to achieve the final landform profile described in the EIS and shown in Appendix 1, Figure 13.

NOTIFICATION OF COMMENCEMENT

- A8. The Applicant must notify the Department in writing, at least one month prior to the commencement of works for the development.
- A9. The Applicant must notify the Department in writing at least one month prior to the commencement of landfilling for each Stage 4 landfill sub-cell 1-6.

EVIDENCE OF CONSULTATION

- A10. Where conditions of this consent require consultation with an identified party, the Applicant must:
- (a) consult with the relevant party prior to submitting the subject document to the Planning Secretary for approval; and
 - (b) provide details of the consultation undertaken including:
 - (i) the outcome of that consultation, matters resolved and unresolved; and
 - (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.

STAGING, COMBINING AND UPDATING STRATEGIES, PLANS OR PROGRAMS

- A11. With the approval of the Planning Secretary, the Applicant may:
- (a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);
 - (b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and
 - (c) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development).
- A12. If the Planning Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.
- A13. If approved by the Planning Secretary, updated strategies, plans or programs supersede the previous versions of them and must be implemented in accordance with the condition that requires the strategy, plan or program.

COMPLIANCE

- A14. The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.

OPERATION OF PLANT AND EQUIPMENT

- A15. All plant and equipment used on site, or to monitor the performance of the development must be:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

UTILITIES AND SERVICES

- A16. Before the construction of any utility works associated with the development, the Applicant must obtain relevant approvals from service providers.

APPLICABILITY OF GUIDELINES

- A17. References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of this consent.
- A18. However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.

ADVISORY NOTES

- AN1.** All licences, permits, approvals and consents as required by law must be obtained and maintained as required for the development. No condition of this consent removes any obligation to obtain, renew or comply with such licences, permits, approvals and consents.

PART B SPECIFIC ENVIRONMENTAL CONDITIONS

WASTE MANAGEMENT

Receipt, Storage and Handling of Waste

- B1. The Applicant must only receive waste on site that is authorised for receipt by an Environment Protection Licence (EPL) applicable to the site.
- B2. The Applicant must ensure any waste generated at the site is classified as in accordance with the EPA's Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014) or its latest version and disposed of to a facility that may lawfully accept the waste.
- B3. The Applicant must provide details of the quantity, type and source of wastes received on the site to the EPA and Planning Secretary when requested.

Waste Monitoring

- B4. From the commencement of operations, the Applicant must monitor incoming waste for the development. The Applicant must:
 - (a) document the quantity, type and source of waste received on site system in accordance with the *Protection of the Environment Operations (Waste) Regulation 2014*;
 - (b) implement procedures that ensure the site does not accept wastes that are prohibited; and
 - (c) ensure that staff receive adequate training in order to be able to recognise and handle prohibited waste, including hazardous waste.

Landfill Operations

- B5. The Applicant must:
 - (a) minimise the expose or cleared areas of the landfill;
 - (b) ensure the active landfill tipping face area is no larger than 100 m² at any one time (or as otherwise agreed to by the EPA);
 - (c) cover all landfilled waste in accordance with the requirements of the *EPA's Environmental Guidelines: Solid Waste Landfills 2016* or its latest version;
 - (d) ensure cover material is either overburden or Virgin Excavated Natural Material (VENM) or another alternative material approved in writing by the EPA;
 - (e) maintain at least two weeks of cover material on the site; and
 - (f) ensure landfill cells are capped progressively during operation.

Note: For the purposes of condition B5(b), the Applicant must seek written approval from the EPA to increase the area of the active landfill tipping face.

Imported Soil

- B6. The Applicant must:
 - (a) ensure that only VENM or other material approved in writing by the EPA is used for capping the landfill;
 - (b) keep accurate records of the volume and type of fill to be used; and
 - (c) make these records available to the EPA and the Planning Secretary upon request.

Litter and Pest Control

- B7. The Applicant must manage litter in accordance with the EPL applicable to the site and the EPA's *Environmental Guidelines: Solid Waste Landfills 2016*, or its latest version.
- B8. The Applicant must implement suitable measures to manage pests, vermin and declared noxious weeds on the site in accordance with the EPL applicable to the site and the EPA's *Environmental Guidelines: Solid Waste Landfills 2016*, or its latest version.

Note: For the purposes of this condition, noxious weeds are those species subject to an order declared under the *Noxious Biosecurity Act 2015*.

LANDFILL CELL DESIGN AND CONSTRUCTION

Landfill Cell Design Report

- B9. Six months prior to the commencement of landfill cell works, the Applicant, must submit to the Planning Secretary and the EPA a Landfill Cell Design Report (LCDR) which details the design, construction, operation and rehabilitation of Stage 4 landfill cells. The LCDR must:
 - (a) be prepared by a suitably qualified and experienced person(s);
 - (b) be prepared in consultation with the EPA;

- (c) must be designed in accordance with the requirements of the EPA's *Environmental Guidelines: Solid Waste Landfills 2016* or its latest version; and
- (d) include details on a QA/QC program which can demonstrate that the Stage 4 landfill cells are constructed to meet its design specifications.

B10. The Applicant must:

- (a) not commence Stage 4 landfill cell construction until the LCDR required by condition B9 is approved by the Planning Secretary; and
- (b) implement the most recent version of the LCDR approved by the Planning Secretary for the duration of the development.

SURFACE WATER AND GROUNDWATER

Erosion and Sediment Control

- B11. Prior to the commencement of surface disturbance for the Stage 4 landfill the Applicant must install and maintain suitable erosion and sediment control measures on-site, in accordance with the relevant requirements of the Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book (Landcom, 2004) guideline and the Erosion and Sediment Control Plan included in the LEMP required by condition C2.
- B12. Prior to the commencement of operations, the Applicant must design, install and operate a stormwater management system for the development. The system must:
 - (a) be designed and constructed by a suitably qualified and experienced person(s);
 - (b) be designed to divert clean surface water around operational areas of the site;
 - (c) be designed to direct all sediment laden water in overland flow away from the leachate management system;
 - (d) be generally in accordance with the conceptual design Appendix 1;
 - (e) be in accordance with applicable Australian Standards; and
 - (f) ensure that the system capacity has been designed in accordance with Australian Rainfall and Runoff (Geoscience Australia, 2019) and Managing Urban Stormwater: Council Handbook (EPA, 1997) guidelines.

Discharge Limits

- B13. The development must comply with section 120 of the POEO Act, which prohibits the pollution of waters, except as expressly provided for in an EPL applicable to the site.

Water Management Plan

- B14. Prior to the commencement of operations, the Applicant must prepare a Water Management Plan (WMP) to the satisfaction of the Planning Secretary. The WMP must form part of the LEMP required by condition C2. The WMP must:
 - (a) be prepared by a suitably qualified and experienced person(s) whose appointment has been endorsed by the Planning Secretary;
 - (b) be prepared in consultation with the EPA and NRAR
 - (c) detail the management of wastewater streams on-site;
 - (d) contain a Groundwater Management Plan (GMP), including:
 - (i) details of the number and location of piezometers on-site;
 - (ii) a program to monitor groundwater levels and quality;
 - (iii) detail the water licence requirements for the development;
 - (iv) analysis of groundwater level monitoring data including changes in groundwater levels attributed to rainfall;
 - (i) groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts; and
 - (ii) a protocol for the investigation and mitigation of identified exceedances of the groundwater impact assessment criteria; and
 - (e) contain a Surface Water Management Plan (SWMP), detailing:
 - (i) a program to monitor surface water flows and quality, surface water storage and use and sediment basin operation;
 - (ii) a water balance;
 - (iii) surface water monitoring program;
 - (iv) measures to divert clean surface waterways from operational areas;
 - (v) trigger levels for investigating any potential adverse surface water impacts; and

- (vi) a protocol for the investigation and mitigation of identified exceedances of the surface water impact assessment criteria.

B15. The Applicant must:

- (a) not commence operations until the WMP required by condition B14 is approved by the Planning Secretary; and
- (b) implement the most recent version of the WMP approved by the Planning Secretary for the duration of the development.

LEACHATE

Leachate Management

B16. The Applicant must:

- (a) treat all water that has entered areas filled with waste, or been contaminated by leachate, as leachate;
- (b) ensure all surface water from areas not subject to waste disposal or leachate disposal is directed away from the leachate management system;
- (c) ensure the construction and operation of the leachate irrigation area does not compromise the proper and efficient collection of landfill gas from the Stage 2 landfill;
- (d) ensure the irrigation of leachate is managed in accordance with the EPA's *Environmental Guidelines: Use of Effluent by Irrigation* (NSW DEC, 2004b) (as may be updated or replaced from time to time);
- (e) ensure the irrigation application rates do not exceed the capacity of the irrigation area to absorb the nutrient, salt, organic and hydraulic loadings supplied by the leachate;
- (f) maintain a buffer zone of at least five metres between the crest of the embankment of the Stage 2 landfill and the irrigation zone;
- (g) ensure the irrigation of leachate does not cause spray drift; and
- (h) ensure signs are prominently displayed to inform the public and employees that leachate irrigation is taking place.

Leachate Dam

B17. The Applicant must ensure there is sufficient freeboard in the leachate dam to accept direct rainfall from a 1 in 25 year average recurrence interval 24-hour rainfall event without overflowing.

Leachate Level Monitoring

B18. The Applicant must ensure leachate levels in the main leachate sump or riser in each landfill cell is monitored quarterly to demonstrate that leachate is not accumulating to unacceptable levels above the liner.

Leachate Management Plan

B19. Prior to the commencement of works for the Stage 4 landfill cells, the Applicant must prepare a Leachate Management Plan (LMP) to the satisfaction of the Planning Secretary. The LMP must form part of the LEMP required by condition C2. The LMP must:

- (a) be prepared by a suitably qualified and experienced person(s);
- (b) be prepared in consultation with the EPA;
- (c) describe in detail the leachate barrier system to be installed;
- (d) describe how all water that has entered areas filled with waste, or been contaminated by leachate, is treated as leachate;
- (e) detail how all surface water from areas not subject to waste disposal or leachate disposal is directed away from the leachate management system;
- (f) detail the measures to collect and store all leachate generated by the landfill;
- (g) describe the measures to be employed to ensure the proper and efficient operation of the leachate irrigation area;
- (h) describe the measures to prevent leachate from escaping to surface water, groundwater or the surrounding subsoils;
- (i) describe how all surface water from areas not subject to waste disposal or leachate disposal are to be directed away from the leachate management system;

B20. The Applicant must:

- (a) not commence operations until the LMP required by condition B19 is approved by the Planning Secretary; and
- (b) implement the most recent version of the LMP approved by the Planning Secretary for the duration of the development.

