Moss Vale Plastics Recycling and Reprocessing Facility

Response to Submissions Report

Plasrefine Recycling Pty Ltd

10 March 2023

The proposal (without the proposed boundary planting)

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Acknowledgement of Country

GHD acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of the land, water and sky throughout Australia on which we do business. We recognise their strength, diversity, resilience and deep connections to Country. We pay our respects to Elders of the past, present and future, as they hold the memories, knowledges and spirit of Australia. GHD is committed to learning from Aboriginal and Torres Strait Islander peoples in the work we do.

Glossary and abbreviations

Term / Abbreviation	Definition
ACHAR	Aboriginal Cultural Heritage Assessment Report
ACHMP	Aboriginal cultural heritage management plan
AEP	Average exceedance probability
AHIMS	Aboriginal Heritage Information Management Systems
ALCAM	Australian Level Crossing Assessment Model
Approved Methods	*Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (NSW EPA 2016)
ARTC	Australian Rail Track Corporation
ASIR	Aboriginal Site Impact Recording
BAM	Biodiversity Assessment Method
BAR	Basic right turn treatment on a two-lane road
BC Act	*Biodiversity Conservation Act 2016* (NSW)
BCD	Biodiversity Conservation Division (NSW)
BDAR	Biodiversity Development Assessment Report
CHR(S)	Channelised right-turn treatment with a short turn slot on a two-lane rural road
CO_2-e	Carbon dioxide equivalent
COAG	Council of Australian Governments
CoRTN	Calculation of Road Traffic Noise
CTMP	Construction Traffic Management Plan
dB	Decibels
dBA	A-weighted sound levels
DCP	Development control plan
DECCW	Department of Environment, Climate Change and Water (NSW)
DN	Nominal diameter
DoS	Degree of Saturation
DP	Deposited plan
DPE	Department of Planning and Environment (NSW)
East-west public access road	The previously proposed access road that was to extend from the plastics recycling and reprocessing facility to Lackey Road via the currently unformed Braddon Road, traversing Lot 10 DP 1084421
EPA	Environment Protection Authority (NSW)
EIS	Environmental Impact Statement
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
EPL	Environment protection licence
FSS	Fire Safety Study
FRNSW	Fire and Rescue New South Wales
FRNSW Guideline	*Fire safety guideline - Fire safety in waste facilities (FRNSW 2020)*
HDPE	High-density polyethylene

Term / Abbreviation	Definition
Hz	The measure of frequency of sound wave oscillations per second. 1 oscillation per second equals 1 hertz.
ICNG	Interim Construction Noise Guidelines
kL	Kilolitre
km	Kilometre
Km/h	Kilometres per hour
LA_{max}	The maximum sound level recording during the measurement period
LDPE	Low-density polyethylene
LEP	Local Environmental Plan
LFN	Low noise frequency
LGA	Local government area
LoS	Level of Service
m AHD	Metres relative to Australian height Datum
MVEC	Moss Vale Enterprise Corridor
MVEC DCP	Moss Vale Enterprise Corridor Development Control Plan 2012
Nm^3	Normal cubic metre
NorBE	Neutral or beneficial effect
North-south public access road	The proposed new public access road that would comprise a portion of the future Enterprise Zone Road (currently a gravel road), a north south road (currently a Council road reserve), and a portion of Braddon Road (also currently a Council road reserve).
NPfI	Noise Policy for Industry
NRAR	Natural Resources Access Regulator
NSW	*New South Wales*
NSW Waste Strategy	*NSW Waste and Sustainable Materials Strategy 2041*
OEMP	Operation Environment Management Plan
Planning Systems SEPP	State Environmental Planning Policy (Planning Systems) 2021
Plastics recycling and reprocessing facility site	The northern parcel of land in Lot 11 DP 1084421, with a current street address of 74-76 Beaconsfield Road, Moss Vale
PET	Polyethylene terephthalate
$PM_{2.5}$	Particulate matter (less than 10 micrometers in diameter)
PM_{10}	Particulate matter (less than 2.5 micrometers in diameter)
PP	Polypropylene
Proponent	Plasrefine Recycling Pty Ltd
Proposal	The construction and operation of a plastics recycling and reprocessing facility with capacity to receive up to 120,000 tonnes per year of mixed plastics, including: – Two main buildings for waste receival, recycling and reprocessing and finished product storage – Ancillary infrastructure including a waste water treatment plant, an office building, workshop, staff and visitor parking, truck parking, internal roadways, weighbridges, water management, landscaping and visual screening, signage, fencing and utility connection. The proposal also includes a new north-south public access road comprising a portion of the future Enterprise Zone Road (currently a gravel road joining the western end of Collins Road), a north south road (currently a Council road reserve), and a portion of Braddon Road (also currently a Council road reserve).
Proposal site	The area that would be occupied by the proposal's permanent operational infrastructure, and/or directly disturbed during construction.
PSA	Primary Study Area

Term / Abbreviation	Definition
PVC	Polyvinyl chloride
RDF	Refuse derived fuel Also called process-engineered fuel (PEF). RDF is a solid fuel produced after processing of waste to increase the calorific value, homogenise the material, remove recyclable materials, remove inert materials, and remove hazardous contaminants.
SEARs	Secretary's (of the Department of Planning, Industry and Environment) environmental assessment requirements
SEPP	State Environmental Planning Policy
SHIP	Southern Highlands Innovation Park An area comprising the MVEC and adjacent industrial zoned land, approximately 1,020 hectares in size and designated for sustainable and innovative businesses, providing a unique opportunity for large scale industrial development conveniently close to Sydney, and good distribution to most of the country.
SSA	Secondary Study Area
TSA	Tertiary Study Area
UPVC	Unplasticised polyvinyl chloride
VOC	Volatile organic compounds
VPA	Voluntary planning agreement

Executive Summary

This Response to Submissions (RTS) report was developed in accordance with Appendix C to the *State Significant Development Guidelines – Preparing a Submissions Report* (DPIE, 2021) and provides:

- A summary and analysis of the public submissions received during exhibition of the Environmental Impact Statement (EIS)
- A summary of requests for information received from the NSW Department of Planning and Environment (DPE)
- A summary of the actions taken during and after exhibition
- Responses to the submissions received including:
  - A summary of actions undertaken during and after EIS exhibition including design refinement, further environmental assessment and investigations, development of additional reports and plans
  - Responses to the public submissions received, requests for information and engagement activities.

The DPE exhibited the EIS for the development from 23 February 2022 to 22 March 2022. During the exhibition period the DPE received a total of 346 submissions including advice from eight NSW government agencies, one from Wingecarribee Shire Council, nine from other organisations and 328 from members of the public.

The 328 community submissions were made by 315 different individuals or organisations. About 65% of the public submissions were from the suburb of Moss Vale.

Key issues raised in public submissions related to land use, traffic, transport and access, air quality, water, noise and vibration, visual, socio-economic, human health, biodiversity, waste, hazard, contamination and utilities and heritage.

Further design development and additional studies have been undertaken to address the submissions. Key updates to the design and additional assessment include:

- A change to the preferred access road to the north south road option presented in the EIS and associated design, due to landowners consent not progressing at this point in time for the formerly preferred east west road option. The north-south road had been presented as one of three possible road access options in the EIS, and its impacts were assessed. This road would comprise a portion of the future Enterprise Zone Road (currently a gravel road joining the western end of Collins Road), a north south road (currently a Council road reserve), and a portion of Braddon Road (also currently a Council road reserve). This would see heavy vehicle traffic using: Hume Highway (M31), Berrima Road, Innes Road (Garrett Street), Lackey Road, Collins Road and then the new north-south public access road. These roads are existing heavy vehicle approved roads. Additional studies undertaken to support the change in site access include:
  - Traffic and transport
  - Noise and vibration
  - Aboriginal heritage
  - Biodiversity
  - Social aspects
- Revision to the stormwater management strategy and layout based on:
  - Updated flood and stormwater quality modelling
  - Refinement and reduction in the water demand during operation
- Development of architectural plans including shadow analysis and light spill assessment
- Updates to photomontages to show the refined façade design and an additional photomontage from Collins Road viewpoint
- Preparation of a Social Impact Assessment (SIA) in accordance with the NSW Department of Planning and Environment (DPIE) (2021) 'Social Impact Assessment Guideline for State Significant Projects'.

The findings of the assessments of these issues are provided in Section 4.4.

The assessments in the EIS and this RTS report have confirmed that any potential impacts can be appropriately mitigated and/or managed by conditions to ensure no significant impacts and an acceptable level of environmental performance. The operation of the facility would also be regulated by the NSW Environment Protection Authority via the Environment Protection Licence required to operate the facility.

The proposal is not anticipated to have any adverse impacts on native flora or fauna, including threatened species, populations and ecological communities, and their habitats. As such, the proposal would not adversely impact on the environment and is consistent with the principles of ecologically sustainable development.

Clarification has also been provided on the construction and operational requirements in relation to:

- Construction timing and access
- Traffic modelling and assessment inputs
- Air pollution control systems
- Water demand and wastewater discharge capacity
- Waste and product material storage.

A quantitative air quality assessment has been undertaken as part of the RTS report. The results show that no exceedances of the criterion are predicted for the closest residential receptor (on Beaconsfield Road). Exceedances of the PM_{10} and $PM_{2.5}$ criterion are predicted at the closest commercial receptor (Australian Bioresources) on days, when background concentrations are unusually high, due to bushfires or other similar sources such as backburning. However, elevated background concentrations would not coincide with elevated incremental concentrations from the operation of the proposal, and as such the risk of proposal emissions leading to additional exceedances of the criteria would be low.

In addition, ambient 24-hour $PM_{2.5}$ concentrations in the Moss Vale locality already exceed the criteria at times due to external factors such as bushfires. It is expected that employees or laboratory mice at Australian Bioresources would ordinarily spend the majority of time in controlled air conditioned environments, and would therefore not be exposed to external, elevated air pollutant concentrations.

Potential environmental impacts have decreased as a result of measures proposed by the proponent to reduce water demand and production of wastewater. The substantial decrease in the proposed water demand is expected to result in decreased potable water demand during operation.

Further refinement of the architectural design and reduction in height has reduced the visual impacts associated with the facility.

The proposed new north-south public access road would remove the need for heavy vehicles to use Beaconsfield Road, during construction of the new road. Based on the outcomes of the additional traffic assessment that has been undertaken, it is considered that the operation of the proposed facility would have negligible impact on the surrounding road network in terms of intersection performance. A review of access and key intersections also shows that sufficient sight distance is available at key access points, which is expected allow for the safe movement of vehicles into and out of the proposed site.

The proposed new north-south public access road would result in reduced noise impacts during the construction phase compared with the original access road, as the construction haulage route utilises roads with higher traffic volumes (Berrima Road and Lackey/Collins/Douglas Road) to a greater extent than the original haulage route and removes the use of Beaconsfield Road during road construction. During operation, the Road Noise Policy criteria is only predicted to be exceeded at some residences fronting Innes Road (AM and PM peak) and Garret Street (PM peak only) at the ultimate predicted heavy vehicle volume of 10 heavy vehicle movements per hour. It is noted that the existing road traffic noise levels at the nearest residences to Innes Road and Garret Street are predicted to already exceed the $L_{Aeq\ (1\ hour)}$ noise level criteria of 55 dBA.

Where exceedances of the Road Noise Policy criteria are predicted based on the facility operating at full capacity and maximum truck movements, monitoring and management options have been recommended to manage the potential increase in road traffic noise level for adjacent residential receivers.

It is noted that heavy vehicle movements would initially be lower than the maximum 10 heavy vehicle movements per hour, and increase over time as the facility reaches full capacity. The timing for this would depend on market conditions, and level of utilisation of the facility however is expected to be at least five years from the commencement of operation.

Council has proposed a number of new roads to service the MVEC/SHIP. The Moss Vale Bypass, which is due to have its detail design completed in late 2023, would enable heavy vehicles to access Lackey Road without utilising the routes discussed above. Timing for construction of this road is not known, however it has potential to be in operation before the facility reaches full capacity. It is also noted that when the proposed Enterprise Zone Road is operational it would connect directly to the north south road and eliminate the need for heavy vehicles travelling to and from the Hume Highway to use Innes Road.

The change in road access has resulted in nine mature planted trees within the designated Council road corridor being impacted. This patch of planted *Eucalyptus macarthurii* trees does not meet the minimum key diagnostic criteria or the condition thresholds outlined in the Commonwealth approved conservation listing for the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) listed CEEC Southern Highlands Shale Forest and Woodland in the Sydney Basin Bioregion (DoE 2015) as the patch is smaller than 0.5 ha and less than 30% of the perennial understorey vegetation cover is made up of native species.

Eucalyptus macarthurii is listed as a Matter of National Environmental Significance (MNES) under the EPBC Act. An assessment of significance has been completed for this species, which indicates that the proposal is unlikely to result in a significant impact on this species, and a referral is not considered necessary. The proposal is unlikely to result in any impacts to other MNES listed under the EPBC Act.

In terms of Aboriginal heritage impacts associated with the north south road, additional test excavation was undertaken which recorded five artefacts. Similar to the findings of investigations at PAD2 and PAD3 in 2021 (associated with the east-west road), this was considered a low artefact density and is representative of a background scatter of artefacts that would be found in most comparable landscape across the region. Following project approval, an Aboriginal Cultural Heritage Management Plan (ACHMP) would be developed in consultation with the RAPs and approved by DPE. The proposed change to the preferred access road to the north–south option would mean that the protection measures for Beaconsfield IF-1, as set out in the ACHAR, will not be required.

A SIA was prepared by Ethos Urban in 2022 to analyse key social considerations relevant to the proposal. Key social impacts of the proposal include potential permanent visual impacts, due to the scale and nature of the buildings in their existing context. Positive social impacts arising from the proposal may be experienced as a result of improved livelihoods and way of life, with the proposal providing increased local employment opportunities, and positive cumulative impacts as part of the broader strategic transformation of the SHIP. This includes the potential to attract people to work and live in the LGA, make use of key enabling infrastructure upgrades, and generate annual revenue and strengthen the capabilities of the Wingecarribee Shire to deliver on the proposal and programs for the community, such as improvements to local infrastructure.

An addendum to the SIA, which documented the potential social impacts and benefits of the change to the preferred access road was prepared in 2023. This concluded that the majority of the identified potential social impacts and benefits documented in the SIA would remain relevant to the proposal, with potential for a reduction in negative impacts in relation to accessibility, health and wellbeing, and surroundings (amenity), particularly for those utilising or living on Beaconsfield Road (where the previous access road was proposed for construction). There were however some additional negative impacts on surroundings (amenity), community and culture as a result of clearing of nine mature trees for the proposed new north-south access road.

There would be some positive social outcomes arising as a result of the north-south road (than previously assessed) due to an increased distance from residential receivers likely improving amenity, accessibility and way of life impacts. It noted that the development no longer proposes the use of Beaconsfield Road during the construction stage, and that there is no need for land acquisition, with the land already being reserved by Council for the purpose of a road.

The proposal aligns with the 'Southern Highlands Destination Strategy', released by Wingecarribee Shire Council in November 2020 which identifies the Southern Highlands as having a number of key economic strengths including:

- **strategic location**, proximate to Sydney, Canberra, Wollongong and the new Western Sydney Airport and Aerotropolis and with good transport access in and out of the region through the Hume and Illawarra Highways and
- **Southern Highlands Innovation Park (SHIP):** provides a unique opportunity for large scale industrial development conveniently close to Sydney, and good distribution to most of the country. The Moss Vale Enterprise Corridor (MVEC) and adjacent industrial zoned land total 1,023 hectares, with a vacant (unoccupied) area of 652 hectares.

The proposed use of the plastics recycling and reprocessing facility site is for a high technology development involving advanced sorting, processing and manufacturing as well as a laboratory to conduct recycling research and product development to further drive innovation in plastics recycling. The proposed use together with the creation of the proposed new north-south public access road would enable further realisation and the orderly and economic development of land in the MVEC and SHIP.

The proposal would also provide local plastic manufacturing capacity consistent with the capacity requirements identified in 'NSW Waste and Sustainable Materials Strategy: A guide to future infrastructure needs' (the Infrastructure Needs Report) (DPIE, 2021c). The Infrastructure Needs report identifies that in 2018/19, only 19% of plastics was recycled into new plastic products or recovered as refuse derived fuel in NSW, and that over 424,000 tonnes of potentially recyclable plastics was disposed in NSW landfills during this period.

Whilst there are current proposals to provide increased plastics sorting and reprocessing capacity in NSW, the report notes that there would still be a significant gap in capacity for processing plastics material affected by the Commonwealth Government's mixed plastic export ban, which came into force in July 2022. The recent identification of more than 5,000 tonnes of stockpiled baled soft plastics and subsequent collapse of the recycler REDcycle has highlighted the limited processing capacity for soft plastics in NSW and Australia.

The plastics recycling and reprocessing facility site is appropriately located in a general industrial zone. The location of the proposal within the SHIP recognises the region's competitive advantages regarding proximity and access to large Australian populations and waste feedstock.

Consultation with Wingecaribee Shire Council has continued in relation to water and wastewater services, changes to the road access and road and intersection design requirements. A copy of the social impact assessment was also provided to Council.

Consultation with the local community has also continued, with five community information sessions held in the Wingecaribee local government area during the public exhibition of the EIS. A community hotline and project email has also been available for enquiries, with a number of responses being provided to community members during preparation of this RTS report.

Engagement with the local community would continue. The proposal website would continue to be updated to inform the community about the status of the proposal and the assessment process, related to major milestones. Subject to approval being obtained, a Communications and Engagement Strategy (CES) including a complaints management procedure (CMP) would be prepared. This would provide a mechanism for landowners and the general community to engage with the project delivery team throughout the construction phase. Prior to construction, a Community Consultative Committee would be formed.

The proposal has significant economic, environmental and sustainability benefits:

- **Reduced landfill use**. The diversion of significant quantities of plastics waste from landfill.
- **Energy conservation**. Recycling a tonne of plastic saves energy equal to 5.774 kWh, equivalent to the amount of energy consumed by two people for a year.
- **Reduced greenhouse gas emissions**. Every tonne of mixed plastics that can be recycled is estimated to lead to a net avoidance of 320 kilograms of CO_2 equivalent greenhouse gas emissions, 1.2 kilograms of non-methane volatile organic compounds (ie. smog) and 26 kilolitres of water.
- **Circular economy**. The proposal would not only recycle mixed plastics, but it would also reprocess the plastics into advanced products, which is consistent with a move towards a circular economy.
- **Restoration of riparian zones**. A five fold increase in native vegetation coverage and improved water quality through bio-retention basins.
- **Investment and Job creation**. The proposal represents a capital investment of $88 million in the Wingecarribee local government area and provides a significant employment contribution to the local economy with up to 200 jobs during construction and 140 jobs during operation. This provides people living in the Southern Highlands with the chance to work locally and spend less time commuting and more time with their families. Employment for the proposal will be informed by a local procurement strategy and social procurement plan which will be prepared in consultation with Wingecarribee Shire Council and other key stakeholders to outline strategies to give preference to local and regional residents and businesses.
- **Driving innovation**: The proposal includes advanced automated sorting and processing technologies but also includes a products manufacturing lab to conduct recycling research and product development to further drive innovation in plastics recycling.

– **Educational opportunities.** Facilities to enable educational activities for school groups and other interested parties to be carried out (and learn about plastic waste, plastic recycling and turning wastes into valuable resources).

The proposal is also consistent with the relevant objects of the NSW *Environmental Planning and Assessment Act 1979* which include:

> *"(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,*
>
> *(c) to promote the orderly and economic use and development of land,*
>
> *(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats*
>
> *(g) to promote good design and amenity of the built environment,*
>
> *(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,*
>
> *(j) to provide increased opportunity for community participation in environmental planning and assessment."*

Consequently, the proposal is considered to be in the public interest and is recommended for approval.

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Appendices

1. Introduction

1.1 Introduction

Plasrefine Recycling Pty Ltd (Plasrefine Recycling) is seeking approval under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) to construct and operate a plastics recycling and reprocessing facility in Moss Vale ('the proposal').

The proposal is defined as the construction and operation of a plastics recycling and reprocessing facility with capacity to receive up to 120,000 tonnes per year of mixed plastics, and includes:

- Two main buildings for waste receival, recycling and reprocessing and finished product storage
- Ancillary infrastructure including a wastewater treatment plant, an office building, workshop, staff and visitor parking, truck parking, internal roadways, weighbridges, water management, landscaping and visual screening, fencing and utility connection.

The proposal also includes construction of a new north-south public access road comprising a portion of the future Enterprise Zone Road (currently a gravel road), a north south road (currently a Council road reserve), and a portion of Braddon Road (also currently a Council road reserve).

An extensive community and stakeholder engagement program was implemented during preparation of the Environment Impact Statement (EIS) including proactive engagement with the community and stakeholders. As a result, the proposal benefitted from the input of local knowledge, insight, experience, goals and priorities, to identify issues, potential environmental management strategies and opportunities to improve outcomes for the proposal, which were presented in the EIS.

Consultation with the local community has continued, with five community information sessions held in the Wingecaribee local government area during the public exhibition of the EIS. A community hotline and project email has also been available for enquiries with a number of responses being provided to community members during preparation of this RTS report.

Consultation with Wingecaribee Shire Council has also continued in relation to water and wastewater services, changes to the road access and road and intersection design requirements. A copy of the social impact assessment was also provided to Council.

1.2 The proposal

1.2.1 Proposal location

The proposal would be located on the northern parcel of land in Lot 11 DP 1084421, known as 74-76 Beaconsfield Road, Moss Vale, within the Wingecarribee Local Government Area (LGA).

The preferred access is now via new north-south public access road which would comprise a portion of the future Enterprise Zone Road (currently a public gravel road joining the western end of Collins Road), a north south road (a Council road reserve), and a portion of Braddon Road (also a Council road reserve).

All proposal lots are within the Moss Vale Enterprise Corridor (MVEC), a significant area of land (greater than 1,000 hectares) between Moss Vale and New Berrima, set aside for industrial and employment generating development under the Wingecarribee Shire Local Environmental Plan 2010 (Wingecarribee LEP).

Surrounding land uses are a mixture of vacant land, industrial, warehouse, manufacturing, waste management and rural residential.

1.2.2 Overview of the proposal

1.2.2.1 Description

The preferred access road has been changed. The expected water consumption for the proposal has been reduced and as a result there have been minor revisions to the stormwater management configuration including measures to minimise impacts on the shared dam.

The landscape plan has also been updated to reflect the revised stormwater management configuration. Further refinement of the architectural design and reduction in height has reduced the visual impacts associated with the facility. The proposal has otherwise not changed since the EIS was published.

These, along with other minor design refinements, are discussed in Section 4.

1.2.2.2 Impacts

The potential impacts of the proposal in a number of key areas are summarised in Table 1.1.

Table 1.1 Summary of key potential impacts during construction and operation

Issue	Key potential environmental impacts
Construction	
Waste	Generation of waste during construction, which would require appropriate storage, segregation, handling and reuse, recycling or disposal
Soils and water	Erosion and generation of sediment due to a relatively large area of disturbance during construction Impacts on downstream water quality if management measures and not implemented, monitored and maintained
Traffic and transport	Temporary increases in heavy vehicle and light vehicle traffic movements on the local road network
Noise and vibration	Potential for construction noise to temporarily exceed the noise management level during worst-case construction conditions (when construction works are at the closest distance between source and receiver) at some of the closest receivers to the proposal site
Air quality	Low levels of dust generation during earthworks, access road and main facility construction activities and well as track-out across all stages of construction
Aboriginal cultural heritage	Harm to three isolated finds (MVRec IF1, BR IF1, and BR IF2) assessed as having high cultural values but low scientific values and four sites (Douglas Rd OS-1, Beaconsfield Rd OS-2, Beaconsfield Rd IF-2, and Beaconsfield Rd IF-3) assessed as no longer having cultural heritage value
Landscape and visual	Temporary landscape character changes and visual impacts due to visibility of construction compound and activities, and increase in construction traffic
Biodiversity	Removal of 0.28 ha of farm dams and associated vegetation that have been assigned to PCT 1256 - Tableland swamp meadow on impeded drainage sites of the western Sydney Basin Bioregion and South Eastern Highlands Bioregion Removal of 0.04 ha of planted trees that have been assigned to PCT 944 Mountain Grey Gum - Narrow-leaved Peppermint grassy woodland on shales of the Southern Highlands, southern Sydney Basin Bioregion Removal of 0.28 ha of potential habitat for the Southern Myotis. Removal of nine planted specimens of Eucalyptus macarthurii, listed as endangered under the BC Act and EPBC Act. Minimal potential indirect impacts to adjoining vegetation associated with edge effects, light spill, noise and introduction of weeds and pathogens.
Operation	
Waste	Generation of some waste during operation from both the recycling and reprocessing activities as well as from staff/offices, which would require appropriate storage, segregation, handling and reuse, recycling or disposal

Issue	Key potential environmental impacts
Soils and water	The realignment of the existing eastern watercourse and changes to surface water flows as a result of the proposal infrastructure Riparian vegetation restoration of both the realigned eastern watercourse and existing western watercourse Demand for potable water and wastewater (sewage) capacity
Traffic and transport	Increases in heavy vehicle and light vehicle traffic movements on the local road network in the order of 50 heavy vehicles a day and 140 light vehicles a day
Noise	Noise from plant and equipment and recycling/reprocessing activities within the buildings that would require appropriate acoustic considerations in the building design. All predicted noise levels at the sensitive receivers are at or below the noise trigger levels.
Air quality	Low levels of particulates and volatile organic compound emissions from granulation and injection and extrusion moulding Low level of particulates emissions from milling or profiling activities in Building 2
Hazards and fire risks	Risks from operational hazards such as vehicle interaction, natural hazards, fire, entanglement, falls from heights, flying/falling objects, manual handling, slips, trips, falls, collisions, contact with chemicals Fire risks from potentially combustible internal waste stockpiles
Landscape and visual	Moderately significant potential impact to the landscape character zone LCZ1 (pastoral open undulating land) as a result of the high sensitivity and susceptibility to change (albeit low magnitude of change) of the zone High potential visual impact to viewpoints 1 (view from Beaconsfield Road looking north-west), and 2 (view from 250 metres north of Bulwer Road, looking north-east towards the plastics recycling and reprocessing facility site) as a result of high sensitivity to change and substantial and obvious changes to the existing view Moderate potential visual impact to viewpoint 5 (view from Collins Road, looking south) as a result of substantial and obvious changes (albeit low sensitivity to change) to the existing view
Biodiversity	Beneficial impacts as a result of the riparian vegetation management plan and the revegetation associated with the realignment of the western watercourse Potential for impacts to surrounding vegetation and habitat values through: – generation of additional light and noise – erosion and sedimentation as a result of runoff from hard stand areas – introduction of weed propagules by vehicle and/or residents/businesses – fauna mortality as a result of collision with vehicles – increased risk of fire – litter
Greenhouse gas	Greenhouse gas emissions of about 91,000 tCO_2-e. While negligible compared to the annual emissions in NSW and Australia, it would potentially be above the reporting threshold of the National Greenhouse and Energy Reporting scheme

1.3 Need for the proposal

Plastic plays an important role in our society. It is cheap, light and durable and is an essential component to so many of the items we rely on today – from life-saving medical supplies to consumer goods like clothing and electronics. While plastic is versatile, it is also increasingly threatening our natural environment through littering and nearly every piece of plastic produced also emits greenhouse gases at every stage of its lifecycle, contributing to carbon emissions and climate change.

Approximately 760,000 tonnes of plastic entered the waste management system in NSW in 2018-19. Of that, only 19% was recycled into new plastic products or recovered as refuse derived fuel. Over 424,000 tonnes of potentially recyclable plastics was disposed in NSW landfills in 2018-19.

The NSW Government's 'NSW Circular Economy Policy Statement: Too Good to Waste' (NSW EPA, 2019) was released in February 2019. This policy provided a basis for NSW's updated waste strategy – the 'NSW Waste and Sustainable Materials Strategy 2041' (the NSW Waste Strategy) (DPIE, 2021a). The NSW Waste Strategy recognises that NSW is committed to making the transition to a circular economy over the next 20 years. It also sets targets to:

- increase the average recovery rate from all waste streams to 80 per cent by 2030
- triple the plastics recycling rate by 2030

Further to this, in March 2020, the former Council of Australian Governments (COAG) announced a ban on the export of waste plastic, paper, glass and tyres. From July 2022 exporters cannot export single resin/polymer plastics that have not been re-processed. The COAG response strategy detailed the volumes of material affected by the export ban based on 2018-19 export data. It showed that a total of 81,000 tonnes of plastic, including 69,000 tonnes of mixed plastics, was exported from NSW and would be affected by the export bans.

By mid-2024 when the full waste export ban comes into effect, Australia must recycle around 645,000 additional tonnes of waste plastic, paper, glass and tyres each year. The NSW Government's 'NSW Waste and Sustainable Materials Strategy: A guide to future infrastructure needs' (the Infrastructure Needs Report) (DPIE, 2021c) identifies that by 2030 an additional 192,000 tonnes of plastics recycling / processing capacity is required in order to address the export ban and meet the 'NSW Plastics Action Plan' (DPIE, 2021b) target of tripling the plastics recycling rate. It also identifies that by 2040 a further 112,000 tonnes per year of additional new capacity for mixed plastics recycling is required (assuming all infrastructure needs to meet the 2030 capacity gap as are brought online).

The proposal would have the capacity to recycle and reprocess up to 120,000 tonnes of plastic waste per year including mixed plastics, mixed soft plastics and used PVC pipes. This would provide just part of the required capacity needed in NSW. The proposal would use innovative separation, sorting and cleaning technologies to keep waste plastics out of landfill. The recent confirmation of more than 5,000 tonnes of stockpiled baled soft plastics and subsequent collapse of the recycler REDcycle has highlighted the limited processing capacity for soft plastics in NSW and Australia.

The proposal would also provide local plastic manufacturing capacity consistent with capacity requirements identified in the Infrastructure Needs Report (DPIE, 2021b). It would create a new industry and jobs in Moss Vale through innovation and provide investment to produce circular goods in the form of reprocessed advanced plastics products.

The proposal is consistent with key national and NSW waste management plans and policies, and other relevant plans and strategies. In summary:

- The proposal is consistent with the Australian Government (2018) 'National Waste Policy: Less Waste, More Resources' and Australian Government (2019) 'National Waste Policy Action Plan' as it would transform plastic waste into high value materials, create jobs and contribute towards meeting Australia's resource recovery targets, which includes achieving an 80% average recovery rate from all waste streams by 2030.
- The proposal is consistent with the Australian Government (2021) 'National Plastics Plan 2021' as it would increase Australia's recycling capacity and contribute towards the packaging and plastics targets.
- The proposal is consistent with the NSW Waste Strategy (DPIE, 2021a) and Infrastructure Needs Report (DPIE, 2021b), as it would contribute necessary infrastructure to improve NSW's capacity to increase resource recovery and lift both the plastics recycling rate and the overall average recovery rate. It would also increase plastics manufacturing capacity.
- The proposal is consistent with the 'NSW Circular Economy Policy Statement: Too Good to Waste' (NSW EPA, 2019) as it would reduce demand for new landfills, provide innovative technologies that increases resource efficiency and create jobs in the resource recovery sector.

The key benefits of the proposal are illustrated in the following graphic.

Benefits of the proposal

HIGH TECHNOLOGY DEVELOPMENT

Advanced manufacturing

- Consistent with the advanced manufacturing uses to be considered in the Southern Highlands Innovation Park (SHIP)
- Includes advanced automated sorting and processing technologies and a products manufacturing lab to conduct recycling research and product development to further drive innovation in plastics recycling

EMPLOYMENT AND LOCAL ECONOMY

Jobs during construction and operations

- 200 jobs during construction and 140 jobs once operating at full scale
- A wide range of employment opportunities
- Multiplier effects for local economy

ACCESSIBILITY

New access road

- Enables further development of the SHIP
- Provision for future walking path and cycle way

IMPROVED SUSTAINABILITY

Recycling of plastic waste

- Diverts significant quantities of plastics waste from landfill, which in turn would reduce demand for new landfills
- Every tonne of mixed plastics that can be recycled is estimated to lead to a net avoidance of 320 kilograms of CO_2 equivalent greenhouse gas emissions, 1.2 kilograms of non-methane volatile organic compounds (ie. Smog) and 26 kilolitres of water
- The proposal would not only recycle mixed plastics, but would also reprocess the plastics into advanced products, which is consistent with a move towards a circular economy

ENVIRONMENTAL BENEFITS

Stormwater management

- Restoration of riparian zones
- Reconstruction of existing stormwater dam to improve water quality

EDUCATIONAL OPPORTUNITY

Liaison with schools and community

- Facilities to enable educational activities for school groups and other interested parties to be carried out (and learn about plastic waste, plastic recycling and turning wastes into valuable resources)

1.4 Purpose of this report

This response to submissions (RTS) report was developed in accordance with Appendix C to the 'State Significant Development Guidelines – Preparing a Submissions Report' (DPIE, 2021) and provides:

- A summary and analysis of the public submissions received during exhibition of the EIS
- A summary of requests for information received from the NSW Department of Planning and Environment (DPE)
- A summary of the actions taken during and after exhibition
- Responses to the submissions received including:
  - A summary of actions undertaken during and after EIS exhibition including design refinement, further environmental assessment and investigations, development of additional reports and plans
  - Responses to the public submissions received, requests for information and engagement activities.

Further supporting information, a full set of updated mitigation measures and additional assessment in relation to air quality and water quality are provided in the appendices to this report.

Detailed information on the proposal background, location, statutory context, strategic need and alternatives is presented in Chapters 1 to 5 of the EIS. Assessment of the potential impacts of the proposal during construction and operation are outlined in EIS Chapters 8 to 18.

1.5 Previous steps in the assessment

The proposal is permissible with development consent under the provisions of the Wingecarribee LEP and is therefore subject to the approval and assessment requirements of Part 4 of the EP&A Act. The proposal is declared State significant development in accordance with State Environmental Planning Policy (Planning Systems) 2021 (the Planning Systems SEPP).

An EIS was prepared to support Plasrefine Recycling's application for approval of the proposal in accordance with the requirements of Part 4 of the EP&A Act. The EIS addressed the environmental assessment requirements of the Secretary of the Department of Planning and Environment (DPE) ('the SEARs'), dated October 2020.

The EIS was placed on exhibition by DPE for a period of 28 days from 23 February to 22 March 2022. During this period, interested stakeholders and community were able to review the EIS and make written submissions for consideration in the assessment of the proposal.

2. Engagement

2.1 Engagement overview

Plasrefine Recycling completed an extensive community and stakeholder engagement and communication program for the proposal during preparation of the EIS and during the EIS exhibition period. Outreach included proactive engagement with the community and adjoining landholders, Wingecarribee Shire Council, the local member of state parliament, State and local government agencies, Illawarra Local Aboriginal Land Council, utility service providers, community interest groups and relevant industry stakeholders.

The proposal has benefitted from the input of local knowledge, insight, experience, and community priorities. These have helped to identify issues, determine potential environmental management strategies, design refinements and identify opportunities to improve proposal outcomes. These changes are presented in the EIS and this report.

Since the proposal announcement in October 2020, Plasrefine Recycling and the GHD project team have engaged with over 250 community members who live and work within proximity to the proposal site.

A toll-free hotline (1800 810 680) and email (community.input@ghd.com) were set up at the onset of the proposal to enable accessible, two-way information exchange opportunities for everyone, including those who could not access project information online. The proposal email and toll-free number was listed on Plasrefine Recycling's website (www.plasrefine.com), all engagement collateral and in the project team's email signatures. It is still accessible today and will continue to be throughout future stages of the proposal.

Five online and seven in-person community engagement sessions were facilitated during development of the EIS and the EIS exhibition period. These sessions provided the community and stakeholders with an opportunity to connect directly with the project team, learn more about the proposal and share their opinions and feedback. Detailed written responses were provided for all questions received during these sessions. These responses were emailed to those on the project mailing list and uploaded to the Plasrefine Recycling webpage.

Ms Nancy Zheng, the Director of Plasrefine Recycling, was also in attendance at the sessions held during the EIS exhibition period to respond to any questions. The project team has listened to community concerns and has incorporated feedback and suggestions into the design and proposed construction and operation, where possible. Further details regarding the engagement undertaken during exhibition of the EIS can be seen in Section 2.2.

Figure 2.1 provides an overview of the community and stakeholder engagement approaches. Section 3.2 of EIS Appendix G: Engagement Outcomes Report describes the engagement undertaken up until exhibition of the EIS, as well as the outcomes of this process.

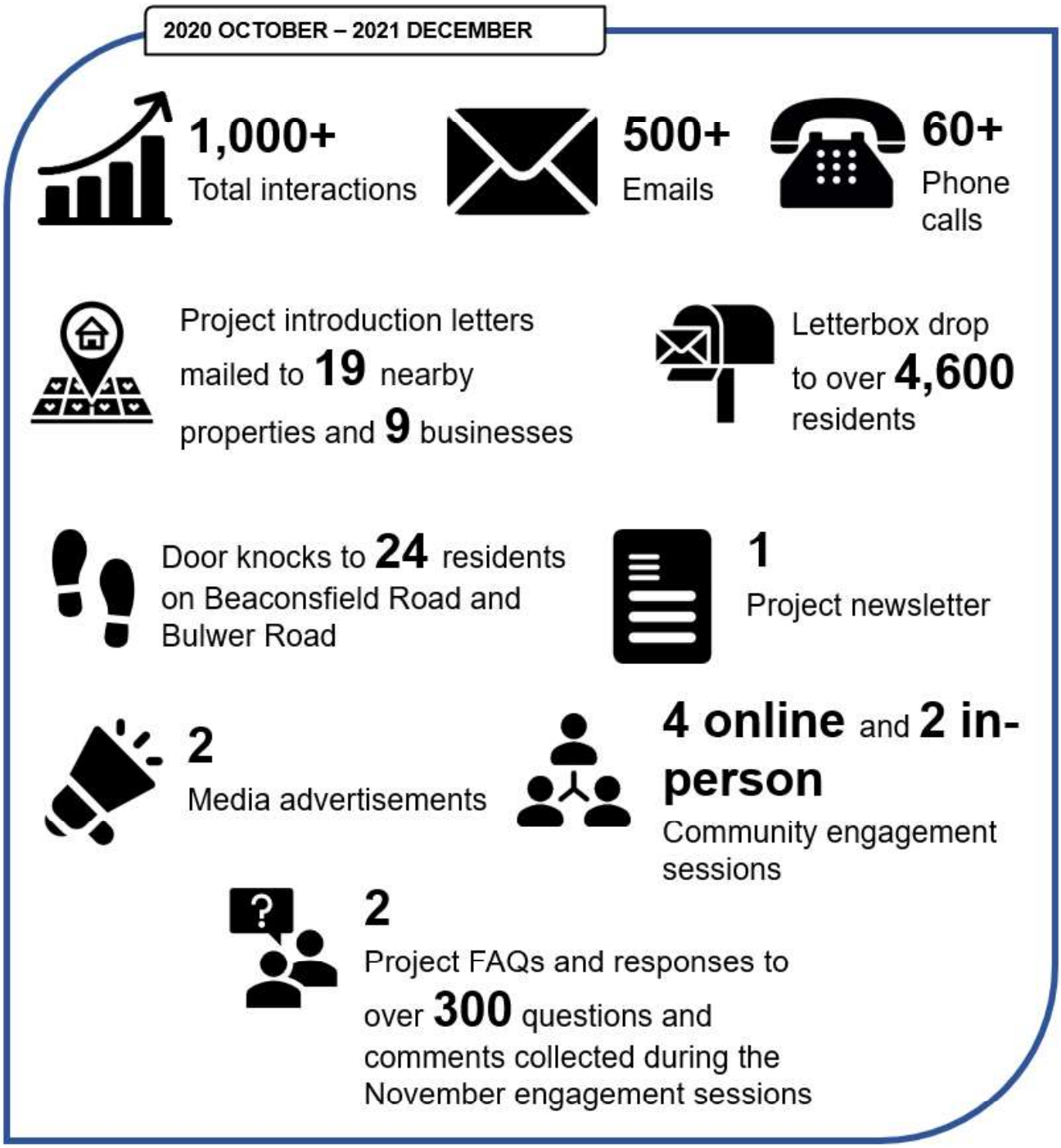


Figure 2.1 Summary of engagement undertaken during preparation of the EIS

2.2 Engagement during EIS exhibition

The EIS was placed on public exhibition by DPE for a period of 28 days from 23 February to 22 March 2022. During the exhibition period, government agencies, key stakeholders (including interest groups and organisations), and the community were advised how to make written submissions. The EIS was available to the public on DPE's website. Plasrefine Recycling also made four hard copies available at the Moss Vale Public Library and Wingecarribee Shire Council – Civic Centre, 68 Elizabeth Street, Moss Vale.

Table 2.1 summarises the engagement activities that Plasrefine Recycling and the project team completed during the EIS exhibition period. The additional engagement was undertaken to provide community members with further opportunities to discuss the proposal with the project team and proponent and to ensure that they had accurate information should they wish to make a submission. A printed copy of the EIS, the appendices and technical reports was also on the display during these sessions. Photos from these sessions can be seen below, and in Appendix B.

The following activities were not described in the EIS, as the EIS had been finalised and printed prior to exhibition. Appendix B contains the meeting notes for each of these community engagement sessions.

Table 2.1 Engagement undertaken during the EIS exhibition period

Activity	Timing	Number of attendees	Details
Online community engagement session	8 March 2022 5:30 pm – 7:30 pm	22	Plasrefine Recycling attended and hosted six community engagement sessions in March 2022 to provide community and stakeholders an opportunity for an informal two-way information exchange. The community engagement sessions were promoted via the project email to those who had registered to the project mailing list, and on the Plasrefine Recycling webpage. They were also advertised informally via community Facebook groups. The facilitated, in-person sessions included a round-table discussion with the project team presenting specific slides about updates to the project and answering questions from attendees. The presentation included information on how aspects of the design, construction and operation of the proposal have changed following feedback from the community and stakeholders to-date. It also included findings from EIS specialist studies and information on how to make a submission. Detailed minutes were provided to those who registered their interest in attending following the sessions (including those who were unable to attend on the day) and included a copy of the presentation and links to documentation referenced in the presentation (Appendix B).
In-person community engagement sessions facilitated at Exeter Village Hall (10 Exeter Road, Exeter)	9 March 2022 2 pm – 4 pm	11	
	9 March 2022 5:30 pm – 7:30 pm	3	
	10 March 2022 9 am – 11 am	2	
	10 March 2022 1 pm – 3 pm	5	
	10 March 2022 4 pm – 6 pm	4	
Newsletter	March 2022	N/A	Community members who registered for project updates received a three page newsletter via the project email address (Appendix C). The newsletter was also hosted on the Plasrefine Recycling webpage. Hard copies were also available to all community members who attended the in-person sessions. The newsletter included: – project background – project timeline and next steps – changes made to the proposal since the last round of community engagement sessions – details on how to make an online submission – project team contact details to enable community members to provide further feedback and comment, and a link to the Plasrefine Recycling website.

Figure 2.2 GHD Technical Director and Plasrefine Recycling Director engaging with the community

Figure 2.3 Plasrefine Recycling Director engaging with the local community

2.3 Engagement following the EIS exhibition

Following exhibition of the EIS, GHD and Plasrefine Recycling undertook several engagement activities with key stakeholders to maintain a working relationship and ensure they had a high level of awareness of all progress on the proposal. These relationships from an engagement perspective, was managed by staff from the associated technical teams, or the main project team. These stakeholders included:

- Wingecarribee Shire Council
- DPE
- Australian Bioresources
- Garvan Institute of Medical Research.

The focus of the engagement with key stakeholders at this phase of the proposal was largely in relation to:

- Capacity of Council's wastewater treatment plant
- Potential water demand and water supply
- Access to the plastics recycling and reprocessing facility site (including the previously proposed new east-west public access road)
- Strategic land use and planning
- Social impact assessment.

Further details regarding communications which occurred between these stakeholders can be found in Section 4.1.1.

During this period, GHD and Plasrefine Recycling also continued to keep the community up to date on the progress of the proposal. Updates were uploaded to the Plasrefine Recycling website in August, October and December 2022, and a further update in February 2023. A two-page infographic was also uploaded to the website in September 2022 which summarised the proposed process, potential impacts and benefits and the strategic location of the proposal site. A number of community members also reached out to the GHD project team during this period via the project email. Responses to all community emails were provided to these community members in a timely manner.

2.4 Engagement during design, delivery and operation of the project

2.4.1 Aims of the engagement

Subject to the obtaining of approval, communication and engagement would continue with the community during detailed design and construction of the proposal, and during operation, with the aims of ensuring that:

- Landholders, community and stakeholders have a high level of awareness of all processes and advanced notification of activities associated with the proposal
- Accurate and accessible information is made available
- Timely responses are given to issues and concerns raised by the community
- Feedback from the community is encouraged
- Opportunities for further feedback and comment are provided.

A project 1800 number and email address would continue to be available during construction so that the community can ask questions and provide feedback about the proposal at any time.

Upon determination, DPE would determine whether a Community Consultative Committee should be established for the proposal, considering factors such as:

- The scale and nature of the proposal and its potential impacts
- The level of public interest in the proposal
- The proponent's community engagement strategy.

The Community Consultative Committee would continue into the operating phase of the proposal, for up to five years.

2.4.2 Complaints management

A complaints management system would be developed and implemented prior to the commencement of construction. It would be maintained throughout the construction period and ongoing during operation. The complaints management system would include the following:

- A response line for complaints and enquiries
- A postal and email address to which complaints and enquiries may be sent
- Publication of contact details on the Plasrefine Recycling website
- Management of complaints in accordance with Plasrefine Recycling's complaints management procedure.

3. Submissions received

3.1 Respondents

Submissions in response to the EIS were received and accepted by DPE during and until shortly after the public exhibition period ceased.

Submissions were accepted via:

- Electronic submission (online) at **www.planningportal.nsw.gov.au/major-projects**
- Electronic submission (email) to the Contact Planner at DPE
- Post addressed to the Contact Planner at DPE.

A total of 346 submissions were received. Of these, eight were received from NSW Government agencies, one from Wingecarribee Shire Council, nine from other organisations and 328 from members of the public.

The 328 community submissions were made by 315 different individuals or organisations. About 65% of the public submissions were from the suburb of Moss Vale. A breakdown of the level of local, regional and broader community interest in the proposal is shown in Table 3.1.

Table 3.1 Geographical interest in the proposal by number of submissions

Local (<5 km from the proposal site)	236
Regional (5-100 km from the proposal site)	74
Broader (>100 km from the proposal site)	27

A breakdown of submissions by submitter type is provided in Table 3.2 below.

Table 3.2 Submissions breakdown by submitter type

	Total
NSW Government agencies and local council	9
Organisation	9
Public	328
Total	**346**

Of the 346 submissions received, six submissions registered support for the proposal, 326 registered an objection, and 14 submissions registered as a comment. A small number of objectors (8) provided more than one submission each.

3.2 Approach to analysis

For the purpose of the analysis, each submission was reviewed and the key issues were summarised and separated into categories and sub-categories. The main groupings for issues were identified as:

- The proposal – the proposal site, proposal area, physical layout and design, key uses and activities and timing
- Procedural matters – compliance with relevant statutory requirements and level or quality of engagement
- Economic, environmental and social impacts
- Justification and evaluation of the proposal as a whole – consistency of the proposal with Government plans, policies or guidelines
- Issues beyond the scope of the proposal or not relevant to the proposal.

Each key issue was further broken down into subcategories.

A breakdown of the key issues raised by submitters is shown in Figure 3.1. The figure shows that the majority of submissions related to 'economic, environmental and social impacts' grouping followed by 'the proposal and 'procedural matters'.

As shown in Figure 3.2, the three main issues associated with economic, environmental and social impacts were identified as traffic, transport and access (25%), water quality, supply and demand (19%) and socio economic impacts (17%).

Plasrefine Recycling has considered the issues raised by all stakeholders and is committed to minimising and managing impacts.

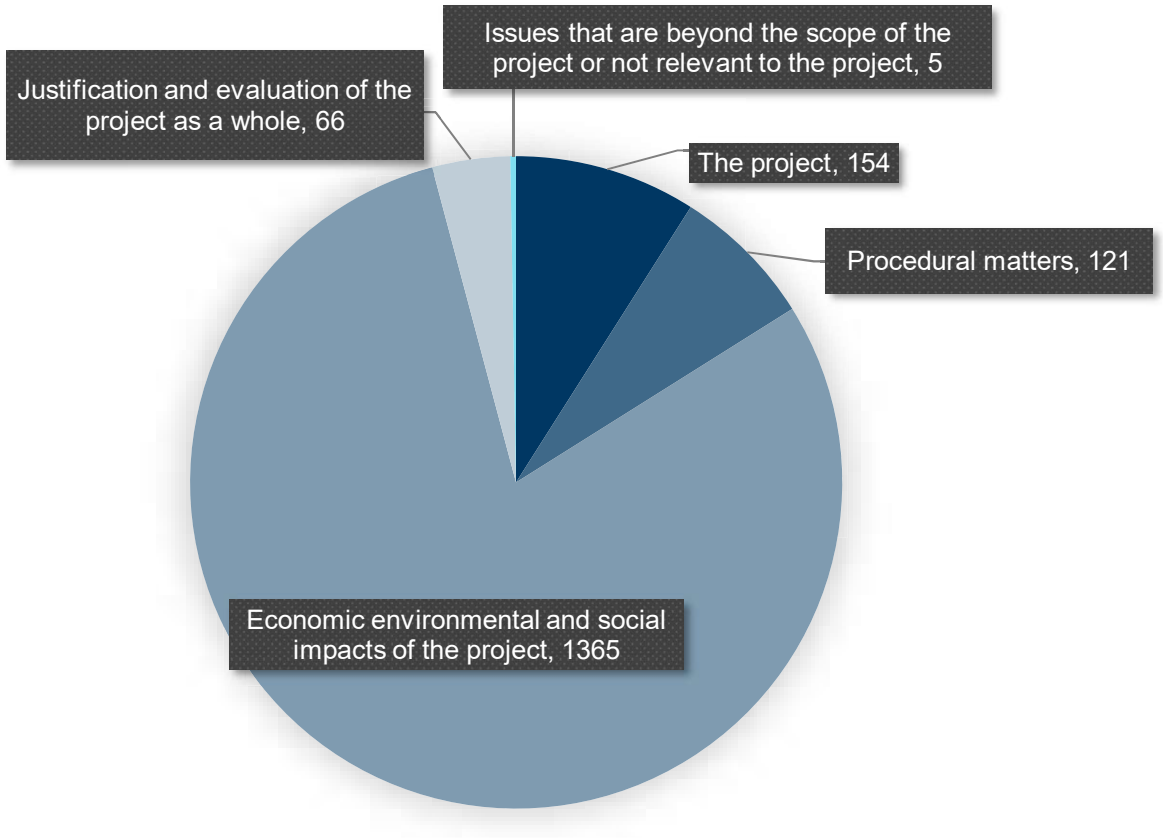


Figure 3.1 Summary of key issue types

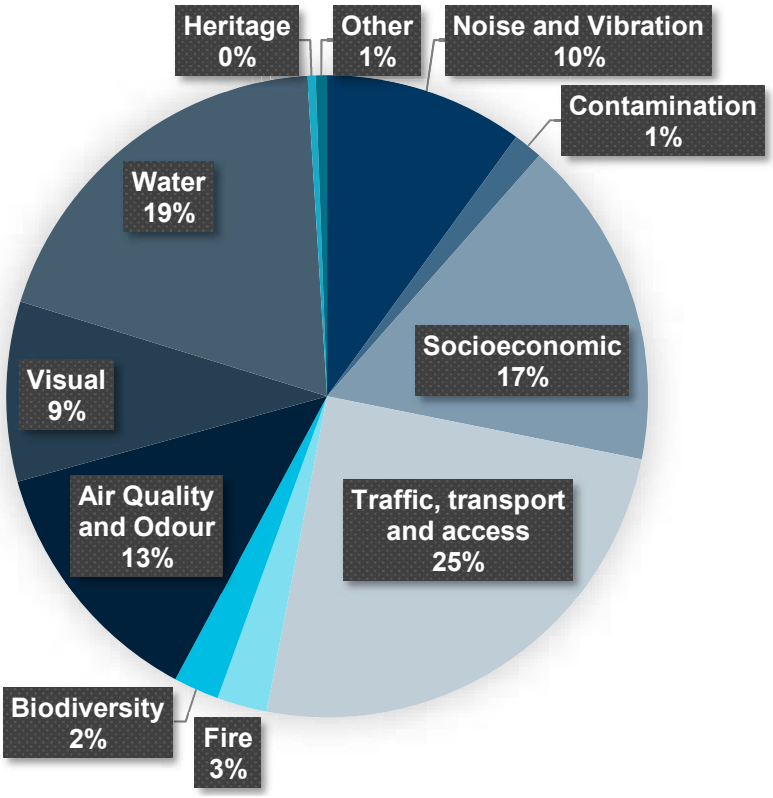


Figure 3.2 Breakdown of economic, environmental, and social impacts

3.3 Overview of submissions and issues raised

3.3.1 NSW Government agencies

Eight NSW Government agencies provided submissions. These are summarised below, with full responses provided in Section 4.4. Plasrefine Recycling would continue to engage with agencies throughout the development of the proposal.

