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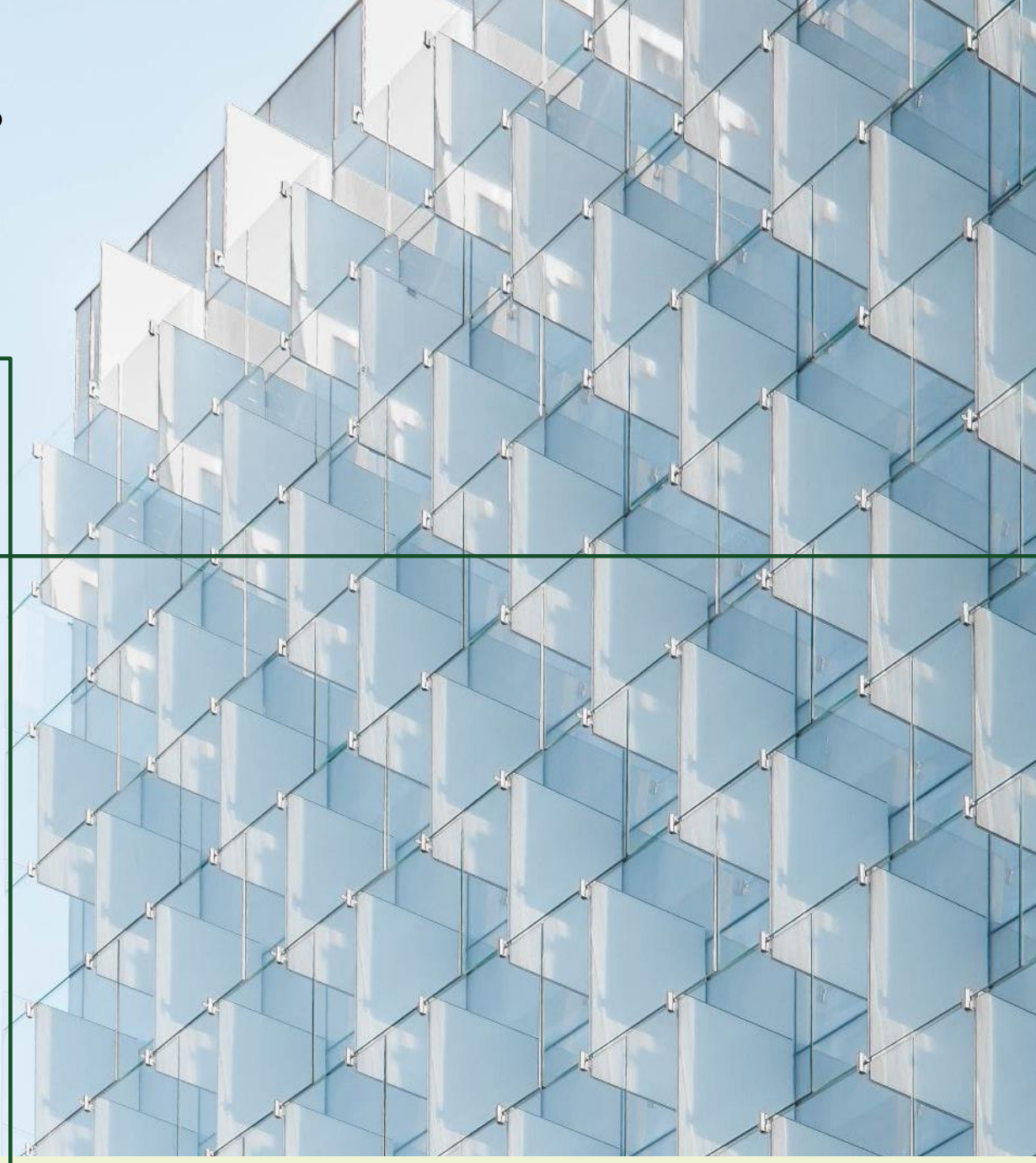

WILLOWTREE PLANNING

AMENDMENT REPORT:
PROPOSED MATERIALS RECYCLING FACILITY

Cambridge Avenue, Glenfield
Lot 1 DP113201, Lot 2 DP333578, Lot 3 DP736881, Lot 3 DP735524 and Lot 91 DP1155962

—

Prepared by Willowtree Planning Pty Ltd
on behalf of Glenfield Waste Services

8 November 2022

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Version No. 5 – UPDATE (02/11/2022)	Cameron Gray Associate	Andrew Cowan Director	Andrew Cowan Director
			

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PART A PRELIMINARY

1.1 PROJECT OVERVIEW

This State Significant Development (SSD) Application (SSD 6249) seeks Development Consent for the Materials Recycling Facility at Cambridge Ave, Glenfield (Subject Site). The Subject Site is comprised of an approximately 12 hectares (ha) area of land consisting of five (5) lots (noting the broader parcel comprises approximately 30ha but the proposal would occupy only approximately 12ha), located within the southern portion of the overall Glenfield Waste Services Site. The legal description of the Subject Site is as follows:

- Lot 1 DP113201;
- Lot 2 DP333578;
- Lot 3 DP736881;
- Lot 3 DP735524; and
- Lot 91 DP1155962.

The proposed development to which this Amendment Report relates, has been identified as SSD pursuant to Schedule 1, Clause 23 (2) and (3) of *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems) as the handling capacity would exceed 100,000 tonnes per year of waste for a Waste and Resource Management Facility.

The proposed development would process up to 450,000 tonnes per annum of general solid waste (non-putrescible), consisting of 'Commercial and Industrial' (C&I) waste, 'Construction and Demolition' (C&D) waste and Excavated Natural Material (ENM), only. The proposal would increase recycling and correspondingly reduce the proportion of waste sent to landfill.

The Site is zoned IN1 General Industrial pursuant to *Campbelltown Local Environmental Plan 2015* (CLEP2015). The IN1 zone is a Prescribed Zone for the purpose of Part 2.3, Division 23 of *State Environmental Planning Policy (Transport and Infrastructure) 2021* (Transport and Infrastructure SEPP) and accordingly development for the purpose of Waste or Resource Management Facilities is permitted with consent.

SSD-6249 was lodged with the NSW Department of Planning and Environment (DPE) in 2016 and was subsequently publicly exhibited and referred to relevant Government Agencies. In total, 17 submissions were received in response to the public exhibition and referral of the Environmental Impact Statement (EIS). Five (5) submissions were received from Government Agencies, 10 submissions were received from the general public, one (1) submission was received from a resident action group and one (1) submission was received from an industry stakeholder. A Response to Submissions (RTS) report and supplementary documentation were prepared at this time and submitted to DPE.

Consultation with DPE and relevant Government Agencies has been ongoing from 2016 to the present. In 2019, a revised RTS was circulated by DPE to relevant Government Agencies, and comments were provided accordingly.

The key issues arising from the submissions are addressed in **Tables 1** and **2** and **Part D** of this Report and are as follows:

1. Vegetation clearing and biodiversity;
2. General environmental performance;
3. Noise;
4. Air quality;
5. Water management;

6. Traffic.
7. Fire safety; and
8. Scale and Use.

This Amended Report and the amended proposal it supports, respond to those matters within the submissions made in 2016, 2019 and ongoing consultation with DPE and Campbelltown City Council.

The amended proposal has been guided by comprehensive environmental assessments in order to ensure the development has no unacceptable impacts for the integrity of the natural environment or amenity of the surrounding area. The amendments have been subject of extensive consultation with DPE and Campbelltown City Council.

All submissions have been duly considered and are now fully reflected in the amended proposal and supporting environmental assessments.

1.2 APPLICATION PROCESS OVERVIEW

Development consent is being sought for the proposal, as State Significant Development (SSD), under Division 4.1, Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

In accordance with Section 89F of the EP&A Act and the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation), the Environmental Impact Statement (EIS) for the proposal is required to be placed on exhibition for not less than 30 days.

All submissions provided from DPE are discussed herein.

1.3 PURPOSE OF THIS REPORT

The purpose of this Amendment Report is to outline the changes proposed to the exhibited development (**Section 1.4** below), provide additional environmental assessment of these changes and detail and respond to matters raised in the submissions received for SSD-6249.

The Amendment Report has been set out to address each submission matter, and is structured as follows:

PART A Provides an overview of the project, the application process and the RTS purpose and structure;
PART B Provides a summary of the consultation undertaken and submissions received;
PART C Provides responses to each of the issued raised in the consultation undertaken and submissions received;
PART D Provides a revised project description and addresses any additional environmental assessment requirements;
APPENDIX A Provides a revised set of project management and mitigation measures, following the review of submissions and technical responses; and
APPENDIX B Provides copies of any supporting information required by the received submissions.

1.4 CHANGES TO THE PROPOSAL AS EXHIBITED

Following the exhibition phase, and upon review of all submissions received and ongoing consultation with DPE and Campbelltown City Council, several amendments have been made to the proposal. Specifically, the proposed development has been reduced in scale significantly in response to comments received by DPE in 2022. These amendments include:

- Enclosure of the development including stockpiles and processing to be within two (2) warehouse buildings;
- Removal of green waste for processing;
- Reduction in the overall footprint of the built form;
- Reduction in the number of loading docks to four (4), being one (1) per stockpile bay;
- Addition of a roller door to the western elevation for haul trucks to bring in raw products to one (1) of the stockpile bays; and
- Process plant relocated to be within the corridor between the raw product and the stored recycled product. That equipment can then float along that corridor on as-needs basis to crush/grind raw product where necessary;
- Reduction in the overall vegetation removal, air and noise emissions and improved stormwater management as a result of the enclosure of the development; and
- Four (4) lot Torrens Title subdivision of the Subject Site.

PART B SUMMARY OF SUBMISSIONS

2.1 SUBMISSIONS PROCESS

Consultation with local, State and Commonwealth Government authorities, services providers, community groups and affected landowners, is a requirement of the Director General's Requirements (DGRs) issued on 19th December 2013 and the Secretary Environment Assessment Requirements (SEARs) issued on 26th November 2015.

In 2016, the SSDA was publicly exhibited and referred to relevant Government Agencies. In total, 17 submissions were received.

For this SSDA, considerable on-going consultation has also occurred post exhibition, aimed both at addressing the issues identified in the originally exhibited proposal as well as those raised since. This has now occurred to the satisfaction of DPE and all statutory authorities, and the proposal has been suitably amended in response to the result of the consultation process. The key stakeholders engaged as part of this consultation process

- DPE;
- NSW Environment Protection Authority (EPA);
- RMS (now TfNSW);
- Department of Primary Industries (DPI) including NSW Office of Water;
- Office of Environment and Heritage (OEH);
- Department of Industry- Geological Survey of NSW (GSNSW);
- Campbelltown City Council;
- Liverpool City Council; and
- Local community and key stakeholders.

The information in **Table 1** overleaf provides a record of the consultation carried out in 2016 and the subsequent years and sets out all key outcomes arising from the consultation process.

The EP&A Regulation permits the Planning Secretary of the NSW DPE to request that the Applicant to provide a written response in relation to the issues raised within any submissions made during public exhibition. This Amendment Report aims to fulfil the request from the Planning Secretary.

2.2 SUBMISSIONS RECEIVED

A total of 17 submissions were received during the exhibition period, including:

- Five (5) submissions from Government Agencies, including:
  - Roads and Maritime Services (RMS, now TfNSW);
  - Department of Primary Industries (DPI);
  - Department of Industry- GSNSW;
  - Campbelltown City Council;
  - Liverpool City Council;
- Ten (10) submissions from the General Public;
- One (1) submission from a resident action group; and
- One (1) submission from an industry stakeholder.

During the post-exhibition period and post the previous RTS, stakeholder submissions were received from:

- Office of Environment and Heritage (OEH);
- Environment Protection Authority (EPA); and

- Campbelltown City Council.

In addition, discussions with DPE have been ongoing.

The information in **Table 2** overleaf provides a response to submissions received to date. It is noted that the responses prepared are based on a previous iteration of the development and given the development as amended results in an overall reduction in scale and footprint, it is considered that any impacts are of an equal or lesser extent. **Part D** of this Amendment Report undertakes a detailed assessment of the environmental impacts of the development as amended.

PART C RESPONSE TO SUBMISSIONS

3.1 RESPONSE TO CONSULTATION

Table 1 below seeks to tabulate all consultation undertaken to date and provide a detailed response to each matter at the time.

TABLE 1: CONSULTATION RECORDS		
STAKEHOLDER	**MEETING/ CORRESPONDENCE DATE**	**CONTENT OF DISCUSSION/CORRESPONDENCE OF OUTCOMES**
RMS, DPI, Department of Industry GSNSW, Campbelltown City Council, Liverpool City Council, the General Public, resident action group and industry stakeholder	2016	In 2016, the SSDA was publicly exhibited and referred to relevant Government Agencies. In total, 17 submissions were received, including: ▪ Five (5) submissions from Government Agencies, including: o RMS; o DPI; o Department of Industry- GSNSW; o Campbelltown City Council; o Liverpool City Council; ▪ Ten (10) submissions from the General Public; ▪ One (1) submission from a resident action group; ▪ One (1) submission from an industry stakeholder. The key issues raised include the following: 1. Water management; 2. Vegetation clearing and biodiversity; 3. Traffic. An RTS and supplementary documentation were prepared at this time and submitted to DPE.

TABLE 1: CONSULTATION RECORDS		
STAKEHOLDER	**MEETING/ CORRESPONDENCE DATE**	**CONTENT OF DISCUSSION/CORRESPONDENCE OF OUTCOMES**
		However, given the amendments to the project that have now been made, an updated response to the 2016 submissions is provided in **Table 2** within this Amendment Report.
OEH	11 April 2019	Following review of the revised RTS dated May 2017, OEH issued a letter providing the following comments: ▪ The Biodiversity Values Map identifies land with high biodiversity value on part of the Subject Site; ▪ There is discrepancy between the vegetation to be impacted and the development footprint, as the proposed vegetation clearance is approximately twice the area of the development footprint; ▪ OEH does not support the clearing of more vegetation than what is required for the SSDA. Impacts must first be avoided through mitigation measures *before* offsets are considered for the remaining impacts; ▪ The 1.91ha area of the 'vegetation rehabilitation area' has been excluded from the Biodiversity Development Assessment Report (BDAR). If this area is proposed to be cleared, Biobanking Credits need to be calculated and included in the offset requirements for the project; ▪ For the area of the Subject Site that *has* been included in the BDAR, OEH confirms that the Framework for Biodiversity Assessment (FBA) has been correctly applied and 284 Credits are required; ▪ OEH concurs with the approach to prefer like-for-like offset outcomes; and ▪ Koalas have been recorded in the area and therefore the SSDA has not adequately assessed the potential impact on koalas. To address these matters, the extent of vegetation clearing has been reduced by approximately 2.4ha compared to the original SSDA, and the proposed vegetation clearing directly connects to the proposed development. Comprehensive assessment and mitigation measures are provided in the Biodiversity Development Assessment Report at **Appendix B3**.
Campbelltown City Council	17 April 2019	Comments provided in the letter from Council relate to the following matters: Traffic: ▪ Increase in local traffic, including trucks, which will intensify noise and vibration and impact on amenity for local residents; ▪ Potential vehicle conflict on Cambridge Ave causeway; ▪ Connections to Cambridge Ave that may prejudice future Georges River bridge options;

TABLE 1: CONSULTATION RECORDS		
STAKEHOLDER	**MEETING/ CORRESPONDENCE DATE**	**CONTENT OF DISCUSSION/CORRESPONDENCE OF OUTCOMES**
		▪ A road pavement assessment has been requested, noting that heavy vehicle routes along Cambridge Ave have *not* been approved for the Moorebank Intermodal; ▪ The impacts of increased traffic generation and car parking must be accommodated; Noise: ▪ Increase in noise as a result of trucks and machinery on the Subject Site; Air quality: ▪ Need to comply with EPA controls to alleviate air quality issues and stop the spread of dust to surrounding properties and waterways; Soils and water management: ▪ Overland flow must be considered with respect to the water quality of the Georges River; ▪ It is recommended that the Landcom Stretch Targets for Water Quality are adopted to assess water quality treatment measures; and ▪ Internal haul roads should be sealed as water spray dust suppression is not considered viable. A vehicle wheel wash facility should be installed. Noise, air quality, and soil and water management, have been addressed in the amended proposal, including through the enclosure of stockpiles and processing areas, and elimination of green waste and VENM. The supporting technical reports demonstrate that traffic would be suitably managed.
	26 October 2021	A meeting was held with Council which raised the following matters: ▪ The Subject Site is a difficult site with a complicated history, further complicated by the nature of the use, and necessary involvement of a number of State Gov agencies and Liverpool City Council; ▪ The proposal needs to be clear on what the existing development approval is, and by default, be clear on the proposed amendments (and timing of application); ▪ Compliance with DA conditions/operating licenses, including the benefits of 'internalising' operations and compliance with environmental controls of EPA;

TABLE 1: CONSULTATION RECORDS		
STAKEHOLDER	**MEETING/ CORRESPONDENCE DATE**	**CONTENT OF DISCUSSION/CORRESPONDENCE OF OUTCOMES**
		▪ The issues raised by Council in earlier submissions (March 2016, April 2019) would likely remain relevant: o Traffic; o Noise Impacts; o Air Quality; o Soil and Water Management; ▪ Compliance with the Biodiversity requirements/legislation; ▪ Rezoning history discussed and issues identified; ▪ Legal compliance with Clause 7.21 of CLEP2015 and whether a Site Specific DCP is required prior to DA; and ▪ Right of way/easements. Following the meeting, the amended EIS package submitted to DPE on 9 August 2021 was provided to Council, to which Council raised no further comments noting that further consultation would be undertaken by DPE.
EPA	09 April 2019	A letter from the EPA states that the primary concern remains that the proposal should be in an enclosed building and on suitable hardstand, to meet industry best practice. This would significantly reduce the environmental risks to water, noise and air (including odour) pollution from the proposal. The following specific requirements were raised by the EPA: ▪ All waste handling activities including receival, sorting, processing, sampling and quarantine, must be conducted within an enclosed building; ▪ Any external haulage areas or roads must be sealed hardstand; ▪ Any unused external surfaces must be sealed hardstand or vegetated; ▪ Best practice waste management facilities include a wheel-wash; ▪ The *Standards for Managing Construction Waste in NSW* under the new *Protection of the Environment Operations (Waste) Regulation* (POEO Waste Regulation) must be complied with; ▪ The quality and impact of discharges have not been appropriately considered pursuant to Section 45 of the *Protection of Environment Operations Act 1997* (POEO Act) and it is unclear whether the proposed measures are appropriate to manage the pollutants potentially present in runoff from the Subject Site. There are practical mitigation measures available, that have not been considered. On this matter, it is noted that industry best practice and mitigation would