Independent Audit of the Leachate and Water Management System

B21. The Applicant must carry out a Leachate and Water Management System Audit no later than 36 months after the commencement of operations and five years thereafter, or as otherwise agreed by the Planning Secretary. Division 9.4 of Part 9 of the EP&A Act applies to this audit which is for the purpose of validating the leachate and water management system. The audit must:

- (a) be carried out by a suitably qualified, independent and qualified person(s), whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in consultation with the EPA;
- (c) assess actual performance against the assumptions and predictions made in the development water balance in the Appendix N of the EIS. This must include:
 - (i) actual versus predicted leachate production rates;
 - (ii) actual versus predicted inputs and outputs into and out of the leachate dam;
 - (iii) actual versus predicted rainfall and evaporation; and
 - (iv) actual versus proposed leachate irrigation rates.
- (d) assess actual versus predicted performance of the leachate irrigation area;
- (e) determine whether the leachate and water management system is achieving its intended objectives; and
- (f) outline all reasonable and feasible measures that may be required to improve water and leachate management of the site.

Note: The leachate and water management system audit may be prepared so that it addresses the requirements of this consent and the EPL applicable to the site.

B22. Within two months of commissioning the Leachate and Water Management System Audit required by condition B21, or as otherwise agreed by the Planning Secretary, the Applicant must submit a copy of the Leachate and Water Management System Audit report to the EPA and to the satisfaction of the Planning Secretary, together with the Applicant's response to any recommendations contained in the Leachate and Water Management System Audit report.

ODOUR AND AIR QUALITY

Meteorological Monitoring

B23. Prior to the commencement of any works, and for the life of the development, the Applicant must ensure that there is a suitable meteorological station operating in close proximity to the site that:

- (a) complies with the requirements in the latest version of EPA's *Approved Methods for Sampling of Air Pollutants in New South Wales* (DEC, 2007) (as may be updated or replaced from time to time); and
- (b) is capable of continuous real-time measurement of atmospheric stability category determined by the sigma theta method in accordance with the *NSW Industrial Noise Policy* (EPA, 2000) (as may be updated or replaced from time to time).

B24. The Applicant must maintain the meteorological station to the satisfaction of EPA for the life of the development.

Air Quality Discharges

B25. The Applicant must ensure the development does not cause or permit the emission of any offensive odour (as defined in the POEO Act).

B26. The Applicant must install and operate equipment in line with best practice to ensure that the development complies with all load limits, air quality criteria/air emission limits and air quality monitoring requirements as specified in the EPL applicable to the site.

Dust Minimisation

B27. The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.

B28. The Applicant must ensure that:

- (a) exposed surfaces and stockpiles are suppressed by regular watering;
- (b) all trucks entering or leaving the site with loads have their loads covered;
- (c) trucks associated with the development do not track dirt onto public road network; and
- (d) rehabilitation works are carried out progressively on site to minimise exposed surfaces.

Odour Minimisation

B29. The Applicant must ensure that:

- (a) the area of the active tip-face does not exceed 100m² (or as otherwise agreed to in writing by the EPA);
- (b) shredding and screening activities are undertaken under appropriate meteorological conditions;

- (c) intermediate cover of no less than 300mm of VENM is placed and maintained to minimise odours; and
- (d) completed landfill sub-cells are progressively capped.

Air Quality Management Plan

- B30. Prior to the commencement of clearing works for the development, the Applicant must prepare an Air Quality Management Plan (AQMP) to the satisfaction of the Planning Secretary. The AQMP must form part of the LEMP required by condition C2. The AQMP must:
- (a) be prepared by a suitably qualified and experienced person(s) whose appointment has been endorsed by the Planning Secretary;
 - (b) consider both particulate emissions and odour impacts;
 - (c) describe the objectives and targets, including specific reference to the offensive odour provision under Section 129 of the *Protection of the Environment Operations Act, 1997*;
 - (d) include a risk assessment to evaluate the odour;
 - (e) detail and rank all emissions from all sources of the development, including particulate emissions;
 - (f) describe a program that is capable of evaluating the performance of the operation and determining compliance with key performance indicators;
 - (g) identify the control measures that will be implemented for each emission source; and
 - (h) nominate the following for each of the proposed controls:
 - (i) key performance indicator;
 - (ii) monitoring method;
 - (iii) location, frequency and duration of monitoring;
 - (iv) record keeping;
 - (v) complaints register must document investigations undertaken to identify the causes(s) of and action(s) taken to rectify any complaints received;
 - (vi) response procedures; and
 - (vii) compliance monitoring.
 - (i) include contingencies strategies to reduce odour impacts;
 - (j) establish a communications strategy so that affected neighbours are kept informed about the operation of the facility and are consulted about aspects of the operation likely to result in particulate emissions and odour; and
 - (k) system and performance review for continuous improvement.
- B31. The Applicant must:
- (a) not commence construction until the AQMP required by condition B30 is approved by the Planning Secretary; and
 - (b) implement the most recent version of the AQMP approved by the Planning Secretary for the duration of the development.

BIODIVERSITY

Offsets

- B32. Prior to any clearing works for the development, the Applicant must retire the following ecosystem and species credits, as determined in accordance with the OEH's Framework for Biodiversity Assessment (FBA) and the Biobanking Assessment Methodology 2014 (BAM):
- (a) 719 ecosystem credits to offset the removal of 9.87 hectare (ha) of Red Bloodwood – Hard-leaved Scribbly Gum – Silvertop Ash heathy open forest on sandstone plateaux of the lower Shoalhaven Valley, Sydney Basin Bioregion;
 - (b) 197 species credit to offset the removal of the Eastern Pygmy-possum habitat; and
 - (c) 217 species credit to offset the removal of the Squirrel Glider habitat.

Note: *If the Applicant seeks a variation to the offset rules, the Applicant must demonstrate that reasonable steps have been taken to find like-for-like offsets in accordance with Section 10.5.4.2 of the FBA and Appendix A of the OEH's NSW Biodiversity Offsets Policy for Major Projects 2014.*

Rope Fauna Crossing

- B33. Prior to any clearing works for the development, the Applicant must install three wildlife rope-bridges with monitoring cameras to maintain habitat connectivity for the life of development in accordance with the EIS.

Conservation Area

B34. The Applicant must establish and maintain for the life of the development the 4.68 ha conservation area to the east of the site shown in Figure 1 in Appendix 1.

Vegetation Management Plan

B35. Prior to the commencement of clearing works for the development, the Applicant must prepare a Vegetation Management Plan (VMP) for the conservation area required by condition B34 to the satisfaction of the Planning Secretary. The VMP must form part of the LEMP required by condition C2. The VMP must:

- (a) be prepared in consultation with Environment, Energy and Science Group (EES) by a suitably qualified and experienced person(s);
- (b) include specific measures for the management and persistence of threatened flora species *Triplarina nowraensis* (Nowra Heath Myrtle), including monitoring and performance measures;
- (c) describe the measures to establish, protect and maintain the ecological integrity of the conservation area, including details of how the conservation area is to be managed and funded in the long-term; and
- (d) describe the measures to establish and maintain the rope fauna crossing as described in condition B33 **Error! Reference source not found..**

B36. The Applicant must:

- (a) not commence commencement of clearing works for Stage 4 landfill extension until the VMP is approved by the Planning Secretary; and
- (b) implement the most recent version of the VMP approved by the Planning Secretary.

FIRE MANAGEMENT

B37. The Applicant must implement the bushfire protection measures outlined in Section 6 Appendix J of the EIS titled *Bushfire Protection Assessment* prepared by Australian Bushfire Protection Planners Pty Ltd and dated 11 July 2017.

NOISE

Hours of Work

B38. The Applicant must comply with the hours detailed in Table 1, unless otherwise agreed in writing by the Planning Secretary.

Table 1 Hours of Work

Activity	Day	Time
Construction and Operation	Monday – Sunday	8 am to 5 pm

Note Construction activity, landfill processing and transporting are not permitted on Public Holidays

B39. Works outside of the hours identified in condition B38 may be undertaken in the following circumstances:

- (a) works that are inaudible at the nearest sensitive receivers;
- (b) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or
- (c) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.

Noise Management

B40. The Applicant must not operate excavators and bulldozers simultaneously during the construction and operation of Stage 4 landfill extension.

B41. The Applicant must:

- (a) implement best practice, including all reasonable and feasible noise management and mitigation measures to minimise operational, low frequency and traffic noise generated by the development;
- (b) minimise the noise impacts of the development during adverse meteorological conditions;
- (c) maintain the effectiveness of any noise suppression equipment on plant at all times and ensure defective plant is not used operationally until fully repaired; and
- (d) regularly assess noise emissions and relocate, modify and/or stop operations to ensure compliance with the relevant conditions of this consent.

Noise Limits

B42. The Applicant must ensure that noise generated by construction and operation of the development does not exceed the noise limits in Table 2.

Table 2 Noise Limits dB(A)

Locality	Location	Day L _{Aeq} (15 minute)
R1	43 Flatrock Road, Mundamia	44
R2	41 Flatrock Road, Mundamia	42
R3	3 Flatrock Road, Mundamia	40
R4	3 Flatrock Road, Mundamia	40
R5	3 Flatrock Road, Mundamia	40
R6	3 Flatrock Road, Mundamia	40
R7	18 Bamarang Road, Mundamia	40
R8	38A Old Bamarang Road, Mundamia	40
R9	56 Stonegarth Road, Mundamia	40
C3	University of Wollongong Shoalhaven Campus (when in use)	45 (L _{Aeq} (1 hour) (external))
C2	National Parks and Wildlife Service Depot (when in use)	68 L _{Aeq} (1 hour) (external)

Note 1 Noise generated by the development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Noise Policy for Industry (EPA,2017) (as may be updated or replaced from time to time).

Note 2: Day is defined as the period from 7:00 am to 6:00 pm Monday to Saturday and 8:00 am to 6:00 pm Sundays.

B43. The Applicant must ensure that the development complies with all noise monitoring requirements as specified in the EPL applicable to the site.

Operational Noise Management Plan

B44. Within 30 days of the commencement of landfilling operations, the Applicant must prepare an operational noise management plan (ONMP) to the satisfaction of the Planning Secretary. The ONMP must form part of the LEMP required by condition C2. The ONMP must:

B45. The ONMP must:

- (a) be prepared in consultation with EPA by a suitably qualified and experienced person(s);
- (b) an analysis of compliance with noise limits specified in condition B42;
- (c) an outline of management actions to be taken to address any exceedances of the limits specified in condition B42; and
- (d) a description of contingency measures in the event management actions are not effective in reducing noise levels to an acceptable level.