Department of Planning and Environment

DPE requested further information related to the proposed new access road, water, traffic, noise, air quality, site plans, water quality, waste, social and visual impacts. DPE also requested land owners consent for the impacted allotments, further justification as to why the chosen site was selected and details of modifications proposed to be undertaken to the shared dam as part of the proposal.

A response to the comments raised by DPE is provided in Section 5.1 of this report.

Department of Planning and Environment Water and the Natural Resources Access Regulator

The DPE Water and the Natural Resources Access Regulator (NRAR) reviewed the EIS and requested additional detail related to the proposed water storage dams and how they would meet the requirements of the water regulatory framework. DPE Water and NRAR also recommended that a Water Access Licence be obtained in accordance with the *Water Management Act 2000* should groundwater be intercepted during construction.

A response to the comments raised by DPE Water NRAR is provided in Section 5.2 of this report.

NSW Environment Protection Authority

The NSW Environment Protection Authority (EPA) reviewed the EIS and provided recommendations related to noise and vibration, waste, air quality, water quality, EPA licensing, diesel generator and contaminated land.

A response to the comments raised by the NSW EPA is provided in Section 5.3 of this report.

WaterNSW

WaterNSW reviewed the EIS with a particular focus on *Technical Report 10 – Soils and Water* and *Technical Report 11 – Water and Wastewater Modelling* and sought additional information related to wastewater management and associated modelling, stormwater management and water quality assessment. Specific questions were raised about alternative options for wastewater management other than that proposed in the EIS and location of storage of onsite wastewater, should overnight storage be required.

WaterNSW also requested further information and preparation of the additional documentation in consultation with WaterNSW, including a detailed stormwater drainage plan for long-term sustainable stormwater management.

A response to the comments raised by WaterNSW is provided in Section 5.4 of this report.

Fire and Rescue NSW

Fire and Rescue NSW provided a number of recommendations for the proposal related to the development of a comprehensive Fire Safety Study and an Emergency Response Procedure in accordance with Hazardous Industry Planning Advisory Paper No.1.

A response to the comments raised by Fire and Rescue NSW is provided in Section 5.5 of this report.

Heritage NSW

Heritage NSW noted that it is satisfied that the EIS and *Technical Report 8 - Aboriginal Cultural Heritage Assessment Report* (ACHAR) adequately identified and assessed the impact of the proposal on any Aboriginal cultural heritage values within proximity to the proposal site, in accordance with the SEARs and additional advice provided in October 2020 in relation to archaeological investigation and community consultation.

Heritage NSW provided recommendations related to development of an Aboriginal cultural heritage management plan and protection of Aboriginal sites during construction and operation of the proposal.

A response to the comments raised by Heritage NSW is provided in Section 5.6 of this report.

Biodiversity Conservation Division

The Biodiversity Conservation Division (BCD) reviewed the EIS and provided comments related to biodiversity and flooding. More specifically, comments were raised in relation to flood investigations and principles of the Floodplain Development Manual, as well as with the modelling methodology adopted.

BCD requested a more comprehensive flood impact risk assessment to be prepared and added recommendations for inclusion in the Conditions of Approval associated with impacts to vegetation.

A response to the comments raised by BCD is provided in Section 5.7 of this report.

Transport for NSW

Transport for NSW reviewed the EIS with a particular focus on *Technical Report 6 – Traffic and Transport*, while focusing on the impact to the state road network. Transport for NSW noted that the infrastructure currently provided at the grade crossing north of the proposal site is limited and therefore notes that there is potential for this crossing to be activated. Transport for NSW recommended that an Australian Level Crossing Assessment Model is undertaken at this location to identify potential risks and any required upgrades.

A response to the comments raised by Transport for NSW is provided in Section 5.8 of this report.

3.3.2 Wingecarribee Shire Council

Plasrefine Recycling has considered the matters raised by Wingecarribee Shire Council and is committed to minimising risks and identified impacts throughout future project stages. Plasrefine Recycling would continue to engage with Wingecarribee Shire Council throughout development of the proposal.

In its submission, Wingecarribee Shire Council noted its key areas of concern for the proposal to address through further design development including site suitability, traffic and road infrastructure, water supply, wastewater, air quality, noise, waste storage, landscape and amenity, and social impact. Wingecarribee Shire Council also appended all community correspondence it has received related to the proposal to-date.

A response to the comments raised by Wingecarribee Shire Council is provided in Section 5.9 of this report.

3.3.3 Community

A total of 337 community submissions were received from 315 different individuals or organisations. The majority of issues raised related to the economic, environmental and social impacts of the proposal (see Figure 3.1). Of the submissions received from the community, six submitters expressed support for the proposal, 326 submitters objected to the proposal, and five submitters provided comments on the proposal. Appendix A includes a register of all submissions received.

Each submission was examined in detail to identify and understand the issues raised. The content of each community submission was reviewed and categorises based on key issues which broadly aligned with the environmental impact statement chapters (for example traffic, transport and access) and the sub-issues under each of these issue headings (for example use of Beaconsfield Road and capacity of the existing road network).

The issues raised in each submission were extracted and collated and have been presented as a summary of the issues raised. This means that while the exact wording of a particular submission may not be presented in the summary of the issue, the intent of each individual issue raised has been addressed and corresponding responses to the issues have been provided. Where similar issues have been raised in different submissions, only one response has been provided.

The community issues raised, and the associated response are provided in Section 6 of this report.

4. Updates to the proposal since EIS exhibition

4.1 Change to the preferred access road

4.1.1 Background

Prior to selecting the preferred access road for the proposal, three options were considered and assessed (as documented in Section 4.3 of the EIS):

- Option 1 (via Beaconsfield Road)
- Option 2 (via a new east-west road connecting with Lackey Road)
- Option 3 (via a new north-south road connecting with Douglas Road).

The three road access options were discussed with Wingecarribee Shire Council at a meeting on 18 June 2021, at which analysis of each of the three options from a traffic, environment, safety and strategic perspective was presented. At the same meeting, Council advised that in the event a road access option would require private land, that it could compulsorily acquire land where an agreement has not been achieved through negotiation and the need for the road access is identified in Wingecarribee Shire Council's Section 94 Developer Contributions Plan.

Following this meeting, in August 2021, Council advised that the proposed *"access through Braddon Road is in accordance with the Council's adopted traffic network for the Enterprise Corridor/SHIP and Council's preference is that access is in accordance with the DCP/s94 Plan for that area"*.

Option 2 was therefore selected as the preferred access for the proposal in the EIS. This previously proposed new east-west public access road was to extend from Lot 11 DP 1084421 to Lackey Road via the currently unformed Braddon Road (paper road), traversing Lot 10 DP 1084421.

The land required for the section of road from the paper road to Lackey Road is privately owned. Plasrefine Recycling entered into negotiations with the private landowner for purchase of the land. Final agreement on the sale of land has not been able to be reached at this stage. The landowner has also advised that it is not currently in a position to provide land owners consent for the application.

Concurrent to negotiations continuing with the private landowner, Plasrefine Recycling provided a draft Voluntary Planning Agreement (VPA) to Council on 20 June 2022 in relation to the proposed new access road for its consideration. As well as including details of the proposed works, developer contributions, and dedication of the access road land to Council, the draft VPA provided included provisions for Council to consider acquiring the land for the access road for the purpose of a public road, should Plasrefine Recycling be unable to reach a negotiated agreement with the existing landowner for a private sale. As of 28 February 2023, no response or comment on the draft VPA had been received from Council.

As agreement was unable to be reached with the landowner to either purchase the land or to provide landowners consent, and nor was Council willing to confirm that it would acquire the land required for Option 2, Plasrefine Recycling has resolved to change the preferred access road for the proposal to one of the two other options to enable the development application to progress.

Option 1 would involve the use of Beaconsfield Road for both construction and operation. In its submission on the EIS, Council noted that it does not support any access via Beaconsfield Road at any stage of the development. Community submissions received on the EIS also raised concern about the use of Beaconsfield Road.

For these reasons, Option 3 is now the preferred access road for the proposal.

Option 3 would involve access to and from the facility via a new constructed north-south road, connecting with an existing public gravel road off Collins Road, which is part of Council's proposed future Enterprise Zone Road.

To remove the need for heavy vehicles to carry out a hook turn across the level rail crossing (and the potential safety risk), it is proposed that all vehicles accessing and departing the plastics recycling and reprocessing facility site would do so via Collins Road (and not use Douglas Road). Vehicles would therefore turn right onto the future Enterprise Zone Road from the proposed new north-south public access road or turn left from the new Enterprise Zone Road into the new north-south public access road. This would see heavy vehicle traffic using: Hume Highway (M31), Berrima Road, Innes Road (Garrett Street), Lackey Road, Collins Road and then the new north-south public access road. These roads are existing heavy vehicle approved roads.

Further detail on the refined road access Option 3 is provided in Section 4.1.2.

4.1.2 Proposed new north-south public access road

Overview

Figure 4.1 defines the proposed new north-south public access road to access the plastics recycling and reprocessing facility site. It includes the following land:

- Part of the future Enterprise Zone Road (currently a public gravel road joining the western end of Collins Road)
- Unformed paper road running north-south (unnamed) between Braddon Road and Collins Road
- Unformed paper road (Braddon Road) running east-west that bisects Lot 11 DP 1084421

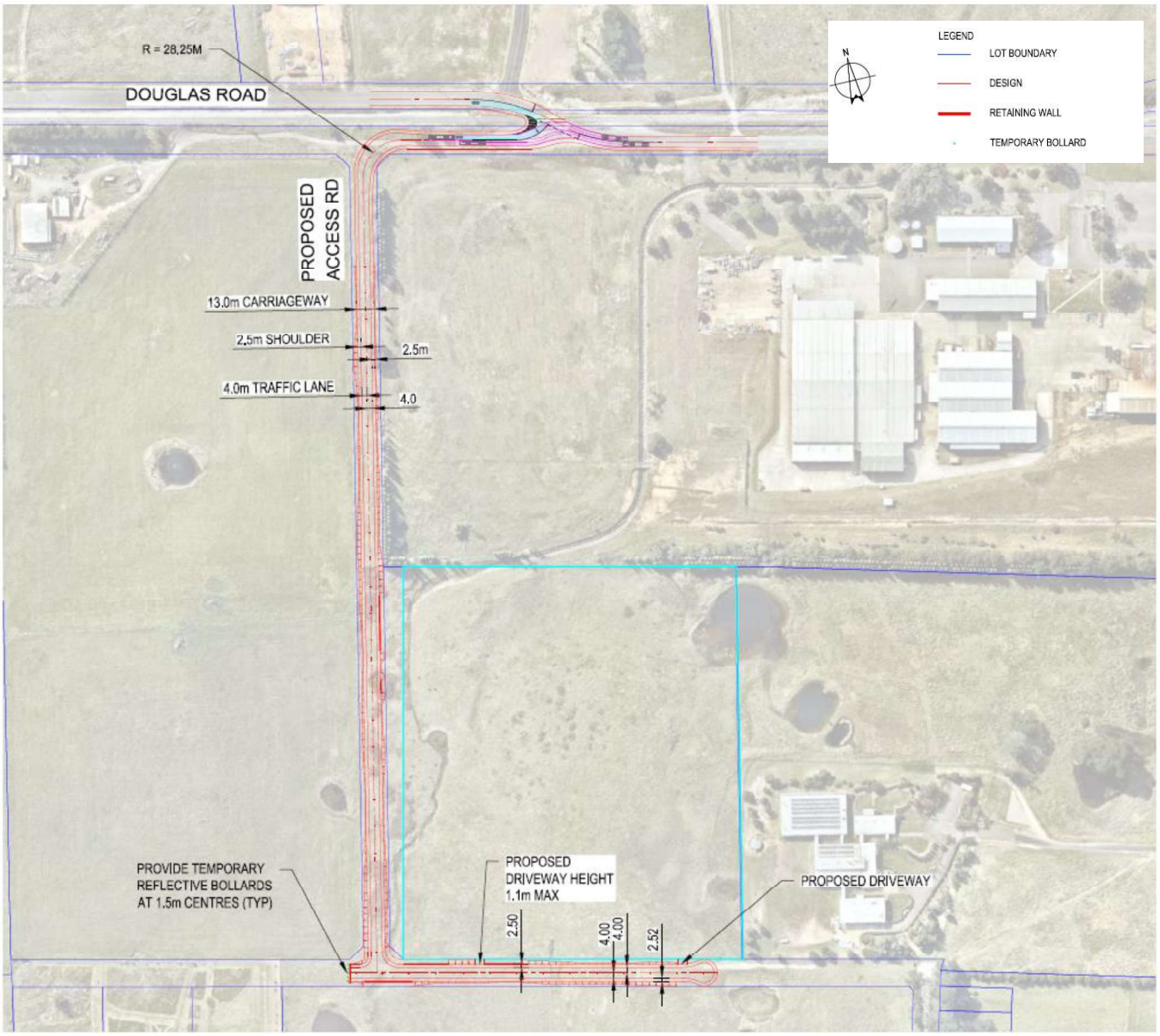


Figure 4.1 Proposed new north-south public access road alignment

This new north-south public access road would be a two-way road with four metre wide lanes (and 2.5 metre wide shoulders), and have a total length of about 1,030 metres. It would include construction of a portion (about 163 metres) of the future Enterprise Zone Road (currently a gravel road), a north-south road (currently a Council road reserve), and a portion (about 245 metres) of Braddon Road (also currently a Council road reserve). The proposed intersection treatment for Douglas Road/Collins Road is shown in Figure 4.2.

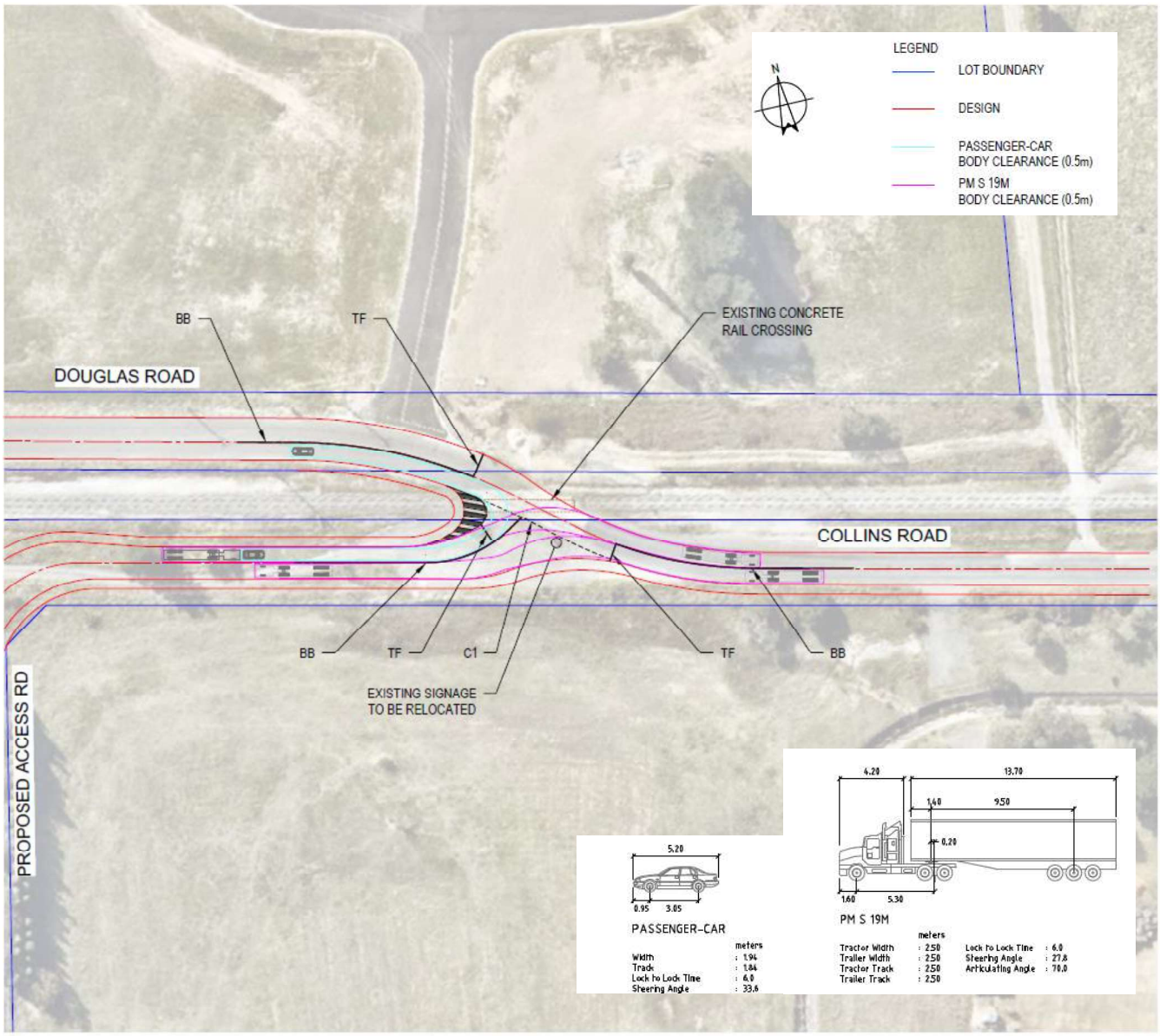


Figure 4.2 ***Proposed new north-south public access road intersection treatment – Douglas/Collins Road***

The plastics recycling and reprocessing facility site is currently accessible via Beaconsfield Road. The proposed new north-south public access road would provide a public benefit, by removing the need for heavy vehicles to use Beaconsfield Road in order to access the site. Beaconsfield Road would also no longer be required to be used during construction.

The proposed road access is consistent with road alignments identified by Wingecarribee Shire Council in the Moss Vale Enterprise Corridor Development Control Plan (2012) (see Figure 4.3). Provision would be made in the positioning of Enterprise Zone Road for Council to construct a footpath and cycleway in the future when the MVEC is further developed.

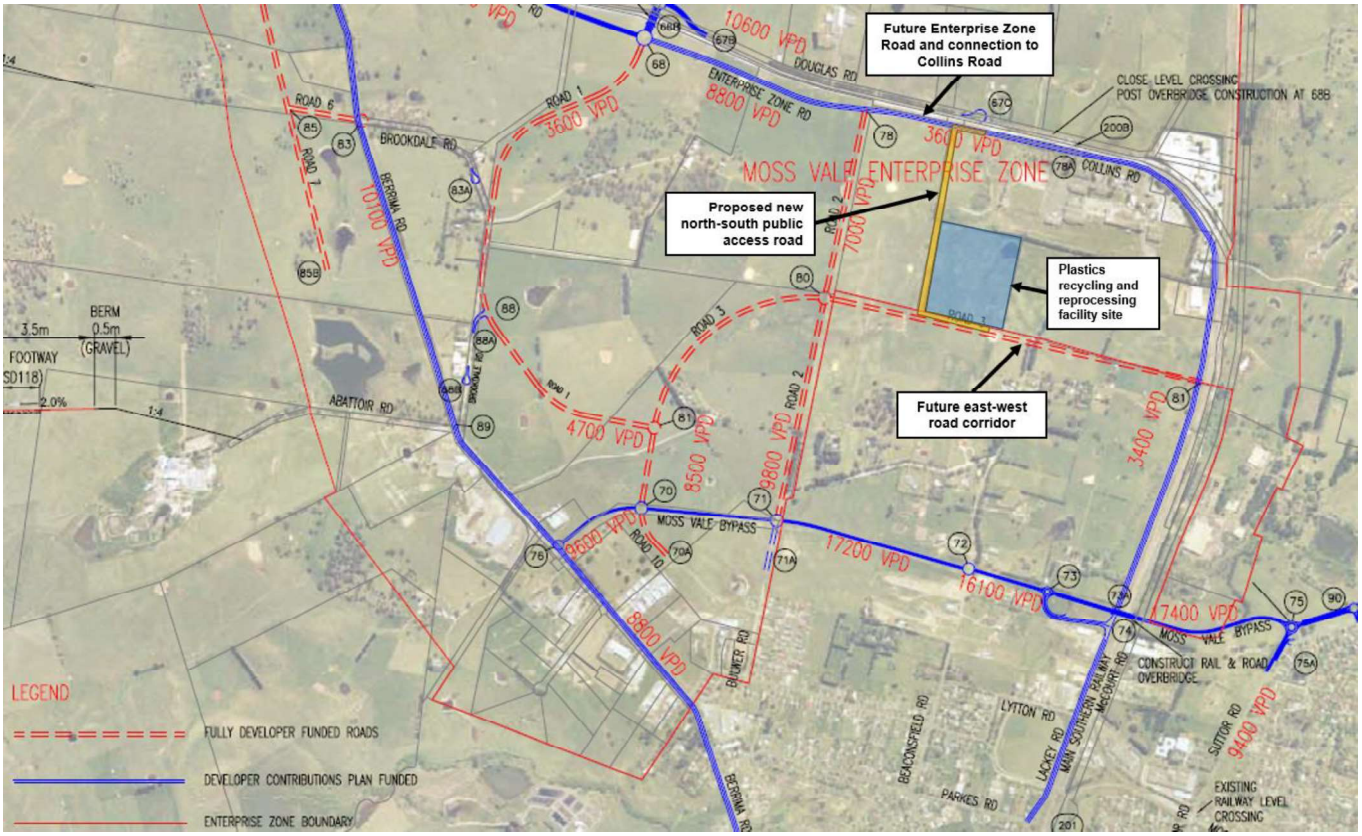


Figure 4.3 *Extract from Moss Vale Enterprise Zone Traffic Facilities Infrastructure Plan with mark-ups (Wingecarribee Shire Council, no date)*

Revised construction work method and program

Construction of the proposed new north-south public access road is expected to take two to three months. The work method for construction of the new north-south public road would generally involve the stages detailed in Table 4.1.

Use of Beaconsfield Road for construction of the permanent access road would no longer be required, as construction vehicles would be able to access the proposed new north-south public access road and the facility via the existing road connecting to Collins Road.

Table 4.1 *Proposed construction method for the proposed new north-south public access road*

Construction stage	Duration	Description
Stage 1	2 weeks	– Mobilisation of plant via Collins Road • 20 tonne excavators • Bulldozers • Road rollers • Asphalt mixers • Tippers – Site establishment works including clearing and construction of hardstands for construction compound and laydown areas and access road along road alignment to facilitate construction access.
Stage 2	2-4 weeks	– Bulk earthworks – Retaining walls and stormwater drainage structures – Road paving – Dewatering and reshaping of the northern bio-retention basin

Construction stage	Duration	Description
Stage 3	2-4 weeks	– Bulk earth works – Retaining walls – Road paving
Stage 4	2 weeks	– Demobilisation of road construction plant – Decommissioning of construction laydown areas

The revised overall construction program based on the new north-south public access road construction method is presented in Table 4.2. The construction method would be finalised during pre-construction planning for the works and engagement of the construction contractor.

Table 4.2 Proposed construction timeline for proposal

Stage	Activity	Estimated duration
Stage 1 – Site establishment	– Site establishment – Access road construction	2-3 months
Stage 2 – Ground works and excavation	– Bulk earthworks for site shaping and surface water – drainage and the bioretention pond – Pouring concrete foundation slab, footings, hardstand and slabs for the buildings – Construction of pavement areas for the truck and car – park, internal roads and the site entrance/egress points	1 month
Stage 3 – Construction of the main structures	– Installation of steel truss framework for structures – Erection of pre-cast concrete panels for external and – internal partition walls and metal roof for site buildings – Installation of firewater and other tanks – Installation of weighbridges	7 months
	– Installation of processing equipment	2 months
Stage 4 – Testing and commissioning	– Testing and commissioning	3 months

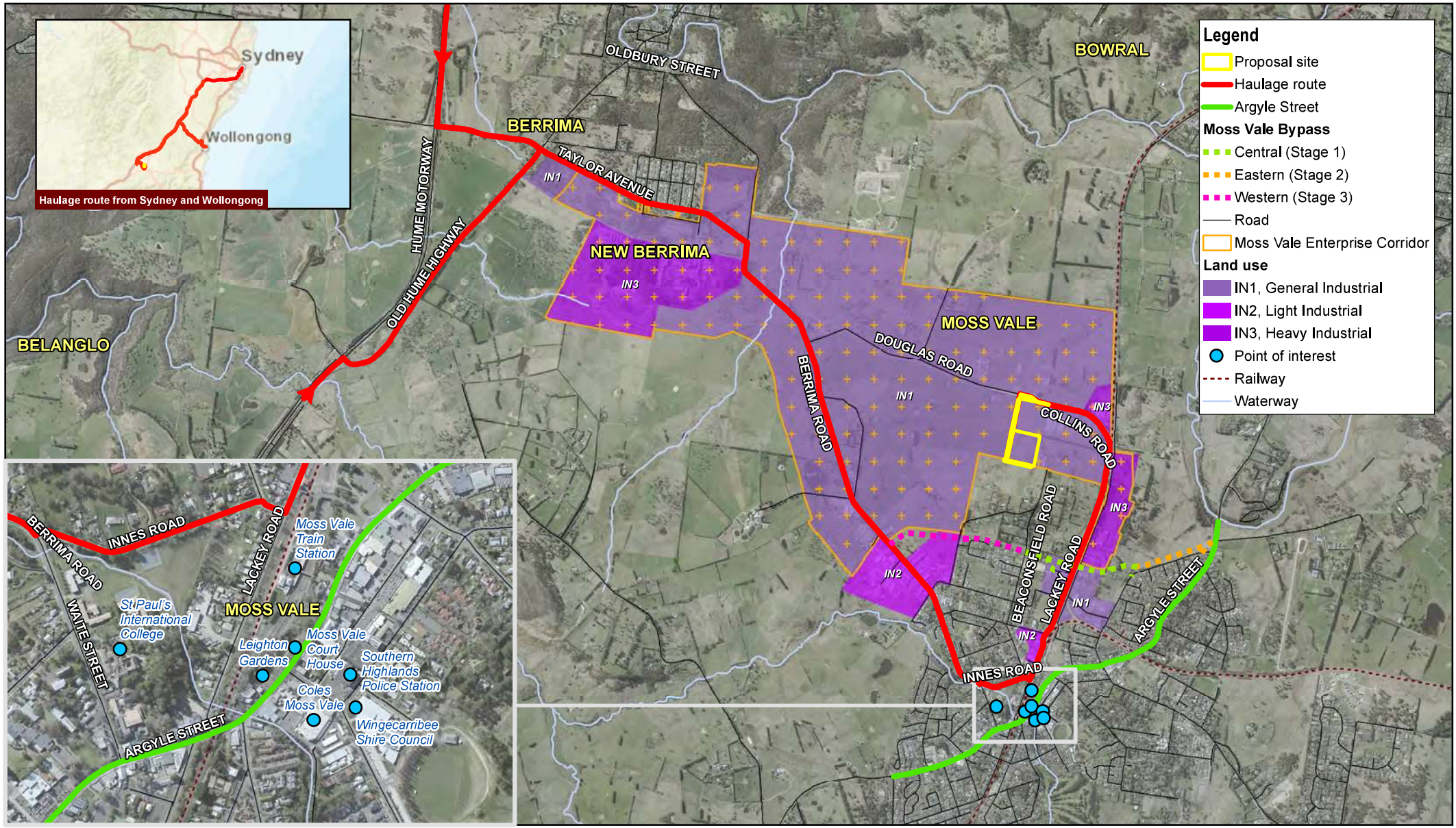
Revised heavy vehicle haulage route

As a result of the change to the preferred access road, the revised heavy vehicle route (for both construction and operation) would be via Hume Highway (M31), Berrima Road, Innes Road (Garrett Street), Lackey Road, Collins Road and then the new north-south public access road. This is shown on Figure 4.4. These roads are existing heavy vehicle approved roads.

Revised proposal site

Based on the proposed new north-south public access route (Figure 4.1), a revised proposal site plan has been prepared and is shown as Figure 4.5.

An assessment of potential impacts associated with the change to the preferred access road is provided in Section 4.4.



Paper Size ISO A4

0 0.5 1 1.5

Kilometers

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

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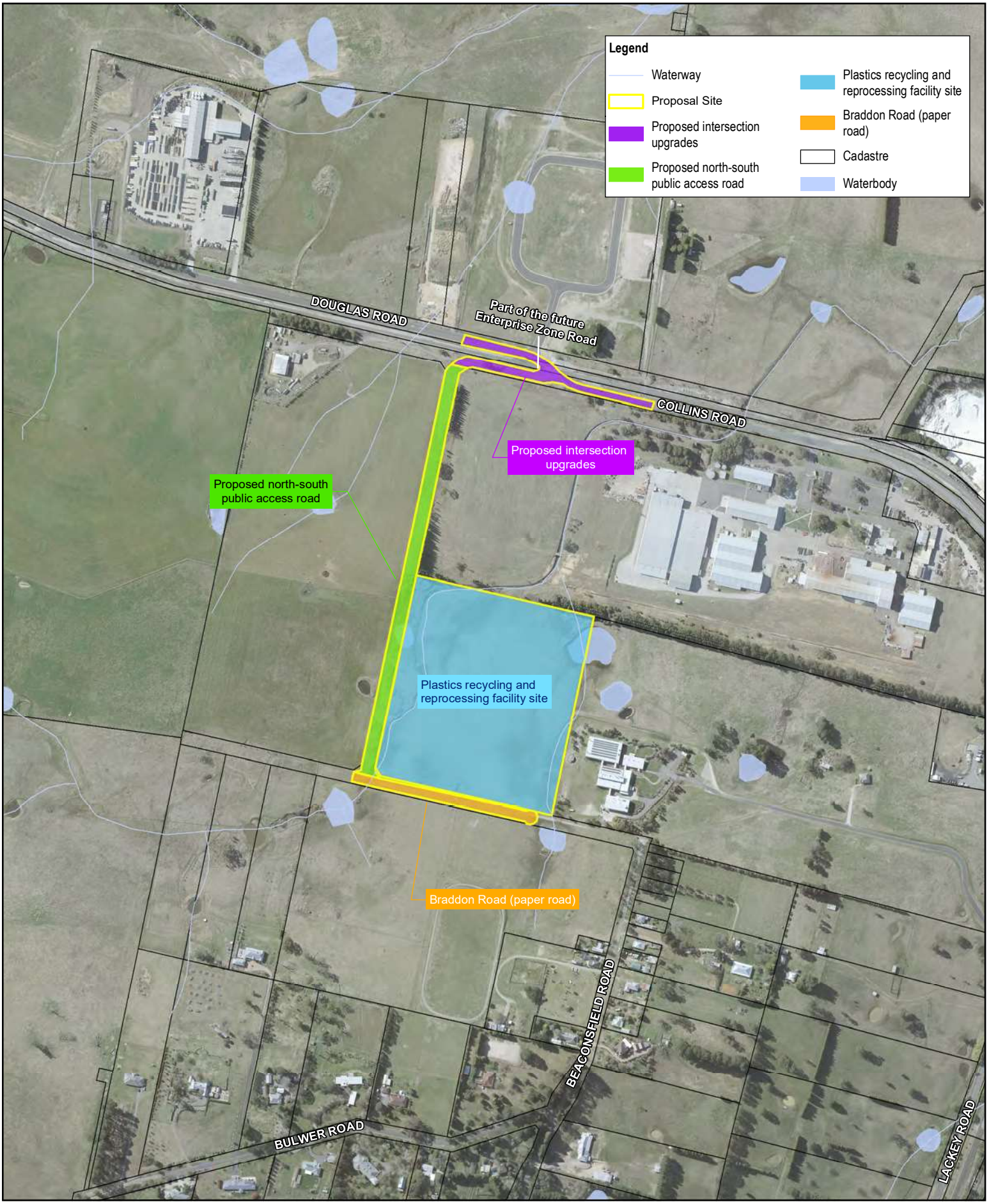
GHD

Plasrefine Pty Ltd
Moss Vale Plastics Recycling and Reprocessing Facility
Response to Submissions Report

Project No. **12524108**
Revision No. **A**
Date **09/03/2023**

Revised key haulage routes

FIGURE 4.4



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Metres

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

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GHD

Plasrefine Pty Ltd
Moss Vale Plastics Recycling and Reprocessing Facility
Response to Submissions Report

Project No. **12524108**
Revision No. **0**
Date **13/01/2023**

Proposal site

FIGURE 4.5

Data source: Data source: Aerial imagery - Metromap, 2022; General topo - NSW LPI DTDB 2020, 2015. Created by: rvillalon

4.2 Design refinements and additional assessments

4.2.1 Water management

Further consideration has been given to, and additional assessment of the impacts associated with stormwater management, water quality and flooding has been undertaken in response to submissions provided by the NSW EPA, WaterNSW, BCD and DPE. The additional analysis includes flood modelling, updated MUSIC modelling and re-assessment of riparian offset boundaries (refer Appendix E).

As a result of this additional analysis and a decreased water demand estimation (as outlined in Section 4.2.5) reducing demand for stormwater and associated pollutant removal, the stormwater management strategy for the proposal has also been updated.

The proposed changes to the stormwater management configuration include:

- Relocation of the stormwater bio-retention basin based on the updated flood modelling results
- Resizing and reconfiguration of the bio-retention basins based on updated MUSIC modelling results
- Retention of the existing basin in the north-east of the plastics recycling and reprocessing facility site, based on consultation with the adjacent landholder regarding diversion of existing flow paths and impact to the portion of the dam on the adjacent lot
- Updating of the riparian offset requirements based on:
  - More detailed mapping of the flow paths (through the updated flood study process)
  - The altered water management system, in particular the retention of the existing basin and the retention of the eastern waterway alignment.

The proposed stormwater management system is shown in Figure 4.6. There would be a minor reduction to the proposed landscaping area north of Building 1 as a result of the increased size of the bio-retention basins.

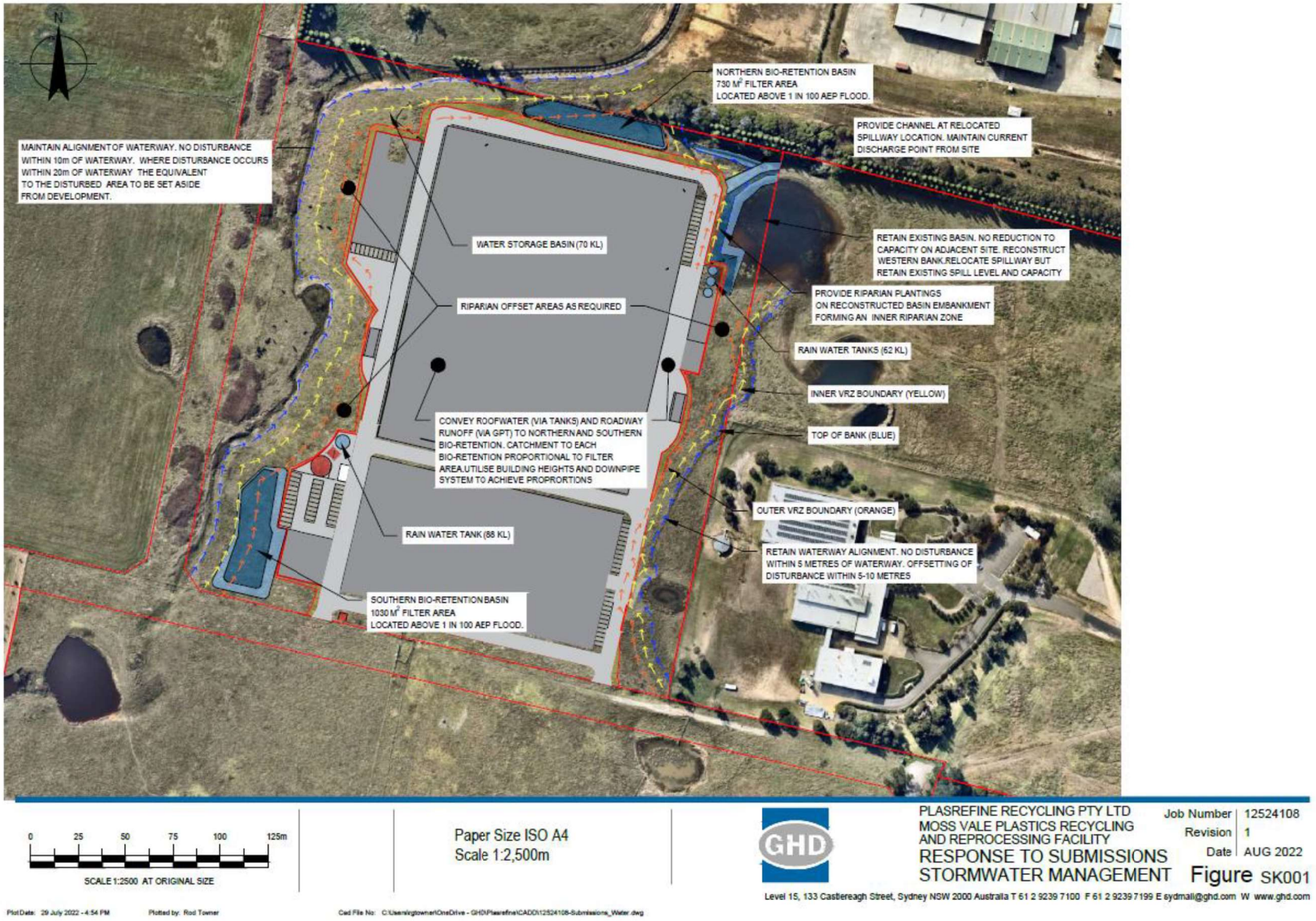


Figure 4.6 Stormwater management system layout plan

4.2.2 Architectural plans

The architectural design of the facility has been further developed since submission of the EIS to provide additional detail on the façade design (including materials and finishes) and visualisations of how the buildings would look. Floorplans have been prepared for the administration building and multi-use building. The updated architectural plans are provided as Appendix F. The plans also clarify the maximum heights of each building.

The plans show that the administration building would have a height of 12 metres, Building 1 and Building 2 each would have a maximum height of 15 metres. The tallest building, the multi-use building attached to Building 2, would have a height of 16.7 metres to accommodate the specific equipment that would be located within that building. Chapter 7 of the EIS indicated that the roof elevation of the three storey multi-use building would be up to 18 metres, however the architectural design development that has been undertaken since the EIS confirms that the maximum roof height would only be 16.7 metres.

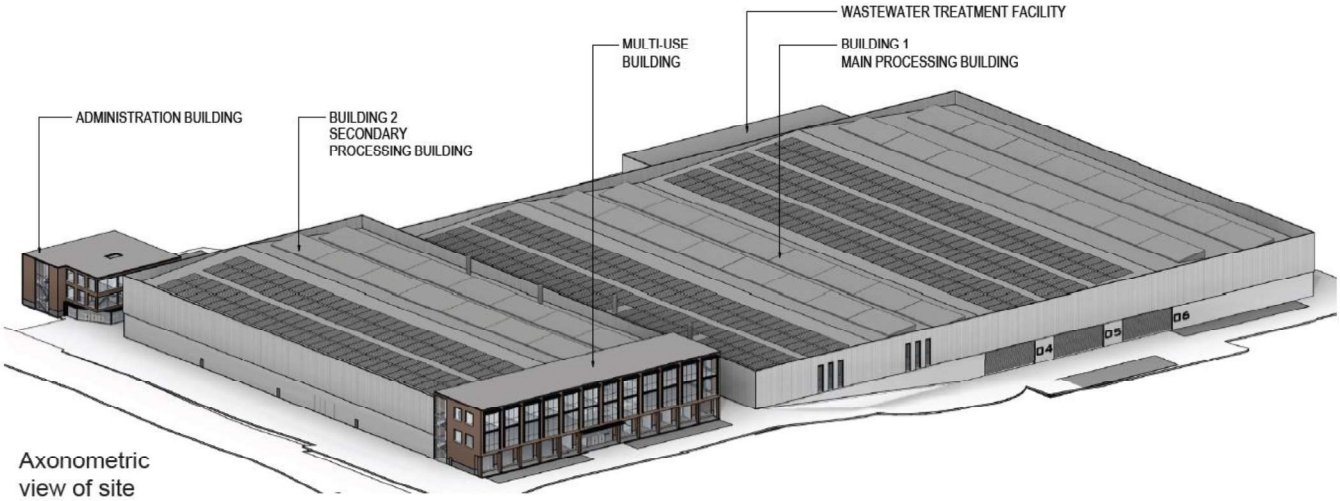


Figure 4.7 Axonometric view of the plastics recycling and reprocessing facility site

A shadow analysis was undertaken for the proposed building designs during summer and winter solstice days which represents solar exposure on the longest and shortest days of the year. As shown in Appendix F, there would be minimal overshadowing from adjacent buildings, and it would not impact on the solar exposure of the Australian Bioresources buildings to the east, which utilise solar cells.

The photomontages presented in *Technical Report 3 - Landscape and Visual assessment* have been updated to reflect the refined architectural design. The updated photomontages are provided in Appendix F.

4.2.3 Lighting

A concept lighting design has been prepared for the facility as shown in Appendix F in accordance with Australian Standard AZ/NZS 1158.3.1 2020 Lighting for road and public spaces, Part 3.1: Pedestrian area (Category P) lighting – Performance and design requirements.

The lighting spill assessment indicates that the lights on the internal roadways and parking areas would not impact on neighbouring properties. An obtrusive light compliance report is provided in Appendix F.

4.2.4 Landscape plan

The landscape plan has been updated to reflect the proposed changes to the stormwater management configuration (as outlined in Section 4.2.1). The updated landscape plan is provided in Appendix G.

4.2.5 Water and wastewater

Following public exhibition of the EIS, Wingecarribee Shire Council indicated that it may not be able to meet the expected demand for water to supply the facility, or treat the expected amount of wastewater at its Moss Vale Wastewater Treatment plant.

In light of Wingecarribee Shire Council's advice, an updated water balance (refer Figure 5.9) has been prepared that reduces both water demand and wastewater disposal quantities. Based on updated advice from equipment suppliers, there would be a reduction in water demand for recycling and processing uses from 40.5 kilolitres per day (as outlined in the EIS) to between 5.5 and 15.5 kilolitres per day (depending upon whether it is necessary to discharge up to 10 kilolitres per day of wastewater to sewer).

This reduction in water demand would occur as a result of greater levels of recycling of treated wastewater to replace potable water demand, as well as less conservative assumptions about evaporation and water losses within the plant.

The onsite treatment and recycling of treated wastewater to replace potable water demand would also result in a reduction in the facility's discharge to sewer from 15.8 kilolitres per day (as outlined in the EIS) to between 2.52 and 12.5 kilolitres per day maximum daily flow to sewer (based on water and sewerage needs to service 140 workers and the facility operating at full capacity). The maximum value of 12.5 kilolitres per day includes a contingency flow allowance of low-level industrial wastewater of up to 10 kilolitres per day (based on full capacity of 120,000 tonnes per year).

4.3 Social impact assessment

Section 18 of the EIS contained an analysis of socio-economic matters including an assessment of the existing environment, impact assessment during construction and operation and mitigation measures. A SIA has since been prepared by Ethos Urban in accordance with the 'Social Impact Assessment Guideline for State Significant Projects' (DPIE, 2021g) and is appended to this report (Appendix D). An addendum to the SIA, which documented the potential social impacts and benefits of the change to the preferred access road was prepared in 2023 and is summarised in Section 4.4.5.

In accordance with the 'Social Impact Assessment Guideline for State Significant Projects' (DPIE, 2021g), potential impacts have been assessed against specific social factors, considering the findings of completed specialist technical reports for the proposal and the ease (or otherwise) of mitigating these impacts. An interview with the Executive Manager – Strategic Outcomes at Wingecarribee Shire Council was undertaken to inform this SIA, as well as an in-depth review of the outcomes of the community engagement undertaken by GHD during development of the EIS and EIS exhibition period.

The primary study area (PSA) for the SIA includes the local community within 800 metres of the proposal site. A secondary study area (SSA) has also been considered to capture the broader impacts and benefits that the proposal would likely have on the surrounding community. This has been defined as the local community living within five kilometres of the proposal site, and broadly aligns to the suburb boundaries of Moss Vale, and parts of Burradoo and New Berrima. A broader tertiary study area (TSA) has also formed part of the assessment. The broader TSA is the Wingecarribee LGA. A figure illustrating the approximate boundaries of these study areas is shown in Figure 4.8.

A detailed assessment of the key community characteristics of the secondary study area and LGA was undertaken based on the results from the 2021 ABS Census of Population and Housing. In summary, the study areas are characterised by an ageing population and lower than average socio-economic indicators. Residents typically live in low density dwellings and home ownership is high. Households are typically characterised by couples with and without children, and lone persons.

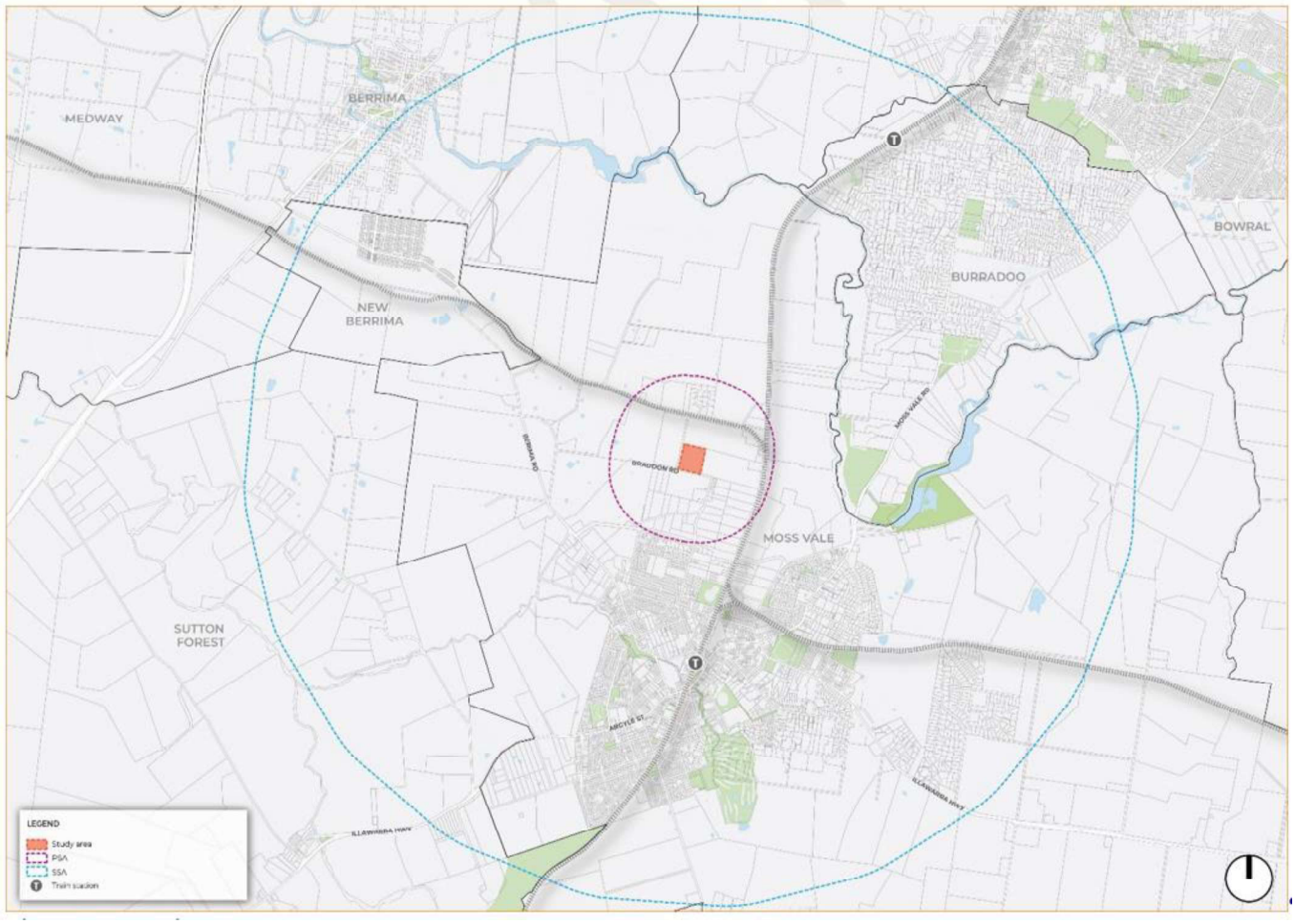


Figure 4.8 Primary and secondary study areas. Source: Ethos Urban (2022)

4.3.1 Key tasks

Key tasks undertaken during preparation of the SIA include:

- Characterising and scoping potential social issues
- Confirming the study areas for the purposes of the assessment
- Reviewing background information and data relevant to the study areas
- Describing the existing social environment, developing a demographic profile and identifying and mapping community infrastructure
- Reviewing other technical papers prepared for the EIS to understand the nature, scale and significance of the proposal's potential impacts, and identify the associated potential for social impacts
- Assessing potential social impacts and benefits during construction and operation, including:
  - Identifying likely significance using the social impact significance matrix provided in the 'Social Impact Assessment Guideline for State Significant Projects' (DPIE, 2021g)
  - Considering and classifying impacts according to the social impact categories identified by 'Social Impact Assessment Guideline for State Significant Projects' (DPIE, 2021g): people's way of life, community, accessibility, culture, health and wellbeing, surroundings, livelihoods and decision-making systems
- Recommending mitigation and enhancement measures.

4.3.2 Key social impacts

Impacts may be viewed as positive or negative, dependant on the receiver. The SIA identified the following key social impacts:

- Temporary potential negative impacts associated with construction activity, which may affect health and wellbeing due to amenity impacts, for some members of the PSA. Construction is anticipated to take approximately 15-17 months.
- Potential permanent visual impacts would have a social impact on surroundings, due to the scale and nature of the buildings in the existing environmental context. This has the potential to impact on the area from the perspective of landowners and community members.
- Positive social impacts arising from the proposal may be experienced for some members of the PSA, SSA and TSA, as a result of improved livelihoods and way of life, with the proposal providing increased local employment opportunities, and positive cumulative impacts as part of the broader strategic transformation of the SHIP, with the potential to attract people to work and live in the LGA, make use of key enabling infrastructure upgrades, and generate annual revenue and strengthen the capabilities of the Wingecarribee Shire to deliver on the proposal and programs for the community, such as improvements to local infrastructure.

The SIA concluded that:

- Subject to effective implementation of such mitigation measures, the proposal can achieve some positive social outcomes for the residents, workers, and community in the PSA, SSA and Wingecarribee LGA and beyond.
- Potential negative impacts can be mitigated through implementation of various technical management plans and recommendations, to be further developed through detailed design phase, and ongoing consultation with the local community and relevant stakeholders throughout all stages of the development, including post-construction and into the operational phase.

4.3.3 Social impact mitigations recommended

In addition to the range of mitigation measures associated with other technical disciplines (such as a Construction Environmental Management Plan (CEMP)) the SIA recommended the following social impact mitigation measures:

- Prepare a Communications and Engagement Strategy (CES) including a Complaints Management Procedure (CMP), which will enable a mechanism for landowners and the general community to engage with the proposal team throughout the construction phase of the proposal. The CES should be prepared alongside the Construction Traffic Management Plan (CTMP) and Construction Environmental Management Plan (CEMP) to ensure the construction process is properly informed by those impacted.
    - The CES should include regular proposal updates and provide opportunities for the community to share feedback throughout the proposal's life cycle.
    - The CES should build on the engagement activities undertaken to date and take into consideration the needs and aspirations of the community that have already been explored as well as existing relationships and networks within the community.
    - The CEMP should be integrated with the CES during construction stage, to provide a mechanism for landowners and the community to communicate and collaborate with the proposal team.
    - The CES should include strategies to promote community understanding and awareness of real and perceived health and wellbeing impacts.
    - The CEP should provide a range of avenues for community members to express their concerns or ask questions – paired with ongoing engagement with nearby residents of the PSA and additional mitigation as identified.
    - Both construction and operational traffic and road network impacts should be communicated to affected stakeholders and community members appropriately as part of a CES and/or Operational Waste Management Plan.
    - Reasonable and feasible work practices should be implemented, with all potentially impacted residents to be consulted during construction.

- There should be ongoing engagement to identify potential health and wellbeing impacts and work out mitigation techniques if appropriate and/or required.
- The CES should communicate any opportunities in the proposal for community benefits.

– Maintain close dialogue with relevant stakeholders such as Wingecarribee Shire Council to identify opportunities to encourage social interaction between workers and the local community (such as complaints management, education, traineeships, local procurement) and mitigate any issues as they arise, both during construction and operation.
– Continuation of the community consultation methods provided during the planning phase and construction phase to enable nearby residents to notify the proposal team of issues and concerns related to construction impacts.
– Ensure the design of the facility, including in relation to materials, planting for visual screening etc responds to issues raised by the community – particularly surrounding residents, and is as sensitive as possible in its design to the surrounding natural environment.
– Consider whether any additional planting is required on adjoining properties to further reduce visual impacts. This should be a collaborative process with affected residents and accompanied by further consultation with affected residents.
– Provide pre-construction and ongoing education to on-site staff (e.g. via inductions) regarding project and local community history which describes current connection to land as well as the more recent agricultural history and community information to encourage respectful behaviours, and enable workers to recognise Aboriginal and European heritage artefacts to prevent accidental damage and promote the swift reporting of heritage discovery.
– Explore strategies to promote the tourism, education and employment opportunities arising from the development in order to foster a transitioning community identity and sense of pride.
– Explore opportunities for partnership building to enhance potential positive impacts associated with job creation during the construction and operational stage. This may include partnerships with organisations such as the nearby TAFE to offer special apprenticeships and programs, or the development of a local procurement strategy or social procurement strategy for employment, to target disadvantaged groups in the employment market.

