



Ravensworth Composting Facility Expansion

State Significant Development Assessment SSD-9418

August 2022



Published by the NSW Department of Planning and Environment

dpie.nsw.gov.au

Title: Ravensworth Composting Facility Expansion

Subtitle: State Significant Development Assessment SSD-9418

Cover image: *View of composting windrows (source: Statement of Environmental Effects, prepared by Jacobs Group (Australia) Pty Ltd, dated 6 February 2018)*

© State of New South Wales through Department of Planning and Environment 2022. You may copy, distribute, display, download and otherwise freely deal with this publication for any purpose, provided that you attribute the Department of Planning and Environment as the owner. However, you must obtain permission if you wish to charge others for access to the publication (other than at cost); include the publication in advertising or a product for sale; modify the publication; or republish the publication on a website. You may freely link to the publication on a departmental website.

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (August 2022) and may not be accurate, current or complete. The State of New South Wales (including the NSW Department of Planning and Environment), the author and the publisher take no responsibility, and will accept no liability, for the accuracy, currency, reliability or correctness of any information included in the document (including material provided by third parties). Readers should make their own inquiries and rely on their own advice when making decisions related to material contained in this publication.

Glossary

Abbreviation	Definition
ACHAR	Aboriginal Cultural Heritage Assessment Report
Amendment Report	Amendment Report titled <i>RE: SSD9418 - Greenspot Hunter Valley Nutrient Recycling Facility – Amendment Report</i> , prepared by Space Urban Pty Ltd, dated 28 June 2022
Applicant	Bettergrow Pty Ltd
BCA	Building Code of Australia
BDAR	Biodiversity Development Assessment Report
CIV	Capital Investment Value
Council	Singleton Council
Crown Lands	Crown Lands, DPE
DA	Development Application
Department	Department of Planning and Environment (DPE)
Demolition	The removal of buildings, sheds and other structures on the site
Development	The development as described in the EIS and RtS for the Ravensworth Composting Facility Expansion
DPI	Department of Primary Industries, Department of Regional NSW
DPE	Department of Planning and Environment
DRG	Division of Resources & Geoscience, DPE
EIS	Environmental Impact Statement titled <i>EIS for 200,000tpa Nutrient Recycling Facility – Ravensworth NSW, SSD 9418</i> (Version 3), prepared by RPS Group, dated 14 November 2019
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence

ESD	Ecologically Sustainable Development
FOGO	Food Organics and Garden Organics
FRNSW	Fire and Rescue NSW
Heritage Council	Heritage Council of NSW, Department of Premier and Cabinet
ISEPP	State Environmental Planning Policy (Infrastructure) 2007
LEP	Local Environmental Plan
Minister	Minister for Planning
Planning Secretary	Secretary of the Department of Planning and Environment
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
RtS	Response to Submissions titled <i>Greenspot Hunter Valley, Nutrient Recycling Facility, Response to Submissions – SSD 9418</i> (Version 1), prepared by Space Urban Pty Ltd, dated 20 June 2022
SEARs	Planning Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SSD	State Significant Development
TfNSW	Transport for NSW

Executive Summary

Introduction

This report details the Department of Planning and Environment's (the Department) assessment of a State significant development application (SSD-9418) for the Ravensworth Composting Facility Expansion.

The Greater Ravensworth Area has a long-established mining presence, with mining commencing as early as the 1950s at Liddell Colliery. The Ravensworth No 2 mine was an open cut coal mine that was decommissioned in 1993. The decommissioned mine comprises five voids which are being rehabilitated by AGL Macquarie, the current owner of the mine.

Bettergrow Pty Ltd (the Applicant) operates a composting facility at Ravensworth which supports the rehabilitation of AGL Macquarie lands by using the finished product on capped voids to improve the soil for revegetation. The facility is located on top of the former Void 3 of the Ravensworth No 2 mine.

Current Proposal

The Applicant proposes to expand the existing composting facility at Ravensworth in the Singleton Local Government Area. The proposed development (the development) would increase the annual processing capacity of the existing facility from 76,000 to 200,000 tonnes per annum (tpa) of organic waste materials. The facility is currently permitted to receive biosolids and garden organics, however the Applicant is seeking to introduce additional organic waste sources.

The development has a capital investment value of \$4.8 million and is expected to generate 15 construction jobs and 4-6 operational jobs.

Statutory Context

The development is classified as State significant development (SSD) under section 4.36 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) because it is development for the purpose of waste or resource management facilities that handle more than 100,000 tonnes per year of waste, meeting the criteria in Clause 23 of Schedule 1 in State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP). Consequently, the Minister for Planning is the consent authority for the proposed development under section 4.5(1) of the EP&A Act.

Engagement

The Department exhibited the Environmental Impact Statement for the development from Wednesday 27 November 2019 until Friday 31 January 2020. During the exhibition period, the Department received one submission from the public (not related to this SSD), one submission from a special interest group and advice from 10 government agencies, including Singleton Council (Council).

Concerns raised in the government advice related to air quality, leachate, traffic, biosecurity, land use conflict and the relationship with the existing development consent (DA140/2016). The Department requested the Applicant address the matters raised in submissions and government agency advice in a Response to Submissions (RtS).

The development was put on hold for some time during the start of the COVID-19 pandemic. Later, the Applicant revisited its proposal in consideration of the concerns raised regarding the processing of food organic waste during the exhibition of the development. Ultimately, the Applicant decided to make changes to the development.

On 20 June 2022, the Applicant provided a RtS on the issues raised during the exhibition of the development. The RtS was supported by an Amendment Report outlining proposed amendments to the SSD application, including the removal of acceptance of Food Organics and Garden Organics (FOGO) at the facility.

The Applicant also provided Supplementary Information on several occasions to provide clarification on the requirement for a Water Access Licence and discrepancies on the waste types and the heavy vehicle movements provided in various documents submitted by the Applicant. The Supplementary Information also included an updated and consolidated list of management and mitigation measures.

Assessment

The Department's assessment of the application has fully considered all relevant matters under section 4.15 of the EP&A Act, the objects of the EP&A Act and the principles of Ecologically Sustainable Development. The Department identified the key issue for assessment to be air quality but has also assessed all other relevant matters, including water and leachate, traffic, noise, waste management and biosecurity.

Wheel-generated dust on the unsealed site roads would be the primary dust emission source, given the high moisture content of the composting material and final product. The Applicant's Air Quality Impact Assessment (AQIA) therefore included contour plots of the maximum 24-hour average concentration of PM₁₀ which demonstrated dust emissions from the development would be minimal at the closest residential receivers located at Camberwell Village.

The AQIA also identified raw biosolids, garden organics and food organics to be potentially odorous material. The RtS included an AQIA addendum which took into consideration the amended application (the removal of FOGO and forced aeration composting and site layout changes) and considered the cumulative impacts with the composting operations (LOOP Organics) to the south of the site. The odour assessment for all scenarios assessed showed that the 2 odour unit contour would not extend far beyond the operational boundaries and complies at all sensitive receivers.

Council and the Environment Protection Authority had no further concerns regarding potential air quality impacts following the amendments to the development.

The Applicant committed to management and mitigation measures to reduce dust generation and odour emissions. The Department has included these commitments in the management and mitigation measures appended to the recommended conditions of consent. The Department has also recommended a condition requiring an Air Quality Management Plan (AQMP). The AQMP would include the Applicant's committed dust and odour reduction measures as well as details of ongoing monitoring, reporting and contingency measures.

The Department's assessment concludes the air quality impacts from the expanded operations would be minor and appropriately managed through the recommended conditions. The development is suitably located as it is sited far from sensitive receptors and in a highly disturbed environment.

Summary

The Department's assessment concluded the impacts of the development can be mitigated and managed to ensure an acceptable level of environmental performance, subject to the recommended conditions of consent.

The development would have minimal impacts on air quality, including dust and odour. The Department has recommended conditions to minimise these impacts, including the requirement for an Air Quality

Management Plan. The Applicant has also committed to implement several management and mitigation measures, which the Department has included in the recommended conditions of consent.

Overall, the Department's assessment has concluded the development would support the rehabilitation of AGL Macquarie lands by using the finished product to improve the soil across these areas. The development would also increase the diversion of organic waste from landfill by expanding the capacity of an existing resource recovery facility, aligning with the objectives of the State and Federal waste policies.

Consequently, the Department considers the development is in the public interest and is recommended for approval, subject to conditions.

Contents

1	Introduction	1
1.1	The Department's assessment	1
1.2	Development background	1
1.3	Site description.....	2
1.4	Surrounding land uses	3
1.5	Other development approvals.....	6
1.6	Related development	6
2	Development	7
2.1	Amended development	7
2.2	Description of the development.....	7
2.3	Physical layout	9
2.4	Process description.....	10
2.5	Applicant's need and justification for the development.....	12
3	Strategic context	13
3.1	Upper Hunter Strategic Regional Land Use Plan	13
3.2	Hunter Regional Plan 2036.....	13
3.3	NSW Waste and Sustainable Materials Strategy 2041	13
3.4	2018 National Waste Policy: Less waste, more resources.....	14
3.5	NSW Circular Economy Policy Statement: Too Good To Waste.....	14
4	Statutory context	15
4.1	State significance	15
4.2	Permissibility	15
4.3	Consent authority	15
4.4	Other approvals.....	15
4.5	Mandatory matters for consideration	15
4.6	Public exhibition and notification	16
4.7	Objects of the EP&A Act	16
4.8	Ecologically Sustainable Development	17
4.9	Legislative amendments	18
4.10	Biodiversity Development Assessment Report	18
4.11	Commonwealth matters	18
5	Engagement.....	19
5.1	Consultation	19
5.2	Submissions and advice	19
5.3	Response to Submissions and Amendment Report	20
5.4	Supplementary Information	21
6	Assessment	22

6.1	Air quality.....	22
6.2	Other issues	24
7	Evaluation.....	29
8	Recommendation.....	30
9	Determination.....	31
	Appendices	32
	Appendix A – List of documents	32
	Appendix B – Considerations under Section 4.15 of the EP&A Act	33
	Appendix C – Consideration of Environmental Planning Instruments.....	35
	Appendix D – Recommended Conditions of Consent	37

1 Introduction

1.1 The Department's assessment

This report details the Department of Planning and Environment's (the Department's) assessment of the State significant development (SSD-9522) for the Ravensworth Composting Facility Expansion.