B46. The Applicant must implement the most recent version of the ONMP approved by the Planning Secretary for the duration of the development.

Road Traffic Noise

B47. Prior to the commencement of operations, the Applicant must prepare a Driver Code of Conduct and induction training for the development to minimise road traffic noise. The Driver Code of Conduct must form part of the LEMP in accordance with condition C2 and all works and must be implemented for the life of the development.

TRAFFIC

Operating conditions

B48. The Applicant must ensure:

- (a) the development does not result in any vehicles queueing on the public road network;
- (b) heavy vehicles and bins associated with the development are not parked on local roads or footpaths in the vicinity of the site;
- (c) all vehicles are wholly contained on site before being required to stop;
- (d) all loading and unloading of materials is carried out on site; and
- (e) all trucks entering and leaving the site with loads have their loads covered and do not track dirt onto the public road network.

ABORIGINAL HERITAGE

Unexpected Finds Protocol

B49. If any item or object of Aboriginal heritage significance is identified on site:

- (a) all work in the immediate vicinity of the suspected Aboriginal item or object must cease immediately;
- (b) a 10 m wide buffer area around the suspected item or object must be cordoned off;
- (c) the Biodiversity and Conservation Division of the EES must be contacted immediately;
- (d) consultation must be undertaken in accordance with the Cultural Heritage Consultation Requirements for Proponents 2010; and
- (e) appropriate site management measures must be developed in consultation with an archaeologist and the Aboriginal community.

B50. Work in the immediate vicinity of the Aboriginal item or object may only recommence in accordance with the provisions of Part 6 of the *National Parks and Wildlife Act 1974*.

Unexpected Finds Protocol

B51. If any archaeological relics are uncovered during the course of the work, then all works must cease immediately in that area. Unexpected finds must be evaluated and recorded in accordance with the requirements of the Department of Premier and Cabinet Heritage Division.

HAZARDS AND RISK

Dangerous Goods

B52. The quantities of dangerous goods stored and handled at the site must be below the threshold quantities listed in the Department of Planning's Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 at all times.

B53. Dangerous goods, as defined by the Australian Dangerous Goods Code, must be stored and handled strictly in accordance with:

- (a) all relevant Australian Standards;
- (b) for liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund; and
- (c) the Environment Protection Manual for *Authorised Officers: Bunding and Spill Management – technical bulletin* (EPA, 1997).

B54. In the event of an inconsistency between the requirements B53(a) to B53(c), the most stringent requirement must prevail to the extent of the inconsistency.

Bunding

B55. The Applicant must store all chemicals, fuels and oils used on-site in appropriately banded areas in accordance with the requirements of all relevant Australian Standards, and/or EPA's Storing and Handling of Liquids: Environmental Protection – Participants Manual (Department of Environment and Climate Change, 2007).

SIGNAGE AND FENCING

B56. All signage and fencing must be erected in accordance with the development plans included in the EIS.

Note: This condition does not apply to temporary construction and safety related signage and fencing.

LANDFILL GAS

Landfill Gas Management System

B57. The Applicant must ensure the landfill gas management system is installed and operated to ensure that the development complies with all methane gas emission limits and landfill gas monitoring requirements as specified in the EPL applicable to the site.

Landfill Gas Monitoring Plan

B58. Prior to the commencement of operations, the Applicant must prepare a Landfill Gas Monitoring Plan (LGMP) developed in accordance with the requirements of the EPA's *Environmental Guidelines: Solid Waste Landfills 2016* or its latest version. The LGMP must form part of the LEMP required by condition C2. The LGMP must:

- (a) be prepared by a suitably qualified and experienced expert(s);
- (b) detail how the landfill gas management system will be installed and operated to ensure that the development complies with all methane gas emission limits and landfill gas monitoring requirements as specified in the EPL applicable to the site;
- (c) detail corrective actions if exceedances of the methane gas emission limits are detected;
- (d) detail how the landfill gas management system for Stage 4 landfill extension will be managed by the existing landfill gas system; and
- (e) detail strategies to optimise landfill gas capture.

B59. The Applicant must:

- (a) not commence operations until the LGMP required by condition B58 is approved by the Planning Secretary; and
- (b) implement the most recent version of the LGMP approved by the Planning Secretary for the duration of the development.

REHABILITATION, FINAL LANDFORM AND CLOSURE

Rehabilitation

B60. The Applicant must progressively rehabilitate the completed landfill cells to achieve the final landform shown in Appendix 1, Figure 13 of this consent. The vegetation types, maintenance and monitoring and performance criteria for the rehabilitation must be detailed in the LEMP required by condition C2.

Final Landform

B61. The Applicant must rehabilitate the site to achieve the final landform shown in Appendix 1, Figure 13 and in accordance with the criteria in the EPA's *Environmental Guideline: Solid Waste Landfills 2016*, or its latest version.

Landfill Closure Plan

B62. The Applicant must prepare a Landfill Closure Plan (LCP) to the satisfaction of the Planning Secretary. The LCP must:

- (a) be prepared in accordance with section 76 of the POEO Act;
- (b) be prepared by a suitably qualified and experienced experts(s);
- (c) be submitted to the EPA and Planning Secretary twelve (12) months prior to the planned closure of the landfill (Stage 4);
- (d) detail the requirements for ongoing management of the capped waste mass;
- (e) detail the maintenance procedures for the final capping, in accordance with the requirements of the EPA's *Environmental Guidelines: Solid Waste Landfills 2016*, or its latest version;
- (f) describe monitoring and management measures to ensure the integrity of the cap;
- (g) describe ongoing surface water and leachate management, odour and dust control;
- (h) detail landfill gas monitoring and maintenance; and
- (i) identify future land use/s on the site.

B63. The Applicant must implement the most recent version of the LCP approved by the Planning Secretary for the duration of the development.

PART C ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Management Plan Requirements

- C1. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:
- (a) detailed baseline data;
 - (b) details of:
 - (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - (ii) any relevant limits or performance measures and criteria; and
 - (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
 - (c) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;
 - (d) a program to monitor and report on the:
 - (i) impacts and environmental performance of the development;
 - (ii) effectiveness of the management measures set out pursuant to paragraph (c) above;
 - (e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
 - (f) a program to investigate and implement ways to improve the environmental performance of the development over time;
 - (g) a protocol for managing and reporting any:
 - (i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria);
 - (ii) complaint;
 - (iii) failure to comply with statutory requirements; and
 - (h) a protocol for periodic review of the plan.

Note: the Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans

LANDFILL ENVIRONMENTAL MANAGEMENT PLAN

- C2. The Applicant must prepare a Landfill Environmental Management Plan (LEMP), in accordance with the requirements of condition C1 and to the satisfaction of the Planning Secretary
- C3. As part of the LEMP required under Condition C2 of this consent, the Applicant must include the following:
- (a) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (b) describe the procedures that would be implemented to:
 - (i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - (ii) receive, handle, respond to, and record complaints;
 - (iii) resolve any disputes that may arise;
 - (iv) respond to any non-compliance;
 - (v) respond to emergencies; and
 - (c) include:
 - (i) Erosion and Sediment Control Plan (see condition B11);
 - (ii) Water Management Plan (see condition B14);
 - (iii) Leachate Management Plan (see condition B19);
 - (iv) Air Quality Management Plan (see condition B30);
 - (v) Vegetation Management Plan (see condition B35);
 - (vi) Noise Management Plan (see condition B44);
 - (vii) Driver Code of Conduct (see condition B47); and
 - (viii) Landfill Gas Management Plan (see condition B58).
- C4. The Applicant must:

- (a) not commence operations until the LEMP is approved by the Planning Secretary; and
- (b) operate the development in accordance with the LEMP approved by the Planning Secretary (and as revised and approved by the Planning Secretary from time to time).

REVISION OF STRATEGIES, PLANS AND PROGRAMS

- C5. Within three months of:
- (a) the submission of a Compliance Report under condition C12;
 - (b) the submission of an incident report under condition C8;
 - (c) the submission of an Independent Audit under condition C15;
 - (d) the approval of any modification of the conditions of this consent; or
 - (e) the issue of a direction of the Planning Secretary under condition A2(b) which requires a review,
- the strategies, plans and programs required under this consent must be reviewed, and the Planning Secretary must be notified in writing that a review is being carried out.
- C6. If necessary to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review.

Note: *This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.*

REPORTING AND AUDITING

Incident Notification, Reporting and Response

- C7. The Planning Secretary must be notified in writing to compliance@planning.nsw.gov.au immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given and reports submitted in accordance with the requirements set out in Appendix 3.

Non-Compliance Notification

- C8. The Planning Secretary must be notified in writing to compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of any non-compliance.
- C9. A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.
- C10. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

Compliance Reporting

- C11. No later than 6 weeks before the date notified for the commencement of operation, a Compliance Monitoring and Reporting Program prepared in accordance with the Compliance Reporting Post Approval Requirements (Department 2018) must be submitted to the Planning Secretary.
- C12. Compliance Reports of the development must be carried out in accordance with the Compliance Reporting Post Approval Requirements (Department 2018).
- C13. The Applicant must make each Compliance Report publicly available no later than 60 days after submitting it to the Planning Secretary and notify the Planning Secretary in writing at least 7 days before this is done.

Independent Audit

- C14. No later than 4 weeks before the date notified for the commencement of operation, an Independent Audit Program prepared in accordance with the Independent Audit Post Approval Requirements (Department 2018) must be submitted to the Planning Secretary.
- C15. Independent Audits of the development must be carried out in accordance with:
- (a) the Independent Audit Program submitted to the Planning Secretary under condition C14 of this consent; and
 - (b) the requirements for an Independent Audit Methodology and Independent Audit Report in the Independent Audit Post Approval Requirements (Department 2018).
- C16. In accordance with the specific requirements in the Independent Audit Post Approval Requirements (Department 2018), the Applicant must:
- (a) review and respond to each Independent Audit Report prepared under condition C15 of this consent;
 - (b) submit the response to the Planning Secretary; and

- (c) make each Independent Audit Report and response to it publicly available no later than 60 days after submission to the Planning Secretary and notify the Planning Secretary in writing at least 7 days before this is done.

Monitoring and Environmental Audits

C17. Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance reporting and independent auditing.

