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Response to Submissions Report

Kariong Sand and Soil Supplies

Sand, Soil and Building Materials Recycling Facility - SSD8660

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We declare that:
The statement has been prepared in accordance with clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation* 2000.

The statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates, and the information contained in the statement is neither false nor misleading.

Report version	Authors	Date	Reviewer	Approved for issue	Date
v1.0	Dr J.Lethlean, and Dr M. Jackson	18/12/2020	Dr M.Jackson	Dr M.Jackson	18/12/2020
V2.0	Dr J.Lethlean, and Dr M. Jackson	05/01/2021	Dr M.Jackson	Dr M.Jackson	05/01/2021
FINAL	Dr J.Lethlean, and Dr M. Jackson	02/02/2021	Dr M.Jackson	Dr M.Jackson	02/02/2021

Executive Summary

Kariong Sand and Soil Supplies (KSSS) is seeking development consent for a site located at 90 Gindurra Rd Somersby to enable the company to receive up to 200,000 tonnes of waste for recycling each year. The proposed development will seek to expand the current facility into a best-practice recycling plant that can process a range of sand, soil and building materials, and produce a wide range of landscape supplies. The proposed facility is ideally located to receive waste materials from the Central Coast region. This will assist in achieving the NSW Government's target of an 80% recycling rate for construction and demolition waste by 2021.

Under Section 4.36 of the *Environmental Planning and Assessment Act* 1979 and Schedule 1 of the *State Environmental Planning Policy (State and Regional Development)* 2011, the proposed development is considered to be a State Significant Development, requiring an EIS to be submitted with the development application.

The original development application was submitted to the Department of Planning and Environment (DPE) on 18th January 2019. The proposal was on public exhibition from 1st February 2019 to 21st March 2019. A revised EIS was submitted and was on public exhibition from 28th August 2020 to 25th September 2020. This report is a response to the submissions received and addresses the comments in those submissions to allow for a final determination of the proposal.

During the second public exhibition, a total of 909 individual (non-duplicate) submissions were received. Of these, 859 supported the proposal (94.5%), 46 objected (5.1%) and 4 provided comments only (0.4%). The public exhibition period demonstrated very strong community support for the upgraded proposal.

In response to the comments received from government agencies, neighbouring properties and the general public, a number of the technical studies were reviewed and responses to the comments prepared. These include:

- Air Quality Impact Assessment;
- Noise and Vibration Impact Assessment;
- Traffic Impact Assessment;
- Water Cycle Impact Assessment and Soil and Water Management Plan;
- Hydraulics Services Plan;
- Fire Safety Study;
- Fire Coverage Plan;
- Biodiversity Assessment; and
- Waste Management Plan.

The addendums to technical studies have also comprehensively addressed peer review comments that were submitted by some members of the community as part of the public exhibition process. In response to the public and agency comments, refinements to the design and operation of the development are proposed. These are described in this report and are summarised as follows:

- Extensions to buildings to further enclose the crushing and mulching operations to further minimise dust and noise and avoid impacts on neighbouring properties;
- Removal of floating wetlands from stormwater treatment train design;
- Operation of the OSD basin as a controlled pump-out system on a 5-day trigger to ensure only high quality water is discharged from the development site, and to reduce the risk of overflow during periods of heavy rain; and
- Confirmation of sumps with isolation valves in the Secondary Sorting Warehouse.

All technical studies conclude that the final design will result in the facility having minimal impact on the environment and surrounding land users. Overall, the project meets the environmental criteria in the relevant standards and guidelines and now meets the additional requirements listed in the agency comments.

The environmental and social impact on the local area will be negligible. The project is consistent with the objectives of the land use zoning and with the Council development strategies for the area. The new facility will provide employment, economic benefits and best practice recycling services for the local area, is broadly supported by the community and is recommended for approval.

CONTENTS

Appendices

1. Introduction

An Environmental Impact Statement (EIS) has been prepared for the proposed development of a sand, soil and building materials recycling facility at 90 Gindurra Rd, Somersby (Lot 4 DP 227279).

The facility located at the site is approved to receive sand and soil, which is blended into specific landscape products.

Kariong Sand and Soil Supplies (KSSS) is seeking development consent for the site to enable the company to receive up to 200,000 tonnes of waste for recycling each year. The proposed development will seek to expand the current facility into a best-practice recycling facility that can process a range of sand, soil and building materials, and produce a wide range of landscape supplies. The proposed facility is ideally located to receive waste materials from the Central Coast region. This will assist in achieving the NSW Government's recycling target of an 80% rate for construction and demolition waste by 2021.

Under Section 4.36 of the *Environmental Planning and Assessment Act* 1979 and Schedule 1 of the *State Environmental Planning Policy (State and Regional Development)* 2011, the proposed development is a State Significant Development, requiring an EIS to be submitted with the development application.

Central Coast Council also advised in a pre-lodgment meeting that under the *Protection of the Environment Operations Act* 1997, the proposed development will require concurrence and licensing from the NSW Environment Protection Authority.

The company is committed to complying with all laws that affect its operations and understands that development approval and appropriate licensing is required prior to the proposed development occurring. In this regard, pursuant to Part 2, Schedule 2 of the *Environmental Planning and Assessment Regulation* 2000, KSSS, as the Proponent, has prepared an Environmental Impact Statement to support its application for development consent.

1.1. Status of development approval

A development application, with EIS, was submitted to DPIE on 18th January 2019. The proposal was on public exhibition from 1st February 2019 to 21st March 2019. Comments from NSW government agencies on the proposal and first EIS were received from 20th March 2019 to 14th June 2019.

Following additional studies and revision of parts of the project, a second EIS was prepared and submitted to DPIE for further feedback. A Response to Submissions report was prepared and submitted with the updated second EIS. The second EIS was on public exhibition from 28th August 2020 to 25th September 2020.

Comments were received from the public, organisations and government agencies between 1st September 2020 and 11th November 2020. This report is a response to the submissions received and addresses the comments in those submissions.

2. Overview of the exhibited project

2.1. Summary of project description in exhibited EIS

The facility will provide for additional sand, soil and building material recycling in the Central Coast region and will service areas across the Sydney region. The current and proposed development features of the site are listed in Table 2.1.

The facility is in the IN1 General Industrial zone of Somersby Industrial Park. The proposed development involves the development of a largely undeveloped industrial site, to enable the facility to be used for the receival, processing and recycling of construction and demolition waste, as well as supply building and landscape supplies for local projects. The facility will require an Environment Protection Licence from the NSW Environment Protection Authority.

Table 2.1. Summary of the 'current', 'proposed' and 'net change' in development features of the Kariong Soil and Sand Supplies Facility under SSD application 8660 – as exhibited in EIS in August – September 2020.

Site feature / operating conditions	Current Consent Conditions	Proposed	Net change
Types of wastes that can be lawfully received at the facility for recycling	Sand and metal	Soil - Virgin Excavated Natural Material (VENM) Soil – Non-putrescible solid waste meeting the CT1 threshold Concrete, tiles, masonry Asphalt Timber and stumps and rootballs Mixed building waste (masonry, concrete, brick, tiles, wood, timber and metal)	Soil - Virgin Excavated Natural Material (VENM) Soil - Non-putrescible solid waste meeting the CT1 threshold Concrete, tiles, masonry Asphalt Timber and stumps and rootballs Mixed building waste (masonry, concrete, brick, tiles, wood, timber and metal)
Annual processing limit (tonnes per annum)	No limit	200,000 tonnes per annum	200,000 tonnes per annum
Scale up of operations	No limit	A commitment that recycling will increase in stages, only after independent testing is done to prove the facility is performing to the highest environmental standards. These stages proposed include: • Following development approval, waste receival to increase over time to a threshold of 100,000 tonnes per annum; • Consent to increase waste receival to 150,000 tonnes per annum;	A commitment that recycling will increase in stages, only after independent testing is done to prove the facility is performing to the highest environmental standards. These stages proposed include: • Following development approval, waste receival to increase over time to a threshold of 100,000 tonnes per annum; • Consent to increase waste receival to 150,000 tonnes per annum;

Site feature / operating conditions	Current Consent Conditions	Proposed	Net change
		• Consent to increase waste receival to 200,000 tonnes per annum.	Consent to increase waste receival to 200,000 tonnes per annum.
Maximum amount of waste that can be stored on-site at any point in time	No limit	40,000 tonnes	40,000 tonnes
Processing equipment	Not stated	<u>Outdoor operations:</u> Screen, excavator, front-end loader (outdoors), storage of materials in dedicated concrete bays and enclosures with dust suppression system in place. <u>Indoor operations:</u> Waste receival, crusher, shredder, front-end Loader, excavator, conveyor, stackers, trommel screen, station picking line with conveyor, overhead magnet, air blower, hopper and bagging machine. Extensive indoor dust suppression systems to be installed, including network of outdoor storage bay mounted sprinkler systems for continuous dust control.	<u>Outdoor operations:</u> Screen, excavator, front-end loader (outdoors), storage of materials in dedicated concrete bays and enclosures with dust suppression system in place. <u>Indoor operations:</u> Waste receival, crusher, shredder, front-end Loader, excavator, conveyor, stackers, trommel screen, station picking line with conveyor, overhead magnet, air blower, hopper and bagging machine. Extensive indoor dust suppression systems to be installed, including network of outdoor storage bay mounted sprinkler systems for continuous dust control.
Weighbridge	None	A new 26m above ground weighbridge will be installed adjacent to the front office. A second 26m weighbridge and a weighbridge office will be installed once the site receives the equivalent of 100,000 tpa of waste.	A new 26m above ground weighbridge will be installed adjacent to the front office. A second 26m weighbridge and a weighbridge office will be installed once the site receives the equivalent of 100,000 tpa of waste.
Fire suppression system	None	A total of six (6) fire hydrants will be installed. Three fire hydrants are to be installed under Stage 1 of the project (DA52541/2017). An additional three will be installed as part of Stage 2 of the project, which is the subject of this development application.	A total of six (6) fire hydrants will be installed. Three fire hydrants are to be installed under Stage 1 of the project (DA52541/2017). An additional three will be installed as part of Stage 2 of the project, which is the subject of this development application.

Site feature / operating conditions	Current Consent Conditions	Proposed	Net change
		A total of six (6) fire hose reels will be installed. Two fire hose reels are to be installed under Stage 1 of the project (DA52541/2017). An additional four will be installed as part of Stage 2 of the project, which is the subject of this development application. Two emergency quarantine areas to be established.	A total of six (6) fire hose reels will be installed. Two fire hose reels are to be installed under Stage 1 of the project (DA52541/2017). An additional four will be installed as part of Stage 2 of the project, which is the subject of this development application. Two emergency quarantine areas to be established.
Containment of firewater	None	To be provided by on-site detention system and 70mm bunding within the Secondary Sorting Warehouse. Isolation valves to be installed in OSD basin.	To be provided by on-site detention system and 70mm bunding within the Secondary Sorting Warehouse. Isolation valves to be installed in OSD basin.
Treatment of stormwater runoff from site	Existing stormwater dam in place.	A new OSD and stormwater storage basin will be constructed to capture stormwater and sediment. The site will be contoured to ensure all stormwater run-off is collected. Stormwater will be treated through an extensive treatment train involving gross pollutant traps, bioswales, floating wetland in the OSD pond and a membrane filtration plant. An emergency spill pond is also proposed.	A new OSD and stormwater storage basin will be constructed to capture stormwater and sediment. The site will be contoured to ensure all stormwater run-off is collected. Stormwater will be treated through an extensive treatment train involving gross pollutant traps, bioswales, floating wetland in the OSD pond and a membrane filtration plant. An emergency spill pond is also proposed.
Operating hours **(operational hours)**	6:30am to 5:30pm Monday to Saturday	Opening hours (staffed): 7:00am to 6:00pm Monday to Saturday. Closed Sunday. Waste deliveries: 7:00am to 6:00pm Monday to Saturday. Closed Sunday. Waste processing (sorting, crushing, grinding, screening): 8:00am to 5:00pm Monday to Friday. Product sales: 7:00am to 6:00pm Monday to Saturday. Closed Sunday.	Opening hours (staffed): 7:00am to 6:00pm Monday to Saturday. Closed Sunday. Waste deliveries: 7:00am to 6:00pm Monday to Saturday. Closed Sunday. Waste processing (sorting, crushing, grinding, screening): 8:00am to 5:00pm Monday to Friday. Product sales: 7:00am to 6:00pm Monday to Saturday. Closed Sunday.
Environmental monitoring	None defined	Continuous monitoring of air quality (dust) and noise at the site boundaries. Surface and groundwater monitoring to be performed.	Continuous monitoring of air quality (dust) and noise at the site boundaries. Surface and groundwater monitoring to be performed.

2.1.1. Staging of development – as exhibited

The proposed development will be staged, consisting of two defined project phases. Stage 1 involved demolishing the existing sheds on the property and constructing an office building and warehouse. The two-stage development approach has enabled the proponent to occupy the site on a more permanent basis, by having an office building for staff to be based as part of Stage 1. It is noted that Stage 1 was approved by Central Coast Council as a local development under DA52541/2017 on 17/11/2017. The building design and location was modified and approved by Central Coast Council on 21/09/2018 under DA52541/2017.2. The building is now completed.

In the exhibited EIS, stage 2 was to involve the following construction activities (subject of this SSD development application):

- Clear selected vegetation from the front half of the site as determined by the Fauna and Flora and Vegetation Management Plan;
- Construct sediment control basin to capture run-off during construction;
- Grading of site. Construct retaining walls. Install water, power and recycled water services across the site. Install hardstand across the operational areas of the site;
- Install noise wall along eastern side of the site;
- Construct onsite roads, new entrance and modifications to Gindurra Rd (turning lane);
- Construct stormwater drainage system, including pond, floating wetland, level rock spreader, bioswales, gross pollutant traps and a packaged recycled water plant, connect to sewer;
- Construct crusher building;
- Construct mulcher building;
- Construct tip and spread waste receival building, rainwater harvesting tanks and misting system. Install truck wash bay, coalescing plate separator and awning (and connect to sewer);
- Install dust and fire suppression systems across the site, including the Secondary Sorting Warehouse;
- Construct waste storage bays, aggregate and landscape supply concrete bays, including bay mounted sprinkler system;
- Install processing equipment in crusher building, mulcher building and secondary sorting warehouse;
- Install weighbridges, traffic control lights and boom gates on site;
- Install environmental monitoring equipment (weather station, high volume air samplers, dust gauges, sound meters);
- Complete landscaping works;
- Commissioning and testing of site plant, equipment and environmental control systems, and issue of EPA licence for the site;
- Commence formal operations for receival and recycling of waste materials up to 100,000 tonnes per annum;
- Install second weighbridge and weighbridge office once waste receival exceeds 100,000 tonnes per annum;

- Waste receival to increase to 150,000 tonnes per annum subject to the site demonstrating compliance with consent and EPA licence conditions and satisfactory environmental performance; and
- Waste receival to increase to a maximum of 200,000 tonnes per annum subject to the site demonstrating compliance with consent and EPA licence conditions.