All the mitigation measures recommended in the SIA, as listed above, would be adopted and have been incorporated into the revised environmental mitigation measures for the proposal, as listed in Table 7.1.

4.3.4 Synthesis of key findings

Overall, the proposal would facilitate the growth and development of the Wingecarribee Shire by potentially attracting people to work and live in the LGA, make use of key enabling infrastructure upgrades, and generate annual revenue and strengthen its capabilities. During construction, positive social impacts of the proposal mainly relate to increased construction jobs for the workforce in the regional study area, and some increased expenditure at local businesses from construction.

Construction activities would result in short term or temporary amenity impacts for local residents. There would be a permanent land use change from a rural landscape to industrial activities. Notwithstanding this, the proposal would be located on land already zoned IN1 within a broader precinct of over 1,000 hectares of industrially zoned land which is earmarked to accommodate similar developments.

Operation of the proposal would see an increase in traffic on the local road network. Heavy vehicle traffic numbers would increase by up to five vehicles per hour between 7:00 am and 6:00 pm. This may cause minor delays for vehicles travelling along the haulage route once the facility reaches full capacity. However, most residents and road users are likely to adapt to this change over time. New road infrastructure associated with the SHIP will minimise these impacts in the longer term.

Construction and operation of the proposal would result in a permanent visual change within the locality due to the scale and nature of the buildings in the existing environmental context. This may impact residents' sense of pride in their local area, and reduce enjoyment of outdoor areas, or views from some windows and yards. However, mitigation measures such as extensive planting on and around the plastics recycling and reprocessing facility site would minimise these impacts. There would be benefits from restoration of riparian vegetation and improvements in water quality of discharges to the site watercourses.

The degree to which community members would experience social impacts would vary based on various factors such as perceptions and individual values, sensitivity to change, distance from the proposal, and duration over which people experience the impacts.

Taking into consideration these above social impacts and benefits, and the ability to further reduce and/or enhance them, as well as the environmental benefits, the proposal is considered to result in an overall net benefit to the Wingecarribee Shire community and broader NSW.

4.4 Assessment of the change to the preferred access road

As discussed in Section 4.1, the preferred access road for the proposal has been changed. The preferred access would now be via Braddon Road and a new constructed north-south road, connecting with an existing gravel road off Collins Road, which is part of Council's proposed future Enterprise Zone Road.

A preliminary environmental risk screeking was undertaken to identify potential environmental impacts that may arise as a result of the change to the preferred access for the proposal. The environmental risk analysis for the change involved:

- Identifying environmental aspects
- Identifying the source of potential risks associated with each of these aspects
- Identifying the potential impact associated with each risk
- Identifying priority issues for assessment.

The potential environmental issues associated with the proposed modification that required further investigation included:

- Traffic and transport
- Noise and vibration
- Aboriginal heritage
- Biodiversity
- Social aspects.

The findings of the assessments of these issues are provided in the following sections.

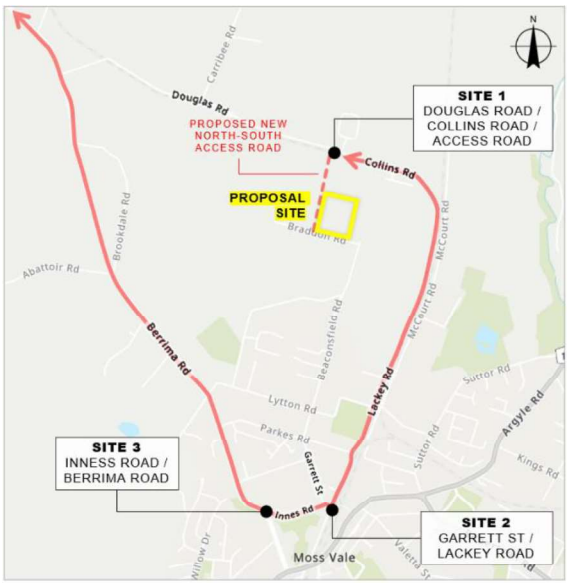
A summary of the other environmental issues that were assessed in the EIS but not considered to be significantly impacted by the change to the preferred access road is provided in Section 4.4.6.

4.4.1 Traffic and transport

The proposed design updates which have the potential to impact traffic and transport in the area are described in Section 4.1. A Traffic and Transport Assessment Addendum has been prepared and provides a detailed assessment of the potential traffic and transport impacts. This letter is provided as Appendix H of this report.

The proposed design updates which have the potential to impact traffic and transport in the area are described in Table 4.3.

Table 4.3 Updates impacting traffic and transport

Moss Vale Plastics Recycling and Reprocessing Facility EIS Appendix F – Transport and Traffic Assessment (GHD, January 2022)	Design updates as of December 2022
Preferred access route	
Option 2 (via a new east-west road connecting with Lackey Road) Via Hume Highway (M31) → Medway Road / Taylor Ave → Berrima Road → either: – (north) Douglas Road → Collins Road → access road *(and vice-versa); OR* – (south) Innes Road (Garrett Street) → Lackey Road → new east-west public access road *(and vice-versa)* 	**Option 3 (via a new north-south road connecting with Douglas Road)** Via Hume Highway (M31) → Medway Road / Taylor Ave → Berrima Road → – Innes Road (Garrett Street) → Lackey Road → Collins Road → new north-south public access road *(and vice-versa)* 

Existing peak hour intersection traffic volumes

GHD engaged Matrix Traffic and Transport Data Pty Ltd to undertake additional intersection traffic turning counts to assess the traffic impacts on key intersections associated with the amended site access route. The surveys were undertaken on Wednesday 23 November 2022 during the following time periods:

- Weekday AM peak (three hours): 6:30 am to 9:30 am.
- Weekday PM peak (three hours): 3:30 pm to 7:30 pm.

The intersection turning count surveys within the immediate vicinity of the site were performed at the following intersections:

- Site 1: Douglas Road /Collins Road / North-south Access Road
- Site 2: Garrett St (Innes Road) / Lackey Road
- Site 3: Innes Road / Berrima Road / Waite Street.

The base 2022 traffic models were developed using the weekday AM and PM peak hour traffic count data. Existing traffic flows at key intersections were analysed using SIDRA 9 to obtain the current operation of the key intersections.

The criteria for evaluating the operational performance of intersections, as provided by the *Guide to Traffic Generating Developments (Roads and Maritime Services, 2002)*, is summarised in Table 4.4. The criteria for evaluating the operational performance of intersections is based on a qualitative measure (i.e. Level of Service, "LoS"), which is applied to each band of average vehicle delay.

The Roads and Maritime Service Traffic Modelling Guidelines indicate a maximum practical Degree of Saturation (DoS) of 0.80 for priority-controlled intersections.

Table 4.4 LoS criteria for intersections

LoS	Average Delay per Vehicle (seconds/veh)	Traffic Signals, Roundabouts
A	<14	Good operation
B	15 to 28	Good with acceptable delays and spare capacity
C	29 to 42	Satisfactory
D	43 to 56	Operating near capacity
E	57 to 70	At capacity, at signals, incidents will cause excessive delays, roundabouts require other control modes
F	>70	Over capacity, unstable operation

Source: Roads and Maritime Services Traffic Modelling Guidelines

A summary of the results of the SIDRA analysis is provided in Table 4.5. Detailed SIDRA results are provided in Appendix H.

Table 4.5 Existing intersection performance – Base Case (2022)

Intersection	AM Peak			PM Peak		
	Average Delay (s)	LoS	Degree of Saturation	Average Delay (s)	LoS	Degree of Saturation
Site 1: Douglas Road / Collins Road / Access Road	6	A	0.03	5	A	0.04
Site 2: Garrett St (Innes Road) / Lackey Road	6	A	0.13	6	A	0.11
Site 3: Inness Road / Berrima Road / Waite Street	10	A	0.08	8	A	0.04

Notes:
- The average delay for priority-controlled intersections is selected from the movement on the approach with the highest average delay.
- The level of service for priority-controlled intersections is based on the highest average delay per vehicle for the most critical movement.
- The degree of saturation (DoS) is defined as the ratio of the arrival flow (demand) to the capacity of each approach.
- Average delay is given in seconds per vehicle.

Table 4.5 indicates that each of the analysed intersections currently operate with good operation performance with LoS A in both the weekday morning and evening peak periods, and delays of 10 seconds or less.

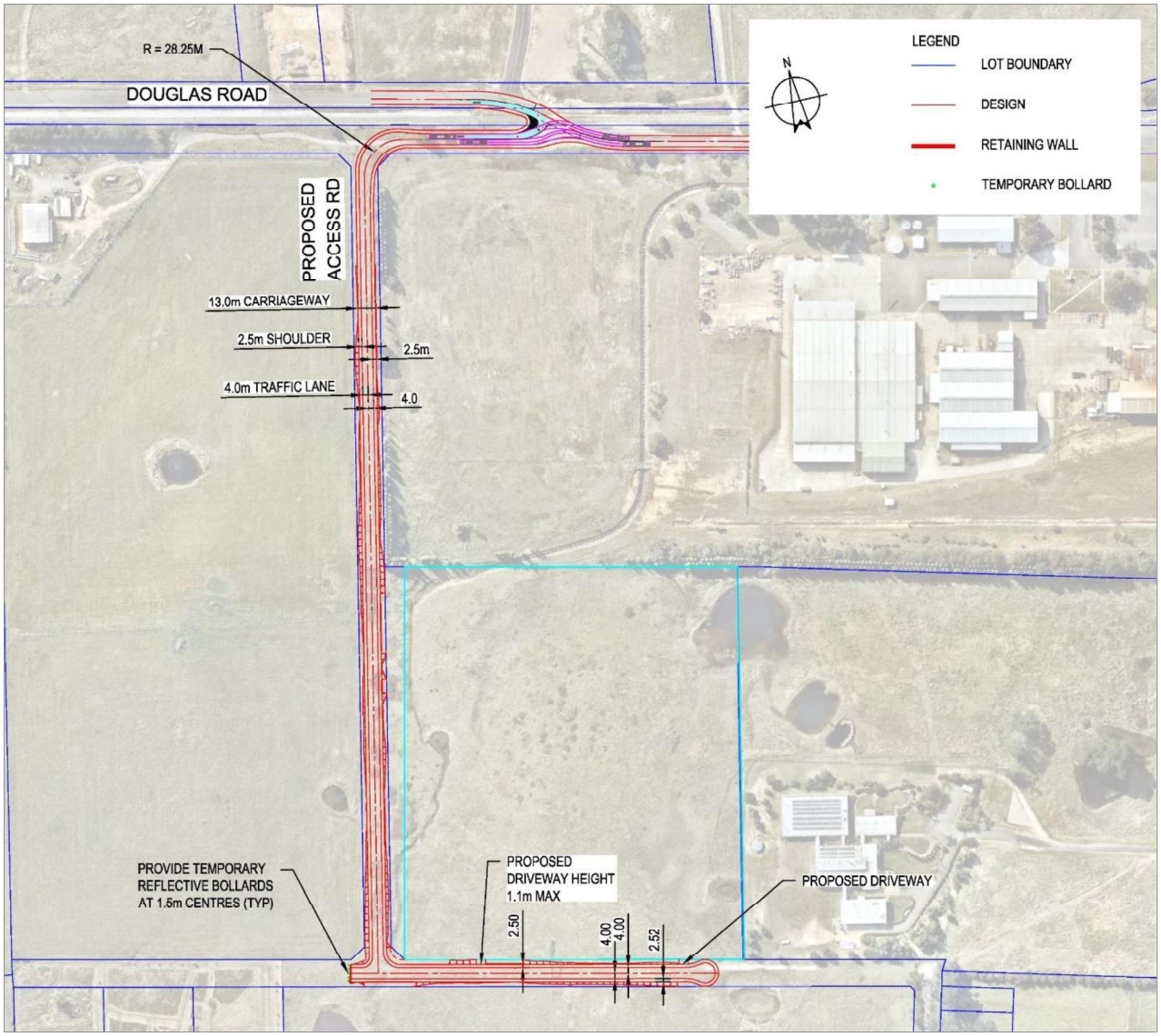
Traffic impact assessment

Revised site access and haulage routes

Access to the proposal site was previously assessed to be via new east-west road along the southern boundary of the proposal site to Lackey Road (referred to as Option 2 access in the EIS / *Technical Report 6 – Traffic and Transport*).

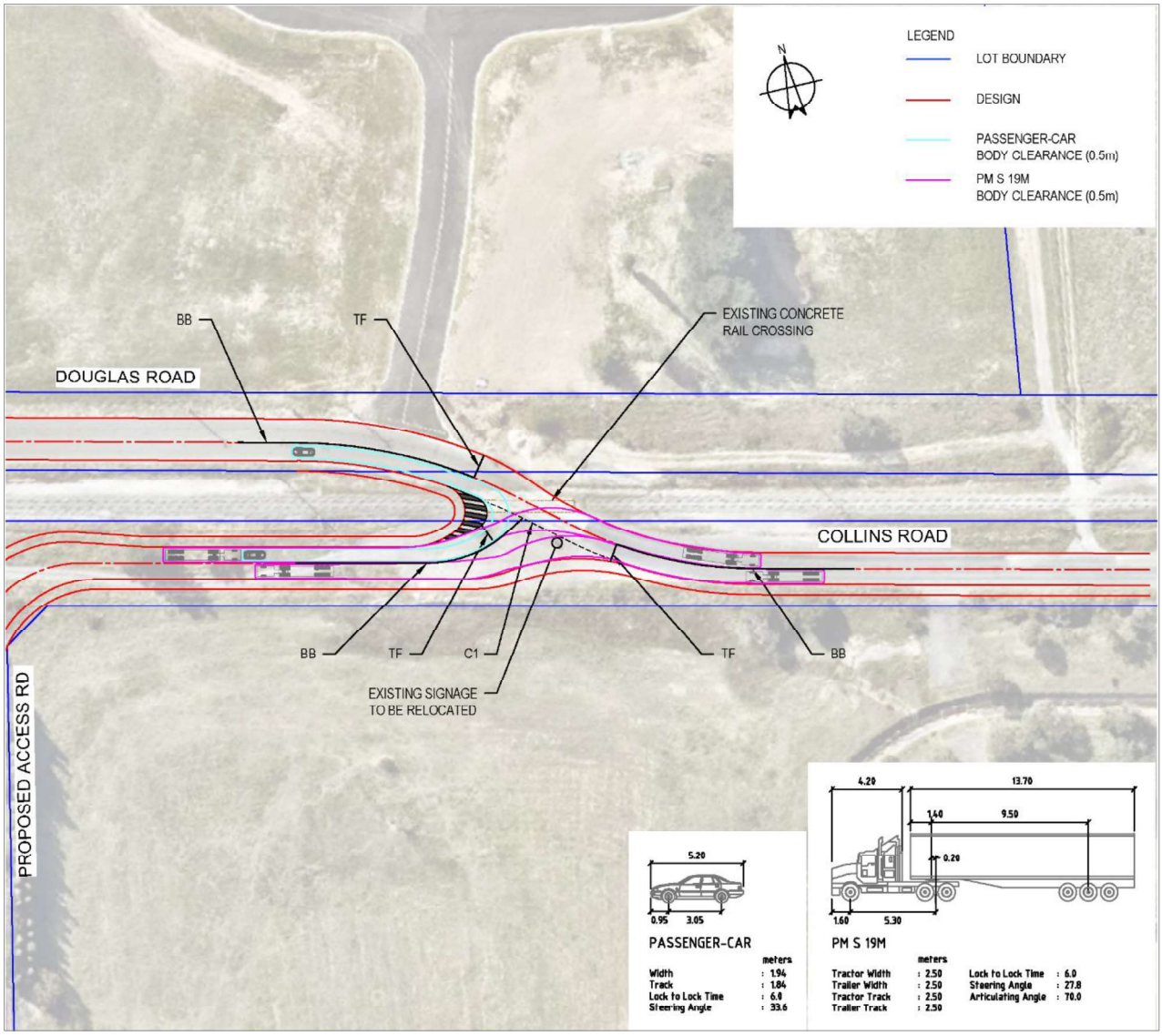
Following stakeholder discussions and land acquisition negotiations, a new preferred access route has been selected, which would be via new north-south connection along the west boundary of the site to Douglas Road / Collins Road (referred to as Option 3).

The alignment of the new preferred access is shown in Figure 4.9, while the proposed intersection treatment for Douglas Road / Collins Road is shown in Figure 4.10.



Source: Moss Vale Plastic Recycling and Reprocessing Facility – Preferred Access Route Concept Drawings (GHD, 2022)

Figure 4.9 Preferred access route (proposed north-south public access road alignment)



Source: : Moss Vale Plastic Recycling and Reprocessing Facility – Preferred Access Route – Intersection Treatment and Swept Paths (GHD, 2022)

Figure 4.10 Proposed new north-south public access road intersection treatment – Douglas Road / Collins Road

Vehicle swept turn path analysis for the proposed intersection has been conducted using AutoTURN 11 for a 19-metre semi-trailer design vehicle, which is the largest expected vehicle that will access the site. The turn path checks show at Figure 4.10 indicate that the proposed intersection configuration can safely accommodate vehicle movements with clearances of at least 300 mm.

Heavy vehicle turn restrictions at the proposed intersection

To remove the need for heavy vehicles to carry out a hook turn across the level rail crossing (resulting in a potential safety risk), it is proposed that all vehicles accessing and departing the plastics recycling and reprocessing facility site would do so via Collins Road, rather than using Douglas Road. Vehicles would therefore turn right onto the future Enterprise Zone Road from the proposed new north-south public access road or turn left from the new Enterprise Zone Road into the new north-south public access road.

Revised heavy vehicle haulage route

As a result of the change to the preferred access road, the revised heavy vehicle route (for both construction and operation) would be via Hume Highway (M31), Berrima Road, Innes Road (Garrett Street), Lackey Road, Collins Road and then the new north-south public access road. This proposed access route is shown at Figure 4.4. This is an approved heavy vehicle access route.

Traffic impacts

Traffic generation

Traffic generation during construction and operation of the facility is expected to remain the same as identified in the previous EIS and supporting traffic assessment. A summary of the expected vehicle movements during these periods is provided in Table 4.6 and Table 4.7.

Table 4.6 Vehicle movement during construction

Vehicle type	Estimated average daily vehicle movements	Estimated daily vehicle movements during peak construction period	Estimated AM Peak vehicle movement		Estimated PM Peak vehicle movement	
			In	Out	In	Out
Light vehicles	40	60	30	0	0	30
Heavy vehicles	15	40	2	2	2	2

Table 4.7 Vehicle movement during operation

Vehicle type	Estimated number of daily vehicle movements	Estimated AM Peak vehicle movement		Estimated PM Peak vehicle movement	
		In	Out	In	Out
Light vehicles	280 *	60	60	60	60
Heavy vehicles	100	10	10	10	10

Note (*) Assumes all FTE staff inbound and outbound daily

As the construction stage of the project is expected to generate lower traffic volumes compared to the operation stage, the analysis of the operational impacts would highlight the most significant impact that the proposal would have on the road network.

For the purposes of this assessment, the traffic generation during the operation of the facility has been adopted, to account for the worst-case scenario in terms of traffic generation.

Trip distribution

The following assumptions were used in estimating the distribution of vehicles trips generated by the proposal during the operation of the facility.

– **Heavy Vehicles (HV)**

  All HVs would utilise the haulage route as described in the sections above.

– **Light Vehicles (LV)**

  The distribution of LV trips is assumed to be split as follows, based on high-level estimates of employee place of origin/residence derived from 2021 population data [1]

  - North (via Douglas Road) 14 per cent (8 veh movements / direction / hr)
  - South (via Collins Road / Lackey Road) 86 per cent (52 veh movements / direction / hr)

Vehicles with southern origins / destinations are expected to be further distributed to the suburbs within and beyond Moss Vale.

For the purposes of a highly conservative assessment, all light vehicles using Lackey Road have been assumed to pass through Site 2 (intersection of Lackey Road / Garrett Street). Further, vehicle split of light vehicles passing through Site 3 (intersection of Inness Road / Berrima Road / Waite Street) has been estimated based on population data.

[1] Australian Bureau of Statistics, Census of Population and Housing, 2021 (Usual residence data)

Future intersection performance

The traffic impact of the proposed facility was determined by comparing the future intersection performance of the key intersection "without" and "with" the proposal. The following assessment scenarios were considered:

- 2023 (year of opening) – post-development scenario during assumed year of opening
- 2033 (ten-year horizon) – future baseline scenario (without the development)
- 2033 (ten-year horizon) – future post-development scenario.

Future baseline traffic for the years 2023 and 2033 were estimated by applying a growth rate of two percent per annum to the existing traffic volumes. Vehicle traffic generated during operation was then added to the baseline traffic to assess the proposal's impact on the affected roads.

(2023) Year of opening

Table 4.8 Future intersection performance – 2023, with development

Intersection	AM Peak			PM Peak		
	Average Delay (s)	LoS	Degree of Saturation	Average Delay (s)	LoS	Degree of Saturation
Site 1: Douglas Road / Collins Road / Access Road	9	A	0.07	9	A	0.07
Site 2: Garrett St (Innes Road) / Lackey Road	7	A	0.17	7	A	0.16
Site 3: Inness Road / Berrima Road / Waite Street	15	B	0.17	15	B	0.13

Notes:
- The average delay for priority-controlled intersections is selected from the movement on the approach with the highest average delay.
- The level of service for priority-controlled intersections is based on the highest average delay per vehicle for the most critical movement.
- The degree of saturation (DoS) is defined as the ratio of the arrival flow (demand) to the capacity of each approach.
- Average delay is given in seconds per vehicle.

Table 4.8 indicates that the operation of the proposed facility is expected to have minimal impact on the analysed intersections, with each intersection operating with acceptable levels of services (LoS A or B) in both morning and evening peak periods. This translates to delays between seven to 15 seconds, which is around a five-second increase in delay when compared to the base scenario (refer to Table 4.5).

Overall, this increase is assessed to be negligible, and the analysed intersections would continue to operate with acceptable delays and plenty of spare capacity.

(2033) Ten-year horizon

Table 4.9 provides a summary of the future intersection performance for the 2033 "without" development scenario, accounting for background traffic growth only. Table 4.10 provides a summary of the future intersection performance "with" the development, i.e. including the operation of the proposed facility.

Table 4.9 Future intersection performance – 2033 baseline, without development

Intersection	AM Peak			PM Peak		
	Average Delay (s)	LoS	Degree of Saturation	Average Delay (s)	LoS	Degree of Saturation
Site 1: Douglas Road / Collins Road / Access Road	9	A	0.01	9	A	0.01
Site 2: Garrett St (Innes Road) / Lackey Road	6	A	0.17	7	A	0.15
Site 3: Inness Road / Berrima Road / Waite Street	14	A	0.13	11	A	0.06

Notes:
- The average delay for priority-controlled intersections is selected from the movement on the approach with the highest average delay.
- The level of service for priority-controlled intersections is based on the highest average delay per vehicle for the most critical movement.
- The degree of saturation (DoS) is defined as the ratio of the arrival flow (demand) to the capacity of each approach.
- Average delay is given in seconds per vehicle.

Table 4.10 Future intersection performance – 2033, with development

Intersection	AM Peak			PM Peak		
	Average Delay (s)	LoS	Degree of Saturation	Average Delay (s)	LoS	Degree of Saturation
Site 1: Douglas Road / Collins Road / Access Road	9	A	0.07	9	A	0.08
Site 2: Garrett St (Innes Road) / Lackey Road	7	A	0.22	8	A	0.20
Site 3: Inness Road / Berrima Road / Waite Street	22	B	0.25	20	B	0.17

Notes:
- The average delay for priority-controlled intersections is selected from the movement on the approach with the highest average delay.
- The level of service for priority-controlled intersections is based on the highest average delay per vehicle for the most critical movement.
- The degree of saturation (DoS) is defined as the ratio of the arrival flow (demand) to the capacity of each approach.
- Average delay is given in seconds per vehicle.

Table 4.9 indicates that by 2033, the analysed intersections are expected to experience a slight increase in delay compared to 2022 base scenario (refer to Table 4.5). Without the proposed facility, all sites are expected to continue operating at LoS A, with delays ranging from six to 14 seconds.

Table 4.10 indicates that the operation of the proposed facility is expected to result to a very minimal increase in delay compared to the baseline 2033 scenario. Sites 1 and 2 are expected continue to have an LoS of A for both morning and evening peak periods, while Site 3 would have an LoS of B. This indicates acceptable levels of delay and plenty of spare capacity to accommodate additional traffic associated with the proposal.

Sight distance checks

Available sight distance at key intersections was assessed to determine whether there is adequate longitudinal sight distance at the proposed access and along the haulage route to allow drivers to safely navigate to and from the site.

This assessment was undertaken based on a desktop assessment only, using Google Maps / SIX Maps and Google Street view. It is worth noting that the actual sight distances observed on site by road users, may differ from the Google images as the images may be outdated because of changes to vegetation and / or changes to the road environment. The level of the Google camera above the road surface of a vehicle may also vary from actual driver eye height etc. Nevertheless, imagery from the aforementioned sources is regarded to be reasonably accurate representations of actual site conditions and has been adopted for the purposes of this assessment.

- **Approach Sight Distance (ASD)** is the minimum requirement to provide the driver of a vehicle adequate sight distance to observe the road layout with sufficient time to react and stop, if necessary, before entering the conflict area.
- **Safe Intersection Sight Distance (SISD)** provides sufficient sight distance for a driver of a vehicle on the major road to observe approaching vehicles from the minor road and to stop before a potential collision.
- **Minimum Gap Sight Distance (MGSD)** is the minimum requirement to provide the driver of a vehicle adequate sight distance to perform a crossing or turning movement.

The required sight distances were derived from the *Austroads Guide to Road Design (AGRD) Part 3: Geometric Design (Austroads 2021)* and *Part 4A: Unsignalised and Signalised Intersections (2021)*. Table 4.11 provides a summary of the sight distance requirements for the key intersections.

Table 4.11 Minimum sight distance requirement

Site	Approach	Design Speed (km/h)	ASD		SISD		MGSD	
			Required	Measured	Required	Measured	Required	Available
1	Douglas Road	90	139	220	214	300	125	125+
	Collins Road	90	139	300	214	300	125	125+
	New north-south access road	60	73	144	-	-	-	-
2	Garrett Street (Innes Street)	40*	40*	70	-	-	-	-
	Lackey Road (north)	60	73	150	123	150	83	83+
	Lackey Road (south)	60	73	150	123	150	83	83+
3	Inness Road	60	73	150	-	-	-	-
	Berrima Road	60	73	160	123	160	83	83+
	Waite Street	60	73	190	123	190	83	83+

LEGEND WITH ADEQUATE SIGHT DISTANCE INADEQUATE SIGHT DISTANCE

Requirements derived from Austroads Guide to Road Design Part 3: Geometric Design (2021) and Part 4a: Unsignalised and Signalised Intersections (2021)
* Note: The lower design speed of Inness Road (40 kph) has been adopted for this review.

As summarised in Table 4.11, the measured sight distances meet the minimum sight distance requirement at each of the assessed intersections.

Conclusions

The proposed new north-south public access road would remove the need for heavy vehicles to use Beaconsfield Road, during construction of the new road. Based on the outcomes of the additional traffic assessment that has been undertaken, it is considered that the operation of the proposed facility would have negligible impact on the surrounding road network in terms of intersection performance. A review of access and key intersections also shows that sufficient sight distance is available at key access points, which is expected allow for the safe movement of vehicles into and out of the proposed site.

4.4.2 Noise and vibration

A Noise Assessment Addendum was prepared to address the potential impacts from the changed access road and the associated haulage route. The Addendum is provided as Appendix I of this report.

Analysis of potential noise impacts along the proposed haulage route (public roads)

Construction

The proposed new north-south public access road would result in reduced noise impacts during the construction phase compared with the original access road, as the construction haulage route utilises roads with higher traffic volumes (Berrima Road and Lackey/Collins/Douglas Road) to a greater extent than the original haulage route and removes the use of Beaconsfield Road during road construction.

Operation

Updated road traffic noise modelling results are presented in and have been assessed against the local road noise criteria (1 hour period) in the Road Noise Policy (RNP) (DECCW 2010) using the CoRTN prediction method.

The changes in road traffic noise levels at residences along the haulage route are based on the following assumptions:

- Existing traffic volumes are based on AM/PM peak hour volumes counted on 23 November 2022
- All heavy vehicles would use Innes Road/Garret Street rather than Waite Street/Illawarra Highway/Lackey Road (south of Innes)

All light vehicles would use Waite Street/Illawarra Highway/Lackey Road (south of Innes).

During non-peak hour periods, there is greater potential for the increase in road traffic noise levels to be greater than 2 dBA as the existing volumes would be lower. However, during non-peak hourly periods, the potential to exceed the RNP controlling noise criteria at receivers is lower as overall traffic volumes are lower (when compared to peak hour periods).

The various scenarios modelled indicate that the acoustic requirements of the Road Noise Policy at sensitive receivers can be met for the majority of sections of the haulage route.

During operation, the Road Noise Policy criteria is only predicted to be exceeded at some residences fronting Innes Road (AM and PM peak) and Garret Street (PM peak only) at the ultimate predicted heavy vehicle volume of 10 heavy vehicle movements per hour. It is noted that the existing road traffic noise levels at the nearest residences to Innes Road and Garret Street are predicted to already exceed the $L_{Aeq\ (1\ hour)}$ noise level criteria of 55 dBA.

It is noted that heavy vehicle movements would initially be lower than the maximum 10 heavy vehicle movements per hour, and increase over time as the facility reaches full capacity. The timing for this would depend on market conditions, and level of utilisation of the facility however is expected to be at least five years from the commencement of operation.

Where exceedances of the Road Noise Policy criteria are predicted based on the facility operating at full capacity and maximum truck movements, monitoring and management options have been recommended to manage the potential increase in road traffic noise level for adjacent residential receivers.

These include:

- Distributing HV movements between the Innes Road/Garret St route and the Waite Street/Lackey Road route; and
- Reducing HV speeds along Innes Road and Garret Street to 40 km/hr and 30 km/hr, respectively.

As Waite Street and Lackey Road route is apparently not an approved heavy vehicle route, further investigation would be required to utilise this route for heavy vehicles.

To mitigate potential noise impacts at residences along Innes Road and Garret Street, it is recommended that the following measures be incorporated into the operational management plan:

- Road traffic noise monitoring be undertaken (pre-operation and within 6 months of operation) to determine the following:
  - Existing road traffic noise levels at residences
  - The frequency of operational delivery trucks during peak periods of operation
  - The increase in road traffic noise level during peak periods of operation
  - The noise level of delivery trucks (range and average) to inform predictions for higher throughput volumes
- Consideration of diverting HV movements to alternate haulage routes where road traffic noise impacts would be reduced (i.e. Waite Street, Illawarra Highway and Lackey Road)
- Induction and training provided to relevant staff and haulage vehicle drivers outlining their responsibilities with regards to:
  - The designated haulage routes
  - The location of sensitive receivers along haulage routes
  - Driver behaviour practices and avoidance of the use of engine compression brakes
  - Acceptable delivery hours.

Noise mitigation options such as quieter road pavements and noise barriers are not considered feasible options and at-property treatments are not considered reasonable at this stage as other mitigation options can be explored to reduce the potential for noise impacts.

Use of the revised haulage route during operation would not result in a better noise outcome than previously modelled because Douglas Road would have been utilised (no residences directly adjacent). The revised haulage route has residences along Berrima Road and Innes Road.

Council has proposed a number of new roads to service the MVEC/SHIP. The Moss Vale Bypass, which is due to have its detail design completed in late 2023, would enable heavy vehicles to access Lackey Road without utilising the routes discussed above. Timing for construction of this road is not known, however it has potential to be in operation before the facility reaches full capacity. It is also noted that when the proposed Enterprise Zone Road is operational it would connect directly to the north south road and eliminate the need for heavy vehicles travelling to and from the Hume Highway to use Innes Road.

Analysis of potential noise impacts along the proposed access road (internal access road)

The proposed use of the preferred access road (Option 3 – via a new north-south road connecting with Douglas Road) would result in better noise outcomes than the original access road for the following reasons:

- During the construction of the new access road, the nearest residences are now >200 metres away compared to ~100 metres away from the original access road. Given this, construction noise levels at the nearest residences would be less than what was originally predicted.
- During the operational phase of the project, the new access road is now further away from the nearest residences to the east and the south of the proposal. This would result in a slight reduction in operational noise levels to these receivers (R010 and R019). For the nearest residences to the southwest (R160), the proximity of the new access road is consistent with the original access road. As such, the predicted noise levels are anticipated to be unchanged and compliance is still expected.

4.4.3 Aboriginal heritage

The corridor for the proposed new north-south public access road was assessed by Biosis in June 2021 and is included in the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the proposal. Biosis recorded a potential archaeological deposit (PAD1) in the north–south corridor and described as being located on a crest of a gentle sloping hill spur leading down to the flats surrounding a creek line. Previous assessments undertaken in the local area have identified artefacts on the surface of similar landforms and there is moderate potential for subsurface artefacts to be present at this location.

At the time of the test excavation program completed for the EIS in August 2021, the north–south corridor to the site was not the preferred access and PAD1 was therefore not tested. As a result of the change to the preferred access, OzArk was engaged to undertake a test excavation program for PAD1 and prepare an ACHAR addendum assessment.

Additional test excavation findings

The findings of the additional test excavation program are provided in Appendix L and a summary is provided below.

The excavation at PAD1 took place on 13 December 2022. The additional test excavation recorded five artefacts. Similar to the findings of investigations at PAD2 and PAD3 in 2021, this is considered a low artefact density and is representative of a background scatter of artefacts that would be found in most comparable landscape across the region.

The results indicate that the ephemeral drainage line near PAD1 attracted a low level of camping activities, although the low artefact density does not allow any meaningful analysis of Aboriginal use and occupation of the area. As artefacts were recorded at PAD1, the area surrounding the relevant test units and transect will be registered with the Aboriginal Heritage Information Management System (AHIMS) as Douglas Rd OS-1.

As the test excavation has removed the recorded artefacts from Douglas Rd OS-1 there are no further known artefacts at the site. Therefore, the site no longer has scientific significance.

Management of Douglas Rd OS-1

Following project approval, an Aboriginal Cultural Heritage Management Plan (ACHMP) would be developed in consultation with the RAPs and approved by DPE.

The ACHMP would contain policies for unexpected finds, including the unlikely event that human skeletal material is uncovered.

The following management principles would be applied to the one site recorded because of the additional test excavation program (Douglas Rd OS-1) that is liable to be harmed by the proposal:

- No further archaeological investigation is required at this site as the test excavation program has demonstrated that the site has a low ability to provide further information on past Aboriginal use of the area.
- The artefacts from the site recorded during the additional test excavation program should be re-buried with any other artefacts collected within the study area because of the previous test excavation program and any artefacts recovered from the community collection of surface artefacts following project approval.

The ACHMP would state that if Douglas Rd OS-1 is impacted by the proposal that an Aboriginal Site Impact Recording Form is submitted to the Aboriginal Heritage Information Management System (AHIMS) register to list the site as 'destroyed'.

The re-burial location should be registered as a site with the AHIMS register and the proponent would undertake to protect that location.

Mitigation measures

The following mitigation measures would be adopted in relation to Aboriginal cultural values within the study area are as follows. These mitigation measures include those provided in the 2021 ACHAR.

- Following project approval, an ACHMP would be developed to manage Aboriginal cultural heritage within the study area. The ACHMP will be developed in consultation with the RAPs.
- The proposed change to the preferred access road to the north–south option would mean that the protection measures for Beaconsfield IF-1, as set out in the ACHAR, will not be required.lk
- If the east–west access road option is utilised, harm to Beaconsfield Rd IF-1 must be avoided. To achieve this, during the construction of the access road, the northern boundary of the study area adjacent to Beaconsfield Rd IF-1 would be temporarily fenced and signed. There would be no vehicle movements or the storage of materials to the north of this fence during the construction activities. The fence would be removed at the conclusion of the construction associated with the proposal.
- The impact footprint of the proposal would be temporarily fenced during construction to ensure that there are no inadvertent impacts to surrounding landforms. The fence would be removed at the conclusion of the construction associated with the proposal.
- An attempt would be made to locate the isolated finds MVRec IF1, BR IF1, and BR IF2 before the start of construction. This would be undertaken with the assistance of the Aboriginal community and all visible artefacts would be collected.
- No further archaeological investigation is required at Douglas Rd OS-1, Beaconsfield Rd OS-1, Beaconsfield Rd OS-2, Beaconsfield Rd IF-2, and Beaconsfield Rd IF-3 as the test excavation program has demonstrated that the sites have a low ability to provide further information on past Aboriginal use of the area.
- The artefacts from the sites recorded during the test excavation program would be re-buried with any other artefacts collected within the study area. The way they are reburied, and the location of the reburial would be set out in the ACHMP.
- The ACHMP would provide policies for unexpected finds, including human skeletal material.

4.4.4 Biodiversity

The proposed north-south road alignment runs along a 'paper road' owned by Council, which has also been largely cleared of all native vegetation, except for a row of canopy trees along the eastern boundary. A planted row of exotic pines is present to the east of the southern portion of this potential road alignment.

Surveys of the north south road route were conducted on 9 November 2022 in accordance with the BAM and with reference to appropriate threatened species survey guidelines for targeted species. The survey scope is summarised below.

A revised Biodiversity Development Assessment Report (BDAR) has been prepared by GHD (see Appendix K) to identify the potential impacts of the proposal on biodiversity values within the proposal site, and includes updates to the proposal footprint since the original BDAR was reviewed during the EIS exhibition phase. This assessment has been completed in accordance with the BAM and includes:

- Desktop assessment to describe the existing environment and landscape features of the proposal site and to identify the suite of threatened biota potentially affected by the proposal.
- Field survey to describe the biodiversity values of the proposal site and surrounding study area and to determine the likelihood of threatened biota and their habitats occurring in the proposal site or being affected by the proposal.
- BAM calculations using the credit calculator version 1.4.0.00 to quantify the biodiversity impacts of the proposal following implementation of measures to avoid and minimise impacts and to determine the biodiversity credits that would be required to be retired to offset the residual impacts of the proposal.

The proposal would result in the following impacts:

- Removal of 0.28 ha of farm dams and associated vegetation that have been assigned to PCT 1256 - Tableland swamp meadow on impeded drainage sites of the western Sydney Basin Bioregion and South Eastern Highlands Bioregion
- Removal of 0.04 ha of planted trees that have been assigned to PCT 944 Mountain Grey Gum - Narrow-leaved Peppermint grassy woodland on shales of the Southern Highlands, southern Sydney Basin Bioregion
- Removal of 0.28 ha of potential habitat for the Southern Myotis
- Removal of nine planted specimens of *Eucalyptus macarthurii*, listed as endangered under the BC Act and EPBC Act
- Minimal potential indirect impacts to adjoining vegetation associated with edge effects, light spill, noise and introduction of weeds and pathogens.

The proposal would not impact any threatened biota listed under the *Fisheries Management Act 1994*.

This patch of planted *Eucalyptus macarthurii* trees does not meet the minimum key diagnostic criteria or the condition thresholds outlined in the Commonwealth approved conservation listing for the EPBC Act-listed CEEC Southern Highlands Shale Forest and Woodland in the Sydney Basin Bioregion (DoE 2015) as the patch is smaller than 0.5 ha and less than 30% of the perennial understorey vegetation cover is made up of native species.

It is estimated that these trees are about 25 years old, and their provenance is unknown. They appear to have been planted as part of a wind break along the edge of a council-owned paper road. There is no evidence of natural recruitment, nor is there the likelihood of any natural regeneration around them, as the area in which they occur is grazed by cattle, and shows signs of significant livestock use and disturbance.

Eucalyptus macarthurii is listed as an MNES under the EPBC Act. An assessment of significance has been completed for this species, which indicates that the proposal is unlikely to result in a significant impact on this species, and a referral is not considered necessary. The proposal is unlikely to result in any impacts to other MNES listed under the EPBC Act.

A BAM assessment and credit calculations have been performed in accordance with the methodology (OEH 2020) and using credit calculator version 1.4.0.00. Credits required to be retired to offset the impacts of the proposal include:

- 6 ecosystem credits to offset impacts to 0.28 ha of PCT 1256 Tableland swamp meadow on impeded drainage sites of the western Sydney Basin Bioregion and South Eastern Highlands Bioregion
- 6 Southern Myotis species credits to offset the removal of habitat within a 0.28 hectare species polygon
- 18 *Eucalyptus macarthurii* species credits to offset the removal of nine individuals.

Other threatened species identified as potentially being impacted by the proposal are ecosystem credit species which would be offset through the retirement of the above listed ecosystem credits.

4.4.5 Social impacts

A Social Impact Assessment was prepared for the proposal by Ethos Urban in September 2022 (Appendix D). The Social Impact Assessment assessed the potential impacts and benefits of construction and operation of the proposal, as defined in the EIS, and did not consider the impacts and benefits of Road Access Option 3.

In February 2023, Ethos Urban prepared an addendum to the Social Impact Assessment which documented the potential social impacts and benefits of the proposed modification. The findings of the Social Impact Assessment addendum are provided in Appendix D and a summary is provided below.

On review of the proposed modification, Ethos Urban concluded that the majority of the identified potential social impacts and benefits documented in the Social Impact Assessment would remain relevant to the proposal, with the following potential changes:

- Potential for a reduction in negative impacts for the PSA in relation to accessibility, health and wellbeing, and surroundings (amenity), particularly for those utilising or living on Beaconsfield Road (where the previous access road was proposed for construction)
- Additional negative impacts on surroundings (amenity), community and culture as a result of clearing of nine mature trees for the proposed new north-south access road.

In summary, there are some positive social outcomes arising as a result of the north-south road (than previously assessed) due to an increased distance from residential receivers likely improving amenity, accessibility and way of life impacts. The development no longer proposes the use of Beaconsfield Road during the construction stage. It is noted there is no need for land acquisition, with the land already being reserved by Council for the purpose of a road.

However, with the proposed north south road there may be additional negative impacts on surroundings (amenity), community, and culture, as a result of the clearing of mature trees for the north-south road and potential impacts to an Aboriginal artefact. There may be potential for a reduction in negative impacts for the PSA in relation to accessibility, health and wellbeing, and surroundings (amenity), particularly for those utilising or living on Beaconsfield Road (where the previous access road was proposed) particularly during construction, as well as potential benefits to culture whereby an Aboriginal artefact may no longer be affected at the east-west road location.

It is recommended that the proposal be carefully prepared in accordance with recommendations in technical reports so as to mitigate social impacts, particularly to culture, community, and surroundings. Construction and operational noise impacts may be improved as a result of the new access road being located away from residential receivers. To mitigate impacts, the CEMP and OEMP should ensure all heavy vehicles and over-dimensional vehicle haulage routes reflect the recommendations presented in Section 4.4.1.

4.4.6 Other environmental issues

Table 4.12 summarises consideration of impacts associated with other environmental issues associated with the change to the preferred access road.

Table 4.12 Other environmental issues

Environment issue	Impact
Waste management	The change to the preferred access road would not result in any significant change to the type or quantities of wastes expected to be generated during construction. There would be no change to operational waste stream types or quantities.
Soils and water	The change to the preferred access road would not lead to any significant increase in the risk of erosion or sedimentation during construction. Appropriate management measures would be adopted during construction.
Air quality and odour	The change to the preferred access road would not result in any significant change to the potential for dust impacts during construction. There would be no change to operational air or odour emissions as a result of the change.
Hazards and fire risks	The change to the preferred access road would not result in any increase to dangerous or hazardous materials handled or stored at the facility. There would be no change in the fire safety considerations of the proposal.

Environment issue	Impact
Urban design and visual	There would be no significant change to landscape character or visual impacts as a result of the change to the preferred access road.
Greenhouse gas	There would be negligible changes to greenhouse gas emissions as a result of the change to the preferred access road.
Non-Aboriginal cultural heritage	There would be negligible changes to potential non-Aboriginal cultural heritage impacts as a result of the change to the preferred access road.

5. Response to stakeholder submissions

5.1 Department of Planning and Environment

In this section, each issue is stated exactly as it appears in the submission. The responses provided to each issue have been prepared by GHD, on behalf of Plasrefine Recycling.

5.1.1 Social impact assessment

Issue

The Department received over 300 submissions during exhibition of the EIS for the development. Many of these submissions raised concern about the social impacts of the development. Please provide a more detailed Social Impact Assessment to address community concerns.

Response

Section 18 of the EIS contained an analysis of socio-economic matters including an assessment of the existing environment, impact assessment during construction and operation and mitigation measures. A SIA has since been prepared by Ethos Urban in accordance with the 'Social Impact Assessment Guideline for State Significant Projects' (DPIE, 2021g) and is appended to this report (Appendix D). A summary of the findings of the SIA can be found in Section 4.3.

A supplementary social impact assessment has also been prepared by Ethos Urban to consider potential impacts associated with the change to the preferred access. This is also provided in Appendix D.

5.1.2 Access road

Issue

Please provide additional design detail for the proposed access road, particularly the intersection treatment for the intersection with Lackey Road. The design will need to include all road infrastructure improvements required and demonstrate the proposed vehicles can safely use the access road and intersection. Any proposed design also needs to demonstrate the relevant roads authority is satisfied with the proposed design.

Response

The preferred access is now via new north-south public access road which would comprise part of the currently unformed Braddon Road (paper road) and a new constructed north-south road, connecting with an existing gravel road off Collins Road, which is part of Council's proposed future Enterprise Zone Road.

Further detail including the proposed design for this road is provided in Section 4.1.2. The proposed new north-south public access road has been designed in accordance with Austroads standards. A layout plan showing the alignment of the road and some engineering details has been provided to Wingecarribee Shire Council for comment. Assessment of the potential impacts associated with the change to the preferred access road is provided in Section 4.4.

Notwithstanding that the preferred access has now changed, for completeness, responses to issues raised in submissions relating to the previously proposed east-west public access road have been provided in Appendix M.

Issue

Alternate access options, such as a potential route from the North of the site, could be considered to help mitigate impacts to residential receivers.

Response

See response above.

5.1.3 General

Issue

The EIS describes the site as Lot 11 DP 1084421 with an access road traversing Lot 1 DP 26490 and Lot 10 DP 1084421. The assessed access road crosses two lots for which landowner's consent is required. In addition, it appears Lot 11 DP 108442 is not owned by Plasrefine Recycling Pty Ltd. Please provide landowner's consent for:

- Lot 11 DP 1084421 owned by The Trustee for Mr LYU Trust
- Lot 1 DP 26490 (proposed route 2b)
- Lot 10 DP 1084421 (proposed route 2a and 2b)

Response

As described in Section 4.1.2, the preferred access is now via a new north-south public access road that includes the following land:

- Part of the future Enterprise Zone Road (currently a gravel road joining the western end of Collins Road)
- Unformed paper road (unnamed) between Braddon Road and Collins Road
- Unformed paper road (Braddon Road) that bisects Lot 11 DP 1084421.

No land required for the proposed new north-south public access road is privately owned.

The site for the plastics recycling and reprocessing facility is Lot 11 DP 1084421.

Land owners consents forms part of the application.

Issue

Many submissions received by the Department were concerned that the location of the proposed development is not appropriate. Please provide further justification for the development in terms of its location and potential distance to waste providers. As part of the justification, please provide more information on where waste would be sourced from and where products would be dispatched to.

Response

Plasrefine Recycling investigated a number of potential sites from the Central Coast in the north, the Western Sydney Aerotropolis in western Sydney, to the Southern Highlands in the south. Land on the Central Coast and in Sydney was considered unsuitable due to its zoning, size, topography, or other factors such as the uncertainty at the time about potential land use restrictions within the Aerotropolis.

Sorting and reprocessing of mixed plastics requires large buildings because of the linear nature of the equipment and material flows. Since articulated vehicles such as semi-trailers are expected to deliver raw material and collect finished products, large turning radii are required for roads servicing the facility.

This means that the site needs to be wide and that such vehicles ideally need to travel around the outside of large wide buildings and potentially in one direction around the main building, rather than having to do a U turn within the site. There is also a need for a weighbridge prior to the material delivery area and a second weighbridge to weigh products leaving the site. This means that the site needs to be quite deep as well as wide.

The 'Southern Highlands Destination Strategy' released by Council in November 2020 provides:

> *The Southern Highlands has a number of key economic strengths:*
>
> ***Strategic location**: the Southern Highlands region provides proximity to Sydney, Canberra, Wollongong and the new Western Sydney Airport and Aerotropolis. The area has good transport access in and out of the region through the Hume and Illawarra Highways and fixed rail.*
>
> ***Southern Highlands Innovation Park:** provides a unique opportunity for large scale industrial development conveniently close to Sydney, and good distribution to most of the country. The Moss Vale Enterprise Corridor (MVEC) and adjacent industrial zoned land total 1,023 hectares, with a vacant area of 652 hectares*

Section 4.3 of the Strategy sets out 'Our Opportunities' as follows:

> *Based on the region's competitive advantages and input from stakeholders, the following future opportunities have been identified (Table 4.1). These opportunities will be pursued with respect to our sensitive environment and in the context of climate change adaptation. All of these opportunities can contribute positively to growing our economy in a sustainable manner*.

The relevant extract from Table 4.1 of the Strategy is:

Industry	***Descriptions***	***Considerations***
Advanced manufacturing	*Renewable metals/materials/ recycling/waste to energy* *Building components and construction materials* *Food and food product manufacturing* *Defence* *Other advanced manufacturing and processing*	*Southern Highlands Innovation Park* *Proximity and access to large Australian populations* *Access to Hume and Illawarra Highways* *Access to Main Southern Railway* *Direct rail connection to Port Kembla* *Opportunities to respond to the challenge of climate change*

The location of the proposal within the SHIP and proposed land use for 'recycling' and 'other advanced manufacturing and processing' aligns with Wingecarribee Shire Council's vision for the SHIP and recognises the region's competitive advantages regarding proximity and access to large Australian populations and waste feedstock.

The 'Southern Highlands Destination Strategy' prepared by Wingecarribee Shire Council (November 2020) recognises the MVEC as *"a unique opportunity for large scale industrial development conveniently close to Sydney, and good distribution to most of the country"*.

Mixed plastics would primarily be sourced from a wide geographic region including Sydney, Wollongong, Canberra and the Southern Highlands/local area. Plastics feedstock availability is discussed further in Section 9.2.3 of the EIS.

Initial processing volumes are expected to start off at moderate levels, with feedstock primarily obtained from:

- Large NSW MRFs producing baled mixed plastics that were formerly exported
- Small and medium sized processors of mixed plastics and commercial plastic waste collections.

There is considerable potential to process quantities of low-density polyethylene (LDPE), as this material is increasingly used for packaging, and there are limited facilities that can reprocess this material. The facility design already includes equipment to process this material.

The Infrastructure Needs Report (DPIE, 2021c) acknowledges a large potential domestic market for plastic products. The facility will have the capability of producing plastic pellets and flakes for domestic customers, exports, and also specific products using moulding equipment on site. The plastics recycling and reprocessing facility site is suitably zoned, industrial (IN1) and the proposed use is permissible with consent under the LEP. Searches of services through Before You Dig Australia confirm power, water and sewerage services are available in the vicinity of the proposal site or can be augmented or upgraded as part of the proposal. The environmental impacts of the proposal have been assessed as part of the EIS and further refined as part of the RTS.

The proposal would not result in any significant adverse impacts. Whilst the proposed built form would contribute to the continuing change in landscape character being experienced in the north of Moss Vale, the proposed bulk and scale is consistent with existing industrial development to the north-east and north-west of the site, within the SHIP, as shown in Figure 5.1, Figure 5.2, and Figure 5.3.

Figure 5.1 *View of development surrounding the proposal from north of Douglas Road*

Figure 5.2 *View of development north of Douglas Road and Collins Road*

Figure 5.3 View of development surrounding the proposal from north west

It is noted that since the EIS was placed on public exhibition, according to Council's online **DA Tracker**, a number of industrial development applications have been approved by Council in the vicinity of the proposal site.

In addition, an industrial development is currently under construction at 1 Red Fields Road, Moss Vale (see Figure 5.4 and Figure 5.5). It is understood this development was approved as Complying Development by a private certifier.

These recently approved Council development applications are listed in Table 5.1. These along with some of the other known existing industrial developments are shown on Figure 5.6. This demonstrates how the landscape character of the area is already starting to change.

Table 5.1 Industrial development applications recently approved by Council in proximity to the proposal site

Development application	Date of Council approval	Location	Description
DA 22/0579	8 August 2022	15 Red Fields Road, Moss Vale (Lot 5 DP 1274517)	Industrial shed and hard stand
DA 22/0324	19 February 2022	17 Red Fields Road, Moss Vale (Lot 4 DP 1274517)	Storage premises
DA 21/1042	25 February 2022	Tarcoola Park, 30 Douglas Road, Moss Value (Lot 40 DP 1189246)	Light industrial

It is noted that a development application (DA 23/0572) has also recently been lodged with Council (on 22 November 2022) for a hard-stand crane boom storage development at 5 Fields Road, Moss Vale (Lot 10 DPE 1274517). This is also indicated on Figure 5.6

Figure 5.4 ***Development under construction at No. 1 Red Fields Road, Moss Vale (view from southern side of Collins Road near Red Fields Road intersection, looking north-west. Photo taken 9 November 2022.)***

Figure 5.5 ***Development under construction at No. 1 Red Fields Road, Moss Vale (view from the road in front of No. 70 Beaconsfield Road, looking north-west. Photo taken 9 November 2022.)***

Legend

- Moss Vale Enterprise Corridor
- Cadastre
- Plastics recycling and reprocessing facility site
- DAs recently approved by Council
- DAs recently lodged with Council
- CDC recently approved by private certifier
- Existing industrial developments

Paper Size ISO A4

0 0.1 0.2 0.3 0.4

Kilometers

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

N

GHD

Plasrefine Pty Ltd
Moss Vale Plastics Recycling and Reprocessing Facility
Response to Submissions Report

Development applications recently approved and existing industrial developments

Project No. **12524108**
Revision No. **A**
Date **3/8/2023**

FIGURE 5.6

Data source: . Created by: rvillalon

Issue

An existing dam which crosses the property boundary into Lot 10 DP 1084421 is proposed to be modified. Please provide details of the proposed works to be undertaken and a dam dewatering report if required.