Note: *For the purposes of this condition, as set out in the EP&A Act, “monitoring” is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an “environmental audit” is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.*

ACCESS TO INFORMATION

C18. At least 48 hours before the commencement of construction until the completion of all works under this consent, including rehabilitation and remediation, the Applicant must:

- (a) make the following information and documents (as they are obtained or approved) publicly available on its website:
 - (i) the documents referred to in condition A2 of this consent and the final layout plans for the development;
 - (ii) all current statutory approvals for the development;
 - (iii) all approved strategies, plans and programs required under the conditions of this consent;
 - (iv) the proposed staging plans for the development if the construction, operation or decommissioning of the development is to be staged;
 - (v) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;
 - (vi) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - (vii) a summary of the current stage and progress of the development;
 - (viii) contact details to enquire about the development or to make a complaint;
 - (ix) a complaints register, updated monthly;
 - (x) the Compliance Reporting of the development;
 - (xi) audit reports prepared as part of any independent audit of the development and the Applicant's response to the recommendations in any audit report;
 - (xii) any other matter required by the Planning Secretary; and
- (b) keep such information up to date, to the satisfaction of the Planning Secretary.

APPENDIX 1 DEVELOPMENT LAYOUT PLANS



Figure 1: Site Plan(s)

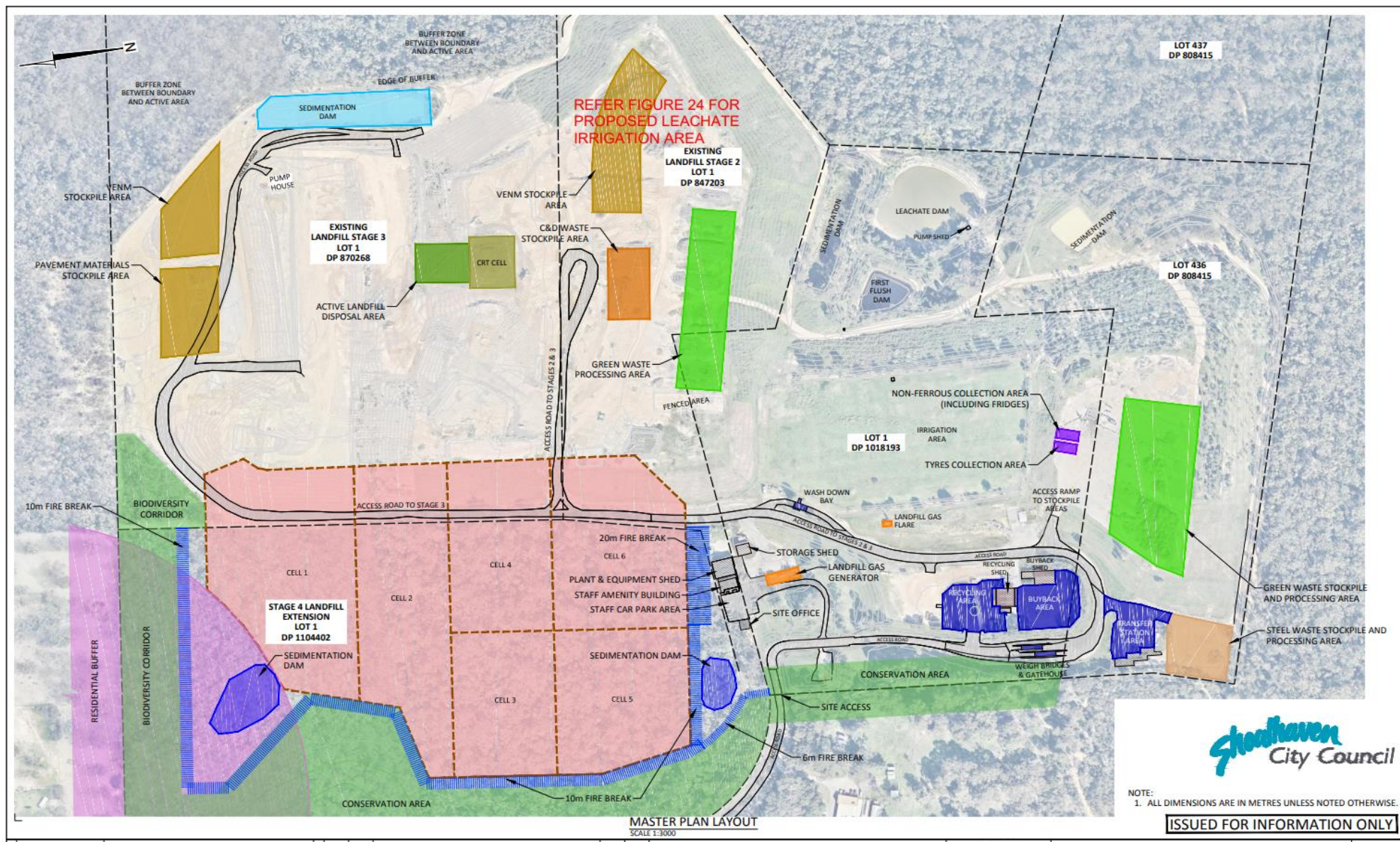


Figure 2: Master Plan Layout

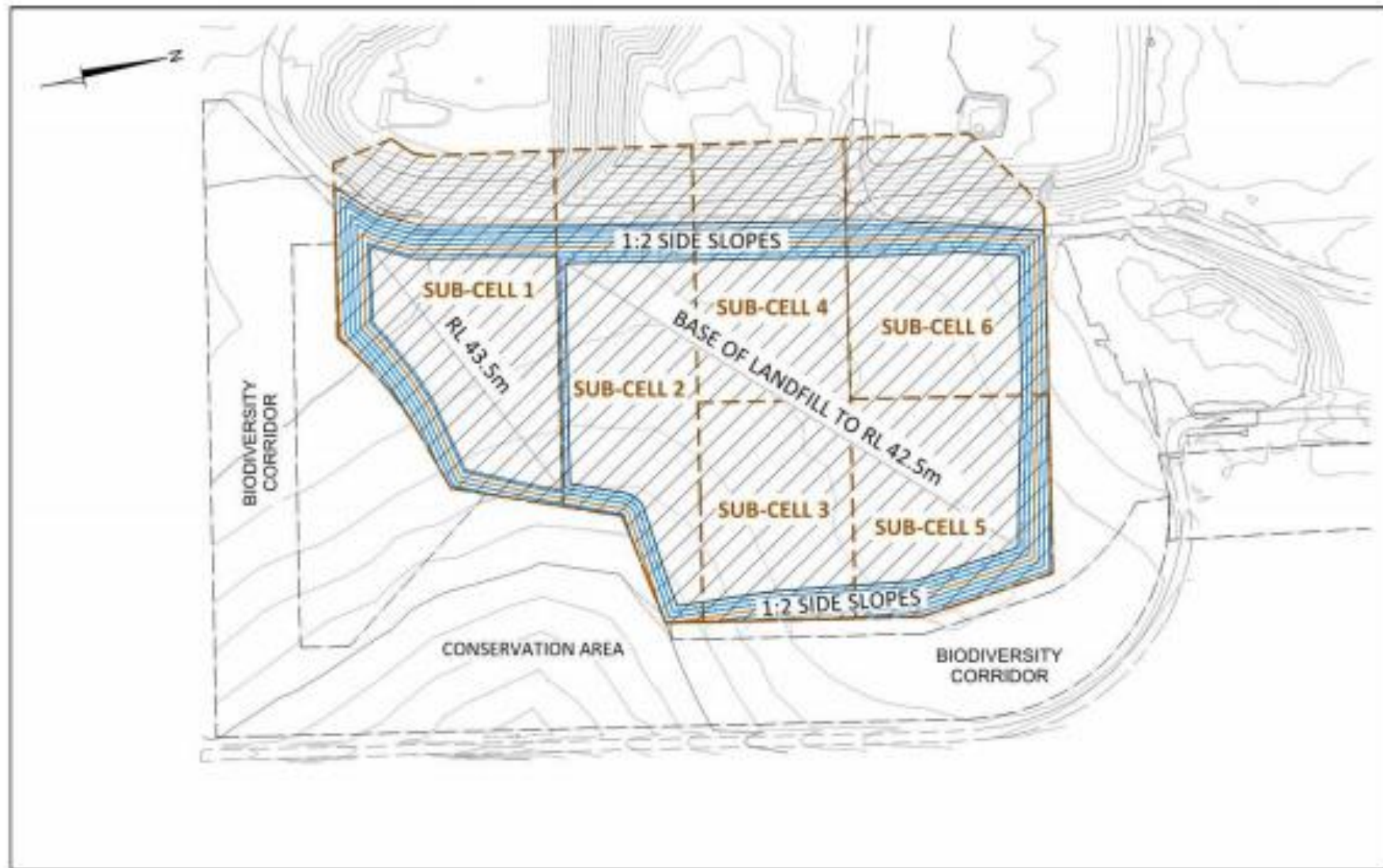


Figure 3: Proposed Landfill Cell Sub-Stages Layout



Figure 4: *Filling Plan Sub Cell 1*

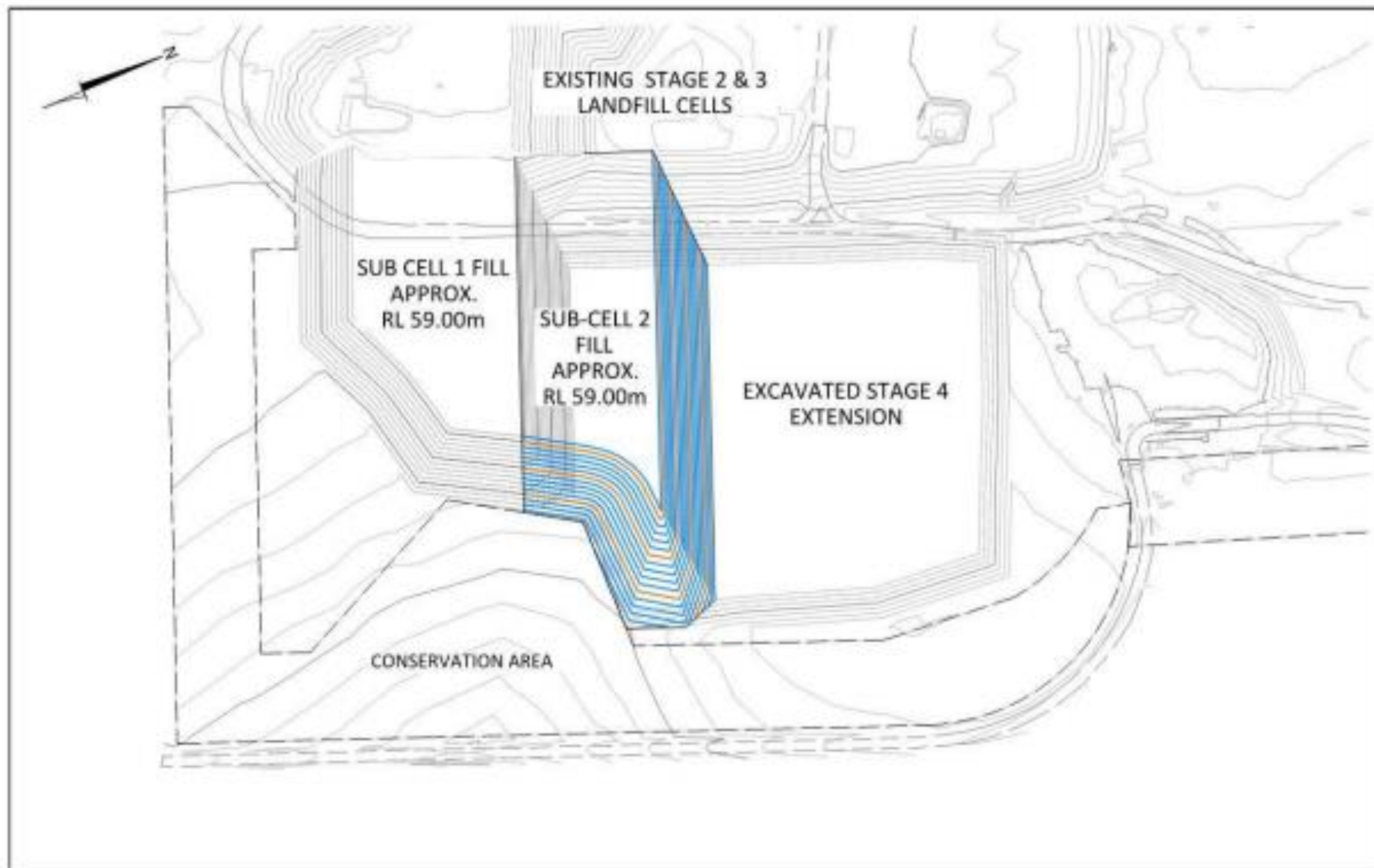


Figure 5: *Filling Plan Sub Cell 2*

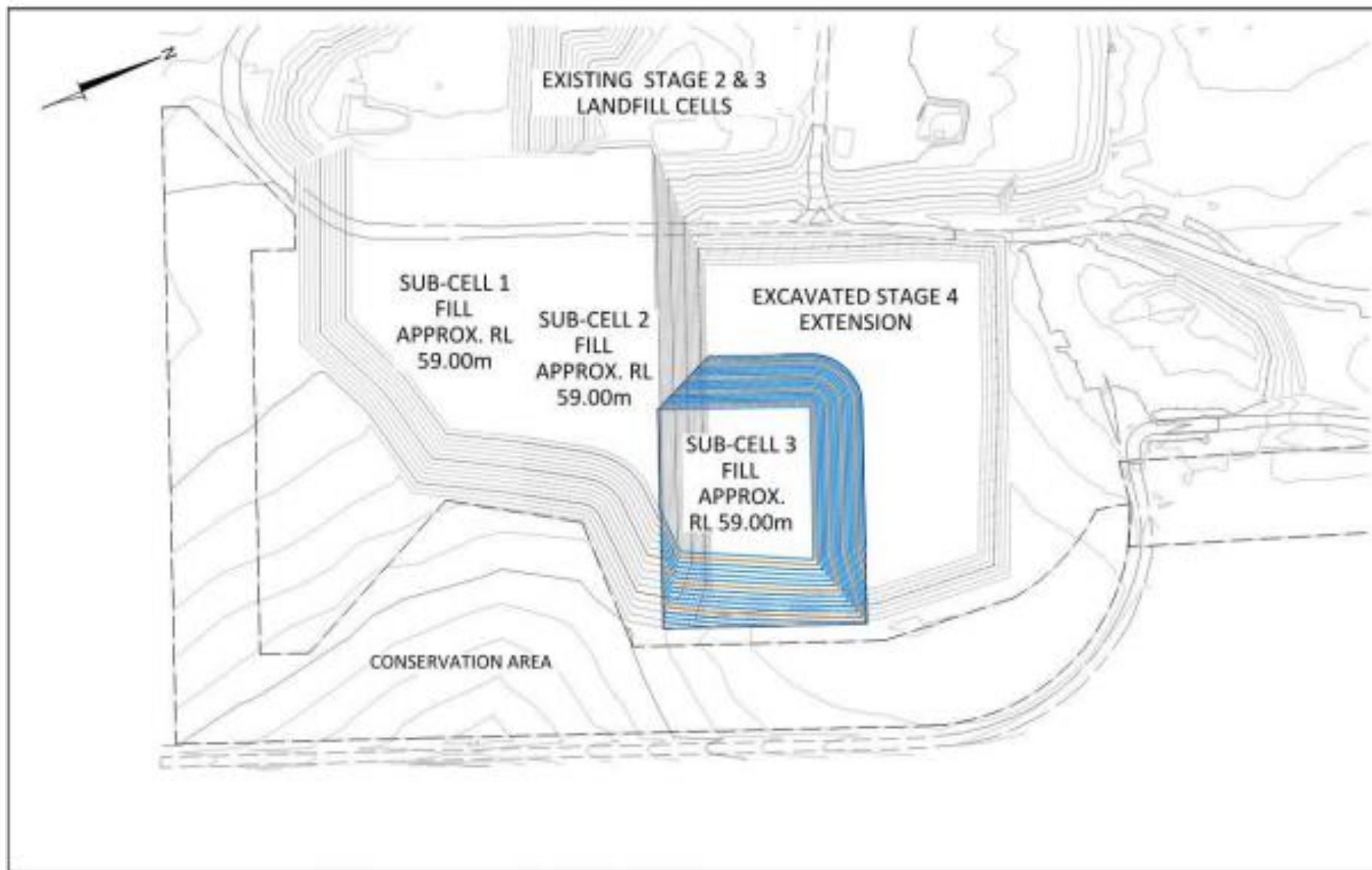


Figure 6: *Filling Plan Sub Cell 3*

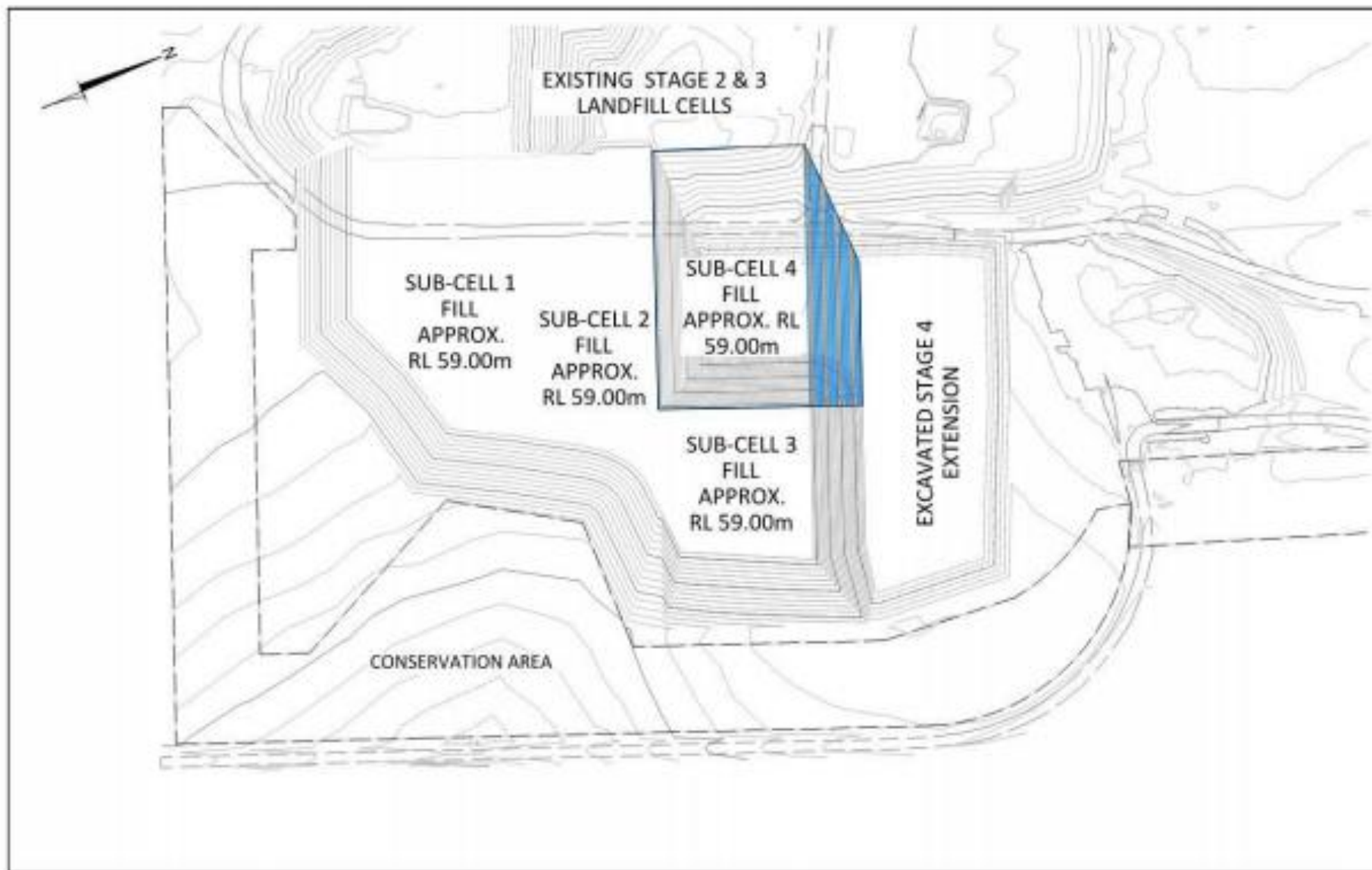


Figure 7: Filling Plan Sub Cell 4



Figure 8: *Filling Plan Sub Cell 5*

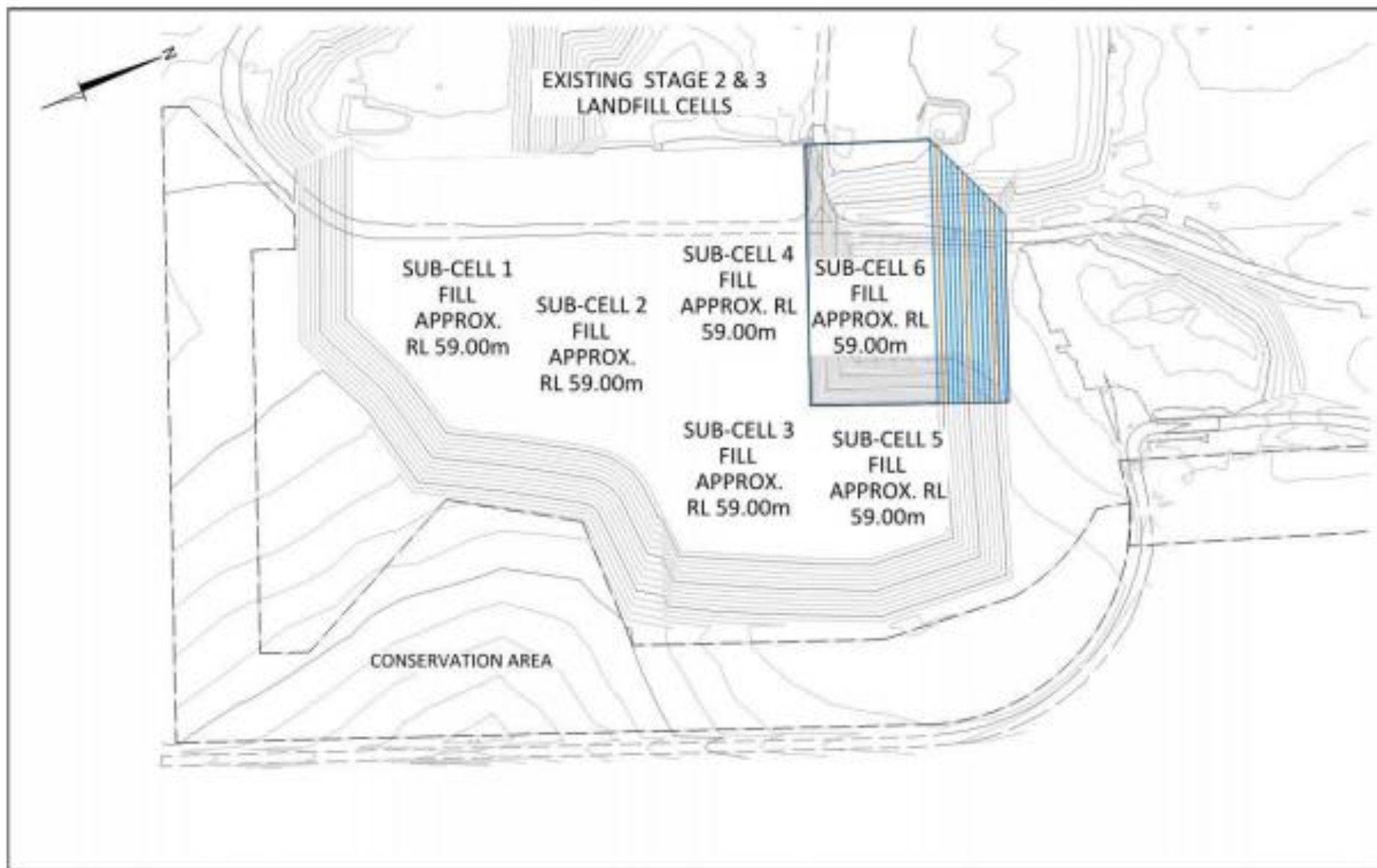


Figure 9: *Filling Plan Sub Cell 6*

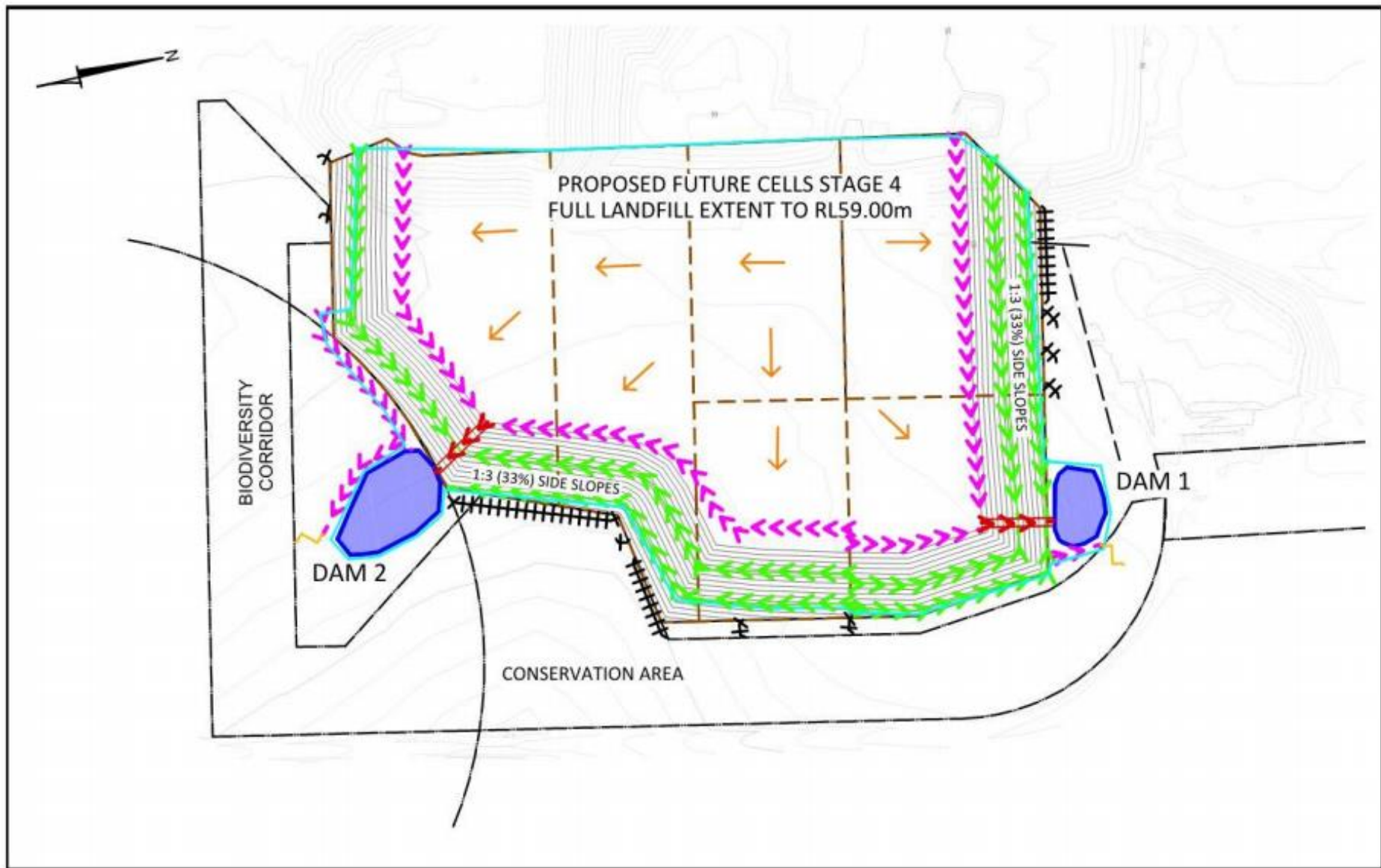


Figure 10: *Conceptual Erosion and Sediment Control*

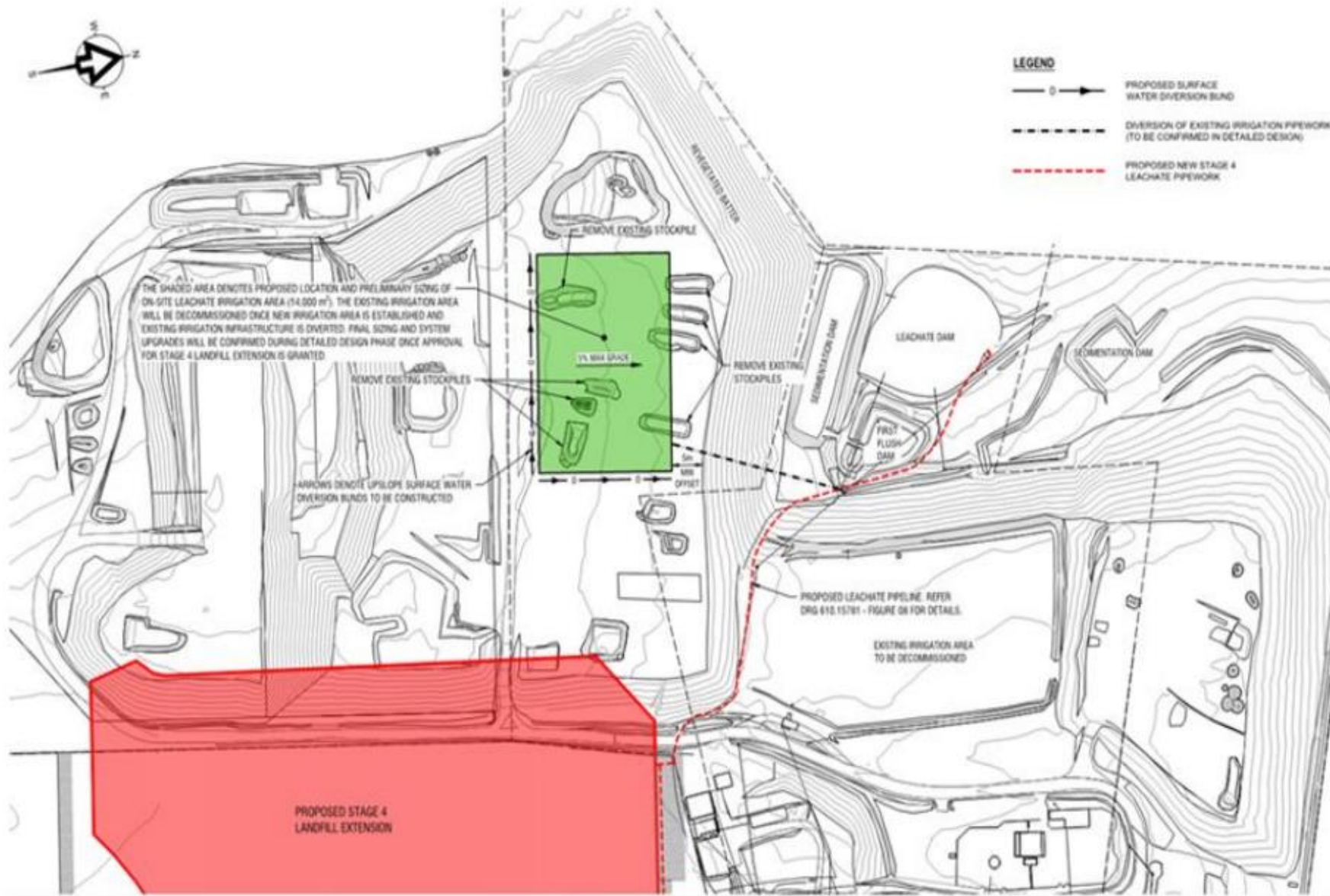


Figure 11: *Proposed Leachate Irrigation Area*

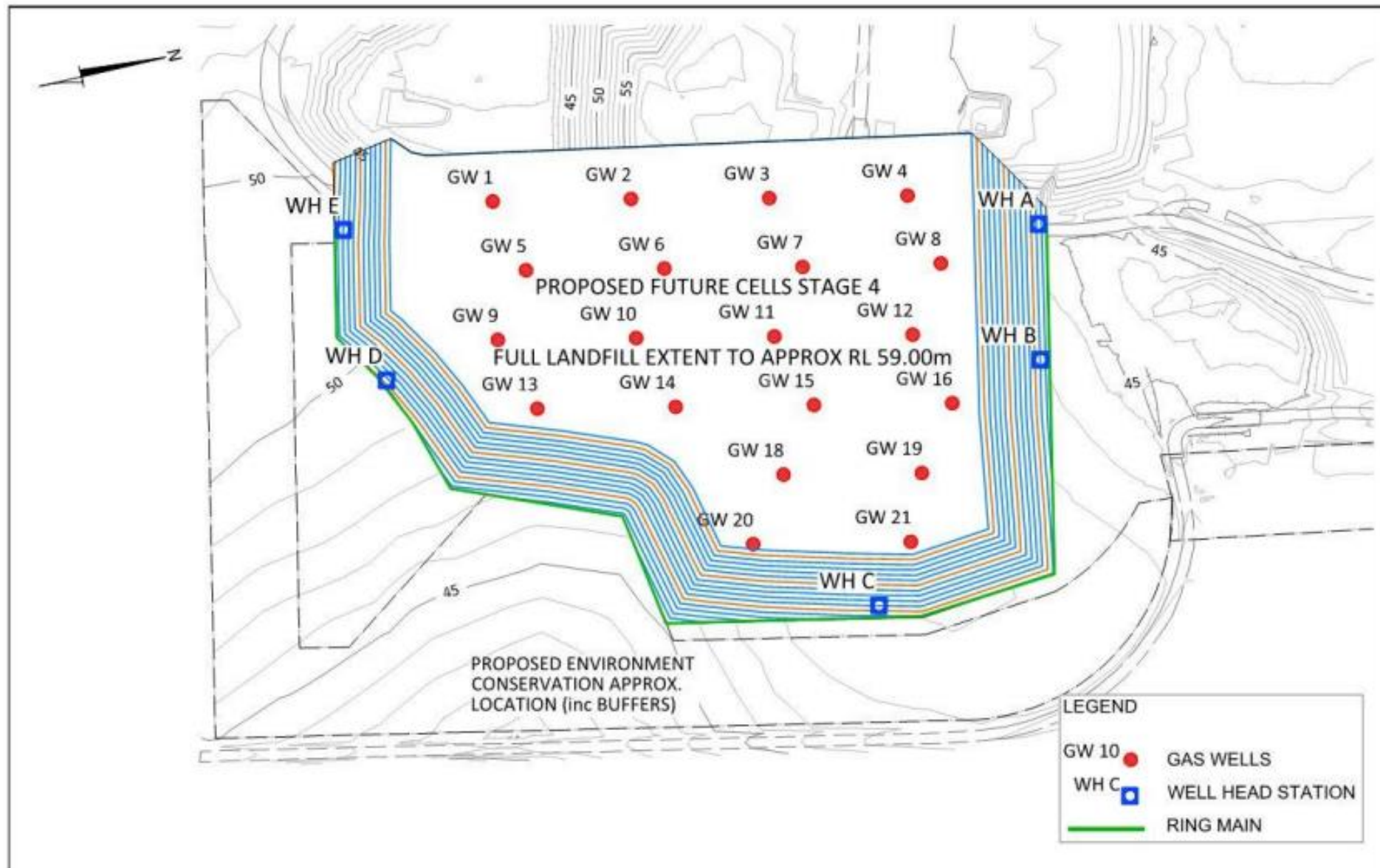


Figure 12: Proposed Stage 4 Landfill Extension Gas Wells



Figure 13: Stage 4 Landfill Extension Final Landform (Concept)

APPENDIX 2 APPLICANT'S MANAGEMENT AND MITIGATION MEASURES

ID #	Mitigation measure	Timing
<u>General</u>		
G-01	Construction and operation of the Proposal would be undertaken in accordance with the 2019 Landfill Environmental Management Plan prepared by SLR.	Construction / Operation
<u>Biodiversity</u>		