The Department's assessment considers all documentation submitted by the Applicant, including the Environmental Impact Statement (EIS) and Response to Submissions (RtS), submissions received from the public and advice from government agencies. The Department's assessment also considers the legislation and planning instruments relevant to the site and the development.

This report describes the proposed development (the development), surrounding environment, relevant strategic and statutory planning provisions and the issues raised in submissions. The report evaluates the key issues associated with the development and provides recommendations for managing any impacts during construction and operation.

1.2 Development background

Bettergrow Pty Ltd (the Applicant), trading as 'Greenspot Hunter Valley', is seeking development consent for the expansion of an existing composting facility at Ravensworth in the Singleton Local Government Area (LGA) (see **Figure 1**).

The Applicant is seeking consent to increase the annual processing capacity of the existing composting facility from 76,000 to 200,000 tonnes per annum (tpa) of organic waste materials. The facility is currently permitted to receive biosolids and garden organics, however the Applicant is seeking to introduce additional organic waste sources.

The Applicant is contracted by AGL Macquarie to supply manufactured soil ameliorant (used to improve the quality of soil for plant growth and revegetation) and rehabilitation products for rehabilitation works at the former Ravensworth No. 2 mine and Ravensworth South mine. The development is located at the site of the decommissioned Ravensworth No. 2 mine. The Applicant is also seeking approval for the sale of composted products to third parties as part of this development application.

Bettergrow was established in 1978 and operates several facilities across New South Wales (NSW) and Queensland. Other NSW operations include facilities at Wetherill Park, Bathurst, Parkes, St Marys, and Vineyard. These facilities receive and process organic material such as drill mud, liquid waste, biosolids, garden organics, food organics and landscape materials. These materials are converted into a variety of organic products suitable for beneficial re-use, such as compost materials, fertilisers and landscaping materials.

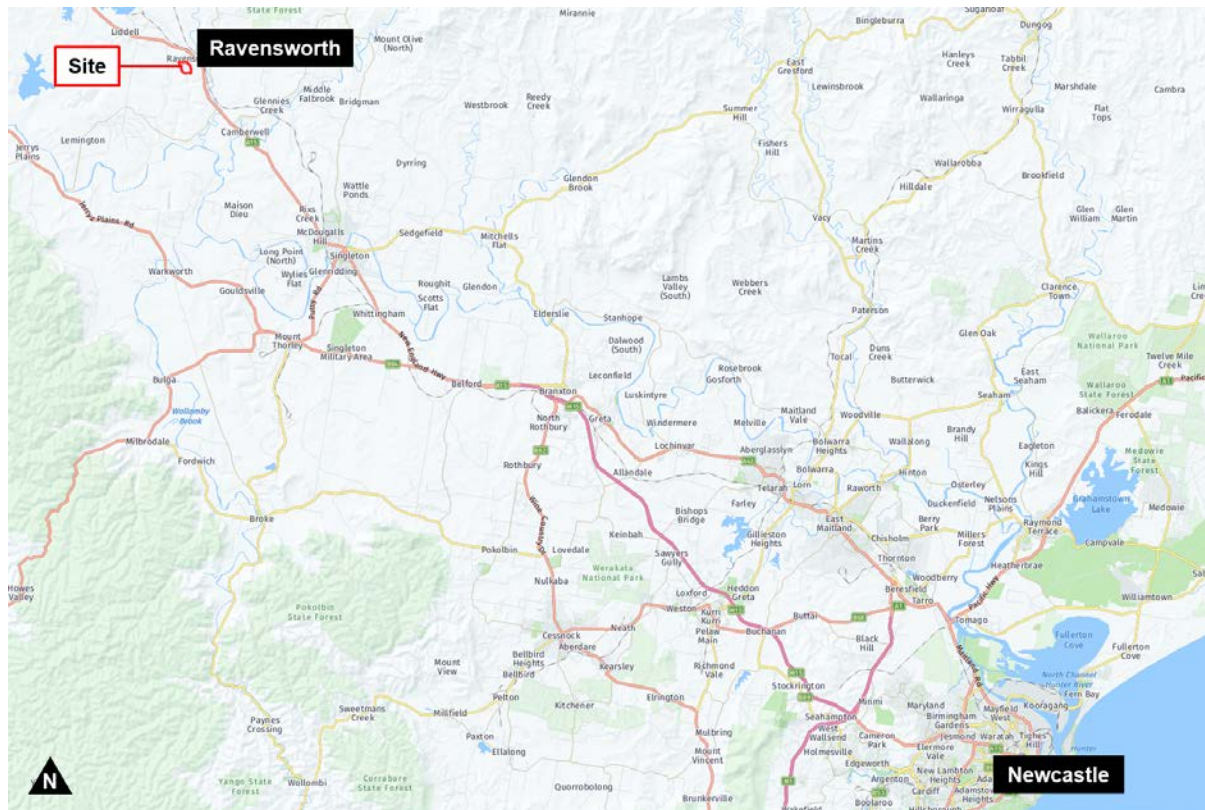


Figure 1 | Regional context

1.3 Site description

The site comprises 57 hectares (ha) of RU1 Primary Production zoned land located at 74 Lemington Road, Ravensworth. The site is legally described as Lot 10 in DP 1204457 and is located 20 kilometres (km) north-west of Singleton and 2 km north-west of Ravensworth. The site currently operates as a composting facility under a consent issued by Singleton Council (DA140/2016, refer to **Figure 2** and **section 1.5**) and is accessed via an internal access road off Lemington Road, which connects to the New England Highway.

The Greater Ravensworth Area has a long-established mining presence, with mining commencing as early as the 1950s at Liddell Colliery. The Ravensworth No. 2 mine was an open cut coal mine that was decommissioned in 1993. The decommissioned mine comprises five voids which are being rehabilitated by AGL Macquarie, the current owner of the mine. The voids are being filled with spoil and ash from the Bayswater Power Station, capped and rehabilitated.

Voids 1, 2 and 3 have been filled and capped. Void 4 is used as a water storage dam and provides additional storage for surface water runoff. Void 5 is currently being filled with fly ash and is anticipated to be completed and capped by 2032. The site is located on top of the former Void 3.

The site is devoid of vegetation due to significant disturbance of the environment from the historical mining and power generating activities in the area. However, the land immediately surrounding the site has been top-soiled and planted with Rehabilitated Pasture Grasslands and pockets of Rehabilitated Woodland.

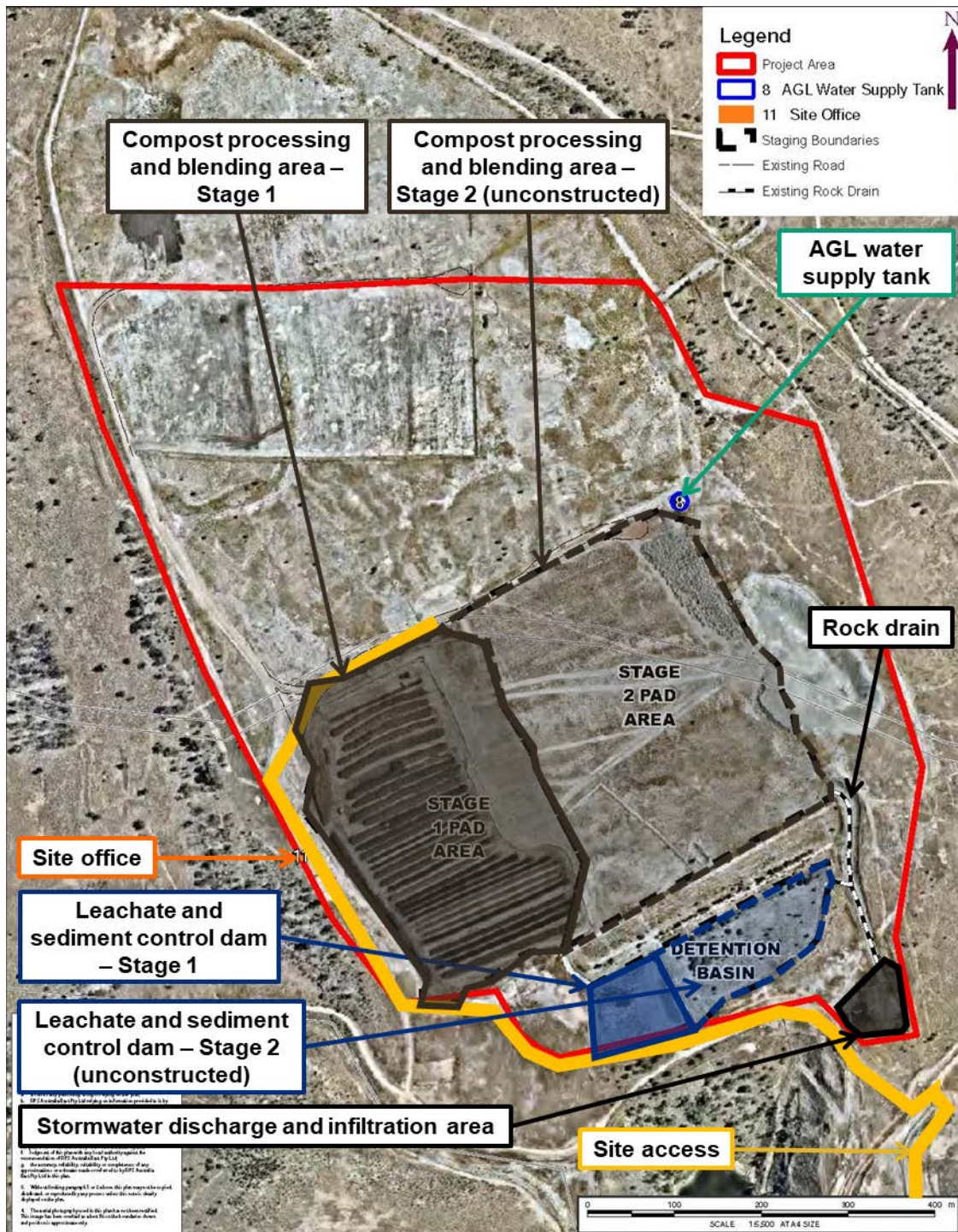


Figure 2 | Existing development (DA140/2016)

1.4 Surrounding land uses

The area consists primarily of coal mining and heavy industry, including power generation. These land uses include:

- Liddell and Bayswater Power Station and Liddell Coal Operations to the north-west
- Ravensworth North Open-Cut Coal Mine to the west
- Integra Coal Mine to the south-east
- LOOP Organics Compost Facility to the south.