Response

As detailed in Section 4.1, the proposed stormwater management configuration has been revised to retain the existing dam in the north-east corner of the plastics recycling and reprocessing facility site. The updated stormwater quality strategy is presented in Appendix E. Some alteration of the existing north-western dam is proposed to the north-western embankment in order to retain the existing storage volume. The dam would be excavated early in the construction program and would operate as a construction phase erosion and sediment control basin.

It would be excavated to the level of the base of the filter media and then operate as a basin. The filter media would be installed at the final stages of construction. Minor drainage works would be undertaken to direct runoff from disturbed areas to the basin. At the point in time where the north-eastern basin alteration works occur, diversion of the eastern waterway around the basin would be temporarily undertaken and the dam dewatered. This would occur over as limited period as possible to minimise impacts on the adjacent landholder.

5.1.4 Process

Issue

The proposed development would have the capacity to accept and process up to 120,000 tpa of plastic waste. Please confirm the proposed development's maximum daily processing capacity.

Response

The maximum daily processing capacity would be 400 tonnes per day as noted in Section 9.4.1 of the EIS.

Issue

It appears all product storage would occur in building 2. Please clarify if building 1 would be used for any storage for plastic products. If so, please show on a plan.

Response

Building 1 would be used for storage of incoming feedstock material. The material would be stored in bunkers along the western side of the building as shown in Figure 5.7. Product materials including plastic flakes or pellets would also be temporarily stored in bins or bags at the end of production lines and in bunkers along the western side of the building prior to transfer to Building 2 or loading onto trucks to deliver to customers.

Semi-finished products (plastics flakes and pellets) that require no further processing would be stored in Building 1. The quantity of semi-finished materials requiring storage in Building 1 would be subject to market demand. Refer to detailed plans in Appendix F.

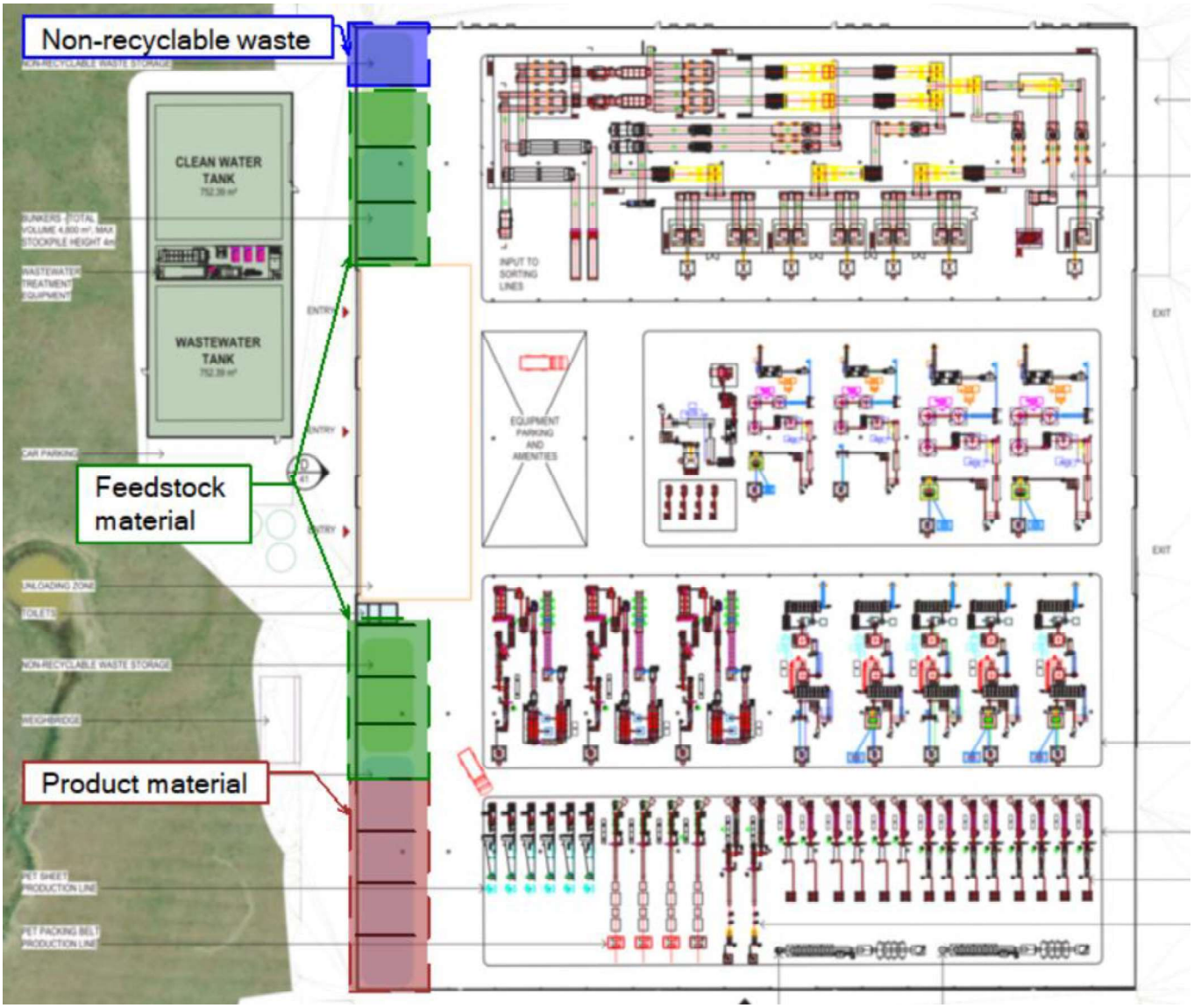


Figure 5.7 Plastic storage in Building 1

Issue

Please confirm if all plastic products would be despatched from building 2.

Response

All manufactured product storage and dispatch of manufactured product material would occur within Building 2. Plastic flakes and pellets that are not required for further processing would be dispatched from Building 1.

Issue

Please confirm approximately how many transfers of product between building 1 and building 2 would occur a day.

Response

As noted in Section 9.4.2 of the EIS, the material would be transferred to Building 2 by electric forklift or other small vehicle. This would represent up to 50 transfers per day of product material from Building 1 to Building 2.

Issue

Show on the site plan where different plastic types would be stored.

Response

The indicative plastic storage areas within Building 1 and Building 2 are shown in Figure 5.7 and Figure 5.8 within designated feedstock storage and end product storage areas. The number of bunkers required in Building 1 for temporary storage of end product (flakes and pellets) will depend upon the demand for these materials compared to the demand for final formed products manufactured in Building 2.

Bunkers may either be used for incoming material or semi-finished materials storage and there needs to be flexibility for the operator to use these designated areas as required. It has no impact on fire safety, as the assessment undertaken for the EIS assumes that all bunkers are used for storage of plastics (either raw materials or semi-finished materials such as pellets or flakes). The pellets or flakes would not be stored loose, but would be in bags, boxes or other containers suitable for transport to customers by truck. If there are too many pellets to store in Building 1, the areas shown in Building 2 would be used to store these pellets. Generally, the areas shown in Building 2 for pellets and powder would just be used for feedstock for the moulding machines in Building 2.

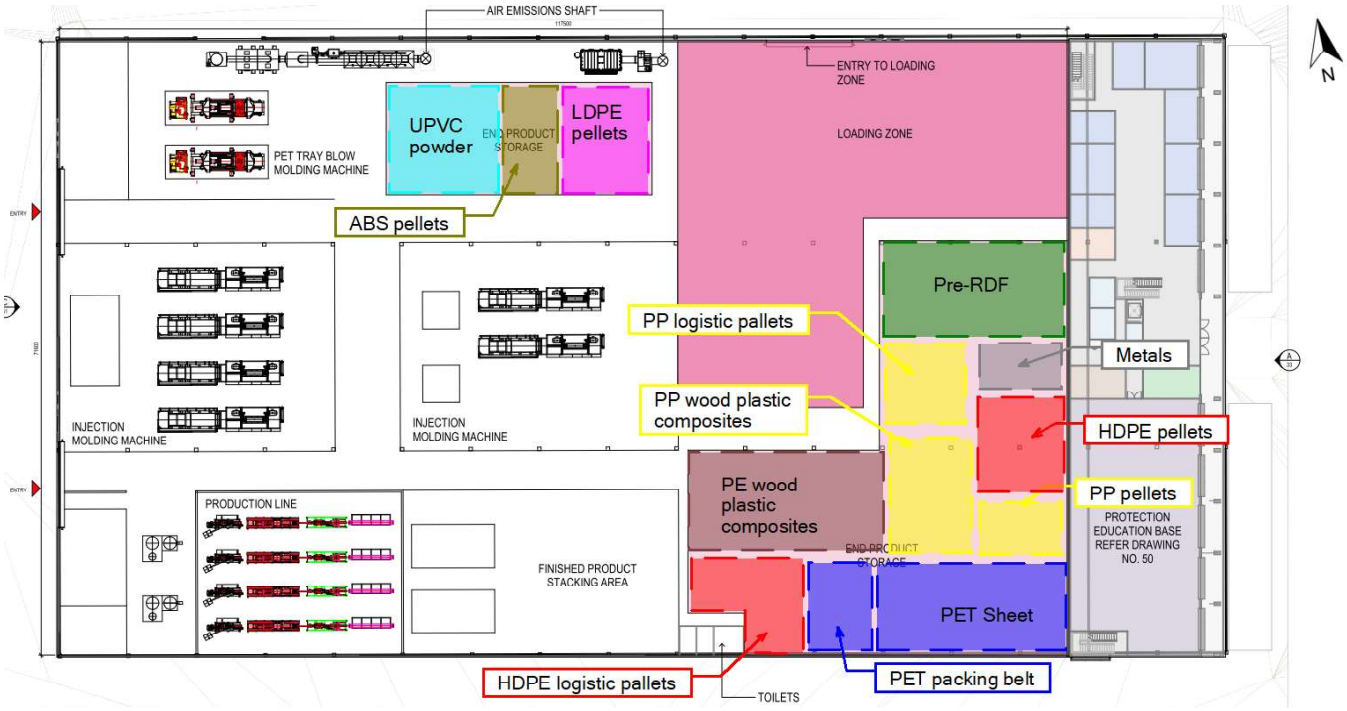


Figure 5.8 Indicative Building 2 plastic storage

Issue

Describe the product manufacturing lab.

Response

The product manufacturing lab design layout has been further developed as shown in the multi-use building floor plans, elevation plans and 3D views in Appendix F. The plans show that the lab would comprise:

- Product processing centre in the southern portion of level 1
- Material processing centre in the northern portion of level 1
- Research and development centre in the northern portion of level 2.

Issue

Provide additional process description as follows:

- Describe how the plastic is dried before granulation
- Describe the water granulation process
- How steam is generated for the steaming/disinfectant process
- What the energy source for extrusion granulation is.

Response

Further clarification is provided below on the following processes:

- Plastic drying before granulation: the plastic would be dried prior to granulation by a dehydrator that utilises non-thermal centrifugal dehydration. The dried plastic would then be transferred to bags.
- Water granulation: Following extrusion, the plastic would pass through the die head of the pelletiser. To effectively cut the plastic, the temperature would be reduced using a water ring around the pelletiser. The granular material and water would be combined with the flowing water and transferred to the dehydration equipment after cooling. The particle size would be adjusted by changing the speed of the cutter.
- Steam generation: processing steam for the disinfectant process would be generated by electrical boilers.
- The energy source for extrusion granulation would be electricity.

5.1.5 Water and wastewater

Issue

Provide justification for the expected water demand and wastewater generation for the facility and include a detailed water cycle showing a breakdown of the water demand, loss, and wastewater generation for each process and how this interacts with the wastewater treatment plant, wastewater discharge and potable water demand. The water balance is to show required flows in both periods of drought and high rainfall.

Response

An assessment of the water demand and wastewater generation for the proposal was undertaken in consultation with Wingecarribee Shire Council as part of the preparation of the EIS in 2021. The water balance assessment was presented in *Technical Report 11 – Water and Wastewater modelling*.

Following public exhibition of the EIS, Wingecarribee Shire Council indicated that it may not be able to meet the expected demand for water to supply the facility, or treat the expected amount of wastewater at its Moss Vale Wastewater Treatment Plant.

In light of Wingecarribee Shire Council's advice, an updated water balance (refer Figure 5.9) has been prepared that shows reduced water demand and wastewater disposal quantities. The previous quantities of water and wastewater that were reported in the EIS are shown in red and in brackets for comparison.

Based on updated advice from equipment suppliers, there would be a reduction in water demand for recycling and processing uses from 40.5 kilolitres per day (as outlined in the EIS) to between 5.5 and 15.5 kilolitres per day (depending upon whether it is necessary to discharge up to 10 kilolitres per day of wastewater to sewer).

This reduction in water demand occurs due to greater levels of recycling of treated wastewater to replace potable water demand, as well as less conservative assumptions about evaporation and water losses within the plant.

The onsite treatment and recycling of treated wastewater to replace potable water demand also results in a reduction in the facility's discharge to sewer from 15.8 kilolitres per day (as outlined in the EIS) to between 2.52 and 12.5 kilolitres per day maximum daily flow to sewer (based on water and sewerage needs to service 140 workers and the plant operating at full capacity). The maximum value of 12.5 kilolitres per day allows for a contingency flow of low-level industrial wastewater of up to 10 kilolitres per day (based on full capacity of 120,000 tonnes per year).

Wingecarribee Shire Council has indicated that a number of upgrades are planned for the water and sewerage system, including a major upgrade of the Moss Vale Wastewater Treatment Plant. However, if the plant is currently unable to cope with the wastewater flows associated with the proposal, (which will not be at maximum levels for a number of years), wastewater could be stored on site, and released into the sewer during the night time period when domestic flows are very low.

Alternatively, because the wastewater volumes are so low, it could be tankered to Berrima Wastewater Treatment Plant instead until the upgrades are in place. Therefore the proposal would not result in any significant impact on the water and sewerage system serving Moss Vale.

In May 2022, Wingecarribee Shire Council indicated that the data that it provided to GHD to undertake the water and sewer modelling requested by Council needed to be reviewed, and that it would provide revised data, however this is still outstanding. In June 2022, GHD provided Wingecarribee Shire Council with the updated water balance shown in Figure 5.9 which is based on the reduced flows, and awaits Council's response to the revised figures.

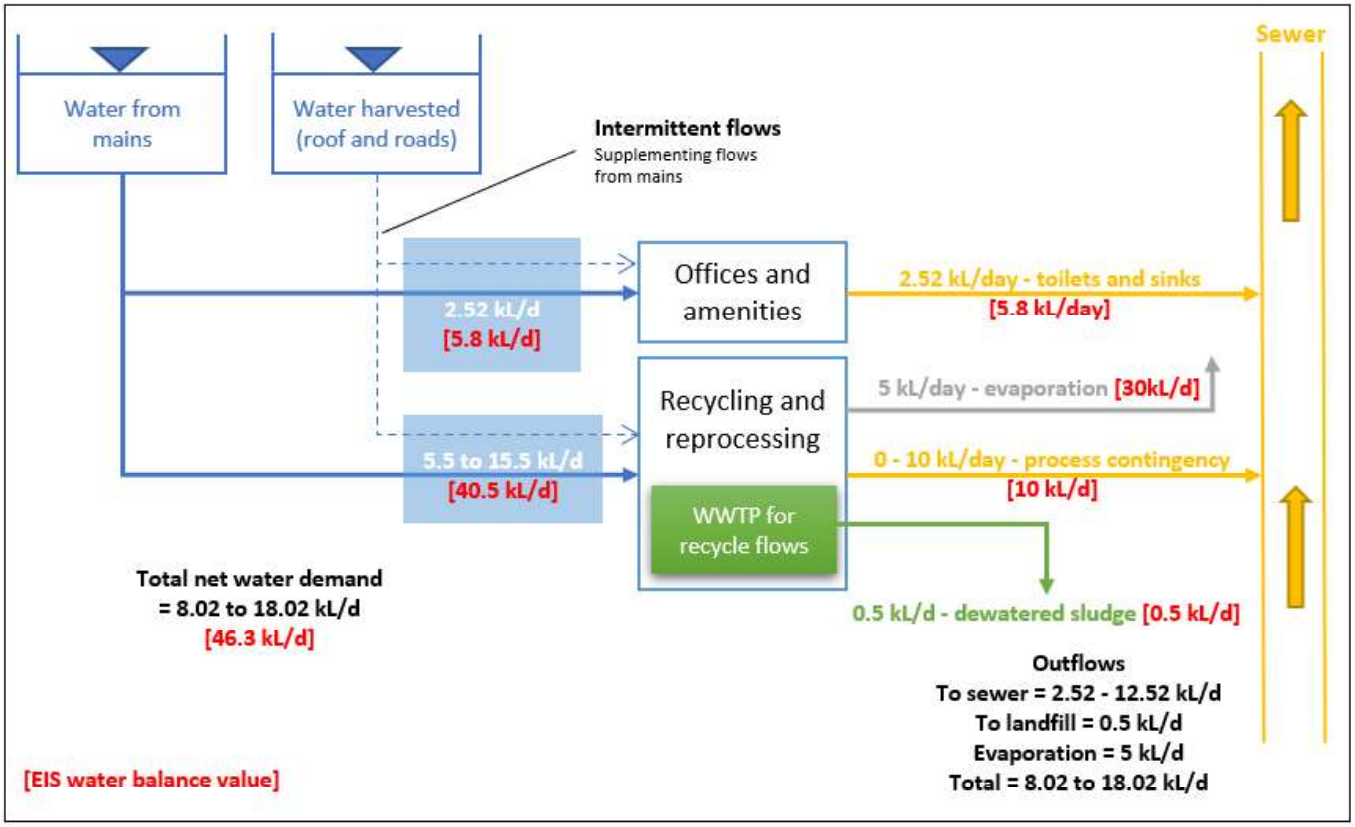


Figure 5.9 Updated water balance

Issue

The water balance shows 30 kL/d is lost to evaporation clarify at what point in the process this occurs and whether it is captured via an emission control system.

Response

Plastics would arrive at the facility pre-sorted and would then be washed during processing to remove any residues and product labels. The washing system would be fully enclosed and process steam would be condensed and reused. The updated water balance (Figure 5.9) shows that approximately 5 kilolitres per day is estimated to be lost to evaporation (30 kilolitres per day was previously assumed). This is based on additional information provided by equipment suppliers. Any steam or evaporation from the washing process would be captured by a series of air collection hoods and piped to air pollution control systems. Further information on the emissions control system is provided in Appendix J.

Issue

Confirm how frequently and how much stormwater would discharge from the site compared to predevelopment levels.

Response

As outlined in Section 4.2.1, the proposed stormwater strategy has been refined to minimise disturbance to existing overland flow paths and water storage as much as possible. The basis for the design change is provided in Appendix E.

Hydraulic modelling was undertaken for the existing predevelopment condition and proposed updated stormwater design. Figure 5.10 shows a percentile analysis for significant discharges (greater than 0.1 litres per second) from the modelled site area and equivalent modelled existing area. As is anticipated for the increase in impervious areas associated with the development, flows occur more often and at a higher rate. However, the range of flows are generally within the range also predicted to be experienced under pre-development conditions.

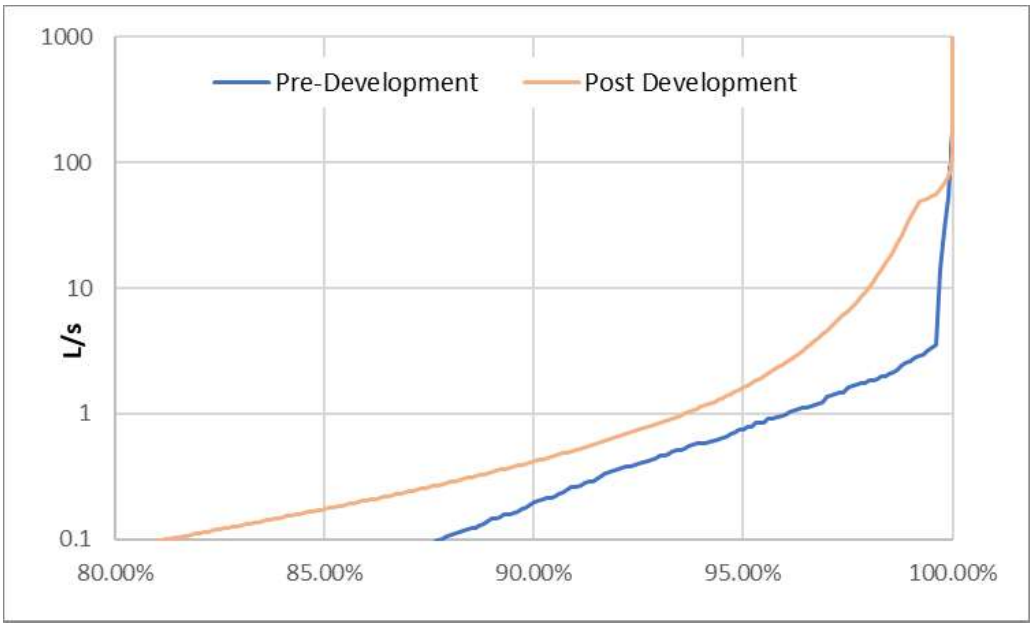


Figure 5.10 Significant stormwater discharges

Issue

The Water and Wastewater Modelling report (WWM) appears to use average flows to describe peak flows for both water consumption and wastewater discharge. Please clarify if the average flows are representative of actual expected peak flows and how this will be achieved in each case.

Response

As shown in Figure 5.9, the water balance has been updated to show a range of flows for process water requirements. For water consumption, an average flow of 2.52 kilolitres per day is assumed for the office and amenities. The estimated processing water consumption of 5.5 to 15.5 kilolitres per day corresponds to a peak net water demand of approximately 18.02 kilolitres per day.

It should also be noted that the revised flows are maximum flows (aligned with the full capacity of 120,000 tonnes per year) and are not expected within the first five years of operation.

Issue

Both the water supply and STP are stated to have limited capacity and are likely to be over capacity in the near future. Please demonstrate that the proposal will not put additional stress on over capacity water/wastewater systems.

Response

Following public exhibition of the EIS, and advice from Wingecarribee Shire Council on current water availability and demand, an updated water balance (refer Figure 5.9) has been prepared that provides an optimisation of the water management system.

The revised flows are substantially lower than those provided in the EIS. The apparent lack of wastewater treatment capacity highlighted by Wingecarribee Shire Council in its EIS submission, and in subsequent discussions with GHD and DPE has resulted in Plasrefine Recycling optimising the likely water demand and wastewater generation figures in consultation with equipment and technology suppliers, to remove significant conservatism with respect to the level of recycled water included in the previous assessment.

This should provide certainty to Wingecarribee Shire Council that the water and sewerage needs of the proposal can be accommodated at the facility and without significant impact on the existing and proposed future infrastructure assets within the local government area.

The wastewater flows in the EIS were estimated to be equivalent to 20 households, and the revised flows are equivalent to 15 households. Plasrefine Recycling understands that additional capacity will not be available until 2025-26 (although Wingecarribee Shire Council has apparently not committed to this date), and that Council does not wish to overload the current system or breach its EPA licence conditions.

Having regard to the above updated water balance and given the low flows, Plasrefine Recycling would be willing to use tankers to collect wastewater from the facility (which could be as low as 2.52 kilolitres per day on some days), and transport it to Berrima wastewater treatment plant, which does not have the same overcapacity issues as Moss Vale Wastewater Treatment Plant.

The frequency of collection would be once per day to avoid issues like gas generation from stored wastewater. Standard vacuum grease-trap trucks could be used for sewage because the anticipated flows are very low (2.32 kilolitres per day up to 10 kilolitres per day), whilst larger tanker trucks of up to 20 kilolitres capacity could be used for industrial wastewater (up to 10 kilolitres per day) removal on an as required basis.

5.1.6 Traffic

Issue

Provide a break-down of the heavy vehicle traffic trip generation by hour showing whether trucks are bringing in waste or picking up product. Describe how incoming heavy vehicles would be scheduled across the day and the expected tonnage of each vehicle.

Response

The expected tonnage for incoming delivery vehicles and outgoing despatch vehicles is 20 tonnes per vehicle. Truck movements would be between 7:00 am and 6:00 pm Monday to Friday only. During this period, each hour there would be an average of two delivery and two despatch trucks. Where possible, heavy vehicles would be scheduled for an even distribution across the 11 hour period.

For the purpose of the traffic and transport assessment, the peak number of vehicles was assumed to be ten percent of heavy vehicles. Based on this, five heavy vehicles per hour would enter the facility during AM and PM peaks (one hour duration) delivering plastics and five heavy vehicles would exit the facility during these times. The distribution of heavy vehicles accessing the facility during peak operating capacity are shown in Figure 5.11.

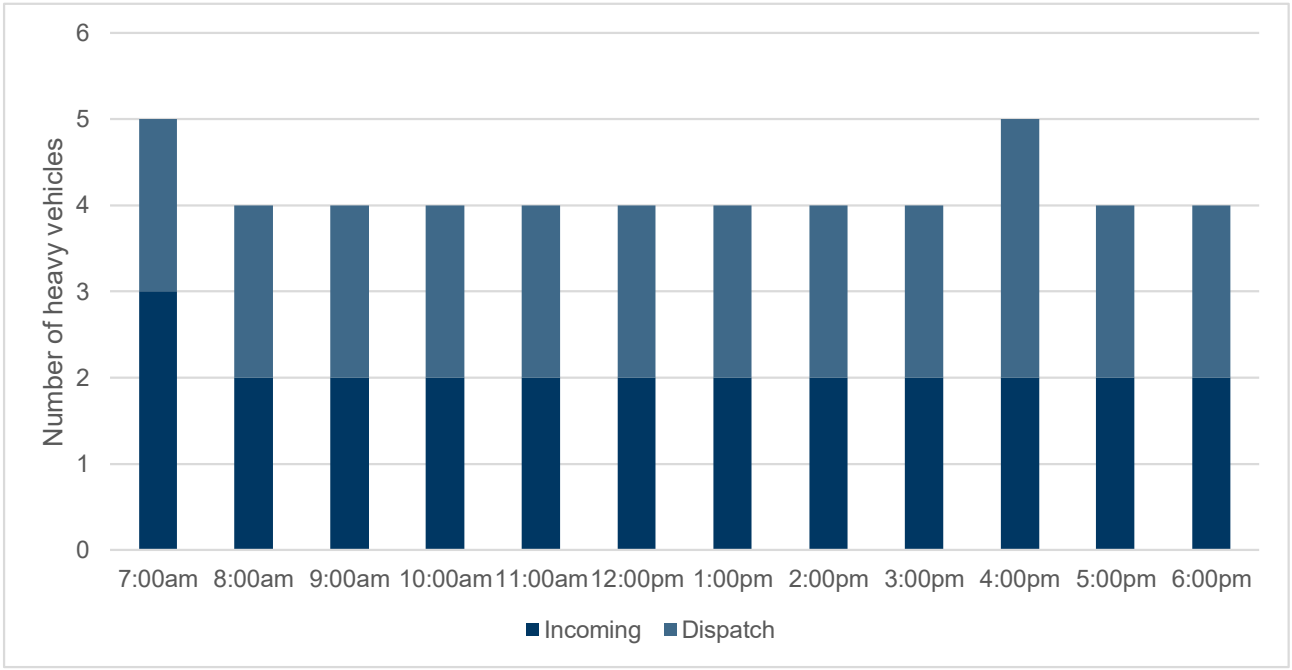


Figure 5.11 Expected distribution of number of heavy vehicles per hour accessing the facility

Issue

The Traffic and Transport assessment is based on the assumption that all heavy vehicles delivering to the site would be 20 tonnes. Please advise how this would be enforced.

Response

An average weight per vehicle of 20 tonnes was used for the purpose of the traffic and transport assessment. Based on the standard configuration of semi trailers, payload limits and typical bale dimensions and density, this tonnage per vehicle is expected to be a conservative estimate.

Since a semi-trailer can typically carry more than 30 tonnes, it is more likely that heavier vehicles rather than lighter vehicles would be used to improve transport efficiencies. This may result in less vehicle movements than currently estimated. The total number of heavy vehicles would not exceed 50 trucks per day, because of logistical issues in unloading vehicles at the facility (there being two unloading bays).

All delivery vehicles would enter the facility through the weighbridge and the weight would be recorded for tracking purposes.

Issue

The identified transport route crosses the railway line at the northern end of Berrima Road. Please assess the potential impact at this railway crossing.

Response

As a result of the change to the preferred access road (refer Section 4.1), the revised heavy vehicle route (for both construction and operation) would be via Hume Highway (M31), Berrima Road, Innes Road (Garrett Street), Lackey Road, Collins Road and then the new north-south public access road. This is shown on Figure 4.4.

The revised transport route would also include vehicles crossing the railway crossing at Berrima Road near Taylor Road. Based on the 'Berrima Rail Upgrade Project EIS Traffic Impact Assessment Report' (Hume Coal Pty Ltd, 2017), the Berrima Branch Line has a practical capacity of around 44 train movements each day (approximately 22 in each direction), including all freight train and light loco (locomotive only) movements.

The maximum usage of the Berrima Branch Line associated with the existing users of the line is 120 train movements per week, with up to 26 train movements daily (both ways). The existing and future daily operation of the Berrima Branch Line train movement is outlined in Table 5.2.

Table 5.2 Existing and future train movements – Berrima Branch Line

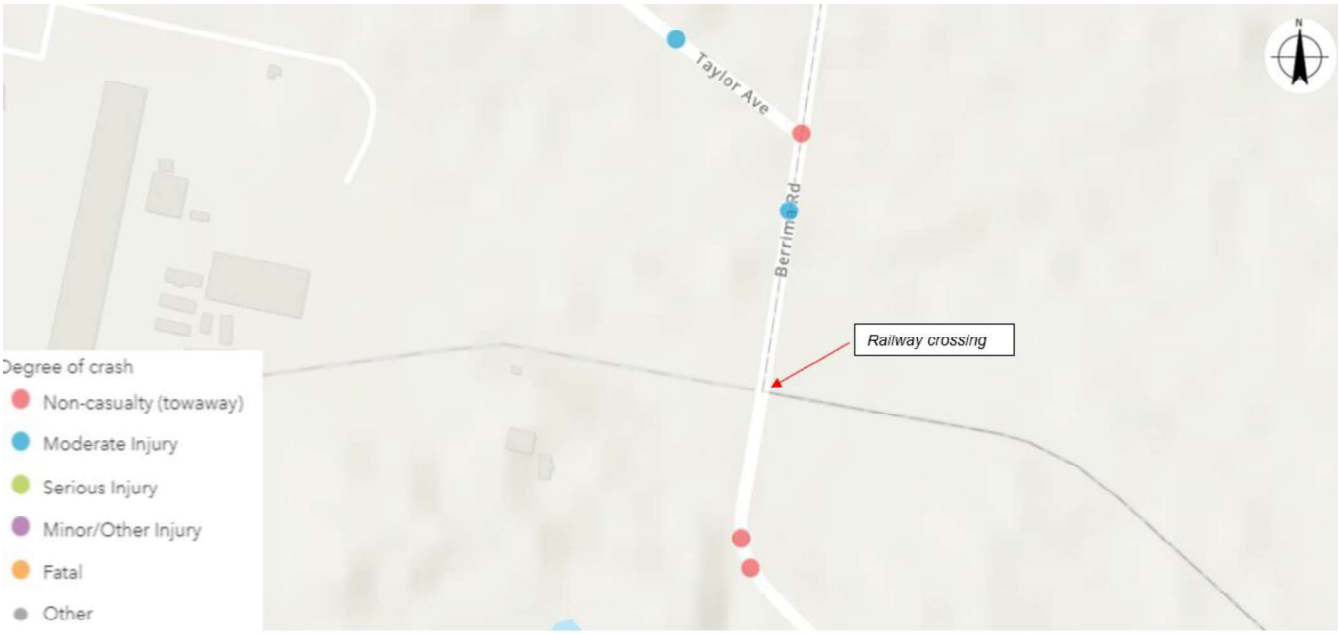
Line operation	Daily train movements (both ways)
Daily maximum operations (existing users)	26
Future daily maximum operations (existing users and Hume Coal)	34

Source: Berrima Rail Upgrade Project EIS Traffic Impact Assessment Report (Hume Coal Pty Ltd 2017)

The 'Berrima Rail Upgrade Project EIS Traffic Impact Assessment Report' (Hume Coal Pty Ltd, 2017) identifies that *"both the train and the road traffic speeds at this level crossing* [the Berrima Road crossing east of the Berrima Cement Works] *are relatively low, so there is minimal public safety risk"*. It is noted that the Hume Coal project was not approved, so the existing number of heavy vehicle movements would be 26 per day.

The impact of the proposal at the railway crossing is expected to be limited due to the number of construction vehicles (30 light and 2 heavy vehicles during the peak hour period), operational vehicles (60 light and 10 heavy vehicles during peak period) and low frequency of train movements. In addition, Berrima Road is an approved Performance Based Standards (PBS) heavy vehicle route.

A review of the crash data at Berrima Road railway crossing, obtained from the ***Centre for Road Safety website*** (Transport for NSW, 2022) for the five year period between 2016 and 2020 indicates that no crashes have occurred at this location, as shown in Figure 5.12.



Source: Crash Data (TfNSW, 2021) – modified by GHD

Figure 5.12 Crash at railway crossing

Therefore, the impact of railway crossing on construction routes is expected to be minimal. Appropriate safety measures and traffic management plans would be prepared prior to construction works to identify risk areas and eliminate or minimise the risks of rail and vehicle collisions during construction.

Issue

Justify the assumed trip distribution where 60% of the trucks would come from and leave to the south.

Response

As a result of the change to the preferred access road (refer Section 4.1), the revised heavy vehicle route (for both construction and operation) would be via Hume Highway (M31), Berrima Road, Innes Road (Garrett Street), Lackey Road, Collins Road and then the new north-south public access road. This is shown on Figure 4.4. All heavy vehicles would follow this route.

5.1.7 Noise

Issue

Justify the use of the chosen noise model for traffic noise as it does not discern the difference between a small and large truck and does not include the effects of acceleration and engine compression braking.

Response

The use of the Calculation of Road Traffic Noise (CoRTN) method is considered conservative as the calculated noise levels would slightly overpredict alternative algorithms (e.g. TNM or CNOSSOS-EU) as CoRTN does not discern the differences between a small and a large truck and assumes all trucks are large trucks.

It should also be noted that the highest road traffic noise level from cars and trucks using the previously proposed east-west public access road was predicted to be 48 dBA at 79 Beaconsfield Road (R018) compared to the RNP criteria of 55 dBA during the day period. This indicates there is sufficient difference between the predicted results and the criteria that would allow for discrepancies between alternative road traffic noise modelling algorithms. It is noted that Beaconsfield Road would no longer be required as a result of the change to the preferred access.

Truck drivers would be advised in the OEMP to avoid the use of air and engine brakes as well as keeping engine revolutions per minute to a minimum and complying with the site speed limits to limit the noise effects of acceleration.

Issue

Please clarify how many trucks have been modelled onsite at any one time and demonstrate compliance with the numbers predicted by the traffic assessment.

Response

An average of two delivery and two despatch trucks have been modelled on-site per hour.

However, to allow for peak AM and PM delivery and dispatch times, five trucks have been modelled on-site at any one time, which is consistent with *Technical Report 6 – Traffic and Transport* that states:

"During operation at full capacity (not expected to be reached for many years), the daily number of heavy vehicles associated with the proposal would be approximately:

- 40 to 50 trucks per day delivering and exporting plastics
- Waste acceptance would only occur Monday to Friday between 7:00 am and 6:00 pm"

and

"It was assumed ten percent of heavy vehicles (five heavy vehicles) would enter the site during AM delivering plastics and five heavy vehicles will exit the site. This is equivalent to approximately the average distribution of daily traffic over the operational period (11 hours)."

Figure 5.11 provides a breakdown of the planned number of heavy vehicles per hour.

The number of truck movements assumed per hour does not represent the maximum number of trucks to achieve compliance with the relevant noise criteria. Although not proposed for the frequency of truck movements to and from the site, a doubling of the assumed truck movements (i.e. 10 in, 10 out) would still result in compliance with the relevant noise criteria during the Noise Policy for Industry (NPfI) day period.

Issue

Please provide contingency measures for night-time noise given it is predicted to be at the noise trigger level.

Response

The noise modelling shows that the predicted noise level at the most-affected receiver (R160 – 50a Bulwer Road) is predicted to be at the noise trigger level of 35 dBA. This is considered conservative as it assumes:

- Worst-case noise-generating operating conditions at the site
- Worst case source to receiver noise-enhancing meteorological conditions.

The use of a less conservative prediction algorithm (ISO 9613-2 at R160) results in a predicted noise level of 32 dBA, which is well under the noise trigger level).

During the night period, the dominant noise sources at the most-affected receiver (R160) are predicted to originate from the following noise-generating components:

1. Break-out noise from the Building 1 roof
2. Building 2 stacks
3. Break-out noise from the Building 1 walls
4. Building 1 stacks.

Further noise modelling of the internal areas of the facility would be undertaken during detailed design to confirm compliance with the project noise trigger levels at sensitive receivers, with special consideration to low-frequency noise. This would include specifying the sound reduction requirements for building components to reduce break out noise from the buildings.

If there is the potential for low frequency noise, the sound power level of the Building 1 and Building 2 stacks would also be designed to a level 5 dB below the assumed sound power level to ensure that no low-frequency characteristics would be experienced at the most-affected receivers.

Issue

Provide more information to demonstrate the internal noise level would remain below 85 dBA, including mobile plant.

Response

A conservative assumption was made for the EIS that the internal noise levels within Building 1 would be a maximum of sound pressure level of 85 dBA. This noise level is set as a level in industrial workplaces where hearing protection is required. In reality, the nature of the proposed operations (sorting and processing plastics) is such that noise levels in all areas are unlikely to be at this level. However, at this stage of design and equipment selection, it is standard practice to assume this maximum noise level, given the number of motors, conveyors and sorting equipment and complexity of considering each noise source.

Noise modelling of the internal areas of the facility would be undertaken during detailed design to confirm compliance with the project noise trigger levels at sensitive receivers and would be based on manufacturer noise data, when available. The aim of the detailed design noise modelling would be to design internal noise levels to be at a level below 85 dBA at the ground level of building 1 where noise levels would be even lower at a high level (i.e. at the metal cladding façade and at the roof of the building) as noise energy reduces with distance from the noise generating equipment.

During detailed design, the following would occur:

- Low noise generating equipment (e.g. sorting and washing equipment) would be selected to ensure internal noise levels are below 85 dBA at 1 metre from equipment; and
- Where this cannot be achieved by equipment selection alone, high-noise generating equipment (i.e. crushing and cutting equipment) would be enclosed (e.g. rock wool sandwich panel enclosures) to ensure noise levels outside of the enclosure do not exceed 85 dBA.
- Should the internal noise modelling indicate that a sound pressure level of $L_{Aeq(15min)}$ 85 dBA cannot be reasonably or feasibly achieved at ground level of the building, additional façade treatments for the building/s would be required to ensure the project noise trigger levels can be met at sensitive receivers.

Issue

The design is high level and as such predictions are based on certain assumptions. Please provide greater detail about the façade construction which will be required to meet a specific noise reduction performance.

Response

Assumptions regarding building breakout noise from Building 1, Building 2 and the wastewater treatment plant (WWTP) are described in detail in Appendix F of the *Technical Report 2 – Noise and Vibration*.

Building 1 and Building 2 would be constructed of precast concrete to approximately three metres above ground and would be metal cladded above this level. Walls of the WWTP would be constructed entirely of precast concrete. The roof of each building has been assumed as a metal profile with internal plasterboard ceiling (R_w 42)

Alternate construction materials may be used for the final architectural design given they achieve the sound reduction indices (R_w) performance presented in Table 5.3 or perform better.

Table 5.3 Sound reduction indices (R_w) of building components

Building	Component	Type	R_w
Building 1 and Building 2	Walls	Concrete panel (low level)	47
		Corrugated metal wall cladding with internal cladding (high level)	33
	Roof	Metal profile roof with internal plasterboard ceiling	42
	Windows	Single glazing (6 mm thick)	29
	Roller door	0.6 mm thick steel	21
	Louvres	Acran 200 acoustic louvres or equivalent	17

Building	Component	Type	R_w
WWTP	Walls	Concrete panel	47
	Roof	Metal profile roof with internal plasterboard ceiling	42
	Roller door	0.6 mm thick steel	21
	Louvres	Acran 200 acoustic louvres or equivalent	17

A detailed design noise assessment would be undertaken once all equipment has been selected and the architectural design has been finalised, to ensure that the building is designed and constructed to meet the environmental noise trigger levels at the nearest receivers. Note should be made that the assumed sound reduction performance of the building components are subject to change based on the outcomes of the detailed design noise modelling.

Issue

The NIA appears to assess traffic noise with a maximum of 5 trucks in a peak hour period. Please provide justification for this peak movement rate including a breakdown of all expected truck movements throughout the day.

Response

It is standard practice in traffic modelling to assume that the peak movements are ten percent of the total daily heavy vehicles. In this case, with 50 heavy vehicles per day predicted at the maximum throughput (120,000 tpa), this means that five heavy vehicles would enter and exit the facility during the peak AM period delivering plastics and five heavy vehicles would enter and exit the facility during the peak PM period. However heavy vehicles would be scheduled to arrive and leave evenly across the 11 hour period nominated for truck movements (7:00 am to 6:00 pm on weekdays, no weekends or outside these hours), and would not be concentrated in the AM and PM peak periods. As noted above, even a doubling of the assumed truck movements (ie. 10 in, 10 out) is predicted to result in compliance with the relevant noise criteria during the NPfI day period.

Issue

Table 5.13 of the NIA provides source heights for vehicle noise generation. Please clarify if the elevation of the access road has been considered in the modelling.

Response

The elevation of the previously proposed new east-west public access road was considered in the noise modelling and assumed that the road follows the existing topography at the proposal site. The existing topography between the Lackey Road access point and the plastics recycling and reprocessing facility site along the previously proposed new east-west public access road has a maximum grade of approximately 15%.

Along these sections of road, a CoRTN correction of up to 5 dB was included (compared to the sections of road that are flat). This is considered a conservative approach as the grade of the access road would have likely needed to be reduced for functional and engineering purposes to be considered during the design development process.

It is noted, as discussed in Section 4.4.2, that the change to the preferred access would result in better noise outcomes along the north-south public access road compared to the previously proposed east-west road option. This is because:

- During construction the nearest residences would be now more than 200 metres away compared to 100 metres away for the previously proposed east-west public access road.
- During operation, the now proposed north-south access road would be further away from the nearest residences to the east and the south of the facility.

Issue

Table 5.13 of the NIA states that traffic speeds with be 25 km/hr, adding that this is conservative. Please provide the expected speed limit of the proposed access road and justification for the modelled speed limit for both trucks and light vehicles.

Response

The modelled speeds for the vehicles in the NIA were:

- 50 km/h for the previously proposed east-west access road between Lackey Road and the facility (incorrectly stated as 25 km/h in Table 5.13 of the NIA)
- 25 km/h for internal roads within the plastic recycling and reprocessing facility site.

The expected speed limit of the proposed access road (during the interim period where only Plasrefine Recycling would utilise this road) is 50 km/h. The expected speed limit within the plastic recycling and reprocessing facility site is 25 km/h for both heavy and light vehicles.

5.1.8 Air Quality

An Air Quality Response to Submissions Letter ('the AQ RTS Letter') has been developed, which provides detailed responses to significant issues raised in submissions. The AQ RTS Letter is provided as Appendix J of this report.

Issue

Explain how the emission control systems (ECS) would operate and which process they would be attached to.

Response

This item is addressed in Sections 3.1 and 3.2 of the AQ RTS Letter (Appendix J). Table 5.4 provides a summary of building areas, relevant processes, associated air pollution control (APC) systems and APC flow rates.

Table 5.4 Overview of controlled emissions

Building	Process	Extracted to APC	Design APC treatment volume
Building 1 Zone 1	PET sheet production line	APC1	50,000 m³/hr
	PET packing belt production line		
	ABS double stage brace granulation		
Building 1 Zone 2	HDPE single stage water ring granulation	APC2	50,000 m³/hr
	PP single stage underwater granulation		
Building 2	PET tray blow moulding machine	APC3	50,000 m³/hr
	Injection moulding machine		
Building 2	PE wood plastic floor production line	APC4	40,000 m³/hr

Issue

Show the ECS on the site plan.

Response

This item is addressed in Section 3.1 of the AQ RtS Letter (Appendix J).

Issue

Provide the modelled cumulative impacts as well as incremental for PM_{10} and $PM_{2.5}$.

Response

This item is addressed in Section 5 of the AQ RtS Letter (Appendix J). Whilst the incremental impact assessment presented in *Technical Report 3 - Air Quality and Odour* used a full five years of meteorological data (2016-2020), the cumulative impact assessment has been completed for a two-year model period (2017, 2018). The two-year period represented a period where PM monitoring data were available from the nearest station at Goulburn, and one where PM measurements were not influenced by elevated bushfire activity, such as they were during 2019 and the start of 2020. Completing a cumulative impact assessment for a period of two years is more than the

required one year period and increases the number of meteorological and background air quality conditions which are considered.

A quantitative air quality assessment has been undertaken as part of the RTS report and the impact assessment results are shown in Table 5.5 to Table 5.8. The results show that no exceedances of the criterion are predicted for the closest residential receptor (on Beaconsfield Road). Exceedances of the PM_{10} and $PM_{2.5}$ criterion are predicted at the closest commercial receptor (Australian Bioresources) on days, when background concentrations are unusually high, due to bushfires or other similar sources such as backburning. However, elevated background concentrations would not coincide with elevated incremental concentrations from the operation of the proposal, and as such the risk of proposal emissions leading to additional exceedances of the criteria would be low.

In addition, ambient 24-hour $PM_{2.5}$ concentrations in the Moss Vale locality already exceed the criteria at times due to external factors such as bushfires. It is expected that employees or laboratory mice at Australian Bioresources would ordinarily spend the majority of time in controlled air conditioned environments, and would therefore not be exposed to external, elevated air pollutant concentrations.

Table 5.5 Annual average $PM_{2.5}$ impacts

Most affected receptor	Predicted ground level concentration (µg/m³)		
	Background	Increment	Total impact
Commercial	6.4	1.8	8.2
Residential	6.4	0.5	6.9

Table 5.6 24-hour average $PM_{2.5}$ impacts

Most affected receptor	Predicted ground level concentration (µg/m³)		
	Background	Increment	Total impact
Commercial	24.5	4.6	29.1
Residential	24.5	0.0	24.5

Table 5.7 Annual average PM_{10} impacts

Most affected receptor	Predicted ground level concentration (µg/m³)		
	Background	Increment	Total impact
Commercial	15.1	1.8	16.9
Residential	15.1	0.5	15.6

Table 5.8 24-hour average PM_{10} impacts

Most affected receptor	Predicted ground level concentration (µg/m³)		
	Background	Increment	Total impact
Commercial	47.7	4.2	51.9
Residential	49	0	49

Issue

It would appear there is potential for odour emissions from the residual waste in the plastic containers and sludge handling at the wastewater treatment plant. Please undertake an odour impact assessment in accordance with the SEARs.

Response

An odour assessment was undertaken, and potential odour impacts from VOCs, raw material and the wastewater treatment plant and sludge handling are discussed in Section 6 of the AQ RTS Letter (Appendix J). The findings are consistent with the Air Quality and Odour assessment in the EIS (Technical Report 3). The proposal has numerous best practice pollution and odour controls and odour impacts are not anticipated. This item is addressed.

Issue

Section 5.3.3 of the Air Quality and Odour report (AQOR) states that 'The majority of residential receptors are to the south of the proposal with the closest located to the southeast. The wind rose presented in Figure 4.2 shows winds in the direction of these receivers, from the northwest, are rare.' The wind roses show significant wind from the northeast and west. Please clarify the likely impacts of these winds on residential receptors.

Response

The closest cluster of residential receptors are to the southeast of the proposal. There is a low frequency of winds from the northwest which would place these receptors downwind of emissions from the proposal.

Winds are more frequent from the northeast, which are winds placing receptors southwest of the proposal downwind. The nearest receptor southwest of the proposal is approximately 100 metres further away from the proposal than the nearest receptor southeast of the proposal. Therefore, the odour risk is not considered any higher at receptors southwest of the proposal than southeast of the proposal.

Issue

The AQOR assesses impacts on the assumption that maximum *Protection of the Environment Operations Act* emission limits are achieved. Please justify this assumption and provide expected emission data from each process.

Response

This item is addressed in Section 3.3 of the AQ RTS Letter (Appendix J). As outlined in the NSW EPA (2016) Approved Methods, *"design specifications can be used to estimate the emission rate of air pollutants from proposed sources"*. Further, the Approved Methods states that *"such specifications provide a reliable means of determining the upper limit to the emission rate or concentration of air pollutants for sources that are maintained and operated in a proper and efficient manner."*

Plasrefine Recycling has been in discussions with various pollution control system providers, but has not yet formally engaged a provider and therefore cannot provide manufacturer guarantees.

However, based on expected emission levels, compliance with the NSW POEO Clean Air Regulation and protection of the local air quality environment, Plasrefine Recycling has established the design specifications outlined in Table 5.9.

Table 5.9 APC system design specifications

Discharge point	Pollutant	Design specification concentration (mg/Nm³, 273K, 1 atm)
APC1, APC2, APC3	Total volatile organic compounds	20
	Benzene	0.8
	Toluene	5
	Styrene	5
APC4	Total particulate matter	20

It is noted that the design specifications as summarised in Table 5.9 comply with the relevant or most representative NSW POEO Clean Air Regulation Standards of concentration including:

- For total particulate matter: General activities and plant (group 6): Solid particles (total) – Any crushing, grinding, separating, or material handling activity – 20 mg PM/Nm³
- For total volatile organic compounds: Afterburners, flares, and vapour recovery units – Vapour recovery units and other non-thermal treatment plant (group 6): Volatile organic compounds (VOCs), as n-propane – Any vapour recovery unit treating air impurities that originate from material containing any principal toxic air pollutant - 20 mg VOC/Nm³.

Plasrefine Recycling is committed to using best available technology at this facility and equipment selected would ensure that emissions meet relevant NSW limits or better. Some further detail on proposed air pollution control devices has been provided in Appendix J.

Issue

The AQOR states that 'The modelling assessment included emissions from the four air pollution control system stacks only'. Please include all potential sources of emissions or provide justification for the limited modelling.

Response

Modelling was completed for all point air discharges in *Technical Report 3 – Air Quality and Odour.* Fugitive emissions of modelled air pollutants (PM, VOCs) are not expected to be significant, as emissions are extracted from the point of emission to an air pollution control system.

Issue

The cumulative assessment within the AQOR utilises data from Bargo (~39 km away) despite a number of local pollution sources being identified. Please justify the use of data from Bargo or assess the likely cumulative impact with consideration to the local pollution sources.

Response

The reference to the Bargo monitoring station is an error in labelling only. The background air quality data used in *Technical Report 3 – Air Quality and Odour* are from Goulburn.

As summarised in Technical Report 3, the identified local emissions sources would not lead to any increased risk of cumulative impact at the sensitive receptor locations.

5.1.9 Plans

Issue

Please provide the following additional plans:

- A cut and fill plan
- A final contour plan
- Individual drawings of the proposed plant
- Details of the administration building, offices, and lab
- The layout of the wastewater treatment building.

Please label all equipment on the site plan.

Response

The following additional plans have been provided in Appendix F:

- Preliminary cut and fill plan and contour plan
- Floor plans, elevation plans and 3D views of the administration building and multi-use building
- Floor plan for the wastewater treatment building that shows the equipment layout
- Floor plans for Building 1 and Building 2 that show additional equipment labels.

In addition, labelled drawings of the air pollution control devices have been provided in Appendix J.

5.1.10 Waste

Issue

Provide the site's total waste storage capacity in tonnes as well as a tonnage per bunker.

Response

As discussed in Section 9.4.1 of the EIS, the maximum waste storage capacity in Building 1 is a total of 4,800 cubic metres. The feedstock material would be stored within bunkers with a maximum height of four metres. This equates to approximately three days of storage capacity. This would allow for a maximum total storage capacity of 1,200 tonnes and maximum bunker capacity of approximately 100 tonnes each.

Issue

The process to produce refuse derived fuel (RDF) is unclear. Please clarify, if waste would be sent for further processing into RDF or if it will be sold as RDF. If RDF is proposed to be produced on site, the NSW Energy from Waste Policy Statement and associated guidelines are to be addressed.