B-01	Three rope bridges with monitoring cameras will be installed over Flatrock Road a minimum of one month before clearing of the development footprint commences to allow arboreal fauna to be accustomed to the rope bridges and be used once clearing works commence. The exact locations for the rope bridges are to be determined by SCC Environmental Assessment Officers in consultation with the relevant road engineers but approximate locations are found in Figure 29 in Appendix B of the EIS.	Pre-construction
B-02	Prior to the commencement of any clearing works the extent of clearing must be accurately marked on the ground.	Pre-construction / construction
B-03	Clearing is only to be carried out during autumn and early winter following a trapping program to capture and relocate resident fauna. The trapping program is to involve terrestrial and arboreal trapping methods over a minimum of 2 separate occasions of 4 nights at an intensity to cover the clearing area under the supervision of a qualified and experienced ecologist. All methods and captures must be documented and recorded in a report to SCC and fauna records submitted to the NSW Wildlife Atlas. All fauna captured are to be relocated to areas of suitable habitat at the direction of the supervising ecologist or retained and kept in the care of a licenced wildlife handler until such time they can be safely released.	Pre-construction / construction
B-04	All clearing works are to be planned in consultation with a supervising ecologist with experience in land clearing and animal capture and handling.	Pre-construction
B-05	An experienced and qualified ecologist must supervise all clearing works on site. The ecologist may utilise the help of a NPWS licenced Wildlife Handler but be supervised on site by the ecologist.	Construction
B-06	To ensure any animals injured during the clearing are dealt with in a humane manner the supervising ecologist must have pre-organised a local vet to deal with injured native animals. Any animals injured during clearing works must be transported to the vet ASAP.	Pre-construction / construction
B-07	<p>The clearing of the development extent must be completed in the following stages under the supervision and direction of the supervising ecologist.</p> <ul style="list-style-type: none"> • Prior to clearing all hollow-bearing trees are to be clearly identified on site with a 5 m buffer around the trunk using barrier fencing or marking tape. • Stage one of clearing will be the under-scrubbing of the shrub layer and small trees less the 15 cm in diameter at "breast height" under the supervision of the commissioned ecologist. The ecologist is to check logs on the ground for fauna and rescue / relocate fauna as far as practicable. • Stage two of the clearing will be the felling of trees including hollow-bearing trees (HBT). Felling of HBTs is to be under the supervision of the ecologist and wildlife handler with hollow-bearing sections to be lowered 	Construction