The general site layout per the exhibited EIS is presented in Figure 2.1.

2.1.2. Operational description of the development – as exhibited

The site will be developed into a fully integrated, best practice facility for recycling of sand, soil and building materials. The site will comprise seven separate functional areas. A summary of operations and the functional areas of the site, as presented in the exhibited EIS, is provided in Figure 2.2 and Figure 2.3 below.

Figure 2.1. Site layout for development - as exhibited.

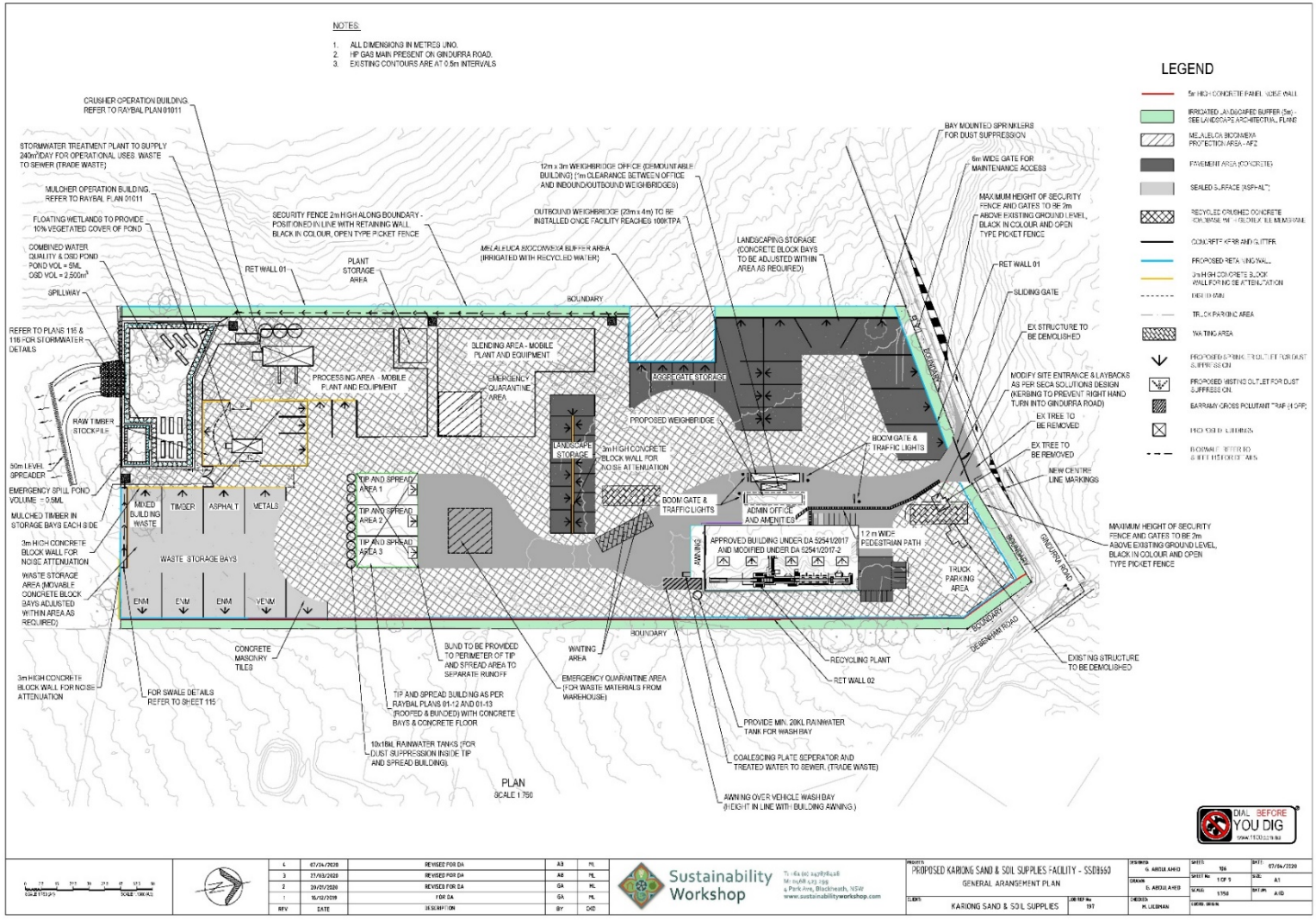
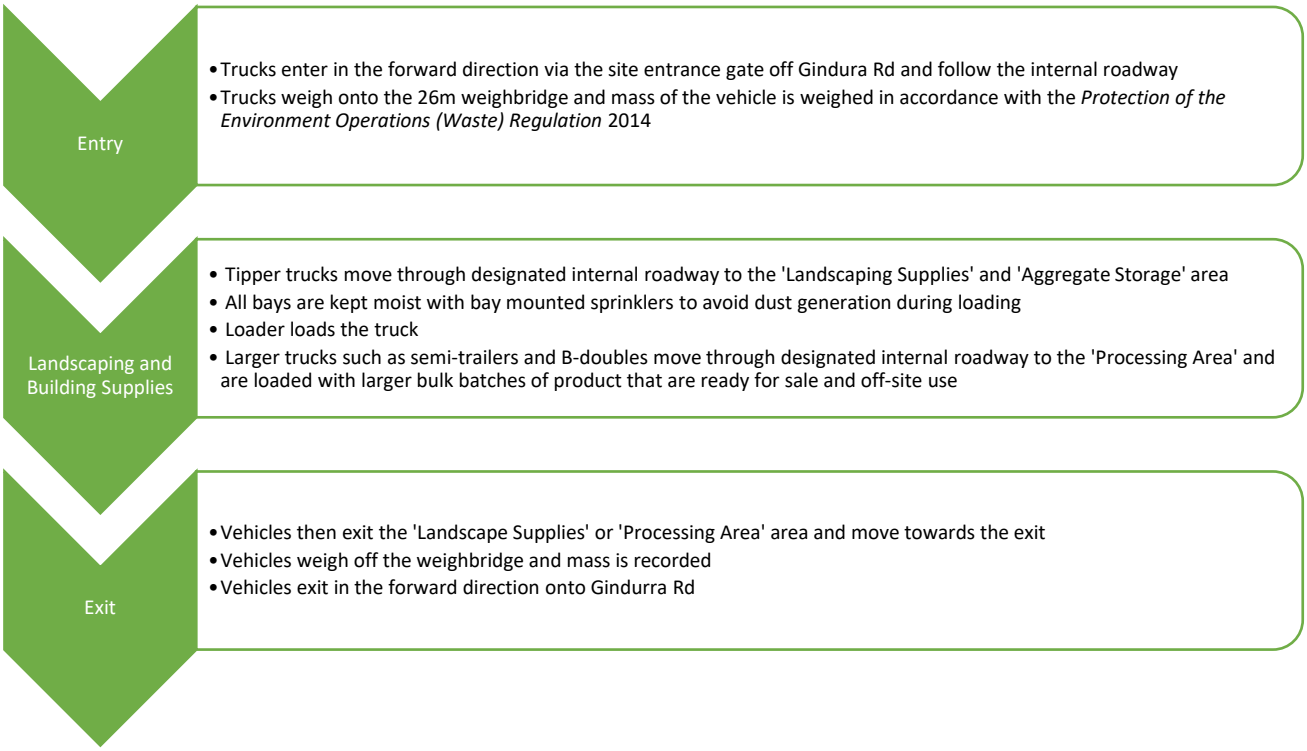


Figure 2.2. Process flow chart for recycling operations as exhibited.

Figure 2.3. Process flow chart for landscaping and building supplies part of the operation as exhibited.



2.1. Summary of issues identified in exhibited EIS

The sections below provide a brief summary of the identified issues relating to the project, as exhibited. It should be noted that the descriptions relate to the project as proposed. The changes made as a result of consultation and comments received during the exhibition period are discussed in Section 5.

2.1.1. Waste Management in exhibited EIS

The waste generated during the demolition / construction phase of the project is estimated to be up to 18,090 m^3 of inert material (recycled concrete, rubble, soil), 5 m^3 of scrap metal, 100 m^3 of woody garden organics, 20m^3 mixed building waste and 3 m^3 of municipal solid waste (MSW). Existing concrete stockpiles on site need to be sampled and tested for compliance with the EPA's *Recovered Aggregate Resource Recovery Order* 2014 to confirm the material is acceptable for use in construction works on the site. The metal will be recycled at a scrap metal recycling facility, off-site. The woody garden organics will be shredded to produce mulch, and either used on-site or sold. The MSW will be removed from site and disposed in a licensed landfill.

During the operational phase, up to 200,000 tonnes per annum of waste materials will be received on site for recycling. The majority will be soil or source-separated inert material. Excavated Natural Material will be managed in accordance with *The Excavated Natural Material Order* 2014. Clean, non-treated timber will be mulched to be sold as a landscape product. Concrete and bricks will be crushed to produce aggregate, in accordance with the *Recovered Aggregate Resource Recovery Order* 2014. Mixed building waste will be sorted in an enclosed Secondary Sorting Warehouse, with the recovered paper, plastic, metal etc. sent off-site for recycling. Recovered timber and inert materials will be recycled on-site.

It is estimated that the re-use/recycling rate for the facility will be approximately 95%, with approximately 5,225 tonnes per annum of residual waste being removed for disposal to landfill. The recovered material will be sold as building and landscaping products from the premises.

2.1.2. Water Impacts in exhibited EIS

The main water issues associated with the site are the potential for stormwater contamination from on-site operations and water use for dust suppression. The on-site storm water and erosion control measures will ensure that all storm water is captured and treated on-site. The discharge point for the proposed development is located 400m away from a waterway. The largest potential impacts are the impacts on the health and stability of the bushland downstream of the proposed discharge point rather than off the site.

The site will comply with the requirements of the Blue Book during construction and this will ensure that construction phase sediment impacts are minimised.

During the operational phase, erosion on site will be limited by the use of concrete pavements, asphalt and hardstands, as well as vegetation in non-operational areas. Any sediment carried in the storm water will be captured in grassed swales and gross pollutant traps, then in sediment inlet ponds, followed by storage in an OSD basin. Sediment is to be removed regularly.

To minimise the risk of stormwater contamination, the site has been divided into four stormwater capture zones. The stormwater from each zone is treated to a level appropriate to the risk of the activities within the zone, prior to be discharged into the on-site detention basin. Stormwater from the high-risk area of waste receival can be isolated, if necessary, to allow testing and, if necessary, removal from site for treatment.

The on-site detention storage is proposed as part of the storage pond in the south-western corner of the site as shown on the Stormwater Management Plan included in Appendix E: Site, civil design and stormwater plans. The OSD basin will have a storage capacity of 5ML, with a headspace of up to 1.5m to allow for capture of firefighting water, if required. The pond is to be an open water body with steep sides and an access for maintenance. Inclusion of floating treatment wetlands in the pond will further attenuate pollutants in a biological process to see metals, suspended solids and nutrients removed. Overflow from the OSD basin is discharged from the site onto adjoining bushland located on the lower 4ha of the lot via a 50m wide level spreader, which will minimise erosion at the point of discharge. Volumes of runoff and runoff frequency are reduced back to near pre-European levels reducing potential impacts and protecting the bushland from any damages at the point of discharge.

Stormwater captured in the OSD basin will be treated in a membrane filtration plant and re-used for dust suppression on the stockpiles. Water captured in rainwater tanks will be used in dust misting systems, and for irrigating vegetation during extended dry periods. MUSIC water quality model results clearly show the site will exceed its best practice target and deliver water quality that is better than what is currently discharged from the site.

The high-risk part of the site is that part that contains the waste storage area and the timber processing area. This is the part of the site which affords the best opportunity to intervene to limit unusually high pollutant loads. If a potential water quality problem is going to occur on the site it is most likely to occur in this area as it stores unprocessed materials that may escape the rigorous tip and spread screening and rejection process. In the high-risk area continuous 24/7 real time water quality and flow monitoring will occur. In addition to the 5 ML water quality pond, an emergency spill pond of 500 m^3 volume will be provided. This will enable up to 60 mm of runoff to be contained in the spill pond from the high-risk catchment. Emergency spill prevention controls would include watertight penstocks which would prevent stormwater containing any spilled material from leaving the site.

A Baseline Groundwater Investigation found that the groundwater was generally fresh (low salinity levels and moderately to highly acidic), which is considered to be consistent with local background groundwater conditions, and that there were no signs of obvious contamination. Groundwater will be protected through the operational areas being either sealed hardstand or through the use of a waterproof membrane layer under areas covered in compacted crushed concrete. A groundwater monitoring and management plan will be implemented once the site is operational.

The site is connected to the town sewerage system. Wastewater from the water recycling treatment unit will be discharged to sewer as trade waste (subject to trade waste approval). A covered vehicle wash bay will use a coalescing plate separator to firstly treat dirty water (separating oils and grease) and then to discharge this water to trade waste.

2.1.3. Soils and Contamination in exhibited EIS

A site investigation was conducted that included a review of site history, site inspection and soil sampling.

The information obtained from the review of available site history materials and site inspection identified three (3) potential Areas of Environmental Concern (AEC):

1. AEC 1 - Fill Materials of Unknown Origin - Fill materials and natural soils within the site were tested for a range of potential contaminants of concern. The samples tested reported results below the adopted criteria for the proposed development excluding 20-8613/TP3 - 0.5m, which reported a zinc concentration of 575 mg/kg which slightly exceeded the adopted ecological investigation levels. Results from three neighbouring test pits (<20m away) and all other test pits from across the site were analysed to be below the adopted criteria. The Zinc result for this sample appears to be an outlier and is considerably lower than Health Investigation Levels. Therefore, no significant risk of chemical contamination is expected across the site.
2. AEC 2 - Asbestos Containing Material - During the sampling, multiple fragments of non-friable asbestos cement (AC) were identified on ground surfaces within the north-eastern section of the site adjacent the buildings as well as in the central section of site.
3. AEC 3 - Hazardous Building Materials - Due to the age of the onsite buildings and structures, it is likely that hazardous building materials including but not limited to asbestos containing materials and lead paint may be present within these structures.

Based on the scope and limitations of the investigation, in consideration of the site observations and sample analytical results, it is considered that the site is unlikely to pose a significant contamination risk with regards to chemical contamination, however ACM was identified on ground surfaces within the north-eastern and central sections of site. A series of recommended mitigation measures will be implemented to reduce the risk at the site.

2.1.4. Air Quality in exhibited EIS

A risk-based assessment of the potential construction phase air quality impacts indicates that the implementation of a range of mitigation measures would be required to ensure that the risks (both health and amenity) to the surrounding community would be low or not significant.