Response

Waste would be sent off site to licenced waste facilities. It has the potential to be processed into RDF but this would not occur on site, and would require a third party to undertake this, RDF production is outside the scope of this proposal.

Issue

Please advise how much RDF would be produced and clarify if the 15,000 tonnes of RDF referred to in Table 7.2 is additional to the 9,000 tonnes included in Table 7.3.

Response

At a maximum throughput of 120,000 tonnes per year, an estimated 15,000 tonnes of material contained within the incoming plastic would be unsuitable for further processing. This material, called pre-RDF material in the EIS, would be sent off site to licenced waste facilities. It has the potential to be processed into RDF. An additional 9,000 tonnes would comprise filter cake reside from the wastewater treatment plant. This would contain approximately 40% water, therefore the RDF material from the filter cake residue would be approximately 5,400 tonnes.

Issue

Show on the site plan where the RDF would be stored.

Response

Refer Figure 5.7 and Figure 5.8, for indicative proposed pre-RDF storage area.

Issue

Show on the site plan where the process residues would be stored and explain how they are removed offsite.

Response

Process residues from sorting activities would be temporarily stored in the waste bunkers in Building 1 as shown in Figure 5.7. Residual waste from the wastewater treatment plant would be temporarily stored in the wastewater treatment building within the equipment area. The residues would be transported off site by trucks for disposal or further processing at an appropriately licensed facility.

Issue

Show on the site plan where staff generated waste will be stored.

Response

Staff generated waste would be stored in mobile garbage bins located outside the administrative buildings as shown in Figure 5.13. The waste storage areas are located near building exits to minimise transfer distance and would be accessible to waste collection vehicles. The exact location of the waste storage areas would be confirmed during detailed design.

Figure 5.13 Indicative waste storage area for staff generated waste

Issue

Provide contingency measures for plant breakdown given the limited onsite storage.

Response

In the event that there is an extended plant breakdown that exceeds the three days of maximum storage capacity allowed in the proposed design, Plasrefine Recycling would stop accepting further delivery trucks to the facility.

5.1.11 Visual

Issue

Please provide further justification regarding the proposed bulk and scale of the development given the concerns raised by the general public during the exhibition period. This justification should also clearly demonstrate that design variations have been considered with respect to the height and bulk of the development, particularly the 18 m high office. The design details are sparse and high level as it appears further detail/visual mitigation would be provided during detailed design. The Department requires a better understanding of visual impacts. As such, further details about finishes including façade treatments, colour and landscaping should be provided, including revised plans. Finishes must consider the proposed bulk and scale in the context of the surrounding area.

Response

The architectural design for the proposal has been further refined since public exhibition of the EIS and includes façade treatments, building massing and material selections (see Appendix F). The massing of the buildings takes advantage of the sloped site, with the larger area building (Building 1) set on a lower level than Building 2. Elements such as large windows and ground level façade detail design has also been incorporated to better integrate the height and bulk of the development into its setting.

A light spill analysis has also been conducted to ensure that the surrounding areas will not be impacted by the lights within the plastics recycling and reprocessing facility site. An updated suite of photomontages has been prepared for inclusion in this report (see Appendix F).

Detailed building elevation plans have been provided in Appendix F. The plans show that the administration building has a maximum height of 12 metres and Building 1 and the majority of Building 2 both have a maximum height of 15 metres. The multi-use eastern section of Building 2 has a maximum height of 16.7 metres to accommodate the specific equipment that would be located within that building. Chapter 7-5 of the EIS indicates that the roof elevation of the three storey multi-use building would be up to 18 metres, however architectural design work undertaken since the EIS confirms that the maximum roof height would be 16.7 metres.

Plasrefine Recycling also proposes to plant vegetation screening on the northern boundary of the C4 portion of the lot at Lot 11 DP 1084421. A landscape concept plan was prepared by a landscape architect and included in Appendix B of *Technical Report 7 – Landscape and Visual.* This this has since been updated to reflect the revised stormwater management configuration (see Appendix G).

As discussed in Section 5.1.3, the proposed bulk and scale is consistent with existing industrial development to the north-east and north-west of the site, within the SHIP, as shown in Figure 5.1, Figure 5.2, and Figure 5.3. There are also a number of other recently approved industrial developments in the vicinity of the proposal site (see Figure 5.6).

Issue

The office building is proposed to be up to 18 m high, yet the visual assessment does not appear to have addressed this aspect. Please clarify.

Response

As noted above, the architectural design for the proposal has been further refined since submission of the EIS. Building elevation plans have been provided in Appendix F. Chapter 7-5 of the EIS indicated that the roof elevation of the three storey multi-use building would be up to 18 metres, however architectural design work undertaken since the EIS confirms that the maximum roof height would be 16.7 metres. No buildings of 18 metre height are proposed.

Issue

As the facility would operate 24 hours per day, it is expected there will be some lighting required. Provide details about the proposed lighting and undertake a light spill impact assessment.

Response

A light spill assessment and proposed lighting layout has been provided in Appendix F. The obtrusive light compliance report indicates the proposed lighting layout complies with maximum allowable values for illuminance, luminous intensity at vertical planes and upward waste light ratio.

Issue

The EIS states that one of the features of the proposal is signage, and that consideration to (former) SEPP 64 was undertaken as part of urban design and visual assessment. However, the EIS does not contain imagery nor an assessment against Chapter 3 of the State Environmental Planning Policy Industry and Employment. Please address.

Response

During detailed design, signage would be specified that complies with Chapter 3 of the State Environmental Planning Policy Industry and Employment. The signage would be consistent with the assessment criteria specified in Schedule 5 of the Industry and Employment SEPP. Mitigation measure UV3 has been updated to refer to the Industry and Employment SEPP.

Issue

Provide a photomontage of the proposal from Collins Road that also shows the developments to either side.

Response

Figure 5.14 shows a photomontage of the proposal from Collins Road looking south (viewpoint 5). The figure shows the location of the residential property located at 50A Bulwer Road to the south west of the proposal and the Gavan Institute of Medical Research building beyond the trees to the east of the proposal. The existing and proposed design with mitigation views from viewpoint 5 are provided in Appendix F.

Technical Report 7 – Landscape and Visual assessed visual impacts from Collins Road and conclude that the significance of impact was moderate as sensitivity to change is low and magnitude of change is high. This area has existing industrial facilities (such as the Dux facility, to the left and just out of view). The landscape within this view is also a newly zoned 'General Industrial' area and falls within the MVEC. It will therefore undergo significant development and changes to the view in the future would be anticipated.

Figure 5.14 Photomontage from viewpoint 5 - Collins Road looking south

5.2 Department of Planning and Environment Water and the Natural Resources Access Regulator

5.2.1 Water storage dams

Issue

The proponent should provide detail on how the proposed water storage dams meet the requirements of the water regulatory framework. This needs to review the applicability of exemptions, harvestable rights or if water entitlements will be held to account for this take.

Clarification is requested on how the proposed storage dams meet the water regulatory framework. The dams will require a water licence unless an exemption applies such as under Schedule 1(3) of the Water Management (General) Regulation 2018 or the dam capacity is within the Maximum Harvestable Rights Dam Capacity. More information on harvestable rights can be found at: https://www.waternsw.com.au/customer-service/waterlicensing/blr/harvestable-rights-dams.

Response

As identified in Section 4.2.1, the stormwater strategy for the proposal has been updated including the configuration and sizing of the water storage dams. Water harvesting is not proposed for the bio-retention dams. Rainwater would be harvested from the rainwater tanks located at south west of building 2 and north east of building for operational reuse. Therefore a licence is not required for the proposed dams.

5.2.2 Groundwater take

Issue

Should groundwater be intercepted, a Water Access Licence (WAL) under the *Water Management Act 2000* must be obtained unless the take is less than or equal to 3 ML of water per year for any aquifer interference activities listed in Clause 7 of Schedule 4 of the Water Management (General) Regulation 2018. For more information visit **https://www.dpie.nsw.gov.au/nrar/how-to-apply/water-licences/Groundwater**

To qualify for an exemption to hold a water access licence, the proponent should:

- Record the water take within 24 hours in the approved form and manner
- Provide the water take records to the Minister by no later than 28 July for the year ending 1 July during which the water was taken (e.g. included in the annual report)
- Keep the water take records for a period of five years.

Response

The civil design (mainly filling of the lower portion) is such that there is only a low probability of intercepting groundwater during construction. Should groundwater be intercepted, a WAL under the *Water Management Act 2000* would be obtained if necessary. No groundwater would be extracted during operation.

5.3 NSW Environment Protection Authority

5.3.1 Noise and vibration

Issue

The applicant should clarify the status of the access road with respect to its being part of the EPA regulated premises (if approved). If the access road is considered part of the premises, then noise generated on the access road must be included in the operational noise assessment with the rest of the premises. In this case, the access road should be assessed using the Noise Policy for Industry (EPA, 2017) (NPfI) and be considered cumulatively with noise emissions from the whole premises.

The Department of Planning and Environment (DPE) considers the appropriate classification of the road as it pertains to noise assessment under the NSW Road Noise Policy (DECCW, 2011) (RNP), if the access road does not form part of the EPA regulated premises. If the road is not considered part of the premises and not regulated by the EPA, then it is recommended that the DPE consider the following during its determination:

- The function/category of the road being assessed using the NSW Road Noise Policy (DECCW, 2011) (RNP). The NVIA has designated the road as "sub-arterial" but assessed it as a "local" road. Using the RNP's "local" road assessment criteria appears appropriate in this instance.
- The method and inputs used to predict impacts from the road such as an appropriate calculation method for small volumes of traffic.

Response

The previously proposed new east-west public access road was to be a proposed public collector road, consistent with the road proposed in Wingecarribee Shire Council's MVEC Development Control Plan. Plasrefine Recycling and the Garvan Institute of Medical Research would have been the initial users of the previously proposed new east-west public access road, until land to the west of the proposal site is developed and requires access. Therefore, under this assumption, the more conservative peak 1-hour criteria (for a new local road) was assumed for the assessment of traffic noise along the previously proposed new east-west public access road.

It is noted, as discussed in Section 4.4.2, that the change to the preferred access would result in better noise outcomes along the now proposed (and preferred) north-south public access road compared to the previously proposed east-west road option. This is because:

- During construction the nearest residences would be now more than 200 metres away compared to 100 metres away for the previously proposed east-west public access road.
- During operation, the now proposed north-south access road would be further away from the nearest residences to the east and the south of the facility.

Issue

NVIA Chapter 5.4.2.1 states that the indicative traffic generation for the operation are: "Up to 100 truck movements between 7 am and 6 pm with a maximum of 5 trucks in a peak hour period". It is unclear what the distinction between a "truck movement" and a "truck" is. Assuming an even distribution of truck movements would mean 9 truck movements per hour over the 11-hour period between 7 am and 6 pm. However, from the NVIA, it is unclear if "5 trucks an hour" means 10 truck movements, or 5 truck movements.

An even hourly distribution of movements over 11 hours appears unlikely to represent a peak or reasonable worst-case scenario, without further justification. In addition, NVIA Table 6.3 states that delivery truck movements should not exceed 10 in and 10 out hourly volumes without a clear indication of the justification for this measure and how it relates to the number of planned movements and noise impacts. The actual volume of light and heavy vehicles used in the calculations for the access road and operational noise assessment over the relevant time periods (e.g. 15 mins) do not appear to have been reported in the NVIA.

Response

A truck movement generally means a one way movement, and each truck has two movements (entry and exit from the facility). Therefore 100 truck movements means 50 trucks. The traffic assessment was based on the expectation that ten percent of the maximum 50 heavy vehicles (five heavy vehicles) would enter the facility delivering mixed plastics and collecting product and the same five heavy vehicles would exit the facility during the peak AM and PM periods (each of one hour duration). *Technical Report 2 – Noise and Vibration* has assessed the following:

- Heavy vehicle arrivals and exits would be fairly evenly distributed across the 11 hour operating period as shown in Figure 5.11 (this would assist in unloading and minimise queuing).
- There would be approximately 1 truck in and 1 truck out per 15 minute period.

The justification for an even distribution of heavy vehicle arrivals and departures is that the main sources of incoming material are existing material recovery facilities, which have the ability to regulate the loading and departure of mixed plastics from their facilities. There are a limited number of truck unloading bays within Building 1, which necessitates scheduling of mixed plastics deliveries to avoid queuing on the internal site roads.

The movement and distribution of staff vehicles in and out of the facility is considered to have a negligible effect on the received noise level at each receiver location.

The actual volume of light and heavy vehicles used in the calculations for the access road and operational noise assessment is stated in Section 5.4.2.1 of *Technical Report 2 – Noise and Vibration*, as up to 100 truck movements between 7:00 am and 6:00 pm, with a maximum of 5 trucks in a peak hour period. Whilst an even hourly distribution (up to 5 trucks per hour) is envisaged, the NVIA predicts that up to 10 trucks in and 10 trucks out during a one hour period (equivalent to 2 trucks in and 2 trucks out per 15 minute period) would still result in compliance with the relevant noise criteria.

Table 6.3 of *Technical Report 2 – Noise and Vibration* presents an operational noise management plan in draft form that would be updated during the design development process.

Issue

The inclusion of source contributions at the most affected receivers benefits the transparency of the assessment, provides a clear picture of the sources affecting receivers and assists in understanding the potential impacts from the premises. The predicted noise levels at receivers R019 (NCA2) and R160 (NCA3) under noise-enhancing meteorological conditions at night are equal to the project noise trigger levels. NVIA Chapter 5 and Appendix F state that the predictions are based on a number of assumptions, which in turn are based on similar plants, and reliance on meeting specific internal noise levels.

Building 1 appears to require mobile plant operating within to feed the processing machine 24 hours a day. This, together with the industrial machinery, makes it unclear if the proposed 85 dBA internal noise limit is achievable without further information. Therefore, the EPA considers there is a risk of impacts above those predicted in the NVIA. The NVIA states that the highest contributors to these noise levels are: the Building 2 stacks, breakout from various elements of Building 1, and wastewater treatment plant fans. NVIA Chapter 6.2 provides recommendations for mitigation, including that the façade construction meets a noise reduction performance specified in NVIA Appendix F.

DPE carefully consider the risks associated with the current status of the design and, if approved, include conditions that account for this.

Response

Refer to response in Section 5.1.7, Issue 3.

Issue

There does not appear to have been a specific assessment using NPfI Fact Sheet C for all relevant characteristics, particularly low frequency noise (LFN) and intermittency. NVIA Chapter 5.1.4 states that “there is potential for the stack outlets to results in low-frequency noise at receivers….the stacks should be designed to achieve a stack exit sound power of LAeq 80 dBA or less (5 dB below the modelled level) to account for this.” The intended outcome for Fact Sheet C is to remove or reduce annoying characteristics. Therefore, if there is potential for LFN from the stacks, the design intent in the first instance should be to remove and/or reduce any LFN characteristics (as per Fact Sheet C). A penalty should only be applied if the LFN cannot be removed through mitigation. Additionally, the potential for intermittent noise during the night should be addressed – for example if there will be machinery (such as ventilation or scrubbers) turning on and off.

Response

A detailed assessment of potential low-frequency noise was not undertaken at this conceptual stage of the project as one-third octave band noise data of all noise-generating equipment has not been provided. A detailed assessment for annoying characteristics would be undertaken during detailed design once equipment has been selected and the architectural design has been finalised.

As shown in Section 5.1.4 of *Technical Report 2 – Noise and Vibration*, the dominant noise sources during the night period at the most-affected receivers would be due to continuous noise sources (stacks, building break-out noise from Building 1 and 2). The potential for intermittent noise (e.g. from ventilation fans turning on and off) is not deemed significant as noise from ventilation fans would be masked by continuous noise sources and would not result in a varying noise level more than 5 dBA when assessed at a receiver location, nor would the ventilation fans be clearly audible.

Based on the noise modelling results predicted for adverse meteorological conditions during the night period, a low-frequency screening assessment has been undertaken to check for the following:

- **Step 1**: Check whether the C-weighted minus A-weighted noise levels at the most-affected receivers is 15 dB or more; and
- **Step 2**: Check whether the Z-weighted levels exceed the one-third octave noise thresholds shown in Table C2 of the NPfI.

The results at the most-affected residences to the facility are presented in Table 5.10 and indicates there is potential for low-frequency noise at R019 (72 Beaconsfield Road, Moss Vale) as a 2 dB exceedance is predicted of the 50 Hz threshold level of 50 dB. Exceedances of the thresholds are shaded in blue.

Further investigation into the source of the low-frequency noise indicates the dominant low-frequency source is due to building break-out noise from the Building 1 roof and assumes the noise level at the roof of Building 1 would be 85 dBA and equal to the noise level on the ground level of the buildings. In reality, noise levels at the roof of the building would be more than 2 dB lower than on the ground level of the building.

Table 5.10 Low-frequency noise check at the most-affected residences

RID	Step 1 C – A is 15 dB or more			Step 2 – One-third octave low-frequency noise thresholds exceeded (Table C2 of the NPfI)								
	A	C	C-A	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz
Thresholds	C – A is 15 dB or more			69	61	54	50	50	48	48	46	44
R010	34	58	24	55	50	45	49	45	41	42	39	36
R019	38	60	22	58	52	48	52	48	44	45	42	39
R160	35	58	23	55	50	45	50	46	42	43	40	37

No third-octave band noise levels were provided for the stacks and has been modelled at an octave-band noise level of 85 dBA at 500 Hz. It is agreed that the design intent in the first instance should be to remove and/or reduce any LFN characteristics (as per Fact Sheet C) and a penalty should only be applied if the LFN cannot be removed through mitigation. However, with the lack of third-octave band noise levels from the stack is it not yet known the extent of mitigation required to eliminate the potential for low-frequency noise from the stacks. It is envisaged that silencers would be required for each stack to ensure the overall low-frequency noise emission from the facility does not exceed the thresholds presented in Table C2 of the NPfI.

Issue

The table of predicted operational noise levels in Appendix G appears to have labelled some receivers as residential receivers, however, the residential project noise trigger levels do not appear to be assigned to them.

Response

R002, R003, R011 and R012 have been incorrectly labelled as residential receivers and are industrial receivers. The predictions and project noise trigger levels for these receivers have been clarified in the response below.

Issue

NVIA Appendix G appears to have assigned project noise trigger levels to non-residential receivers inconsistently with NVIA Table 4.3. NVIA Table 4.3 appears to have implemented the project noise trigger levels in accordance with the NPfI.

Response

The incorrect project noise trigger levels for non-residential receivers presented in Appendix G of the *Technical Report 2 – Noise and Vibration* have been corrected in Table 5.11 below. The results indicate that the predicted $L_{Aeq(15min)}$ noise level at all non-residential receivers is predicted to comply with the NPfI project noise trigger levels.

Table 5.11 Operational noise levels at non-residential receivers

RID	Receiver Type	Address	Project noise trigger level, $L_{Aeq(15min)}$ dBA			Predicted $L_{Aeq(15min)}$ noise level, dBA		
			Day	Evening	Night	Day (Neutral)	Evening/ Night (Neutral)	Night (Adverse)
R001	Commercial	9-11 Lackey Rd, Moss Vale	63	63	63	52	49	49
R002	Industrial	9-11 Lackey Rd, Moss Vale	68	68	68	44	42	42
R003	Industrial	2 Lackey Rd, Moss Vale	68	68	68	30	28	31
R004	Industrial	2 Lackey Rd, Moss Vale	68	68	68	32	31	34
R005	Industrial	9-11 Lackey Rd, Moss Vale	68	68	68	35	34	36
R006	Industrial	50 Carribee Rd, Moss Vale	68	68	68	28	27	30
R011	Industrial	7 Lackey Rd, Moss Vale	68	68	68	28	26	29
R012	Industrial	3 Lackey Rd, Moss Vale	68	68	68	29	28	30
R013	Industrial	16 McCourt Rd, Moss Vale	68	68	68	22	21	25
R015	Industrial	13-14 McCourt Rd, Moss Vale	68	68	68	17	17	21
R029	Industrial	5 Lackey Rd, Moss Vale	68	68	68	15	15	18

5.3.2 Waste

Issue

The facility operations propose to dispose of up to 10,000 L/d of wastewater to the Moss Vale Sewage Treatment System (operated by Council) when the domestic flows are low. The quality of the wastewater is not provided in the EIS and there is the potential for microplastics to be a significant component of this liquid waste stream. To ensure microplastics are appropriately managed, this warrants further consideration at the design phase of the development as additional treatment processes may be required prior to disposal to sewer.

Response

Section 7.2.2 of the EIS described the proposed onsite WWTP including a process flow diagram for the treatment processes. Dissolved air flotation would be used within the treatment plant to purify the water and make it suitable for re-use within the plant. This process injects compressed air into the incoming water, and once the aerated water is released into the flotation tank, fine air bubbles attach themselves to the particles, making them float.

The floating material is then skimmed off the top of the tank and dewatered in a screw press. To assist the processes, pH adjustments would be made using acid and alkali solutions and other chemicals such as polyelectrolytes would be added. Microplastics present in the process water would be removed by filter press at the WWTP. The resulting filter cakes would be disposed of to an appropriately licenced facility.

A dissolved air flotation system treatment plant configuration would typically include:

- Wastewater collection tank
- Filtration system
- Deposition tank
- Flotation tanks
- Air compressor and storage tank
- Polyelectrolyte dosing and pH adjustment system
- Sludge tank
- Sludge treatment system and press
- Processed water storage tank.

As identified above, Plasrefine Recycling has not formally engaged a technology supplier for the WWTP. Further details would be provided during detailed design regarding treatment processes.

Issue

There are limits in relation to plastic storage with only 3 days capacity at the point of receival (Section 9.4.1 of the EIS).

Response

The quantity of mixed plastic feedstock received each week or day may fluctuate but is not expected to exceed 2,800 tonnes per week or 400 tonnes per day. There would be an allowance for three days storage capacity for incoming material in Building 1 for a total volume of 4,800 cubic metres. Deliveries of mixed plastic feedstock would be temporarily stopped if the storage bunkers reach capacity. Monitoring, management and maintenance of the storage bunkers would be included in the OEMP.

Issue

The wastes have been classified as general solid waste and liquid waste except for batteries. It is noted that batteries are to be disposed of as hazardous waste (table 9.14 at Bowral Waste Centre).

A total of 23,800 tonnes of solid waste will require disposal from the facility. The destination for this waste is outlined to be either Bowral Waste Centre Pty Ltd (EPL 13366) or Wollongong Waste and Resource Recovery Park (EPL 5862). Bowral Waste Management Centre has a limit on the EPL (Condition L4.2): "The total amount of waste received at the premises must not exceed 80,000 tonnes in any twelve-month period". Should all the solid waste generated by the proposed development be disposed of at this facility it would account for approx. 30% of the licensed annual capacity of the landfill.

Response

Table 9.14 has been updated as shown below to identify alternative potential off-site recycling and disposal options during operation in response to limitations identified for Bowral Waste Centre. It is noted that the final destinations for all off-site recycling and disposal would be confirmed prior to commencing operation and updated throughout the life of the facility based on availability of suitably licenced facilities.

Table 5.12 Potential off-site recycling and disposal options - operation

Material	Quantity (t/year)	Recycling/disposal options
General waste	10.8	Licenced landfill sites such as Wollongong Waste and Resource Recovery Park or Bowral Waste Centre
Recyclable material	10.3	Recycling facility such as Wingecarribee Shire Council Resource Recovery Centre
Food waste	9.6	Licenced landfill sites such as Wollongong Waste and Resource Recovery Park or Bowral Waste Centre
Liquid waste	Minimal	Liquid waste management facility such as Cleanaway Port Kembla Liquid Waste Services
Hazardous waste	Minimal	Licenced site such as Lucas Height Resource Recovery Park
Treated effluent	3,650	Wastewater treatment plant such as Moss Vale Wastewater Treatment Plant or Bowral Wastewater Treatment plant (to be confirmed)
Filter cake	9,000	Licenced landfill sites such as Wollongong Waste and Resource Recovery Park or Bowral Waste Centre
Filter residue and waste filters	1,800	Licenced landfill sites such as Wollongong Waste and Resource Recovery Park or Bowral Waste Centre

5.3.3 Air quality

The AQ RTS Letter has been developed, which provides detailed responses to significant issues raised in submissions. The AQ RTS Letter is provided as Appendix J of this report.

Issue

Section 5.4 of the AQIA states that the proposed emission controls system includes localised capture of emissions from individual processing units with emissions ventilated to four emission controls systems. Three emission control systems would include a pneumatic cyclone spray tower, an electrostatic degreasing device, and activated carbon adsorption prior to treated air being discharged from a stack. The fourth system would be for the treatment of particulate matter.

However, the AQIA does not provide further detailed descriptions of each emission control system. This includes (but is not limited to): describing which unit operations (or processing units) each emission control system would collect emissions from, how emissions would be collected, the number and size of particular treatment steps such as any activated carbon vessels, or how any proposed activated carbon changeout would be managed to prevent emission breakthrough. Additionally, process flow diagrams detailing the unit operations and the relationship between each emission control system has not been included to provide sufficient clarity on the proposed emission control systems. Further, *Technical Report 3 – Air Quality and Odour* does not provide specific information on the operating parameters of specific individual unit operations (or processing units) or emission control systems.

This includes but is not limited to the process inputs (i.e. the types of plastics) to individual process units, the operating temperatures of process units and the performance of the proposed controls. Process parameters Page 7 and inputs can impact the potential generation and emission of air pollutants. As such it is important to convey this information to understand potential risks to air pollutant emission generation and potential impact.

Response

This item is addressed in Section 3.1 and Section 3.2 of the AQ RTS Letter (Appendix J).

Issue

Table 5.3 provides a single list of values for discharge parameters that apply to each stack. However, it is not clear why two (2) stack diameters are provided and if there are stacks with different stack diameters. Additionally, it is not clear what pollution control system is associated with each discharge stack, the proposed location of each stack discharge, and descriptive information on which process units each stack is associated with. Further, each proposed discharge point should include an identification name or number to provide a clear and transparent picture of the proposed discharge points. This is of particular importance to enable any potential recommended environment protection licence conditions.

Response

This item is addressed in Section 3.2 of the AQ RTS Letter (Appendix J).

The stack diameter for air pollution control systems APC1, APC2, and APC3 is 1.2 metres, and the stack diameter for APC3 is one metre.

Issue

Section 7.5.4 of the EIS describes the use of steam to sterilise plastics, however, it is not described how the steam would be generated. Steam could be generated by onsite boilers which may involve the combustion of fuels and hence emissions of combustion air pollutants from the premises. *Technical Report 3 – Air Quality and Odour* does not account for any potential combustion emissions from potential boilers should they be proposed. Clarification is required.

Response

Steam would be generated using electrically powered boilers.

Issue

Section 5.4 of the AQIA states that emissions estimations provided in Table 5.4 are based on maximum emission concentrations as guaranteed by the equipment provider. However, no emission guarantees or manufacturers specifications are provided. Additionally, assessed emissions for particulate matter and total VOCs appear to be based on the assumption that emissions are equivalent to specific prescribed concentrations contained in the Protection of the Environment Operation (Clean Air) Regulation 2021 (the Clean Air Regulation), rather than specific emission guarantees or manufacturers specifications. As per Section 3.3 of the Approved Methods the EPA's preferred methods are manufacturers' design specifications and/or performance guarantees for proposed sources.

Response

This item is addressed in Section 3.3 of the AQ RTS Letter (Appendix J).

Issue

The emissions inventory provided in *Technical Report 3 – Air Quality and Odour* does not include a demonstration that compliance with the prescribed concentrations contained in the Clean Air Regulation can be achieved. As per Section 3.5 of the Approved Methods the emissions inventory must be used to demonstrate compliance with the Clean Air Regulation.

Response

This item is addressed in Section 3.3 of the AQ RTS Letter (Appendix J).

Issue

The AQIA includes a quantitative assessment (dispersion modelling) of Benzene emissions. Benzene is classified as a principal toxic air pollutant as per the Approved Methods. Section 7.2.1 of the Approved Methods describes that principal toxic air pollutants must be minimised to the maximum extent achievable through the application of best-practice process design and/or emission controls. *Technical Report 3 – Air Quality and Odour* does not benchmark the proposed design against best practice or include a demonstration that emissions of air toxics have been minimised to the maximum extent achievable.

Response

This item is addressed in Section 3.4 of the AQ RTS Letter (Appendix J).

Issue

The proposed development includes the processing of 120,000 tonnes of plastic waste per year including used PVC pipes. The EPA understands that part of the process involves processing waste material under heat. Processing of plastics under heat has the potential to generate persistent organic pollutants (POPs) (such as dioxins), however the potential risk would be dependent on such factors as composition of waste material and processing parameters. *Technical Report 3 – Air Quality and Odour* does not assess the potential risk of emissions of persistent organic pollutants.

Response

This item is addressed in Section 4.3 of the AQ RTS Letter (Appendix J).

Issue

The AQIA assesses potential impacts of benzene (a principal toxic air pollutant), toluene and styrene (both odorous air pollutants). However, the assessment does not include a justification for the selection and assessment of these individual volatile organic compounds (VOCs). Given the proposed processing of various plastic materials it could be that a range of VOCs or other air pollutants are potentially generated and emitted from the premises.

For example, the proposed development seeks to process Acrylonitrile butadiene styrene (ABS) plastics. Acrylonitrile is a principal toxic air pollutant as per the Approved Methods. Processing of some plastics, such as ABS may result in emission of other air pollutants. However, this would be dependent on the specific operational nature of the proposed processing (i.e. temperatures), emission control performance, and waste input streams.

Response

This item is addressed in Section 4.1 and Section 4.2 of the AQ RTS Letter (Appendix J).

Issue

Section 4.2.2 of the AQIA describes that meteorological data for the Bureau of Meteorology weather station at Moss Vale was considered to represent the meteorological environment at the proposal location. The AQIA presents wind roses for five years of data collected from the Moss Vale station. However, the AQIA does not describe which year of meteorological data was utilised for conducting the dispersion modelling, and it does not include a demonstration that the selected modelled year was representative.

As per the Approved Methods a Level 2 impact assessment must be conducted using at least one year of site-specific or site-representative meteorological data. Site representative data must be correlated against a longer-duration site representative meteorological database of at least five years. It must be clearly established that the data adequately describes the expected meteorological patterns at the site under consideration. Meteorological data used in dispersion modelling is of fundamental importance as it drives the transport and dispersion of the air pollutants in the atmosphere.

Response

As outlined in Section 6 of *Technical Report 3 – Air Quality and Odour* ('Modelling methodology'), the dispersion model and subsequent assessment of incremental impacts presented in the used a full five years of meteorological data (2016-2020), and as such considers all meteorological conditions which are part of the required representative period.

As summarised in Section 6 of *Technical Report 3 – Air Quality and Odour* ('Cumulative impacts (particulate matter)'), the "contemporaneous impact assessment was completed for a period of two years (2017 and 2018). The two-year period represented a period where PM monitoring data were available from the nearest station at Goulburn, and one where PM measurements were not influenced by elevated bushfire activity during 2019 and the start of 2020. Completing a cumulative impact assessment for a period of two years is more than the required one year and increases the number of meteorological and background air quality conditions which are considered.

Issue

Section 6.2 of the AQIA *r* provides an assessment of the potential impacts for operation of the proposed development. Table 6.6 provides incremental ground level concentrations at sensitive receptors for particulates with comparison against assessment criteria. However, the assessment criteria contained in the Approved Methods is a cumulative assessment criterion. As such predicted cumulative impacts should be presented for comparison against the impact assessment criteria.

Additionally, the AQIA references a $PM_{2.5}$ criteria of 20 ug/m^3, whereas the impact assessment criteria as per the Approved Methods is 25 ug/m^3. Additional analysis has been presented on potential cumulative impacts, with the assessment stating there is potential for exceedances of the $PM_{2.5}$ assessment criteria. However, this analysis is not based on the criteria contained in the Approved Methods

Response

This item is addressed in Section 5 of the AQ RTS Letter (Appendix J).

Issue

Section 6.2.4 of the AQIA provides time series plots of potential cumulative ground level concentrations. The time series plots label the background air quality data as being referenced from the Goulburn monitoring station. However, other sections of *Technical Report 3 – Air Quality and Odour* describe background air quality data as being referenced from the Bargo monitoring station. Hence there is conflicting information on the assessment methodology.

Response

The reference to the Bargo monitoring station is an error in labelling only. The background air quality data used in *Technical Report 3 – Air Quality and Odour* are from Goulburn. Updated air quality impact assessment presented in the AQ RTS Letter (Appendix J) similarly use data measured at the Goulburn monitoring station.

Issue

There appears to be limited information in the EIS on odour emissions and control with broad claims that the emission of odour is low, unlikely and minor. An odour assessment does not appear to have been conducted and there appears to be no explicit statement regarding compliance with Section 129 of the POEO Act 1997 (offensive odours). The EPA's policy framework for managing odour is the Approved methods for the modelling and assessment of air pollutants in NSW and Technical framework - assessment and management of odour from stationary sources in NSW. This includes planning to prevent and minimise odour, use of a range of strategies to manage odour and ongoing environmental improvement. The odour benchmark for an operational facility is whether emission of odour is 'offensive' (scheduled activities) or is being prevented or minimised using best management practices and best available technology (scheduled as well as non-scheduled activities). New or modified activities must also incorporate all best practicable means to prevent or minimise odour.

The EPA makes the following observations:

- The EIS states the received (baled) plastic waste can contain residual liquid waste (such as liquid in beverage containers etc). This and other waste material (eg residual foodstuff, cleaning products or cosmetics) have the potential to generate odours during storage, sorting and washing.
- The EIS appears to put an emphasis on localised capture of emissions from specified individual processes in each building. The facility buildings are claimed to be fully enclosed and fitted with high speed roller doors to keep any potential odours inside. A ventilation system will be used to prevent any odours escaping the building. There is no detail on the building air extraction and air treatment systems to control air pollutants (including odours).
- The wastewater treatment system relies on Dissolved Air Flotation to purify the water and make it suitable for reuse. It is unclear how soluble components in the water (and resulting odorous water) will be managed to prevent odours & facilitate water reuse. This includes but is not limited to; presence of soluble proteins from residual dairy products in ice cream, milk or yogurt containers, need for further wastewater treatment (e.g. biological) etc.
- The EIS states the wastewater treatment plant will be fully enclosed with air flow through natural ventilation of the building. There is no detail on odour emission and its prevention and control.
- The EIS states some odour may be generated from handling and storage of dewatered sludge (filter cake residue) from the WTP. Up to 9000 tpa of sludge is expected to be generated. There does not appear to be information on odour emission and its prevention related to storage, handling and offsite disposal.
- The EIS states heating and processing of plastics has the potential to lead to emissions of VOCs found as impurities in the plastic. The specific types and quantities of VOCs generated during the processing are dependent on a number of factors, including type of plastic, purity of material, processing methodology, residence time and processing temperature. There is uncertainty in these emissions and a resulting risk of odorous air pollutants that does not appear to have been adequately addressed.
- The recovered plastics will be cleaned and disinfected with steam and a patented alkaline water disinfectant solution. The potential to generate odours from this process does not appear to have been assessed. The disinfectant solution comprises tea tree oil, essential oils, natural plant-based ingredients and turpentine which all have potentially odorous components. Condensed steam would be treated at the onsite wastewater treatment plant and reused back in the process. The site water balance however appears to state up to 30 kilolitres per day of water will be lost through evaporation.
- Should odour impacts be experienced once a facility is operational, it will be necessary to address them and, if required, modify the facility based on actual operational outcomes. Addressing odour impacts retrospectively is likely to be more difficult and costly than incorporating such measures in the initial proposal.

Response

This item is addressed in Section 6 of the AQ RTS Letter (Appendix J).

5.3.4 Water quality

Issue

The EIS states the proposed facility is in the Sydney drinking water catchment area with sensitive receptors. As such, it is recommended that the applicant adopts enhanced erosion and sediment Page 12 control measures to minimise impacts on drinking water. These controls may include larger sediment basins where practical, stabilising areas as quickly as possible, and inspecting and monitoring erosion and sediment control measures regularly, particularly after rainfall and runoff events.

Response

A construction phase erosion and sediment control strategy has been developed in accordance with best practice in accordance with Landcom (2004) 'Managing Urban Stormwater: Soils and Construction'. In addition to this, it is considered feasible to opportunistically upsize sediment basin volume and this would be included in the detailed Soil and Water Management Plan to be developed prior to construction.

5.3.5 EPA licensing

Issue

The EIS states the proposal will require an environment protection licence (EPL) under section 43 of the *Protection of the Environment Operations Act 1997* (POEO Act) for:

- Chemical Production - plastics reprocessing - Clause 8 of Schedule 1 of the POEO Act.
- Recovery of General Waste - Clause 34 of Schedule 1 of the POEO Act

The EPA Guide to Licensing is a general guide to EPA's environment protection licensing requirements. The applicant should check this information to determine the type of environment protection licence required (if approved). This should include consideration of other activities such as potentially waste storage - Clause 42 of Schedule 1 of the POEO Act.

To comply with the waste legislation, those who generate waste are responsible for classifying their waste. The EPA has developed Waste Classification Guidelines which are a step-by-step process for classifying waste. Generators and waste facilities must ensure they classify their waste carefully in accordance with the procedures in the guidelines. This is because waste can only be taken to, and accepted at, a waste facility which is lawfully authorised to receive, re-use and/or dispose of that classification or type of waste.

Response

Noted.

5.3.6 Diesel generator

Issue

The EIS appears to state a backup diesel generator will be installed on the site. Further details should be provided on the location and operation of this generator (and fuel storage). This should include the assessment of noise, air quality and fuel storage (bunding) matters as well as demonstrated compliance with relevant statutory requirements.

Response

Table 18.1 of the *Technical Report 9 – Greenhouse Gas* indicates that a backup generator would be used during operation of the proposal, however a backup diesel generator is not proposed as part of the proposal. A revised version of Table 18.1 is presented below, which also adjusts a figure that was incorrectly reported in that table. The overall change to total emissions during operations is minimal and does not change the outcomes of the greenhouse gas assessment.

Table 5.13 Revised summary of emissions – construction and operation phase

Activity	Activity data	Units	Emissions (tCO_2-e)*		
			Scope 1	Scope 2	Total emissions
Construction					
Total diesel consumption	953	kL	2,583	0	2,583
Total construction emissions (t CO_2-e/ year)			**2,583**		**2,583**
Operations					
Electricity consumption (NSW) - Operations	87,430	MWh/year	0	70,818	70,818
Employee commuting	697	kL	1,894	0	1,894
Transport of plastics to site	3,366	kL	9,147	0	9,147
Transport of product	3,366	kL	9,147	0	9,147
Total annual operational emissions (t CO_2-e/ year)			**20,188**	**70,818**	**91,006**

*Emissions are rounded up to the nearest whole tCO_2-e

5.3.7 Contaminated land

Issue

The EIS appears to conclude the potential risk from contamination is low. This is based on a Preliminary Site Investigation (PSI).

The PSI appears to be based on a desk top study and site inspection (visual). The PSI identifies data gaps in site knowledge including limited information regarding site activities prior to 1949 and excavation and a statement that filling activities of unknown nature (including waste) may have occurred at the site.

The State Environmental Planning Policy (Resilience and Hazards) 2021 states that a consent authority must not consent to the carrying out of any development on land unless:

(a) it has considered whether the land is contaminated, and

(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and

(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

Additional site investigations should be considered to address the identified data gaps in the PSI and satisfy the above requirements. If activities have been carried out across the site which may have caused significant site contamination, the consent authority should request the services of an accredited site auditor for those areas.

Response

A review of available information shows there is no evidence of contaminating activities undertaken on site before 1949. This is demonstrated by the following lines of evidence:

- Aerial photographs clearly show the plastics recycling and reprocessing facility site was vacant and undeveloped in 1945, with natural-looking wetlands present within the site.
- In the 1945 aerial photograph the only apparent human activity was agriculture and vegetation clearance. There was no sign of manmade structures or access roads.
- In 1920 to 1923 the plastics recycling and reprocessing facility site was owned by private individuals (James Butler Joseph Swann) and in 1923 the land was managed by the Crown Tenure Forfeited. After that, the site was owned by farmers until the 1970s.

As such, there is no evidence of contaminating activities carried out on site prior to 1949.

A further review of aerial photographs in combination with site inspections undertaken as part of the EIS indicated that filling activities are unlikely to have occurred at the plastics recycling and reprocessing facility site. This is based on the following lines of evidence:

- Aerial photographs do not show signs of filling activities on site.
- Site inspection observations suggest that the site topography is natural and consistent with the surrounding environment, indicating that imported material is unlikely to be present on site.
- A number of soil profiles have been observed on site particularly near drainage lines. Soil profiles were all natural.
- No odours, staining or other signs of contamination were noted.

Earthworks have occurred onsite to excavate ponds. The excavated material has likely been accumulated in stockpiles particularly in the north-eastern portion of the plastics recycling and reprocessing facility site. Stockpiled material appeared natural and was not contaminated with waste.

On this basis, the likelihood that the land is contaminated is low as stated in the PSI (subject to the limitations set out in the PSI report). Hence, the land is not considered contaminated.

5.4 WaterNSW

5.4.1 Wastewater management and associated modelling

Issue

If Wingecarribee Shire Council identifies/assesses that the Moss Vale WWTP cannot accept additional wastewater load from the facility, what are the alternative options for wastewater management generated by the proposed facility.

Response

As discussed in Section 5.1.5, alternative options for wastewater disposal would include:

- Storage of wastewater and discharge to sewer during low flow period (night time)
- Tankering of wastewater from the wastewater treatment plant for treatment and disposal at the Berrima wastewater treatment plant. Further information on anticipated tanker movements is provided in Section 5.1.5.

Issue

If the overnight storage of wastewater is required on site, how and where the wastewater will be stored on the site and any associated impacts on water quality.

Response

Treated wastewater would be stored temporarily in the clean water tank located in the northern portion of the wastewater treatment plant. The location of the tank is shown in Figure 5.15. The water would be treated and would not degrade whilst being stored.

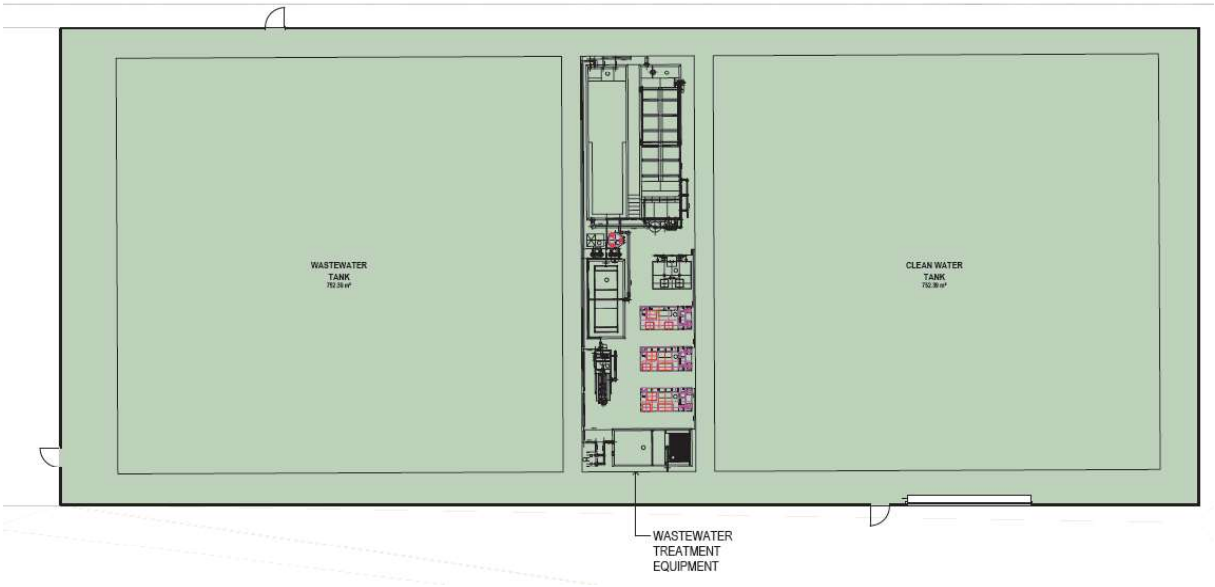


Figure 5.15 Wastewater storage

5.4.2 Stormwater management and water quality assessment

Issue

MUSIC modelling and stormwater treatment:

- Existing pond/dam in the north-eastern corner of the property should be considered in "pre" modelling scenario for NorBE assessment. Some portion of eastern side of the adjoining property drains to this pond/dam and needs to be considered in the model. When these changes are implemented in the model, NorBE may not be met.
- Location of western bioswale is directly adjacent to the second order watercourse, which is at risk of inundation (based on the EIS flooding study). Therefore, a bioswale maybe not be suitable for stormwater treatment at this location and alternatives need to be considered.
- The proposed bioretention basin's hydraulic conductivity is set to 200 mm/h in the model however WaterNSW's Current Recommended Practices require this to be set as 100 mm/h, considering hydraulic conductivity of the filter media decreases over time. When hydraulic conductivity of filter media was adjusted, the model does not meet NorBE.
- High flow bypass should be set 50% of the 1-year ARI.

Response

The following responses are provided based on the revised proposed stormwater strategy and additional MUSIC modelling as provided in Appendix E.

- Existing pond/dam: Previously, filling and reconfiguration of the shared pond/dam (which straddles the Plasrefine Recycling and Australian Bioresources facility property line) was proposed. Under the revised proposal the dam will be retained and only modified on the Plasrefine Recycling side by partially filling to enable stormwater to be diverted past the pond. The current pond volume, surface area and spilling properties remain largely unchanged. The current treatment properties of the pond would be retained, and its performance would improve, as it would have the same passive treatment capability but would service a slightly smaller catchment (as the overall site water flows have been reconfigured). On this basis, the modelling approach that has been adopted, which compares the local site catchment before and after development (without the pond) is considered conservative.
- The feasibility of maintaining the pond volume and surface area whilst partially filling the western portion of the pond was investigated. The loss in volume associated with the partial filling was estimated as less than 200 cubic metres. This compares to a pond area in the range of 2,000 square metres. Therefore, after the pond is dewatered and reconfigured for the proposal, minor cleaning or excavation around the base of the

pond could readily be undertaken to achieve the same water quality treatment properties. This would be confirmed during detailed design.

- Location of western bioswale: The stormwater quality strategy has been revised to include only stormwater treatment measures above the modelled 1 in 100 AEP flood level (refer Appendix E). A hydraulic conductivity of 100 mm/h has been adopted in the modelling for bio-retention.
- High flow bypass: This has been adopted in the revised modelling as presented in Appendix E.

Issue

Details of consultation with the neighbouring property on the eastern side need to be provided regarding proposed changes to existing dam and stormwater drainage.

Response

Ongoing consultation has occurred with the eastern property owner Australian Bioresources facility (operated by Garvan Institute of Medical Research) about the proposal. This has included the shared dam. The proposal has been designed to minimise impacts on Australian Bioresources facility's operations. This has included redesign of the stormwater management system to minimise impacts on the shared dam, as outlined in Section 4.2.1 of this report.

Issue

More details are required for operational maintenance of the proposed stormwater treatment measures. This is to ensure a stormwater device like the large bioretention basin (filter area 500 m^2) can function as designed.

Response

Maintenance of the gross pollutant traps would include inspection after every rain event greater than 10 mm and/or monthly. Any captured litter would be removed.

The bio-retention basins will require maintenance initially to ensure vegetation establishment and that they are not inundated with construction sediment. This can include temporary irrigation systems to establish plant growth.

Monthly ongoing maintenance would then include the removal of litter and plant debris and repair of any eroded areas.

Bi-annual maintenance is required to remove and replace any dead or diseased plants, along with harvesting and removal of species to remove nutrients from the system.

Annual maintenance would be undertaken to assess the soil health. The frequency of this complete replacement of the bio-retention media is between 5-20 years, depending on catchment factors and maintenance regimes during operation.

Issue

Erosion and sediment control measures must be detailed to manage the disturbance associated with large site clearing, changes to a dam which overlaps into the adjoining property and construction works near waterways.

Response

As noted above, a construction phase erosion and sediment control strategy has been developed in accordance with best practice in accordance with *Managing Urban Stormwater: Soils and Construction*. In addition to this, it is considered feasible to opportunistically upsize sediment basin volumes. This would be included in the detailed Soil and Water Management Plan to be developed prior to construction.

Issue

WaterNSW requests the following documents are prepared in consultation with WaterNSW to address the stormwater management issues:

- A detailed stormwater drainage plan for long-term sustainable stormwater management. This requires reconsideration of the stormwater treatment elements and a rerun of MUSIC stormwater quality modelling to demonstrate NorBE.

– Monitoring, management, and maintenance measures of the proposed stormwater treatment train as a part of the Operational Environmental Management Plan (OEMP)
– A detailed Soil and Water Management Plan must be developed prior to construction, dealing with erosion and sediment control. It is to be prepared in accordance with Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom, 2005)

Response

More detailed stormwater drainage plans and corresponding management plans would be provided during detailed design in consultation with WaterNSW.

5.5 Fire and Rescue NSW

Issue

FRNSW recommended that a comprehensive Fire Safety Study (FSS) is developed, considering the operational capability of local fire agencies and the need for the facility to achieve an adequate level of on-site fire and life safety independence. FRNSW also recommended that the FSS is a condition of consent.

Response

Preparation of a Fire Safety Study, with consideration of the operational capability of the local fire agencies and the need for the facility to achieve an adequate level of on-site fire and life safety independence would be considered during future stages of the project, should the proposal receive planning approval.

Issue

FRNSW recommended that the FRNSW safety guideline of Fire Safety in Waste Facilities (**https://www.fire.nsw.gov.au/gallery/files/pdf/guidelines/guidelines_fire_safety_in_waste_facilities.pdf**) which includes legislated requirements and development considerations (planning) is utilised and consulted.

Response

Technical Report 5 – Fire and Incident Management Review prepared and appended as part of the EIS included an assessment of the proposal against the FRNSW Guideline *Fire Safety Guideline – Fire Safety in Waste Facilities.* A copy of Technical Report 5 was provided to FRNSW for consultation and a meeting was held in October 2021 to discuss the design of the facility and its compliance with the FRNSW Guidelines. FRNSW indicated it was generally happy with the proposed approach to fire safety. FRNSW would be continued to be engaged through the design development via the Fire Engineering Brief Questionnaire and Fire Engineering Report submissions, both of which shall also encapsulate the assessment of the FRNSW Guidelines.

Issue

FRNSW recommended that a comprehensive Emergency Response Procedure is developed for the site in accordance with *Hazardous Industry Planning Advisory Paper* No.1.

Response

As documented in Section 2.4.27 of *Technical Report 5 – Fire and Incident Management Review,* Plasrefine Recycling would document and provide an Emergency Services Information Package, which would include an Emergency Response Procedure.

Issue

FRNSW recommended that an Emergency Services Information Package is prepared in accordance with FRNSW fire safety guidelines – *Emergency services information package and tactical fire plans* (**https://www.fire.nsw.gov.au/gallery/files/pdf/guidelines/guidelines_ESIP_and_TFP.pdf**).

Response

Plasrefine Recycling would document and provide an Emergency Services Information Package which would incorporate the requirements of the FRNSW Guideline *Emergency services information package and tactical fire plans.*

5.6 Heritage NSW

Issue

An Aboriginal cultural heritage management plan (ACHMP) must be prepared and implemented for the project.

In accordance with the recommended management measures outlined in the EIS, an ACHMP must be developed for the project in consultation with the RAPs and to the satisfaction of HNSW, to manage and mitigate extant Aboriginal sites and objects located with the project area. HNSW recommends that an ACHMP be developed in consultation with the RAPs and to the satisfaction of HNSW, prior to any ground disturbance works being undertaken on the access road or the site.

HNSW recommends that a consent condition is created that requires an ACHMP be prepared in consultation with the RAPs prior to ground disturbing works being undertaken for the project.

Response

Mitigation measure AH1 (refer to Table 7.1 of this report), states:

> *An ACHMP would be developed prior to construction commencing to manage Aboriginal cultural heritage within the study area. The ACHMP would also provide policies for unexpected finds, including human skeletal material.*
>
> *The ACHMP would be developed in consultation with the RAPs.*

As such, no amendments to mitigation measure AH1 are considered necessary. The ACHMP will be developed in consultation with the RAPs and will be submitted to HNSW for approval prior to ground disturbance works commencing on the proposed new north-south public access road or plastics recycling and reprocessing facility site.

Issue

Aboriginal sites to be impacted by the proposed development must be mitigated based on the information supplied in the ACHAR, registered Aboriginal Heritage Impact Management System (AHIMS) sites #52-4-0712 (MVREC IF1), #52-4-0386 (BR-IF1) and #52-4-0387 (BR-IF2), located within the proposed project area will be subject to full impact by project construction works.

The EIS and ACHAR recommend the isolated finds associated with the above sites be salvaged by community collection, under a mitigation procedure integrated into the ACHMP, to be developed for the project. HNSW concurs with the recommendation of impact mitigation for the above AHIMS sites as outlined in the ACHAR.

Should the Aboriginal object be salvaged, then an Aboriginal Site Impact Recording (ASIR) form must be completed and submitted, for inclusion on the AHIMS database.

HNSW recommends a mitigation strategy for AHIMS sites #52-4-0712 (MVREC IF1), #52-4-0386 (BR-IF1) and #52-4-0387 (BR-IF2) be integrated into the ACHMP, to be prepared for the project.