	<p>to the ground using a “cherry picker” if it is known to contain fauna or potentially contains a fauna occupied hollow (“potentially” means the hollow can’t be inspected by the ecologist or wildlife handler). Hollow sections may be dropped if known to be clear of fauna. Any trees with bird nests containing eggs must not be disturbed and can only be felled once the birds have fledged.</p> <ul style="list-style-type: none"> Hollow-bearing sections must be placed, under the supervision of the ecologist in consultation with SCC’s Waste Services section, along disturbed areas on the Proposal Site outside the development footprint. 	
B-08	Any disturbed bushland areas along Flatrock Road outside the development footprint (except for access to the monitoring wells) must be rehabilitated and returned to a weed free natural state using the services of a restoration ecologist or bush regenerator.	Construction/ operation
B-09	To improve fauna movements through the bushland remnant of the Proposal Site, fencing in the south-west corner of the subject lot where it adjoins the neighbouring existing landfill site, and along that portion of the southern boundary of the landfill site outside the “landfill cells”, will be removed to allow for the clear passage of native fauna. The fencing must be removed prior to the landfill extension area becoming operational.	Construction/ operation
B-10	SCC will establish a formal Biobank Site (and/or purchase and retire the required biobanking credits) to offset the impacts of the vegetation clearing required as part of the Proposal.	Pre-clearing
B-11	Should any clearing for the installation of fauna poles be required, the area would need to be assessed by an ecologist and advice sought regarding the need for additional approvals for any required clearing.	Pre-clearing
Air quality and odours		
AQ-1	<p>The LEMP would be updated to include the following dust and odour mitigation measures:</p> <ul style="list-style-type: none"> methods for management of odour and dust emissions into site inductions, training and daily toolbox meetings. Ensure all trucks entering and leaving the premises carrying loads are to be covered at all times Train staff to ensure that any particularly odorous loads are quickly covered to prevent significant odour emissions The active tipping area would be kept as small as practicable 	Construction / operation
AQ-2	Implement and regularly review traffic management procedures to co-ordinate delivery schedules and avoid queueing of incoming or outgoing trucks at the Facility for extended periods of time.	Construction / operation
AQ-3	Plant and machinery will be regularly checked and maintained in accordance with manufacturer’s specifications, engines switched off when not in use and fitted with emission control devices complying with Australian Design Standards	Construction / operation
AQ-4	<p>Record any dust and/or odour complaints in the Customer Relationship Management System and include the following information:</p> <ul style="list-style-type: none"> The time and date the complaint was received 	Construction / operation