The dispersion model predictions associated with the operational phase of the project indicate that the proposed operations can be performed without additional exceedances of the air quality criteria at any residential or non-residential receptor location surrounding the project site.

A range of emissions control measures would be implemented as part of the project operation, including; enclosing dust-generating operations, use of water misting systems on stockpiles and in buildings, and the use of a water cart

around the paved areas and roads. The air quality mitigation measures are discussed in detail in the main body of the report and in the Air Quality Impact Assessment report. It is considered that the measures adopted represent best practice dust control. The measures which are adopted have been demonstrated to ensure that the environmental objectives are achieved.

The updated air quality modelling also assessed the potential for release of silica dust. Worst case scenario modelling has been done. With the addition of a background concentration of 0.7 $\mu g \cdot m^{-3}$, the maximum respirable crystalline silica concentration is less than one third of the Victorian EPA and the California EPA Office for Environmental Health Hazard Assessment annual average criterion of 3 $\mu g \cdot m^{-3}$. Results clearly indicate that the project will not negatively impact on the health of the community, even at the closest residential receptor.

It is further recommended that a campaign of fence-line air quality monitoring is performed to provide the EPA with assurance that the site can be operated with the best practice measures outlined in the report and without giving rise to unacceptable air quality impacts.

2.1.5. Transport and Traffic in exhibited EIS

The level of operation, by 2025, is estimated to generate up to 164 vehicle trips per day consisting of staff operational vehicles, 12 tonne tippers, 32 tonne truck and dog or semis, and 40 tonne B-Doubles. The peak hour movements were calculated based on the operation of a similar development, with a review of the typical movements across a day for this type of facility showing that peak truck movements for the site do not coincide with the road network peak periods. An allowance for 17 vehicles in the AM peak and 9 vehicles in the PM peak has been made based on the data provided. It is noted that the road network between Wisemans Ferry Road and 90 Gindurra Road is an approved B-Double route by the National Heavy Vehicle Regulator.

The site operator is anticipating that 25% of materials entering the site will come from Sydney while the remainder will be sourced locally on the Central Coast. It is expected that 100% of the products leaving the site will be used in the local area. These will be bulk loads transported in the various heavy vehicle classes listed above. There will be no sales direct to the public.

The existing road network and major intersections are currently operating at a good level of service with spare capacity and the traffic generated by the proposed development will be distributed to the road network over an 8 hour working day. The additional traffic is expected to have only a minor impact on the LoS of each of these roads and they will still be operating within their existing capacity.

From the route nominated, it is also clear that these additional trips will not have any significant impact on the operational performance of the intersections at Central Coast Highway / Kangoo Road. The intersections of the Central Coast Highway / Wisemans Ferry Road and Wisemans Ferry Road / Gindurra Road have been assessed and as each of these intersections is currently operating at acceptable levels of service with sufficient spare capacity to cater for the additional traffic generated by this proposed development the impact on the future development is acceptable.

The existing access has been reviewed and is to be relocated 14 metres west in accordance with Council's recommendation to satisfy sight distance. A concrete kerb is recommended on the exit to the site to ensure vehicles only exit to the left on Gindurra Road and do not proceed into the rural and residential areas to the east. A "no right turn" sign will also be installed at the exit to the site.

To facilitate the right turn movement into the site it is recommended that a right turn lane into the site be installed on Gindurra Road. The right turn lane shall provide sufficient storage for two B-Doubles (60 metres) with "No Stopping" signs installed. Management of vehicles internal to the site through the use of queuing/waiting areas, traffic lights and boom gates to control access to the weighbridge is described.

2.1.6. Noise and Vibration in exhibited EIS

A noise and vibration assessment, including noise modelling, was conducted for the proposed development. The assessment found that the predicted noise emissions from the site to the surrounding environment are low. The proposed development satisfies the Project Noise Trigger Levels (PNTLs) of the NSW Noise Policy for Industry (NPI) of the NSW Environment Protection Authority during all the time periods, providing the following noise mitigation measures are included:

- 5m high noise barriers along the eastern site boundary;
- 3m high noise barriers inside the site – one adjacent to the processing zone and another two adjacent to the landscaping storage zone and tip and spread waste inspection area;
- Processing building façade construction to provide a minimum airborne sound insulation performance of 35 dB Rw. This requirement should be reviewed and confirmed during detailed design;
- Processing building to have all doors and openings completely closed during processing activities; and
- Processing building mechanical equipment (AC units etc.) should have a maximum aggregate sound power level of 80 dB L_{WA}. This requirement should be reviewed and confirmed during detailed design.

Additional noise mitigation measures have been considered in the assessment in response to agency and community consultation. These include:

- Enclosure of the tipping and spreading bays to reduce noise during the unloading process;
- Enclosure of the crushing/grinding operation to reduce noise generation during processing; and
- Enclosure of the mulching operation to reduce noise generation during processing.

The sleep disturbance impacts from the operational noise events generated by the site were investigated in this assessment. There proposed development satisfies the sleep disturbance trigger levels at all nearby sensitive receivers.

The existing traffic noise levels on the nearby affected roads already likely exceed the RNP criteria. Therefore, all new traffic noise increases must satisfy the RNP 2 dB increase criteria. The noise assessment found that the proposed development generates negligible additional traffic noise. The Road Noise Policy (RNP) criteria are satisfied as a result.

The construction noise impacts have been assessed in accordance with the NSW interim Construction Noise Guidelines (ICNG). During standard construction hours, exceedances of the NMLs of up to 12 dB are predicted at the closest residential receivers on Acacia Road and Debenhams Road South. No receivers were found to be "highly noise affected" per the ICNG. Standard noise mitigation measures have been recommended for the construction phase. In addition, the operational noise walls along the eastern boundary should be constructed as early as practicable to reduce construction noise impacts for the remainder of the construction period.

The noise and vibration impact assessment also recommended that construction noise monitoring is undertaken for the duration of the construction period with bi-monthly reporting of construction noise levels. This monitoring should be undertaken at the worst-affected receiver during construction, with the assessment identified as 242 Debenham Rd South.

Construction traffic noise levels must satisfy the RNP 2 dB increase criteria. The assessment shows that the construction traffic generates negligible additional traffic noise. The NSW Road Noise Policy (RNP) criteria are satisfied as a result.

The offset distances (in all directions) between the vibrationally intensive equipment and any sensitive receivers is large (> 300 m). The potential for vibration impacts due to the construction or operation of the development are effectively nil. All vibration criteria with respect to cosmetic damage to buildings and human comfort impacts will be satisfied as a result.

The study concluded that the proposed materials processing facility is a complying development with respect to noise and vibration impacts and is, therefore, suitable for construction and operation.

2.1.7. Flora and Fauna in exhibited EIS

Biodiversity consultants, Narla Environmental, conducted site assessments over multiple days in 2018 and 2019. The ecologists determined that a large portion of the development area had been historically cleared and modified and contained large old stockpiles of a range of materials including fill, large slabs of concrete, polystyrene, corrugated iron and conglomerate rocks. Large infestations of weeds and exotic pasture grasses had taken over much of the centre of the site, on and surrounding old stockpiles. Native vegetation was restricted mainly to the western and southern boundaries of the development area, in which vegetation was derived from three vegetation communities classified according to Plant Community Types (PCTs), including:

- PCT 1642: Scribbly Gum - Red Bloodwood - Old Man Banksia heathy woodland of southern Central Coast;
- PCT 1643: Red Bloodwood - Smooth-barked Apple - Scribbly Gum - Old Man Banksia heathy woodland on sandstone ranges of the Central Coast; and
- PCT 1579: Smooth-barked Apple - Turpentine - Blackbutt open forest on ranges of the Central Coast;

Four (4) native vegetation zones were identified based on the PCT classification above and an assessment on condition consistent with the requirements of the FBA (OEH 2014b):

- Zone 1: PCT 1642 – Low Condition;
- Zone 2: PCT 1642 – Moderate to Good Condition;
- Zone 3: PCT 1579 – Moderate to Good Condition; and
- Zone 4: PCT 1643 – Moderate to Good Condition.

A further two (2) zones that constituted non-native vegetation and were not assigned a PCT were classified as 'Cleared' and 'Weeds and Exotics'.

Eight (8) plots and transects were established within the development area to best sample the natural variation of the vegetation across the development area. Plots were randomly stratified to attain best coverage across the development area. The current and future site value scores for the vegetation zones were then assessed and calculated based on the data from the eight plots and transects collected on site and entered into the BCC. The current site value scores range between 25.17 / 100 to 83.51 / 100. For areas of complete clearing the future site value score is 0 / 100.

The BCC and Bionet identified a list of 17 species credit fauna species that were subject to targeted survey within the development area. Targeted survey was conducted using remote camera trapping, bat acoustic monitors, spotlighting, fauna call playback, and opportunistic sightings.

Eastern Pygmy Possum (*Cercartetus nanus*) was confirmed on the subject site through targeted surveys. The Eastern Pygmy Possum is a Species Credit species. No other Species Credit fauna species were identified within the Subject Site.

A total of 32 threatened 'species credit' flora species were modelled as having potential to occur, or historically recorded within 10km of the subject site. Such species were surveyed utilising the parallel field transverse method as recommended by the NSW Guide to Surveying Threatened Plants. The survey periods aligned with the flowering period (when the species are most conspicuous) of most flora species, thereby having the greatest chance of displaying key diagnostic features.

During targeted surveys, the ecologists identified the presence of one threatened flora species within the subject site, *Melaleuca biconvexa*, which is listed as Vulnerable under the TSC Act and EPBC Act. This species is a Species Credit species. Fifteen (15) individual specimens were recorded on the subject site. The occurrence of *Melaleuca biconvexa* was restricted to the western boundary of the subject site, confined to a small patch of mature individuals with evidence of regeneration. This small patch of *Melaleuca biconvexa* will be excluded from the development, including a 10m vegetation buffer surrounding the population. No other threatened flora species were identified within the subject site during site inspection.

Specific ameliorative measures have been incorporated into the site design and operations to prevent any direct or indirect impacts to this population of *Melaleuca biconvexa*. This will involve treated water being used to irrigate land draining to this plant community aiming to supply the same average annual volume of water that would have flowed to this community under predevelopment conditions.

The proposed development is restricted to the northern sections of 90 Gindurra Road, Somersby NSW (Lot 4 / DP 227279). Total impacts to native vegetation is 3.11 ha, with the remainder of the development area consisting of already cleared land or dominated by exotic vegetation. This includes the clearing of:

- 1.4 ha within Zone 1: PCT 1642 – Low Condition;
- 0.78 ha within Zone 2: PCT 1642 – Moderate to Good Condition;
- 0.30 ha within Zone 3: PCT 1579 – Moderate to Good Condition; and
- 0.63 ha within Zone 4: PCT 1643 – Moderate to Good Condition.

Impacts to Eastern Pygmy-possum are anticipated within Vegetation Zone 2 and Vegetation Zone 4. A total impact of 1.41 ha to Eastern Pygmy-possum has been calculated.

In total, 103 ecosystem credit and 28 Eastern Pygmy-Possum species credits must be retired in order to offset the impacts of the proposed development.

Although complete clearing of native vegetation has been used to calculate credits within the development area, several avoidance measures have been implemented during project design. Several mitigation measures will also be implemented during development to reduce impacts as much as possible.

The proponent will now explore the generation of credits from an on-site Biodiversity Stewardship site, before considering other options such as the purchase of credits from the market or payment to the Biodiversity Conservation Trust.

2.1.8. Fire Safety in exhibited EIS

A Fire Safety Study was conducted by fire consultants, ACOR, for the proposed development. The fire safety study investigated proposed combustible materials to be stored at the site and the potential impacts of thermal radiation, the risk mitigation strategies and the recommendations for fire detection and protection.

At maximum capacity, the facility will store on-site approximately 3,907 tonnes of combustible materials at any one time comprising six discrete locations. The fire load associated with these materials is equivalent to approximately 60,525 gigajoules of energy.

The study identified that the open stockpiles of combustible materials stored in the yard (waste storage bays, processing area and landscape storage bays) are unlikely to cause an escalation of the fire event by direct thermal radiation. However, the risk from spread of burning embers could result in escalation. Consequently, methods to detect likely fire conditions and take preventative actions have been identified.

The Secondary Sorting Warehouse has several stockpiles of combustible (recovered) materials with proximity to each other. A fire in any of the SSW stockpiles is likely to spread to each of the other stockpiles, meaning that the worst-case heat release rate (49MW) in the Secondary Sorting Warehouse is much lower than for the open yard stockpiles (96 – 3,817MW).

Diesel fuel and lube oil, stored in a bunded compound in the southwest corner of the Secondary Sorting Warehouse, are unlikely to cause escalation to other combustible materials within the Secondary Sorting Warehouse, with fully developed burn time lasting 1.75 hours at 75kW/m^2 thermal radiation. This level of flux will cause damage to the zincalume cladding but should not result in combustion initiation in the actual Secondary Sorting Warehouse infrastructure.

LPG cylinders stored at the northern end of the SSW will be impacted by thermal radiation from a fire in the process area at a thermal radiation flux less than 4.7kW/m^2, however, this is unlikely to result in gas venting, assuming that firefighting water can applied within 20 minutes of a fire commencing.

An LPG cylinder jet fire is unlikely to result in injury at distances beyond 10m from source.

Flame heights in the SSW will extend beyond the three (3) metre high, concrete, tilt-up panels and cause thermal stress failure of the zincalume cladding. Thermal radiation will then be able spread into the yard space closest to the heat source.

Similarly, the yard stockpiles will extend to one metre below the top of the concrete block walls, allowing flame height to extend above the masonry heat barrier. The only thermal radiation that is likely to escape from the yard originates in the waste storage bay holding only timber. The distance of this bay from the eastern boundary of the KSSS property (44m) and the presence of the five (5) metre high noise barrier allows a thermal shadow to prevent radiation within a minimum of 54m from the source, to the east and 95 metres from the source to the west. The furthest extent of thermal radiation from source is 25 metres.

The consequences of a fire event may result in:

- Injurious thermal radiation (30 seconds exposure) originating in the Secondary Sorting Warehouse will be blocked (shadowed) to an average distance of 13m beyond the site boundary (at ground level) to the east, by the five (5) metre high noise barriers, effectively negating impacts adjacent to the Secondary Sorting Warehouse;
- Injurious thermal radiation (after 30 seconds exposure) originating in the processing area will not extend beyond the boundary of the KSSS premises;
- Injurious thermal radiation (after 30 seconds exposure) originating in the central landscape storages will not extend beyond the boundary of the KSSS premises;
- Injurious thermal radiation (after 30 seconds exposure) originating in the waste storage bays will not extend beyond the boundary of the KSSS premises; and
- An LPG vapour cloud explosion, involving the contents of two 18kg LPG cylinders should not cause injury beyond the western and northern boundaries of the site. On the eastern boundary, injurious overpressure

with up to a 10 per cent probability of injury will extend approximately 15m into the adjoining property adjacent to the Secondary Sorting Warehouse.