The closest residential receivers are located in Camberwell Village, approximately 7 km to the south-east of the site.

The site is located within the Hunter River Catchment. Nearby waterbodies include the Hunter River 6 km to the south, Bayswater Creek 600 m to the west and Bowmans Creek 1.2 km to the east.

There are two locally-listed heritage items identified in the Singleton Local Environmental Plan (LEP), Ravensworth Homestead 3 km to the north-east and a former public school located 2.5 km to the south-east.

The surrounding land uses are shown in **Figure 3**.

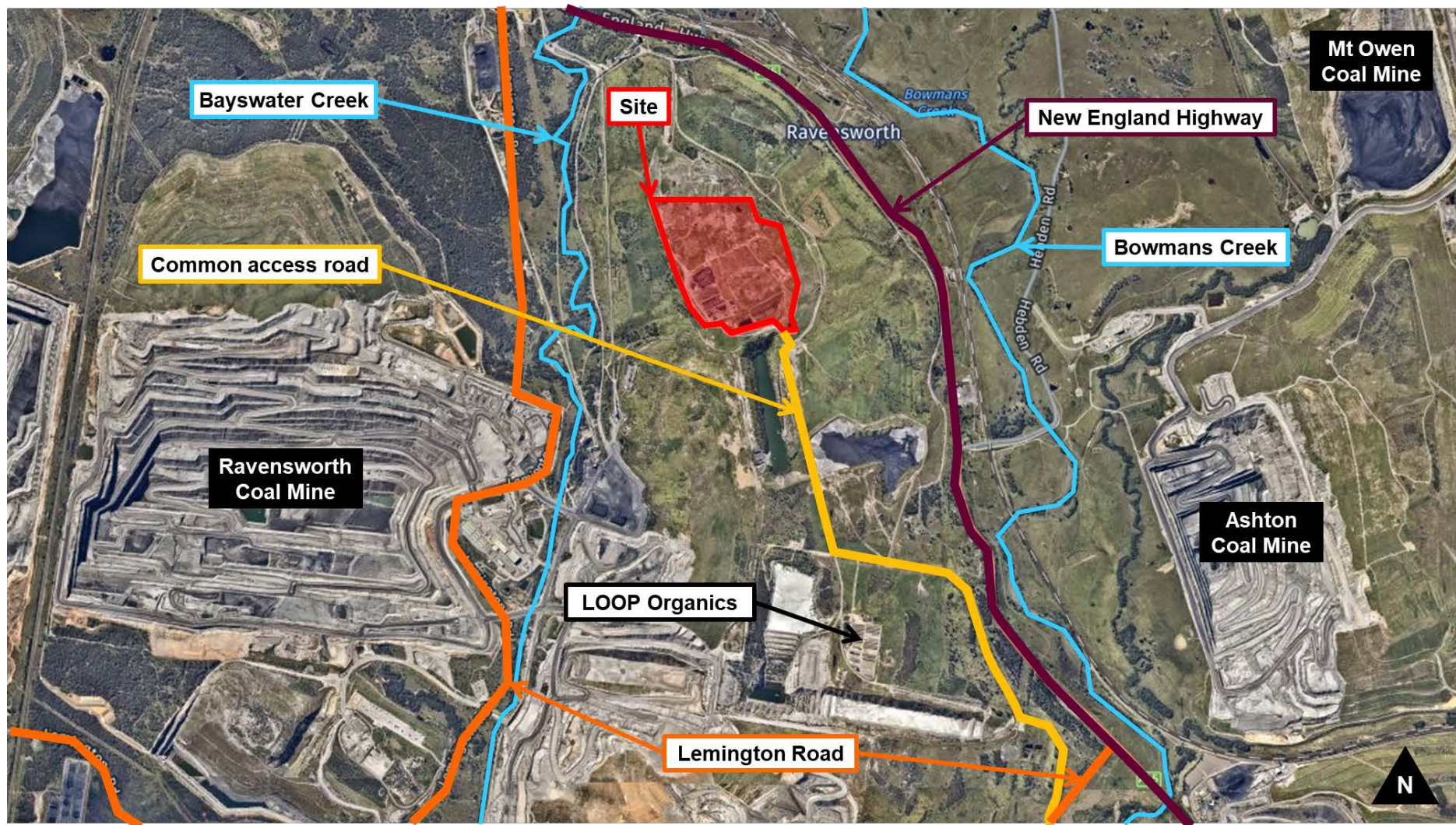


Figure 3 | Surrounding land uses

1.5 Other development approvals

The Applicant currently operates a composting facility on the site under a development consent granted by Singleton Council (DA140/2016) (see **Figure 2**). The development consent permits a processing capacity of 76,000 tpa of biosolids and garden organics, with operational hours of 6 am to 6 pm, Monday to Saturday.

The existing development is permitted to accept the following types of general solid waste (non-putrescible) and liquid waste:

- urban wood residues
- paper crumble
- wastewater from Bayswater mine Void 4
- natural organic fibrous material
- coal ash
- biosolids
- garden waste.

The existing development has two stages, however only Stage 1 has been constructed to date. The Applicant proposes to incorporate both stages into the SSD and surrender DA140/2016 following determination of the application as this would provide better outcomes for operations, compliance, management and reporting.

Stage 1 comprises:

- compacted earth processing pad (8.78 ha)
- surface water drainage, including a rock drain and stormwater discharge and infiltration area
- leachate and sediment control dam (14.7 ML)
- portable site office and staff amenities
- AGL Macquarie water tank for raw water storage (300,000 L).

The following additional works are approved under Stage 2:

- expanded compacted earth processing pad (16.58 ha)
- extension of the surface water drainage works to cover the additional processing pad area
- expanded leachate and sediment control dam (50.2 ML).

The facility is regulated by the Environment Protection Authority (EPA) through Environment Protection Licence (EPL) No. 7674.

1.6 Related development

AGL Macquarie is rehabilitating Voids 1 to 5 at the Ravensworth No 2 and Ravensworth South Mines using fly ash from the Bayswater Power Station. The following development consents allow the use of compost as part of the mine rehabilitation works, however do not permit the processing of compost:

- Development consent No. 144/93 granted by Singleton Shire Council on 8 December 1993, as modified
- Development consent No. 138/93 granted by Muswellbrook Shire Council on 13 December 1993, as modified
- Development consent No. 86/51 for Ravensworth South Mine granted by the Department of Planning and Environment on 16 December 1986.

2 Development

2.1 Amended development

The Applicant originally sought development consent for the expansion of an existing resource recovery facility to process up to 200,000 tpa of organic material, including:

- urban wood residues for composting
- paper crumble for composting
- wastewater from Bayswater mine Void 4
- drill mud process water
- natural organic fibrous composting material
- coal ash
- biosolids
- garden waste
- food organics and garden organics (FOGO).

Other components of the exhibited development included water drainage and leachate works, covered hardstand areas, an aerated composting system and associated infrastructure.

During exhibition of the development, Council and the EPA raised concerns with the processing of FOGO and its potential air quality impacts. In particular, the EPA had odour emission concerns relating to the composting of food organics in open windrows rather than within an enclosed building.

On 28 June 2022, the Applicant wrote to the Department requesting to amend the DA pursuant to section 37 of the EP&A Regulation 2021. The letter (Amendment Report) requested the following changes to the DA:

- remove FOGO from the proposed incoming waste streams
- remove the Mobile Aerated Floor for FOGO processing and the FOGO receival and blend shelter
- remove food waste from kerbside green bin waste collection as an acceptable waste source
- extension of the Processing Pad area to include an additional 4.93 hectares.

The Department considered the amended application to be consistent with the requirements of the EP&A Regulation and accepted the amended application accordingly.

2.2 Description of the development

The major components of the development are summarised in **Table 1** and shown in **Figure 4**, and described in full in the EIS and RtS included in **Appendix A**.

Table 1 | Main components of the development

Aspect	Description
Development Summary	Expansion of an existing resource recovery facility to process up to 200,000 tonnes per annum of organic material, including water drainage and leachate works, covered hardstand areas and associated infrastructure.
Site area	• 57 hectares

Aspect	Description
	The site is located on part of a capped open cut mining void (Void 3) of the Ravensworth No 2 mine
Construction	- Expansion of the compost processing and blending areas processing pad (21.51 ha) - Extension of the surface water drainage works to cover the additional processing pad area - Expanded leachate and sediment control dam (50.2 ML) - Installation of the following: - a single lane weighbridge (approximately 27.5 m long) - a dedicated trailer wash bay - two 50,000 litre (L) recycled drill water storage tanks - a machinery shelter for the storage of tools and machinery for servicing 8 months duration, standard construction hours
Operation	- Receipt and processing up to 200,000 tpa of organic material - Compost organic material in open windrows for approximately eight weeks, prior to drying, sorting, screening and blending to create the final product - Transfer of composted material to other AGL Macquarie sites (e.g. the Liddell Ash Dam, Liddell Power Station and Baywater Power Station) for use in rehabilitation - Sale of composted material to third parties
Accepted wastes	- Garden waste - Biosolids - Paper crumble for composting - Urban wood residues for composting - Natural organic fibrous composting material - Wastewater from Bayswater Power Station - Animal waste - Drill mud process water
Traffic	- Site access via Lemington Road, a rural two-way local road, which connects to the New England Highway - Construction traffic: additional 10 movements per day - Operational traffic: 146 vehicles per day (73 in-bound and 73 out-bound), comprising 32 light vehicles and 114 heavy vehicles (waste and fuel deliveries) - Construction and existing operational activities would occur concurrently
Hours of operation	6am to 6pm, Monday to Saturday - No operations on Sunday or Public Holidays - Deliveries from 6:30am to 5pm, Monday to Friday
Capital investment value	\$4.8 million
Employment	15 full-time equivalent construction jobs and 4-6 operational jobs