TABLE 1: CONSULTATION RECORDS		
STAKEHOLDER	**MEETING/ CORRESPONDENCE DATE**	**CONTENT OF DISCUSSION/CORRESPONDENCE OF OUTCOMES**
		be achieved through the enclosure of the warehouses and sealing of paved areas of the Subject Site. Stormwater would be collected from the roof and hardstand for capture and re-use in dust mitigation. Run-off would be limited by both harvesting and bunding of the hardstand; ▪ It is unclear whether Area 1 would be consistent with the *Environmental Guidelines, Composting and Related Organics Processing Facilities* (DEC 2004), particularly in relation to the sizing of leachate dams and the design of the working surfaces and leachate barrier of the organics storage and processing areas. It is noted that this would no longer be relevant given green waste and VENM have been eliminated from the proposal; ▪ It has not been adequately demonstrated that the proposal would comply with the *Noise Policy for Industry* project noise trigger levels; ▪ The use of stockpiles as noise barriers is not appropriate for ongoing operations. This matter is no longer relevant as noise mitigation would be achieved through the enclosed warehouses; ▪ The volume of heavy vehicles accessing the Subject Site needs to be justified and accounted for in noise predictions; ▪ The equipment fleet noise levels need to be justified; ▪ The maintenance activities proposed to be carried out between 4:30pm-6pm need to be included in the Noise Assessment; ▪ The proposed controls for air quality are not consistent with industry standard practice. Benchmarking against industry best practice is required for material handling and processing in the open, and all potential odour sources need to be identified; ▪ Emissions/particulates associated with roads and hardstand areas should be assessed as part of the air quality assessment; ▪ Wind erosion from stockpiles requires further assessment, as do emissions estimates for conveyor transfer to stockpiles, crushing operations and haulage; ▪ There is significant risk of offensive odours owing to large volumes of green waste. This matter has been resolved through the elimination of green waste from the proposal; and ▪ All input and output files used in the dispersion modelling should be included. These matters have been addressed in this Amendment Report and the supporting technical reports.

TABLE 1: CONSULTATION RECORDS		
STAKEHOLDER	**MEETING/ CORRESPONDENCE DATE**	**CONTENT OF DISCUSSION/CORRESPONDENCE OF OUTCOMES**
DPE and EPA	31 May 2019	A meeting was held between DPE, the EPA and the Applicant, during which the following key items were discussed: ▪ Biodiversity; ▪ Noise; ▪ Air quality; ▪ Water and waste; ▪ Roads; and ▪ Fire safety. In response to those matters discussed at the meeting, the proposal has been amended to incorporate permanent noise attenuation, best practice dust attenuation for processing areas and additional sealing of ground surfaces, removal of green waste from the proposal to reduce leachate and associated odour and water management, and design in accordance with current fire safety standards. Many of these improved environmental outcomes have been achieved through the enclosure of the stockpiles and operational areas, reflecting best practice design.
DPE	01 July 2019	A letter was issued to DPE providing further updates on the progress of the formal amendments being carried out to the proposal. The letter outlined that the intended 'next steps' included the following: ▪ Preparation of an amended Site Layout Plan, addressing fire safety specifications, internal truck maneuvering, reduced stockpile heights, enclosed processing areas, additional noise and air quality mitigation and management measures, and additional water management measures; ▪ Preparation of updated Specialist Report and Modelling for noise, air quality and water management; and ▪ Preparation and lodgement of a formal amendment to the SSDA in the form of a comprehensive, consolidated report. A draft conceptual 'mud map' was appended, demonstrating the intended amendments to the Subject Site layout based on fire safety requirements. The letter to DPE requested feedback from DPE and sought confirmation that the approach outlined was acceptable.

TABLE 1: CONSULTATION RECORDS		
STAKEHOLDER	**MEETING/ CORRESPONDENCE DATE**	**CONTENT OF DISCUSSION/CORRESPONDENCE OF OUTCOMES**
	09 August 2019	An email was sent to DPE, inclusive of a revised concept layout plan and stockpile calculations. Key revisions included: ▪ Expansion of the development footprint to approximately 12ha; ▪ An additional 2.5ha (approximately) of vegetation would be retained on the Subject Site, and the area of vegetation clearing would be directly connected to the proposed development footprint; ▪ Stockpile heights for combustible waste streams would be limited to 4m; and ▪ Stockpile heights for non-combustible VENM material would be limited to 7m. The email requested that DPE review the layout plan and stockpile calculations, engage in discussion, and ultimately endorse the proposed concept plan.
	19 August 2019	Feedback was provided by DPE via email. Whilst stating that comments would be reserved until detailed plans and assessments are submitted, the email did list a number of matters for further consideration, including: ▪ The extent of clearing of EEC, which would require justification as part of the amended proposal; ▪ The necessity for on-Site storage of the yearly receival and processing amounts of VENM; ▪ Issues with the stockpile calculations; and ▪ Ambiguity regarding the intent for the enclosure or not of the processing areas. The email confirmed that all matters from DPE's August 2018 letter, would also need to be addressed through amended, and additional, technical assessments.
	04 September 2019	An email was sent to DPE responding to the key items in DPE's previous correspondence. The email provided the following clarifications: ▪ The expansion of the development footprint over the vegetated area containing EEC, was a product of operational design consistent with relevant guidelines; ▪ Detailed justification and explanation of the approach to biodiversity management would form part of the revised proposal;

TABLE 1: CONSULTATION RECORDS		
STAKEHOLDER	**MEETING/ CORRESPONDENCE DATE**	**CONTENT OF DISCUSSION/CORRESPONDENCE OF OUTCOMES**
		▪ The need for the proposed facility (including the volume of VENM) is well supported by strong demand for the storage and processing of this type of material. This demand would be propelled by a significant pipeline of Government infrastructure projects in Western Sydney, a short supply of sandstone generating significant demand for the manufactured alternative, and a current lack of capacity for high-volume recycling of VENM; ▪ The calculations account for a batter slope for each stockpile, in accordance with fire safety requirements. This would influence the volume; and ▪ The revised proposal involves the enclosure of the processing areas. The email indicated an indicative timeframe of three (3) months following the provision of in-principle support from DPE, for submission of the formal amended proposal inclusive of all relevant technical studies.
	07 April 2022	A meeting was held with DPE to discuss the comments received by DPE on 11 February 2022 and subsequent response. The comments raised by DPE were as follows: <u>Site Layout</u> ▪ Provide justification for the size and scale of the two warehouse structures in accommodating the resource recovery facility at the proposed throughput capacity of 450,000t per annum. The Department has concerns that the development footprint may be too big for the proposal. For example, the storage bays in Warehouse B appear to be 50 m x 50m wide (Plan DA-101). In addition, the development layout is very similar to that of a warehouse facility with the inclusion of multiple loading docks. The Department questions whether the size and scale of the proposed warehouse structures are necessary in the context of the proposal and if the facility could be carried out within a smaller footprint, thereby reducing the area requiring vegetation removal; ▪ Plan DA 101 shows several loading docks or roller doors. Provide further details on how trucks will enter and exit the Subject Site via these multiple loading dock entrances/roller doors; ▪ Plan DA 101 also shows several sorting bays in Warehouse A. Provide further details on how trucks would reverse into these bays particularly Sorting Bay 1 and 2;

TABLE 1: CONSULTATION RECORDS		
STAKEHOLDER	**MEETING/ CORRESPONDENCE DATE**	**CONTENT OF DISCUSSION/CORRESPONDENCE OF OUTCOMES**
		<u>Water Quality</u> ▪ A response to the Department's comment on flood modelling was provided in the summary table of the RTS cover letter (item 19, page 5). Please ensure this information is also included in the RTS document/Amended EIS; ▪ The RTS cover letter notes the modifications to the soil and water management infrastructure at the Glenfield Waste Disposal landfill is described in a Soil and Water Management Plan for the landfill, with only the EPA required to review it. Assuming the removal of the southern basin will be assessed under the SSD, the Department would need to understand the integrated stormwater management approach across the landfill site and the Subject Site and the impacts associated with the removal of the southern basin. Consider whether the water cycle management report would need to be updated to incorporate this assessment. Conversely, a modification to the development consent for the landfill may be required to address the removal of the southern basin and further details should be provided on this option; and <u>Biodiversity</u> ▪ Figure 1.6 of the Biodiversity Development Assessment Report (Page 13) shows a new stormwater basin south of the Subject Site and Cambridge Ave. Update the scope of works and assessment within the BDAR if the new stormwater basin is no longer proposed. Following this meeting, a response was issued to DPE on 30 May 2022 which included the amended Architectural Plans as currently proposed (and provided in **Appendix B1**) and provided the below justification: The size of the shed has been purpose built to accommodate the bespoke manner in which the waste comes in through one (1) side, is processed and stored for collection in the most efficient manner possible. In addition, further internal details have been shown on the plans to provide further clarity on the proposed operational details of the development. These include: ▪ Area calculations/measurement for the sorting and stockpile bays, which relate directly to the areas of the existing stockpiles on-site;

TABLE 1: CONSULTATION RECORDS		
STAKEHOLDER	**MEETING/ CORRESPONDENCE DATE**	**CONTENT OF DISCUSSION/CORRESPONDENCE OF OUTCOMES**
		▪ Circulation areas for staff vehicles delivering waste into the waste cells shown in orange. That circulation space allows for movement of plant and equipment around the stockpile bays, and also to accommodate any spill over of product outside bay walls which can then be scooped up and also provides fire access pathways; ▪ Unprocessed waste stockpiles shown in green; ▪ Processing areas shown in blue; and ▪ Processed waste for sale stockpiles shown in pink. The total volumes that can be stored are therefore reduced. If production demands necessitate, an application for expansion could be made in the future. It is noted that DPE met with the EPA to discuss the above response and amended development, to which no issues with the size and scale of the proposal were raised, subject to the following: ▪ Noise: EPA highlighted that additional noise attenuation may be required along a section of the site boundary along Cambridge Ave, particularly where there is a gap between Warehouse A and B. There is potential for noise to be generated by trucks reversing into Warehouse B that could impact nearby receivers to the south of the Subject Site. ▪ Stormwater: the size of the warehouses are likely to generate significant amounts of stormwater. Details on how stormwater will be captured and managed on-site i.e. on-site detention will need to be outlined in the RTS. An amended Noise Assessment has been provided in **Appendix B7** which has considered the acoustic impacts of the amended development, including the properties to the south of the Subject Site and the impacts of truck movements. This assessment has determined that noise levels at all sensitive receivers will satisfy the relevant noise criteria during operations and has included appropriate measures to mitigate any impacts during construction. Furter consideration of the acoustic impacts has been undertaken in **Section 4.3** of this Amendment Report.

TABLE 1: CONSULTATION RECORDS		
STAKEHOLDER	**MEETING/ CORRESPONDENCE DATE**	**CONTENT OF DISCUSSION/CORRESPONDENCE OF OUTCOMES**
		Details of the proposed stormwater system have been detailed in the amended Civil Engineering Plans and amended Water Cycle Management Plan provided in **Appendices B4** and **B12**. Further consideration of the stormwater management has been undertaken in **Section 4.5** of this Amendment Report. Subject to the above, DPE provided approval for an updated report to be lodge with revised technical reports for key issues including noise, air quality, water and biodiversity. As such, this Amendment Report has been prepared based on the agreed upon amended development and all relevant amended technical reports attached.

3.2 RESPONSE TO AGENCY SUBMISSIONS

Table 2 below seeks to tabulate all submissions received from government agencies and provide a detailed response to each matter. It is noted that these responses remain unchanged from the RTS submitted on 22 November 2021 as these submissions were based on a previous iteration of the development and these responses were not submitted to any agencies. Given the development as amended results in an overall reduction in scale and footprint, it is considered that any impacts are of an equal or lesser extent. A detailed environmental assessment of the development as amended is undertaken in **Part D** of this Amendment Report.

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
RMS	RMS raises no objection.	It is acknowledged that RMS raised no objection to the proposal.
DPI	DPI Fisheries and Agriculture have no comment.	It is acknowledged that DPI Fisheries and Agriculture raised no comments.
	DPI Water confirms that the proposed sediment control dams do not require approval or a water access licence, given the exemptions pursuant to the *Water Management (General) Regulation 2011* and the Farm Dams Policy. DPI Water however also states that given the water will be from active working areas, it may be potentially polluted with waste products.	It is noted that approval from DPI Water or a Water Access Licence would not be required. Water quality has been addressed in the Water Cycle Management Report (Appendix 3 of the RTS dated 22 November 2021), which details that water quality treatment

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
		measures will be employed to treat collected stormwater runoff prior to discharge to the Council drainage or river system located near Cambridge Ave and Georges River. A treatment train approach is proposed, consisting of rainwater tanks, pit filter baskets and a bio-retention basin. MUSIC modelling confirms compliance with *Campbelltown Development Control Plan 2015* (CDCP2015). Further, the Soil and Water Management Plan (Appendix 5 of the RTS dated 22 November 2021), confirms that a water quality monitoring programme is currently in place at the Subject Site including the monitoring of stormwater basins and stormwater discharges from the Subject Site. It is recommended that the current programming be expanded to include regular monitoring of retained stormwater, overflow, pumped discharges and storage levels in each stormwater basin.
	DPI Water confirms that no approval or a water access licence would be required, given that the Proposal would not involve excavation into groundwater. The EIS indicated that there is a low potential for groundwater contamination due to the benign nature of the wastes to be accepted onsite. DPI Water recommends that hardstand areas be constructed with an impervious layer to ensure that any possible pollutants from waste streams do not percolate into underlying groundwater.	The updated proposal would still involve no excavation into groundwater. It is noted that approval from DPI Water or a Water Access Licence would not be required. The updated proposal includes the internalisation of all operations within warehouses. Bunding of the Subject Site would prevent runoff. Accordingly, the proposal incorporates adequate measures to mitigate against the contamination of groundwater.
	The EIS acknowledged that the strip of riparian vegetation along the Georges River would be protected, as no works would be undertaken in this area.	The updated proposal would still involve no works within the riparian area.

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
	DPI Water regards the EIS as adequate and the measures to protect groundwater, surface water sources and riparian vegetation, as adequate.	It is acknowledged that DPI considered the proposal to be adequate, subject to the recommended impervious layer for hardstand areas.
GSNSW	GSNSW has no concerns with the Proposal as it has no impact on mineral or extractive resources.	It is acknowledged that GSNSW raised no comments.
Campbeltown City Council	The Proposal would be consistent with the Planning Proposal currently under assessment by Council relating to the industrial rezoning of the Site.	The Planning Proposal (PP-2020-2419) for the rezoning of the Subject Site to IN1 General Industrial, was gazetted on 12 June 2018. The proposal is consistent with the previously gazetted Planning Proposal.
	Ecological Assessment: 1. The proponent is to undertake an adequate assessment of the subject site for 'core koala habitat' under *State Environmental Planning Policy 44 — Koala Habitat Protection* that meets the guideline requirements as specified under Section 2.1 of Planning Circular B35. 2. Prior to the removal of any Cumberland Plain Woodland vegetation from the site, documentary evidence of a suitable Biodiversity offset agreement must be provided to the consent authority and Campbelltown City Council.	The BDAR (Appendix 9 of the RTS dated 22 November 2021) includes an assessment pursuant to the *Campbelltown Comprehensive Koala Plan of Management 2018*. Based on Council's mapping, the Site is *not* identified as Core Koala Habitat, but *is* mapped as Potential Koala Habitat. As such, the BDAR acknowledges the requirement for a Vegetation Assessment Report and Koala Activity Assessment Report. Based on the surveys undertaken by Travers (author of the BDAR), no koala activity was recorded in the form of scats, tree scratches or visual observations. No records of koalas have been made in the development footprint within the last 18 years. One (1) record of a koala was made within the study area in 2017; this was a road-kill located in the north of the study area, between the train line and the waste management facility. Notwithstanding, the BDAR acknowledges that there is a strategic linkage from the eastern riparian zone into the study area, and that Council would therefore need to be satisfied that the proposal will not sever or otherwise

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		interfere with the movement of koalas within an identified strategic linkage area. With respect to the balance of biodiversity (including Cumberland Plain Woodland) with potential to be impacted by the proposal, the BDAR provides comprehensive assessment, mitigation measures and calculation of Biodiversity Credits.
	Traffic Impact Assessment: a. The EIS has adopted Council's previous recommendation that the current entrance/exit to the site from Cambridge Avenue be used as the entrance only and exiting vehicles utilise the roundabout at Railway Parade. It should be noted that this recommendation was made with respect to the Planning Proposal for the entire property and may not be the best outcome for the development application. It should also be noted that as part of the Planning Proposal process it was identified that the current entrance/exit to the site from Cambridge Avenue is flood affected and an additional access point to the site is proposed to be created from Cambridge Avenue, which would appear to conflict with the information exhibited for this application.	Based on consultation with TfNSW to-date, it is understood that early planning has commenced for a future upgrade and extension of Cambridge Ave. It is understood that a future connection from Cambridge Ave into the Subject Site is under investigation, and that this is likely to be a signalised 4-way intersection (also connecting into the lots to the south). However, at the time of writing, funding, timing and detailed design had not been confirmed. Notwithstanding, the proposed development on the Subject Site is intended to become operational, regardless of the timing of the Cambridge Ave upgrade. Accordingly, it is expected that there will be two (2) stages of the access strategy, as follows: ▪ Interim Site Access: During the interim stage (prior to the Cambridge Ave upgrade), the Subject Site would be accessed via the existing access road connecting to Cambridge Ave adjacent to the eastern boundary of the Subject Site. Temporary all-weather access roads would be connected to the existing permanent haul roads.