Response

Plasrefine Recycling acknowledges Heritage NSW's support for the proposed approach to salvage isolated finds associated with sites #52-4-0712 (MVREC IF1), #52-4-0386 (BR-IF1) and #52-4-0387 (BR-IF2) by community collection, under a mitigation procedure integrated into the ACHMP.

Plasrefine Recycling accepts the additional requirement for an ASIR, should an Aboriginal object be salvaged.

Issue

HNSW understands newly recorded AHIMS sites #52-4-0713 (Beaconsfield Rd OS-1), #52-4-0714 (Beaconsfield Rd OS-2), #52-4-0716 (Beaconsfield Rd IF-2), and #52-4-0717 (Beaconsfield Rd IF-3) have been subject to a test excavation program under the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010). The AHIMS database must be updated to reflect the current status of Aboriginal sites located within the project area, to show which sites have been subject to impacts from test excavation.

For any impacted site, an ASIR form must be submitted for inclusion on the AHIMS database. The ASIRs must show the total count of the artefacts identified at each site.

HNSW recommends the status of Aboriginal sites located within the project area is updated on AHIMS to reflect the current status of the site. It is expected that the ACHMP, to be prepared for the project, will include measures for the appropriate management of salvaged Aboriginal objects and sites impacted as a result of the 2021 test excavation.

Response

Plasrefine Recycling accepts this recommendation.

Issue

It is understood that the long-term care and curation of Aboriginal objects recovered from the project area is yet to be finalised with the Registered Aboriginal Parties (RAPs).

HNSW recommends that the finalised long term care and control procedure for the management of any Aboriginal objects from the project area including any extant sites, must be integrated into an ACHMP, to be prepared for the project.

Response

The finalised long-term care and control procedure for the management of any Aboriginal objects impacted by the proposal, including any extant sites, will be integrated into the ACHMP.

Mitigation measure AH1 reflects this:

> *An ACHMP would be developed prior to construction commencing to manage Aboriginal cultural heritage within the study area. The ACHMP would* ***include a long-term care and control procedure for the management of any Aboriginal objects impacted by the proposal, including any extant sites, and*** *also provide policies for unexpected finds, including human skeletal material*
>
> *The ACHMP would be developed in consultation with the RAPs.*

The ACHMP will be developed in consultation with the RAPs and will be submitted to HNSW for approval.

Issue

The ACHAR recommends the northern boundary of the development area adjacent to AHIMS site #52-4-0715 Beaconsfield Rd IF-1 be fenced prior to and for the duration of ground disturbing activities to ensure no inadvertent impacts occur to this site.

HNSW supports this proposal to protect known Aboriginal cultural heritage values from potential impacts associated with the proposed development.

Response

Plasrefine Recycling acknowledges Heritage NSW's support for this proposal to protect known Aboriginal cultural heritage values from potential impacts associated with the proposal.

It is noted that the proposed change to the preferred access road to the north–south option would mean that the protection measures for Beaconsfield IF-1, as set out in the ACHAR, will not be required.

5.7 Biodiversity Conservation Division

5.7.1 Flooding

Issue

The development is proposed on flood prone land and should therefore be considered in accordance with the flood related SEARs and the NSW Government's Flood Prone Land Policy as set out in the Floodplain Development Manual, 2005 (FDM).

Plasrefine Recycling has provided a Soils and Water report for the site, including a flooding assessment. We have reviewed the information provided and have identified a range of issues relating to the adequacy of flood investigations, consistency with the SEARs and the principles of the Floodplain Development Manual. There are also issues with the modelling methodology adopted and that flood information has not been provided for one of the watercourses on site.

As presented, this proposal presents a potential risk to the community and environment which can be avoided through appropriate consideration of these issues at this stage of planning and design. A more comprehensive flood impact risk assessment therefore required to ensure consistency with the SEARs and relevant government policy and guidance.

Response

The flood assessment has been updated with a different methodology as presented in Appendix E. The methodology includes:

- A 2-dimensional flood model over both the western and eastern watercourses
- Mapping flood depth, velocity, level and hazard
- Not relying on the RFFE method
- Considering the full range of events up to the PMF
- Considering climate change by basing the modelling on the 1 in 200 and 1 in 500 AEP events as a proxy for the 1 in 100 AEP under climate change conditions
- Considering the Wingecarribee River Flood Study, noting that why it may be in the model extents, the primary relevant cause of flooding is not from the River and as such the same parameters may not be appropriate for adoption.

Table 5.14 provides a comparison of the revised flood assessment compared to the flooding SEARs requirements identified by BCD.

Table 5.14 Flooding SEARs table

SEAR Category	Requirements	GHD Comments
Flooding and coastal hazards	9. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including: Flood prone land. Flood planning area, the area below the flood planning level. c. Hydraulic categorisation (floodways and flood storage areas).	Flood prone land is defined as that under the PMF flood, and is therefore shown in the provided flood mapping attached to this document. The Flood Planning Area is defined as the 1 in 100 AEP event plus 500 mm and is shown in the provided flood mapping of the revised flood assessment. Hydraulic hazard is provided in the updated flood mapping, with all development proposed over low hazard areas during the 1 in 100 AEP event. Furthermore, it is noted that the eastern watercourse is a minor first order watercourse where full watercourse diversion under the Water Management Act is permissible. For the western watercourse all development occurs over areas where the velocity depth product during the 1 in 100 AEP event is less than 0.5 m^2/s. Based on this, plus the relatively ephemeral nature of the watercourse in an elevation location of the catchment, the filling associated with the project is not proposed in any floodways.
	10. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event.	A detailed flood assessment has been undertaken as described in Section 1 of Appendix E. This included a WBNM hydrological and a 2-dimensional HECRAS hydraulic model simulating a full range of flood events in accordance with ARR2019. A number of flood maps have been provided.
	11. The EIS must model the effect of the proposed project (including fill) on the flood behaviour under the following scenarios: Current flood behaviour for a range of design events as identified in 11 above. This includes the 1 in 200 and 1 in 500 year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.	These matters are addressed by the detailed flood assessment as described in Section 1 of Appendix E.
	12. Modelling in the EIS must consider and document: The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood. Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazards and hydraulic categories. Relevant provisions of the NSW Floodplain Development Manual 2005.	These matters are addressed by the detailed flood assessment as described in Section 1 of Appendix E.

SEAR Category	Requirements	GHD Comments
	13. The EIS must assess the impacts on the proposed project on flood behaviour, including: Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure. Consistency with Council floodplain risk management plans. Compatibility with the flood hazard of the land. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the SES and Council. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the SES and Council. Emergency management, evacuation and access, and contingency measures for the development considering the full range or flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the SES. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.	The relevant comment number is referenced in the below response text: As noted above the impacts of the proposed works during the 1 in 100 AEP event are not of significant extent downstream [13a,13b] and are limited to the plastics recycling and reprocessing facility site and the lot to the east. This has no significant impact on any existing infrastructure or access/egress routes for flood evacuation [13g, 13h, 13i, 13j]. The site pad is located above the Probable Maximum Flood. As the impacts on flooding are localised, no significant environmental impacts are anticipated due to flood impacts from the works [13e,13f]. No works are proposed over any areas other than those that are low hazard during the 1 in 100 AEP event [13c,13d].

5.7.2 Biodiversity

Issue

The BDAR found that the development will need to retire 14 biodiversity credits including 5 credits for PCT 1256 and 2 credits for PCT 944. Seven credits are required for the southern myotis. The Conditions of Approval needs to require that these credits are retired before any impacts occur.

Response

The BDAR has been updated (Appendix K) including updated credit calculations.

Plasrefine Recycling would meet offset obligations prior to the clearing of native vegetation for the proposal through payment into the Biodiversity Conservation Fund.

Issue

We recommend that the Conditions of Approval include the requirement for mitigations measures to be carried out to minimise impacts to biodiversity in accordance with the BDAR. This should include the requirement for a Riparian Vegetation Management Plan, as mentioned in the BDAR.

Response

Conditions of approval are a matter for DPE to consider during its assessment of the proposal.

Issue

The BDAR was generated more than 14 days before it was submitted to the Planning Portal. The BDAR is dated 1/11/2021 and the Report was submitted on 27/1/2022. In accordance with the Biodiversity Conservation Act, section 6.15, an accredited person must certify the Report and that date must be within 14 days of the Report being submitted.

Response

The BDAR has updated and has been certified and dated 03 March 2023, the BAM-C has been submitted on BOAMS on 03 March 2023.

Issue

Plasrefine Recycling will need to finalise the case in the Biodiversity Offsets and Agreement Management System (BOAMS) and submit it to the Consent Authority for review by BCD before any approval can be granted. We have requested this of Plasrefine Recycling already. We suggest that PAG also advises Plasrefine Recycling of this requirement.

Response

The BAM-C case has been finalised and submitted to the Consent Authority in BOAMS for review.

5.8 Transport for NSW

5.8.1 Rail crossing

Issue

TfNSW notes the traffic assessment states that 40% of vehicle movements will be from the north with the proposed haulage route indicating that the trucks that will be delivering and exporting plastics will come from the west. As such, the proposal will increase the number of vehicles that cross the at grade rail crossing that is located to the north of the development site.

TfNSW understands that this rail line is a Boral Branch line and is not controlled/managed by the Australian Rail Track Corporation (ARTC). It is however noted that there is limited infrastructure currently provided at this at grade crossing and given the increase in vehicle movements, there may be a need to activate the crossing. In this regard, it is suggested that an Australian Level Crossing Assessment Model (ALCAM) be undertaken to identify potential risks and any required upgrades.

Response

The basis for the traffic distribution and further discussion on the traffic impact at the Berrima Road rail crossing has been provided in Section 5.1.6. As noted by Wingecarribee Shire Council, new roads are planned which will eventually eliminate the at grade crossings of the railway line in and around the SHIP. As noted in Section 5.1.6, the impacts of the railway crossing on construction and operational routes for the proposal are expected to be minimal because of the expected low frequency of truck movements (maximum of 5 trucks per hour each way), and of train movements (1 per hour).

The crash data at the existing crossing based on TfNSW Centre of Road Safety website shows there has not been any crashes in the past 5 years (2016-2020) of available data. This is despite it being a non-active/passive site (ie. a site that relies on drivers stopping to observe any approaching trains with no activated lights/boom gates etc when train approaches).

If required, an Australian Level Crossing Assessment Model (ALCAM) could be undertaken to identify potential risks and any required upgrades, given that the timing of future road upgrades by Wingecarribee Shire Council is uncertain.

5.9 Wingecarribee Shire Council

5.9.1 Site suitability

A combined response for all issues pertaining to site suitability has been provided below.

Issues

- The proposal relates to land contained in the SHIP on the outskirts of Moss Vale. This precinct was previously known as the MVEC. The Moss Vale Enterprise Corridor Development Control Plan 2012 (MVEC DCP) has been adopted by Council to facilitate the development of this corridor. A copy of the MVEC DCP can be obtained on the Wingecarribee Shire Council website at the following address: **https://www.wsc.nsw.gov.au/files/assets/public/development/dcps/mvec6.pdf**
- Council has considered the suitability of the proposed development and the proposed site in relation to the MVEC DCP and in particular the key aims, infrastructure, constraints and precinct concepts outlined in the MVEC DCP. These are relevant to this proposed development. The MVEC DCP was prepared to ensure, among other things; the orderly and proper development of the enterprise corridor; provide adequate and essential physical infrastructure to service development; and to protect the amenity of surrounding rural and residential areas. The proposed development is inconsistent with the MVEC DCP in a number of key areas.
- The proposed development is located in a precinct of the SHIP that is not planned for this this type of activity. The subject site is part of transitional interface area of the SHIP classified as an Enterprise Precinct. This is outlined in the MVEC DCP Land Use Precinct map (Copy attached in Appendix 1).
- As quoted in the MVEC DCP, "[t]he Enterprise Precinct includes land at, and near, the interface with the Moss Vale township. This precinct will facilitate a transition between residential uses and heavier industrial uses [planned] across the northern parts of the Enterprise Corridor. [The Enterprise Precinct] will accommodate a mix of light industrial and commercial office uses".
- The creation of this precinct foreshadowed the potential amenity conflict with the residential town fringe to the south, and it is very important.
- The proposed development is neither light industrial or commercial office space. The nature and scale of the proposed development is not suited to the aims of the Enterprise Precinct, particularly in relation to the proposals size, footprint, visual impact, vehicle movements, hours of operation, and environmental emissions. Maintaining the integrity of the aims of this precinct is very important in the orderly development of the SHIP and protecting the amenity of the surrounding rural and residential area.
- Council is also concerned that a development of the proposed nature may also affect the future development (i.e. future light industry / commercial office development) of the Enterprise Precinct in this location.
- It is important for Council and the community to continue to develop the SHIP in an orderly and proper manner in line with the MVEC DCP, including the planning objectives of the Enterprise Precinct where the subject site is located.

Response

The proposal would be located in the MVEC on land zoned IN1 General Industrial (the facility) and RU2 Rural Landscape (the Braddon Road portion of the proposed new north-south public access road) under the Wingecarribee LEP is permissible with consent in these zones and consistent with the zone objectives. The plastics recycling and reprocessing facility site does not adjoin any residential zoned land, and a new access road is proposed that does not pass through residential zoned land. Further, the C4 zoned portion of lot 11 DP 1084421 provides an approximate 200 metre buffer between the IN1 site and the closest residential receiver on land zoned RU2 Rural Landscape.

The proposal is consistent with the land uses contemplated in the MVEC, an industrial zoned area of land greater than 1000 ha. The proposal is an appropriate use of the site and would not result in unreasonable amenity impacts.

The suburb of Moss Vale has a number of zones in which industrial and office uses are permitted. Table 5.15 summaries the land uses permitted without consent, permitted with consent and prohibited in the IN1, IN2, IN3, B4 and B5 zones.

Council's comments indicate that the site is 'part of transitional interface area of the SHIP classified as an Enterprise Precinct' to 'accommodate a mix of light industrial and commercial office uses.' However, the site is zoned IN1. General Industrial which permits a broader range of industrial uses including general industry, light industries and waste management land uses with consent. Business premises, which include commercial offices, are prohibited in the IN1 General Industrial zone. The only exception is selected commercial activities, that provide direct services to the industrial activities and their workforce (as per the proposal). Commercial office uses are permissible with consent in the B4 Mixed Use and B5 Business Development zones to the south of the site in the Moss Vale town centre.

It is also noted that Council has zoned land IN2 Light Industrial, at the north-western end of Lytton Road where it meets Berrima Road, between the Moss Vale town centre and the MVEC, as shown in Figure 5.16. This zoning permits light industrial uses and immediately adjoins residential zoned land and existing housing.

Table 5.15 Land uses permitted without consent, permitted with consent and prohibited in the IN1, IN2, B4 and B5 zones

Land zoning	(2) Permitted without consent	(3) Permitted with consent	(4) Prohibited
IN1 General Industrial	Environmental protection works; Home-based child care; Home occupations	Depots; Freight transport facilities; Garden centres; **General industries**; Hardware and building supplies; Industrial training facilities; Landscaping material supplies; **Light industries**; Neighbourhood shops; Oyster aquaculture; Places of public worship; Plant nurseries; Roads; Rural supplies; Take away food and drink premises; Tank-based aquaculture; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; **Any other development not specified in item 2 or 4** *Office premises (but as pr the zone objectives, only where they provide direct services to the industrial activities and their workforce)	Agriculture; Air transport facilities; Airstrips; Amusement centres; **Business premises**; Camping grounds; Cemeteries; Correctional centres; Crematoria; Eco-tourist facilities; Exhibition homes; Exhibition villages; Farm buildings; Forestry; Health services facilities; Heavy industrial storage establishments; Highway service centres; Home occupations (sex services); Industries; Open cut mining; Pond-based aquaculture; Residential accommodation; Restricted premises; **Retail premises**; Schools; Sex services premises; Tourist and visitor accommodation; Water recreation structures; Wharf or boating facilities
IN2 Light Industrial		Agricultural produce industries; Depots; Garden centres; Hardware and building supplies; Industrial training facilities; Landscaping material supplies; Light industries; Neighbourhood shops; Oyster aquaculture; Places of public worship; Plant nurseries; Roads; Rural supplies; Specialised retail premises; Take away food and drink premises; Tank-based aquaculture; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; **Any other development not specified in item 2 or 4** *Office premises (but as pr the zone objectives, only where they provide direct services to the industrial activities and their workforce)	Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; **Business premises**; Camping grounds; Cemeteries; Correctional centres; Crematoria; Eco-tourist facilities; Exhibition homes; Exhibition villages; Farm buildings; Forestry; Health services facilities; Heavy industrial storage establishments; Highway service centres; Home occupations (sex services); **Industries**; Open cut mining; Pond-based aquaculture; Residential accommodation; Restricted premises; Retail premises; Rural industries; Schools; Sex services premises; Tourist and visitor accommodation; Water recreation structures; Wharf or boating facilities

Land zoning	(2) Permitted without consent	(3) Permitted with consent	(4) Prohibited
IN3 Heavy Industrial	Environmental protection works	Depots; Freight transport facilities; General industries; Hazardous storage establishments; Heavy industries; Offensive storage establishments; Oyster aquaculture; Roads; Tank-based aquaculture; Warehouse or distribution centres; **Any other development not specified in item 2 or 4**	Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Camping grounds; Car parks; Caravan parks; Cemeteries; Centre-based child care facilities; Commercial premises; Community facilities; Correctional centres; Crematoria; Eco-tourist facilities; Educational establishments; Entertainment facilities; Exhibition homes; Exhibition villages; Farm buildings; Forestry; Function centres; Health services facilities; Highway service centres; Home-based child care; Home businesses; Home industries; Home occupations; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Information and education facilities; Local distribution premises; Mortuaries; Open cut mining; Passenger transport facilities; Places of public worship; Pond-based aquaculture; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Residential accommodation; Respite day care centres; Restricted premises; Self-storage units; Service stations; Sex services premises; Tourist and visitor accommodation; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Water recreation structures; Wharf or boating facilities
B4 Mixed Use	Environmental protection works; Home-based child care; Home occupations	Boarding houses; Centre-based child care facilities; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Hotel or motel accommodation; Information and education facilities; Light industries; Medical centres; Oyster aquaculture; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Seniors housing; Shop top housing; Tank-based aquaculture: **Any other development not specified in item 2 or 4**	Agriculture; Air transport facilities; Amusement centres; Animal boarding or training establishments; Camping grounds; Caravan parks; Cemeteries; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Exhibition villages; Extractive industries; Farm buildings; Farm stay accommodation; Forestry; Freight transport facilities; Heavy industrial storage establishments; Home occupations (sex services); Industrial training facilities; Industries; Open cut mining; Pond-based aquaculture; Recreation facilities (major); Recreation facilities (outdoor); Research stations; Rural industries; Rural workers' dwellings; Sewage treatment plants; Sex services premises; Storage premises; Transport depots; Waste or resource management facilities; Water recreation structures; Water supply systems; Wharf or boating facilities

Land zoning	(2) Permitted without consent	(3) Permitted with consent	(4) Prohibited
B5 Business Development		Centre-based child care facilities; Garden centres; Hardware and building supplies; Landscaping material supplies; Light industries; Oyster aquaculture; Passenger transport facilities; Plant nurseries; Respite day care centres; Roads; Specialised retail premises; Tank-based aquaculture; Warehouse or distribution centres; Any other development not specified in item 2 or 4	

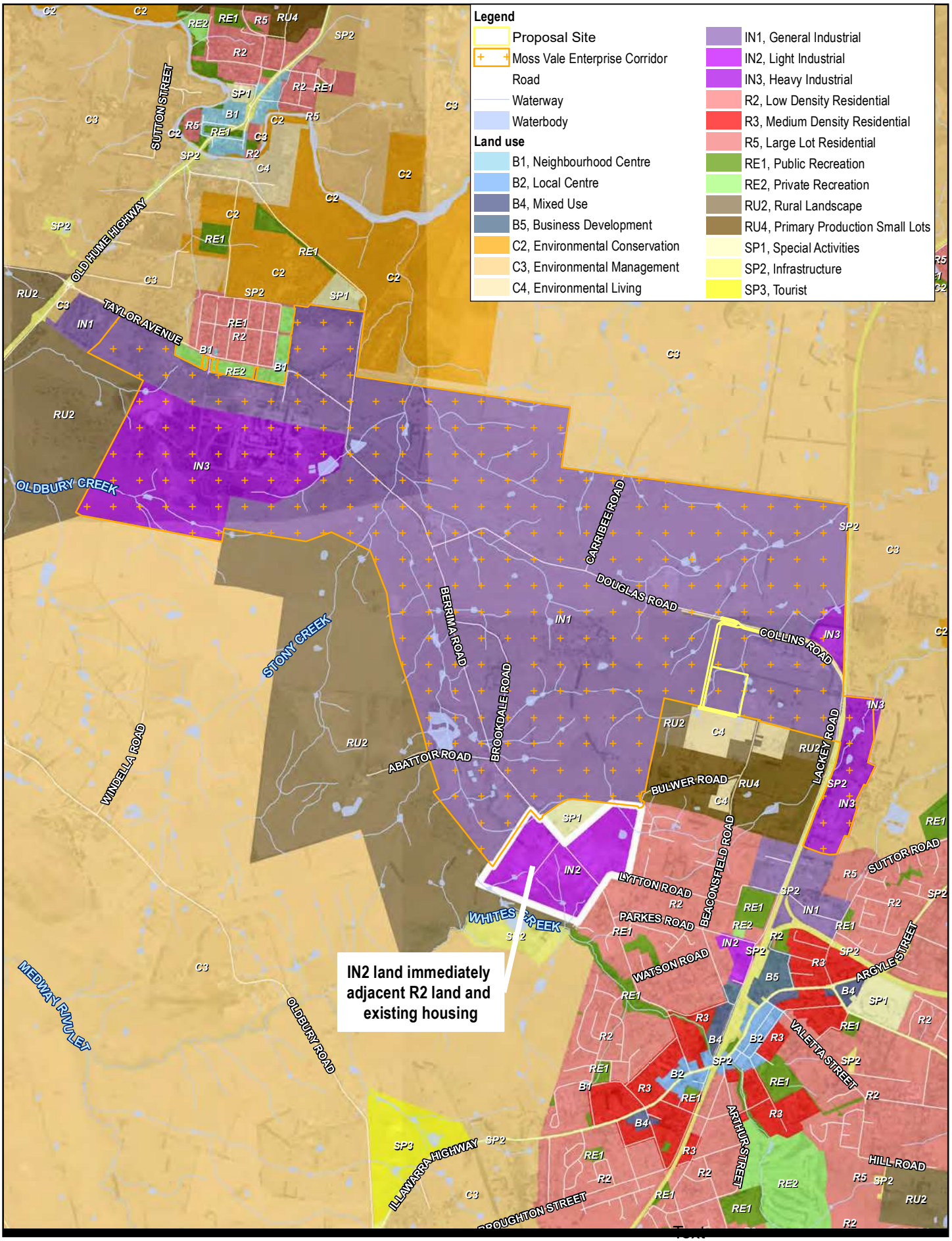
As discussed in Section 5.4 of the EIS, pursuant to the provisions of Section 2.10 of the Planning Systems SEPP (previously Clause 11 of the State Environmental Planning Policy (State and Regional Development) 2011), development control plans do not apply to State Significant Development. Notwithstanding the above, the proposal has been designed to have regard to the DCP wherever possible. Development controls provided in the MVEC DCP are considered as part of *Technical Report 7 – Landscape and Visual.*

The nature and scale of the proposed development seeks to minimise potential impacts in relation to the size, footprint, visual impact, vehicle movements, hours of operation, and environmental emissions associated with the proposal.

The proposal would be the first facility of its kind in NSW and would broaden the variety of business and industry sectors within the Wingecarribee LGA. It would also have the likelihood of attracting people to work and live within the Wingecarribee LGA. The proposal would also have the ability to make use of key enabling infrastructure such as the proposed Moss Vale By-Pass and Moss Vale Wastewater Treatment Plant upgrades that are designed to unlock the potential of the MVEC.

Construction and operation of the proposal would also require:

- Construction of a new access road (part of Braddon Road and a north-south connection to Collins Road) which would be dedicated to Council as a public road.
- Construction of a new gravity sewer located directly west of the proposal site, connecting to the nearest maintenance hole located on Douglas Road. This sewer would be available for other developments to connect to.
- Connection to the local electricity supply and the National Broadband Network, allowing other future developers west of the plastics recycling and reprocessing facility site to connect to these as well.



Paper Size ISO A4

0 250 500 750 1,000

Meters

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

N

GHD

Plasrefine Pty Ltd
Moss Vale Plastics Recycling and Reprocessing Facility
Response to Submissions Report

Project No. **12524108**
Revision No. **A**
Date **13/01/2023**

Land use zoning

FIGURE 5.16

5.9.2 Traffic and road infrastructure

Issue

The nature and scale of the proposed development in its current location, and at this point of times, is out of sequence with the development of the SHIP. It is ahead of its time in terms of important infrastructure being developed for the SHIP, and for the Moss Vale area. This adds potential safety and efficiency risks to the current transport network.

Response

The proposal would be located within close proximity (100 metres to 500 metres) to a number of existing large-scale industrial developments within the SHIP, such as Dux Hot Water, Fast Skips Recycling, Omya Australia and A&I Coatings. The MVEC DCP does not include a staging plan for release of land, and the plastics recycling and reprocessing facility site is the next vacant land south and west south of Dux Hot Water and west of Australian Bioresources respectively.

Chapter 19 of the EIS details the off-site infrastructure required for construction and operation of the proposal and the proposed staging for delivery of the infrastructure. They are also discussed in Section 5.9.1. The Southern Highlands Destination Strategy released by Wingecarribee Shire Council in November 2020 provides the following:

> *The Southern Highlands has a number of key economic strengths*
>
> *Southern Highlands Innovation Park: provides a unique opportunity for large scale industrial development conveniently close to Sydney, and good distribution to most of the country.*

Technical Report 6 – Traffic and Transport concludes that with the implementation of the proposed mitigation measures, the proposal would have a negligible impact on the surrounding road network in the vicinity of the proposal site during construction and operation. The Construction Traffic Management Plan (CTMP) and Operational Environmental Management Plan (OEMP) prepared for the proposal would be to maintain the safety of all workers and road users within vicinity of the proposal site.

Based on the outcomes of the additional assessment that has been conducted and documented in Section 4.4.1, it is considered that the operation of the proposed facility would have negligible impact on the surrounding road network in terms of intersection performance. A review of access and key intersections also show that sufficient sight distance is available at key access points which is expected allow for the safe movement of vehicles into and out of the proposed site.

Since 9 December 2022, Council has been contacted on four occasions via email, and progressively provided with drawings showing the proposed north south road route alignment, intersection design, and road design, and been asked to comment on these aspects. No responses have been received from any Council officers on any matter since 16 November 2022, when Council provided a formal response on water and wastewater servicing of the site.

Issue

The MVEC DCP outlines the Transport Infrastructure plan for the SHIP. A number of upgrades and new roads are required to facilitate and accommodate development in the SHIP. Some of this infrastructure has been completed, particularly to the north of the SHIP. But there are still significant roads, bridges and other infrastructure that is yet to be completed especially to the south and west of the SHIP, and in the vicinity of this proposal.

Response

Refer to response above and in Section 5.9.1.

Issue

Importantly, new roads are planned which will eliminate the at grade crossings of the railway line in and around the SHIP. Currently three at grade railway crossings are situated on the planned transport route between the proposed site and the Hume Highway. When the MVEC DCP Traffic Infrastructure plan is completed, all of these at grade crossings will be removed.

Response

Noted.

Issue

In addition, the planned Moss Vale Bypass will remove significant existing inefficiencies currently in the road network around the Moss Vale township. The additional vehicle use with this proposed development will add pressure on the current network before the future infrastructure is in place.

Response

As noted above, the *Technical Report 6 – Traffic and Transport* concludes that with the implementation of the proposed mitigation measures, the proposal would have a negligible impact on the surrounding road network in the vicinity of the proposal site. In addition, based on the outcomes of the additional assessment in Section 4.4.1 that has been conducted and documented for the now proposed north-south access, it is considered that the operation of the proposed facility would have negligible impact on the surrounding road network in terms of intersection performance.

Issue

Council advocates on the continued orderly development of the SHIP, in a sequence that does not add significant safety and inefficiency issues to the transport network.

Response

Noted.

Issue

Council does not support any access via Beaconsfield Road at any stage of the development. This is a significant issue for the community and Council. Council expects all development in the SHIP, not just this proposal, to be consistent with the infrastructure plans outlined in the MVEC DCP, and Beaconsfield Road does not feature in these Plans.

Response

The preferred access is now via a proposed new north-south public access road (refer Section 4.1). As a result, the use of Beaconsfield Road would no longer be required, including during construction.

The proposed new north-south public access road is consistent with road alignments identified by Wingecarribee Shire Council in the Moss Vale Enterprise Corridor Development Control Plan (2012) (see Figure 4.3).

Issue

The MVEC DCP provides for access to the subject site across to Lackey Road via the future Braddon Road (currently unformed). The development proposal includes construction of this new road and a new connection to Lackey Road (the proposed Braddon Rd east extension).

Council is concerned that important details around the development of the unformed road are unclear and remain unresolved, especially as this such a significant issue for Council and community. Council is concerned that negotiations are still ongoing with adjoining landholders around purchasing of land for the road reserve and that the adjoining landholders consent was not included with the application.

Response

The preferred access is now via a proposed new north-south public access road (refer Section 4.1). Figure 4.1 defines the proposed new north-south public access road. It includes the following land:

- Unformed paper road (Braddon Road) that bisects Lot 11 DP 1084421
- Unformed paper road (unnamed) between Braddon Road and Collins Road
- Part of Collins Road (unformed).

The site for the plastics recycling and reprocessing facility is Lot 11 DP 1084421.

The purchase of land is not required for any part of the proposed new north-south public access road.

Land owners' consent for the proposal forms part of the application.

Issue

There is insufficient detail in the EIS to determine if the proposed road and intersections can be built to Council's requirements. Council has not received enough information to determine if it is prepared to take over the completed road, or to enter into a voluntary planning agreement (involving the road). The proposal should not be approved until this has been resolved.

Response

The preferred access is now via proposed new north-south public access road. Detail including the proposed design for this road is provided in Section 4.1.2. The proposed new north-south public access road has been designed in accordance with Austroads standards.

In June 2022, a draft voluntary planning agreement was provided to Council in relation to the previously proposed new east-west public road being dedicated to Council, for its consideration – the Braddon Road East Extension Planning Agreement, prepared under section 7.4 of the EP&A Act.

A revised draft voluntary planning agreement would be provided to Council in relation to the proposed new north-south public access road being dedicated to Council, for its consideration.

Issue

Levies through the MVEC Contributions Plan have been collected exclusively for land acquisition along identified road corridors, but not for the construction of the roads. The proponent would therefore need to construct the road at their expense, but to Council's standards, as a condition of consent.

Response

The preferred access is now via proposed new north-south public access road (see Section 4.4). Acquisition of the land is not required for this road corridor.

Plasrefine Recycling proposes to initially fund the design and construction of the new north-south public access road, noting that discussions would be held with Council in regard to the public roadworks being considered as 'works in kind' and therefore potentially able to offset developer contributions. Once constructed, the new north-south access road would be dedicated to Council for maintenance and use as a public road.

Issue

The EIS provides a likely transport route for heavy vehicles travelling towards the proposed site via the Hume Highway (M31), Douglas Road, Collins Road, and Lackey Road. Currently this would be Council's preferred route until such time as the completion of the planned Moss Vale By Pass (which is still at an early planning stage), as this keeps vehicles away from Moss Vale township and other sensitive areas. If the development is approved, Council needs to know what controls will be put in place to control the transport to these routes.

Response

As a result of the change to the preferred access road, the revised heavy vehicle route (for both construction and operation) would be via Hume Highway (M31), Berrima Road, Innes Road (Garrett Street), Lackey Road, Collins Road and then the new north-south public access road. This is shown on Figure 4.4. The outcomes of the additional assessment in Section 4.4.1 that has been conducted and documented for the north south access indicate that the operation of the proposed facility would have negligible impact on the surrounding road network in terms of intersection performance.

Plasrefine Recycling would require its suppliers and delivery vehicles to submit a Journey Planner prior to accessing the facility confirming the use of this haulage route.

5.9.3 Water supply

Issue

The proposed development will be a large consumer of water with a daily demand of 43.5 kL. This equates to about 16,900 kL/annum.

In the short term, it is shown there is capacity in the water networks to support the facility. However, there are known capacity issues in the Moss Vale water supply network in the near future. This will occur when plan development and infill demands come on line from 2026. Modelling in the EIS shows the water network cannot meet the demand in 2026.

Council does have various capital works projects planned to upgrade the water network infrastructure within Moss Vale to ensure adequate supply is maintained for future. These are still in design phase with an estimated budget of $20 million, but this is subject to change once the route and design is confirmed. While the estimated timeframe sees the delivery in the next three years, this again is still dependent on the confirmation of routes, designs and budget.

Council is concerned about approving an additional major water user to the water network, until there is more certainty about completion timeframes of these large-scale essential water supply projects.

Response

Based on the apparent lack of capacity of the water supply and wastewater treatment capacity highlighted by Council in its EIS submission, Plasrefine Recycling has refined the likely water demand and wastewater generation figures in consultation with equipment and technology suppliers to remove significant conservatism with respect to the level of recycled water included in the previous assessment. This has resulted in a significant reduction in water demand as shown in Section 5.1.5.

The updated water balance shown as Figure 5.9 shows that daily water demand would be reduced from 43.5 kilolitres per day to between 8.02 and 18.02 kilolitres per day (depending on whether it is necessary to discharge up to 10 kilolitres per day of wastewater to sewer each day. This represents a 60% reduction in water demand at full plant capacity. The water demand is estimated based on full operational capacity of the proposal and represents the maximum water demand.

This is not expected to be required at commencement of operations as the processing would be scaled up over time. In addition, Section 10.4.4 of the EIS noted that in the longer term, an average of approximately 80% of the water demand could be sourced from onsite rainwater collection. With the updated reduced demand this proportion is expected to be higher.

Council advised on 16 November 2022 that Plasrefine Recycling's temporary water supply strategy, to pump from Council's water supply network at non-peak times, and store the water for production during the day, could be accomodated within the existing infrastructure networks.

5.9.4 Wastewater treatment

Issue

The subject site is serviced by the Moss Vale Waste Water Treatment Plant. As the EIS mentions, this facility is currently operating at capacity. Council has committed to an upgrade of the facility, but it will be several years before it is completed. Although the impact from the proposal is relatively small on a percentage basis of overall capacity, the Department should be advised that discharges from the proposed development will contribute to the Council's facility operating at, and over, capacity for several years.

Details on the quality of the wastewater is not provided in the EIS, therefore it is not possible to confirm if this can meet Council's trade waste requirements. There may be potential for microplastics and nanoplastics to be present in the liquid waste stream. No consideration has been given on the implications of this type of waste at Council's waste water treatment plant, and its ability to treat it. This requires further investigation, as additional onsite treatment processes may be needed prior to discharge.

Response

The process water from washing activities would contain microplastics. However these would be removed via the dewatering and filtering processes in the WWTP. The filtered and treated wastewater would be reused in processing and the filter cakes containing the microplastics would be landfilled. The wastewater quality would meet Council's Trade waste requirements.

As shown in the updated water balance (Figure 5.9), the wastewater discharge quantity is proposed to be reduced from 15.8 kilolitres per day to between 2.52 and 12.52 kilolitres per day. This is based on upgrading of the on-site WWTP so that it can effectively operate as a zero discharge facility. An allowance for discharge to sewer of up to 10 kilolitres per day for industrial wastewater would still be proposed, however wastewater could be tankered off site for treatment at Berrima Wastewater Treatment Plant if there was insufficient treatment capacity at Moss Vale Wastewater Treatment Plant until Council's planned upgrading occurs, noting that this quantity is not expected to be generated prior to 2026.

Council provided a comment on 16 November 2022 that it remains concerned about setting an undesirable precedent by allowing the tanking of effluent throughout the Shire. However it noted that in relation to the planned infrastructure upgrades, being the Moss Vale STP and the Bowral to Moss Vale Trunk duplication, that it has previously advised that it is working towards having these enabling infrastructure projects completed by the end of 2026, subject to funding.

The proposed facility would not be operational until at least 2025, and would only produce a fraction of the envisaged maximum flows in its first 1 to 2 years of operation, because they are highly dependent upon employee numbers and throughput, which would build up over a period of time. Therefore it is expected that the existing wastewater treatment capacity would be sufficient to accommodate early operations of the proposal in the period prior to the necessary upgrades occurring.

5.9.5 Air quality

An Air Quality Response to Submissions Letter ('the AQ RTS Letter') has been developed, which provides detailed responses to significant issues raised in submissions. The AQ RTS Letter is provided as Appendix J of this report.

Issue

Air quality from the proposed development is a major concern to the community. A thorough and transparent assessment is required to ensure confidence can be built amongst the community.

Response

The potential air quality impacts have been thoroughly assessed in accordance with the NSW EPA *Approved Methods for Assessment of Air Pollutants in New South Wales*, and emission limits for the proposed facility will be designed to be compliant with the NSW EPA POEO Clean Air Regulation standards of concentration. The assessment found that no impacts above the criteria at residential locations within the community.

The AQ RTS Letter provides detailed responses to issues raised during submissions, including those raised by the air quality specialists at NSW EPA.

Issue

The EIS focuses on specific volatile organic compounds (VOCs) and particulate matter but does not include a justification for the selection of only these parameters. A variety of plastic materials are proposed to be processed which may generate a range of other air pollutants not specified in the EIS (eg. the processing of plastics such as acrylonitrile butadiene styrene). This should be fully considered and justified.

Response

This item is addressed in Section 4.1 and section 4.2 of the AQ RTS Letter (Appendix J).

Issue

Processing of plastics (including PVCs) under heat has the potential to generate persistent organic pollutants such as dioxins. The EIS does not assess the potential risk of emissions of persistent organic pollutants.

Response

This item is addressed in Section 4.3 of the AQ RTS Letter (Appendix J).

Issue

The EIS discusses emissions of particulate matter, but there is no information about the makeup of these particles. As these are generated form processes such as the granularization of plastics, there is likelihood they contain microplastics and nanoplastics. There is no consideration of the cumulative effect of microplastics and nanoplastics as the particulate matter settles and contaminates the landscape.

The build-up of microplastics and nanoplastics contamination across a large area over the course of time is potentially alarming. Council and the community would like to know what impact this contamination could have on human health, local agriculture (livestock, crops, and feed supplies), food chains, nearby land uses, water catchments, water courses, ecology and the local economy. This potential impact must be fully explored and assessed.

Response

This item is addressed in Section 4.4 of the AQ RTS Letter (Appendix J).

Issue

There is limited information in the EIS on odour emissions and control apart from a general claim that the emission of odour is low, unlikely and minor. An odour assessment does not appear to have been conducted. There would appear to be a number of processes and stages where odours could potentially by generated (eg. waste water treatment, residues on the plastics, the disinfection process and impact of impurities during the heating process). There is also little detail on the localised air treatment systems to control air pollution and how they might control odours. This needs further investigation and detail.

Response

This item is addressed in Section 6 of the AQ RTS Letter (Appendix J).

5.9.6 Noise

Issue

Council is concerned that there are properties predicted to be impacted during the construction phases of the project. The community is already very wary of the proposed development and this is unlikely to be accepted. It is unclear how this now source will controlled and regulated.

Response

The potential for noise and vibration impacts have been quantitatively assessed against the relevant guidelines referenced in the SEARs. Construction noise impacts have been compared to the established noise management levels at sensitive receivers (Section 5.2 of the NVIA) and the potential for human comfort or structural damage impacts as a result of construction vibration has also been assessed (Section 5.3 of the NVIA).

Construction noise levels during all stages of construction are predicted to result in noise levels above the Interim Construction Noise Guidelines (ICNG) Noise Affected Noise Management Level. The noise levels are predicted to be between 46 dBA to 65 dBA however will not exceed the ICNG Highly Noise Affected Noise Management Level of 75 dBA at any receivers.

The ICNG requires that where noise from construction works is above the ‘noise affected’ noise management levels, all feasible and reasonable work practices should be undertaken to minimise noise. Additionally, potentially affected receivers would be informed of the expected noise impacts and duration. Mitigation measures to reduce noise levels and the risk of the noise impacts during construction have been recommended. Mitigation, management and monitoring measures to be implemented during construction are provided in Section 6.1 of the NVIA to reduce the potential for impacts as required by the SEARs.

This includes the development of a construction noise and vibration management plan (CNVMP) that would include a review of the construction contractor's methodology, updates to the noise predictions (if required) and an examination of the feasible and reasonable work practices, mitigation measures, management measures and monitoring measures to be implemented prior to and during the construction works.

Issue

Within the EIS there appears to be some inconsistency where some receivers are identified as residential receivers, however, the residential project noise trigger levels do not appear to be assigned to them (Appendix G of *Technical Report 3 - Air Quality and Odour*). This should be reviewed.

Response

The identification of receivers and associated project noise trigger levels are corrected in Section 5.3.1.

Issue

The EIS mentions the potential for low frequency noise to be experienced at the nearest sensitive receivers. This adds annoying characteristics to the noise which may affect the receivers. More detail should be provided on how these annoying characterises can be mitigated.

Response

The potential for low-frequency noise is discussed in Section 5.3.1. Once third-octave band noise levels have been provided, it is envisaged that each stack would require a silencer to eliminate the potential for low-frequency noise at receivers and detailed internal noise modelling would be undertaken prior to construction to ensure there are no low-frequency impacts associated with building break out noise in accordance with the NPfI.

5.9.7 Waste storage

Issue

The EIS states that the facility will only 3 days capacity of plastic storage at the point of receival. There is concern that in the event of a process failure plastic would need to be stored outside of the enclosed facility which would have associated risks. Management controls need to be factored into this process.

Response

Refer to response in Section 5.3.2.

5.9.8 Landscape and amenity

Issue

Council is concerned the proposed development relies heavily on screening plantings to be undertaken on an adjoining site and not on the proposal site itself. The landscape design has been prepared in part to compensate on the unavoidable negative visual impact of the development, and the visual impact photo montages appear to rely on the plantings proposed on a neighbouring property.

Response

The proposal has been designed so that it is not reliant on the proposed plantings. The proposed screening planting on the adjacent C4 portion of Lot 11, DP 1084421 would be implemented at the earliest opportunity, to reduce visual impacts during both construction and operation of the proposal. This parcel of land is also owned by Mr Lyu Trust, and such works are permissible without consent on land zoned C4 under the Wingecarribee LEP.

Issue

It is unclear if the neighbouring property is included in the proposal site being considered in this application. It is also unclear how approval and enforcement may actually occur on the neighbouring site. Will restrictions be placed on the neighbouring property to ensure the long term retention of this screening? Visual amenity and the transition between the SHIP and the adjoining residential and rural areas (as outlined in paragraphs 3-6 above), are significant issues to the community and Council, and this needs to be reviewed.

Response

The southern parcel of land in Lot 11 DP 1084421 is zoned C4 Environmental Living and is also owned by Mr Lyu Trust.

Mitigation measure UV4 (refer to Table 7.1 of this report), states:

> *Staging of works would be considered to undertake perimeter buffer planting in advance of construction works, particularly in locations where short-term visual mitigation would be beneficial. This would include larger-sized trees and shrub planting stock.*

Conditions of approval are a matter for DPE to consider during its assessment of the proposal. During detailed design, the potential to implement perimeter buffer planting within the southern boundary of the proposal site would be assessed.

5.9.9 Social impact

Issue

The proposed development has generated a high level of opposition from the community. Council has received a lot of feedback from the community on their perceptions of the proposal. Prior to the submission of the EIS, Council advocated to Plasrefine Recycling for the inclusion of a social impact assessment with the EIS. This has not been included.

Response

The SEARs issued by DPE for the proposal did not require assessment of social impacts. Nonetheless, Section 18 of the EIS contained an analysis of socio-economic matters including an assessment of the existing environment, impact assessment during construction and operation and mitigation measures.

It is noted that Council did not respond to DPE's request for inputs to the SEARs (issued October 2020). Furthermore, on 1 February 2021 the project team issued a letter to Council offering a briefing and requesting feedback to allow integration of that feedback into the EIS documentation. This letter was accompanied by a copy of the SEARs and EIS Scoping Report. On 10 February 2021 Council acknowledged receipt of the letter and attachments but did not raise any issues or request any additional studies to be undertaken in its response.

The project team also had ongoing liaison with Council during the EIS preparation phase, and the need for a social impact assessment was not raised during this time. The EIS was completed and provided to DPE for consistency review on 5 November 2021, with the expectation that the EIS would be formally lodged in early 2022 to enable exhibition to occur outside of the Christmas and school holiday period.

On 22 December 2021 Council advised Plasrefine Recycling by email that it had resolved in its December Council meeting to 'encourage the proponent to undertake a Social Impact Assessment in addition to the required Environmental Impact Statement'. The EIS addressed this by including a chapter on the socio-economic aspects of the proposal (Chapter 18.2). This included an analysis of the existing social economic environment of Moss Vale and Wingecarribee LGA, consultation which informed the socio-economic assessment, assessment of economic and social impacts from construction and operation of the proposal, changes made to the proposal in response to feedback received, and mitigation and management measures to minimise impacts.

In its submission about the EIS, DPE noted that it had received over 300 submissions during exhibition of the EIS for the development, and that many of these submissions raised concern about the social impacts of the development. DPE requested that "a more detailed Social Impact Assessment" be provided to address community concerns. A Social Impact Assessment (SIA) was prepared by Ethos Urban in accordance with the *Social Impact Assessment Guideline for State Significant Projects* (DPIE, 2021) and is appended to this report (Appendix D). A summary of the findings of the social impact assessment can be found in Section 4.3. The content and findings of

the independent SIA and EIS Chapter 18.2 align very closely. Since the EIS has been prepared, additional changes have been made to the proposal to reduce potential impacts, including the use of larger vehicles to reduce heavy vehicle movements, decreased water usage and improved air pollution management systems. These reduced impacts were included in the information used by Ethos Urban in preparing the independent SIA, which was undertaken in accordance with the Social Impact Assessment Guidelines (DPIE, 2021).

In addition, the preferred access for the proposal has been changed. The preferred access is now via a proposed new north-south public access road (refer Section 4.1). An addendum to the Social Impact Assessment was also prepared to document potential social impacts and benefits of the proposed change. The findings are provided in Appendix D and summarised in Section 4.4.5.

Issue

Attached to this report as Appendix 2 is a copy of correspondence that Council has received on this matter. Names and personal details have been redacted.

Response

Noted.

6. Response to community submissions

In this section, the issue raised in individual submissions have been grouped by topic. The responses provided to each issue have been prepared by GHD, on behalf of Plasrefine Recycling.

6.1 The proposal

6.1.1 Siting

Summary of issues raised

Several submissions raised concerned about the suitability of the site for the proposal. Issues raised included concern with:

- location of the site in proximity to residents, the Moss Vale town centre, schools and a preschool
- location of the site in the Southern Highlands
- the appropriateness of the site.

Response

The Wingecarribee 2040 Local Strategic Planning Statement

Following amendments to the EP&A Act in 2018, Wingecarribee Shire Council, along with all other local councils in NSW were required to prepare a Local Strategic Planning Statement (LSPS). The Wingecarribee 2040 LSPS document sets out the 20-year land use visions for the area, and provides a long-term planning framework to meet the economic, housing, social and environmental needs of the community in accordance with the *South East and Tablelands Plan 2036* (2017). It takes into consideration the key issues and challenges of the region that were identified during the extensive engagement process undertaken during development of the *Wingecarribee Community Strategic Plan* (2017) and builds upon the strategies noted within the Community Strategic Plan to ensure that the area continues to grow in a way that is consistent with the communities' values and expectations.

Within the LSPS are planning priorities and actions set to achieve the communities' vision for the area, many of which are relevant to the proposal. These include:

- Planning priority 1.1 – Reduce carbon emissions and increase energy, water and waste efficiencies
  - Action xiv – Maximise re-use and recycling to support a circular economy
- Planning priority 3.1 – Our Shire supports businesses' and attracts people to work, live and visit
  - Action iii – Broaden and promote the range of business and industry sectors
- Planning priority 5.1 – Plan for and deliver enabling infrastructure to unlock the potential of the Southern Highlands.

The proposal would assist divert waste from landfill, recover valuable materials and produce products from plastic waste. In doing so, the proposal would avoid the greenhouse gas impacts associated with the production of plastics from raw materials. This would promote a circular economy model of waste management, turning waste plastic into a valuable resource which could be used for bollards, decking, outdoor recreation and school furniture, fencing, signage, traffic controls.

The proposal would broaden the variety of business and industry sectors within the Wingecarribee LGA. It would also have the likelihood of attracting people to work and live within the Wingecarribee LGA, supporting planning priority 3.1. The proposal would also have the ability to make use of key enabling infrastructure such as the proposed Moss Vale Bypass and Moss Vale Wastewater Treatment Plant upgrades that are designed to unlock the potential of the MVEC, supporting planning priority 5.1.

The Moss Vale Enterprise Corridor and Southern Highlands Innovation Park

The proposal would be located within the MVEC and the SHIP. In total, the MVEC and SHIP comprise of over 1,000 hectares of industrially zoned land, about three kilometres north-west of the Moss Vale town centre, between Moss Vale and New Berrima.

The *Southern Highlands Destination Strategy 2020-2030* (Destination Southern Highlands and Wingecarribee Shire Council, no date) identified that the SHIP provides a unique opportunity for large scale industrial development within 70 kilometres of Wollongong, 140 kilometres of Sydney and 165 kilometres of Canberra, and has good connections to most of the country. This land was identified by Wingecarribee Shire Council for employment generating development under the Wingecarribee LEP.

6.1.2 Site layout and design

6.1.2.1 New public access road

Summary of issues raised

Several submissions raised concern about the previously proposed new east-west public access road. Issues raised included concern with:

- The appropriateness of site access
- Construction methodology, staging and costing
- Relocation of existing services
- Swept path analysis for Lackey Road intersection
- Wingecarribee Shire Council's position on the proposed alignment.

Response

The preferred access is now via a new north-south public access road which would comprise part of the currently unformed Braddon Road (paper road) and a connection to Collins Road (via an unnamed paper road, also currently unformed).

The new north-south public access road has been designed in accordance with Austroads standards.

Further detail including the proposed design, construction method and staging for this road is provided in 4.1. The proposed new north-south public access road has been designed in accordance with Austroads standards.

One existing power pole on Collins Road may need to be relocated to facilitate construction of the proposed new north-south public access road. No other relocation of services is expected to be required. This would be confirmed during detailed design.

Costs associated with construction of the previously proposed new east-west access road were estimated by a quality surveyor to be of the order of $1.38 million. This information was provided in Appendix H of the EIS.

Council's position on the proposed new public access road design is provided in Section 5.9.2.

6.1.2.2 Site plans

Summary of issues raised

Some submissions raised concern about the site plans. Issues raised included concern with:

- Lack of site survey and cut and fill plans undertaken during development of the EIS
- Lack of detailed plans and/or architectural drawings provided within the EIS
- Concern the scale of development it too large for the site
- Orientation of the facility.

Response

The following plans have been provided as part of this report:

- More detailed architectural plans as described in Section 4.2.2 – see Appendix F
- Preliminary cut and fill plan – see Appendix F.

The building footprint would comprise less than 65 percent of the total site area, due to required riparian setbacks and landscaping. The proposal would be a larger scale development than the neighbouring Australian Bioresources facility development, however would not be out of character with height and proportions of other industrial developments within the locality, such as Dux.

The architectural plans show a more developed design that minimises the height and bulk of the buildings by avoiding blank facades without suitable articulation. Natural tones are proposed that do not detract from the long range views of the surrounding rural landscape. Updated photomontages that show the refined architectural design are provided in Section 4.2.2.

The concept site layout was designed to enable to the main doors where waste delivery trucks would enter and exit to be placed on the western side of the building, facing away from the nearest sensitive receivers, further reducing potential for any impacts.

6.1.2.3 Technology

Summary of issues raised

Some submissions raised concern about the proposed technology. Issues raised included concern with:

- General infancy of plastics recycling technology which are untested
- Lack of nominated technology supplier and detail relating to the proposed technology
- Lack of information regarding the efficacy of the proposed systems for treating air emissions
- Provision of effective barriers to air movement which will prevent untreated emissions escaping via open roller doors
- Efficacy of the proposed technology to correctly separate different kinds of plastics
- Consequences of cross-contamination of plastics, especially when heating plastics
- Proposed temperatures for the extrusion process in Building 1
- Lack of information regarding the precise temperature range for melting each plastic type
- Lack of machinery specifications for the technology proposed for manufacturing equipment in Stage 2.

Response

Plastics recycling technology similar to that proposed, has been used for many years in many countries. The technology is improving all the time, especially the ability to sort different plastics using robotic technology, and to differentiate between different plastics in sorting processes.

There are many alternative suppliers for this equipment. Some are European based, some are from countries like China.

Efficacy of the proposed systems for treating air emissions is addressed in Section 3.3 of the AQ RTS letter. Emissions would be treated at source – each machine would be directly connected to ducting and this would prevent untreated emissions from escaping via open roller doors.

The sorting processes are very accurate and there is almost no possibility of cross-contamination of plastics. None of the temperatures used for moulding of plastics would be high enough to burn the plastics, so if there was a situation where the wrong plastics were fed into an extrusion machine, this would potentiality cause the product to be defective. It would not cause any fumes or danger to anyone. The proposed temperatures for the extrusion process in Building 1 are discussed in the air quality section.