	<ul style="list-style-type: none"> • The location where dust and/or odours were observed; • A description of the nature of the dust and/or odour • Any information the complainant can provide on the meteorological conditions at the time of the complaint; • Contact details for the complainant; and • The feedback provided to the complainant once the event has been investigated. • Records of complaints will be provided to the EPA. 	
AQ-5	Should odour complaints be received from receptor C2 shredding and screening activities should be postponed until the recurrence of suitable operating conditions.	Operation
Soil, water and leachate		
SWL-01	Undertake ongoing monitoring of the wells downgradient of the Stage 2 landfill prior to construction of the irrigation area in this location to observe any changes in groundwater quality and provide ongoing feedback on the performance of the liner. Should the monitoring data indicate a decline in water quality downgradient of the Stage 2 landfill, SCC will review the proposed location of the irrigation area and consider reasonable and feasible alternative leachate disposal/treatment solutions.	Pre-construction
SWL-02	Surface water management infrastructure (including clean water diversion infrastructure, first flush dams, sedimentation dams) will be maintained to ensure clean surface water runoff is intercepted and diverted from the landfill footprint prior to entering the waste mass and thus becoming leachate. Surface water infrastructure will be regularly cleared of litter.	Pre-construction / construction / operation / post operation
SWL-03	An environmental monitoring program will be developed and implemented that includes groundwater, surface water and leachate. The program will incorporate the existing EPL requirements as well as the monitoring requirements outlined in the LEMP at Appendix L of the EIS.	Pre-construction / construction / operation / post operation
SWL-04	A Landfill Closure Plan (LCP) will be prepared and submitted to the EPA for approval no later than 12 months before the last load of waste is due to be landfilled at the Facility. This LCP will include measures to reduce any impacts to soil and water during and after closure of the Landfill along with on-going post closure monitoring requirements.	Operation / post operation
SWL-05	<p>An Erosion Sediment Control Plan (ESCP) will be developed in accordance with the 'Blue Book' for the construction and operational phase of the Proposal and will include the following measures to minimise discharge of sediment laden water downstream:</p> <p>Collection and management of disturbed runoff into two sedimentation dams, one to the north and one to the south of the Stage 4 landfill extension area. Sediment ponds have been designed to adequately capture and retain sediment laden runoff allowing for the settlement of suspended sediment from the stormwater prior to release.</p> <p>Monitoring and management of the sedimentation dams and surface waters to ensure minimal discharge of sediment laden waters as per the Landfill Environmental Management Plan (LEMP) and the ESCPs.</p> <p>Diversion of clean runoff around the disturbed areas. This will include the installation and management of erosion and sediment control structures</p>	Operation