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		▪ Ultimate Site Access: Ultimately, the Subject Site would be accessed via the new signalised 4-way intersection at Cambridge Ave, while maintaining a left-in/left-out access on the eastern access and the current connection at the western access point. It is noted that public access is only via the eastern gatehouse. As noted above, the Cambridge Ave upgrade and new intersection are not part of this SSDA and would be subject to ongoing, post-approval consultation with TfNSW and future applications.
	b. B-Doubles accessing the site are proposed to enter and leave via Cambridge Avenue (in the short term). The EIS indicates that a Restricted Access Vehicle Route exists from Campbelltown Road to the Cambridge Avenue entrance to the site. This is confirmed with RMS maps. The EIS proposes to apply to have the RAV route extended to include Railway Parade if B-Doubles "become commonplace". A quantitative limit needs to be placed on B-Double vehicles and it is recommended that this matter is referred to Council's Traffic Committee for advice.	Currently, the most common truck types accessing the Subject Site (accounting for 76% of vehicles) are generally 15-20m in length (including TRTRA, TRAIL, TRUCK and HOOK type trucks). Vehicles larger than 20m in length (B-Doubles) account for 5% of traffic. This proportion and total quantum of B-Double trips is expected to remain consistent with the existing operations as a result of the proposed development. It is noted that a B-Double is the largest truck that will access the Site. TfNSW already identifies Campbelltown Road as a 25/26m B-doubles route and part of Cambridge Ave as a heavy vehicle approved route with travel conditions.
	c. Details will need to be submitted regarding how egress from the site to Cambridge Avenue for vehicles other than B-Doubles will be restricted.	The proposed access arrangements as detailed in the Transport Assessment (Appendix 6 of the RTS dated 22 November 2021) would accommodate all vehicles entering and exiting the Subject Site.
	d. Similarly, as the internal road is designated as a one way road, how will a B-Double navigate back to Cambridge Avenue?	The existing and proposed internal road network would facilitate the one-way circulation of traffic from Cambridge

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		Ave, through the Subject Site, and exiting via Cambridge Ave. Details are shown in the Architectural Drawings and Transport Assessment.
	e. This report indicates that final planning for upgrade works at the intersection of Glenfield Road and Campbelltown Road are still not finalised. This is not correct, and construction under the Pinch Point Program has commenced.	Based on consultation with TfNSW to-date, it is understood that early planning has commenced for a future upgrade and extension of Cambridge Ave. It is understood that a future connection from Cambridge Ave into the Subject Site is under investigation, and that this is likely to be a signalised 4-way intersection (also connecting into the lots to the south). However, at the time of writing, funding, timing and detailed design had not been confirmed. In any case, based on the traffic assessments undertaken, the proposal does not rely on such upgrade works.
	f. The discussion regarding the Cambridge Avenue Causeway indicates that the proposal will comprise only 1% of the traffic on the Causeway by 2024. It does not acknowledge that this traffic volume comprises of a much higher proportion of heavy vehicles than the through traffic on Cambridge Avenue. This will underestimate the impact on vehicle safety at the Causeway due to the current road geometry and restricted width at the Cambridge Avenue causeway and will result in more heavy vehicle passing heavy-vehicle conflict. The report cites a similar width bridge on Windsor Road and the high traffic volume it achieves. The report does not discuss heavy vehicle proportions at the two locations, nor does it discuss the accident history at the Windsor Road Bridge. With respect to the accident history for Cambridge Avenue, ARC indicates that "this is not an enviable crash record" and also that "it is difficult to pinpoint why so many accidents have occurred in what is generally a well-defined moderate speed road". As heavy vehicle numbers increase, the conflict and hence safety issues will increase. Added to this is the statement in the report that larger vehicles will be bringing material to the site, which needs to be included in any assessment of the Causeway.	The analysis documented within the Transport Assessment (Appendix 6 of the RTS dated 22 November 2021) demonstrates that the current operation of the weighbridges does not result in any traffic impact onto Cambridge Ave. Further, the operational particulars result in a theoretic capacity of the weighbridge to process approximately 90 vehicles per hour. Given that the existing peak hour volume of the Subject Site is recorded as 31 vehicles (outside road network peak hours), the weighbridge is capable of handling the existing demand as well as the projected demand of a 20% growth rate in five (5) years. (It is noted that the SSDA itself would not generate additional traffic compared to the existing Glenfield Waste Services facility).

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		Accordingly, the proposal will not increase the vehicular traffic generation of the Subject Site and as such it will not have any additional operational impact on Cambridge Ave.
	g. The report indicates that vehicles accessing the landfill will continue to enter and exit the site at Cambridge Ave while traffic accessing the Recycling Facility will enter from Cambridge Avenue and exit via the Railway Parade Roundabout (with the exception of B-Doubles, which will exit via Cambridge Avenue). It is unclear how vehicles will be managed on site to ensure that this happens. Given the need to reduce vehicle conflict on Cambridge Avenue, this is an essential part of this proposal. The applicant will need to submit a Traffic Management Plan to demonstrate how they will police these vehicle movements to ensure no additional burden on Cambridge Avenue due to turning vehicles.	In light of the future Cambridge Ave upgrades, it is expected that there will be two (2) stages of the Subject Site access strategy, as follows: ▪ Interim Site Access: During the interim stage (prior to the Cambridge Ave upgrade), the Subject Site would be accessed via the existing access road connecting to Cambridge Ave adjacent to the eastern boundary of the Subject Site. Temporary all-weather access roads would be connected to the existing permanent haul roads. ▪ Ultimate Site Access: Ultimately, the Subject Site would be accessed via the new signalised 4-way intersection at Cambridge Ave, while maintaining a left-in/left-out access on the eastern access and the current connection at the western access point. It is noted that public access is only via the eastern gatehouse. As noted above, the Cambridge Ave upgrade and new intersection are not part of this SSDA and would be subject to ongoing, post-approval consultation with TfNSW and future applications.
	h. The internal road is quite narrow and the proposed vehicles accessing the site are very large. It will be necessary to demonstrate that the vehicles can safely	Swept paths are provided as part of the Transport Assessment at Appendix 6 of the RTS dated 22 November 2021 and demonstrate that the proposed internal roads, and

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	negotiate the internal road network. Turning path diagrams for applicable vehicle sizes and speed environments are required.	all areas of the Subject Site accessible to vehicles, would accommodate the largest vehicle expected to access the Subject Site.
	i. To ensure that the vehicles from the Recycling Facility utilise the Railway Parade exit, it may be necessary to impose a condition of consent that requires the new weigh bridges (aligned to the new route) to be installed prior to operation.	As detailed in the Transport Assessment (Appendix 6 of the RTS dated 22 November 2021), vehicles entering and exiting the Subject Site would do so via the existing Cambridge Ave access point and weighbridges.
	j. The proposal is for 450,000 tonnes of material to be recycled. Current (2013) amount of recycled material is -140,000 tonnes of material. Hence the proposal will triple the site recycling. The Executive Summary of the report indicates that this will NOT result in a tripling of the vehicle movements associated with moving the material to the site as larger vehicles will be used. This argument is not supported with any reasons in the report. In fact, the discussion in the report seems to take a different approach. Unless there is a real reason for this assumption, it is considered reasonable that a tripling of the recycled materials will result in a tripling of the vehicles delivering such materials. This matter needs to be clarified.	As outlined in the Traffic Report for the original SSDA, traffic generation would not increase proportionally with the increased capacity of the facility as the trucks already travel to the Subject Site to access the Glenfield Waste Disposal Service. The proposal would support the separation of existing disposals.
	k. The traffic surveys undertaken do not break down vehicle types other than cars and trucks. As such, it is impossible to determine if the argument regarding larger vehicles (above) is feasible.	Currently, the vehicles entering the weighbridge are divided into the following coded categories: ▪ ACCRW: Account holders that weighs in and out; ▪ BINCHN: Seeking space provided to store their bins; ▪ CHARITY: Customer type is charity and code determines price i.e. no levy; ▪ EQPSV: Equipment service vehicle; ▪ NO_TIP: Customer did not tip; ▪ REWEIGH: Not an account holder that weighs in and out – cash sales; and ▪ VISIT: Visitors Logged as onsite.

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		Currently, approximately 90% of the average daily traffic volume accessing the weighbridges consists of ACCRW and REWEIGH customers. The remaining customers consist of 7% of BINCHN, 2% of VISIT, CHARITY and EQPSV, and 0.1% of N0_TIP customers. Further, approximately 42% of the overall vehicles are regular customers that attend the Subject Site more than once per week. The most common truck types accessing the Subject Site (accounting for 76% of vehicles) are generally 15-20m in length (including TRTRA, TRAIL, TRUCK and HOOK type trucks). Vehicles larger than 20m in length (B-Doubles) account for 5% of traffic, and vehicles smaller than 15m account for the balance of the traffic.
	l. Tables 4.3.1, 4.3.2.1, 4.3.2.2 and 4.3.3 indicate inbound and outbound trips. It is reasonable to assume that these should be equal. This would account for the minimum traffic generation of all exiting vehicles carrying a back load. While some vehicles may not leave the site fully laden, they will still leave the site. As such, the traffic generation will need to be re-assessed, giving regard to the number of back load trips and the number of empty vehicles arriving to fill up. Perhaps the current distribution of such vehicles may provide some guidance in this split.	The traffic generation counts presented within the Transport Assessment focus on trips occurring within the AM and PM peak hours of the facility. It is noted that not all vehicle trips (in and/or out) would occur during these periods.
	m. The TIA indicates that at least one of the concept designs for the high level bridge across the Georges River on Cambridge Avenue would necessitate closing access to the site via GWS Road 1. As such, it is recommended that this road connection is granted only until such time as bridge works commence. No permanent connection to Cambridge Avenue is to be permitted that may prejudice future bridge options.	The proposal incorporates an interim access solution, pending the future Cambridge Ave upgrades. The ultimate Subject Site access arrangements would be subject to ongoing, post-approval consultation with TfNSW and future applications.
	n. The TIA focuses on traffic. Another road related issue that will need to be addressed will be the road pavement of Cambridge Avenue. With the marked increase in heavy vehicle traffic, a road pavement assessment will need to be	Traffic generation would not increase proportionally with the increased capacity of the facility as the trucks already travel to the Subject Site to access the Glenfield Waste

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	undertaken and the suitability of the existing pavement evaluated in light of the increased loading. Any works, or contribution, required as a result of this increase will need to be apportioned to the GWS site.	Disposal Service. The proposed development would support the separation of existing disposals. Given there would be no additional traffic generation as a result of the proposal, upgrades to road pavements would not be required as part of the SSDA.
	o. The physical impact on the existing roundabouts either side of the rail bridge on Cambridge Avenue needs to be assessed. The significant increase in heavy vehicle movements will lead to additional shear forces on the pavement which will decrease the useful pavement life.	Traffic generation would not increase proportionally with the increased capacity of the facility as the trucks already travel to the Subject Site to access the Glenfield Waste Disposal Service. The proposed development would support the separation of existing disposals. Given there would be no additional traffic generation as a result of the proposal, upgrades to road pavements would not be required as part of the SSDA.
	p. Generally the report dismisses the traffic impact of this proposal by indicating that it is dwarfed by the greater impact of the Intermodal proposal and indicates that there is spare capacity at many of the existing intersections. While this may be accurate to some extent, this development still has a measurable impact and should contribute to any required road and traffic facility works required in proportion to the increase in road traffic load in the adjoining network. This should also include any contribution required for works on Moorebank Ave. Such apportionment of responsibility will need to be undertaken taking into account the impact of the Intermodal proposal and any other significant traffic generating developments proposed for the roads in this area.	Traffic generation would not increase proportionally with the increased capacity of the facility as the trucks already travel to the Subject Site to access the Glenfield Waste Disposal Service. The proposal would support the separation of *existing* disposals. Given there would be no additional traffic generation as a result of the proposal, upgrades to the surrounding roads and/or intersections would not be required as part of the SSDA.
	q. The proposal has analysed the intersections and a Give Way control is all that is proposed for the intersection of Cambridge Avenue and GWS Road 1 (the existing entrance to the landfill site). The traffic impacts of all intersections will need to be reassessed in light of the issues raised above.	Based on SIDRA modelling of the 2026 Project Case, whilst the Cambridge Ave/Eastern Site Access intersection is expected to operate at LOS F during the AM peak, it should be noted that the 76.5 second intersection delay during the AM peak is due to right turn movements from the Subject

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		Site access (approximately four (4) vehicles per hour). The delay time on Cambridge Ave is still satisfactory for both westbound (31.4 seconds, LoS C) and eastern traffic (12.6 seconds, LoS A). Additionally, despite the 76.5 second delay time, given the low right turn traffic demand, the 95th percentile queue length at the Eastern Site Access during the AM peak is expected to be only 2.6m. Therefore, it is deemed that the proposed development would not result in any material impact on the surrounding road network and key intersections. Furthermore, it is important to note that by the time Cambridge Ave is upgraded and new intersections are developed by TfNSW, the eastern access point will be reconfigured to left-in/left-out only which resolves the delay for the right turn movements.
	Environmental Report- Contamination, Soil and Water: 3. The EIS does not contain any real information regarding flooding on the site with the exception of a couple of statements regarding proximity of the Georges River. It is unlikely that the site would be impacted by flooding from the Georges River in the 1% AEP event.	The Subject Site is prone to flooding being adjacent to the Georges River with predicted flood levels at the Subject Site of approximately 12.0-12.5m AHD in the 1 in 100-year storm event as per the *Upper Georges River Flood Study* prepared by the Department of Land and Water Conservation in conjunction with Liverpool City Council in December 2000. The proposed building levels, ranging between 19.000 – 21.000 are well above the flood levels predicted in the *Upper Georges River Study* and there are no works proposed within 40m of Georges River.

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		Based on the above, the proposed development is not expected to change the level or frequency of floods along Georges River or impact other properties.
	2. Assessment of the overland flow on the site should be undertaken given the nature of the proposed site use and the proximity of the Georges River. It is considered essential that measures are in place to protect water quality. This assessment is to take into account the site proposals and define where overland flow is directed, conveyed, treated and discharged.	As detailed in the Civil Plans at Appendix 4 of the RTS dated 22 November 2021, overland flow would be directed around the perimeter of Warehouse B to the access road. The access road would provide a stormwater draining road area bypassing the OSD catchment area and discharging to a new kerb and drain in the existing road. Drainage would be provided for stormwater treatment. The treatment measures consist of rainwater tanks, pit filter baskets and a bio-retention basin. The combination of these measures provides a treatment train approach to the treatment of stormwater runoff. Further, the updated Soil and Water Management Plan (Appendix 5 of the RTS dated 22 November 2021), confirms that stormwater basin capacities have been calculated in accordance with Landcom *Managing Urban Stormwater-Soils and Construction* (2004) and are designed to accommodate runoff generated during the 90th percentile, five (5) day rainfall event. The inclusion of a provision for the chemical treatment of retained stormwater will ensure that discharge criteria can be met and also that stormwater dam capacity can be restored promptly following rain events. The expansion of the Northern basin (a factor of three (3) times larger than the design requirement) will significantly reduce the frequency of pumped discharges and overflows from the basin.

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	3. The structural design of the retention ponds is to be in accordance with the applicable engineering standards. Details of keying in, geotechnical properties of materials used, compaction standards, landscaping and all other details are to be provided for comment.	As detailed in the Civil Plans at Appendix 4 of the RTS dated 22 November 2021, the stormwater system incorporates above ground bio-retention and an onsite detention tank basin. Details of the design are shown in the Civil Plans (Appendix 6 of the RTS dated 22 November 2021).
	4. The document indicates that "overflows will not occur or pumping-off site be (sic) required" (Page 32). This is not considered plausible and a time series approach to water balance using a model like MUSIC will be required to demonstrate that a suitable design has been achieved.	Detailed modelling using the Council endorsed MUSIC software package, has been undertaken and details are provided in the Water Cycle Management Report at Appendix 3 of the RTS dated 22 November 2021.
	5. It appears the performance criteria (section 5.6) may be based on the document *Managing Urban Stormwater - Soils and Construction* which provides requirements for the construction phase (i.e. short duration) of works rather than permanent facilities. It will be necessary to take a first principles approach to water quality. This is particularly important given the proximity of the site to the Georges River.	As detailed in the Water Cycle Management Report at Appendix 3 of the RTS dated 22 November 2021, to ensure the quality of stormwater leaving the Subject Site is acceptable and meets Council's requirements, specific water quality treatment measures are to be employed. These treatment measures are to treat the collected stormwater runoff prior to discharge to the Council drainage or river system located near Cambridge Ave and Georges River. The treatment measures consist of Rainwater Tanks, Pit Filter Baskets and Bio-Retention Basin. The combination of these measures provides a treatment train approach to the treatment of stormwater runoff. Modelling of the proposed treatment measures has been undertaken using the MUSIC software package version 6.
	6. The plans provided are very basic but indicate that there is a single swale on the north and western side of the haul road, directing flows to the water quality control ponds. The site generally grades in this direction. There are concerns that to get to this swale, surface flows will traverse the whole site, maximising the mobilisation of sediment and other pollutants. It also means that in times of continuing rain, the haul road will be subjected to surface flows, which may increase the amount of material picked up on vehicle wheels and transported off site. Details of the stormwater system are to be provided and must address the above concerns.	The drainage of the Subject Site drains below Cambridge Ave via an existing culvert that will drain to the OSD that is located on the southern side of Cambridge Ave. The proposed point of discharge is located south of Cambridge Ave to a creek that branches off of Georges River. Tailwater levels have been assumed with the 100yr ARI Tailwater level set at the top of bank. DRAINS modelling is

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		detailed in the Water Cycle Management Report at Appendix 3 of the RTS dated 22 November 2021.
	7. The document proposes that the roads within the site will be unsealed. This then necessitates the haul road to be wetted down multiple times a day to suppress dust. This is not seen as a viable option and the internal haul road is to be a fully engineered pavement and sealed to minimise the transport of material on vehicle wheels to the public road system. As the storage areas will not be sealed, it will also be necessary to provide a system to remove material from vehicle wheels before leaving the storage areas and entering the haul road.	As part of the amended proposal, all roads would be sealed (temporary all-weather access roads (supported by water carts).
	8. The proposed basins are intended to be kept as full as possible to maximise water reuse on site. While this is a good objective in terms of minimising potable water usage, it is at odds with water quality objectives. Maximising water storage will lead to the basins overtopping when periods of extended rainfall occur. The applicant is to ensure that the water quality objectives are met at all times.	The updated Soil and Water Management Plan (Appendix 5 of the RTS dated 22 November 2021), confirms that stormwater basin capacities have been calculated in accordance with Landcom *Managing Urban Stormwater-Soils and Construction* (2004) and are designed to accommodate runoff generated during the 90th percentile, five (5) day rainfall event. The inclusion of a provision for the chemical treatment of retained stormwater will ensure that discharge criteria can be met and also that stormwater dam capacity can be restored promptly following rain events. The expansion of the Northern basin (a factor of three (3) times larger than the design requirement) will significantly reduce the frequency of pumped discharges and overflows from the basin. A water quality monitoring programme is currently in place at the Subject Site including the monitoring of stormwater basins and stormwater discharges from the Subject Site. It is recommended that the current programming be expanded to include regular monitoring of retained stormwayer, overflow, pumped discharges and storage levels in each stormwater basin.