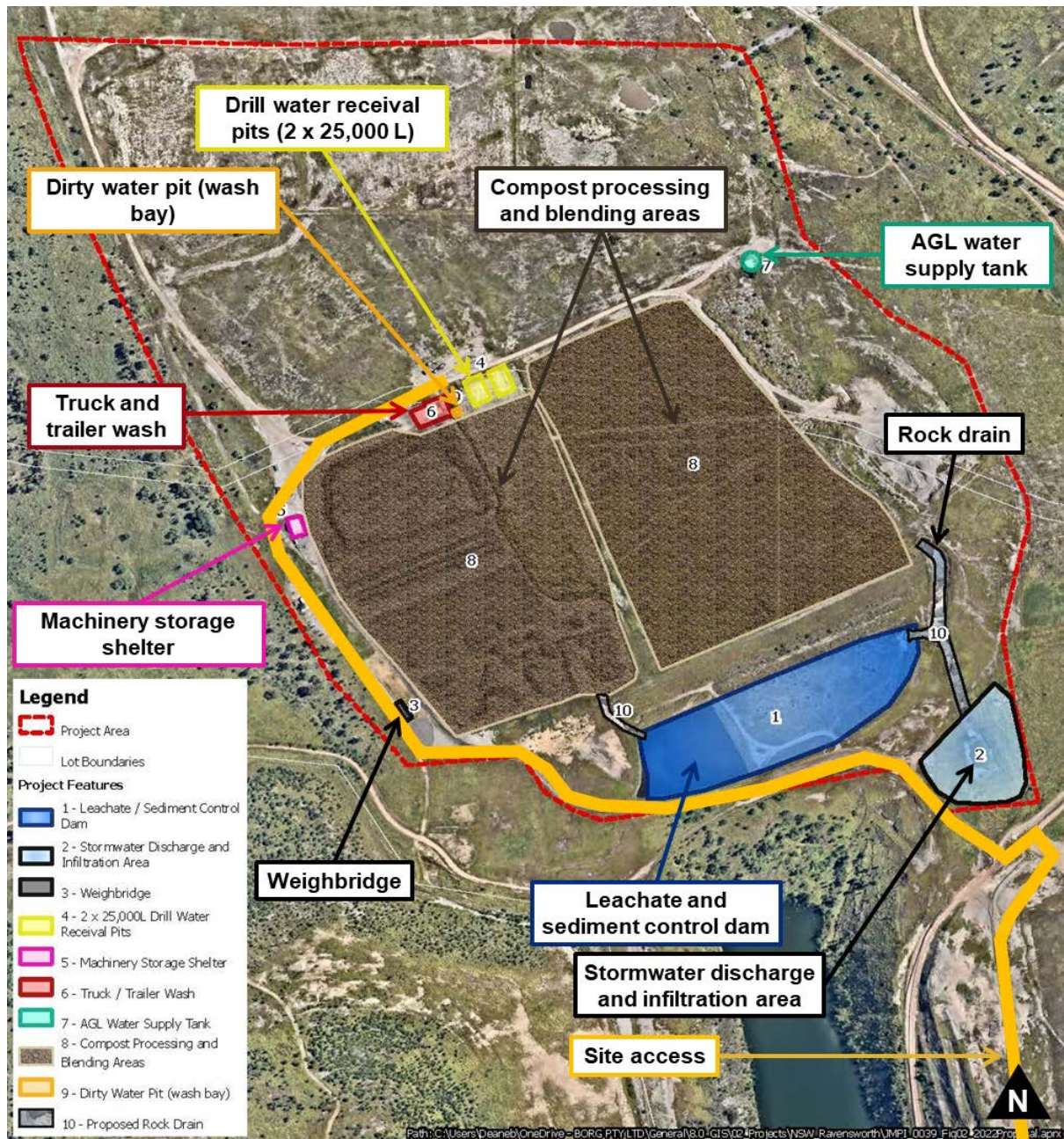


Figure 4 | Site layout

2.3 Physical layout

The development would comprise the following key features (numbering as shown in Figure 4):

1. Leachate and sediment control dam – The dam would have a capacity of 50.2 ML and capture stormwater runoff and leachate from the compost processing and blending area. The dam would have the capacity for a 1 in 25-year Annual Exceedance Probability (AEP) 24-hour rainfall event.
2. Stormwater discharge and infiltration area – The point of discharge and is also referred to as the 'lower basin'. This basin would capture overflow from the leachate dam during an extreme rainfall event. In the rare event the lower basin fills, water would overflow into Void 4 which provides emergency storage capacity.

3. Weighbridge – A single weighbridge, designed to accommodate vehicles up to 27.5 m in length, would weigh incoming and outgoing trucks.
4. Two 25,000 L drill water receival pits – The drill water receival pits would store recycled drill water from the Applicant's existing drill mud processing facilities for re-use in the composting process and for dust suppression on the roads.
5. Machinery storage shelter – This structure would be used for the storage and maintenance of plant and equipment.
6. Truck and trailer wash – Trucks and equipment would be washed down with raw water pumped from Void 4. Dirty water and sediment would be captured and reused in the composting process.
7. AGL Macquarie water supply tank – No changes are proposed to the AGL raw water storage tank (300,000 L).
8. Compost processing and blending area – The processing area would be constructed of compacted fly-ash and spoil, graded to direct leachate and stormwater to the dam. The processing area would be expanded 4.93 ha, for a total area of 21.51 ha.
9. Dirty water pit – Dirty water storage from the truck and trailer wash.
10. Rock drain – The concrete lined channel has sufficient capacity to discharge the peak flow during a 1 in 100 AEP rainfall event.

2.4 Process description

The current operations involve the composting and blending of organic material, which is then used to create a final compost layer for rehabilitated land. Under this SSD application, organic waste throughput would increase to 200,000 tpa, however composting operations would continue in generally in the same manner as currently approved under DA140/2016.

The estimated annual throughput of each waste stream is summarised in **Table 2**. The actual tonnages would vary depending on contracts secured from suppliers such as councils and Government agencies.

Table 2 | Estimated throughput of waste streams

Waste type	Waste stream	State of waste received	Tonnes per annum
Garden organics	Garden waste (as defined in Schedule 1 of the POEO Act)	Mulched and screened	110,000
Biosolids	Biosolids (as defined in 'The Biosolids Order 2014')	Dewatered – for blending	25,000
Paper crumble	Paper crumble for composting (defined as General or Specific Exempted Waste)	Shredded – for blending	10,000
Urban wood residue	Urban wood residues for composting (as defined in 'The compost order 2016')	Shredded – for blending	2,500

Waste type	Waste stream	State of waste received	Tonnes per annum
Natural organic fibrous material	Natural organic fibrous composting material (as defined in Schedule 1 of the POEO Act)	Shredded – for blending	2,500
Recycled water from Bayswater Power Station	Wastewater from Bayswater Power Station	Raw – for blending and compost maintenance	25,000
Animal wastes (manure)	Animal waste (defined in Schedule 1 of the POEO Act)	Raw – for blending	5,000
Hydro-excavated drilling mud	Drill mud process water (as defined in 'The Treated Drill Mud Order 2014')	Raw – transfer only to another facility for processing	20,000
Total			200,000

Organic material would be transported to the site and unloaded directly onto the compost processing and blending area. From there, the material would be placed in an open windrow and blended by either a front-end loader or the windrow turner. Windrows would be up to 3 m in height and 7 m wide in a trapezoidal shape. Windrows would be frequently turned to ensure they remain aerobic and pasteurisation is achieved.

During the composting process, temperature and moisture levels for each windrow would be monitored and adjusted as needed. The internal temperature of the windrows would reach a minimum of 55°C for a minimum of 15 days and be turned at least five times to create a stabilised product.

After approximately eight weeks, maturation would occur. Compost would be dried to the appropriate moisture content, sorted, screened and blended with other ingredients to create the final product.

Biosolids

Biosolids would be immediately placed into a windrow and blended with garden organics and any other ingredients if required to commence the composting process. Any biosolids for reprocessing received at the facility would be managed as a separate batch and monitored to ensure the requirements of the reprocessing are met. The material would be released for sale once the composting is completed and testing has confirmed it has met the required standard.

Quality control measures

The incoming loads would be inspected upon discharge and contaminated loads are reloaded onto the truck to be transported to a licenced facility for disposal.

Contamination identified during blending and composting would be removed and isolated in a hook-lift bin. The hook-lift bin would be transported to a licenced landfill facility for disposal.

The weighbridge would record outbound trucks carrying contaminated loads and the hook-lift bin.

Transport of material

Deliveries to and from the site would be via enclosed trucks, including truck and dogs, B-Double combinations, high-capacity trailers, walking floors and liquid tankers.

All vehicles and products would require pre-approval before being accepted at the site. Camera recognition software would be installed at the weighbridge to assist with security.

The final product would be loaded onto trucks and transported to the relevant area for rehabilitation use or sold to third parties.

2.5 Applicant's need and justification for the development

AGL Macquarie have over 700 ha of land requiring progressive rehabilitation. The expansion of the composting operations on the site would continue to support the existing rehabilitation activities across AGL lands. The EIS argues the successful rehabilitation of the voids is dependent on creating a biologically active soil to enable the establishment of robust and diverse vegetation communities. The open cut mining operations have removed the topsoil and the remaining sub-soils have limited value as a plant growth medium. The organic material produced at the site would be used to improve the soil across existing rehabilitated areas and new rehabilitation areas.

3 Strategic context

3.1 Upper Hunter Strategic Regional Land Use Plan

The *Upper Hunter Strategic Regional Land Use Plan* (SRLUP) (September 2012) provides a framework for balancing economic growth with the protection of high value agricultural land within the Upper Hunter region. The plan identifies the following regional planning challenges:

- improving the balance between agricultural land uses and resource development proposals, focusing on achieving co-existence between mining, coal seam gas and agriculture
- maintaining or enhancing opportunities for environmentally responsible mining and coal seam gas development to deliver reliable energy supplies to the State that reduce energy costs and carbon emissions and that generate economic wealth for the State
- maintaining or enhancing future opportunities for sustainable agriculture
- defining and protecting strategic agricultural land.

The development would assist with the regional planning challenges by supporting the rehabilitation activities across AGL Macquarie lands. The material produced at the site would be used to improve the soil across existing and new rehabilitation areas, potentially allowing these areas to be used in the future for agricultural purposes.

3.2 Hunter Regional Plan 2036

The Department's *Hunter Regional Plan 2036* (Regional Plan) sets out the strategic vision for the Hunter Region. The Regional Plan identifies four key goals:

- a leading regional economy in Australia
- a biodiversity-rich natural environment
- thriving communities
- greater housing choice and jobs.