There is no issue with lack of machinery specifications for the technology proposed for manufacturing equipment in Stage 2, because the type of equipment to be used in Building 2 is standard extrusion and moulding equipment. This is like the equipment used at places like Cromford Pipe, which is located in Moss Vale not far from the proposal site.

6.1.3 Site activities and operations

6.1.3.1 Processes

Summary of issues raised

Some submissions raised concerns about the proposed process. Issues raised included concern with:

- The proposed process of dealing with toxic wastes
- Why Plasrefine Recycling has not opted to utilise nearby rail infrastructure to transport feedstock to the proposal site, instead of heavy vehicles.

Response

Minimal amounts of hazardous waste are expected to be generated during construction. Any batteries would be collected and stored in designated collection containers and disposed of to an appropriately licensed facility. During operation, putrescible waste, liquid waste, clinical waste, hazardous waste, asbestos and other chemical waste would not be accepted at the facility. Residual emissions generated by melting plastics are discussed in Appendix J.

Plastic feedstock would come from a number of regions within NSW. Some may not be accessible via rail. Even if rail was possible for a portion of the route, semi-trailers would still need to transfer the feedstock from a rail siding to the facility.

6.1.3.2 Construction

Summary of issues raised

Some submissions raised concerns about the proposed construction process. Issues raised included concern with:

- Detail regarding the road design and constructability
- Potential construction impacts to the shared dam
- Detail regarding the volume of cut and fill required during construction of the facility and previously proposed new east-west access road
- Detail regarding the timing and staging of construction, including detail on how impacts to local utilities would be avoided
- How construction plant and equipment would access the site
- Impacts to the Australian Bioresources facility during construction
- Detail relating to construction of the proposal and how the building would house the equipment required for construction
- Perception that construction of the facility and resources required would be outsourced from Sydney and Canberra
- Stormwater management during construction
- Preparation of a construction management plan.

Response

The preferred access is now via a proposed new north-south public access road (refer Section 4.1).

Construction of the proposed new north-south public access road is expected to take up to three months. A revised overall construction program including the new north-south public access road construction is provided in Table 4.2. Construction plant for roadworks would be mobilised to the proposal site via Collins Road during Stage 1 of construction. The construction methodology would be finalised during pre-construction planning for the works and engagement of the construction contractor.

The construction haulage route for all plant and equipment would be via the haulage route shown on Figure 4.4.

During development of the EIS and the design of the facility, GHD regularly engaged with the Australian Bioresources facility, as the nearest sensitive receiver, in relation to:

- Site access for environmental investigations
- Potential and perceived impacts to its daily operations
- Noise monitoring and modelling
- Construction of the proposal
- Fire risk and management
- Site layout
- Access to the proposal site (including land acquisition and valuation)
- Services and utilities within proximity to the proposal site and within the proposed road corridor.

GHD also provided draft copies of the following technical reports to Garvan Institute of Medical Research for its review and discussion:

- Technical Report 2 – Noise and Vibration
- Technical Report 3 – Air Quality and Odour
- Technical Report 6 – Traffic and Transport.

Following exhibition of the EIS, consultation between GHD and Garvan Institute of Medical Research has been ongoing and will continue during future stages of the proposal (see Section 2 of this report).

Details regarding the storage of construction plant, equipment and materials would be included within the construction management plan prepared by the construction contractor prior to commencement of construction.

Construction of the proposal would be undertaken by a suitably qualified and experienced contractor.

In relation to construction resources, mitigation measure GHG4 (refer to Table 7.1 of this report), states:

> *Construction materials would be sourced locally where possible.*

Construction of the proposal would be undertaken in accordance with the construction environmental management plan to be developed for the proposal. The plan would detail mitigation measures to manage risks associated with generation of dust, noise, and other environmental impacts during construction as identified in Chapter 20 of the EIS and the conditions of approval.

The stormwater management concept for the proposal has been enhanced as described in Section 4.2.1 to allow for the existing north-east shared dam to be retained. The dam would be modified to adjust the spillway location and to maintain the existing storage capacity. Three-dimensional modelling has been undertaken that confirms that the existing capacity of the dam would be retained. Further clarification on construction staging for the existing dam is provided in Section 4.2.1.

Mitigation measure SW3 (refer to Table 7.1 of this report), states:

> *A detailed soil and water management plan would be developed after the construction contractor has been engaged and a detailed construction method has been developed. The detailed soil and water management plan would be developed in accordance with Managing Urban Stormwater: Soils and Construction – Volume 1 and include management procedures, operations and controls as well as monitoring and maintenance processes to ensure compliance requirements are satisfied.*
>
> *It would also include:*
>
> - *The final water management configuration and staging of key activities*
> - *Final sediment basin sizing requirements, with the basins operating as Type D/F 'wet' basins based on the soil conditions at the site*
> - *Construction phase water quality monitoring of the sediment basins, as well as any discharge during construction hours. A daily rainfall record would also be kept. Where a discharge of greater than 50 mg/L of suspended solids occurs when the design rainfall event has not been exceeded this would be considered a* non-compliance and remedial action taken.

A cut and fill plan that shows the final contours for the construction pad and updated elevation plans have been prepared and is appended to this report (see Appendix F). Detailed site survey would be undertaken during detailed design.

6.1.4 Timing

6.1.4.1 Access road construction

Summary of issues raised

Some submissions raised issues relating to the timing for construction of the previously proposed new east-west public access road. Issues raised included concerns related to:

- Waiting for the previously proposed new east-west public access road to be built, to ensure there is no need to use Beaconsfield Road
- Timing for construction of the previously proposed new east-west public access road to commence following construction of the facility
- Disbelief construction of the previously proposed new east-west public access road would take one month.

Response

The preferred access is now via a proposed new north-south public access road (refer Section 4.1).

Construction of the proposed new north-south public access road is expected to take up to three months. Information on the expected work method and staging for construction of the new north-south public road is provided in Table 4.1. The construction methodology would be finalised during pre-construction planning for the works and engagement of the construction contractor.

Use of Beaconsfield Road would no longer be required.

6.1.4.2 Construction

Summary of issues raised

Several submissions raised issues relating to construction timing of the proposal. Issues raised included concerns related to:

- Use of Beaconsfield Road during construction
- Perceived unrealistic construction timeframes
- Duration of the construction period.

Response

As the preferred access is now via a proposed new north-south public access road, use of Beaconsfield Road would no longer be required (refer Section 4.1).

Construction of the proposed new north-south public access road is expected to take up to three months. A revised overall construction program including the new north-south public access road construction is provided in Table 4.2. The construction methodology would be finalised during pre-construction planning for the works and engagement of the construction contractor.

6.2 Procedural matters

6.2.1 Level or quality of engagement

Summary of issues raised

Several submissions raised issues relating to the level and/or quality of engagement. Issues raised included concerns related to:

- Adequacy of engagement with the local community, Council and the Garvan Institute of Medical Research, with engagement activities carried out to inform rather than to consult and engage with stakeholders and the community
- Methods undertaken to meaningfully engage with the community, including number of opportunities for in-person engagement and suitable timeslots available for working parents
- Perception of the proposal being 'hidden' from the local community
- Inability for the community to engage directly with the proponent
- Timing and location of March 2022 community engagement sessions
- Opportunities to co-develop solutions with the proponent
- Lack of community support
- Distribution zone of the March 2021 letterbox drop.

Response

Community and stakeholder engagement has been an integral component in the development of the proposal. The engagement process has proactively informed and engaged stakeholders and community members during proposal development. This approach aimed to increase public understanding of the proposal, encourage participation in the development process and promote the benefits of the proposal to the local communities and stakeholders. The proposal has benefited from the input of local knowledge, insight, goals, and priorities, which has helped to identify issues, develop potential mitigation strategies and realise opportunities to improve project outcomes.

Extensive engagement and consultation has been carried out with the community throughout the proposal's development prior to the exhibition of the EIS in accordance with the SEARs, as described above. Engagement activities carried out to date for the proposal prior to the exhibition of the EIS is outlined in Section 6.2.1 of the EIS, and summarised in Section 2 of this report.

The engagement and consultation process for the proposal is described in Section 6 of the EIS and was guided by the engagement objectives listed in Section 2.1 of Appendix G of the EIS.

The consultation and communication tools used as part of the proposal leading up to the exhibition of the EIS are detailed in Section 6.2 of the EIS. This has included:

- General information and feedback channels (including proposal website, email address and 1800 number, letterbox drop and proposal updates to email subscribers)
- Hosted events (online and in-person community engagement sessions)
- Door knocking residents on Beaconsfield Road and Bulwer Road
- Newspaper advertisements
- These tools provided a range of opportunities for the community to be engaged and consulted, provide feedback and be involved throughout the proposal's development.

The timing of the proposal has occurred in an environment where COVID-19 related travel restrictions have prevented in-person consultation sessions for many months. All community engagement sessions were intended to be held in-person, but due to the extension of the NSW Government stay at home orders, they were moved to an online format. Fortunately, two in-person sessions were able to be held in November 2021, and a further five in March 2022, to provide more detailed information to local residents and the community and to receive and answer questions. The November 2021 in-person sessions were organised as soon as the NSW Government permitted in person sessions to be held in accordance with NSW Government requirements.

While every opportunity was made to suit the needs of all community members, it was not always possible. In every instance, the GHD project team endeavoured to provide a range of timeslots for engagement activities to suit the needs of those who work full-time, parents to young children, etc. For those who were still unable to attend, the project team offered one-on-one briefings at a time and place which suited them best. Of all the briefings offered during development of the EIS and exhibition phase, only 1 was taken up.

Nancy Zheng, Director of Plasrefine Recycling attended all six of the community engagement sessions held in March 2022.

The in-person community engagement sessions facilitated during the public exhibition period were held at the Exeter Village Hall, Exeter, located about 13 kilometres from the proposal site. The venue was selected due to its location within the Southern Highlands, availability across two whole days, access to a television projector, exclusive access and suitable floor plan, suitable parking, and exclusion of alcohol.

Based on our previous experience in November, most people travelled to the community engagement sessions by private vehicle, and this was considered when booking the venue.

Due to the heavy rainfall events in NSW during this time, the GHD project team rescheduled the planned engagement sessions and continued to monitor the weather forecast provided by the Bureau of Meteorology and Live Traffic NSW to confirm any road closures. On the day of the events, the team undertook an on the ground assessment prior to holding the sessions, including driving the local roads and inspecting the venue to ensure it was indeed accessible. The locality had no areas of water accumulation, all roads were passable, and the days were free of any rain.

During development of the environment assessment process, the design of the facility and its access point was iterative and dependent on rigorous engineering and ongoing community and stakeholder engagement.

Where possible, Plasrefine Recycling has sought to incorporate community and stakeholder feedback directly into the design process. This process has enabled a number of changes to be made to the proposal which are detailed in Section 6.3.2 of the EIS.

Plasrefine Recycling acknowledges that many members of the community do not support a plastics recycling and reprocessing facility being located at this site, and have suggested alternatives, such as other industrial zoned land within Moss Vale, and (undefined) locations other than Moss Vale, however the plastics recycling and reprocessing facility site was purchased specifically for the proposal, based on its industrial zoning and size, and location, and it is Plasrefine Recycling's preferred site for such a development. Reasons as to why this site was selected are provided in Section 6.1.1 of this report.

6.2.2 Land use and zoning

Issues

A number of submissions raised issues relating to land use and zoning. Issues raised included concerns that:

- The proposal should be located within an industrial area
- The proposal is not compatible with the current land zoning of the site either because:
  - The proposal is a hazardous and/or heavy industry and not suitable for the IN1 General Industrial zone, or
  - The land zoning is intended for light industry, offices or rural residential
- The site has two land zonings (IN1 General Industrial and C4 Environmental Living) which are incompatible
- The proposal is incompatible with immediately adjacent land uses
- The land on which the proposal would be located is incorrectly zoned / should not be / should not ever have been zoned IN1 General Industrial.

Response

The proposed plastics recycling and reprocessing facility would be located on the northern parcel of land in Lot 11, DP 1084421 which is zoned IN1 General Industrial. The proposed new north-south public access road would traverse land zoned RU2 Rural Landscape and IN1 General industrial.

This land is part of the wider MVEC and SHIP, a significant area (1,023 hectares) of industrial zoned land set aside for industrial and employment generating development under the Wingecarribee Local Environment Plan 2010 and identified in the *Southern Highlands Destination Strategy 2020-2030* as being set aside specifically for industrial development. The *Southern Highlands Destination Strategy 2020-2030* is a combined ten year economic development and tourism strategy for the Wingecarribee LGA and was adopted by Wingecarribee Shire Council on 11 November 2020.

The proposal is consistent with the uses permitted with consent in the relevant zones:

- a waste or resource management facility is permissible with consent in the IN1 General Industrial zone
- roads are permitted with consent in the RU2 Rural Landscape and IN1 General Industrial zones.

The proposal is also consistent with the objectives of the IN1 General Industrial zone, as discussed in Section 6.4.1.1. The IN1 General Industrial zone permits a wide range of industrial land uses including, as noted above, waste or resource management facilities. The permitted land uses are not restricted to only light industry. Residential accommodation is prohibited in the IN1 zone. It is noted that an office development would be considered a commercial land use (not industrial) under the Wingecarribee Local Environment Plan 2010.

Further to this, the Wingecarribee Local Environment Plan 2010 provides for other land zone types in other parts of the local government area such, as but not limited to:

- IN2 Light Industrial with objectives to provide for a range of light industrial uses
- B7 Business Park with objectives to provide for a range of office and light industrial uses.

Neither the IN2 Light Industrial nor B7 Business Park land zonings apply to the proposal site.

The proposal is not considered heavy industry. A preliminary risk screening carried out in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33), confirmed that the proposal is not a potentially hazardous industry. The proposed operations would be housed entirely within enclosed warehouse style buildings. Deliveries of plastic waste would be limited to weekdays and between 7 am to 6 pm. The air quality and odour and noise and vibration assessments undertaken as part of the EIS and further clarified in Section 6.3.2 and 6.3.4 also confirm that the proposal would not release a quantity of pollutants considered to be offensive.

The southern parcel of land in Lot 11, DP 1084421 is zoned C4 Environmental Living and is separated from the northern parcel of land by the future road corridor for Braddon Road. The southern parcel of land C4 Environmental Living does not form part of the development application.

Land immediately adjacent to the proposed site for the plastics recycling and reprocessing facility is zoned IN1 General Industrial (to the east, north and west) and C4 Environmental Living (to the south). The C4 Environmental Living land (owned by Mr Lyu Trust) is currently vacant and provides a buffer between the proposal and existing land uses further to the south.

The EIS technical studies and supplementary assessments (as discussed in Section 6.2.3) undertaken as part of the response to submissions phase have demonstrated that the proposal would not result in significant impacts to nearby sensitive receivers or land uses. With the implementation of the proposed mitigation and management measures outlined in Section 7, the potential environmental impacts of the proposal would be adequately managed. The proposal would therefore be compatible with the immediately adjacent land uses and land uses in the general vicinity as well.

The land zoning provisions in the Wingecarribee Local Environment Plan 2010, including the current zoning of the proposal site, and strategic planning for the MVEC and SHIP are outside the scope of the proposal and are matters for Wingecarribee Shire Council.

6.2.3 EIS process

Issues

The following issues was raised in relation to the EIS process:

- The 28 day EIS exhibition period is inadequate
- The EIS is certified by someone without formal strategic planning qualifications.

Response

Community participation is integral to assessing the merits of state significant development projects. The EIS exhibition period was consistent with the requirements of the *Environmental Planning and Assessment Act 1979*, which requires that all development applications must be exhibited for at least 28 days. The duration of the exhibition of the EIS was determined by the Department of Planning and Environment.

There is no requirement under the EP&A Act of EP&A Regulations for an EIS to be certified by someone with strategic planning qualifications.

The EIS was certified by David Gamble as GHD's Project Director. Mr Gamble is GHD's Senior Technical Director – Waste Infrastructure, and has more than 37 years' experience in waste management, environmental engineering, and environmental approval projects. During this time, he has led the preparation of environmental impact assessments and approvals for more than 20 waste management and resource recovery infrastructure projects such as landfills, transfer stations, recycling plants, organics processing facilities, and alternative waste treatment facilities.David has a Master of Engineering Science in Waste Management, and Bachelor degrees in Engineering and Economics. He is a Chartered Professional Engineer, a Fellow of the Institution of Engineers Australia, is listed on the National Professional Engineers Register for Environmental Engineering and is a Registered Professional Engineer Queensland (RPEQ no.13979) for Environmental Engineering. Mr Gamble oversaw the preparation of the EIS for the proposal by a team of highly qualified and experienced professionals.

The EIS (and this RTS report) have been reviewed by Sofie Mason-Jones, who is a Certified Environmental Practitioner (CEnvP #642) with specialist capabilities in statutory and strategic planning, feasibility studies, environmental impact assessment, consultation, government liaison and project management. Sofie is a Registered Environmental Assessment Practitioner (REAP) under the NSW Government Scheme. She holds a Master of Applied Science, and a Bachelor of Science and has almost 20 years of experience in the preparation and management of environmental impact assessments for projects assessed under Commonwealth and NSW legislation.

6.2.4 Land owners consent

Issue

The following issues were raised in relation to land owners consent:

- There is no land owners consent for the access road
- Land owners consent was not obtained prior to lodgement of the development application.

Response

The preferred access is now via a proposed new north-south public access road (refer Section 4.1). Figure 4.1 defines the proposed new north-south public access road. It includes the following land:

- Unformed paper road (Braddon Road) that bisects Lot 11 DP 1084421
- Unformed paper road (unnamed) between Braddon Road and Collins Road
- Part of Collins Road (unformed).

No land required for the proposed new north-south public access road is privately owned.

The site for the plastics recycling and reprocessing facility is Lot 11 DP 1084421.

Land owners' consent for the proposal forms part of the application.

6.3 Economic, environmental and social impacts of the project

6.3.1 Traffic, transport and access

A number of submissions raised issues around impacts associated with traffic, transport and access. The issues raised are discussed in the following sections.

6.3.1.1 Use of Beaconsfield Road

Issue

The highest number of traffic issues submitted related specifically to use of Beaconsfield Road and associated noise, air quality and safety impacts to surrounding residents and road users.

Response

The preferred access is now via a proposed new north-south public access road (refer Section 4.1). As a result, the use of Beaconsfield Road would no longer be required for the proposal, including during construction.

6.3.1.2 Capacity of existing road network

Issue

There were a number of comments regarding congestion on the existing local road network and capacity of the existing network to accommodate additional traffic movements generated by the proposal.

Response

The preferred access is now via a proposed new north-south public access road (refer Section 4.1).

Additional assessment (Section 4.4.1) concluded that the proposal would have negligible impact on the surrounding road network in terms of intersection performance. A review of access and key intersections also showed that sufficient sight distance is available at key access points which is expected allow for the safe movement of vehicles into and out of the proposed site.

6.3.1.3 Truck queuing

Issue

Several public submissions identified potential truck queuing on public roads in the event of delays as a concern.

Response

As noted in Section 5.1.6, a truck would enter the site approximately every 14 minutes. The outcomes of *Technical Report 6 – Traffic and transport* indicate that there would be sufficient capacity in the road network for the operation of the proposal. As shown in the Appendix B of *Technical Report 6 – Traffic and transport,* swept turn path figures confirm there is sufficient spatial allowance using the internal western and eastern perimeter haul road for approximately 8 trucks to queue within the site without inhibiting circulation.

6.3.1.4 Road safety

Issue

Impact to road safety on local roads identified in the proposed traffic haul routes was identified as a concern in particular around interaction with heavy vehicles accessing the proposal site.

Response

A Construction Traffic Management Plan (CTMP) would be prepared prior to the commencement of works with site induction for construction personnel being undertaken to outline the requirements of the CTMP. The aim of the CTMP is to maintain the safety of all workers and road users within the vicinity site and the following are the primary objectives:

- To minimise the impact of the construction vehicle traffic on the overall operation of the road network.
- To provide continuous, safe and efficient movement of traffic for both the general public and construction workers.
- Installation of appropriate advance warning signs to inform users of the changed traffic condition.
- To provide a description of the construction vehicles and the volume of these construction vehicles accessing the construction site.
- To provide information regarding the changed access arrangement and also a description of the proposed external routes for vehicles, including the construction vehicles accessing the proposal site.
- Establishment of a safe pedestrian environment in the vicinity of the proposal site. This can include scheduling deliveries via semi-trailers to avoid school start and finish times.

Access and egress would primarily be prior to both the AM and PM peak hour periods as construction activity generally would commence at 7:00 am and finish by 4:00 pm on weekdays.

Road safety during operation was assessed as part of *Technical Report 6 - Traffic and Transport* and Section 4.4.1. The assessments included a review of access and key intersections which showed that sufficient sight distance is available at key access points which is expected allow for the safe movement of vehicles into and out of the proposed site.

6.3.1.5 Traffic routes

Issue

Further clarification was requested regarding assurances as to how trucks would be managed to ensure that proposed traffic routes in the EIS are adhered to during construction and operation.

Response

The proposed haulage routes for heavy vehicles during construction and operation of the proposal have changes a results of the revised preferred access:

- From Sydney: Hume motorway, Berrima Road, Innes Road (Garrett Street), Lackey Road, Collins Road and then the new north-south public access road
- From Canberra: Hume motorway, Berrima Road, Innes Road (Garrett Street), Lackey Road, Collins Road and then the new north-south public access road
- From Wollongong: Princes Highway, Mount Ousley Road, Picton Road, Hume motorway, Berrima Road, Innes Road (Garrett Street), Lackey Road, Collins Road and then the new north-south public access road

These routes are approved for use by heavy vehicles. The OEMP would specify heavy vehicle routes and this information would be communicated to haulage companies and drivers to ensure that these routes are adhered to by delivery and despatch vehicles. Plasrefine Recycling would require its suppliers and delivery vehicles to submit a Journey Planner prior to accessing the facility confirming the use of this haulage route.

Issue

One submission queried why the proposal was not using trains instead of trucks.

Response

Plastic waste feedstock would come from a number of regions within NSW that are not all accessible via rail. Even if rail transport was possible for a portion of the route, semi-trailers would still need to transfer the feedstock from a rail siding to the facility. Finished product would also be despatched to a number of destinations, not all with rail access.

6.3.1.6 Traffic survey

Issue

The following issues were raised associated with the traffic survey undertaken by GHD as part of the traffic and transport assessment:

- The survey was undertaken in 2020 during a period of significantly reduced traffic flows due to the COVID pandemic. It is requested that the survey is repeated once traffic flows return to normal to allow for an accurate assessment of impacts. It is also noted that there has been an increase in migration from Sydney to the Southern Highlands area following 2020.
- The automatic tube count assessment of traffic on Beaconsfield Road seems to have been conducted in the vicinity of Trotter's Lane. Local experience would suggest that the majority of traffic on Beaconsfield Road after Lytton Road turns onto Roche Cl or Stables Place. The tube will not have detected that traffic.
- No assessment of Lackey Road was undertaken.

Response

While the comments regarding the timing of the traffic survey undertaken by Matrix Traffic and Transport Data Pty Ltd on behalf of GHD are noted, the analysis showed the road network analysis is well within capacity limits with the available capacity to cater for the changes in traffic that may result relating to the comments. In addition, Beaconsfield Road was previously planned to be used for mobilisation of construction plant for construction of the new access road only and would not be used by heavy vehicles during operation of the facility. This is no longer the case as a result of the change to the preferred access.

In regard to the location of the automatic tube count on Beaconsfield, the traffic count was placed in this location to ascertain general mid block traffic flow along Beaconsfield Road to gain an understanding of potential "typical" traffic along Beaconsfield Road. The tube counter was positioned generally within the "built up area" of Beaconsfield Road and at the mid block positioning. Given the land use /density in the area, positioning of the traffic counter and review of the data obtained in previous survey, it is anticipated that the road network would remain within road network capacity.

Traffic counts were undertaken at the Lackey Road intersection as part of the intersection assessment to ascertain both the operation of the existing intersection (to the private road) and future operation of the previously proposed Lackey Road / Access Road intersection. The existing traffic numbers were based on traffic counts undertaken as part of the assessment. The SIDRA model analysis indicated that the existing /future intersection operated well within operational capacity. Furthermore it is noted that the SIDRA modelling was undertaken as a worst case layout configuration (BAR treatment – single lane each way). This intersection is no longer proposed as a result of the change to the preferred access.

It is noted that additional intersection traffic turning counts were commissioned to assess the traffic impacts on key intersections associated with the amended preferred access route (refer Section 4.4.1). The surveys were undertaken on Wednesday 23 November 2022 during the following time periods:

- Weekday AM peak (three hours): 6:30 am to 9:30 am
- Weekday PM peak (three hours): 3:30 pm to 7:30 pm.

The intersection turning count surveys within the immediate vicinity of the site were performed at the following intersections as illustrated in :

- Site 1: Douglas Road /Collins Road / North-south Access Road
- Site 2: Garrett St (Innes Road) / Lackey Road
- Site 3: Inness Road / Berrima Road / Waite Street.

6.3.2 Air quality and odour

The AQ RTS Letter has been developed which provides detailed responses to significant issues raised in submissions. The AQ RTS Letter is provided as Appendix J of this report.

6.3.2.1 Emissions

Issue

A number of submissions identified a concern with potential emissions generate by the proposal including:

- Emissions from traffic generated by the proposal
- Operational emissions including toxic emissions from processing and melting of plastics
- Inadequate detail on pollution control systems
- Issues with air quality modelling in the EIS.

Response

These items are addressed in Section 3 and Section 4 of the AQ RTS Letter (Appendix J).

Emissions from the proposed plastic recycling and reprocessing activities would be relatively low due to the low process temperatures and would likely meet NSW Government POEO limits without any additional pollution controls. Plasrefine Recycling is nonetheless committed to best practice and minimising emissions, and therefore has included numerous controls. Emissions of both total VOCs and fine particulate matter to the atmosphere would comply with the NSW POEO Clean Air Regulation standards of concentration.

6.3.2.2 Odour

Issue

Issues associated with odour were identified relating to plastic waste material and residual waste from processing activities including sludge produced by the WWTP.

Response

Further information on odour sources and odour assessment is provided in Section 6 of the AQ RTS Letter (Appendix J).

6.3.2.3 Roller doors

Issue

The performance of the rapid close roller doors was questioned due to frequency of trucks entering and exiting the buildings and ability to contain emissions.

Response

All processes which may generate emissions would be located within fully enclosed buildings. Processes with emissions would be located in different zones where all air is collected and directed to pollution control devices and treated air is discharged above the roof.

Rapid roller doors are used for trucks to enter and leave the facility in order to deliver pre-sorted waste plastic. The plastic waste has a low odour potential as described in Section 6.2.1 of the AQ RTS Letter (Appendix J). Roller doors would help to prevent any ground level air discharges of odours and form part of Plasrefine Recycling's commitment to best practice at the facility.

6.3.3 Water

A number of submissions raised issues around impacts associated with water. The issues raised are discussed in the following sections.

6.3.3.1 Contamination of water quality

Issue

A number of community submissions identified contamination of waterways and groundwater as a key. Potential causes for water pollution included:

- Erosion and sediment from construction activities
- Microplastics in runoff from the processing areas
- Air emissions from traffic and operation of the facility
- Litter.

Response

As noted in Section 5.3.4 a construction phase erosion and sediment control plan would be developed prior to start of construction. The plan would be based on the detailed drainage plan to be prepared as part of the detail design of the proposal.

During operation, all plastic processing activities would take place within enclosed buildings. Any runoff or litter from these areas would be contained within the building and are not anticipated to impact on water quality. In addition, all incoming and outgoing loads would be covered to prevent litter offsite. Further discussion regarding contamination of water quality is provided in Section 5.4.2 included some updated water quality modelling in response to the submission from WaterNSW.

Further, the predicted water quality impacts are low as the only water discharged to the environment would be rainwater that falls on roofs or internal roads, and this water would be treated to a high standard through bioretention basins. No water used for processing plastics would run off site and all would be contained within the buildings.

6.3.3.2 Water supply

Issue

The impacts associated with water demand were identified in several submissions as an issue for the proposal. Concerns were raised that during drought periods, when rainwater is not available, that the proposal would consume local potable water and impact local resident water supply.

Response

The water balance analysis for the facility has been refined as detailed in Section 5.1.5. The conservatism in the initial estimates for water demand has been significantly reduced through discussions with suppliers. Further discussion regarding the update to water demand is provided in responses above.

6.3.3.3 Wastewater

Issue

The key concern raised in submissions with regard to wastewater was that the local wastewater management system is already overloaded and would not be able to handle the additional contribution from the proposal. It was reported that the Bowral waste facility was recently served a penalty for a licence non-compliance and has had a number of odour complaints. Another concern was that disposal of sludge from the proposal would exacerbate odour issues.

Response

Wastewater generation, impact on the local wastewater treatment network and proposed mitigation measures are outlined in Section 5.1.5.

6.3.3.4 Drinking water catchment

Issue

The proposal is located within the Sydney drinking water catchment area with sensitive receptors. Several submissions raised concerns that pollution from the proposal would impact on Sydney drinking water.

Response

Mitigation measures proposed as part of the proposal to address the location of the plastics recycling and reprocessing facility site within the Sydney drinking water catchment area are outlined in Section 5.3.4.

6.3.3.5 Flooding

Issue

Members of the community identified that flooding occurs in the vicinity of the proposal site during high rainfall event on Lackey Road, and areas of Collins Road and Douglas Road. Further analysis of the proposal impacts to flooding was requested.

Response

Additional flood modelling was undertaken as provided in Appendix E. The modelling indicates that the proposal would not increase flood impacts on surrounding roads during storm events. Flood maps have been provided that show the existing and proposed future scenarios.

6.3.3.6 Stormwater diversion

Issue

The proposal requires diversion of the eastern watercourse, further detail was requested in several submissions around the realignment works including decommissioning of the existing dam in the north-east corner of the plastics recycling and reprocessing facility site and raised concerns about potential impacts to the riparian zone and water quality.

Response

As outlined in Section 4.2.1, and further detailed in Appendix E, the proposed stormwater strategy for the proposal has been revised. The existing dam in the north-east corner of the plastics recycling and reprocessing facility site would be retained and the extent of the diversion and realignment works for the eastern watercourse has been minimised to retain existing drainage paths where possible. The revised stormwater configuration is shown in Figure 4.6.

6.3.4 Noise and vibration

Issue

A number of submissions were concerned about noise and vibration impacts. The issues raised related to:

- Noise generated by traffic during construction and operation impacting local residents and businesses
- Noise and vibration impacts to nearby residential properties from the facility operating 24 hours per day
- Noise impacts on the Australian Bioresources facility.

Response

Technical Report 2 - Noise and Vibration included the results of modelled noise generated during both the operational and construction phases, including noise generated by traffic associated with the proposal. Mitigation measures have been proposed to reduce noise levels during construction and manage community reaction to construction noise.

Construction noise levels were predicted to be between 46 dBA and 65 dBA but would not exceed the ICNG Highly Noise Affected Noise Management Level of 75 dBA at any receivers. The ICNG requires that where noise from construction works is above the 'noise-affected' noise management levels, all feasible and reasonable work practices should be undertaken to minimise noise. Additionally, potentially affected receivers would be informed of the expected noise impacts and duration. Mitigation measures to reduce noise levels and the risk of noise impacts during construction would be adopted.

An assessment of changes to the previously assessed noise impacts as a result of changes to the preferred access road and associated haulage route is provided in Section 4.4.2.

The potential for noise and vibration impacts during both construction and operation on mice housed at the Australian Bioresources facility was also assessed in the EIS as part of *Technical Report 2 – Noise and Vibration Assessment*. To predict the internal noise level, the façade of the building was assumed to provide a sound transmission loss performance of Rw 38, which is considered conservative. A worst-case scenario was assessed, which modelled a dump truck (L_{max} 118 dBA) at the closest distance between the construction area and the Australian Bioresources facility building. The results predicted an internal noise level of 24 dBZ (1 kHz to 16 kHz). That is, under the worst-case scenario, the predicted noise levels are not expected to exceed the noise target for the assessment[3]. As such, no adverse noise impacts to mice are anticipated as a result of construction or operation of the proposal.

It is also noted that mice are nocturnal and the noise levels that would occur during daylight hours during the construction phase of the proposal are higher than those which would occur during operation.

6.3.5 Visual

A number of submissions raised issues around impacts associated with visual amenity. The issues raised are discussed in the following sections.

6.3.5.1 Size and scale of buildings

Issue

A number of submissions raised concerns that the size and scale of the proposed buildings are not appropriate for the site location and would result in unacceptable impacts on the landscape and amenity. Further architectural plans were requested to show how Plasrefine Recycling would minimise the bulk of the building within the landscape.

Response

As discussed in Section 5.1.3, whilst the proposed built form would contribute to the continuing change in landscape character being experienced in the north of Moss Vale, the proposed bulk and scale is consistent with existing industrial development to the north-east and north-west of the site, within the SHIP.

In addition, *Technical Report 7 - Landscape and Visual* found that although there would be impacts, they can be partially mitigated through the measures described and the proposal would likely be in keeping with the planned future character of the 'General Industrial - IN1' zone.

It is noted that since the EIS was placed on public exhibition, according to Council's online DA Tracker, a number of other industrial development applications have been approved by Council in the vicinity of the proposal site. These recently approved Council development applications are listed in Table 5.1 and shown on Figure 5.6. This demonstrates how the landscape character of the area is already starting to change.

Further refined architectural plans have been provided in Appendix F that include further details on the façade design.

[3] Different species of fauna have different hearing sensitivities, depending on the evolutionary structure of the hearing organ. Generally, mice hearing range is in the ultrasound range (1-100 kHz) with the greatest sensitivity between 15 kHz and 20 kHz. Guidance from the Garvan Institute suggests a noise target for the assessment of Lmax 60 dB as noise levels below this level are not anticipated to result in adverse impacts.

6.3.5.2 Lighting

Issue

The impacts associated with lighting have not been assessed as part of the EIS. Further detail is required for the proposed lighting design and impacts to nearby receivers.

Response

A light spill assessment has been provided in Appendix F and discussed in Section 5.1.11.

6.3.6 Socio-economic

A number of submissions raised concerns around the proposal's socio-economic impacts. The issues raised are discussed in the following sections.

6.3.6.1 Employment

Issue

Several community submissions raised concerns relating to the number and types of jobs that would eventuate as a result of construction and operation of the proposal. Issues raised included concern with:

- Proportion of operational staff that would be sourced from the local area and alignment with local skilled labour force
- Potential for automation to reduce employment opportunities
- Local businesses currently struggling to fill positions
- Insufficient information in the EIS regarding employment opportunities.

Response

Employment opportunities relating to the construction of the proposal are discussed in Section 7.7.2 of the EIS. During construction, the proposal would provide direct employment opportunities on the proposal and indirect employment opportunities in businesses and industries that support this construction. The proposal is expected to support a maximum of 200 staff working across the entire span of the construction period. The peak workforce is expected during major concrete pours to up to 30 people. Indirect employment opportunities would be generated across local and regional businesses in industries that support construction such as manufacturing and services.

The number and types of jobs generated would vary across this period based on the works being carried out. Like most construction projects, some of the jobs generated during the construction of the project would be temporary employment positions that exist only for the duration of the construction works or part thereof. There would also be many jobs that are likely to be carried out by full time employees of businesses that are contracted to carry out specific tasks.

Employment for the proposal will be informed by a local procurement strategy that includes strategies to increase employment and training opportunities for groups such as Aboriginal people, women, young people and the unemployed, to help maximise employment benefits of the proposal. A social procurement plan will also be prepared and will outline strategies to give preference to local and regional residents and business, including incorporating local procurement requirements into key proposal contracts to maximise local employment opportunities.

6.3.6.2 Social impact assessment

Issue

Several community submissions noted that a standalone social impact assessment did not accompany the EIS documentation for the proposal.

Response

Section 18 of the EIS contained an analysis of socio-economic matters including an assessment of the existing environment, impact assessment during construction and operation and mitigation measures. A Social Impact Assessment has since been prepared by Ethos Urban in accordance with the *Social Impact Assessment Guideline for State Significant Projects* (DPIE 2021) and is appended to this report (Appendix D).

A supplementary social impact assessment has also been prepared by Ethos Urban to consider potential impacts associated with the change to the proposed access. This is also provided in Appendix D.

A summary of the findings of the social impact assessment can be found in Section 4.34.3.

6.3.6.3 Impact to local businesses

Issue

Several community submissions raised concerns relating to impacts to local businesses that would eventuate because of the proposal. Issues raised included concern with impacts to the local economy and businesses, impacts to the tourism industry in the Southern Highlands and impacts to the Australian Bioresources facility.

Response

The proposal would increase economic activity in the Southern Highlands region with potential increases in trade at local businesses and increased demand for construction related goods and services.

As noted in Section 6.3.6.1, a social procurement plan would be prepared which would outline strategies to give preference to local and regional residents and businesses, including incorporating local procurement requirements into key proposal contracts to maximise local employment opportunities.

A CES would also be prepared which would outline an approach to ongoing communication and engagement with businesses, and other key stakeholders through construction and operational stages. The CES would seek to communicate key proposal milestones and timeframes and provide a mechanism for business owners to provide further proposal input/feedback, with a commitment to this feedback being considered and where possible responded to in development planning.

As identified in the SIA (Ethos Urban, 2022), positive social impacts associated with the proposal include the potential to attract people to work and live in the LGA, make use of key enabling infrastructure upgrades, and generate annual revenue and strengthen the capabilities of the Wingecarribee Shire.

As noted in Section 3.2.1 of Appendix G of the EIS and Section 2.3 of this report, regular engagement with Australian Bioresources and Garvan Institute of Medical Research commenced in December 2020 and have sought to minimise impacts during both the construction and operation phases.

6.3.6.4 Property value

Issue

Several community submissions raised concerns that the proposal would have a negative impact on current and future property values.

Response

Changes to property values, both positive and negative, are driven by a range of economic, social and amenity factors, for example housing supply and demand, interest rates, economic growth, local amenity and accessibility to things such as employment and social infrastructure. The technical studies undertaken during preparation of the EIS and RTS report have indicated that ongoing impacts resulting from the proposal are minimal and unlikely to impact the amenity of the locality.

6.3.6.5 Community values

Issue

A number of community submissions raised concerns about the impacts on quality of life and community values as a result of increased noise, traffic and change of scenery for the local Moss Vale community during construction and operation of the proposal.

Response

The existing way of life in the area is predominantly semi-rural residential, accompanied by some light, general and heavy industrial facilities. The way of life in the major township of Moss Vale is centred on its main street and its concentration of social infrastructure. The township of Moss Vale has a strong community identity and significant civic infrastructure, contributing to its solid sense of place.

Negative social impacts during construction are associated with a likely change to the existing way of life that residents living within the PSA value highly, though the construction impacts would be temporary. It is noted that this change to way of life is commensurate with construction of a facility of this scale. Impacts to way of life may be more acute in the initial phases of this proposal, as changes associated with this development first begin to impact residents and workers in the PSA and broader SSA (eg. heavy construction vehicle movements, siteworks) particularly as the plastics recycling and reprocessing facility site has been generally vacant for almost 100 years. During construction, some members of the local community may welcome the change as a result of the subsequent employment opportunities and introduction of an innovative technology industry.

However, once operational, the proposal is not anticipated to have a significant impact on way of life for residents of Moss Vale subject to mitigation. Negative social impacts associated with way of life would be most significant for some residents living within the PSA, dependent on their proximity to the proposal site.

Though the industrial development may be generally consistent with the intended development of the SHIP - which will undergo significant development and a change in character of the future, it is still considered that possible negative social impacts may arise to way of life to the existing community.

Additional mitigation measures that have been developed in response to the potential social impacts have been included in Table 7.1 of this report.

6.3.7 Human health

Issue

There were a number of submissions that identified issues around human health impacts. These reported health concerns for nearby residents and the community as a result of toxic emissions from the proposal. Some overseas studies were sited that related to plastic recycling facilities and health impacts on residents in proximity of the study sites.

Response

The air quality assessment showed that the design specification emission rates would be compliant with the POEO Air Regulation standards and that the emission rates complied with approved methods. Therefore it was concluded that with the proposed controls, operation of the proposal is not expected to have any significant impact on the environment or human health. Further detail on air quality modelling, pollution control equipment and impacts on human health is provided in the technical letter provided in Appendix J.

6.3.8 Fire

Issue

Several submissions raised issues around impacts associated fire, primarily the risk of a fire at the facility. Key concerns related to:

- Impacts to the surrounding community and environment
- Capability of local fire services to extinguish larger scale fires and access the site
- Buffer zones for fire hazard

- Inadequate emergency response plans including evacuation procedures for surrounding residences
- Prevalence of fires occurring in waste facilities
- Environmental impacts of fire water runoff.

Response

Technical Report 5 – Fire and Incident Management was prepared as part of the EIS to assess the potential fire risks associated with operation of the proposal. The review assessed the proposal design and layout against the Fire and Rescue NSW (FRNSW, 2020) Guideline *Fire Safety Guideline – Fire Safety in Waste Facilities* (the 'FRNSW Guidelines'). It identified preliminary fire safety requirements to be incorporated into the proposal.

A copy of *Technical Report 5 – Fire and Incident Management* was provided to Fire and Rescue NSW for consultation and a meeting was held in October 2021 to discuss the design of the facility and its compliance with the FRNSW Guidelines. FRNSW indicated it was generally happy with the proposed approach to fire safety.

FRNSW would continue to be engaged with through the design development via the Fire Engineering Brief Questionnaire and Fire Engineering Report submissions.

Prior to operation of the facility Plasrefine Recycling would do the following:

- An operations plan would be documented and implemented for stockpile management and a copy would be included within the Emergency Services Information Package (ESIP).
- An Incident Response Management Plan would be provided for staff and other persons at the facility in the event of fire.
- An Emergency Services Information Package (ESIP) would be provided for firefighters in accordance with FRNSW guideline Emergency services information package and tactical fire plans.

The ESIP would address requirements for notification of authorities and nearby property owners as well as first response and emergency procedures and protocols.

An operations plan would also be documented and implemented for stockpile management and a copy would be included within the ESIP.

An automatic fire water run-off containment system would be provided and designed to contain the total combined hydraulic demand of the fire hydrant and fire sprinkler system.

6.3.9 Biodiversity

Issue

Several submissions raised issues around impacts associated with biodiversity and the impact of the proposed construction and operational activities on the existing flora and fauna. Key concerns included damage to the following:

- Endangered native wildlife habitat
- Native wildlife in the riparian waterways including platypus in the Wingecarribee River
- Koala habitat
- Southern Highlands Shale Forest and Woodland.

Response

As described in Section 5.7.2, *Technical Report 1 – Biodiversity Development Assessment Report* has been updated to include the change to the preferred access road and to finalise the Biodiversity Offsets and Agreement Management System case in accordance with the *Biodiversity Conservation Act 2016*. The updated report is included as Appendix K.

Technical Report 1 confirms that impacts on biodiversity values would be largely restricted to the construction phase of the proposal. Some beneficial impacts would occur as a result of the riparian vegetation management plan and the revegetation associated with the realignment of the eastern watercourse. However, during operation there is potential for the proposal to impact surrounding vegetation and habitat values through:

- Generation of additional light and noise
- Erosion and sedimentation as a result of runoff from hard stand areas
- Introduction of weed propagules by vehicle and/or residents/businesses
- Fauna mortality as a result of collision with vehicles
- Increased risk of fire
- Rubbish dumping.

Given current land uses at the proposal site and in adjacent areas the proposal would not result in a substantial increase in the operation of any of these potential impacts. Mitigation measures are also proposed to minimise the potential for these impacts.

To avoid and minimise potential impacts of the proposal on biodiversity values, a series of mitigation and management measures have been identified, which would be implemented as part of the construction environmental management plan and riparian vegetation management plan for the proposal site. These include measures relating to:

- Standard construction environmental management plan protocols – including site inductions and dust suppression measures
- Planting of native vegetation along the riparian corridors or the western and eastern watercourses
- Vegetation protection – including protective fencing to prevent impacts to surrounding vegetation, vehicle washing to avoid spread of pathogens/weeds, appropriate locations of stockpiles during construction and installation of sediment fences
- Weeds – including weed management actions/planning, weed propagule spread control measures and sediment control
- Fauna habitat – including hygiene protocol implementation, presence of an ecologist during clearing, staged vegetation clearing and protocols for the removal of habitat features
- Water quality and aquatic habitats – including erosion and sediment control measures, plans and surface stabilisation, dust control, spill kits and protocols.

The preferred approach to offset the residual impacts of the proposal is to secure and retire appropriate credits from stewardship sites that fit within the trading rules of the NSW Biodiversity Offsets Scheme (BOS) in accordance with the 'like for like' report generated by the BAM calculator. If such credits are unavailable, credits would be sourced in accordance with the 'variation report' generated by the BAM calculator.

A payment to the Biodiversity Conservation Trust would be considered if a suitable number and type of biodiversity credits cannot be secured.

The proposal involves significant landscaping and restoration of riparian vegetation within the plastics recycling and reprocessing facility site, with more than three hectares of land that is currently unmanaged grazing land being improved. More than five times the area of native vegetation that is being removed within the proposal site will be replanted with native species as summarised in Table 6.1.

Table 6.1 Estimated revegetation

Total native vegetation to be removed	2,600 m^2
Proposed revegetation within the plastics recycling and reprocessing facility site	14,100 m^2

6.3.10 Waste

Issue

Several submissions raised concern about the handling and management of waste materials at the facility. The following issues were identified:

- Generation of toxic residual waste by the proposal
- Suitability of disposal facilities, local landfills are noted as being over capacity
- Uncontrolled migration of litter and microplastics off site during operation.

Response

The likely waste classification of residual waste generated by operation of the proposal is identified in Section 9.4.3 of the EIS. The only hazardous waste identified to be generated is batteries from the operation of offices and amenities. The estimated quantity of batteries is expected to be minimal. Dewatered sludge generated by operation of the wastewater treatment plant would likely be classified as general solid waste (putrescible). According to the *NSW EPA Waste Classification Guidelines Part 1: Classifying Waste*, grit or screening from sewage treatment systems that have been dewatered so that the grit or screenings do not contain free liquids has been pre-classified by the EPA as general solid waste (putrescible). The process for the handling of dewatered sludge is outlined in Section 5.1.8.

As noted in Section 5.3.2, alternative landfill facilities have been nominated to address concerns about Bowral Waste Centre.

All loading and unloading, and processing of materials would take place within the enclosed buildings within the dedicated areas shown in Appendix F. The buildings would be equipped with fast acting roller doors to reduce the potential for litter from escaping the building. All emissions would be extracted from the source, and treated in a dust collector (see Appendix J for further detail). This would minimise the potential for particulate matter being released to the environment. Material transfers between buildings and incoming and outgoing delivery vehicles would be covered to minimise windblown litter. As identified in Table 7.1, an operational water management plan would be developed before commencement of operations that would include daily visual inspections for plastic waste and litter.

6.3.11 Hazard

Issue

Some submissions raised concern about hazards. The following issues were identified:

- There would be stockpiling of hazardous materials and chemicals on site
- Some of the plastic proposed for recycling are potentially explosive in powder form
- Based on the requirements of SEPP 33, the proposal is potentially hazardous.

Response

As described in Chapter 14 of the EIS, the following chemicals are proposed to be stockpiled on site during operation:

- Disinfectant solution (tea tree oil, essential oils and other natural plant-based ingredients plus 0.0015% turpentine by volume)
- Polyacrylamide (PAM)
- Polyaluminium chloride (PAC).

None of these chemicals are classed as dangerous goods under the *Australian Code for the Transport of Dangerous Goods by Road & Rail*.

In relation to hazards posed by plastics in powder form, only unplasticised poly vinyl chloride would be milled into powder form. All other plastic types would be converted to flakes or pellets/granules.

Unplasticised poly vinyl chloride is less flammable than most polymeric materials, natural or synthetic and will not normally continue to burn unless a source of a sizeable fire exposure remains present. It also has low ignitability and is considered to exhibit low fire hazard (Hirschler, 2017). The fire properties of the material would be consistent in powder form provided the particle size is not so small it creates a very fine dust that could burn. The crushing/milling process is not expected to result in such a small particle size. Even if it did, considering the low flammability and ignitability, a significant heat source would still be required to burn the dust. In powdered form, it is not considered to present an explosive risk.

UPVC in both pipe and powder form is considered to have low flammability, low ignitability and low fire hazard (Hirschler, 2017) and is not classified as a hazardous according to criteria of Work Safe Australia or a dangerous good (Pipemakers, 2006).

A preliminary risk screening was undertaken in accordance with *Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines*, which confirmed that, as no dangerous goods would be stored on site or transported to the facility, the proposal is not considered to be a potentially hazardous industry under SEPP33.

As an additional precaution, a hazard identification exercise was undertaken to identify potential hazards and appropriate safeguards/control measures associated with chemicals and materials stored on site. These would be incorporated into the OEMP.

6.3.12 Contamination

Issue

A submission raised concerns regarding existing contamination at the proposal site. In particular, the submission stated that two ponds to the north of the proposal site and surrounding land were used as a dump for broken asbestos pipes and waste from the James Hardie Asbestos Pipe factory (circa 1997 to 1993) and that during 2010 Dux Manufacturing buried asbestos on its property.

Response

The areas of concern raised in the submission are located outside the proposal site (to the north). Notwithstanding this, a further review of aerial photographs in combination with site inspections undertaken as part of the EIS indicate that such filling activities are unlikely to have occurred at the plastics recycling and reprocessing facility site. This is based on the following information presented in the EIS:

- Aerial photographs do not show signs of filling activities on the plastics recycling and reprocessing facility site.
- Site inspection observations suggest that the plastics recycling and reprocessing facility site topography is natural and consistent with the surrounding environment, indicating that imported material is unlikely to be present on site.
- A number of soil profiles have been observed on site particularly near drainage lines. Soil profiles were all natural.
- No odours, staining or other signs of contamination were noted.
- Earthworks have occurred onsite to excavate ponds. The excavated material has likely been accumulated in stockpiles particularly in the north-eastern portion of the plastics recycling and reprocessing facility site. Stockpiled material appeared natural and was not contaminated with waste.

6.3.13 Utilities

Several submissions raised issues relating to connection of services to the proposal. The issues raised are discussed in the following sections.

6.3.13.1 Capacity of existing wastewater and water supply networks

Issue

The main issues were associated with:

- Capacity of existing wastewater network to handle contribution from the proposal
- Capacity of the water supply network to provide potable water to the proposal in particular during drought periods and reliance on rainwater harvesting.

Response

As discussed in Section 5.1.5 and 4.2.4, the net water consumption for the facility has been significantly reduced through further development of the water balance assessment. In addition, Plasrefine Recycling has engaged in further consultation with Wingecarribee Shire Council to address wastewater treatment capacity issues including identification of contingency measures. Further details are provided in Section 5.9.4.

6.3.13.2 Connection to services

Issue

Another issue raised was the lack of infrastructure and availability of connection to services in the vicinity of the site.

Response

Section 7.4 of the EIS provides an overview of the existing services within the proposal site.

Endeavour Energy noted in its submission that it has no objection to the application subject to completion of the application for connection of load process with Endeavour Energy's Customer Network Solutions Branch.

6.3.13.3 Disruption to services during construction

Issue

Disruption to existing services to neighbouring properties during construction in particular the Australian BioResources facility.

Response

A Before You Dig Australia survey has already been undertaken. Australian BioResources services were identified at the end of Beaconsfield Road. This includes underground electrical cables, fibre optic cable, 210 kPa gas distribution line and a sewer rising main. There is also a water main along the south of the lot up to Beaconsfield Road including some stop valves and a hydrant.

It is noted that the proposed new north-south public access road would not extend all the way to Beaconsfield Road.

During detailed design, any potential interaction with existing services would be further assessed by using on-site service location techniques. After the route is surveyed, exploratory excavation would be undertaken to confirm the presence or absence of buried services, and enable them to be marked and identified.

One existing power pole on Collins Road may need to be relocated to facilitate construction of the proposed new north-south public access road. No other relocation of services is expected to be required. This would be confirmed during detailed design.

6.3.14 Heritage

Some submissions raised issues relating to heritage. The issues raised are discussed in the following sections.

6.3.14.1 Consultation with local Aboriginal stakeholder groups

Issue

The submissions raised concerns that EIS does not provide details of liaison with local Aboriginal stakeholder groups regarding the proposal or findings of high cultural value.

Response

The Aboriginal Cultural Heritage Assessment Report followed the DECCW (2010) *Aboriginal cultural heritage consultation requirements for proponents* (ACHCRs). Consultation with Aboriginal community stakeholders was undertaken by both Biosis and OzArk.

Technical Report 8 – Aboriginal Cultural Heritage Assessment Report provides complete details of liaison undertaken with local Aboriginal stakeholder groups. A summary of the liaison, as outlined in this report, is provided below:

The ACHCRs include four main stages:

Stage 1

The aim of Stage 1 was to identify the Registered Aboriginal Parties (RAPs) who wish to be consulted about the proposal. The ACHCRs were initiated by Biosis. On 21 April 2021 a public notice was placed in the Highland Times inviting expressions of interest to be consulted about the proposal.