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	9. The stormwater quantity and quality are being treated and stored in combined basins. This is not considered appropriate (as the requirements are contradictory) and it may be necessary to separate these two processes to ensure that each is adequately addressed.	Details of stormwater management, including re-use, quality and quantity, are provided in the Water Cycle Management Report at Appendix 3 of the RTS dated 22 November 2021, Civil Plans at Appendix 4 of the RTS dated 22 November 2021 and Soil and Water Management Plan at Appendix 5 of the RTS dated 22 November 2021.
Liverpool City Council	Council recommends the implementation of the recommendations from the Acoustic Report, Fire and Hazard Preliminary Risk Assessment, Air Quality and Odour Assessment, and Environment Reports on contamination, soil, water and greenhouse gas emissions.	The recommendations of the respective technical assessments would be implemented accordingly.
	All consent conditions should be consistent with the Environment Protection Licence issued by the EPA.	The development would be carried out in accordance with the conditions of consent and Environment Protection Licence.
Public Submissions	One (1) submission communicates support for the Proposal as there is a need to facilitate increased recycling and reduced landfill. Support is communicated also on the grounds of environmental benefits, employment opportunities and associated economic benefits, and sustainable growth.	The support for the proposal is acknowledged. It is echoed that the proposal would promote significant positive environmental impacts through increased recycling and a corresponding reduction in landfill. With respect to the employment and economic benefits, it is noted that the proposal is anticipated to generate 300 FTE jobs during construction and employ 20 staff during operation.
	The existing facility should not be allowed any further expansion, but rather should be re-located to a less-populated location that is further distanced from residential areas.	It is acknowledged that Glenfield has experienced urban sprawl, and that as a result residential development is now situated in the general vicinity of the Subject Site including to the south of Cambridge Ave and west of the railway. Notwithstanding, the historic use of the Subject Site has been for a landfill facility, operated by Glenfield Waste Services. The proposed materials recycling facility would be

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		contained within the existing boundary of the Glenfield Waste Services Site. The proposal would complement the existing operations of Glenfield Waste Services, by providing a recycling option for materials that are already being transported to the Subject Site. The proposal would increase the proportion of recycling undertaken at the Subject Site and correspondingly reduce the proportion of waste sent to landfill. Accordingly, the proposal would support the more sustainable management of waste, on a site that is already used for waste services. In addition, the assessments supporting this Amendment Report, including noise and air quality impact assessments, demonstrate the proposal would have no unacceptable impact on the amenity of any residential properties. The Subject Site is therefore suitable for the proposed development.
	Glenfield has developed as a residential area and any waste processing plants should be prohibited.	As above, it is acknowledged that Glenfield has experienced residential growth. The Subject Site is however zoned IN1 General Industrial. The IN1 zone is a Prescribed Zone for the purpose of Part 3, Division 23 of the ISEPP and accordingly development for the purpose of Waste or Resource Management Facilities is permitted with consent.
	The proposal would have a negative environmental impact and would negatively impact on the residential areas and property values.	The assessments supporting this Amendment Report, demonstrate the proposal would have no unacceptable impact on the environment or amenity of any residential properties.

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	The facility may generate odour (including from green waste) and noise (including from truck movements) and attract birds and insects which have the potential to spread disease.	The amended proposal represents industry best practice, as achieved through the internalisation of all operational areas and stockpiles within enclosed warehouses. In addition, all roads and hardstand areas would be sealed (temporary all-weather access roads). Further, the elimination of green waste and VENM, would reduce the scale and extent of associated impacts. These measures would minimise and mitigate potential pollution, including noise, odour and dust. The Noise Assessment (Appendix 7 of the RTS dated 22 November 2021) concludes that noise levels are predicted to comply with relevant criteria at all receivers during the daytime and evening periods. Road traffic noise impact associated with the proposal is expected to be minimal given the relatively small increase in proposed traffic volumes compared to existing volumes. In addition, an Operational Noise Management Plan would be prepared prior to commencement of operations and would include protocols for monitoring and reporting noise emission levels, the effectiveness of mitigation measures, and any noise complaints. The Air Quality Impact Assessment (Appendix 8 of the RTS dated 22 November 2021) confirms that the proposal would achieve compliance with relevant criteria. In accordance with the recommendations of the Air Quality Assessment, an Air Quality Management Plan would be implemented. Whilst the potential for odour nuisance complaints is considered very low, an odour complaints procedure would

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		be implemented as part of the Air Quality Management Plan. Accordingly, odour, noise and other pollutants would not unacceptably impact on human health, residential amenity of the environment.
	Dust and pollutants would pose a risk to human health. All roads should be properly sealed, not gravel.	The amended proposal has been designed to incorporate best practice particulate matter control, which includes the performance of all activities within enclosed, hardstand sheds. All roads and hardstand areas would be sealed (temporary all-weather access roads). The Air Quality Impact Assessment (Appendix 8 of the RTS dated 22 November 2021) confirms that the proposal would achieve compliance with relevant criteria. In accordance with the recommendations of the Air Quality Assessment, an Air Quality Management Plan would be implemented. Accordingly, dust and other pollutants would not unacceptably impact on human health, residential amenity of the environment.
	Concern is raised regarding soil and water impacts and the potential for contamination to 'leak' to the residential area.	Soil and water management have been addressed in the amended proposal, including through the enclosure of stockpiles and processing areas, and elimination of green waste and VENM. As green waste is no longer proposed to be received by the facility, leachate would no longer be a concern.

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		It is also noted that the proposal is for a recycling facility and would not accept contaminated waste. Given all processing and stockpiling would be wholly contained within enclosed hardstand warehouses, impacts to soil and water would be avoided. Bunding of the Subject Site would prevent runoff.
	The proposal would result in the loss of the visual and noise buffer to the existing facility, resulting in the facility encroaching on the edge of Glenfield.	Noise and air quality have been addressed in the amended proposal, including through the enclosure of stockpiles and processing areas, and elimination of green waste and VENM. The noise and air quality assessments (Appendices 7 and 8 of the RTS dated 22 November 2021) confirm that compliance with the relevant criteria would be achieved, and the recommended management plans would be adopted. Accordingly, the proposal would not unacceptably impact on nearby residential areas, the local centre or the surrounding environment. The visual impact of the proposal would be mitigated by landscaping adjacent to Cambridge Ave within the 10m setback zone.
	The Proposal has not been adequately justified. The submission notes that Council had proposed to rezone the Site for open space to maintain the buffer between the residential and industrial areas and protect the remnant Cumberland Plain Woodland.	The Subject Site retains its IN1 zoning and there is no current rezoning proposal or publicly-exhibited plans by Council relating to the reclassification of the land for open space. In accordance with the provisions of *State Environmental Planning Policy (Transport and Infrastructure)* 2021 (Transport and Infrastructure SEPP), the Subject Site is

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
		therefore zoned for the purposes of Waste or Resource Management Facilities. Accordingly, it is not a relevant consideration to 'weigh' the environmental benefits of a recycling facility versus open space. In any case, it is noted that the proposal would promote significant positive environmental impacts through increased recycling and a corresponding reduction in landfill. As detailed in this Amendment Report and its Appendices, the proposal would have no unacceptable impact on the environment or amenity of any residential properties.
	The loss of so much Cumberland Plain Forest would be unacceptable.	The extent of vegetation clearing has been reduced by approximately 2.5ha, from 9.5ha down to 7.05ha. This vegetation includes both State listed Cumberland Plain Woodland CEEC, and Federally listed Cumberland Plain Shale Woodlands and Shale Gravel Transition Forest CEEC. The BDAR (Appendix 9 of the RTS dated 22 November 2021) describes that within the development footprint, the majority of the CEEC is in poor condition with a depauperate shrub layer and a managed and grazed ground layer that has a high abundance of exotic species. Notwithstanding the poor condition of the CEEC to be impacted, the BOS is automatically triggered as the project is SSD. Accordingly, the BDAR calculates the credits required to be purchased in accordance with the BAM.

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
	Concern is raised regarding the environmental impact on koalas, wildlife and the Georges River.	Noise, air quality, soil and water management and ecological impacts, have been addressed in the amended proposal, including through the enclosure of stockpiles and processing areas, and elimination of green waste and VENM. This would avoid adverse environmental impacts to the Georges River and wildlife. With respect to koalas specifically, the BDAR (Appendix 9 of the RTS dated 22 November 2021) includes an assessment pursuant to the *Campbelltown Comprehensive Koala Plan of Management 2018*. Based on Council's mapping, the Site is *not* identified as Core Koala Habitat, but *is* mapped as Potential Koala Habitat. As such, the BDAR acknowledges the requirement for a Vegetation Assessment Report and Koala Activity Assessment Report. Based on the surveys undertaken by Travers (author of the BDAR), no koala activity was recorded in the form of scats, tree scratches or visual observations. No records of koalas have been made in the development footprint within the last 18 years. One (1) record of a koala was made within the study area in 2017; this was a road-kill located in the north of the study area, between the train line and the waste management facility. Notwithstanding, the BDAR acknowledges that there is a strategic linkage from the eastern riparian zone into the study area, and that Council would therefore need to be satisfied that the proposal will not sever or otherwise

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
		interfere with the movement of koalas within an identified strategic linkage area.
	Objection is raised to asbestos or dangerous materials which would be detrimental to human health. It is queried whether truck loads would be monitored prior to dumping.	The proposed facility would not accept asbestos or dangerous goods. All material entering the facility would be visually inspected upon arrival. It is anticipated that majority of the material received will be source separated, however there will be capacity to sort mixed loads.
	Trucks exiting the Site leave mud on Cambridge Ave and exit at dangerous speeds.	Wheel wash areas will be provided accordingly for truck wash downs. Drainage for these areas will be segregated from the stormwater system with contaminated water treated appropriately on Site prior to disposal in accordance with EPA requirements and will be finalized at the detailed design stage. Truck drivers would be expected to drive safely and to adhere to speed limits.
	The Proposal would cause increased traffic congestion. The Traffic Report has not accounted for significant residential growth in the area. Congestion is already experienced on Cambridge Ave and Railway Pde during the morning and afternoon peak hours, including as a result of the nearby school and school zones. As Glenfield Causeway cannot be used by trucks, additional pressure would be placed on the existing roundabout. Without further road infrastructure development, the impact on Glenfield would be unacceptable. Trucks should be restricted to accessing the Site via Moorebank Ave and should not be allowed to use residential streets.	To assess potential impacts of the proposed development, SIDRA analysis has again been undertaken for a future 2026 Project Case scenario. Strategic future year traffic projects (EMME data) have been obtained from TfNSW for the core study network, in light of the rezoning and population projections for the adjacent Glenfield Precinct over the next 10-20 years. In summary, with the exception of the Cambridge Ave/Eastern Site Access during the AM peak, all other key intersections are expected to operate at a satisfactory Level of Service (LoS C or better) during the AM and PM peak hours.

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
		Whilst the Cambridge Ave/eastern access intersection is expected to operate at LOS F during the AM peak, it should be noted that the 76.5 second intersection delay during the AM peak is due to right turn movements from the Subject Site access (approximately four (4) vehicles per hour). The delay time on Cambridge Ave is still satisfactory for both westbound (31.4 seconds, LoS C) and eastern traffic (12.6 seconds, LoS A). Additionally, despite the 76.5 second delay time, given the low right turn traffic demand, the 95th percentile queue length at the eastern access during the AM peak is expected to be only 2.6m. Therefore, it is deemed that the proposed development would not result in any material impact on the surrounding road network and key intersections. Furthermore, it is important to note that by the time Cambridge Ave is upgraded and new intersections are developed by TfNSW, the eastern access point will be reconfigured to left-in/left-out only which resolves the delay for the right turn movements. In summary, the proposal will not increase the vehicular traffic generation of the Subject Site and as such it will not have any additional operational impact on Cambridge Ave.
	The importance of adhering to hours of operation is highlighted.	The hours of operation for the proposal would be generally consistent with the established Glenfield Waste Services, as the main entry, gatehouse infrastructure and personnel, would be shared. Accordingly, the facility is proposed to operate between the hours of 6:30am to 4:30pm Monday to Friday and 8am to 4pm on Saturdays. Access until 6pm

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		Monday to Friday would be required for maintenance. Occasional out-of-hours deliveries and dispatch would be required to cater for night road works and similar operations.
Industry Stakeholder Submissions	The submission communicates support for the Proposal.	The support for the proposal is acknowledged.
	The Proposal is understood to not impact on SIMTA's projects, including SIMTA's use of part of the Glenfield Waste Services Site for freight rail. The Proposal would be complementary to SIMTA's projects.	It is echoed that the proposal would complement other industry and intermodal projects in the area and would continue to support the use of the freight rail by other industry stakeholders.
	The Proposal would reduce the impact of vehicles on the road as the recycled building materials produced would be in closer proximity to demand, reducing the distances trucks are required to travel between production and consumption. SIMTA shares the Proposal's interest in improving logistical efficiencies.	It is echoed that the proposal would support logistical efficiencies and would reduce travel distances between points of source and consumption for recycled building materials.
	The Proposal provides necessary infrastructure for South West Sydney and would be in accordance with Council's Growth Strategy and the OEH Resource Recovery Infrastructure Needs Analysis.	In accordance with Council's Growth Strategy, the proposal would provide infrastructure and employment opportunities, thereby complementing the growth of Campbelltown and Glenfield. Further, the OEH Resource Recovery Infrastructure Needs Analysis identified that South West Sydney would require 400,000t additional capacity for C&I waste processing; which the proposal would provide.
	Increased resource recovery of C&I and C&D waste is a strategic priority of NSW Government identified in NSW 2021, the NSW Waste Avoidance and Resource Recovery Strategy and the Macarthur Regional Waste Avoidance and Resource Recovery Strategy.	The proposal would support increased resource recovery and reduced landfill, in accordance with NSW Government priorities and targets.
	It is increasingly challenging to establish new landfills, and accordingly it is increasingly important and in the community interest to extend the life of existing facilities by reducing landfill and increasing the share of recycling.	It is echoed that the proposal would support reduced landfill and increased recycling, through the efficient and strategic use of an existing waste facility.
	The Proposal would provide many environmental and economic benefits to industry, including through resource recovery as a substitute for a primary resource that is in closer proximity to the source of demand and also through the recovery of finite	It is echoed that the proposal would support significant environmental and economic benefits through resource recovery.

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
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	resources for which growing demand is anticipated in accordance with the growth of South West Sydney and associated consideration projects.	
OEH & DPE	There is discrepancy between the vegetation to be impacted and the development footprint, as the proposed vegetation clearance is approximately twice the area of the development footprint. OEH does not support the clearing of more vegetation than what is required for the SSDA. Impacts must first be avoided through mitigation measures *before* offsets are considered for the remaining impacts. Similarly, DPIE stated that vegetation clearing must be sufficiently connected to the SSDA. As such, the SSDA needs to demonstrate that it has avoided impacts to the native vegetation on the Site.	The extent of vegetation clearing has been reduced by approximately 2.5ha, from 9.5ha down to 7.05ha. The vegetation to now be cleared connects directly to the proposed development. Accordingly, the impacts of the proposal to native vegetation have been minimized. For the remainder of the vegetation clearance area, offsets would be provided in accordance with the BDAR at Appendix 9 of the RTS dated 22 November 2021.
	Clarity is required regarding the intent for the 1.91ha area of the 'vegetation rehabilitation area'. If this area is proposed to be cleared, Biobanking Credits need to be calculated and included in the offset requirements for the Project.	The intention is for the Vegetation Rehabilitation Area to not be cleared.
	Further consideration is required as to the potential impact on koalas, given that koalas have been recorded in the area.	The BDAR (Appendix 9 of the RTS dated 22 November 2021) includes an assessment pursuant to the *Campbelltown Comprehensive Koala Plan of Management 2018*. Based on Council's mapping, the Subject Site is not identified as Core Koala Habitat, but *is* mapped as Potential Koala Habitat. As such, the BDAR acknowledges the requirement for a Vegetation Assessment Report and Koala Activity Assessment Report. Based on the surveys undertaken by Travers (author of the BDAR), no koala activity was recorded in the form of scats,

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		tree scratches or visual observations. No records of koalas have been made in the development footprint within the last 18 years. One (1) record of a koala was made within the study area in 2017; this was a road-kill located in the north of the study area, between the train line and the waste management facility. Notwithstanding, the BDAR acknowledges that there is a strategic linkage from the eastern riparian zone into the study area, and that Council would therefore need to be satisfied that the proposal will not sever or otherwise interfere with the movement of koalas within an identified strategic linkage area.
EPA & DPE	The EPA has recommended that the Proposal should be in an enclosed building and on suitable hardstand, to meet industry best practice. This would significantly reduce the environmental risks to water, noise and air (including odour) pollution from the Proposal.	The amended proposal internalizes all stockpiles and all operational facilities within two (2) warehouse buildings. The warehouses would accommodate the following: ▪ Stockpiles; ▪ Crushing/grinding; ▪ Tipping and sorting; ▪ Waste bins; and ▪ Truck lanes. The external areas of the Subject Site would serve vehicular circulation only and would include sealed hardstand (temporary all-weather access roads). The enclosure of all operational areas and stockpiles directly responds to the recommendations of DPE and the EPA and would achieve industry best practice.