The development is generally consistent with Goal 1, Direction 5: 'Transform the productivity of the Upper Hunter' and Goal 1, Direction 10: 'Protect and enhance agricultural activity' as it would support the rehabilitation of existing mining activities, while facilitating the future re-use of these rehabilitated areas.

3.3 NSW Waste and Sustainable Materials Strategy 2041

Since the Application was lodged, the NSW Government has released the *NSW Waste and Sustainable Material Strategy 2041* (WSMS), updating the previous *Waste Avoidance and Resource Recovery Strategy 2014-21*. The WSMS sets targets for transitioning NSW to a circular economy over the next 20 years. The key aims of the strategy are to minimise waste, reuse resources efficiently, reduce emissions and increase innovation in the waste sector.

The WSM Strategy adopts targets from the *National Waste Policy Action Plan*, including:

- reduce total waste generated by 10% per person by 2030
- have an 80% average recovery rate from all waste streams by 2030
- significantly increase the use of recycled content by governments and industry
- phase out problematic and unnecessary plastics by 2025
- halve the amount of organic waste sent to landfill by 2030.

The Department considers the development is consistent with the principal aim of the WSMS, as it would increase the facility's processing capacity thereby decreasing the amount of organic waste sent to landfills. The Applicant advises the main purpose of the development is nutrient recycling for the purposes of land rehabilitation and soil amelioration.

3.4 2018 National Waste Policy: Less waste, more resources

The 2018 National Waste Policy provides a framework for collective action by businesses, governments, communities and individuals until 2030. The policy is based on five principles for waste management, recycling and resource recovery in a circular economy:

- avoid waste
- improve resource recovery
- increase use of recycled material and build demand and markets for recycled products
- better manage material flows to benefit human health, the environment and the economy
- improve information to support innovation, guide investment and enable informed consumer decisions.

The development would assist in achieving 'Strategy 7: Increasing industry capacity' and 'Strategy 12: Reduce organic waste' by expanding the capacity of an existing resource recovery facility and increasing the diversion of organic waste from landfill.

3.5 NSW Circular Economy Policy Statement: Too Good To Waste

The EPA prepared the *Circular Economy Policy Statement* in 2019, outlining principles for transitioning NSW towards a circular economy. The policy states a circular economy values resources by keeping products and materials in use for as long as possible.

The policy identifies focus areas to guide future Government action, including making the most of organic resources by avoiding waste and encouraging recovery and re-use. The development would assist with this focus area by increasing the nutrient recycling capacity of an existing organics processing facility.

4 Statutory context

4.1 State significance

The proposal is State significant development pursuant to section 4.36 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) because it is development for the purpose of waste or resource management facilities that handle more than 100,000 tonnes per year of waste, meeting the criteria in Clause 23 of Schedule 1 in State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP).

4.2 Permissibility

The site is zoned RU1 Primary Production under the Singleton Local Environment Plan 2013 (Singleton LEP). While resource recovery facilities are considered prohibited in the RU1 zone under the Singleton LEP as an innominate use, the development is permissible with consent under State Environmental Planning Policy (Infrastructure) 2007. Therefore, the Minister for Planning (the Minister) or a delegate may determine the carrying out of the development.

4.3 Consent authority

The Minister is the consent authority for the development under section 4.5 of the EP&A Act. On 9 March 2022, the Minister delegated the functions to determine SSD applications to the Director, Industry Assessments where:

- the relevant local council has not made an objection and
- there are fewer than 15 unique public submissions in the nature of objections and
- a political disclosure statement has not been made.

Council did not object to the development and the public submission received did not object to the development. No reportable political donations were made by the Applicant in the last two years.

Accordingly, the application can be determined by the Director, Industry Assessments under delegation.

4.4 Other approvals

Section 4.42 of the EP&A Act requires further approvals to be obtained, considered or determined in a manner that is consistent with any Part 4 approval for SSD projects under the EP&A Act. In the case of the proposed development, a licence variation to EPL 7654 will need to be applied for and issued by the EPA under the *Protection of the Environment Operations Act 1997*.

4.5 Mandatory matters for consideration

Section 4.15 of the EP&A Act sets out matters to be considered by a consent authority when determining a DA. The Department's consideration of these matters is set out in **section 6** and **Appendix B**.

Under section 4.15 of the EP&A Act, the consent authority, when determining a DA, must take into consideration the provisions of any environmental planning instrument (EPI) and draft EPI (that has been subject to public consultation and notified under the EP&A Act) that apply to the proposed development.

Since lodgement of the DA, all NSW State Environmental Planning Policies have been consolidated into 11 policies. The consolidated SEPPs commenced on 1 March 2022, with the exception of State Environmental Planning Policy (Housing) 2021, which commenced on 26 November 2021.

The SEPP consolidation does not change the legal effect of the repealed SEPPs, as the provisions of these SEPPs have simply been transferred into the new SEPPs. Further, any reference to an old SEPP is taken to mean the same as the new SEPP. For consistency, the Department has considered the development against the relevant provisions of several key EPIs as in force when the DA was lodged, including:

- State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)
- State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)
- State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)
- State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)
- Singleton Local Environmental Plan 2013 (Singleton LEP).

Development Control Plans (DCPs) do not apply to SSD under Clause 11 of the SRD SEPP. However, the Department has considered the relevant provisions of the Singleton LEP in its assessment of the development in **section 6** of this report.

Detailed consideration of the provisions of all EPIs that apply to the development is provided in **Appendix C**. The Department is satisfied the proposed development generally complies with the relevant provisions of these EPIs.

4.6 Public exhibition and notification

In accordance with section 2.22 and Schedule 1 to the EP&A Act, the DA and any accompanying information of an SSD application are required to be made publicly exhibited for at least 28 days. The application was on public exhibition from **Wednesday 27 November 2019** until **Friday 31 January 2020**. Details of the exhibition process and notifications are provided in **section 5.1**.

4.7 Objects of the EP&A Act

In determining the application, the consent authority should consider whether the development is consistent with the relevant objects of the EP&A Act. These objects are detailed in section 1.3 of the EP&A Act. The objects of relevance to the merit assessment of this application include:

- to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,*
- to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,*
- to promote the orderly and economic use and development of land,*
- to promote the delivery and maintenance of affordable housing,*
- to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,*
- to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),*
- to promote good design and amenity of the built environment,*
- to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,*
- to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,*

- (j) *to provide increased opportunity for community participation in environmental planning and assessment.*

The Department has fully considered the objects of the EP&A Act, including the encouragement of Ecologically Sustainable Development (ESD), in its assessment of the application (see **Table 3**).

Table 3 | Considerations against the objects of the EP&A Act

Object	Consideration
1.3(a)	The development would promote social and economic welfare and a better environment by diverting recyclable and reusable wastes away from landfill thereby extending the life of landfill operations, and by producing compost for the rehabilitation of open cut mine voids.
1.3(b)	The Department's assessment has considered all socio-economic and environmental considerations in a single holistic assessment and is satisfied the development can avoid potentially serious or irreversible environmental damage while providing tangible socio-economic and environmental benefits. The Department is satisfied the development can be carried out in a manner that is consistent with the principles of ESD.
1.3(c)	The development is permissible use which would promote orderly and economic development of old mining land. It would provide employment for 6 operational employees and promote economic growth in the Singleton area.
1.3(e)	The Department's assessment in section 6 demonstrates that with the implementation of the recommend conditions of consent, the impacts of the development can be mitigated and/or managed to ensure the environment is protected.
1.3(i)	The Department has consulted with, and given due consideration to, the technical expertise and comments provided by other government agencies, including Council. This is consistent with the object of sharing the responsibility for environmental planning between the different levels of government in the State.
1.3(j)	The application was exhibited in accordance with clause 9 of Schedule 1 of the EP&A to provide public involvement and participation in the environmental planning and assessment of this application.

4.8 Ecologically Sustainable Development

The EP&A Act adopts the definition of ESD found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- (a) *the precautionary principle*
- (b) *inter-generational equity*
- (c) *conservation of biological diversity and ecological integrity*
- (d) *improved valuation, pricing and incentive mechanisms.*

The potential environmental impacts of the development have been assessed and, where potential impacts have been identified, mitigation measures and environmental safeguards have been recommended.

As demonstrated by the Department's assessment in **section 6** of this report, the development is not anticipated to have any adverse impacts on native flora or fauna, including threatened species, populations and ecological communities, and their habitats. The development does not require the removal of any vegetation. As such, the Department considers the development would not adversely impact on the environment and is consistent with the objectives of the EP&A Act and the principles of ESD.

4.9 Legislative amendments

The Department notes that since the lodgement of the DA, the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation 2000) has been repealed by the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation 2021). Under Schedule 6(3) of the 'savings, transitional and other provisions' of the EP&A Regulation 2021, the 2000 Regulation continues to apply (instead of the new EP&A Regulation 2021) to a DA made but not finally determined before 1 March 2022. As the application was lodged on 15 November 2019, the application has been assessed having regard to the requirements of the EP&A Regulation 2000.

4.10 Biodiversity Development Assessment Report

Under section 7.9(2) of the *Biodiversity Conservation Act 2016* (the BC Act), SSD applications are to be accompanied by a Biodiversity Development Assessment Report (BDAR) unless the Planning Agency Head and the Environment Agency Head determine that the development is not likely to have any significant impact on biodiversity values.

On 3 December 2019, the Applicant submitted a request to the Planning Secretary to waive the requirement for a BDAR, on the basis that the development relates to the construction and operation of a resource recovery facility on a site which has a long history of disturbance and mining operations and is not likely to have any significant impact on biodiversity values.

The Environment Agency Head and A/Director, Industry Assessments, as nominee of the Planning Secretary, determined the proposed development is not likely to have any significant impact on biodiversity values. A BDAR waiver under section 7.9(2) of the BC Act was subsequently granted for the development on 16 January 2021.

4.11 Commonwealth matters

Under the EPBC Act, assessment and approval is required from the Commonwealth Government if a development is likely to impact on a matter of national environmental significance (MNES), as it is considered to be a 'controlled action'. The EIS for the development advised the development would not impact on any of these matters and is therefore not a 'controlled action'. As such, the Applicant determined a referral to the Commonwealth Government was not required.

5 Engagement

5.1 Consultation

The Applicant, as required by the Planning Secretary's Environmental Assessment Requirements (SEARs), undertook consultation with relevant government agencies as well as the community and affected landowners. The Department undertook further consultation with these stakeholders during the exhibition of the EIS and throughout the assessment of the application. These consultation activities are described in detail in the following sections.