In addition, the following agencies were contacted by Biosis on 13 April 2021 to determine if they were aware of any individuals or groups who may be interested in being consulted about the proposal:

- Heritage NSW, Department of Premier and Cabinet
- Illawarra Local Aboriginal Land Council
- Wingecarribee Shire Local Council
- Office of the Registrar, Aboriginal Land Rights Act 1983
- National Native Title Tribunal
- Native Title Services Corporation Limited
- South East Local Land Services.

As a result, the following individuals and groups registered to be consulted about the proposal. These individuals/groups were regarded as the RAPs for the proposal.

- Leanne Tungai
- Yurrandaali
- Tungai Tonghi
- Woronora Plateau Gundungara Elders Council
- Illawarra Local Aboriginal Land Council
- Duncan Falk Consultancy
- Yerramurra (Murrin Clan/Peoples) and Taste of Tradition Native Aboriginal Corporation
- Cubbitch Barta Native Title Claimants
- Wodi Wodi Traditional Owner
- Stakeholder 1 (so denoted as they have requested anonymity).

Stage 2 and 3

The aim of Stages 2 and 3 was provide information about the proposal to the RAPs and to acquire information regarding Aboriginal cultural values associated with the proposal either through consultation and/or field work.

Often these two stages are run together, and the detailed project information is provided in the assessment methodology that is issued to all RAPs for their consideration.

On 4 June 2021, Biosis issued the Stage 2 and 3 Aboriginal Community Consultation document which introduced the proposal to the RAPs (Stage 2 of the ACHCRs) and outlined the forthcoming methodology for the assessment in line with Stage 3 of the ACHCRs. The closing date for comment was 2 July 2021.

Three comments were received by Biosis from the Illawarra LALC, the Woronora Plateau Gundungara Elders Council, and Stakeholder 1.

On 14 September 2021, OzArk sent all RAPs a project update letter that set out the fact that OzArk was taking over the archaeological investigation and to provide RAPs with more detailed information regarding the test excavation methodology. OzArk requested that any comments be returned by 30 September 2021.

During this time, one comment was received from Cubbitch Barta Native Title Claimants.

Regarding the test excavation, there were four RAP representatives present for each of the four days of test excavation.

Stage 4

Stage 4 involved the production of a draft Aboriginal Cultural Heritage Assessment Report that is issued to all RAPs for their consideration. The ACHAR documented the results of the assessment, outlined opportunities for the conservation of Aboriginal cultural values, and suggest recommendations for the management of Aboriginal objects should impacts to these objects be unavoidable.

A draft of this Aboriginal Cultural Heritage Assessment Report was sent to all RAPs on 29 September 2021 with a closing date of 19 October 2021 for comments. One response was received from Cubbitch Barta Native Title Claimants which stated:

> *"Thank you for the opportunity of participating and commenting on this proposed project. I agree with the recommendations made that a CHMP be completed in order to manage the artefacts still located on the site, and the reburial of the artefacts that were excavated as part of this project. I believe that an AHIP will still be applicable unless this is a State significant project.*
>
> *In relationship to the unimpacted areas, there should be a fence, so that there are no secondary impacts to the site by stockpiling or vehicles, including bulldozers to the area. All on site inductions to workers should include a cultural induction, so that all workers are aware of the responsibility under the NPW Act."*

6.3.14.2 Impacts to Aboriginal and European culture and heritage

Issue

Several submissions raised concerns that:

- The proposal would impact on Aboriginal and European culture and heritage
- The proposal would facilitate further industrial development of the area and thereby impact the cultural and Aboriginal heritage features of the landscape of Moss Vale.

Response

Technical Report 8 - Aboriginal Cultural Heritage Assessment Report was prepared for the proposal to assess potential impacts to Aboriginal cultural heritage. The report found that there would be a very low impact to Aboriginal cultural heritage values as few Aboriginal sites were recorded, and no intangible heritage values were identified within the study area. The results of the surface survey and test excavation also indicated that significant Aboriginal cultural heritage values would not be harmed by the proposal. The report made a number of recommendations concerning Aboriginal cultural values, which have all been incorporated into the management and mitigation measures for the proposal (see Section 7).

Section 18.3 of the EIS provided an assessment of potential impacts to non-Aboriginal heritage. This found that since no heritage-listed items or site are located on or within 200 metres of the proposal site, no direct impacts on items or sites of local, state or national heritage significance are anticipated.

The potential for vibration impacts on structures was assessed by the *Technical Report 2 - noise and vibration assessment*. This assessment concluded that construction vibration was not likely to cause structural damage beyond 22 metres from vibration-intensive activities (such as rollers). There are no heritage-listed structures within this distance and therefore no vibration related impacts to heritage-listed structures are expected.

Other future industrial development in the Moss Vale area are outside the scope of the proposal. However it is expected that other developments in Moss Vale would be subject to assessment as part of any development application process, and the assessment would include consideration of potential impacts to Aboriginal and European heritage.

6.4 Justification and evaluation of the proposal as a whole

6.4.1 Consistency with policy and legislation

Some submissions raised concerns around the proposal's consistency with policy and legislation. The issues raised are discussed in the following sections.

6.4.1.1 Consistency with the objectives of the IN1 General Industrial zone

Issue

Several submissions raised concerns that the proposal is not consistent with the objectives of the IN1 General Industrial zone.

Response

The objectives of Zone IN1 General Industrial set out in the Wingecarribee Local Environment Plan 2010 are as follows:

- To provide a wide range of industrial and warehouse land uses
- To encourage employment opportunities
- To minimise any adverse effect of industry on other land uses
- To support and protect industrial land for industrial uses
- To allow a range of non-industrial land uses, including selected commercial activities, that provide direct services to the industrial activities and their workforce or that, due to their type, nature or scale, are appropriately located in the zone without impacting on the viability of business and commercial centres in Wingecarribee
- To ensure that new development and land uses incorporate measures that take account of their spatial context and mitigate any potential impacts on neighbourhood amenity and character, or the efficient operation of the local or regional road system.

The proposal is consistent with the objectives of the IN1 zone as it would be an industrial development that provides employment opportunities.

The proposed operations would be fully enclosed in warehouse type buildings. The EIS technical studies, and supplementary assessments undertaken as part of the response to submissions phase have demonstrated that the proposal has been designed to minimise the potential for adverse effects on other land uses. These are discussed further in Section 6.2.3.

It is acknowledged that the anticipated transition to an 'Enterprise Corridor' industrial zone with predominantly large industrial buildings and associated facilities would change the character of the area over time. However, with respect to the proposal, mitigation is proposed through the use of sensitive and considered architecture and landscape design that considers façade articulation, built-form setbacks, architectural screening and high-quality landscape treatments for visual amenity and screening. This is discussed further in Section 5.1.11.

6.4.1.2 Consistency with strategic planning objectives

Issue

A number of submissions raised concerns that the proposal is not consistent with local strategic planning objectives and would have detrimental effects to the efficient development of the SHIP.

Response

Key local strategic planning documents include:

- Wingecarribee 2031 Community Strategic Plan
- Wingecarribee Local Strategic Planning Statement
- Southern Highlands Destination Strategy 2020-2030.

The consistency of the proposal with these key strategic planning documents is discussed below.

Wingecarribee 2031 Community Strategic Plan

The *Wingecarribee 2031 Community Strategic Plan* is a long-term plan that identifies where the Wingecarribee community wants to be in the future. The plan was developed to assist in shaping the future of the Wingecarribee Shire and enable Council to collectively respond to emerging challenges and opportunities and deliver outcomes that benefit the whole community. The plan establishes a range of goals and strategies, of which the following are relevant to the proposal:

- Goal 4.3 Wingecarribee achieves continuous reduction in waste generation and disposal to landfill
  - Strategy 4.3.2 Maximise the recovery of resources from the waste stream
- Goal 4.4 Wingecarribee addresses, adapts, and builds resilience to climate change
  - Strategy 4.4.2 Build community capacity to reduce greenhouse gas emissions and response to the impacts of climate change
- Goal 5.1 Our Shire attracts people to work, live and visit
  - Strategy 5.1.1 Broaden and promote the range of business and industry sectors
  - Strategy 5.1.2 Increase local employment opportunities for people in all stages of life
- Goal 5.2 Sustainable business and industry work in harmony with local community and environment
  - Strategy 5.2.1 Promote business and industry development opportunities suited to our distinct region
  - Strategy 5.2.2 Encourage and showcase leading edge clean industries.

The proposal is consistent with and supports the goals and strategies outlined in the *Wingecarribee 2031 Community Strategic Plan* as it would:

- divert waste from landfill and recovering valuable resources from the waste stream, which supports Goal 4.3
- recycle plastics and produce plastic products from plastic waste, which would in turn avoid greenhouse gas emissions, water and energy consumption associated with production of plastics from raw materials, which supports Goal 4.4
- create new business and industry in the Shire and provide employment opportunities during the construction and operation, and thereby broaden employment opportunities locally, which supports Goal 5.1
- stimulate sustainable economic development within the Southern Highlands region with a high-tech, circular economy based (and clean) industry, which supports Goal 5.2.

Wingecarribee Local Strategic Planning Statement

The *Wingecarribee Local Strategic Planning Statement* sets out the 20-year land use vision for the region and provides a long-term planning framework to meet the economic, housing, social and environmental needs of community. It takes into consideration the key issues and challenges that were identified during the extensive engagement as part of the *Wingecarribee Community Strategic Plan* and builds upon the strategies noted within the plan to ensure that the LGA continues to grow in a way that is consistent with the communities' values and expectations.

The planning statement outlines how the Wingecarribee LGA will continue to evolve in a way that protects the local character of the region, natural areas and rural landscapes in accordance with the communities' expectations. It also informs future infrastructure planning and investment decisions by Council, State Government agencies and service providers.

Within the planning statement are planning priorities and actions set to achieve the communities' vision for the Wingecarribee LGA, many of which are relevant to the proposal. These include:

- Planning priority 1.1 – Reduce carbon emissions and increase energy, water and waste efficiencies
  - Action vii – Build community capacity to reduce greenhouse gas emissions and respond to the impacts of climate change
  - Action xiii – Reduce the volume of waste to landfill and waste transport requirements
  - Action xiv – Maximise re-use and recycling to support a circular economy
- Planning priority 3.1 – Our Shire supports businesses' and attracts people to work, live and visit
  - Action iii – Broaden and promote the range of business and industry sectors
- Planning priority 5.1 – Plan for and deliver enabling infrastructure to unlock the potential of the Southern Highlands.

Consistent with planning priority 1.1, the proposal would help divert waste from landfill, recover valuable materials and produce products from plastic waste. In doing so, the proposal would avoid the greenhouse gas impacts associated with the production of plastics from raw materials. This would also promote a circular economy model of waste management, turning waste plastic into a valuable resource which could be used for bollards, decking, outdoor recreation and school furniture, fencing, signage, traffic controls.

The circular economy is designed to keep products, equipment and infrastructure in use for as long as possible, increasing the productivity of these resources. Waste energy and materials should become inputs for resource recovery, changing the traditional cycle of produce, use and dispose, and increasing the economic, social and environmental benefits for NSW.

The proposal would broaden the variety of business and industry sectors within the Wingecarribee LGA. It would also have the likelihood of attracting people to work and live within the Wingecarribee LGA, supporting planning priority 3.1. The proposal would also have the ability to make use of key enabling infrastructure such as the proposed Moss Vale By-Pass and Moss Vale Sewerage Treatment Plant upgrades that are designed to unlock the potential of the MVEC, supporting planning priority 5.1.

Southern Highlands Destination Strategy 2020-2030

The *Southern Highlands Destination Strategy 2020-2030* sets out the long-term economic and tourism vision and associated strategy for the Wingecarribee LGA. It builds on the *Wingecarribee 2031 Community Strategic Plan* to provide a blueprint to achieve the 2031 vision. It was adopted by Wingecarribee Shire Council on 11 November 2020.

The *Southern Highlands Destination Strategy 2020-2030* identifies that the key economic strengths of the Southern Highlands include the following:

- "Strategic location: the Southern Highlands region provides proximity to Sydney, Canberra, Wollongong and the new Western Sydney Airport and Aerotropolis. The area has good transport access in and out of the region through the Hume and Illawarra Highways and fixed rail.
- Southern Highlands Innovation Park: provides a unique opportunity for large scale industrial development conveniently close to Sydney, and good distribution to most of the country. The Moss Vale Enterprise Corridor (MVEC) and adjacent industrial zoned land total 1,023 hectares, with a vacant area of 652 hectares. Together, this industrial area will be referred to ongoing as the Southern Highlands Innovation Park (SHIP)".

Table 4.1 of the *Southern Highlands Destination Strategy 2020-2030* identifies future opportunities to be pursued by Wingecarribee Shire Council that will contribute positively to growing the regional economy. It lists "renewable metals/materials/recycling/waste to energy" (part of 'Advanced Manufacturing') as one of these key opportunities. It also specifically makes note of the SHIP, the proximity and access to large Australian populations and access to the Hume and Illawarra Highways as being considerations for development of these kinds of advanced industries.

The following Destination Strategy foundation pillars and priority activities are relevant to the proposal:

- Pillar 1. People
  - Priority activities:
    i. Encourage local training and workforce development outcomes
    ii. Create new jobs through promotion of the area for new and expanding businesses
- Pillar 3. Prosperity
  - Priority activities:
    iii. Focus on key industries including advanced manufacturing.

The proposal is consistent with the *Southern Highlands Destination Strategy 2020-2030* as it:

- would be a new business that creates permanent jobs for about 140 operational staff at full scale operation and provide local training and workforce development outcomes consistent with Pillar 1
- would provide local employment and business opportunities as a result of construction related jobs and revenue for businesses providing construction facilities and resources consistent with Pillar 1
- is an identified key industry (advanced manufacturing) specifically to be pursued consistent with Pillar 3
- would be located within the MVEC and SHIP, making use of the strategic location and land area specifically set aside for industrial development as identified in the Destination Strategy.

6.4.2 The proponent

Issues

Submissions raised concerns about Plasrefine Recycling, including that:

- The EIS does not provide information about the proponent or its corporate history
- The proponent is not Australian owned, has Chinese interests, and poses a national security risk due to geopolitical tensions with China
- The proponent does not have appropriate relevant experience or a track record in Australia
- The proponent's nominated operator has a poor track record in environmental management in China, including a number of environmental breaches.

Response

Plasrefine Recycling is an Australian registered company, established in 2020 for the purpose of developing and operating the proposal.

Corporate history, nationality and track record in Australia are not relevant considerations in the merit assessment under the EP&A Act for this application.

6.4.3 Benefits

Some submissions raised issues related to the environmental and or economic benefits of the proposal. The issues raised are discussed in the following sections.

6.4.3.1 Environmental benefits

Issue

Some submissions in support of the proposal included comments that the proposal would be good for the environment and help achieve sustainable development, would divert plastic waste from landfill, and that Australia needs to have the ability to process plastic wastes banned from export to China.

However, a number of submissions raised concerns about the environmental benefits of the proposal, in particular that:

- The proposal would have no environmental benefit
- The carbon emissions produced would be greater than any savings made by recycling plastic
- Recycling plastic is more harmful to the environment than landfilling.

Response

The NSW Government recognises the environmental benefits of plastic recycling. Through the *NSW Waste and Sustainable Materials Strategy 2041* (DPIE, 2021a) it has set a target to triple the plastics recycling rate by 2030. Recycling is also a key component of circular economy principles, which aims at both minimising waste and promoting continual re-use of resources.

The *NSW Waste and Sustainable Materials Strategy 2041* highlights that currently, about 99% of plastics are made from fossil feedstocks, plastic production involves significant energy consumption and if current production rates continue, carbon emissions of plastics are forecast to comprise 15% of global emissions by 2050.

An RMIT University Study undertaken for Sustainability Victoria in 2015 (Carre et al, 2015) compared kerbside collection, sorting and reprocessing/recycling of waste plastic streams with plastic production (from virgin materials), kerbside collection and subsequent landfilling using a life cycle analysis approach.

The study estimated that every tonne of kerbside collected mixed plastic that is recycled leads to a *net avoidance* of:

- Emissions: 320 kg CO_2 equivalents
- Smog: 1.2 kg non-methane volatile organic compounds (NMVOC)
- Water use: 26 kilolitres.

These figures take into consideration the emissions, smog and water demand associated with collection, sorting, and reprocessing/recycling operations of the waste plastic.

Based on the RMIT University Study findings, as it would recycle mixed plastic, at full scale operation (120,000 tonnes per year) it is estimated that the proposal would lead to a *net avoidance* each year of:

- 38,400 tonnes of greenhouse gas emissions (as carbon dioxide equivalents)
- 144 tonnes of smog (as non-methane volatile organic compounds)
- 3,120 million litres of water use.

This represents significant environmental benefits including savings to carbon emissions. It is also noted that:

- The RMIT University Study assumed that mixed plastic would be reprocessed entirely overseas (China) whereas the proposal would involve local reprocessing.
- The proposal also commits to use of solar panels, which is expected to supply a significant proportion of power for operation of the facility.
- The proposal includes rainwater collection, storage and reuse, which is expected to supply a significant proportion of water demand for operation of the facility.

In addition, the proposal would help reduce demand for new landfills by diverting plastic waste, provide innovative technologies that increase resource efficiency and produce new products from plastic waste, which would create value from materials already in the economy.

6.4.3.2 Economic benefits

Issue

Some submissions in support of the proposal commented that the proposal would benefit the local and wider NSW economy. However, several submissions raised concerns the proposal would result in no/minimal local or regional economic or employment benefits.

Response

The proposal has an estimate capital investment value of $88 million, which represents a significant investment in Moss Vale. The construction of the facility would increase economic activity in Moss Vale and the Southern Highlands region with increases in trade and local business and increased demand for construction related goods and services expected.

The proposal is expected to create up to 30 jobs at the peak of construction and up to 140 new long-term jobs in the resource recovery sector once the facility is at full scale operation. The proposal would provide local opportunities for training and skill development and require a wide variety of positions in roles such as, but not limited to:

- Administration and management
- Engineering and technical support
- General machinery operation
- Forklift/skid steer operation
- Cleaning
- Maintenance
- Research, innovation and development.

As further discussed in Section 6.3.6.1, a local procurement strategy that includes strategies to increase employment and training opportunities for local and regional residents and business, including incorporating local procurement requirements into key proposal contracts to maximise local employment opportunities. The strategy would also encourage employment of groups such as Aboriginal people, women, young people and the unemployed, to help maximise employment benefits of the proposal.

The proposed access road is consistent with the Wingecarribee Shire Council in the Moss Vale Enterprise Corridor Development Control Plan (2012) and would enable further development of the Southern Highlands Innovation Precinct, land specifically designated by Wingecarribee Shire Council for employment generating development, large scale industrial development and sustainable and innovative businesses such as the proposal.

The proposal would also include facilities to enable educational activities for local school groups and other interested parties to be carried out (and learn about plastic waste, plastic recycling and turning wastes into valuable resources).

6.5 Issues that are beyond the scope of the proposal or not relevant to the proposal

6.5.1 Council planning and engagement

Issue

The level and quality of Council planning and engagement was identified in the submissions. The main issues identified include:

- Members of the local community feel that they have not received adequate representation by local government elected councillors. Therefore the timing for assessment of this proposal is not appropriate until a Council is elected to represent the local community.
- No information was supplied by Wingecarribee Shire Council on the proposal.

Response

Community engagement activities undertaken by Wingecarribee Shire Council are beyond the scope of the proposal. As outlined in Section 27, Plasrefine Recycling has undertaken consultation with Council throughout the development of the proposal.

6.5.2 Incomplete submission

Issue

A duplicate and incomplete submission was provided by Maree Baxter. The submission referred to an attachment that was not provided.

Response

Noted as not relevant to the proposal.

7. Revised environmental mitigation measures

The EIS for the Moss Vale Plastics Recycling and Reprocessing Facility identified environmental mitigation measures that would be adopted to avoid or reduce environmental impacts. After consideration of the issues raised in the public submissions, the environmental management measures for the proposal have been revised (refer Table 7.1).

The adjustments to the measures were made to improve environmental outcomes by:

- Including additional commitments based on the response to submissions within this report
- Incorporating findings for further assessments provided within this report
- Modifying the wording so that the outcome of a commitment is clearer to implement.

Where new commitments have been added or new text has been added to an existing measure, it is in bold text. Where a commitment has been deleted or text from a commitment deleted, it appears as strikethrough text.

All revised environmental mitigation measures would be incorporated into management plans where relevant.

Table 7.1 Revised environmental mitigation measures

Ref	Issue/Impact	Mitigation measures
Detailed design/pre-construction		
Waste management		
WM1	*Excess waste generation*	Detailed design would include measures to minimise quantities of waste requiring off-site disposal including cut and fill balance and careful procurement of construction materials to minimise excess waste materials.
Soils and water		
SW1	*General soil and erosion management*	A detailed soil and water management plan would be developed after the construction contractor has been engaged and a detailed construction method has been developed. The detailed soil and water management plan would be developed in accordance with *Managing Urban Stormwater: Soils and Construction – Volume 1 and* include management procedures, operations and controls as well as monitoring and maintenance processes to ensure compliance requirements are satisfied. It would also include: – the final water management configuration and staging of key activities – final sediment basin sizing requirements, with the basins operating as Type D/F 'wet' basins based on the soil conditions at the site – construction phase water quality monitoring of the sediment basins, as well as any discharge during construction hours. A daily rainfall record would also be kept. Where a discharge of greater than 50 mg/L of suspended solids occurs when the design rainfall event has not been exceeded this would be considered a non-compliance and remedial action taken.
SW2	*Riparian vegetation management*	A detailed riparian vegetation management plan would be developed before commencement of construction. The plan would meet the requirements of the *Water Management Act 2000* for controlled activities on waterfront land and detail the vegetation restoration associated with the realignment of the eastern waterway and revegetation of the western waterway. The plan would include: – the final riparian vegetation management approach – riparian vegetation management measures – details of riparian vegetation monitoring, review and reporting.
SW3	*Embankment stability*	Embankment engineering would be undertaken during the detailed design phase to confirm the ongoing stability of the basins. ~~The proposed basin in the northeast section of the site would be particularly focused on due to the limited area and interaction with the existing water storage (to be partially decommissioned).~~

Ref	Issue/Impact	Mitigation measures
Noise and vibration		
NV1	*Noise and vibration impacts during operation*	As the design progresses, the proposal would continue to be refined to minimise the potential for operational impacts and ensure compliance with the requirements of the Noise Policy for Industry. Table 6.2 in Technical Report 2 – Noise and Vibration lists the design features that would be considered during detailed design. In addition, during detailed design and once vendor noise data is made available, the operational noise model would be updated to include manufacturer noise data (third-octave band) for all significant items of plant associated with the plastics recycling and reprocessing facility. Noise modelling would be undertaken during detailed design, using the updated noise model, to ensure the final design complies with the relevant environment protection licence conditions and the requirements of the *Noise Policy for Industry*.
Fire and incident management		
FS1	*Fire safety*	The fire safety system for the proposal would be refined during detailed design and developed in consultation with FRNSW.
FS2	*Compliance with building codes*	A detailed *Building Code of Australia* review and assessment would be undertaken as part of the detailed design.
Aboriginal cultural heritage		
AH1	*Avoiding and minimising impacts on Aboriginal heritage*	An ACHMP would be developed prior to construction commencing to manage Aboriginal cultural heritage within the study area. The ACHMP would **include a long-term care and control procedure for the management of any Aboriginal objects impacted by the proposal, including any extant sites, and** also provide policies for unexpected finds, including human skeletal material. The ACHMP would be developed in consultation with the RAPs.
~~AH2~~	*Impacts on artefacts*	~~To ensure that Beaconsfield Rd IF-1 is not harmed during the construction of the access road, the northern boundary of the study area adjacent to Beaconsfield Rd IF-1 would be temporarily fenced and signed.~~ ~~No vehicle movements or the storage of materials would be permitted to the north of this fence during construction. The fence would be removed following completion of construction.~~
AH3		An attempt would be made to locate the isolated finds MVRec IF1, BR IF1, and BR IF2 before the commencement of construction. This would be undertaken with the assistance of the Aboriginal community and all visible artefacts would be collected.
AH4		The artefacts from the sites recorded during the test excavation program would be re-buried with any other artefacts collected within the study area. The way they are reburied, and the location of the reburial would be set out in the ACHMP.
Urban design and visual		
UV1	*Visual amenity*	'Early works' screening planting on the adjacent C4 portion of Lot 11 DP 1084421 (also owned by Plasrefine Recycling) would be implemented at the earliest opportunity, to reduce impacts from both the construction phase and operation phase.
UV2		Seed collection of local provenance species would be undertaken for use in the revegetation.
UV3		As the design progresses, the proposal would continue to be refined to minimise the potential impacts on landscape character and views to the plastics recycling and reprocessing facility site. Design features that would be considered during detailed design include: – Layout: • working with the existing topography and land slope, to optimise the siting of buildings and external infrastructure components, in a way which minimises the visual and landscape impacts for surrounding uses • minimising (and avoiding where possible) potential impacts to existing drainage corridors and nearby waterways • appropriate setbacks from public and private viewpoints, and suitable space for perimeter planting • having regard to the surrounding vehicular, pedestrian and cycling networks

Ref	Issue/Impact	Mitigation measures
		• achieve a well-integrated solution which achieves seamless integration between internal pathways and these surrounding networks • examine and address key vantage points and views from more exposed sections along Collins Road. – Alignment and design of new **north-south public** access road: • roadside planting and strategic use of lighting, to maintain the amenity of nearby rural residential properties • taller canopy trees and screening vegetation along the length of newly proposed access routes, leading to the plastics recycling and reprocessing facility, to make a positive contribution to the landscape setting in this location ~~• retention of the existing screening planting to help mitigate views towards the proposed access road, where possible (excluding the interface with Beaconsfield Road, where tree removal is necessary)~~ ~~• a planted entry statement with signage from the new entrance along Lackey Road consistent with the aesthetic and character seen within the broader Moss Vale township. Signage in accordance with and consistent with State Environmental Planning Policy 64 – Advertising and Signage (SEPP 64).~~ – Buildings and structures: • built form design strategies to minimise the footprint, height and bulk of the building, by avoiding large blank facades without suitable articulation • building materials and finishes compatible with surrounding visual environment and colours and materials that are sensitive to the surrounding landscape: – bright colours that would draw the eye and reflective surfaces would be avoided – a palette of natural, earthy tones that do not detract from long range views of the surrounding rural landscape, would be adopted. – Landscaping and setbacks: • planting in accordance with the Landscape Concept Plan ~~provided in Figure 16.37~~ • a minimum 15-metre-wide landscaped area along lot frontages to internal access roads and along boundaries with rural zoned land outside the MVEC, and minimum 3-metre-wide landscaped area along the side and rear boundaries • plant selection within the plastics recycling and reprocessing facility site and along the new access road that reflect the palette of the area, and use compatible local native species selected from Council's native species list • more transparent, open-style perimeter fencing (rather than solid, impermeable structures, except if needed for retaining purposes) constructed of natural materials • where possible, retaining existing vegetation and where not possible, providing replacement vegetation to assist in screening the proposed built form from the surrounding roads, residential areas and scenic viewpoints. – Lighting: • lighting provided in accordance with the Australian Standards for outdoor lighting, AS/NZS 4282:2019 *Control of the Obtrusive Effects of Outdoor Lighting*, to minimise lighting spill within the area • the use of eco lighting and, where appropriate, the use of directional luminaires, shields and baffles to minimise sky glow and light spill for surrounding rural residential properties. – Signage: • Signage for the facility and new **north-south public** access road would in accordance with and consistent with Chapter 3 of the State Environmental Planning Policy Industry and Employment.

Ref	Issue/Impact	Mitigation measures
Biodiversity		
BD1	*Managing the potential for biodiversity impacts during construction*	Prior to the commencement of any work near the retained planted trees adjoining the proposal site, a survey would be carried out to mark the construction impact boundary. The perimeter of this area would be fenced using high visibility fencing and clearly marked as the limits of clearing. All vegetation outside this fence line would be clearly delineated as an exclusion zone to avoid unnecessary vegetation and habitat removal. Fencing and signage must be maintained for the duration of the construction period. Fencing would be designed to allow fauna to exit the site during clearing activities.
BD2		Control measures would be incorporated in the design of the proposal to limit the spread of weed propagules downstream of proposal site. Sediment control devices, such as silt fences, would assist in reducing the potential for spreading weeds.
Greenhouse gas		
GHG1	*Greenhouse gas emissions during operation*	More efficient equipment and lighting would be investigated during detailed design.
Socio-economic		
SE1	***Connection to land***	**Provide pre-construction and ongoing education to on-site staff (e.g. via inductions) regarding project and local community history which describes current connection to land as well as the more recent agricultural history and community information to encourage respectful behaviours, and enable workers to recognise Aboriginal and European heritage artefacts to prevent accidental damage and promote the swift reporting of heritage discovery.**
SE2	***Employment***	**Explore opportunities for partnership building to enhance potential positive impacts associated with job creation during the construction and operational stage. This may include partnerships with organisations such as the nearby TAFE to offer special apprenticeships and programs, or the development of a local procurement strategy or social procurement strategy for employment, to target disadvantaged groups in the employment market.**
SE3	***Social impacts, communication and engagement***	**Prepare a Communications and Engagement Strategy (CES) including a Complaints Management Procedure (CMP), which will enable a mechanism for landowners and the general community to engage with the proposal team throughout the construction phase of the proposal. The CES should be prepared alongside the Construction Traffic Management Plan (CTMP) and Construction Environmental Management Plan (CEMP) to ensure the construction process is properly informed by those impacted.** **– The CES should include regular proposal updates and provide opportunities for the community to share feedback throughout the proposal's life cycle** **– The CES should build on the engagement activities undertaken to date and take into consideration the needs and aspirations of the community that have already been explored as well as existing relationships and networks within the community.** **– Ensure the CEMP is integrated with the CES during construction stage, to provide a mechanism for landowners and the community to communicate and collaborate with the proposal team.** **– The CES should include strategies to promote community understanding and awareness of real and perceived health and wellbeing impacts. The CMP should provide a range of avenues for community members to express their concerns or ask questions – paired with ongoing engagement with nearby residents of the PSA and additional mitigation as identified.** **– Communicate both construction and operational traffic and road network impacts to affected stakeholders and community members appropriately (as part of a CES and/or Operational Waste Management Plan)** **– Reasonable and feasible work practices with all potentially impacted residents to be consulted during construction. Ongoing engagement to identify potential health and wellbeing impacts and work out mitigation techniques if appropriate and/or required.** **– The CES should communicate any opportunities in the proposal for community benefits.**

Ref	Issue/Impact	Mitigation measures
SE4	***Social impacts associated with changes to visual amenity***	**Ensure the design of the facility, including in relation to materials, planting for visual screening etc responds to issues raised by the community – particularly surrounding residents, and is as sensitive as possible in its design to the surrounding natural environment.**
Construction		
Waste management		
WM1	*Construction waste management*	A construction waste management plan would be prepared and implemented as part of the construction environmental management plan for the proposal. The plan would adopt the waste hierarchy principles contained in the *Waste Avoidance and Resource Recovery Act 2001* and detail processes, responsibilities and measures to manage waste and minimise the potential for impacts during construction. This would include waste separate, handling, storage, transport and off-site re-use, recycling and disposal locations.
WM2		All construction waste would be classified and recycled or disposal of in accordance with the *Waste Classification Guidelines* and the waste provisions contained within the POEO Act and other relevant legislative and policy requirements.
Soils and water		
SW3	*Soils and water quality*	A detailed soil and water management plan would be developed after the construction contractor has been engaged and a detailed construction method has been developed. The detailed soil and water management plan would be developed in accordance with *Managing Urban Stormwater: Soils and Construction – Volume 1 and* include management procedures, operations and controls as well as monitoring and maintenance processes to ensure compliance requirements are satisfied. It would also include: – the final water management configuration and staging of key activities – final sediment basin sizing requirements, with the basins operating as Type D/F 'wet' basins based on the soil conditions at the site – construction phase water quality monitoring of the sediment basins, as well as any discharge during construction hours. A daily rainfall record would also be kept. Where a discharge of greater than 50 mg/L of suspended solids occurs when the design rainfall event has not been exceeded this would be considered a non-compliance and remedial action taken.
SW4	*Unexpected finds*	An unexpected finds procedure would be developed and incorporated into the construction environmental management plan for the proposal. The unexpected finds procedure would describe the measures to manage unexpected finds such as buried waste including asbestos containing materials, and contamination indicators (such as odours, staining or sheens).
Traffic and transport		
TT1	*General impacts of construction activities on traffic, transport, access, pedestrians and cyclists.*	A construction traffic management plan (CTMP) would be prepared prior to the commencement of construction with site induction for construction personnel being undertaken to outline the requirements of the CTMP. The CTMP would aim to maintain the safety of all workers and road users within the vicinity of the proposal site.
TT2	*Road safety at Lackey Road intersection*	The design of the intersection treatment would be subject to detailed design and assessment of adequate sight distances.

Ref	Issue/Impact	Mitigation measures
Noise and vibration		
NV2	*Managing the potential for noise and vibration impacts during construction*	A construction noise and vibration management plan would be developed after the construction contractor has been engaged and a detailed construction method has been developed. The construction noise and vibration management plan would include a review of the construction noise predictions during the environmental impact assessment phase based. The plan would be based on the construction contractor's method and include a detailed examination of feasible and reasonable work practices and noise mitigation measures to manage sensitive receivers that are predicted to be 'noise affected'. The construction noise and vibration management plan would also include: – details of the construction methodology – feasible and reasonable work practices and mitigation measures to be implemented – updated noise predictions at sensitive receivers – a noise monitoring procedure and program for the duration of works – a community consultation plan to liaise with the noise affected receivers.
Air quality		
AQ1	*Construction activities and earthworks that may cause dust impacts*	A dust management plan would be developed for the proposal which would incorporate the general and specific dust management measures for construction and track-out outlined in Table 5.1, Table 5.2 and Table 5.3 of Technical Report 3 – Air Quality and Odour.
Urban design and visual		
UV4	*Visual amenity*	Staging of works would be considered to undertake perimeter buffer planting in advance of construction works, particularly in locations where short-term visual mitigation would be beneficial. This would include larger-sized trees and shrub planting stock.
UV5		All practical measures would be taken to ensure construction equipment, stockpiles, and other visible elements are located away from rural residential properties and sensitive views, as much as possible.
UV6		Should any equipment or stockpiles be located in a visually prominent location for any reasonable period of time, screening measures such as hoarding and practices would be incorporated to ensure the site is kept tidy and visibility reduced.
UV7		No-go-zones would be implemented around drainage and water capture areas, and tree protection fencing would be implemented as needed, to support vegetation retention during construction.
Biodiversity		
BD3	*General biodiversity impacts*	All workers would be provided with an environmental induction prior to starting work on-site. This would include information on the ecological values of the site, protection measures to be implemented to protect biodiversity and penalties for breaches.
BD4	*Impacts of vegetation clearing*	Disturbance of vegetation would be limited to the minimum necessary to undertake the proposal.
BD5		Daily inspections of exclusion zones during works in area would be carried out.
BD6		Stockpiles of fill or vegetation would be placed within existing cleared areas (and not within areas of adjoining native vegetation).
BD7		Sediment fences would be installed to prevent transfer of sediments into adjacent vegetation.
BD8	*Introduction of weeds and pathogens*	A weed and pest species management plan would be developed as part of the construction environmental management plan to manage weeds and pathogens during the construction and operational phase of the proposal.
BD9		The location and extent of any priority and/or high threat environmental weeds within the proposal site would be identified by a suitably qualified ecologist during pre-clearance surveys. The introduction and spread of weed species would be minimised by restricting access to areas of native vegetation and communicating the responsibilities of all proposal personnel at site inductions and during regular toolbox meetings. All priority weeds identified on-site would be controlled and removed in accordance with the requirements of the *Biosecurity Act 2016* and Council's relevant Weed Control

Ref	Issue/Impact	Mitigation measures
		Manuals. Appropriate pesticides would be applied if required and a record of such application made in the pesticide application register. All noxious and environmental weeds would be cleared and stockpiled separately to all other vegetation, removed from site and disposed of at an appropriately licenced disposal facility. When transporting weed waste from the site to the waste facility, trucks would be covered to avoid the spread of weed-contaminated material. Disposal would be documented, and evidence of appropriate disposal would be kept.
BD10		All machinery entering the proposal site would be appropriately washed down and disinfected prior to work on-site to prevent the potential spread of weeds, Cinnamon Fungus (*Phytophthora cinnamomi*) and Myrtle Rust (*Pucciniales fungi*) in accordance with the national best practice guidelines for Phytophthora (O'Gara *et al.* 2005) and the *Myrtle Rust factsheet* (DPI 2015b) for hygiene control.
BD11	*Removal of fauna habitat*	Protocols to prevent introduction or spread of chytrid fungus would be implemented in accordance with the *Hygiene protocol for the control of disease in frogs* (DECC 2008c).
BD12		A trained ecologist would be present during the clearing of native vegetation or removal of potential fauna habitat to avoid impacts on resident fauna and to salvage habitat resources as far as is practicable.
BD13		Temporary dewatering of the dam would be done in accordance with a dam dewatering plan to be developed for the proposal in order to manage the environmental impacts that may arise from dewatering dams. The dewatering plan would include: – the quality and quantity of the water to be released – the fate of the water – any impacts to native, threatened or protected species – relocation of displaced native fauna – the spread of exotic flora and fauna species.
BD14		A suitably qualified and appropriately licenced ecologist would be present during the clearance of all native vegetation and/or fauna habitats. Animals that require handling must not be approached or handled until the ecologist is present, unless in an emergency (eg. when there are both no authorised persons present and where the failure to immediately intervene would place the animal at significant risk). In such an emergency, the site manager may obtain over the phone instructions from the project ecologist to ameliorate the situation. A wildlife rescue organisation (eg. WIRES or Sydney Wildlife) would be made aware of operations in case any injured fauna are found. All animals encountered would be treated humanely, ethically, and in accordance with relevant codes under the NSW *Prevention of Cruelty to Animals Act 1979*, including: – Australian code of practice for the care of animals for scientific purposes (NHMRC 2004) – Code of practice for the welfare of wildlife during rehabilitation (DPI 2001) – Animal ethics considerations and protocols outlined in this document. If the project ecologist considers an animal is at risk of injury or undue stress, it would be gently directed into secure adjoining habitat. Where deemed necessary by the project ecologist, the animal may be required to be captured and released. Capture and release operations would proceed via the following protocols: – All construction activities that are considered by the project ecologist be likely to increase the risk of injury, mortality or stress to the animal would be halted until the animal has been removed, which would be enforced with the co-operation of the construction contractor. Construction activities that do not contribute to the risk of injury, mortality or stress to the animal can continue (as determined by the project ecologist). – Only qualified ecologists or wildlife carers would be authorised to handle animals. – Animals would be captured (if required) by the project ecologist using a safe and ethical technique, as is appropriate for the particular species (see below). Native animals that are unable to depart of their own accord would be captured and held in a receptacle appropriate for that species until release. All captive-held animals would be provided with food, water and warmth as is appropriate for the species. Each receptacle would only hold one animal at a time and would be cleaned and disinfected between use to avoid the spread of disease.

Ref	Issue/Impact	Mitigation measures
		Details of any fauna relocated from trees, shrubs or other areas would be recorded on the register.
BD15		The construction contractor would be required to contact the project ecologist for advice if any unexpected fauna are found during the construction period (ie. following clearing of native vegetation when the project ecologist is no longer on-site).
BD16		A post-clearing report would be prepared documenting all animals that are handled, or otherwise managed, within the site. Data that would be recorded includes: – date and time of the sighting and details of the observer – species – number of individuals recorded – adult/juvenile – condition of the animal (living/dead/injured/sick) – management action undertaken (eg. captured, handled, taken to vet) – results of any management actions (eg. released, placed in a nest box, euthanised, placed with carer) – an inventory of hollows and fallen timber salvaged and relocated.
Greenhouse gas		
GHG3	*Greenhouse gas emissions during construction*	Sustainable procurement practices would be adopted where feasible.
GHG4		Construction materials would be sourced locally where possible.
GHG5		Investigations into the feasibility of using biodiesel for trucks and equipment, electric vehicles and low carbon concrete would be undertaken would be undertaken.
GHG6		All plant and equipment used during construction would be regularly maintained to reduce emissions and comply with the relevant exhaust emission guidelines.
GHG7		All plant and equipment used during construction would be switched off when not in constant use and not left idling, as long as safe.
GHG8		Construction plant and equipment brought on-site would be regularly serviced and energy efficient vehicles or equipment would be selected where available.
Socio-economic		
SE6	***Connection to land***	**Provide pre-construction and ongoing education to on-site staff (e.g. via inductions) regarding project and local community history which describes current connection to land as well as the more recent agricultural history and community information to encourage respectful behaviours, and enable workers to recognise Aboriginal and European heritage artefacts to prevent accidental damage and promote the swift reporting of heritage discovery.**
SE7	***Employment***	**Explore opportunities for partnership building to enhance potential positive impacts associated with job creation during the construction and operational stage. This may include partnerships with organisations such as the nearby TAFE to offer special apprenticeships and programs, or the development of a local procurement strategy or social procurement strategy for employment, to target disadvantaged groups in the employment market.**
~~SE1~~ **SE8**	*Social impacts, communication and engagement*	A community information and awareness strategy would be included in the construction environmental management plan and would outline measures to maintain communication with the community and all relevant stakeholders throughout construction of the proposal.
~~SE2~~ **SE9**		A contact log would be maintained to log public comments and complaints.
SE10		**Maintain close dialogue with relevant stakeholders such as Wingecarribee Shire Council to identify opportunities to encourage social interaction between workers and the local community (such as complaints management, education, traineeships, local procurement) and mitigate any issues as they arise, both during construction and operation.**

Ref	Issue/Impact	Mitigation measures
~~SE3~~ **SE11**	*Community consultative committee*	A community consultative committee would be established to ensure the community and stakeholder groups are: – kept informed of the status of the project, any new initiatives, and the performance of Plasrefine Recycling – consulted on the development of the project, management plans and proposed changes to the approved project – able to provide feedback on key issues that may arise during the development or implementation of the project.
SE12	***Social impacts, communication and engagement***	**Continuation of the community consultation methods provided during the planning phase and construction phase to enable nearby residents to notify the proposal team of issues and concerns related to construction impacts**
Operation		
Waste management		
WM3	*Operational waste management*	An operational waste management plan would be developed and implemented which incorporates the requirements of relevant guidance documents, waste management hierarchy principles contained in the *Waste Avoidance and Resource Recovery Act 2001*. This would include: – All key operational waste streams and expected quantities – Waste handling, management and storage procedures including for both plastic waste feedstock as well as wastes generated on-site – Procedures for identifying and managing unacceptable and non-confirming feedstock – Waste classification procedures and details of how all waste streams would be recycled or disposal of in accordance with the *Waste Classification Guidelines* and the waste provisions contained within the *Protection of the Environment Operations Act 1997*, Waste Regulation and other relevant legislative and policies – Details of off-site recycling and disposal locations – Detailed product sampling and validation program for refuse derived fuel, in accordance with agreed end use specifications – Record keeping and reporting requirements
Water management		
SW5	*Water quality impacts during operation*	A detailed operational water management plan would be developed before commencement of operations and updated yearly. The plan would be based on specifying and maintaining all mixed plastics waste receival, storage, recycling and reprocessing activities and finished product storage within the buildings. The plan would also include daily visual inspection by a specified person(s) of the plastics recycling and reprocessing facility site for plastic waste or litter and – collection of any plastic waste or litter found outside of buildings during inspections – maintenance of an incident log where plastic waste or litter found outside of building during inspections.
Traffic and transport		
~~TT2~~ **TT3**	*Alternative transport*	A green travel plan would be developed to encourage and promote alternate transport opportunities to the plastics recycling and reprocessing facility. The green travel plan would summarise alternate transport options to access the facility, outlining where and how these services can be accessed and the frequency of the service.
Noise		
NV3	*Noise impacts during operation*	An operational noise management plan would be developed to minimise the risk of adverse noise impacts during the operation. It would be refined throughout the design process and have consideration to: – the relevant license conditions (to be confirmed) – conditions of approval (to be confirmed) – the *Noise Policy for Industry* – *Australian Standards 1055 Acoustics – Description and measurement of environmental noise* – *Approved methods for the measurement and analysis of environmental noise in NSW* – currently in draft form.

Ref	Issue/Impact	Mitigation measures
		The operational noise management plan would include: – operational noise management measures to be implemented – updated operational noise predictions at sensitive receivers – a noise monitoring procedure and program – a complaints handling protocol. Table 6.3 in Technical Report 2 – Noise and Vibration provides draft inclusions for incorporation into the operational noise management plan to minimise the risk of adverse noise impacts at sensitive receivers during the operation.
NV4	***Noise impacts at residences along Innes Road and Garret Street during operation***	**To mitigate potential noise impacts at residences along Innes Road and Garret Street, the following measures would be incorporated into the operational management plan:** **– Road traffic noise monitoring be undertaken (pre-operation and within 6 months of operation) to determine the following:** **• Existing road traffic noise levels at residences** **• The frequency of operational delivery trucks during peak periods of operation** **• The increase in road traffic noise level during peak periods of operation** **• The noise level of delivery trucks (range and average) to inform predictions for higher throughput volumes** **– Consideration of diverting HV movements to alternate haulage routes where road traffic noise impacts would be reduced (i.e. Waite Street, Illawarra Highway and Lackey Road)** **– Induction and training provided to relevant staff and haulage vehicle drivers outlining their responsibilities with regards to:** **• The designated haulage routes** **• The location of sensitive receivers along haulage routes** **• Driver behaviour practices and avoidance of the use of engine compression brakes** **• Acceptable delivery hours.**
Air quality		
AQ2	*Operational air emissions*	The emission control system would be operational and regularly maintained. Should any unit become faulty, production on those affected lines would halt immediately and not resume until emission control systems are fully operational.
AQ3		An odour complaints management procedure would be developed as part of the broader complaints management procedures to ensure that any complaints regarding odour are received by appropriate personnel and that potential issues can be investigated, and site practices adjusted accordingly.
AQ4		Once operational, sampling of the proposal operational emissions would be conducted to confirm assumptions made throughout the air quality assessment. An air monitoring program would be established to ensure workplace exposure limits are maintained. Sampling would be undertaken in each building biannually by a suitable professional in accordance with guidance from Safe Work Australia and relevant Australian Standards.
AQ5		To maintain dust levels within both Building 1 and Building 2, regular sweeping and housekeeping practices would be undertaken. No activities, including stockpiling, would occur external to buildings. Building doors would remain closed at all times except when allowing vehicles to enter or exit.

Ref	Issue/Impact	Mitigation measures
Fire and incident management		
FS3	*Fire risks*	Prior to commencement of operations, the following would be developed: – an operations plan for stockpile management, with a copy to be included within the Emergency Services Information Package – an Incident Response Management Plan for staff and other persons at the facility in the event of fire – an Emergency Services Information Package for firefighters in accordance with the FRNSW (2019) guideline *Emergency services information package and tactical fire plans.*
Hazards and risk		
HR1	*Operational hazards*	All safeguards identified in the hazard identification process would be implemented through the development and implementation of a safety management system for the operation of the proposal.
Biodiversity		
BD22	*Operational impacts on biodiversity*	Appropriate speed limits would be signposted and enforced along internal roads to reduce the likelihood of vehicle strike and mortality of native fauna.
BD23		Appropriate fencing would be erected at the interface between the proposal site boundary.
BD24		Legal obligations to control priority weeds within proposal site to prevent the spread of propagules would be enforced.
BD25		Street lighting would be designed to direct light away from rows of adjacent trees and to limit the impacts of light spill on native fauna habitats.
Greenhouse gas		
GHG9	*Greenhous gas emissions reporting obligations*	Annual monitoring and reporting of greenhouse gas emissions required under the National Greenhouse and Energy Reporting scheme would be undertaken.
GHG10	*Reducing greenhouse gas emissions*	Greenpower would be purchased for grid electricity during operation.
Socio-economic		
~~SE5~~ **SE13**	*Community consultative committee*	A community consultative committee would be established to ensure the community and stakeholder groups are: – kept informed of the status of the project, any new initiatives, and the performance of Plasrefine Recycling – consulted on the development of the project, management plans and proposed changes to the approved project able to provide feedback on key issues that may arise during the development or implementation of the project.
~~SE4~~ **SE14**	*Complaints handling*	A contact log would be maintained to log public comments and complaints.
SE15	***Social impacts, communication and engagement***	**Continuation of the community consultation methods provided during the planning phase and construction phase to enable nearby residents to notify the proposal team of issues and concerns related to construction impacts**
SE16		**Maintain close dialogue with relevant stakeholders such as Wingecarribee Shire Council to identify opportunities to encourage social interaction between workers and the local community (such as complaints management, education, traineeships, local procurement) and mitigate any issues as they arise, both during construction and operation.**

Ref	Issue/Impact	Mitigation measures
SE17	***Social impacts associated with changes to visual amenity***	**Consider whether any additional planting is required on adjoining properties to further reduce visual impacts. This should be a collaborative process with affected residents and accompanied by further consultation with affected residents.**
SE18	***Community sense of pride***	**Explore strategies to promote the tourism, education and employment opportunities arising from the development in order to foster a transitioning community identity and sense of pride.**

8. Conclusion

The proposal aligns with the Southern Highlands Destination Strategy, released by Wingecarribee Shire Council in November 2020 which identifies the Southern Highlands as having a number of key economic strengths including:

- **Strategic location**, proximate to Sydney, Canberra, Wollongong and the new Western Sydney Airport and Aerotropolis and with good transport access in and out of the region through the Hume and Illawarra Highways and
- **SHIP:** provides a unique opportunity for large scale industrial development conveniently close to Sydney, and good distribution to most of the country. The MVEC and adjacent industrial zoned land total 1,023 hectares, with a vacant (unoccupied) area of 652 hectares.

The proposed use of the plastics recycling and reprocessing facility site is for a high technology development involving advanced sorting, processing and manufacturing as well as a laboratory to conduct recycling research and product development to further drive innovation in plastics recycling. The use of the site together with the creation of the new public access road will enable further realisation and the orderly and economic development of land in the MVEC and SHIP.

The location of the proposal within the SHIP recognises the region's competitive advantages regarding proximity and access to large Australian populations and waste feedstock.

The proposed new north-south public access road would improve accessibility to the southern part of the SHIP and once constructed, would remove the need for heavy vehicles to access the SHIP via Beaconsfield Road (the existing site access).

Engagement with the local community would continue to ensure they have a high level of awareness of all processes and activities associated with future stages of the proposal. The proposal website would continue to be updated to inform the community about the status of the proposal and the assessment process. Subject to approval being obtained, a CES including a CMP would be prepared. This would provide a mechanism for landowners and the general community to engage with the project delivery team throughout.

The proposal has significant economic, environmental and sustainability benefits:

- **Reduced landfill use**. The diversion of significant quantities of plastics waste from landfill.
- **Energy conservation**. Recycling a tonne of plastic saves energy equal to 5.774 kilowatt-hours. That is the equivalent to the amount of energy consumed by two people for a year.
- **Reduced greenhouse gas emissions**. Every tonne of mixed plastics that can be recycled is estimated to lead to a net avoidance of 320 kilograms of CO_2 equivalent greenhouse gas emissions, 1.2 kilograms of non-methane volatile organic compounds (ie. smog) and 26 kilolitres of water.
- **Circular economy**. The proposal would not only recycle mixed plastics, but it would also reprocess the plastics into advanced products, which is consistent with a move towards a circular economy.
- **Restoration of riparian zones**. A five fold increase in native vegetation coverage and improved water quality through bio-retention basins.
- **Job creation**. The proposal provides a significant employment contribution to the local economy with up to 200 jobs during construction and 140 jobs during operation. This provides people living in the Southern Highlands the chance to work locally and spend less time commuting and more time with their families. Employment for the proposal will be informed by a local procurement strategy and social procurement plan which will be prepared in consultation with Wingecarribee Shire Council and other key stakeholders to outline strategies to give preference to local and regional residents and business.
- **Driving innovation**: The proposal includes advanced automated sorting and processing technologies but also includes a products manufacturing lab to conduct recycling research and product development to further drive innovation in plastics recycling.
- **Educational opportunities.** Facilities to enable educational activities for school groups and other interested parties to be carried out (and learn about plastic waste, plastic recycling and turning wastes into valuable resources).

A social impact assessment and addendum social impact assessment was prepared by Ethos Urban to analyse key social considerations impacting the proposal. Key social impacts as a result of the proposal include:

- Temporary potential negative impacts associated with construction activity, which may affect health and wellbeing due to amenity impacts, for some members of the PSA. Construction is anticipated to take approximately 15-17 months.
- Potential permanent visual impacts would have a social impact on surroundings, due to the scale and nature of the buildings in the existing environmental context. This has the potential to impact on the area from the perspective of landowners and community members.
- Positive social impacts arising from the proposal may be experienced for some members of the PSA, SSA and TSA, as a result of improved livelihoods and way of life, with the proposal providing increased local employment opportunities, and positive cumulative impacts as part of the broader strategic transformation of the SHIP, with the potential to attract people to work and live in the LGA, make use of key enabling infrastructure upgrades, and generate annual revenue and strengthen the capabilities of the Wingecarribee Shire to deliver on the proposal and programs for the community.

The proposal is consistent with the relevant objects of the EP&A Act which include:

(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment

(c) to promote the orderly and economic use and development of land

(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats

(g) to promote good design and amenity of the built environment

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

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