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
	To meet the objectives of the POEO Act, the Proposal must achieve best practice. All practical measures should be taken to prevent, control, abate or mitigate pollution. The *Standards for Managing Construction Waste in NSW* under the new POEO Waste Regulation, must be complied with.	As described above, the proposal represents industry best practice, as achieved through the internalisation of all operational areas and stockpiles within enclosed warehouses. In addition, all roads and hardstand areas would be sealed (temporary all-weather access roads). Further, the elimination of green waste and VENM, would reduce the scale and extent of associated impacts. These measures would minimise and mitigate potential pollution, including noise, odour and dust.
	The Proposal would need to be designed in accordance with fire safety codes, including the new *E110 – National Construction Codes*.	The amended proposal has been designed to be capable of compliance with current fire safety standards. It is requested that this is included as a condition of consent.
EPA, DPE and Campbelltown City Council	The EPA has recommended that the Proposal should be in an enclosed building and on suitable hardstand, to meet industry best practice. This would significantly reduce the environmental risks to water, noise and air (including odour) pollution from the Proposal.	The amended proposal internalizes all stockpiles and all operational facilities within two (2) warehouse buildings. The warehouses would accommodate the following: ▪ Stockpiles; ▪ Crushing/grinding; ▪ Tipping and sorting; ▪ Waste bins; and ▪ Truck lanes. The external areas of the Subject Site would serve vehicular circulation only and would include sealed hardstand (temporary all-weather access roads). The enclosure of all operational areas and stockpiles directly responds to the recommendations of DPE and the EPA and would achieve industry best practice.

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	To meet the objectives of the POEO Act, the Proposal must achieve best practice. All practical measures should be taken to prevent, control, abate or mitigate pollution. The *Standards for Managing Construction Waste in NSW* under the new POEO Waste Regulation, must be complied with.	As described above, the proposal represents industry best practice, as achieved through the internalisation of all operational areas and stockpiles within enclosed warehouses. In addition, all roads and hardstand areas would be sealed (temporary all-weather access roads). Further, the elimination of green waste and VENM, would reduce the scale and extent of associated impacts. These measures would minimise and mitigate potential pollution, including noise, odour and dust.
	The EPA has recommended that the enclosure of the processing areas would be required to adequately mitigate noise and achieve industry best practice. The use of stockpiles as noise barriers is not appropriate for ongoing operations.	The amended proposal internalizes all stockpiles and all operational facilities. The external areas of the Subject Site would serve vehicular circulation only and would include sealed hardstand (temporary all-weather access roads). The enclosure of all operational areas and stockpiles directly responds to the recommendations of DPE and the EPA, and would achieve industry best practice. Therefore, stockpiles are no longer proposed to be used as noise barriers.
	Compliance with the *Noise Policy for Industry* project noise trigger levels, would need to be demonstrated. This would include demonstrating that all reasonable and feasible mitigation measures have been investigated prior to assessing residual impacts. The acoustic assessment would also need to account for (and justify): ▪ Volume of heavy vehicles accessing the site. ▪ Equipment fleet noise levels. ▪ Maintenance activities between 4:30pm-6pm.	The Noise Assessment includes an assessment of the operational scenario for the proposal, against the EPA's *NSW Noise Policy for Industry* (NPfI) and confirms compliance with all Project Trigger Noise Levels (PTNLs) at all times for all receivers. Informing this assessment, the Noise Assessment documents all acoustically significant plant and equipment proposed for use during the daytime and evening,

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SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
	▪ Equipment sound power levels.	respectively. The corresponding sound power levels are documented in Appendix B of the Noise Assessment. An assessment of road traffic noise has also been provided, based on the volume of heavy vehicles predicted to access the facility. Road traffic noise impact associated with the proposal is expected to be minimal given the relatively small increase in proposed traffic volumes compared to existing volumes.
	The EPA has recommended that the enclosure of the processing areas would be required to adequately mitigate dust and odour and achieve industry best practice.	The amended proposal internalizes all stockpiles and all operational facilities. The external areas of the Subject Site would serve vehicular circulation only and would include sealed hardstand (temporary all-weather access roads). The enclosure of all operational areas and stockpiles directly responds to the recommendations of DPE and the EPA and would achieve industry best practice.
	Additionally, the EPA requires all hardstand areas and roads to be sealed. Any unused external surfaces must be sealed hardstand or vegetated.	All roads and hardstand areas would be sealed, in accordance with best practice (temporary all-weather access roads).
	The air quality assessment should consider the following: ▪ Emissions/particulates associated with roads and hardstand areas. ▪ Wind erosion from stockpiles. ▪ Emissions estimates for conveyor transfer to stockpiles. ▪ Emissions estimates for crushing operations. ▪ Emissions estimates for haulage.	The Air Quality Impact Assessment includes assessment of emissions/particulates resulting from the following sources: ▪ Wheel-generated particulate emissions from trucks and other vehicles on paved road surfaces and temporary unpaved road surfaces; ▪ Particulate emissions from the unloading and loading of materials; ▪ Particulate emissions from the handling of materials by front-end loaders and excavators;

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
		▪ Particulate emissions from the operation of the pulveriser, crusher, screen and shredder; and ▪ Particulate emissions from materials storage areas generated by wind erosion. It is noted that, given that all operations and stockpiles would be internalised within enclosed warehouses in accordance with industry best practice, associated emissions would be minimised.
	All potential odour sources need to be identified and detailed management measures developed. There is significant risk of offensive odours owing to large volumes of green waste. All input and output files used in the dispersion modelling should be included.	The proposed Materials Recycling Facility would process non-putrescible solid waste, consisting of C&D waste, C&I waste and ENM, only. The amended SSDA excludes VENM, green waste and other materials. This would reduce associated odours. Whilst the potential for odour nuisance complaints is considered very low, an odour complaints procedure would be implemented as part of the Air Quality Management Plan. A full description of the emission sources included in the assessment, and the emission factors and assumptions adopted, are presented in Appendix C of the Air Quality Impact Assessment.
	The EPA has identified the need for mitigation measures to be adopted to manage potential water pollution risks.	All previously identified water management risk items, would be mitigated through the enclosure of the warehouses and sealing of paved areas of the Site. Stormwater would be collected from the roof and hardstand for capture and re-use in dust mitigation and non-potable uses. Details of stormwater management, including re-use, quality and quantity, are provided in the Water Cycle

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
		Management Report at Appendix 3 of the RTS dated 22 November 2021, Civil Plans at Appendix 4 of the RTS dated 22 November 2021 and Soil and Water Management Plan at Appendix 5 of the RTS dated 22 November 2021. As green waste is no longer proposed to be received by the facility, leachate would no longer be a concern.
	The quality and impact of discharges require consideration pursuant to Section 45 of the POEO Act. Water quality treatment would be required for overland flow and any water directed to the Georges River or other waterways. Council recommends that the *Landcom Stretch Targets for Water Quality* are adopted to assess water quality treatment measures.	All previously identified water management risk items, would be mitigated through the enclosure of the warehouses and sealing of paved areas of the Site. Stormwater would be collected from the roof and hardstand for capture and re-use in dust mitigation and non-potable uses. Details of stormwater management, including re-use, quality and quantity, are provided in the Water Cycle Management Report at Appendix 3 of the RTS dated 22 November 2021, Civil Plans at Appendix 4 of the RTS dated 22 November 2021 and Soil and Water Management Plan at Appendix 5 of the RTS dated 22 November 2021. As green waste is no longer proposed to be received by the facility, leachate would no longer be a concern.
	The *Environmental Guidelines, Composting and Related Organics Processing Facilities* (DEC 2004) should be complied with, particularly in relation to the sizing of leachate dams and the design of the working surfaces and leachate barrier of the organics storage and processing areas. DPIE asserted that the removal of green waste would significantly reduce leachate management requirements.	As green waste is no longer proposed to be received by the facility, leachate would no longer be a concern.
	The EPA has raised concerns around the calculation of stormwater capacity and re-use onsite.	Details of stormwater management, including re-use, quality and quantity, are provided in the Water Cycle Management Report at Appendix 3 of the RTS dated 22

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
		November 2021, Civil Plans at Appendix 4 of the RTS dated 22 November 2021 and Soil and Water Management Plan at Appendix 5 of the RTS dated 22 November 2021.
	Internal haul roads should be sealed as water spray dust suppression is not considered viable (particularly owing to potential contaminated particulates).	All internal roads would be sealed (temporary all-weather access roads).
	A vehicle wheel wash facility should be installed in accordance with best practice.	Wheel wash areas will be provided accordingly for truck wash downs. Drainage for these areas will be segregated from the stormwater system with contaminated water treated appropriately on the Subject Site prior to disposal in accordance with EPA requirements and will be finalized at the detailed design stage.
DPE and Campbelltown City Council	The increase in local traffic, including trucks, will intensify noise and vibration and impact on amenity for local residents. The environmental conditions of the local road system should be considered in the context of the RMS traffic volume thresholds. The impacts of increased traffic generation and car parking must be accommodated, in accordance with RMS and Council requirements. Safety for pedestrians and vehicles accessing the site would also require consideration.	Traffic generation would not increase proportionally with the increased capacity of the facility as the trucks already travel to the Subject Site to access the Glenfield Waste Disposal Service. The proposal would support the separation of *existing* disposals. To assess potential impacts of the proposed development, SIDRA analysis has again been undertaken for a future 2026 Project Case scenario. Strategic future year traffic projects (EMME data) have been obtained from TfNSW for the core study network, in light of the rezoning and population projections for the adjacent Glenfield Precinct over the next 10-20 years. In summary, with the exception of the Cambridge Ave/Eastern site Access during the AM peak, all other key intersections are expected to operate at a satisfactory Level of Service (LoS C or better) during the AM and PM peak hours.

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
		Whilst the Cambridge Ave/Eastern Site Access intersection is expected to operate at LOS F during the AM peak, it should be noted that the 76.5 second intersection delay during the AM peak is due to right turn movements from the Subject Site access (approximately four (4) vehicles per hour). The delay time on Cambridge Ave is still satisfactory for both westbound (31.4 seconds, LoS C) and eastern traffic (12.6 seconds, LoS A). Additionally, despite the 76.5 second delay time, given the low right turn traffic demand, the 95th percentile queue length at the eastern site Access during the AM peak is expected to be only 2.6m. Therefore, it is deemed that the proposed development would not result in any material impact on the surrounding road network and key intersections. Furthermore, it is important to note that by the time Cambridge Ave is upgraded and new intersections are developed by TfNSW, the eastern access point will be reconfigured to left-in/left-out only which resolves the delay for the right turn movements. In summary, the proposal will not increase the vehicular traffic generation of the Site and as such it will not have any additional operational impact on Cambridge Ave. With respect to car parking, the Transport Assessment confirms that as trip generation is estimated to remain consistent with the current operations, minimal demand for car parking would be generated.

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
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		As such, the parking rates under CDCP2015 would not be applicable in light of the specific operational particulars of the proposal. (It is also noted that CDCP2015 provides general industrial rates only and no rates specifically for a materials recycling facility). Notwithstanding, for reference purposes the CDCP2015 industrial rates have been applied to the proposed built form, resulting in a calculated requirement for 312 parking spaces. In response, the proposal provides 256 parking spaces with additional spare capacity provided informally across the Site. Whilst representing a numeric shortfall compared to the CDCP2015 rates, it is noted that the Subject Site would accommodate the estimated peak of 20 staff. Therefore, it is reasonable to expect that the on-Site car parking demand of the Subject Site would remain minimal and the theoretic parking requirements as per CDCP2015 are surplus to the actual parking demand. It is noted that the proposal would not increase the staff numbers. As such, the development proposes a total of 24 formally line marked on-site car parking spaces. Furthermore, a total provision of 256 car parking spaces have been indicatively allowed for in the event that Council would require additional spaces for future proofing of the Subject Site. It is considered that the 24 spaces would sufficiently accommodate the parking demand of this SSD with no adverse parking impacts on the surrounding road network based on the immediate operation of the development.

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
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		Adopting the BCA requirement for one (1) in 100 spaces to be accessible, a minimum of three (3) accessible spaces would be required.
	Council is the road authority responsible for approving the B-Double route on Railway Parade, and an application would need to be made accordingly.	TfNSW already identifies Campbelltown Road as a 25/26m B-doubles route and part of Cambridge Ave as a heavy vehicle approved route with travel conditions.
	Council requested a road pavement assessment, noting that heavy vehicle routes along Cambridge Ave have *not* been approved for the Moorebank Intermodal.	It is considered appropriate for a Road Pavement Assessment to be included as a condition of consent, if required.
	Potential vehicle conflict on the Cambridge Ave causeway should be addressed.	The analysis documented within the Transport Assessment (Appendix 6 of the RTS dated 22 November 2021) demonstrates that the current operation of the weighbridges does not result in any traffic impact onto Cambridge Ave. Further, the operational particulars result in a theoretic capacity of the weighbridge to process approximately 90 vehicles per hour. Given that the existing peak hour volume of the Subject Site is recorded as 31 vehicles (outside road network peak hours), the weighbridge is capable of handling the existing demand as well as the projected demand of a 20% growth rate in five (5) years. (It is noted that the SSD itself would not generate additional traffic compared to the existing Glenfield Waste Services facility). Accordingly, the proposal will not increase the vehicular traffic generation of the Subject Site and as such it will not have any additional operational impact on Cambridge Ave.
	Council has requested that there are no permanent connections to Cambridge Ave that may prejudice future Georges River bridge options.	No new connections are required given the Subject Site will be accessed via the existing access road connecting to

TABLE 2: RESPONSE TO AGENCY SUBMISSIONS		
SUBMITTER	**COMMENTS / REQUESTS**	**FORMAL RESPONSE**
		Cambridge Ave adjacent to the eastern boundary of the Subject Site.
	DPIE raised concern around internal truck manouvring areas and requested detailed plans.	The amended proposal includes a new internal road layout, which would be finalised in conjunction with the future subdivision DA. Internal roads and truck manoeuvring areas are shown in the Architectural Drawings at Appendix 2 of the RTS dated 22 November 2021.

PART D SUMMARY OF CHANGES

In response to the consultation undertaken with DPE throughout 2022, the proposed development has been amended to be significantly reduced in scale. The following subsections outline the project amendments and an updated environmental assessment and/or commentary.

4.1 PROJECT DESCRIPTION

Development consent is sought for the construction and operational use of a Materials Recycling Facility, incorporating the functions of a Resource Recovery Facility and a Waste or Resource Transfer Station in accordance with the Standard Instrument LEP.

Waste streams to be processed by the facility would include the following:

- C&D waste;
- C&I waste; and
- ENM.

Specifically, the proposal would include bulk earthworks, tree removal, civil works, servicing, construction of built form, installation of ancillary structures, construction of internal access roads, landscaping, and signage.

Key aspects of the proposal are detailed in **Sections 4.1.1 – 4.1.5** below.

4.1.1 Layout and Design

Whilst the design of the original proposal included external hardstand, the amended design internalizes all stockpiles and all operational facilities within two (2) warehouse buildings. The warehouses would accommodate the following:

- Receipt of waste;
- Tipping and sorting;
- Crushing/grinding;
- Stockpiles;
- Waste bins; and
- Truck lanes.

One (1) warehouse (Warehouse A, being the eastern most warehouse) would accommodate the initial receipt and sorting of all materials, and the second warehouse (Warehouse B, being the western most warehouse) would be used for materials processing, recycling, and then handling and storage pending sale.

The external areas of the Subject Site would serve vehicular circulation only. Bunding of the Subject Site would prevent runoff. Stormwater collection would be facilitated via water harvesting and collected water would be re-used for dust suppression or transferred to a stormwater treatment pond in the Glenfield Waste Disposal facility.

Landscaping would be provided adjacent to the Cambridge Ave frontage.

Overall, the scope of works proposed as part of the SSDA includes the following:

- Clearing and grading of the Subject Site;

- Mulching and recycling of trees;
- Installation of stormwater harvesting and management systems;
- Provision of other utility services (electricity, communications, etc) as required;
- Spreading and compaction of hardstands;
- Construction of internal roads and parking area;
- Construction of built form;
- Installation of operational fixtures including office and weighbridge; and
- Landscaping, fencing and signage.

The layout and design of the proposal as amended is shown in the Architectural Drawings at **Appendix B1**, and the Site Plan is provided in **Figure 1** below.