Consultation by the Applicant

The Applicant undertook a range of consultation activities throughout preparation of the EIS including:

- consultation with government agencies, including emails, telephone conversations and meetings
- consultation with the local Aboriginal community during the preparation of the Aboriginal Cultural Heritage Assessment Report (ACHAR)
- the distribution of a project factsheet and feedback form via mailout, email and publication on the Applicant's website.

Consultation by the Department

The Department consulted with relevant government agencies during the preparation of the SEARs. The Department also held a meeting with the Applicant and a representative from Fire and Rescue NSW (FRNSW) during the preparation of the EIS.

After accepting the DA and EIS for the application, the Department:

- made it publicly available from **Wednesday 27 November 2019** until **Friday 31 January 2020**:
 - o on the Department's website
 - o at the Department's office (320 Pitt Street, Sydney and 4 Parramatta Square, 12 Darcy Street, Parramatta)
 - o at any Service NSW Centre
 - o at Singleton Council (12-14 Queen Street, Singleton),
- notified landowners in the vicinity of the site about the exhibition period by letter
- notified and invited comment from relevant State government agencies and Singleton Council
- advertised the exhibition in the Singleton Argus.

5.2 Submissions and advice

During the exhibition period, the Department received two submissions from the public (one special interest group, one individual) and advice from 10 government agencies, including Council. A link to the full copy of the submissions and advice is provided in **Appendix A**.

Key issues - Government agencies

Singleton Council (Council) raised concerns regarding potential land use conflicts, leachate, soil contamination, air quality and odour, waste management, biosecurity and traffic impacts on local roads. Council also sought clarification on the relationship between the existing development consent (DA140/2016) and the proposed SSD. Council requested all existing management plans be updated to account for the proposed additional processing capacity.

The **Environment Protection Authority** (EPA) requested additional information on the new waste types proposed to be accepted (e.g. expected quantity, category) and the ash used to remediate the void (e.g. chemical characteristics). The EPA requested the Air Quality Impact Assessment (AQIA) be updated to address issues raised regarding odour and dust. The EPA prefers activities such as composting to be undertaken in an enclosed facility with suitable hardstand. As such, the EPA requested the Applicant demonstrate the proposed dust and odour controls would meet the same standard as best practice.

Transport for NSW (TfNSW) requested the Applicant update the Traffic Impact Assessment (TIA) to include assessments of the PM peak hour and the Lemington Road and Golden Highway intersection. TfNSW also advised of a road widening proposal along New England Highway, which bounds the site to the east, but noted it would be unlikely to impact the development.

NSW Rural Fire Service (RFS) recommended conditions relating to Asset Protection Zones, the requirement for a Fire Management Plan and the provision of a 20,000 litre (L) water supply.

The **Department's Water group** (DPE Water) requested the Applicant specify the water access licence the 125 megalitres (ML) per annum would be accounted against.

The Department also received advice from **Fire and Rescue NSW** (FRNSW), the **Department of Primary Industries** (DPI), the **Heritage Council**, the **Department's Crown Lands group** (DPE Crown Lands) and the **Department's Division of Resources of Geoscience** (DPE DRG). These agencies advised they had no comments on the development.

Key issues - Special Interest Groups

Ausgrid advised the Applicant must apply for any necessary load increases, asset relocations or new electricity connections associated with the proposal.

Key issues - Public

The Department received one public submission in support of the proposal. However, the submission refers to the relocation of the Ravensworth Homestead (3 km to the north-east of the site) which does not form part of this development application.

5.3 Response to Submissions and Amendment Report

The development was put on hold for some time during the start of the COVID-19 pandemic. The Applicant also revisited its proposal in consideration of the concerns raised regarding the processing of food organic waste during the exhibition of the development. Ultimately, the Applicant decided to make changes to the development.

On 20 June 2022, the Applicant provided a Response to Submissions (RtS) on the issues raised during the exhibition of the development. On 28 June 2022, the Applicant also provided an Amendment Report outlining proposed amendments to the DA, including the removal of acceptance of FOGO at the facility. Both documents are available at **Appendix A**. The RtS and Amendment Report were made publicly available on the Department's website and provided to key government agencies to consider whether they adequately addressed the issues raised.

Council noted its concerns regarding the storage and processing of food organics were no longer applicable. Council advised the RtS did not consider the ability of the existing controls to manage the

increased impacts expected from the expanded operations. Furthermore, Council requested the existing management plans be updated and the TIA consider other local roads (i.e. other than Lemington Road).

The **EPA** advised the RtS addressed its concerns, noting the Applicant had amended the proposal significantly by removing food organics from the waste types proposed and the associated risk of offensive odour being generated. The EPA also advised the Applicant must submit a licence variation to EPL 7654 should the proposed SSD be approved.

TfNSW advised the development would not have a significant impact on the nearby classified (State) road network. TfNSW advised the New England Highway has been declared a Controlled Access Road and direct access across this boundary is restricted. TfNSW also re-iterated the site is affected by a road widening proposal along New England Highway.

DPE Water noted the RtS did not address its request for the Applicant to identify the Water Access Licence against which the estimated 125 ML/year of water is to be accounted.

5.4 Supplementary Information

On 19 July 2022, the Applicant provided additional information in response to DPE Water's issues. The Applicant clarified there would be no licensable water take from Void 4, which contains wastewater reclaimed from an adjoining tailings emplacement and from decommissioned ash dams.

The development would operate within an enclosed water management system. Leachate water from the composting pads would be captured and reused from an expanded on-site leachate dam. The Applicant noted the EIS stated that make up water would be sourced from Void 4, however the water supply system was revised so that make up water would be sourced from a 300,000 L on-site storage tank that receives recycled water from the Bayswater Power Station.

On 3 August 2022, DPE Water advised it was satisfied with the Applicant's response, on the basis the water would be sourced from a tailings emplacement and ash dams which are above the natural groundwater table. DPE Water noted the requirements to account for water would need to be reconsidered should the source of water in Void 4 change.

On 5 August 2022, the Applicant provided additional information in response to Council. The Applicant argued it had updated and revised the mitigation measures implemented under DA140/2016 to what are now considered best practice. These measures are considered adequate to minimise the impacts of the expanded operations. The Applicant also provided an updated and consolidated list of the management and mitigation measures it would commit to. The Applicant did not believe it was reasonable to update the management plans prior to determination of the application as they are typically post-approval requirements. The Applicant also confirmed that Lemington Road would be the only local road included in the haul routes.

On 15 August 2022, the Applicant provided clarification on discrepancies raised by the Department on the waste types and the heavy vehicle movements provided in various documents submitted by the Applicant.

The Department has considered the issues raised in submissions, the RtS, the Amendment Report, the Supplementary Information and the additional concerns raised, in its assessment of the development.

6 Assessment

The Department has considered the EIS, the issues raised in the submissions, the Applicant's RtS and supplementary information in its assessment of the development. The Department considers the key assessment issue is air quality.

A number of other issues have also been considered. These issues are considered to be relatively minor and are assessed in **Table 6** under **section 6.2**.

6.1 Air quality

The acceptance, storage and processing of organic material has the potential to generate dust and odour emissions particularly on any nearby sensitive receivers.

To assess the potential air quality and odour impacts of the development, the Applicant submitted an Air Quality Impact Assessment (AQIA), prepared in accordance with the EPA's *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (Approved Methods).

Dust

Given the high moisture content of the composting material and final product, the AQIA identified wheel-generated dust on the unsealed site roads as the primary dust emission source. The AQIA focused on particulate matter with an aerodynamic radius less than 10 micrometres (PM₁₀), total suspended particulates (TSP) and dust deposition. The AQIA noted combustion-type sources (rather than unsealed roads) are more likely to generate PM_{2.5}, however assumed 10% of the PM₁₀ emissions was in the form of PM_{2.5}.

The impact assessment criteria from the Approved Methods for TSP, PM₁₀, PM_{2.5} and dust deposition are summarised in **Table 4**.

Table 4 | Air quality impact assessment criteria

Pollutant	Averaging Period	Criterion
TSP	Annual	90 µg/m ³
PM ₁₀	24-hour	50 µg/m ³
	Annual	30 µg/m ³
PM _{2.5}	24-hour	25 µg/m ³
	Annual	8 µg/m ³
Dust deposition	Monthly – maximum increase	2 mg/m ² /day
	Monthly – maximum total	4 mg/m ² /day

The AQIA noted it is likely the existing air quality is already significantly impacted by the surrounding mining operations. The Camberwell monitoring station shows that PM₁₀ exceeds the 24-hour average air criterion of 50 µg/m³ on 11 to 87 days per year based on data between 2015 and 2019.

The AQIA focused on dust generated from daily heavy vehicles movements on unsealed roads during average (73 movements) and peak (108 movements) operations. The unsealed haul road is approximately 5.3 km long. The predicted dust emission rates are summarised in **Table 5**.

Table 5 | Predicted wheel generated dust emission rates

Units	Average scenario			Peak scenario		
	TSP	PM ₁₀	PM _{2.5}	TSP	PM ₁₀	PM _{2.5}
Haul road length (km)	5.3	5.3	0.5	5.3	5.3	0.5
Wheel generated dust (kg/vehicle km travelled/day)	47.7	11.9	1.2	70.7	17.6	1.8
Wheel generated dust (kg/day)	251	63	6.3	372	93	9.3

The dust dispersion model used the volume sources with the emission rates in **Table 5**. The AQIA included contour plots of the maximum 24-hour average concentration of PM₁₀ generated from the development in isolation during the average and peak operations. The assessment demonstrated the concentration of PM₁₀ would be 1 µg/m³ at Camberwell for both operational scenarios, which is well below the criterion of 50 µg/m³. While the results are not comparable to the assessment criteria in **Table 4**, the AQIA demonstrates the dust emissions from the development would be minimal at Camberwell (the closest receptor location), which is 7 km from the site.

The Department acknowledges the background concentration of PM₁₀ is already elevated in the area due to the large presence of mining operations. The development is suitably located as it is sited far from sensitive receptors and in a highly disturbed environment. Furthermore, the EPA advised it had no further concerns for the development following the amendments to the development.

The Department considers the Applicant has demonstrated the dust impacts from the development would not impact the closest sensitive receptors and any dust generated could be managed through the adoption of dust reduction measures. These measures include the regular watering of hardstand pads and internal roadways, the watering and tarping of loads prior to leaving the site, the use of a site weather station to adjust operations according to conditions. The Department has included these commitments in the management and mitigation measures appended to the recommended conditions of consent.