	<p>such as surface diversion bunds and swale drains around open excavations (unfilled) and active landfill cells.</p> <p>Minimisation of disturbed areas and minimising the disturbance period. The Stage 4 landfill extension will take place as 6 landfill cell sub-stages, minimising exposed soils and the potential for erosive effects.</p> <p>Stockpiles will be placed at a minimum of 5m from concentrated flow paths and any soils stockpiled for further use will be vegetated to stabilise the surface and reduce erosion risks.</p>	
SWL-06	As a minimum, at the end of each working day, all exposed waste surfaces at the active tipping area that have not achieved final landform levels will be covered with a minimum 150 mm thick layer of VENM or an alternative material(s) approved by the EPA.	Pre-construction / construction / operation
SWL-07	Avoiding, if practicable, tipping and/or waste handling during windy conditions and keeping the active waste tipping area as small as possible.	Pre-construction / construction / operation
SWL-08	Detailed design will consider the compatibility of the irrigation area over the Stage 2 landfill with the gas collection system operating at this location.	Pre-construction
Noise and vibration		
NV-01	Activities involving the use of a compactor in Landfill Stage 3 and dozer stripping in Landfill Sub-cell 1 of Stage 4 would be scheduled so works aren't occurring concurrently.	Construction / operation
NV-02	SCC would maintain an ongoing complaint register at the site to ensure any noise concerns raised by the public are promptly and effectively addressed.	Pre-construction / construction / operation
Traffic		
TA-01	Driver training (i.e. such as a driver code of conduct, safety toolbox, or similar) would need to be implemented to ensure staff and contractors are aware of the existing sight distance issue at the Yalwal Road / Flatrock Road intersection. This mitigation measure has been identified as a precaution against any road safety and intersection capacity impacts associated with the operation of the Proposal.	Construction / Operation
TA-02	A road occupancy licence would be secured prior to construction and installation of the fauna rope bridges	Pre-construction
TA-03	Appropriate traffic control measures would be implemented to manage traffic during construction and installation of the fauna rope bridges	Construction
Greenhouse Gas		
GHG-01	Ensure that the final capping layer meets the requirements outlined in the EPA's <i>Environmental Guidelines: Solid Waste Landfills, 2016</i> and Landfill Environmental Management Plan (LEMP), 2019 prepared by SLR for the site. A review of best practice standards, methodologies and technologies at the time of capping, should be undertaken to ensure that an optimal solution is achieved. To maximise natural oxidation through the final capping layer and reduce emissions, the capping layer should be maintained in good	Post-operation / closure

	condition (i.e. thick layer of topsoil with healthy vegetation). The design and implementation should be reviewed at the time of capping.	
GHG-02	Undertake project planning to ensure that on-site vehicle movements and construction activities are efficient, avoid double handling of materials and avoid unnecessary fuel use.	Pre-construction / construction / operation
GHG-03	Consider use of alternative fuels which are less carbon intensive, such as operating machinery and construction activity vehicles which use bio-diesel fuels.	Pre-construction / construction / operation
GHG-04	Review the GHG emissions profile of the landfill based on recorded waste volumes four years ¹ after landfilling commences in Stage 4 to: Confirm the emissions projections reported herein and the need for reporting under the NGER scheme, and Identify opportunities to optimise existing landfill gas management strategies, including existing landfill gas infrastructure.	Operation
GHG-05	Provide a separate report to DPE summarising the findings of the GHG emissions review and outlining any additional reduction and/or management strategies to be implemented.	Operation
Heritage		
H-01	Prior to their on-site involvement, all personnel engaged for vegetation clearing and topsoil stripping would undergo a general site induction prior to their on-site involvement that provides information on legal obligations with respect to archaeological relics, including 'stop work' conditions applicable in the event that any identified or suspected heritage relics are discovered at any time	Pre-construction
H-02	In the event that any previously identified / suspected Aboriginal objects are detected at any time, all disturbance work should immediately cease within 20 m of the find and temporary protective fencing erected around this 'no-go zone' pending further management advice from the OEH (Planning and Aboriginal Heritage Section, South Coast Region). The find should also be reported to the NSW EPA Environment Line (131 555). If the find consists of or included human remains, the NSW Police Department and NSW Coroner's office would be contacted.	Pre-construction / construction / operation
H-03	A LEMP will be updated for the Proposal. This would include a procedure for unexpected finds and protocols for communication with the Aboriginal community during the construction and operational phases of the Proposal (in accordance with <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010</i> (Department of Environment, Climate Change and Water, 2010)).	Pre-construction
H-04	Prior to installation of fauna poles for the fauna rope bridge crossing an Aboriginal heritage specialist would need to inspect the area to ensure there are no Aboriginal archaeological heritage items.	Pre-construction
H-05	Prior to their on-site involvement, all personnel engaged for vegetation clearing and topsoil stripping would undergo a general site induction prior to	Pre-construction

¹ The selection of the date of four years post opening is because the landfill is predicted to open in 2026 and the NGER reporting threshold is predicted to be breached in 2031 (5 years later). Hence the timing would inform a decision on whether SCC is required to report under the NGER scheme.

H-06	<p>their on-site involvement that provides information on legal obligations with respect to archaeological relics, including 'stop work' conditions applicable in the event that any identified or suspected heritage relics are discovered at any time</p> <p>In the event that any previously identified / suspected non-Aboriginal historical relics are detected at any time, all disturbance work should immediately cease within 20m of the find and temporary protective fencing erected around this 'no-go zone' pending further management advice from the OEH (Planning and Aboriginal Heritage Section, South Coast Region). If the find consists of or includes human remains, the NSW Police Department and NSW Coroner's office would be contacted.</p>	Pre-construction / construction / operation
Hazard and risks		
HR-01	<p>Procedures for responses to fire to be included in LEMP/PIRMP in accordance with:</p> <ul style="list-style-type: none"> AS 3745 - 2010 Planning for emergencies in facilities AS 1815: Maintenance of Fire Suppression System and Equipment AS 2419.1-2005 Fire hydrant installations - System design, installation and commissioning. 	Construction/ Operation
HR-02	The PIRMP for the WNRWF will be updated to be applicable to the Proposal Site	Construction/ Operation
HR-03	<p>The LEMP would be updated to include the following hazard and risk mitigation measures:</p> <ul style="list-style-type: none"> Control of vehicle movements in the facility to be overseen by attendants Clear signage and road markings (speed limits, give way signs, directions, no access areas and disposal areas) Limited number of heavy vehicles to be onsite at any one time Ensure all personnel operating vehicles on site are licenced and competent Operational procedures for plant and equipment to be outlined in the LEMP Requirements for asbestos handling and disposal 	Construction/ Operation
HR-04	<p>The LEMP would be updated to include the bushfire mitigation measures outlined in Appendix J of the EIS including:</p> <ul style="list-style-type: none"> Water tankers and heavy earth moving plant on stand-by during days of Total Fire Ban Provision of portable fire extinguishers during maintenance activities involving cutting, grinding, welding and slashing Hazard reduction burning of vegetation within the biodiversity corridor, operating landfill cell, fire trails and fire breaks in accordance with the NSW Rural Fire Services Environmental Assessment Code 2006 Provision and maintenance of a 10 m wide temporary slashed fire break to the outer edge of incremental landfill cells Provision and maintenance of a 20 m wide fire break to the south of the existing site office, staff amenity and plant and equipment buildings 	Construction/ Operation

- Provision and maintenance of a 10 m wide fire break to the south and east outer edges of the Stage 4 extension
- Provision of on-site fire-fighting water tanks, portable first-aid firefighting equipment (fire hose reels/fire extinguishers), heavy equipment including bulk water trucks and water supplies and equipment for firefighting.
- At the perimeter of each incremental landfill cell a temporary fire trail that connects to the existing/proposed perimeter/internal road/fire trail network should be provided that is capable of carrying a NSW RFS tanker
- A locked gate would be provided at the junction of the Main Entry Road and fire trail
- Drilling, cutting, grinding, welding and slashing works would not be undertaken on total fire ban days unless during an emergency, in which case firefighting equipment should be on stand-by
- For the purpose of fuel reduction using hazard reduction burning:
 - All perimeter fire trails clear and maintained
 - Maintain a 20 m wide defensible space (fire break) to the existing office complex
 - Provide and maintain temporary fire trails and defensible spaces adjacent to each stage.

APPENDIX 3 INCIDENT NOTIFICATION AND REPORTING REQUIREMENTS

WRITTEN INCIDENT NOTIFICATION REQUIREMENTS

1. A written incident notification addressing the requirements set out below must be emailed to the Department at the following address: compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of an incident. Notification is required to be given under this condition even if the Applicant fails to give the notification required under condition **Error! Reference source not found.** or, having given such notification, subsequently forms the view that an incident has not occurred.
2. Written notification of an incident must:
 - a. identify the development and application number;
 - b. provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);
 - c. identify how the incident was detected;
 - d. identify when the applicant became aware of the incident;
 - e. identify any actual or potential non-compliance with conditions of consent;
 - f. describe what immediate steps were taken in relation to the incident;
 - g. identify further action(s) that will be taken in relation to the incident; and
 - h. identify a project contact for further communication regarding the incident.
3. Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Applicant must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested.
4. The Incident Report must include:
 - a. a summary of the incident;
 - b. outcomes of an incident investigation, including identification of the cause of the incident;
 - c. details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and
 - d. details of any communication with other stakeholders regarding the incident.