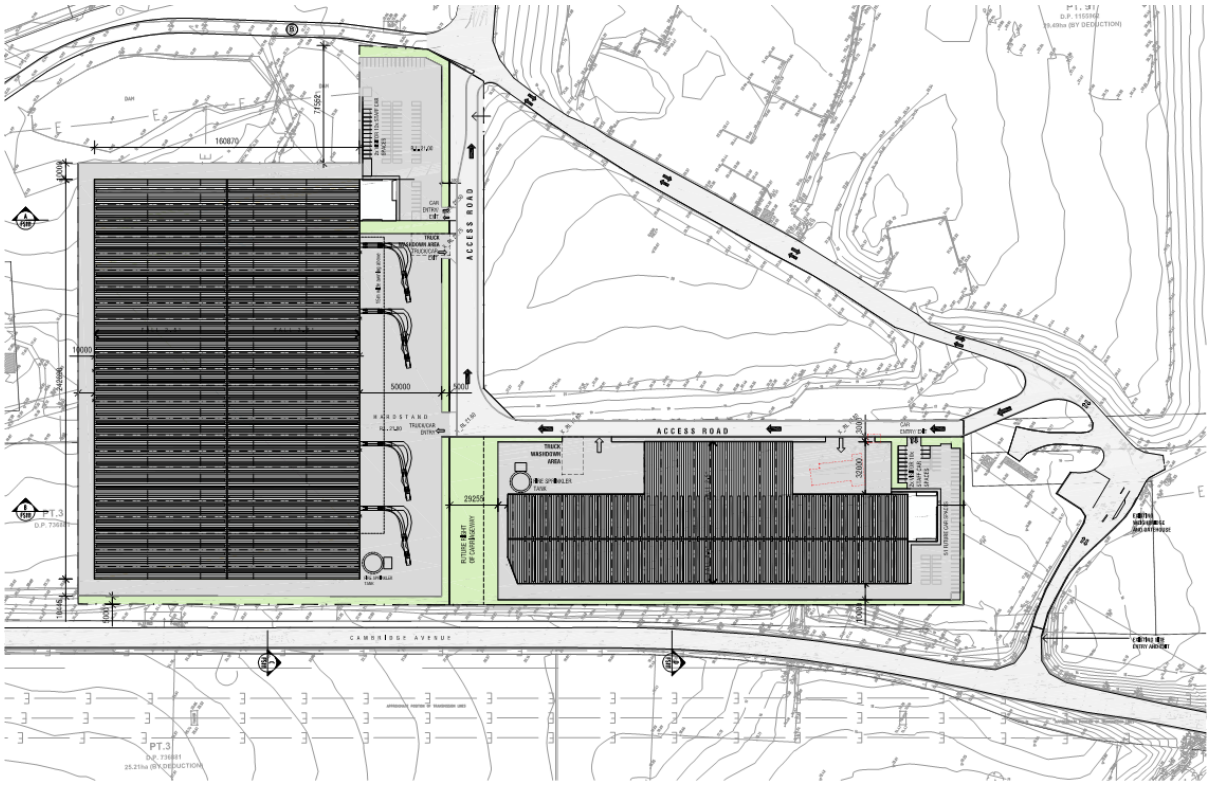


Figure 1. Site Plan (Source: L Form Architects, 2022)

4.1.2 Site Access

Access to the Subject Site would be facilitated via the existing vehicular access road which connects to Cambridge Ave adjacent to the eastern boundary of the Subject Site.

Discussions with TfNSW have been ongoing and it is anticipated that TfNSW will upgrade Cambridge Ave at some point in the future. Accordingly, the Subject Site design makes allowance for road widening and a new entry point.

Internal to the Subject Site, temporary all-weather access roads would connect to the existing permanent haul roads.

4.1.3 Operations

The proposed Materials Recycling Facility would have the capacity to process 450,000t per annum of non-putrescible solid waste, consisting of the following waste streams only:

- C&D waste;
- C&I waste; and
- ENM.

Since the original SSDA, these operations have been amended to exclude VENM, green waste and other materials. The proposed development has a maximum storage capacity of 13,700t.

Key aspects of the proposed operations are summarized as follows:

- Material would be delivered to the Subject Site via the existing access road and received via the main gatehouse. Here it would be weighed, then directed towards the Solid Waste Recycling Facility along a temporary all-weather access road;
- On arrival at the first warehouse, trucks would proceed through automated doors, which would close prior to the material being deposited inside a purpose-built 'tipping and sorting' warehouse;
- Once a load is tipped and sprayed for dust mitigation, the vehicle would continue in a forward direction to exit at the opposite end of the warehouse and then return to the gatehouse to document and exit;
- The deposited materials would then be inspected and sorted into respective piles of metal, bricks, stone, wood etc;
- Green and non-recyclable material would be disposed of out of the recycling waste stream and transferred to the Glenfield Waste Disposal facility;
- Unprocessed recyclable materials would then be transferred by dump-truck to the 'stockpile pending processing' in Warehouse B;
- Processing of 'like' materials in batches (including crushing, screening and/or shredding) would be performed within the stockpile pending processing shed (Warehouse B), before being loaded via a conveyor belt into sorted material bays (covered bins) within the warehouse;
- The material would be stored and remain dry and not exposed to the elements, as the processing would take place in a sealed environment which will use dust suppression techniques while in operation;
- Vehicles arriving to Subject Site to collect materials would enter the Subject Site via the existing access road, travel to the stockpile pending processing shed (Warehouse B), be loaded (internally) and depart the Subject Site via the existing access road; and
- Any material that cannot be recycled would be forwarded to the existing adjoining Glenfield Waste Service landfill facility. It is anticipated that approximately 10% of material received at the Subject Site may need to be disposed of in this manner.

Details of the proposed operations are provided in **Figure 2** below.

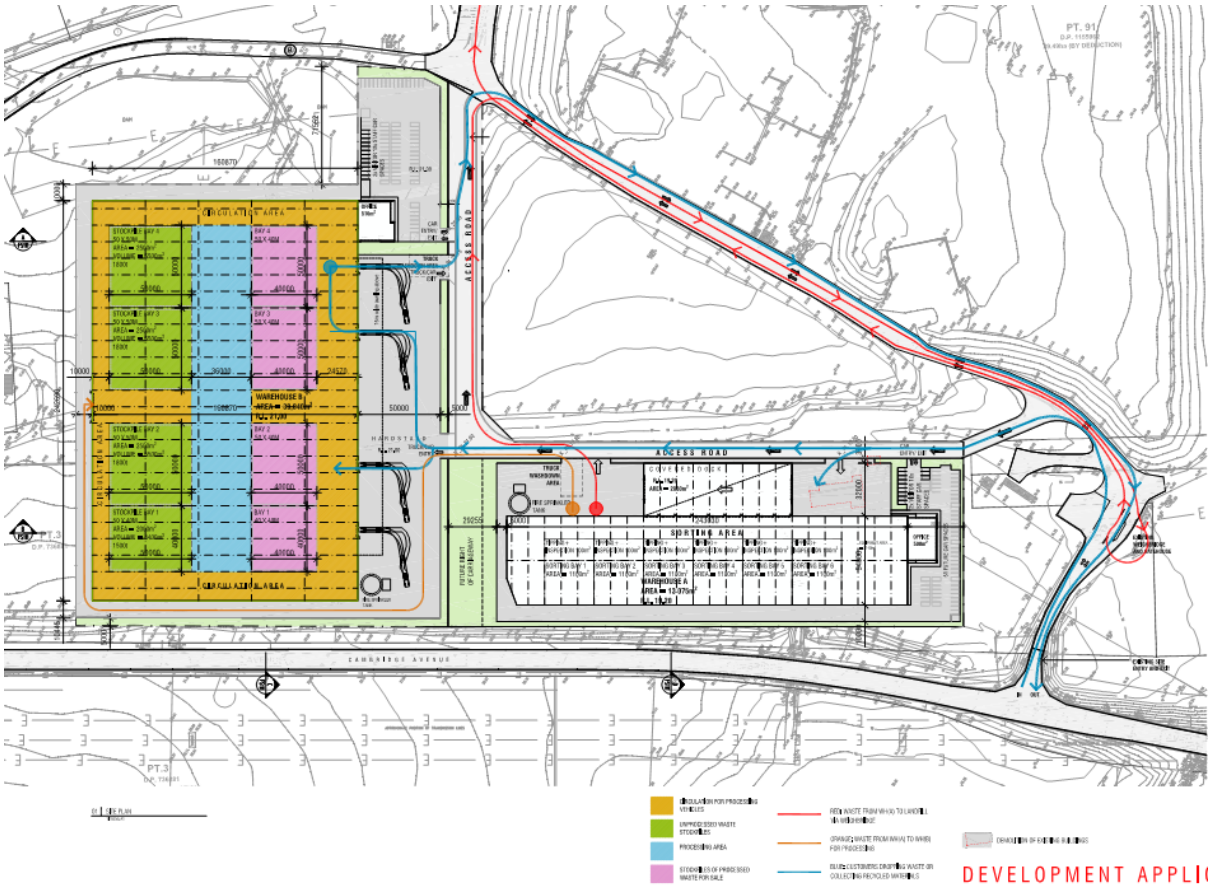


Figure 2. Detailed Site Plan (Source: L Form Architects, 2022)

More detailed operational particulars are outlined below:

- Receipt of waste materials:
  - It is anticipated that majority of the material received will be source separated, however there will be capacity to sort mixed loads;
  - All material entering the facility will be visually inspected upon arrival; and
  - Material received will be charged based on weight and/or volume.

- Separation of C&I materials into different waste streams:
  - Paper/cardboard and plastics are to be separated for baling and recycling; and
  - Metals and glass are to be separated for recycling.

- Processing of C&D materials using the following methods depending on the type of treatment required:
  - Breakdown/pre-processing – material that is delivered in large sections (over 600mm) is first to be broken down into manageable sizes using a pulveriser attached to an excavator;
  - Initial processing (pulverising) to remove reinforced steel that will be separated and stored until taken off-site for recycling;
  - The pulverised material will then be crushed using a mobile crushing plant;
  - The crushed material will then be blended ('mixed') into finished product, and stored in separate signposted stockpiles by blend type and specification; and
  - The finished product will be tested (as relevant to that blend) prior to sale.

Plant and equipment proposed to be used on-site includes the following mobile machinery:

- Three (3) x Front end loaders (including one (1) x Caterpillar 966M, one (1) x Volvo 150 and one (1) x Volvo L220H);
- Two (2) x 45t Volvo excavators (including one (1) fitted with Krupp rock breaker);
- One (1) x Pegson XR400 jaw crusher;
- One (1) x Model VB 950DK Hammel shredder;
- Two (2) x Volvo A35 tonne dump trucks; and
- Two (2) x Water carts.

It is noted that no fixed plant is proposed; all machinery would be portable and would move along the bays sorting and processing.

All plant and equipment would be operated within the warehouses (with the exception of trucks, which would travel along the proposed temporary all-weather internal roads and existing haul roads).

The hours of operation for the proposal would be generally consistent with the established Glenfield Waste Services, as the main entry, gatehouse infrastructure and personnel, would be shared. Accordingly, the facility is proposed to operate between the hours of 6:30am to 4:30pm Monday to Friday and 8am to 4pm on Saturdays. Access until 6pm Monday to Friday would be required for maintenance. Occasional out-of-hours deliveries and dispatch would be required to cater for night road works and similar operations.

The proposal is anticipated to generate 300 FTE jobs during construction and employ 20 staff during operation.

4.1.4 Subdivision

The proposed development seeks consent for subdivision for the purpose of a boundary realignment which consolidates the existing lots being and the Torrens Title Subdivision of the Subject Site into four (4) lots as detailed on the Subdivision Plan provided in **Appendix B10** and shown below in **Figure 3**.

The proposed subdivision would create the following lots:

- Proposed Lot 1, being 31.35ha in area;
- Proposed Lot 2, being 2.89ha in area;
- Proposed Lot 3, being 9,653m^2 in area; and
- Proposed Lot 4, being 7.85ha in area.

It is noted that all proposed lots would satisfy the minimum lot size stipulated by Clause 4.1 of Campbelltown Local Environmental Plan 2015.

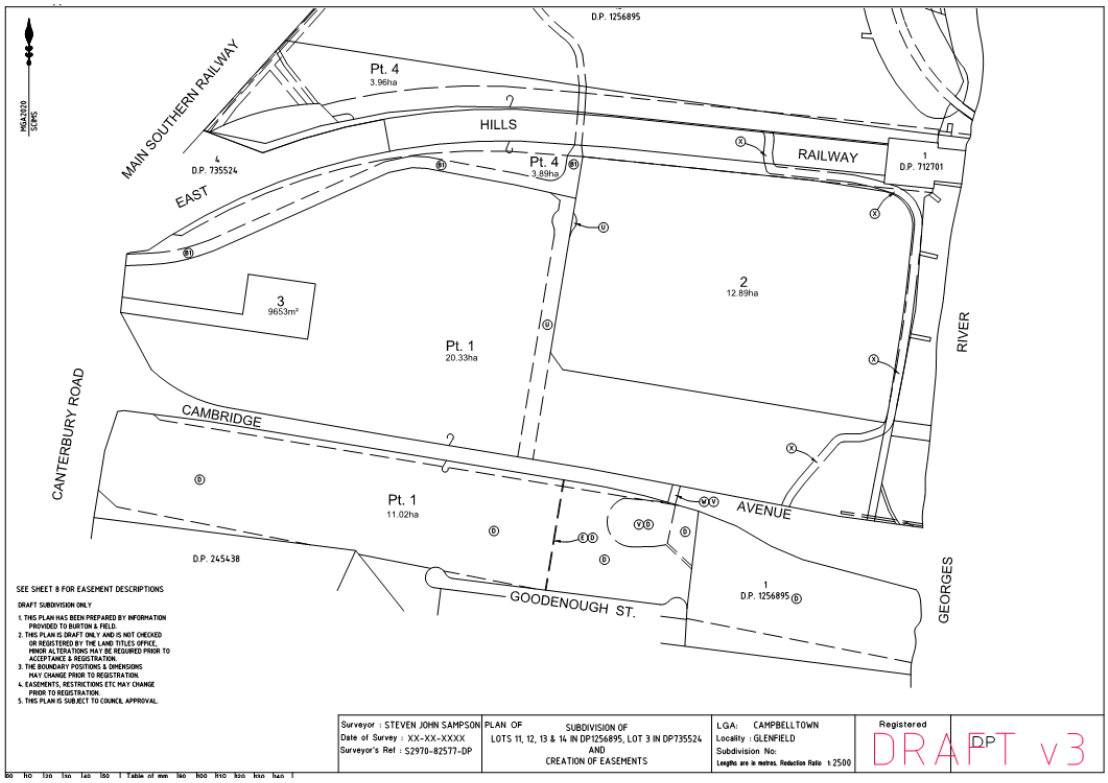


Figure 3. Subdivision Plan (Source: Steven John Sampson, 2022)

4.1.5 Native Vegetation Clearing

The original SSDA proposed clearing of a 9.5ha area of native vegetation from the Subject Site.

In conjunction with the proposed amendments, the extent of vegetation clearing has been reduced by approximately 2.4ha, from 9.5ha down to 7.11ha. The vegetation to now be cleared connects directly to the proposed development.

This vegetation includes both the State listed Cumberland Plain Woodland Critically Endangered Ecological Community (CEEC) and Commonwealth listed Cumberland Plain Shale Woodlands and Shale Gravel Transition Forest CEEC.

The BDAR (**Appendix B3**) describes that within the development footprint, the majority of the CEEC is in poor condition with a depauperate shrub layer and a managed and grazed ground layer that has a high abundance of exotic species.

Notwithstanding the poor condition of the CEEC to be impacted, the Biodiversity Offsets Scheme (BOS) is automatically triggered as the project is SSD. Accordingly, the BDAR calculates the credits required to be purchased in accordance with the *Biodiversity Assessment Methodology 2020* (BAM).

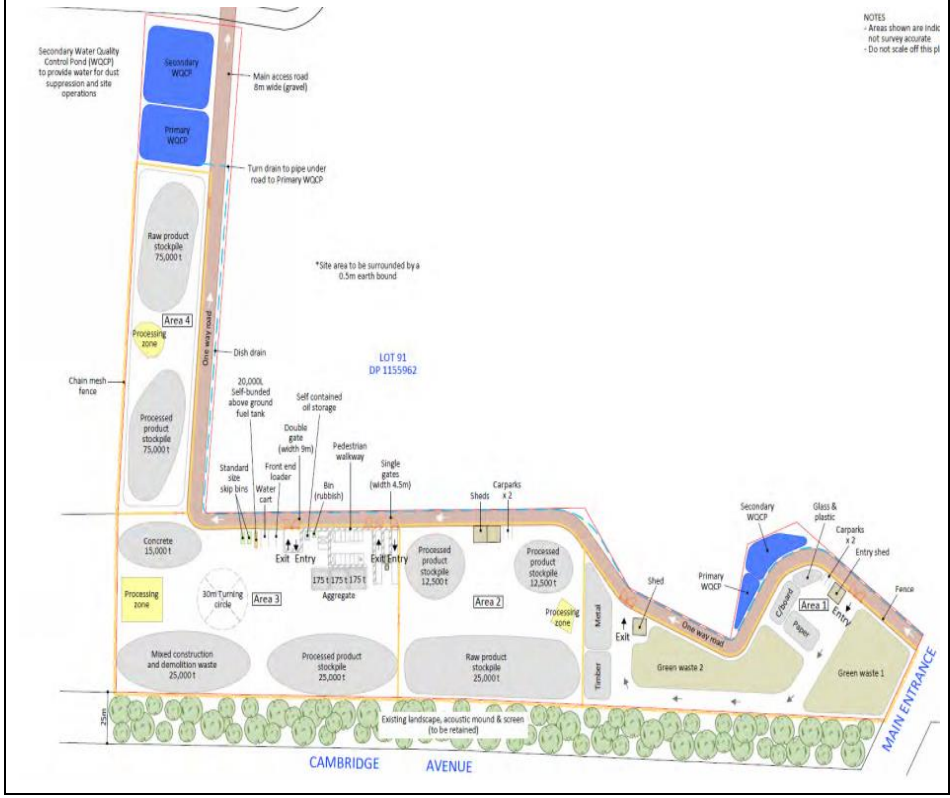
Further details of biodiversity are provided in **Section 4.2** of this Report and in the BDAR at **Appendix B3**.