The Department has also recommended a condition requiring the preparation and implementation of an Air Quality Management Plan (AQMP). The AQMP would include the Applicant's committed dust reduction measures as well as details of ongoing monitoring, reporting and contingency measures. The Department's assessment concludes the dust impacts from the expanded operations would be minor and appropriately managed through the recommended conditions.

Odour

The AQIA identified raw biosolids, garden organics and food organics to be potentially odorous material.

During the exhibition of the EIS, the EPA raised several concerns with the AQIA regarding odour impacts. The EPA advised that best practice odour mitigation and management measures include the enclosure or covering of food waste composting. As discussed in **section 2.1**, the Applicant amended the development application to remove the acceptance and processing of food organics.

The RtS included an AQIA addendum which took into consideration the amended development application (the removal of FOGO and forced aeration composting and site layout changes) and considered the cumulative impacts with the LOOP Organics operations to the south of the site.

Specific odour emission rates were determined based on odour sampling undertaken at the existing operations on the site in 2019. Using the specific odour emission rates with the proposed surface area of the composting pads and the leachate pond, odour unit (OU) contour plots were generated for the development in isolation and cumulatively with LOOP Organics.

The resulting contour plots for all scenarios assessed showed that the 2 OU contour would not extend far beyond the operational boundaries, which is well away from the closest sensitive receiver.

The EPA reviewed the AQIA addendum and determined it addressed its concerns raised during the exhibition of the EIS. The EPA noted the removal of 'food organics' significantly reduces the risk of offensive odours being generated.

Noting the removal of FOGO composting from the development, the Department considers the odour emissions from the site, even when considering the neighbouring LOOP Organics facility, would be unlikely to have unacceptable off-site impacts. The closest sensitive receivers are located 7 km to the south-east of the site and the odour impacts would be negligible. The Department has included the Applicant's odour management commitments in the management and mitigation measures appended to the recommended conditions of consent. These include updating the Compost Management Plan, training staff on odour reduction methods, ensuring only approved wastes are accepted on the site and mixing organic waste with a higher potential to generate odour immediately to minimise emissions.

The Department's assessment concludes the potential dust and odour impacts associated with the construction and operation of the development would be minimal and appropriately managed through a range of air quality measures.

6.2 Other issues

The Department's assessment of other issues is provided in **Table 6**.

Table 6 | Assessment of other issues

Findings	Recommendations
Water and leachate • Operation of the composting facility has the potential to impact the surrounding waterways of the Hunter catchment and groundwater aquifers through the discharge or infiltration of leachate. • Leachate is currently captured in a leachate dam located to the south of the pad area. The water is then re-used in the composting process. Clean water is currently diverted around the development into the surrounding mining voids. • The EIS included a Surface Water Impact Assessment which identified the stormwater management requirements of the development determined from modelling undertaken for the original development. • The EIS also included a Groundwater Impact Assessment which identified that groundwater is 40 m below the site surface level and that seepage of rainwater is low. • The development includes the expansion of the leachate pond to capture runoff from the additional pad area and extension of the perimeter bund to divert clean water. • The expanded pad area would be designed and constructed with a low permeable base to prevent infiltration of leachate, namely a compacted sub-base of 300-400 mm of overburden with 100-150 mm compacted gravel over the existing capping layer constructed over Void 3. • Additional water required for the composting process or dust suppression would be sourced from tank water supplied by Bayswater power station. • Any runoff generated from a storm event greater than the design event (1% AEP, 24-hour storm event) would be directed to the lower basin (capacity of 50 ML). • Council sought additional information about appropriate management of leachate from an additional 130,000 tonnes of waste, as well as information on the structural integrity of leachate and surface water containments. • The RtS responded to Council's concerns, advising the leachate management system is appropriate as the pad has appropriately low permeability and its size is not greater than that approved under DA140/2016. • The RtS also detailed a range of management measures, including the requirement to treat all water that has entered processing and storage areas as leachate and use of leachate for conditioning of compost to ensure the design capacity of the basin is maintained. • Council did not raise any further concerns on review of the RtS. • The EPA raised no concerns about the structural integrity of the pad or leachate basin, or potential water contamination. • The Department is satisfied the development would not result in stormwater or groundwater pollution given the site would operate in a closed water cycle. All clean water would be diverted around the site and all leachate would be generated on a pad with a low permeable base and captured via a leachate pond also with a low permeable base. Any runoff from the leachate pond, in rainfall events greater than the 1 in 100 AEP 24-hour event, would be stored on-site in the lower basin which has a storage capacity of 50 ML. • The EIS included a Surface and Groundwater Management Plan (SGMP) detailing measures to minimise contamination of stormwater and groundwater. The SGMP was previously approved to manage	Require the Applicant to: • prepare and implement an updated Surface and Groundwater Management plan • install the stormwater management system prior to operation.

Findings

Recommendations

stormwater for DA140/2016. To ensure any potential adverse impacts are identified and rectified, the Department recommends the SGMP be updated to reflect the development and include trigger measures for investigating potential adverse surface water impacts, as well as measures to mitigate any identified exceedances.

- The Department also recommends a condition requiring the Applicant to install and operate the proposed stormwater management system prior to the commencement of operation.
- The Department's assessment concludes the potential water impacts can be minimised and managed by the Applicant via the implementation of the proposed stormwater management measures and the consent conditions recommended by the Department.

Traffic

- The expanded operations would generate a peak of 146 trips per day (73 in and 73 out), comprising 114 heavy vehicles (waste and fuel deliveries) and 32 light vehicle trips. The heavy vehicle movements have the potential to impact the local and regional road networks.
- The RtS included a revised Traffic Impact Assessment (TIA) to detail the traffic types and volumes likely to be generated by the development, identify the haul routes, and assess the potential impact on the road network.
- The TIA noted the surrounding road network has adequate capacity to accommodate the traffic movements, noting there would be a negligible change to intersection delay, level of service and queue length across the key intersections.
- TfNSW reviewed the revised TIA and considered there would be no significant impact on the State road network.
- Council raised concerns about the potential impact on the local road network, noting the TIA did not consider the impact of the additional heavy vehicles on other local roads, however the Applicant confirmed that Lemington Road would be the only local road included in the haulage routes.
- The Department considers that, while the development would generate increased heavy vehicle movements, the TIA has demonstrated there would be a negligible impact on the local and State road network. The existing network could accommodate the traffic from construction and operation without the need for any upgrades.
- The expanded operations would result in approximately 9.5 heavy vehicles movements per hour during the 12-hour operational period. While construction and operation activities would occur concurrently, the construction traffic volumes would be low, peaking at an additional 10 movements per day. In the context of the broader mining precinct, the Department considers these increases to be minor.
- To ensure there are measures in place to appropriately manage and monitor traffic during all stages of the development, the Department has recommended standard conditions requiring the Applicant to prepare an Operational Traffic Management Plan.
- The Department's assessment concludes the development's traffic impacts would be minor and could be adequately managed through the recommended conditions of consent.

Require the Applicant to prepare and implement an Operational Traffic Management Plan.

Findings

Recommendations

Noise

- The development has the potential to generate noise during construction and operational hours which could impact the amenity of the locality.
- The EIS included a Noise Impact Assessment (NIA) undertaken by Global Acoustics Pty Ltd in accordance with the relevant noise policies and guidelines. The NIA included worst-case modelling of noise and vibration impacts for the proposal which included continuously operating noise sources during the hours of operation at the site (6am – 6pm), as well as construction activities in conjunction with existing site operations.
- The NIA demonstrated that operational, construction and traffic noise levels would be well below EPA's *Noise Policy for Industry* (NPfI) project trigger levels (40 A-weight decibels (dBA) for daytime and 35 dBA during evening/night) for residential receivers, and noise criteria set out in EPA's *Interim Construction Noise Guidelines* (ICNG) and *Road Noise Policy*.
- The NIA stated that vibration impacts were anticipated to be negligible during construction and operation activities.
- The Department notes that no government agency submissions raised concerns regarding noise or vibration due to the site's remote location and distance between the facility and the nearest noise sensitive receiver (approximately 7.5 km south-east from the site).
- To ensure any noise impacts are effectively managed, the Department has recommended conditions requiring the Applicant to comply with the identified construction and operational hours, as well as meet the operational project trigger limits and construction noise management levels detailed in the NPfI and ICNG, respectively.
- The Department is satisfied the NIA has demonstrated noise impacts associated with the proposal are negligible, especially considering the large separation distance from potential sensitive receivers.
- The Department's assessment concludes the development would not result in unacceptable noise or vibration impacts.

Require the Applicant to:

- comply with the hours of work listed in Table 1
- operate and construct the development in accordance with the NPfI project trigger limits and/or ICNG.

Waste management

- The development would accept up to 200,000 tonnes of organic waste for processing. It would also generate operational waste including office waste, packaging waste and maintenance wastes. The inappropriate management of these wastes has the potential to result in impacts both on and off the site.
- Council advised insufficient information was provided on the management of residual wastes and the lifespan of the development.
- The EPA advised it required further detail on the waste types, including classification, expected quantities and the state of each waste type received.
- In the RtS, the Applicant noted very little residual waste would be generated due to the inspection protocol. Should an incoming load not pass the inspection protocols, it would be rejected. Minor contamination would be handpicked and placed into a bin for disposal to landfill. The Applicant advised the current operations (76,000 tpa) results in an average of one front lift bin per week requiring disposal to landfill.
- With regards to the development's lifespan, the EIS noted the development would have an operational life of approximately 20 years

Require the Applicant to:

- comply with statutory requirements for waste receipt, storage and handling
- prepare and implement a Waste Monitoring Program and Waste Management Plan
- classify and dispose of waste on-site in accordance with the EPA's Waste Classification Guidelines
- prepare a decommissioning

Findings	Recommendations
and provided some information about the proposed decommissioning and rehabilitation of the site. • In the Supplementary Information, the Applicant provided a breakdown of each waste type proposed to be received, including the waste classification, the state of the waste received and the estimated annual throughput. • To ensure waste materials are handled efficiently on-site, the Department recommended conditions requiring the Applicant to prepare and implement a Waste Monitoring Program and Waste Management Plan to ensure waste inputs and outputs are monitored and adequate measures are in place for the duration of the development. • The Department has also recommended a condition requiring the preparation of a decommissioning plan to be prepared 5 years prior to the closure and decommissioning of the site. • The Department's assessment concludes the site is suitable for the proposed use and can accommodate the volume of waste proposed to be processed. In addition to meeting all statutory requirements, specific conditions are recommended to ensure waste is received, handled and dispatched in an appropriate and responsible manner.	and closure plan five years before operations cease.