An LPG vapour cloud explosion, involving the contents of two 18kg LPG cylinders (one LPG cylinder will cause the two other LPG cylinders to explode generating a maximum overpressure from two LPG cylinders) should not cause injury beyond the western and northern boundaries of the site. On the eastern boundary, injurious overpressure with up to a 10 per cent probability of injury will extend approximately 15m into the adjoining property.

The fire study indicates that three additional fire hydrants and four fire hose reels will need to be installed adjacent to the outside storage areas.

Firewater generated during a fire event will either be contained within the bunded compound of the Secondary Sorting Warehouse or will flow though dish and /or swale drains to the on-site detention (OSD) pond. Contaminated firewater captured in the OSD will be analysed prior to being discharged or removed from site by a licensed third party waste contractor.

The estimated firewater application for a four-hour duration fire in the Secondary Sorting Warehouse is approximately 288kL of which 50% is assumed to evaporate (144kL contaminated firewater, equivalent to a depth of 68mm over the Secondary Sorting Warehouse floor area. Consequently, a 70mm high bund wall will be installed internally, at each opening to the Secondary Sorting Warehouse.

The estimated firewater application for a four-hour fire in one of the processing area finished mulch bays is approximately 288kL of which 50% is assumed to evaporate (144kL contaminated firewater, equivalent to 2.9% of the OSD pond ullage capacity).

ACOR has modelled outcomes that are consistent with low consequence and low probability and considers that the development can be managed to provide a risk outcome that is acceptable to persons, property and the environment.

2.1.9. Bushfire Hazard Assessment

The proposed development has been assessed against the potential threat of bushfire. It is noted that the proposed works relate to the construction of four unenclosed, non-combustible and non-habitable structures (mulcher operation building, crusher operation building, aggregate storage bay, landscape storage bay, waste receival bay and waste storage bay). The proposed development is considered to be “Other Development” in the context of PBP (2019).

The Class 7 development is not required to comply with AS3959 (2018) with regards to the construction of a building in a bushfire prone area. The general fire safety construction provisions of the NCC (2020) are taken as acceptable solutions, but the aims and objectives of PBP (2019) apply in relation to other matters such as access, water and services, emergency planning and landscaping/vegetation management. All proposed built structures are non-combustible and suitably located. In the event of a bushfire it is our view that the proposed development will not influence bushfire behaviour and will not increase bushfire risk for any adjoining properties.

There are no specific asset protection zones required for this type of development. The RFS have requested that the entire development area be managed as an Inner APZ. In addition to managing the development area as an Inner APZ, all storage bays are bounded by concrete retaining walls that will prevent potential fire spreading from the subject site onto adjoining bush land and vice versa.

Unobstructed vehicular access is provided to all key areas within the development site and unobstructed pedestrian access is provided to the rear of the site consistent with the RFS recommendations.

All proposed works are to be constructed from non-combustible materials. The nominated asset protection zones are deemed to be adequate. Site access, including access via the public road system is suitable for emergency response vehicles. The development can comply with *Planning for Bushfire Protection* (2019) with regards to the provision of water, subject to certification of services by a hydraulic engineer. The requirements for electricity and gas (if applicable) can also be complied with. A bushfire emergency evacuation plan has been prepared such that employees and visitors are informed about suitable egress routes away from the site in the event of bushfire. Compliance with the NCC (2016) via compliance with AS3959, the *Australian Standard for the Construction of Buildings in Bushfire Prone Areas* can also be achieved.

2.1.10. Heritage in exhibited EIS

1.1.1.1 Historical heritage

The assessment has identified that the study area likely contains the archaeological remains of the 1920s cottage and associated buildings in the north eastern section. The significance assessment has identified that these archaeological remains do not contain any significant fabric or research potential and therefore does not require any management. The southern border of the study area is adjacent to a state listed conservation area, Mount Penang Parklands and as such required an assessment of possible impacts resulting from the proposed development. The works are confined to the northern section of the study area with no plans to use the southern section. The significance of the Mount Penang Parklands includes the visual relationship of the conservation area with its surrounds. Therefore, the southern portion of the study area should remain undeveloped to minimise any visual impacts. Built infrastructure within the study area should not exceed the height of extant buildings. It should also be mentioned that cumulative impacts of any future developments within the surrounds of Mount Penang Parklands will contribute the loss of the Parklands significance and should therefore be managed appropriately.

1.1.1.2 Aboriginal heritage

As part of the Aboriginal archaeological assessment, background research was undertaken for the study area, including a search of the Aboriginal Heritage Information Management System (AHIMS) database and a review of regional and local archaeological survey reports. There are 36 Aboriginal cultural heritage sites registered with the Aboriginal AHIMS register in the vicinity of the study area, however there are no recorded sites located within the study area. Background research has identified that previous surveys have identified an engraving site, SIE 26, as either being located within the study area (J. C. Lough & Associates 1981) or 50m to the west of the study area (AMBS 2002). SIE 26 has not been recorded on the AHIMS register. Biosis has checked the coordinates for this site, and through mapping has been able to confirm that this site is not located within the study area and is located approximately 120 metres to the west of the study area. The location of this site was also checked during the field investigation and was unable to be identified.

An archaeological survey of the study area was undertaken on the 2 February 2018, with two representatives of the Darkinjung Local Aboriginal Land Council. The field investigation was conducted in accordance with requirements 5 to 10 of the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW 'the code' (DECCW 2010). The field investigation involved the recording of the disturbances within the study area and focused on the identification of areas that may possess potential for Aboriginal archaeological sites and objects. The exposure and ground surface visibility (GSV) within the study area was also noted. Areas of exposure were investigated in order to identify any Aboriginal objects/sites that might be present upon the surface. The study area was observed to be highly disturbed by human activity within the area. Poor levels of ground surface visibly and the lack of appropriate sandstone exposures and overhangs suitable for rock engravings, shelters and grinding grooves within the area also contributed to the low potential for identifying these dominant site types within the study area.

A supplementary field investigation of the study area was conducted on Wednesday 11 September 2019 by representatives from Biosis, Awabakal & Guringai Pty Ltd and a Guringai Elder. No previously unrecorded Aboriginal cultural heritage sites were identified during the field investigation, and no areas of (archaeological) sensitivity were identified. Due to the high levels of disturbance identified in the northern section and the lack of sandstone exposures and overhangs suitable for rock, engravings, shelters and grinding grooves, there is allow potential for Aboriginal sites to be present within the study area.

The Aboriginal community was consulted regarding the heritage management of the project throughout its lifespan. Consultation has been undertaken as per the process outlined in the DECCW document, *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (consultation requirements). The appropriate government bodies were notified and advertisements placed in the Central Coast Express newspaper (27 June 2019) which resulted in the following Aboriginal organisations registering their interest:

- Darkinjung Local Aboriginal Land Council;
- Widescope Indigenous Group;
- Corroborree Aboriginal Corporation;
- Awabakal & Guringai Pty Ltd;
- A1 Indigenous Services; and
- Private citizen.

A search conducted by the Office of the Registrar, *Aboriginal Land Rights Act* 1983 listed no Aboriginal Owners with land within the study area. A search conducted by the National Native Title Tribunal (NNTT) listed no Registered Native Title Claims, Unregistered Claimant Applications or Registered Indigenous Land Use Agreements within the study area, as the area is freehold and this extinguishes Native Title.

Upon registration, the Aboriginal parties were invited to provide their knowledge on the study area and to provide feedback on the provided Methodology document supplied to all Registered Aboriginal Parties (RAPs) on 25 July 2019. Comments received supported the proposed methodology. One group requested an additional site survey, which was undertaken. No responses were received commenting on the cultural significance of the study area therefore the outcome of the consultation process with the RAPs so far is that the study area currently has an unknown level of cultural significance. The results of the consultation process are included in the Aboriginal Cultural Heritage Assessment report.

2.1.11. Visual impacts in exhibited EIS

The existing landscape character is a mix of industrial development, rural properties and bushland ridgelines and corridors. The scale of the built form in the proposal is small compared to existing industrial developments in the Somersby Industrial Area and is more in keeping with adjacent rural residential developments.

The implemented design principles of this report seek to avoid, reduce and where possible, remedy adverse effects on the environment arising from the proposed development. Implementation of the mitigation measures, which propose a combination of primary mitigation measures (site planning principles) and secondary measures (landscaping, street trees, colour and material selections) are proposed to reduce localised negative impacts.

The 5m noise barrier along the eastern boundary of the site will reduce to 2m in height in the north-eastern corner, to reduce the visual impact from Gindurra Rd. The wall will be screened by plantings, include native trees, shrubs and a native vine.

With the implementation of the recommended mitigation measures, the proposed development could be undertaken whilst maintaining the core landscape character of the area and have a negligible visual impact on the surrounding visual landscape.

2.1.12. Chemicals and hazards in exhibited EIS

An assessment was conducted of the risk posed by the management and handling of chemicals during the construction and operational phases of the project. The assessment found that the risk of harm due to chemicals spills and leaks during the construction and operational phases of the project is deemed low. Containment measures and clean-up of the incident will address the negligible harm to environment, consistent with existing pollution incident response procedures in place at the site.

A range of mitigation measures are proposed to minimise impacts from chemicals during the different stages of the project. These measures will help mitigate against the impacts of a chemical spill or fire, thereby reducing the potential for harm to receiving waterways.

3. Analysis of submissions

A total of 909 submissions from private individuals and organisations were received during the public exhibition period. Of the public submissions, 859 supported the proposal (94.5%), 46 objected to the proposal (5.1%) and 4 provided comments. A further 13 submissions from government agencies were received.

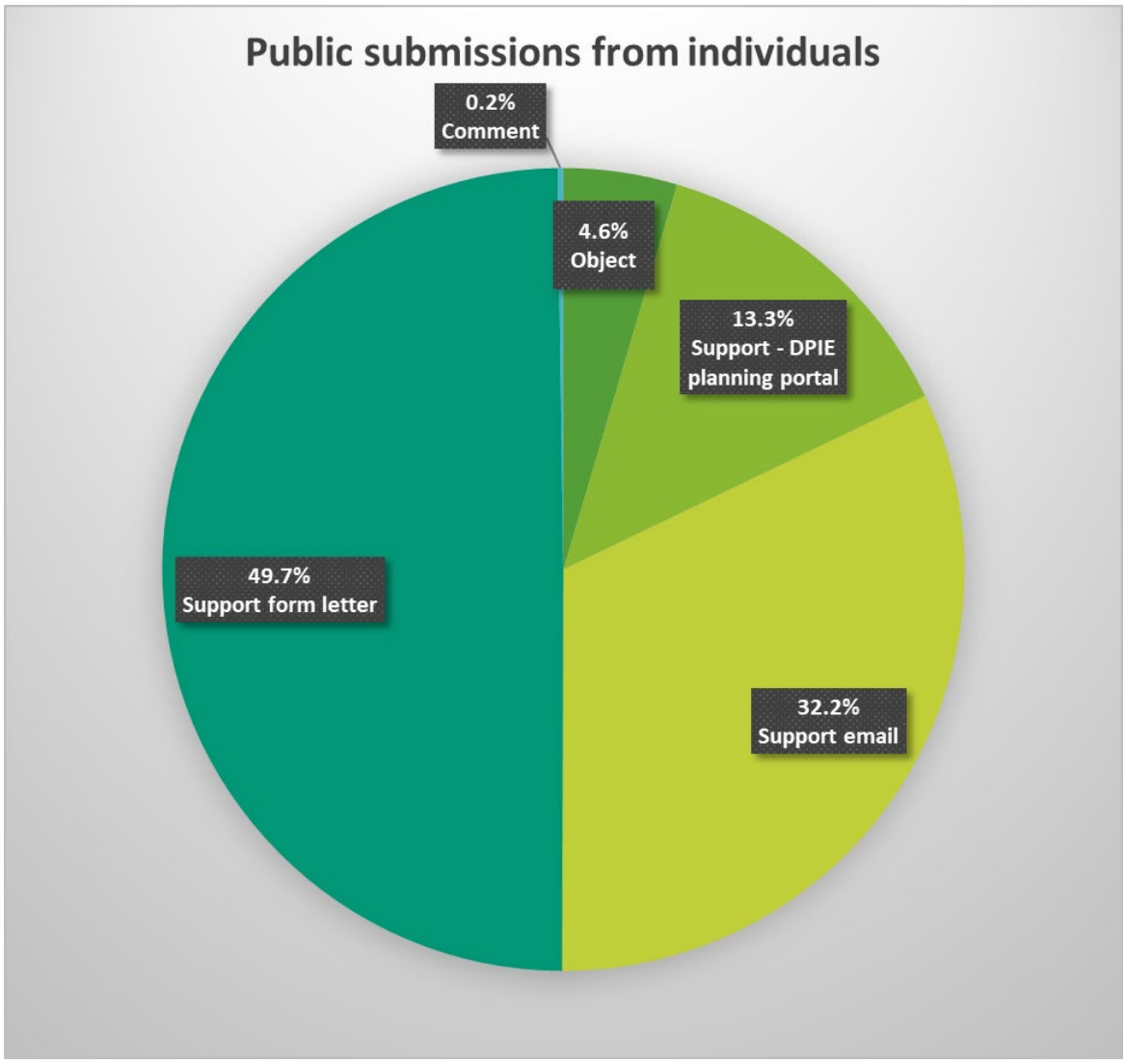
The individual submissions can be found on the DPIE website: https://www.planningportal.nsw.gov.au/major-projects/project/24101.