A summary of the key changes between the proposal as exhibited in 2016 and the amended proposal that is the subject of this Amendment Report, is outlined in **Table 3** below

TABLE 3: SUMMARY OF AMENDMENTS TO THE PROPOSAL		
Project Element	**Proposal as Exhibited 2016**	**Amended Proposal 2022**
Site Area	Approximately 30ha.	Approximately 30ha.
Developable Area	Approximately 5ha.	Approximately 5.6ha.
Gross Floor Area (GFA)	0m² GFA.	Warehouse A: 13,075m² Office A: 500m² Warehouse B: 39,040m² Office B: 516m² Total GFA: 53,131m²
Built Form	Ancillary structures only.	Two (2) warehouses, including: Warehouse A: ▪ Warehouse GFA: 13,075m²; ▪ Office GFA: 500m²; ▪ 10.5m floor to ceiling height; ▪ 12.0m ridge height; ▪ Covered dock: 2,880m²; ▪ Tipping and sorting; ▪ Truck lanes; ▪ 63 car parking spaces. Warehouse B: ▪ Warehouse GFA: 39,0404m²; ▪ Office GFA: 516m²; ▪ 9.1m floor to ceiling height; ▪ 12.0m ridge height; ▪ 15m wide awning; ▪ Four (4) loading docks; ▪ Crushing/grinding; ▪ Truck lanes; ▪ 76 car parking spaces.
Stockpiles	265,000 combined area of the stockpiles; 0-20m high.	All stockpiles would be contained within 12.0m high warehouses.
Primary Land Use	Materials Recycling Facility, incorporating the functions of a Resource Recovery Facility and a Waste or Resource Transfer Station in accordance with the Standard Instrument LEP.	Materials Recycling Facility, incorporating the functions of a Resource Recovery Facility and a Waste or Resource Transfer Station in accordance with the Standard Instrument LEP.
Processing Capacity	450,000t	450,000t
Waste Streams	C&D waste, C&I waste, ENM, VENM, green waste and other materials.	C&D waste, C&I waste and ENM, only.
Subdivision	Subdivision of three (3) lots north of the railway (not part of the developable Site, but instead part of the existing Glenfield Waste Service Site), to create a separate parcel of land for dedication to DPE as part of the Biodiversity Offset Strategy.	Subdivision for the purpose of a boundary realignment which consolidates the existing lots being and the Torrens Title Subdivision of the Subject Site into four (4) lots.

TABLE 3: SUMMARY OF AMENDMENTS TO THE PROPOSAL		
Project Element	**Proposal as Exhibited 2016**	**Amended Proposal 2022**
Native Vegetation Clearing	9.5ha of Cumberland Plain Woodland CEEC, requiring 284 Biodiversity Credits.	Extent of vegetation clearing reduced by approximately 2.4ha, down to 7.11ha, and directly connected to the proposed development. Biodiversity Credits have been calculated in the BDAR at **Appendix B3**.
Landscaping	25m vegetation buffer zone (existing) adjacent to Cambridge Ave.	Landscaping adjacent to Cambridge Ave within the 3-5m setback zone, with 10-10.4m access route behind. Landscaping would continue around the perimeter of Warehouse A (except in the location of the access road) and landscape setbacks with a dimension of 5-7.5m would be provided around the perimeter of Warehouse B. A landscaped area will be provided between the warehouses, 29.2m in width, in the area of the future right of carriageway.
Earthworks	Clearing and grading to provide a level working area for the storage of materials and operation of machinery.	Clearing and grading to create pad sites for warehouse development and internal roads.
Site Infrastructure	One-way internal access road, stormwater management system, and all relevant utilities.	Temporary all-weather internal access road.
Car Parking	14 car parking spaces shown line-marked on the Site Plan, but the Traffic Report referenced peak demand for 20 staff parking spaces and 5 visitor spaces which could be accommodated on-Site.	63 car parking spaces at Warehouse A and 76 parking spaces at Warehouse B.
Employment Generation	Five (5) FTE jobs during construction and 20 staff during operation.	300 FTE jobs during construction and 20 staff during operation.

The following images within **Table 4** demonstrate the differences in the development as amended versus that proposed as originally proposed.

TABLE 4: SITE PLAN COMPARISON	
Original	**Amended**
	

4.2 BIODIVERSITY

A BDAR has been prepared by Travers and provided in **Appendix B3** which includes ecological survey and assessment in accordance with the BAM and other relevant legislation including the EP&A Act, BC Act, EPBC Act and the *Fisheries Management Act 1994* (FM Act).

The BDAR documents that threatened species and ecological communities expected to occur within the development area, including the following:

- BC Act:
  - Five (5) state listed threatened fauna species being:
  - White-bellied Sea-eagle (*Haliaeetus leucogaster*);
  - Grey-headed Flying-fox (*Pteropus poliocephalus*);
  - Eastern False Pipistrelle (*Falsistrellus tasmaniensis*);
  - Large Bent-winged Bat (*Miniopterus orianae oceanensis);*
  - Little Bent-winged Bat (*Miniopterus australis*);
  - No threatened flora species; and
  - One (1) threatened ecological community being the Cumberland Plain Woodland.
- EPBC Act:
  - One (1) threatened fauna species being the Grey-headed Flying-fox (*Pteropus poliocephalus*);
  - No protected migratory bird species;
  - No threatened flora species; and
  - One (1) threatened ecological community being the Cumberland Plain Shale Woodland and Shale Gravel Transition Forest.
- FM Act:
  - No suitable habitat for threatened marine or aquatic species.

The key impact of the proposal would be the removal of 7.11ha of native vegetation from the Site (reduced by approximately 2.4ha, from 9.5ha down to 7.115ha), which includes impacts to two (2) different vegetation units including the following:

- Plant Community Type (PCT 849) Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion – poor (Zone 1) – equivalent to the CEEC CPW – 6.85ha; and
- Planted native vegetation – 0.26ha.

The extents of native vegetation and vegetation to be impacted, are shown in the extracts at **Figures 4-6** below.

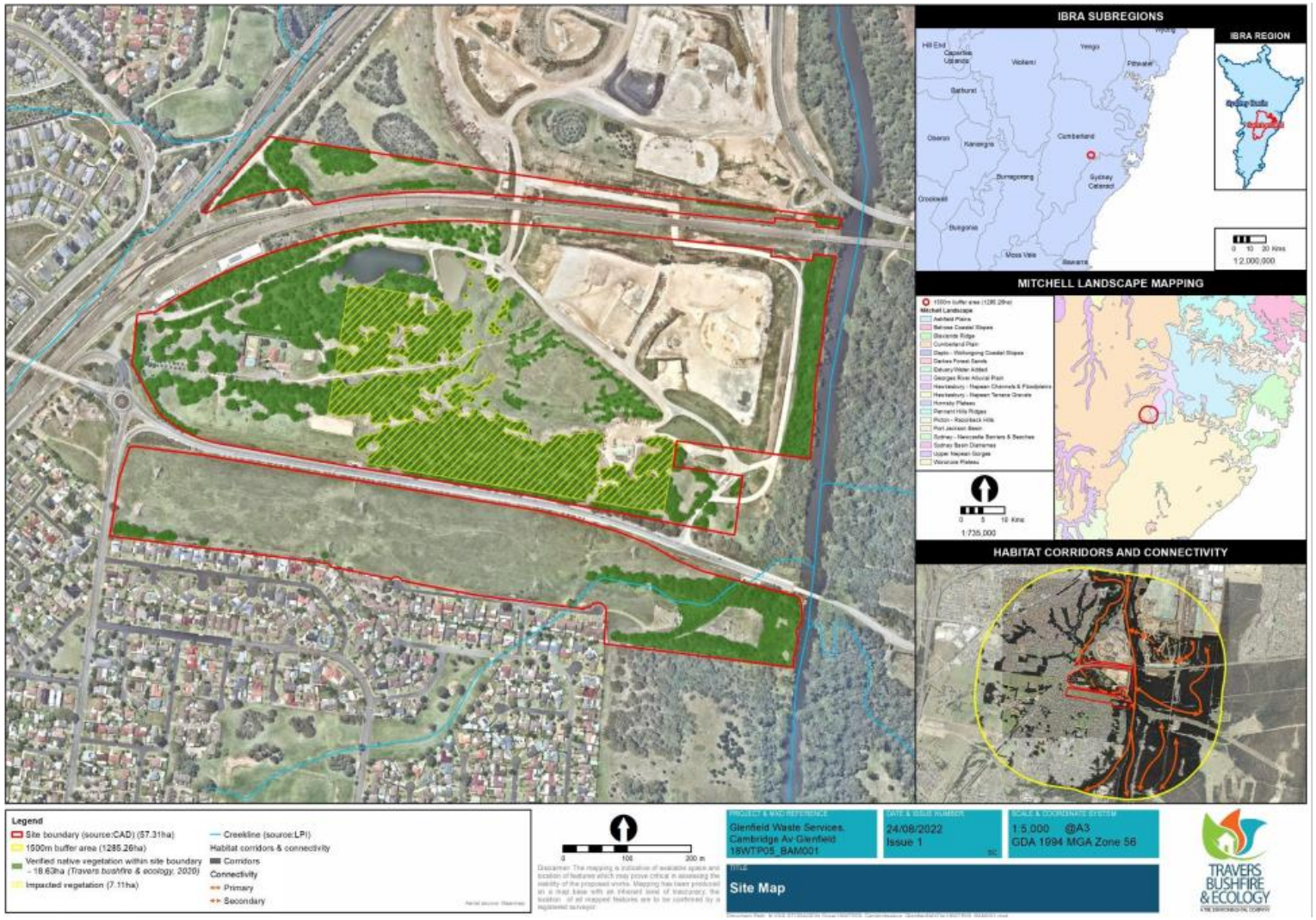


Figure 4. Site Plan- Existing & Impacted Vegetation (Source: Travers, 2022)

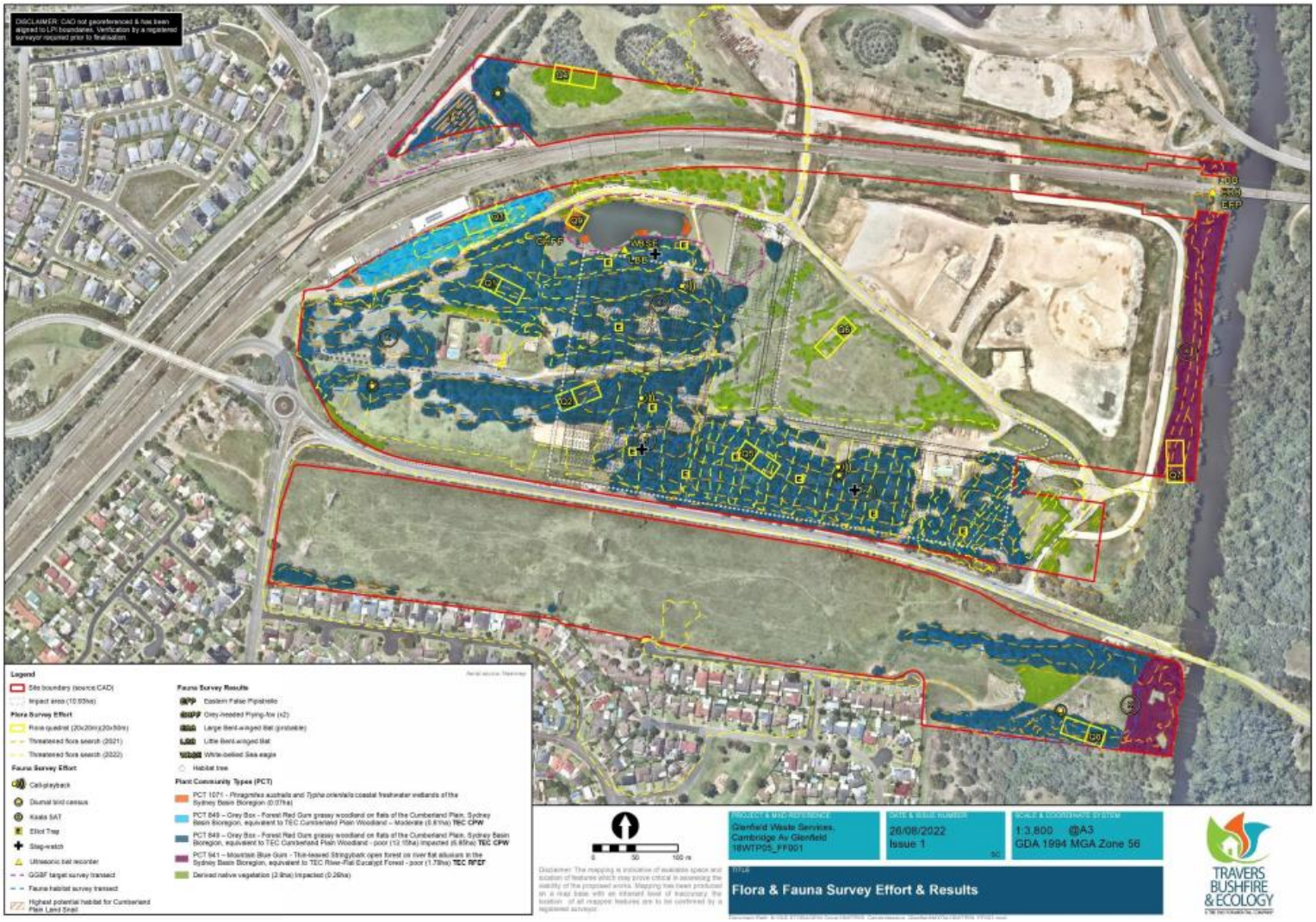


Figure 5. Site Plan- Flora & Fauna Survey Results (Source: Travers, 2022)

Figure 6. Site Plan- Habitat Trees (Source: Travers, 2022)

The BDAR describes that within the development footprint, the majority of the CEEC is in poor condition with a depauperate shrub layer and a managed and grazed ground layer that has a high abundance of exotic species.

Notwithstanding the poor condition of the CEEC to be impacted, the BOS is automatically triggered as the project is SSD. Accordingly, the BDAR calculates the credits required to be purchased in accordance with the BAM.

With respect to koalas, the BDAR includes an assessment pursuant to the *Campbelltown Comprehensive Koala Plan of Management 2018*. Based on Council's mapping, the Subject Site is not identified as Core Koala Habitat but is mapped as Potential Koala Habitat. As such, the BDAR acknowledges the requirement for a Vegetation Assessment Report and Koala Activity Assessment Report (provided in **Appendix B13**).

Based on the surveys undertaken by Travers (author of the BDAR), no koala activity was recorded in the form of scats, tree scratches or visual observations. No records of koalas have been made in the development footprint within the last 18 years. One (1) record of a koala was made within the study area in 2017; this was a road-kill located in the north of the study area, between the train line and the waste management facility.

Notwithstanding, the BDAR acknowledges that there is a strategic linkage from the eastern riparian zone into the study area, and that Council would therefore need to be satisfied that the proposal will not sever or otherwise interfere with the movement of koalas within an identified strategic linkage area.

Regarding biodiversity values overall, the BDAR documents the strategies and actions that have been undertaken to avoid or minimise impacts, including the following:

- Locating the proposal in areas where the native vegetation is already managed and in the poorest condition;
- The best-quality Cumberland Plain Woodland to the north-west of the development footprint has been avoided, as has riparian vegetation along the Georges River;
- The total area of clearing proposed has been reduced from 9.5 ha to 7.11ha;
- Preparation of a Vegetation Management Plan to protect and restore retained vegetation; and
- Internalisation of all operations within warehouses, and bunding of the Subject Site would prevent runoff. Stormwater collection will be facilitated via water harvesting and collected water would be re-used for dust suppression or transferred to a stormwater treatment pond in the Glenfield Waste Disposal facility. These measures will prevent mobilisation of any pollutants and stormwater impacts hence minimising indirect impacts.

Additional mitigation measures are recommended within the BDAR to avoid, minimise or ameliorate potential ecological impacts, address threatening processes and guide a more positive ecological outcome for threatened species and their associated habitats.

Further details of biodiversity are provided in the BDAR at **Appendix B3**.

4.3 NOISE

A Noise Assessment has been prepared by SLR Consulting and provided in **Appendix B7**, to assess the potential noise and vibration impacts associated with the amended proposal. The current noise assessment guidelines include:

- Australian Standard AS 1055:1997 Description and Measurement of Environmental Noise Parts 1, 2 and 3;

- EPA's NSW Noise Policy for Industry (NPfI) (which has superseded the NSW Industrial Noise Policy);
- Interim Construction Noise Guideline (ICNG) (DECC, 2009); and
- NSW Road Noise Policy (RNP) (DECCW, 2011) (which has superseded the Environmental Criteria for Road Traffic Noise).

The noise levels and criteria applicable to the Subject Site and proposal, are outlined in the following sub-section.

4.3.1 Project Noise Impact Assessment Criteria

The nearest sensitive residential receivers to the Subject Site are located in the suburb of Glenfield to the south of Cambridge Ave and west of the railway, as shown in **Figure 7** below.

Figure 7. Location of Sensitive Receivers (Source: SLR, 2022)

Background noise monitoring was undertaken at these locations, and the existing ambient noise levels are summarised in **Table 5** below.

TABLE 5: EXISTING AMBIENT NOISE LEVELS

Location	Period	Rating Background Level	Measured LAeq (Period)	Existing Industrial Contribution LAeq
NM1- 8 Goodenough St, Glenfield	Morning Shoulder	48 dBA	52 dBA	37 dBA
	Day	42 dBA	51 dBA	37 dBA
NM2- 3 Albion Cres, Glenfield	Morning Shoulder	47 dBA	52 dBA	Non discernible
	Day	39 dBA	52 dBA	Non discernible

The project amenity noise levels for the purpose of the NPfI are summarised in **Table 6** below.