Biosecurity

• Council advised the site is in a Phylloxera Exclusion Zone and material imported to the site may come from areas that are Phylloxera infested. As such, Council requested clarification on the proposed controls for ensuring the facility and the finished product would be Phylloxera free. • In the RtS, the Applicant clarified the incoming material would not come from areas considered high risk for Phylloxera. Furthermore, any presence of Phylloxera would be destroyed due to the temperatures achieved during the composting process. Australian Standard (AS) 4554-2012 requires compost material be subjected to pasteurisation temperatures above 55°C for at least three consecutive days. These requirements meet the heat treatment disinfection procedures outlined in the <i>Australian National Phylloxera Management Protocol</i>. • The Department considers the Applicant has demonstrated the biosecurity risk posed by the development would be adequately managed through the composting processes required by AS 4554-2012. • The Department has recommended a condition requiring the Applicant to prepare and implement a biosecurity protocol, which would ensure unexpected biosecurity risks are identified and managed. • The Department's assessment concludes the biosecurity risk of the development would be adequately managed through the existing AS and the recommended conditions of consent.	Require the Applicant to prepare and implement a biosecurity protocol.
--	---

7 Evaluation

The Department's assessment of the application has fully considered all relevant matters under section 4.15 of the EP&A Act, the objects of the EP&A Act and the principles of ESD.

The Department has considered the development on its merits, taking into consideration strategic plans that guide development in the area, the EPIs that apply to the development, advice received from the relevant government agencies, including Council, and submissions from the public.

There were no objections from the government agencies or the community. The Department has sought to address any issues raised through consultation with both the government agencies and the Applicant.

The Department's assessment concluded there would be some amenity impacts during operation of the expanded resource recovery facility, such as minor increases to dust and odour emissions. Therefore, the Department has recommended conditions to minimise these impacts, including the requirement for an Air Quality Management Plan. The Applicant has also committed to implementing several management and mitigation measures, which the Department has included in the recommended conditions of consent.

Overall, the Department's assessment has concluded the development would:

- support the rehabilitation of AGL Macquarie lands by using the finished product to improve the soil across these areas
- increase the diversion of organic waste from landfill by expanding the capacity of an existing resource recovery facility, aligning with the objectives of the State and Federal waste policies
- represent an investment of \$4.8 million in the Singleton LGA and provide 15 full-time equivalent construction jobs and 4-6 operational jobs.

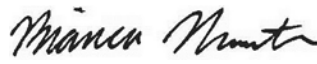
The Department considers these benefits can be realised without any significant environmental impacts and therefore, considers the development is in the public interest and should be approved, subject to conditions.

8 Recommendation

For the purpose of section 4.38 of the *Environmental Planning and Assessment Act 1979*, it is recommended that the Director, Industry Assessments, as delegate of the Minister for Planning:

- **considers** the findings and recommendations of this report
- **accepts** and **adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the application
- **agrees** with the key reasons for approval listed in the notice of decision
- **grants consent** for the application in respect of SSD-9418, subject to the conditions in the attached development consent
- **signs** the attached development consent and recommended conditions of consent (see **Appendix D**).

Recommended by:

 31/08/2022

Bianca Thornton

Senior Environmental Assessment Officer
Industry Assessments

Recommended by:

 31/08/2022

Sheelagh Laguna

Principal Planning Officer
Industry Assessments

9 Determination

The recommendation is **Adopted** by:



31/08/2022

Chris Ritchie

Director

Industry Assessments

Appendices

Appendix A – List of documents

The Department has relied upon the following key documents during its assessment of the proposed development:

Environmental Impact Statement

- *EIS for 200,000tpa Nutrient Recycling Facility – Ravensworth NSW, SSD 9418 (Version 3)*, prepared by RPS Group, dated 14 November 2019

Submissions

- All submissions received from relevant government agencies and the general public

Response to Submissions

- *Greenspot Hunter Valley, Nutrient Recycling Facility, Response to Submissions – SSD 9418 (Version 1)*, prepared by Space Urban Pty Ltd, dated 20 June 2022

Amendment Report

- a letter titled *RE: SSD9418 - Greenspot Hunter Valley Nutrient Recycling Facility – Amendment Report*, prepared by Space Urban Pty Ltd, dated 28 June 2022

Supplementary Information

- a letter titled *RE: Request for Additional Information SSD 9418*, prepared by Space Urban Pty Ltd, dated 19 July 2022
- a letter titled *RE: Request for Additional Information SSD 9418*, prepared by Space Urban Pty Ltd, dated 5 August 2022
- a letter titled *RE: Request for Additional Information SSD 9418 – Waste Tables and Traffic Numbers*, prepared by Space Urban Pty Ltd, dated 15 August 2022

Statutory documents

- relevant considerations under section 4.15 of the EP&A Act (see **Appendix B**)
- relevant environmental planning instruments, policies and guidelines (see **Appendix C**)

All documents relied upon by the Department during its assessment of the application may be viewed at: <https://pp.planningportal.nsw.gov.au/major-projects/projects/ravensworth-composting-facility-expansion>

Appendix B – Considerations under Section 4.15 of the EP&A Act

Table 7 | Matters for consideration under Section 4.15 of the EP&A Act

Matter	Consideration
a) the provisions of:	
i.) any environmental planning instrument, and	The Department has considered the relevant environmental planning instruments in its assessment of the development.
ii.) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and	The Department has considered the Draft State Environmental Planning Policy (Remediation of Land) in its assessment of the development.
iii.) any development control plan, and	Under clause 11 of the SRD SEPP, development control plans do not apply to State significant development.
iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and	The Applicant has not entered into any planning agreement under section 7.4
iv.) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), that apply to the land to which the development application relates,	The Department has assessed the development in accordance with all relevant matters prescribed by the regulations, the findings of which are contained in this report.
b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,	The Department has considered the likely impacts of the development in detail in section 6 of this report. The Department concludes that all environmental impacts can be appropriately managed and mitigated through the recommended conditions of consent.
c) the suitability of the site for the development,	The development is for a waste or resource management facility on land zoned RU1 which is a prescribed zone under cl 120 of the infrastructure SEPP (ISEPP)
d) any submissions made in accordance with this Act or the regulations,	All matters raised in submissions have been summarised in section 5 of this report and given due consideration as part of the assessment of the development in section 6 of this report.
e) the public interest.	The development would generate up to 15 jobs during construction, 6 jobs during operation and direct \$4.8 million in capital investment in the

Matter	Consideration
	Singleton local government area. The environmental impacts of the development would be appropriately managed via the recommended conditions. The Department considers to the development is in the public interest.

Appendix C – Consideration of Environmental Planning Instruments

To satisfy the requirements of section 4.15(1) of the EP&A Act, the following EPI's were considered as part of the Department's assessment:

- State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)
- State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)
- State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)
- State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)
- draft State Environmental Planning Policy (Remediation of Land) (draft Remediation SEPP)
- Singleton Local Environmental Plan 2013.

State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)

The SRD SEPP identifies certain classes of development as SSD. The proposal is State significant development pursuant to section 4.36 of *Environmental Planning and Assessment Act 1979* (EP&A Act) because it involves development for the purpose of resource recovery facility that handles more than 100,000 tonnes per year of waste which meets the criteria in Clause 23 of Schedule 1 in the SRD SEPP.

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)

The ISEPP aims to facilitate the effective delivery of infrastructure across the State by improving regulatory certainty and efficiency, identifying matters to be considered in the assessment of development adjacent to certain types of infrastructure development, and providing for consultation with relevant government agencies about certain types of development during the assessment process.

TfNSW's comments are detailed in **section 5** of the report.

The Department has consulted and considered the comments from relevant government agencies and where applicable, has included suitable conditions in the recommended conditions of consent.

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)

SEPP 33 aims to identify developments with the potential for significant off-site impacts, in terms of risk and/or offence. A development is defined as potentially hazardous and/or potentially offensive if, without mitigating measures in place, the development would have significant risk and/or adverse impact on off-site receptors.

The Applicant reviewed the development in accordance with SEPP 33 and advised that as the development does not involve the use of hazardous chemicals above the screening levels that would trigger consideration and given the extensive buffer between the development and sensitive land uses, the development is not potentially hazardous or offensive.

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)

SEPP 55 aims to provide a State-wide approach to the remediation of contaminated land. In particular, SEPP 55 aims to promote the remediation of contaminated land to reduce the risk of harm to human health and the environment by specifying:

- under what circumstances consent is required
- the relevant considerations for consent to carry out remediation work
- the remediation works undertaken meet certain standards and notification requirements.

The development has no known contamination, the site is capped with ash associated with the operation of Bayswater Power Station. No interaction with the cap is proposed.

Draft State Environmental Planning Policy (Remediation of Land) (draft Remediation SEPP)

The draft Remediation SEPP seeks to retain the key operational framework of the current SEPP 55, while also adding new provisions relating to changes in categorisation and introducing modern approaches to the management of contaminated land. The development has been assessed against SEPP 55 (see above), and the Department is satisfied the development would be consistent with the draft Remediation SEPP.

Singleton Local Environmental Plan 2013

The Singleton LEP aims to encourage the development of housing, employment, infrastructure and community services to meet the needs of the existing and future residents of the Singleton LGA so that Singleton continues to develop as a sustainable and prosperous place to work.

The development is located on RU1 Primary Production zoned land and while resource recovery facilities are considered prohibited in the RU1 zone under the Singleton LEP as an innominate use, the development is permissible with consent under State Environmental Planning Policy (Infrastructure) 2007. The Department has consulted with Singleton City Council throughout the assessment process and has considered all relevant provisions of the Singleton LEP and those matters raised by Council in its assessment of the development (see **section 6** of this report). The Department concludes that the development is consistent with the relevant provisions of the Singleton LEP.

Appendix D – Recommended Conditions of Consent

The recommended conditions of consent can be found on the Department's website at:

<https://pp.planningportal.nsw.gov.au/major-projects/projects/ravensworth-composting-facility-expansion>