3.1. Statistical data about submissions

3.1.1. Individual public submissions

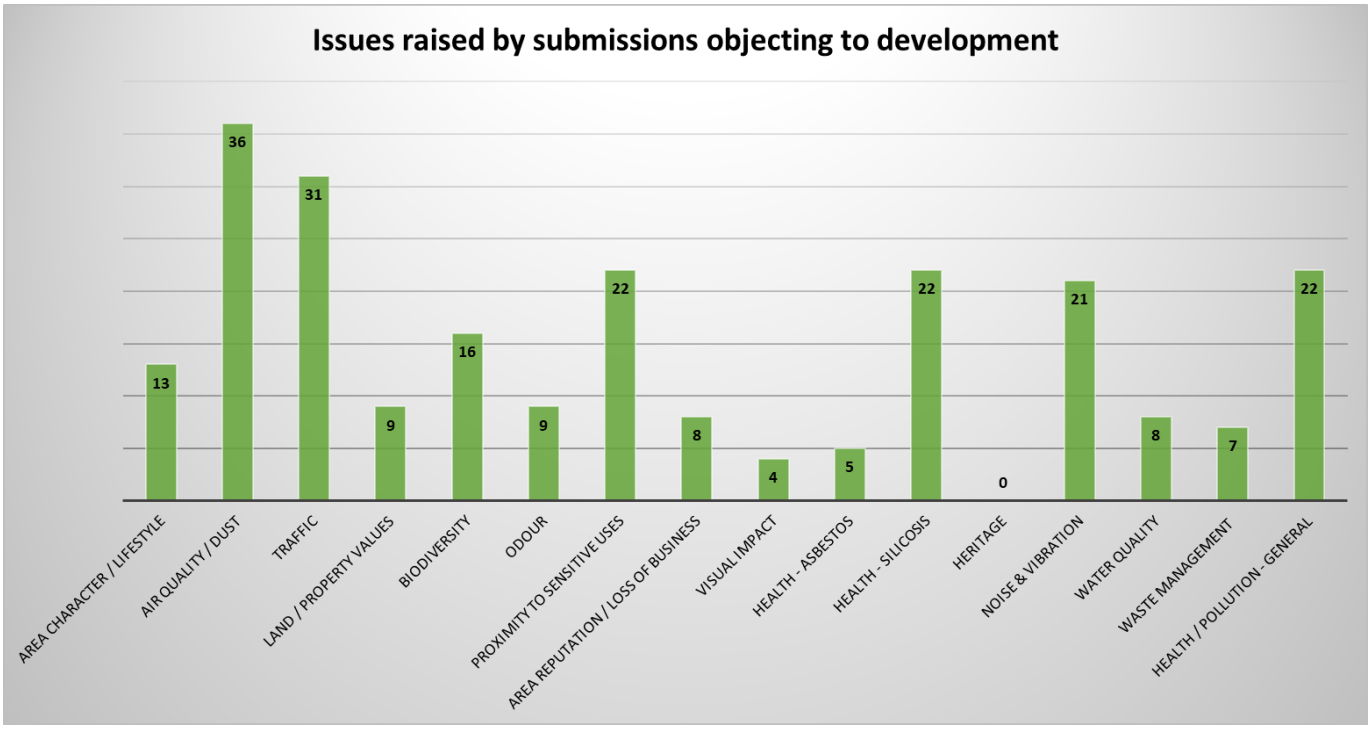
Data provided by DPIE indicates that there were 895 (non-duplicate) submissions from private individuals. Of these, 41 objected (4.6% of submissions by private individuals) to the proposal and 852 supported the proposal (95.2% of submissions by private individuals). Two private individuals provided comments only via the DPIE planning portal. The public exhibition period demonstrated very strong community support for the upgraded proposal.

Figure 3.1. Breakdown of public submissions from individuals by type.



The concerns raised covered a wide range of environmental issues. These are summarised in Figure 3.2.

Figure 3.2. Issues raised in the public submissions from individuals.



The main areas of concern were:

- Air quality – Concerns were raised about dust from the facility, and whether the dust would be harmful to human health;
- Traffic – The increase in heavy traffic on the roads was a concern, both for safety and noise reasons;
- Impact on the character of the area – Concerns were raised that the development was not consistent with the character of the area, and that this would impact on both lifestyles of residents and businesses that rely on tourism. There were also concerns that other waste facilities would set up in the area, further changing the character of the area.

Loss of fauna habitat as a result of vegetation clearing and water quality issues were also raised, but by only a few respondents.

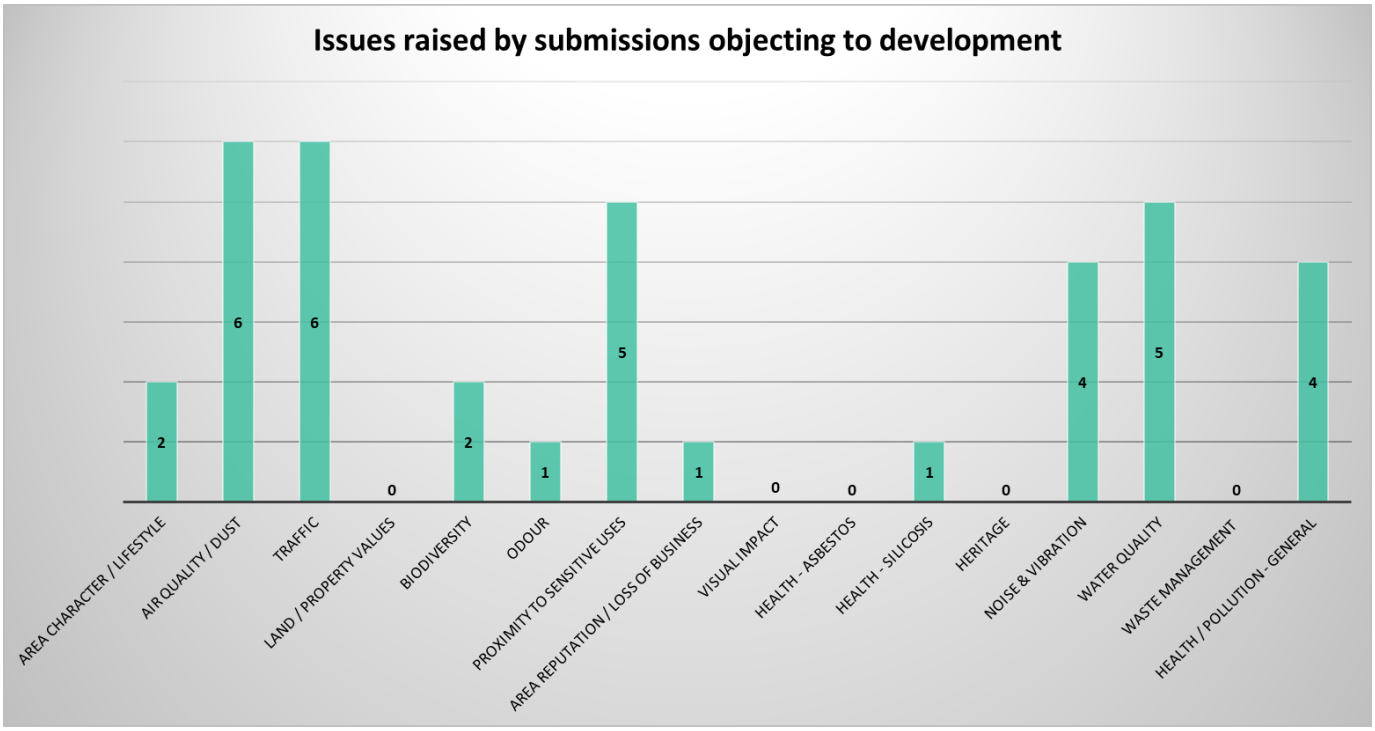
While many of the concerns raised were based on a misunderstanding of the project, there were a number of legitimate issues of concern that need to be addressed to provide the local community a greater peace of mind about the development. Kariong Sand and Soil Supplies has considered the submissions received and made further improvements to the mitigation measures deployed at the facility. These are discussed in detail in following sections.

3.1.2. Submissions by private organisations

A total of 15 submissions were received as an "organisation" submission, including one by the Central Coast Public Health Unit and two from one organisation. The two submissions from the single community group were combined for the purposes of this analysis. Of the private organisations that made submissions, 5 objected to the proposal and 7 supported the proposal. Their comments were noted. Two organisations, including the Central Coast Public Health Unit, provided comments. Their comments were noted.

Figure 3.3 provides an overview of the issues raised by the private organisations in their submissions. The issues of concern are mainly traffic, air quality (specifically dust) and impact on local water quality. A number of the submissions questioned whether the development was consistent with Council's published intention for the industrial park, which they understood to be for small, "clean" businesses only. A number raised the bad experiences that they had with other waste facilities.

Figure 3.3. Summary of issues raised by private organisations.



3.1.3. Submissions by government agencies

The following government bodies provided comments on the proposed development through DPIE:

1. Central Coast Council;
2. Department of Planning, Industry and Environment;
3. Department of Planning, Industry and Environment – Biodiversity and Conservation Division;
4. Department of Planning, Industry and Environment – Crown Lands;
5. Department of Planning, Industry and Environment – Water Group;
6. Environment Protection Authority (2 submissions);
7. Fire and Rescue NSW;
8. Transport for NSW;
9. Water NSW;
10. Heritage NSW;
11. NSW Rural Fire Service;
12. NSW Health; and
13. Department of Primary Industries – Agriculture.

Most comments related to water treatment and air quality assessment for the site. However, traffic, waste management, noise, and biodiversity issues were also raised.

All comments were considered and addressed in the revision of the development design and the EIS. Section 5 provides details of the changes to the project as a result of the comments received and further input from the additional studies conducted.

4. Action taken during and after public exhibition

4.1. Engagement activities

4.1.1. Engagement with government agencies

The primary source of feedback on the proposed project was via the written comments received after the EIS exhibition. In addition, clarification on comments by EPA were sought directly with the DPIE to ensure the design modifications adequately addressed the comments on the proposal.

4.1.2. Community engagement

A comprehensive community engagement and awareness program was undertaken during the second public exhibition period in September 2020, to increase community knowledge and awareness in relation to the updated project proposal. Activities performed included:

- Production of a fact sheet and Reply Paid card on the upgraded proposal, delivered via post to more than 1,500 residents and businesses in Somersby and Kariong;
- Production of an A3 poster on the project for hosting in local businesses;
- A Zoom meeting was held for members of the Kariong Progress Association between 6.30pm and 7.30pm on Thursday 17th September 2020; and
- Publication of a newsletter story in the Mangrove Mountains & Districts Community News, issued to 3,000 businesses and residents via letterboxes to Mt White, Somersby, Central Mangrove, Mangrove Mountain, Peats Ridge, Calga, Kulnura, Bucketty, Yarramalong, Dooralong and Jilliby areas. Bulk quantities are sent to Spencer, Mooney Mooney, Wyong, Kariong, Laguna, Wollombi and Gosford CBD and Council Offices.

Resources developed to support the community engagement and awareness program during the second public exhibition are given in Appendix 12.

4.2. Further environmental assessment

In response to the comments received from the community and government agencies, further studies were undertaken and additional technical design work for the development was conducted. These included:

- Altered the design of the crusher building and mulcher building to further enclose all operations;
- Updated Fire Safety Report to provide more detail on fire safety systems;
- Additional biodiversity study to include additional field investigations;
- Additional air quality assessment and modelling, including response to a peer review report received from the community;
- Updated Noise and Vibration Impact Assessment report to reflect the upgraded site layout and design and to include a response to a peer review report received from the community;
- Additional traffic assessment and slight re-design of the site entrance, including a response to a peer review report received from the community;
- Additional design features added to the stormwater capture and treatment system;
- Update of the Water Cycle Impact Assessment and Soil and Water Management Plan report, including response to a peer review report received from the community;

- Updated the Waste Management Plan to provide more detail.

A summary of each of the final studies is provided in the sections below. The full copies of the addendum reports are attached to this report (Appendix 1-11).

4.2.1. Crusher building design

The previous crusher building design enclosed the crushing and screening operations, but the input and output material travelled through opens end to the building. The inlet hopper is now fully enclosed, and an extension has been designed to add to the crusher building that will enclose the conveyor belt and material is discharged into enclosed bunkers. Two three-sided concrete bunkers, covered by a canvas roof each, will enclose the material output area. Rubber curtains covering the front of the bunkers will be provided.

A sliding door has been built into the wall around the crusher building to allow the crushing and screening equipment to be removed from the building for maintenance and cleaning.

The new building design is provided in the elevation plans in Appendix 3.

4.2.2. Mulcher building design

The previous mulcher building design enclosed the mulching operations, but the input and output material travelled through opens end to the building. The inlet hopper is now fully enclosed, and an extension has been designed to add to the mulcher building that will enclose the conveyor belt and material is discharged into an enclosed bunker. A three-sided concrete bunker, covered by a canvas roof will enclose the material output area. A rubber curtain covering the front of the bunker will be provided.

A sliding door has been built into the wall to allow the mulching equipment to be removed from the building for maintenance and cleaning.

The new building design is provided in the elevation plans in Appendix 3.

4.2.1. Additional air quality assessment and modelling

Northstar Air Quality Pty Ltd was engaged to perform the original air quality impact assessment for the proposed development. Northstar have conducted additional air quality modelling, using more conservative assumptions, in line with the comments received from government agencies and the peer review consultant. Northstar prepared a supplementary report that addresses in detail each of the comments and issues raised in government agencies' comments, public submissions and the peer review report. The supplementary report is provided at Appendix 5.

4.2.1. Additional traffic assessment and re-design of the site entrance

Seca Solution Pty Ltd was engaged to prepare the original Traffic Impact Assessment. Seca Solution has reviewed the comments and the peer review report, and prepared a detailed response to each comment in a Technical Design Note (see Appendix 7).

The access driveway gate is recessed 26m from Gindurra road, which is sufficient to allow a 26m B-double vehicle to wait on the site, without impacting traffic along Gindurra Rd, if they arrive before the site opens.

Updated traffic surveys and updated traffic modelling were conducted.

4.2.2. Additional biodiversity study to include additional field investigations

Further site surveys were undertaken in response to comments by Central Coast Council. A report addendum has been prepared by the Biodiversity consultant, Narla Pty Ltd, which explains that no further evidence of endangered species were found, and provides detailed responses to the comments on the biodiversity aspects of the project. The Biodiversity report addendum is provided at Appendix 8.

4.2.3. Additional noise modelling to reflect the upgraded site layout and design

Waves Consulting was engaged to conduct the original noise and vibration impact assessment of the proposed development. Waves Consulting has reviewed the comments and the peer review report, and prepared an addendum report (see Appendix 6), which provides a response to each of the comments received and issues raised.

4.2.4. Changes to stormwater treatment

There have been two main changes to the stormwater treatment design:

1. The floating treatment wetland has been removed from the proposal; and
2. The proposed 5,000 m^3 storage pond will be operated with a 5-day trigger to discharge, meaning it will discharge treated water to the environment under controlled conditions once water quality criteria have been achieved to reduce the frequency of predicted uncontrolled discharges.

The Water Cycle Impact Assessment and Soil and Water Management Plan for the second EIS was prepared by The Sustainability Workshop. The Sustainability Workshop has reviewed the comments received and prepared a supplementary report, which addresses all the comments in detail and explains the proposed changes. The supplementary report is provided at Appendix 4.

4.2.5. Updated Fire Safety Report

The Fire Safety Report was updated to reflect the comments received (see Appendix 9). The hydraulics services plan was updated to provide more details about the construction of the hydraulic services and flow rate calculations for the site. A fire services coverage plan is also provided (see Appendix 10).

4.2.6. Updated Waste Management Plan

The Waste Management Plan has been updated to reflect the comments received (see Appendix 11). The main changes relate to more details on the waste receiving and inspection procedure.

5. Changes to the project

As a result of the community feedback, comments from government agencies and results of the additional studies, changes have been made to the project. A number of additional mitigation measures were added to the overall development design.

5.1. Minor errors and discrepancies

The main discrepancy in the second version of the EIS was minor differences in the way the project was described in different sections of the report and in technical consultancy reports. Care has been taken to use the exact same wording, where possible. However, in some instances, slightly different wording is appropriate within the context it is being used.

5.2. Changes to physical layout, construction/operation methodology, technology, etc.

There have been some improvements to the mitigation measures at the site. Changes to the physical design of the site include:

- Enclosing the inlet hopper and outlet conveyors of the crusher building, with aggregate discharged into a fully enclosed storage bunkers to further mitigate against any dust being released;
- Enclosing the inlet hopper and the outlet conveyor of mulcher building, with mulch discharged into a fully enclosed storage bunker to further mitigate against any dust being released;
- Redesign of the overflow mechanism for the OSD basin to be a managed pump-out system that will discharge treated water meeting ANZECC water quality guidelines to the environment under controlled conditions once water quality criteria have been met;
- Removal of the floating wetlands from the OSD basin;
- The entrance gate has been set back from Gindurra Rd to permit a full 26m vehicle to wait at the site entrance without impacting Gindurra Rd traffic.

5.3. Changes to plans and figures

The changes to the plans and figures reflect the changes listed in the section above. Appendix 1 provides copies of the original General Arrangement Plan for before the changes and the final General Arrangement Plan for comparison. The full set of civil plans is provided as an appendix to the revised EIS.

5.4. Changes to impacts

The changes to the predicted impacts are minimal, as the impacts were modelled to be very low, originally. The main change is to the reduction in the predicted overflow from the On-site Detention Basin for captured stormwater. Table 5.1 provides a list of the **additional** mitigation measures to be implemented as a result of feedback received during the consultation period. It should be emphasised that these are in addition to the mitigation measures already planned and recorded in the EIS.

Table 5.1. Summary of additional mitigation measures and changes to impacts.

Impact	Change to mitigation measures after consultation	Original impact	Revised impact
Crusher building	The inlet and output sides of the building are fully enclosed, with a covered output conveyor. Aggregate is now discharged into two bunkers with three concrete walls and a canvas roof. The front of the enclosed bunkers will have a "rubber curtain", to ensure dust does not escape.	Potential for dust and noise exceedances during unfavourable conditions. Potential for sediment contamination of stormwater from outdoor stockpile.	Substantially reduced risk of dust and noise exceedances. Reduced sediment load in stormwater entering the stormwater treatment train.
Mulcher building	The inlet and output sides of the building are fully enclosed, with a covered output conveyor. Mulch is now discharged into a bunker with three concrete walls and a canvas roof. The front of the enclosed bunker will have a "rubber curtain", to ensure dust does not escape.	Potential for dust and noise exceedances during unfavourable conditions. Potential for sediment contamination of stormwater from outdoor stockpile.	Substantially reduced risk of dust and noise exceedances. Reduced sediment load in stormwater entering the stormwater treatment train.
Noise	The increased number of concrete walls installed as a result of enclosing the output conveyors and stockpiles of the crusher and mulcher buildings will act as sound buffers on site, further decreasing noise travelling off-site.	Noise modelling predicted no exceedances of Noise criteria.	Further reduction of noise impacts from site operations on neighbouring properties.
Air Quality	Further enclosing the crushing and mulching operations will further reduce the risk of dust emissions.	The original modelled impact was within air quality criteria at all identified receptors.	The dust emissions are expected to comply with quality criteria at all identified receptors.
	Installation of a weather station at the site to collect data and allow a quick response to adverse wind conditions	Insufficient data on local meteorological and air quality conditions.	Site-specific data will be collected to allow site-specific assessment of air quality issues and improved air quality modelling.
	Commitment to prepare and implement an Air Quality Management Plan.	An air quality management plan would have been required as part of the application for an Environment Protection Licence.	No change.
	Conduct further air quality modelling using the updated data set once the 100,000tpa throughput milestone is met. If necessary,	A staged approval was proposed in the second EIS.	The additional modelling prior to moving to 150,000 tpa will incorporate site-

Impact	Change to mitigation measures after consultation	Original impact	Revised impact
	further mitigation measures can be implemented prior to increasing throughput to 150,000tpa.		specific data. Therefore, it should be more accurate.
Traffic	The gate at the site entrance has been recessed 26m to allow a 26m vehicle to wait at the site entrance without impacting traffic along Gindurra Rd.	Potential for queuing / waiting along Gindurra Rd if a vehicle arrived outside operational hours.	Reduced risk of queuing / waiting by vehicles if the site entrance gate is closed.
	A Drivers' Code of Conduct and Traffic Management Plan will be prepared.	Potential for development to impact traffic along Gindurra Rd.	Traffic accessing the site will be monitored and any issues addressed promptly.
Water Quality	The OSD overflow mechanism will operate on a controlled pump out system with a 5-day trigger, subject to water quality criteria being met.	Estimated 8 uncontrolled discharge events per year.	Estimated 3 uncontrolled discharge events per year. Discharge water to meet ANZECC guidelines.
	Removal of floating wetlands from stormwater treatment train design.	Floating wetlands would have improved the water quality beyond that modelled.	Water quality will not change as the contribution from the floating wetlands was not estimated in the EIS.
	Water Quality System maintenance and monitoring plan to be prepared.	A water management plan would be required as part of the application for an Environment Protection Licence.	No change.

6. Updated project description

The Kariong Sand and Soil Supplies development will involve the construction and operation of a best practice recycling and landscape supplies facility that will enable the receipt of up to 200,000 tonnes of sand, soil and building materials each year. The project will transform the site into a state-of-the-art facility turning sand, soil and building materials into 100% recycled building and landscaping supplies. The facility aims to produce a number of building and landscape products, providing them for re-use mainly in the Central Coast region.

The proposed development will seek to expand the current facility into a best-practice recycling plant that will assist the Central Coast in achieving the NSW Government's target of an 80% recycling rate for construction and demolition waste by 2021.

The project will involve the development of a largely undeveloped industrial site, to enable the facility to be used to receive, process and recycle construction and demolition waste, as well as supply building and landscape supplies for local projects. All waste materials will be received and processed under cover, to minimise impacts on the environment and neighbours.

The front part that will be visible from Gindurra Rd will be the landscaping supply operations, including landscaping along the road frontage and landscape storage bays behind the setback area. A fully enclosed warehouse where sorting and recycling operations will be conducted will be visible from the front of the site. Along the eastern boundary, a noise barrier and a native landscape buffer will be planted to avoid noise impacts on nearly rural dwellings, and to provide an aesthetically pleasing interface between the edge of the Somersby Industrial Estate and nearby rural zone lots and dwellings.

Waste processing and recycling operations for selected materials, including crushing and mulching will be done on the southern section of the site, where processing will also be done in dedicated buildings to avoid any impacts on nearby land uses. These operations are to be conducted at maximum distance from any sensitive receptors. The southern section of the site will be retained as bushland to provide a natural buffer between the development and other residential areas more than a kilometre away from the southern boundary of the site.

Advanced water capture, rainwater harvesting, water treatment and dust suppression systems will be integrated in all buildings and outdoor areas to prevent dust being formed. The site will also include an advanced membrane filtration plant to enable much of the water captured from the site to be fully reused across the site for operational uses. The site will also include a water pond treatment system for treating stormwater runoff, and an emergency spill pond for capture, testing and management of contaminated water for sewer discharge or off-site treatment. The site will also include its own weather monitoring station, high volume air samplers for continuous air quality and dust analysis, continuous noise loggers and continuous water quality analysis to confirm compliance with consent and licence conditions. The site will be fully serviced with fire suppression systems.

Flow charts providing an operational overview of the proposed development is provided in Figure 6.1 (recycling operations) and Figure 6.2 (landscaping and building supplies operation).

Figure 6.1. Process flow chart for recycling operations.

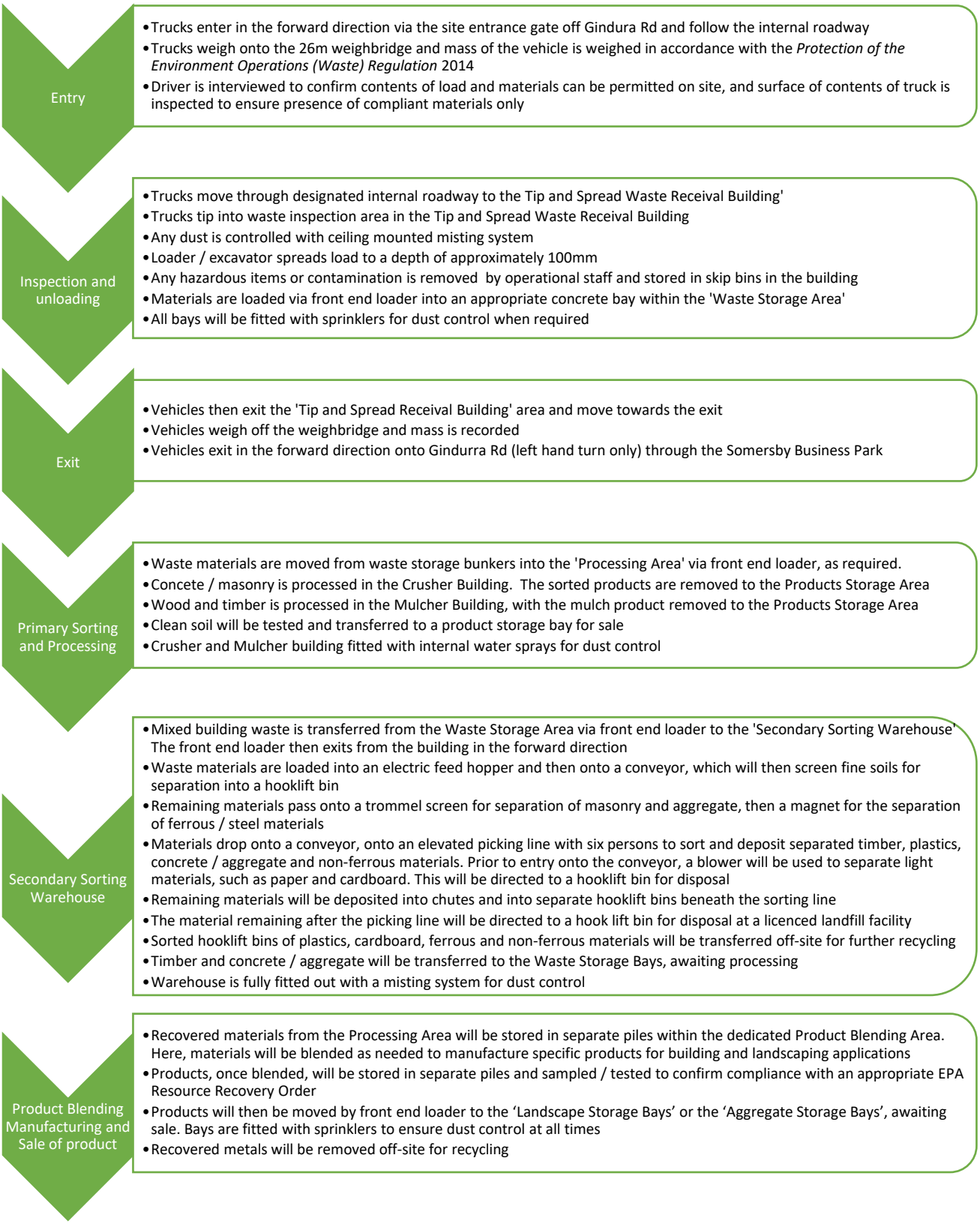


Figure 6.2. Process flow chart for landscaping and building supplies part of the operation.

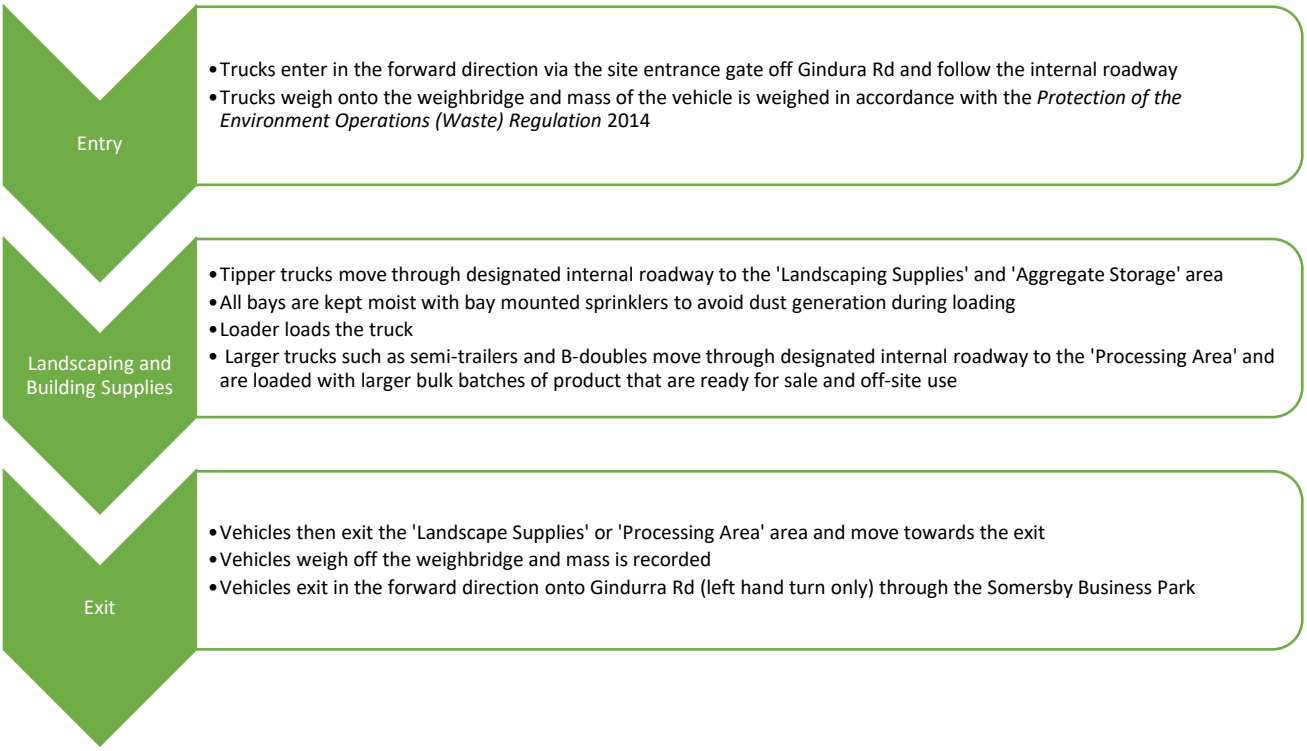


Table 6.1. Summary of construction activities under Stage 1 and 2 on the site.

Stage		Description	Consent status
1	i.	Demolish existing corrugated iron sheds	Approved under DA52541/2017 and modified under DA52541/2017.2
	ii.	Construct office building and warehouse	
	iii	Construct car park next to buildings and new entrance	
	iv.	Install fence at front of site	
2	a.	Clear selected vegetation from the front half of the site as determined by the Fauna and Flora and Vegetation Management Plan	Approval sought under State Significant Development application SSD8660
	b.	Construct sediment control basin to capture run-off during construction	
	c.	Grading of site. Construct retaining walls. Install water, power and recycled water services across the site. Install hardstand across the operational areas of the site	
	d.	Install noise wall along eastern side of the site	
	e.	Construct onsite roads, new entrance and modifications to Gindurra Rd (turning lane).	
	f.	Construct stormwater drainage system, including pond, level rock spreader, bioswales, gross pollutant traps and a packaged recycled water plant, connect to sewer	
	g.	Construct crusher building	
	h.	Construct mulcher building	
	i.	Construct tip and spread waste receival building, rainwater harvesting tanks and misting system. Install truck wash bay, coalescing plate separator and awning (and connect to sewer)	
	j.	Install dust and fire suppression systems across the site, including the Secondary Sorting Warehouse	
	k.	Construct waste storage bays, aggregate and landscape supply concrete bays, including bay mounted sprinkler system	

Stage		Description	Consent status
	l.	Install processing equipment in crusher building, mulcher building and secondary sorting warehouse	
	m.	Install weighbridges, traffic control lights and boom gates on site	
	n.	Install environmental monitoring equipment (weather station, high volume air samplers, dust gauges, sound meters)	
	o.	Complete landscaping works	
	p.	Commissioning and testing of site plant, equipment and environmental control systems, and issue of EPA licence for the site	
	q.	Commence formal operations for receival and recycling of waste materials up to 100,000 tonnes per annum	
	r.	Waste receival to increase to 150,000 tonnes per annum subject to the site demonstrating compliance with consent and EPA licence conditions and satisfactory environmental performance	
	s.	Waste receival to increase to a maximum of 200,000 tonnes per annum subject to the site demonstrating compliance with consent and EPA licence conditions	

6.1. Key elements of the updated project

The following is a summary of key elements of the updated project in response to submissions, to further address matters raised including air quality, dust, silica, noise, vibration, water quality, and health. These additional site and operational features are proposed to further mitigate impacts and to provide confidence to the community that public health and the environment will be protected at all times:

- Extensions to buildings to further enclose the crushing and mulching operations to minimise dust and noise;
- Removal of floating wetlands from stormwater treatment train design;
- Operation of the OSD basin as a controlled pump-out system on a 5-day trigger to ensure only high quality water meeting ANZECC guidelines is discharged from the development site, and to reduce the risk of overflow during periods of heavy rain;
- Confirmation of sumps with isolation valves in the Secondary Sorting Warehouse; and
- Site entrance gate has been recessed 26 m from Gindurra Rd.

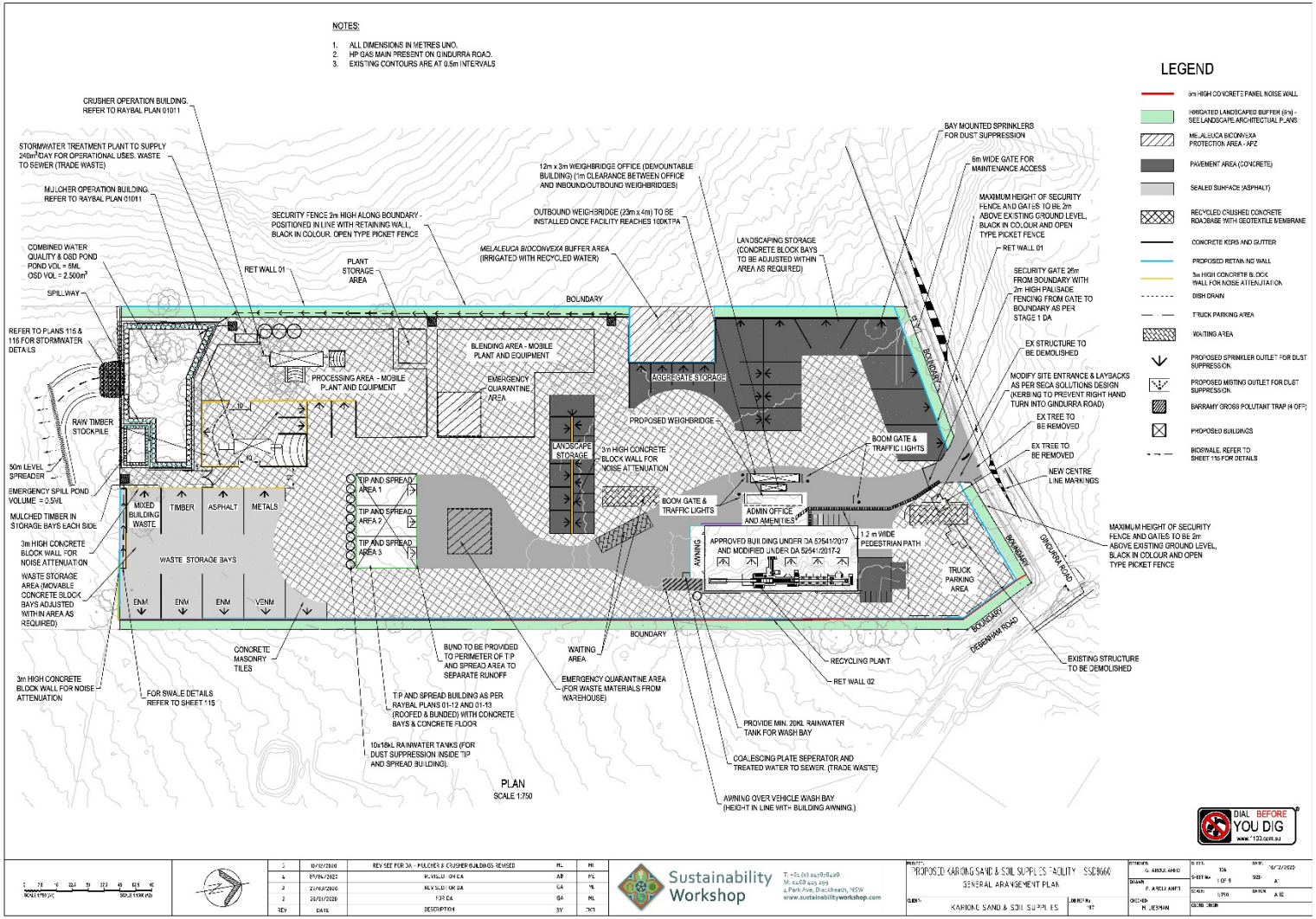
6.1. Updated plans and figures

The relevant civil design plans have been updated, including;

- General Arrangement Plan – showing general site layout and key features
- Turning Path Plan – showing turning paths for large vehicles on-site
- Detailed Shed Plan – showing details of the Secondary Sorting Warehouse, including the sumps.
- Stormwater Plan – showing the proposed stormwater capture and drainage system
- Stormwater Sections & Detail – showing the design of the On-site Detention Basin, outlet weir and Bioswales
- Layout and elevation plans for Crusher Building
- Layout and elevation plans for Mulcher Building
- Layout and elevation plans for Tip and Spread Building.
- Hydraulic services plan.

The full set of plans is provided in Appendices 1, 2 and 10.

Figure 6.3. Updated General Arrangement Plan.



7. Response to submissions

A total of 1,029 public submissions and 13 government agency submissions were received. A summary of the responses to the key issues raised in the various submissions (as listed above in section 3.1.1) is provided below.

Detailed responses to each comment received is provided within the relevant supplementary reports provided in Appendix 13.

7.1. Air quality / dust

In addition to comments received from the DPIE, the public submissions included a peer review of the Air Quality Impact Assessment report. The original report was prepared by Northstar Air Quality Pty Ltd. The peer review report was prepared by Todoroski Air Sciences.

This section provides a summary of the key issues raised and the proponent's response. A detailed response to the specific comments and the peer review report is provided at Appendix 5.

7.1.1. Increased dust-mitigation measures

Concerns were raised that some of the dust-generating activities were not enclosed, and that the buildings enclosing the crushing and shredding still allowed dust to escape.

The project has been redesigned to include full enclosure around all materials processing activities. These include:

- Shredder/mulcher:
    - Full enclosure of the shredding/mulching activities in a treated steel sheet-clad (e.g. Colorbond®) building. Sliding doors allow access if required and will remain closed during operation;
    - Drop rubber curtain between the loading hopper and shredding/mulching activities to contain particulate within the building;
    - Inclusion of dust misting system inside the shredding/mulching building;
    - Full enclosure of the conveyor from the shredder/mulcher to the product receiving bunker; and,
    - Enclosure of the product receiving bunker with concrete block walls, Colorbond® roof and a rubber curtain for front end loader access.
- Crusher/screen:
    - Full enclosure of the crushing/screening activities in a Colorbond® building. Sliding doors allow access if required and will remain closed during operation;
    - Drop rubber curtain between the loading hopper and crushing/screening activities to contain particulate within the building;
    - Inclusion of dust misting system inside the crushing/screening building;
    - Full enclosure of the conveyor from the crusher/screen to the product receiving bunker; and,
    - Enclosure of the product receiving bunker with concrete block walls, Colorbond® roof and a rubber curtain for front end loader access.

An air quality management plan will be implemented to ensure all mitigation measures are fully implemented and complied with.

The air quality will be monitored as part of the Environmental Protection Licence conditions. The air quality monitoring data will be considered in the approval to increase the throughput for the facility from 100,000 tpa to 150,000 tpa.

7.1.2. Air quality modelling

A number of comments were made by DPIE, EPA and the peer review consultant regarding technical details of the air quality modelling. Although the air quality consultant believed they had already taken a conservative approach to the modelling, the air quality modelling was conducted again using even more conservative parameters, in line with the comments received. The revised air quality modelling showed a slight increase in air quality impact, as expected. However, the emission are still predicted to comply with all air quality criteria.

The proponent will install a meteorological monitoring station at the site and air quality monitoring equipment surrounding the site to:

i. Characterise the meteorological environment of the project site; and,

ii. Provide air quality monitoring data with which to assess the performance of the project at 100 000 tpa to ensure the adequacy and performance of the air quality controls in place. This data will also support the scale-up approvals to 150 000 tpa and 200 000 tpa in due course, and subject to review.

7.1.3. Comparison with best practice

The comments included a requirement to compare the dust mitigation measures at the Kariong Sand and Soil Supplies facility with other similar facilities. Table 7.1 presents a comparison of dust mitigation measures at the proposed development to those at similar facilities that have been approved recently. The mitigation measures proposed at the Kariong Sand and Soil Supplies facility are as good or better than other, larger facilities.

Table 7.1. Comparison of dust mitigation measures at Kariong Sand and Soil Supplies with other similar facilities.

Activity	Kariong Sand and Soil Supplies Facility SSD 8660 Under assessment	Kembla Grange Waste Facility SSD 5300 Approved in 2016	Mayfield West Waste Facility SSD 7698 Approved in 2018
General information			
Throughput	200 000 tpa	230 000 tpa	315 000 tpa
Materials processing	All activities enclosed	Some activities performed external, some internal. Crushing and mulching activities external using mobile equipment. Crushing to be done indoors as part of Mod 2	All crushing and mulching activities external using mobile equipment, co-mingled waste sorting internal (3-sided shed)
Haulage	Majority on paved roads, some on compacted crushed concrete pavement	Compacted crushed concrete pavement	Some paved, some constructed of compacted crushed concrete
Mitigation measures			
Proposed mitigation	Full enclosure of all materials processing activities with water mists	Watering of haul routes	Water sprays used on unsealed surfaces

Activity	Kariong Sand and Soil Supplies Facility SSD 8660 Under assessment	Kembla Grange Waste Facility SSD 5300 Approved in 2016	Mayfield West Waste Facility SSD 7698 Approved in 2018
	Tipping and spreading building to be 3-sided, with water mists Watering of all haulage routes, minimisation of vehicles speeds Use of 3-sided bays with water sprays for all materials storage		Vehicle movements restricted to designated routes Water sprays will be used at stockpiles, crushing and screening plants and during material handling Wheel wash Existing sheds used to undertake particulate generating activities where possible

7.2. Traffic

In addition to comments received from the public and government agencies, the public submissions included a peer review of the Traffic Impact Assessment. The original report was prepared by Seca Solution. The peer review was prepared by Intersect Traffic.

This section provides a summary of the key issues raised and the proponent's response. A supplementary Technical Note prepared by Seca Solution that addresses, in detail, the comments received and the peer review report is provided at Appendix 7.

7.2.1. Vehicle queuing impacting traffic on Gindurra Rd

Concerns were raised in both the government agency comments and the peer review report that queuing of heavy vehicles entering the site would impact traffic on Gindurra Rd during peak times.

The peer review report estimates during peak times, a vehicle will arrive every 3 minutes. The time to process a vehicle on the weighbridge is approximately 2 minutes. There is sufficient room for three (3) 19 m vehicles (truck and dog combinations) to queue along the entrance driveway while waiting to enter the weighbridge. Furthermore, there is room for at least five trucks in the designated truck parking area to the front (northern side) of the warehouse building. As a result, no vehicle queueing on Gindurra Rd is expected at any time.

A Drivers' Code of Conduct, in conjunction with a Traffic Management Plan, will be prepared and provided to drivers of vehicles accessing the site.

7.2.2. Outdated traffic surveys and traffic modelling

Updated traffic surveys were conducted on 11th November 2020 for the AM and PM peak periods. These were used to update the SIDRA modelling. The modelling considered other proposed developments in the area, and modelled both 2020 traffic and a future 2030 traffic scenario.

The SIDRA modelling confirms the roundabout at Wisemans Ferry Rd and Gindurra Rd can continue to operate very well with minor delays and queues. The level of service for all movements remain at A for the AM and PM peak periods through to 2030 and beyond.

7.3. Noise and Vibration

In addition to comments received from the public and government agencies, the public submissions included a peer review of the Noise and Vibration Impact Assessment. The original report was prepared by Waves Consulting. The peer review was prepared by Muller Acoustic Consulting.

This section provides a brief summary of the main issues raised in the comments and by the peer review consultant. An addendum report prepared by Waves Consulting that addresses, in detail, the comments received and the peer review report is provided at Appendix 6.

7.3.1. Sound power levels used to model performance of crushing and screening plant

It has been suggested that the sound power levels used to model the sound levels from the crushing and screening equipment was too low, as it was below that normally used for similar applications. Waves Consulting confirmed that the sound power levels used were actual levels provided by manufacturers, rather than generic values, as proposed by the peer review consultant. Therefore, the sound power level values used are more accurate, and therefore more appropriate to be used for the modelling.

7.3.2. Location of background monitoring

The location of the noise monitoring equipment to measure background noise levels was consistent with the requirements of the NSW Noise Policy for Industry, which requires a general background noise level to be established, not identify the lowest noise level experienced by any potential receptor. It is believed that the location of the ambient noise logger during the background noise measurement was appropriate.

7.4. Water quality

Comments were received requesting detailed technical specifications about the proposed stormwater management system. As stated in section 6.1, several key changes have been made to the project design that will ensure only high quality stormwater is discharged from the site.

This section provides a brief summary of the key issues and how they have been addressed. The comments have been addressed in a supplementary report to the Water Cycle Impact Assessment and Soil and Water Management Plan, which is provided at Appendix 4.

7.4.1. Adequacy of the stormwater treatment system

Concerns have been raised about the quality of water to be discharged onto the bushland at the back of the site. After extensive discussions with DPIE, and considering the written comments received, the OSD basin has been designed to operated as a controlled discharge of treated water to the neighbouring bushland (via the level spreader). The triggers for the controlled discharge will be that the water quality meets ANZECC guidelines.

Concerns were raised about the floating wetlands proposed for the OSD basin. As these were not included in any of the water quality modelling (therefore not necessary to meet the water quality criteria), the floating wetlands have been removed from the site design.

7.4.2. Leachate capture inside Secondary Sorting Warehouse

Concerns were raised about capturing any spills or leachate inside the Secondary Sorting Warehouse, where mixed building waste is sorted. The warehouse building was approved under a local development consent. Detailed plans of the building, as built, confirm that there are four (4) sumps for collecting liquid along the eastern wall of the warehouse building. The sumps drain to the oil/water separator, and then to sewer. The sumps are fitted with isolation valves, which can be closed in the event of a chemical spill or fire event to contain the liquid within the building. See Appendix 10d for details.

It should be noted that chemical spill kits are provided inside the warehouse to deal with any chemical or fuel spills. It should also be noted that, as the waste being sorted in the warehouse is dry non-putrescible waste, the amount of leachate generated should be negligible.

7.5. Biodiversity

Narla Environmental Pty Ltd were engaged to conduct the initial Biodiversity Assessment for the second EIS. Narla has prepared an addendum report, which provides detailed responses to the comments on the biodiversity aspects of the project. The Biodiversity report addendum is provided at Appendix 8.

7.5.1. Melaleuca bioconvexa

DPIE Biodiversity Conservation requested a vegetation monitoring program be established to ensure the long term survival of the area of *Melaleuca bioconvexa* on the western boundary of the site. A vegetation monitoring program will be prepared and implemented, post-approval, as part of the ongoing environmental compliance at the site.

7.5.2. Groundwater dependent ecosystems

No evidence of groundwater dependent ecosystems has been found at the development site. The southern portion of the site was not assessed.

7.5.3. Identification of threatened species and habitat

Additional site surveys were undertaken in November 2020 at the site to target the barking owl (*Ninox connivens*) and to identify hollow-bearing trees.

No barking owls were found during any of the site surveys conducted at the site. The latest survey confirmed the absence of barking owls.

The hollow-bearing trees on the site were mapped. Any hollow-bearing trees removed during the development will be recorded, with the number of hollows documented. Where possible, the hollows will be salvaged and replaced in bushland in the southern portion of the lot. Where this is not possible, hollows will be replaced by nest boxes, installed in the southern portion of the lot, which will remain bushland.

7.5.4. Biodiversity Stewardship Agreement for southern portion of the lot

A feasibility assessment of Biodiversity Stewardship Agreement (BSA) for the southern portion of the lot, undertaken in October 2018, found that there were not sufficient credits to offset the development and cover the costs to establish a BSA. The proponent will purchase and offset credits from other site – within the Central Coast LGA, where possible.

7.5.5. Estimation of credits

Offset credits remain unchanged. In total, 108 credits are required for the proposed impact of 3.11 ha of native vegetation and ecosystem species habitat. The impact to 1.41 ha of Eastern Pygmy-Possum habitat requires 28 species credits to be retired. No other species credits will need to be retired to facilitate this project.

7.6. Waste management

DPIE made several comments related to waste management at the site, mainly requiring clarification of procedures and more detail on various processes.

DPIE also requested clarification on the treatment of material sold as Excavated Natural Material (ENM) from the site. Further explanation has been provided to make clear that any material sold as ENM will not be processed, per the *Excavated Natural Material Order* 2014 and the *Excavated Natural Material Exemption* 2014.

The Waste Management Plan has been updated to provide additional detail, as requested. The updated Waste Management Plan is provided at Appendix 11.

7.7. Fire Safety

The DPIE requested an Emergency Plan be prepared in accordance with AS3745-2010 *Planning for emergencies in facilities*. An Emergency Plan, prepared in accordance with AS3745-2010, was provided with the second EIS at Appendix V.

DPIE requested a detailed hydraulics design and fire sprinkler system design. It also requested detailed hydraulics calculations to support the design. These are provided at Appendix 10.

The Fire Safety Study has been updated to address inconsistencies and provide more detail on proposed fire protection systems. The updated Fire Safety Study is provided at Appendix 9.

7.8. Area character / lifestyle

A large number of mitigation measures will be put in place to minimise the impact on any nearby properties and the surrounding environment.

It should be noted that the site is zoned IN1 General Industrial and is within the Somersby Industrial Estate.

8. Project evaluation

The comments from agencies and the public received during the exhibition period have been considered and addressed in detail.

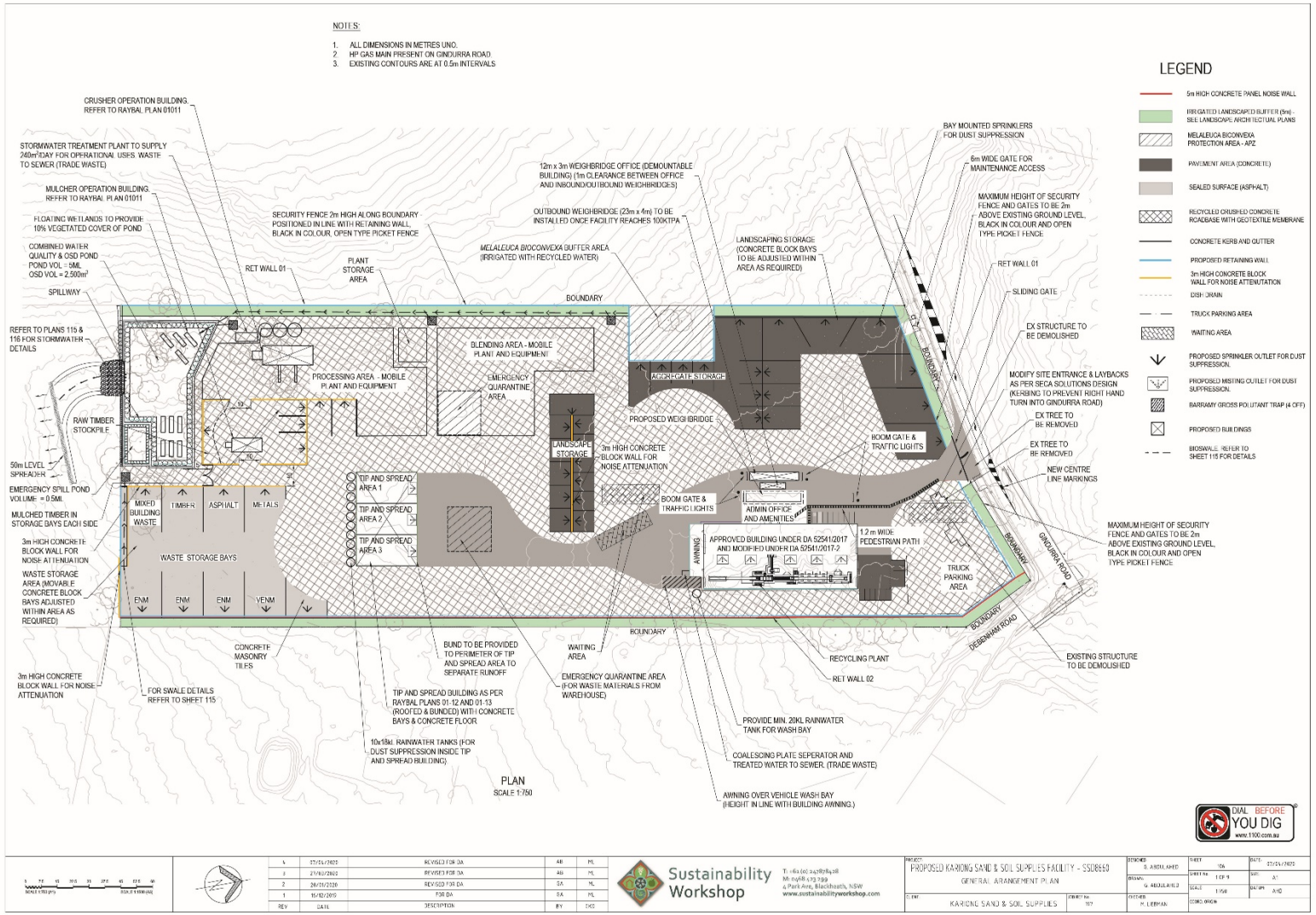
The development design has been adjusted to incorporate the comments received. Additional mitigation measures will be put in place to ensure the impacts of the facility are minimal.

All the relevant technical studies have been reviewed and, where appropriate the site design and parameters have been changed to address the comments. All technical studies conclude that the final design will result in the facility having minimal impact on the environment and surrounding land users.

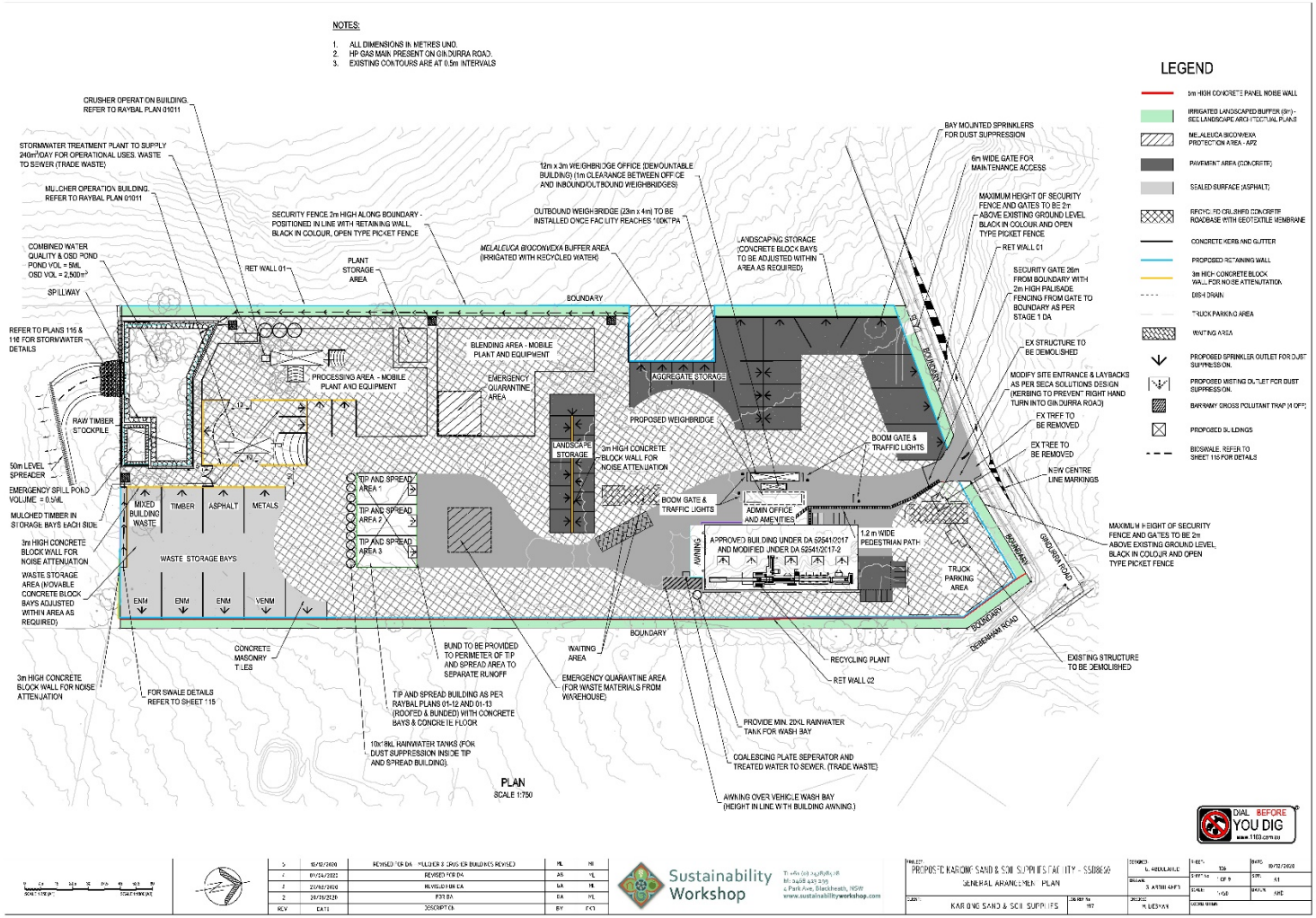
Overall, the project meets the environmental criteria in the relevant standards and guidelines and now meets the additional requirements listed in the agency comments. The environmental and social impact on the local area will be negligible. The project is consistent with the objectives of the land use zoning and with the Council development strategies for the area. The new facility will provide employment, economic benefit and sustainable recycling services to the local area.

Appendix 1 – Site Layout Plans (before and after changes)

General Site Layout Plan – as exhibited.



General Site Layout – after changes made in response to comments received during exhibition and community engagement.



Appendix 2 – Updated Civil Plans

Appendix 3 – Updated Crusher building and Mulcher building designs

Appendix 4 –Water Quality Impact Assessment and Soil and Water Management Plan supplementary report

Appendix 5 – Air Quality Impact Assessment Supplementary Report

Appendix 6 – Noise and Vibration Impact Assessment addendum report

Appendix 7 – Traffic Technical Note

Appendix 8 – Biodiversity assessment addendum

Appendix 9 – Updated Fire Safety Study

Appendix 10 – Updated Hydraulic Services Plan and Fire Coverage Plan

Appendix 11 – Updated Waste Management Plan

Appendix 12 – Collateral developed to support the community engagement and awareness program

Appendix 13 – Compiled agency comments and responses