TABLE 6. PROJECT AMENITY CRITERIA

Type of Receiver	Noise Amenity Area	Time of Day	Recommended LAeq (Period) Noise Level, dBA
Residential	Suburban	Day	55
		Evening	45
		Night	40

The conversion of the amenity noise levels has determined the Project Trigger Noise Levels (PTNL) for the purpose of the NPfI, as outlined in **Table 7** below.

TABLE 7. PROJECT TRIGGER NOISE LEVELS

Period	Period Intrusive dBA LAeq(15min)	Project Amenity LAeq(Period)	Project Amenity LAeq(15min)	Resulting PTNL dBA LAeq(15min)
Residents on Goodenough St, Ferguson St and Canterbury Rd, Glenfield				
Morning Shoulder	47	43	46	46
Day	47	50	53	47
Residents on Slessor Rd, Glory Rd and Minstrel St, Glenfield				
Morning Shoulder	44	43	46	44
Day	44	50	53	44

Sleep disturbance noise goals are summarised in **Table8** below.

TABLE 8. SLEEP DISTURBANCE NOISE GOALS

Location	Period	RBL	SDNL LAmax
Residents on Goodenough St, Ferguson St and Canterbury Rd, Glenfield	Morning Shoulder	48	63
Residents on Slessor Rd, Glory Rd and Minstrel St, Glenfield	Day	47	62

For construction, Noise Management Levels (NMLs) are set out in the ICNG, and the project NMLs are summarised in **Table 9** below.

TABLE 9. CONSTRUCTION NOISE MANAGEMENT LEVELS			
Location	**Time of Day**	**Standard Hours NML**	**Highly Affected NML**
Residents on Goodenough St, Ferguson St and Canterbury Rd, Glenfield	Recommended standard hours	52	75 dBA
Residents on Slessor Rd, Glory Rd and Minstrel St, Glenfield	Recommended standard hours	49	75 dBA

Noise goals for road traffic noise are established in the RNP and summarised below in **Table 10**.

TABLE 10. ROAD TRAFFIC NOISE GOALS			
Road Category	**Type of Project/Land Use**	**Assessment Criteria**	
		Day 7am-10pm	**Night 10pm-7am**
Freeway/arterial/sub-arterial roads – Glenfield Rd	Existing residences affected by additional traffic on existing roads generated by land-use developments	LAeq(15hour) 60 dBA (external)	LAeq(9hour) 55 dBA (external)

The project's compliance with criteria for operation, construction and road traffic, is addressed in the sub-sections below.

4.3.2 Operational Noise Impact Assessment

The operational scenario for the project is summarised in the following table, based on the acoustically significant plant and equipment proposed for use during the daytime and evening, respectively.

TABLE 11. OPERATIONAL SCENARIO		
Plant/Equipment	**Sound Power Level (dBA)**	**In Use During Morning Shoulder & Daytime?**
Front End Loaders	109	Yes (3 x loaders)
Crusher/Screen	114	Yes
8t Excavator	98	Yes
45t Excavator with Pulveriser Attached	108	Yes (2 x excavators)
33t Dispatch/Delivery Trucks	103	Yes (8 x trucks)
Articulated Dump Trucks	112	Yes (2 x trucks)

Based on this operational scenario, predicted noise levels at the nearest potentially affected residential locations, are summarised in the following table. **Table 12** demonstrates that compliance with the PTNLs would be achieved at all times for all receivers.

TABLE 12. PREDICTED NOISE LEVELS				
Location	**Period**	**Predicted Noise Level LAeq15min**		**PTNL LAeq15min**
		Standard Weather	**Noise-Enhancing Weather**	
Slessor Rd, Casula	Morning Shoulder	36	37	44
	Day	36	N/A	44
Glory Rd (north), Glenfield	Morning Shoulder	36	38	44
	Day	37	N/A	44
Glory Rd (south), Glenfield	Morning Shoulder	35	37	44
	Day	37	N/A	44
Minstrel St, Glenfield	Morning Shoulder	35	37	44
	Day	36	N/A	44
Canterbury Rd, Glenfield	Morning Shoulder	37	39	46
	Day	39	N/A	47
Fergusson St (west), Glenfield	Morning Shoulder	38	39	46
	Day	39	N/A	47
Fergusson St (central), Glenfield	Morning Shoulder	42	42	46
	Day	43	N/A	47
Fergusson St (east), Glenfield	Morning Shoulder	42	42	46
	Day	43	N/A	47
Goodenough St (west), Glenfield	Morning Shoulder	45	46	46
	Day	46	N/A	47
Goodenough St (central), Glenfield	Morning Shoulder	44	45	46
	Day	46	N/A	47
Goodenough St (east), Glenfield	Morning Shoulder	44	45	46
	Day	44	N/A	47

Sleep disturbance was assessed based on the plant and equipment to be used during the morning shoulder period and out of hours, including:

- Truck accelerating: 108 dBA; and
- Truck handbrake (air release): 118 dBA.

The assessment, summarised in **Table 13**, demonstrates that compliance with the Sleep Disturbance Noise Levels would be achieved for all receivers.

TABLE 13. MAXIMUM NOISE PREDICTIONS				
Location	**Period**	**Predicted Noise Level LAmax**		**SDNL LAmax**
		Standard Weather	**Noise-Enhancing Weather**	
Slessor Rd, Casula	Morning Shoulder	45	48	62
Glory Rd (north), Glenfield	Morning Shoulder	44	47	62
Glory Rd (south), Glenfield	Morning Shoulder	43	46	62
Minstrel St, Glenfield	Morning Shoulder	40	43	62
Canterbury Rd, Glenfield	Morning Shoulder	42	45	63
Fergusson St (west), Glenfield	Morning Shoulder	47	50	63

TABLE 13. MAXIMUM NOISE PREDICTIONS				
Location	**Period**	**Predicted Noise Level LAmax**		**SDNL LAmax**
		Standard Weather	**Noise-Enhancing Weather**	
Fergusson St (central), Glenfield	Morning Shoulder	51	53	63
Fergusson St (east), Glenfield	Morning Shoulder	55	58	63
Goodenough St (west), Glenfield	Morning Shoulder	57	59	63
Goodenough St (central), Glenfield	Morning Shoulder	56	58	63
Goodenough St (east), Glenfield	Morning Shoulder	58	60	63

4.3.3 Construction Noise Assessment

Predicted construction noise levels for the nearest potentially affected residences are summarised in **Table 14**.

TABLE 14. PREDICTED CONSTRUCTION NOISE LEVELS				
Location	**Time of Day**	**Predicted Construction Noise Level LAeq15min**	**NML LAeq15min**	
			Noise Affected	**Highly Noise Affected**
Slessor Rd, Casula	Recommended standard hours	38	52	75
Glory Rd (north), Glenfield		41	52	75
Glory Rd (south), Glenfield		40	52	75
Minstrel St, Glenfield		39	52	75
Canterbury Rd, Glenfield		41	54	75
Fergusson St (west), Glenfield		41	54	75
Fergusson St (central), Glenfield		44	54	75
Fergusson St (east), Glenfield		48	54	75
Goodenough St (west), Glenfield		47	54	75
Goodenough St (central), Glenfield		47	54	75
Goodenough St (east), Glenfield		50	54	75

Accordingly, the construction noise modelling indicates that the NML is predicted to be achieved at all noise sensitive locations.

Notwithstanding, to minimise construction noise impacts, the following mitigation measures are recommended:

- Adherence to the standard daytime construction hours;
- Noisy plant operating simultaneously to be avoided wherever possible;
- Maintenance work on all construction plant will be carried out away from noise sensitive areas and confined to standard daytime construction hours, where practicable;
- Site noisy equipment behind structures that act as barriers or at the greatest distance from the noise-sensitive area or orient the equipment so that noise emissions are directed away from any sensitive areas;
- Keep equipment well maintained; and
- Employ 'quiet' practices when operating equipment.

It is also acknowledged that consultation with neighbouring properties can reduce the adverse reaction to noise.

4.3.4 Road Traffic Noise

Traffic generation for the project is estimated to be approximately 874 vehicles per day on Glenfield Road.

Annual average daily traffic (AADT) for Glenfield Road was 12,841 in 2009 (ARC TIA report). The corresponding increase in road traffic noise would therefore be expected to remain below 2dB which, according to the RNP, is unlikely to be discernible and would not require consideration of mitigation.

Further, a number of other significant developments occurring and/or planned in and around Glenfield (including Glenfield Road Urban Release Area, Campbelltown Road Upgrade, Glenfield Link Road and The Moorebank Avenue Intermodal), will have a significantly greater impact on the road traffic network.

4.3.5 Summary and Conclusion

The Noise Assessment concludes the following:

- Noise levels under standard weather conditions are predicted to be compliant during the daytime and evening periods at all receiver locations;
- Construction noise impacts are predicted to be below the relevant noise goals. Notwithstanding, recommendations have been provided with the aim of minimising construction noise impacts at nearby noise sensitive receivers, as follows:
    - Adherence to the standard daytime construction hours;
    - Noisy plant operating simultaneously to be avoided wherever possible;
    - Maintenance work on all construction plant will be carried out away from noise sensitive areas and confined to standard daytime construction hours, where practicable;
    - Site noisy equipment behind structures that act as barriers or at the greatest distance from the noise-sensitive area or orient the equipment so that noise emissions are directed away from any sensitive areas;
    - Keep equipment well maintained;
    - Employ 'quiet' practices when operating equipment; and
- Road traffic noise impact associated with the project is expected to be minimal given the relatively small increase in proposed traffic volumes compared to existing volumes.

In addition, an Operational Noise Management Plan will be prepared prior to commencement of operations and will include protocols for monitoring and reporting noise emission levels, the effectiveness of mitigation measures, and any noise complaints.

Full details of the noise assessment, including the detailed resulted of monitoring and sound power levels, are provided in **Appendix B7**.

4.4 AIR QUALITY

An Air Quality Impact Assessment has been prepared by Northstar and provided in **Appendix B2**, to examine and identify whether the impacts of the operation of the proposal may adversely affect local air quality. The Air Quality Impact Assessment has been performed in accordance with:

- Protection of the Environment Operations Act 1997;
- Protection of the Environment Operations (Clean Air) Regulation 2010; and
- Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (NSW EPA, 2016).

A dispersion modelling assessment conducted in accordance with the relevant NSW EPA guidance has been performed to determine the likely air quality impacts upon surrounding receptor locations. Activity rates associated with average operational conditions have been used to determine the potential impact and compared against annual average criteria. To determine the potential maximum 24-hour impact of the proposal, the materials unloading, handling and processing rates have been assumed to be double the annual average rates. This is considered to represent a conservative assumption.

4.4.1 Identification of Potential Air Emissions

During the operation of the proposal, the following activities are anticipated to result in potential emissions to air:

- Wheel-generated particulate emissions from trucks and other vehicles on paved road surfaces and temporary unpaved road surfaces;
- Particulate emissions from the unloading and loading of materials;
- Particulate emissions from the handling of materials by front-end loaders and excavators;
- Particulate emissions from the operation of the pulveriser, crusher, screen and shredder; and
- Particulate emissions from materials storage areas generated by wind erosion.

For clarity, all roads in the Subject Site will be paved, with the exception of the road to the GWS landfill. Emissions from all roads have been calculated according to the level of paving.

The proposed Materials Recycling Facility would process non-putrescible solid waste, consisting of C&D waste, C&I waste and ENM, only. The amended SSDA excludes VENM, green waste and other materials which would reduce associated odours.

Whilst the potential for odour nuisance complaints is considered very low, an odour complaints procedure would be implemented as part of the Air Quality Management Plan.

4.4.2 Air Quality Standards

The EPA's Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (Approved Methods) lists the statutory methods that are to be used to model and assess emissions of air pollutants from stationary sources in NSW. The criteria adopted for the project are summarised in **Table 15**.

TABLE 15: NSW EPA AIR QUALITY STANDARDS AND GOALS

Pollutant	Averaging Period	Units[E]	Criterion	Notes
Particulates (as PM_{10})	24 hours	$\mu g \cdot m^{-3}$ [A]	50	Numerically equivalent to the AAQ NEPM[B] standards and goals.
	1 year	$\mu g \cdot m^{-3}$	25	
Particulates (as $PM_{2.5}$)	24 hours	$\mu g \cdot m^{-3}$	25	

TABLE 15: NSW EPA AIR QUALITY STANDARDS AND GOALS				
Pollutant	**Averaging Period**	**Units[E]**	**Criterion**	**Notes**
	1 year	$\mu g \cdot m^{-3}$	8	
Particulates (as TSP)	1 year	$\mu g \cdot m^{-3}$	90	
Particulates (as dust deposition)	1 year[C]	$g \cdot m^{-2} \cdot month^{-1}$	2	Assessed as insoluble solids as defined by AS 3580.10.1
	1 year[D]	$g \cdot m^{-2} \cdot month^{-1}$	4	

The sensitive receptors considered in the assessment are identified in **Figure 8** for reference.

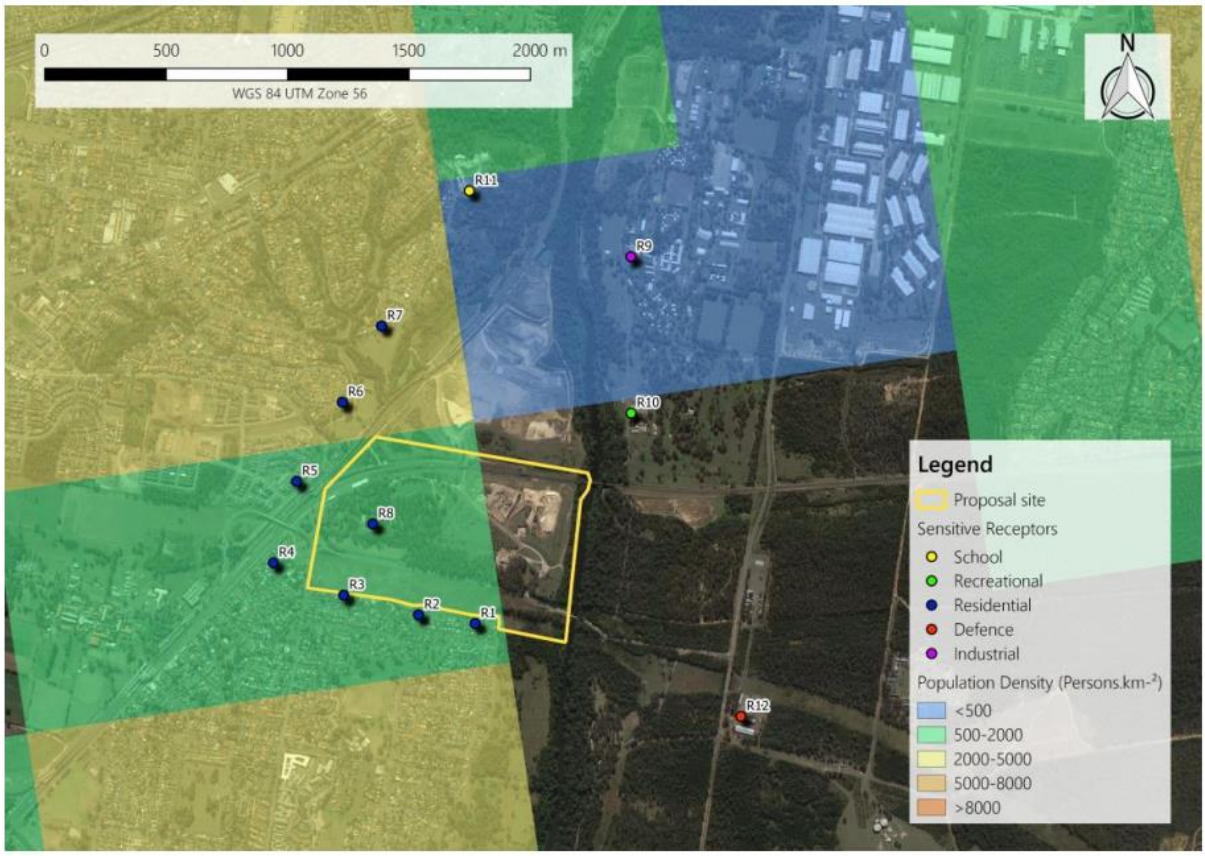


Figure 8. Sensitive Receptors (Source: Northstar, 2022)

4.4.3 Emissions Controls

The amended proposal includes the enclosure of all operations; no material would be unloaded, sorted, handled, processed, or stored external to a building. Fast-acting roller shutter doors would be closed at all times except to allow the ingress and egress of vehicles. Neither building would have any open sides and can be considered to be fully enclosed. Given that the buildings will be fully enclosed, water mists would be required to ensure that particulate matter is managed to meet occupational air quality, safety and comfort criteria. Handheld hoses will also be available in each shed to 'spot' water any particularly dusty loads, as required.

The fast-acting roller doors will be closed between vehicle entry and exit. Although vehicles may be entering the buildings regularly, the installation of fast-acting roller doors (as opposed to 'normal' roller doors) will ensure that they can be closed quickly when vehicles are not entering or exiting. The use of the water misting system within each building will ensure that particulate matter generation is

minimised, and that any emission of particulate matter through the doors, when they are open, will be significantly reduced.

All roads would all be constructed of paved/hard surface which would be regularly swept to minimise silt loadings. Vehicle speeds within the Subject Site would be limited to 15km/h, which would ensure that any resuspension of deposited material is reduced. A water cart would also be available to water road surfaces if required.

The performance of all activities within fully enclosed buildings with water mists, and the construction of fully sealed roads across the Subject Site, as requested by the EPA, represent best practice for operations of this nature.

4.4.4 Emissions Estimates

Emissions factors have been adopted for materials handling processes, movement of trucks on paved roads, crushing, screening and wind erosion. A full description of the emission sources included in the assessment for each scenario, and the emission factors and assumptions adopted, are presented in Appendix C of the Air Quality Assessment.

The calculated annual average uncontrolled and controlled particulate emissions for the proposal are summarised in **Figure 9** below.

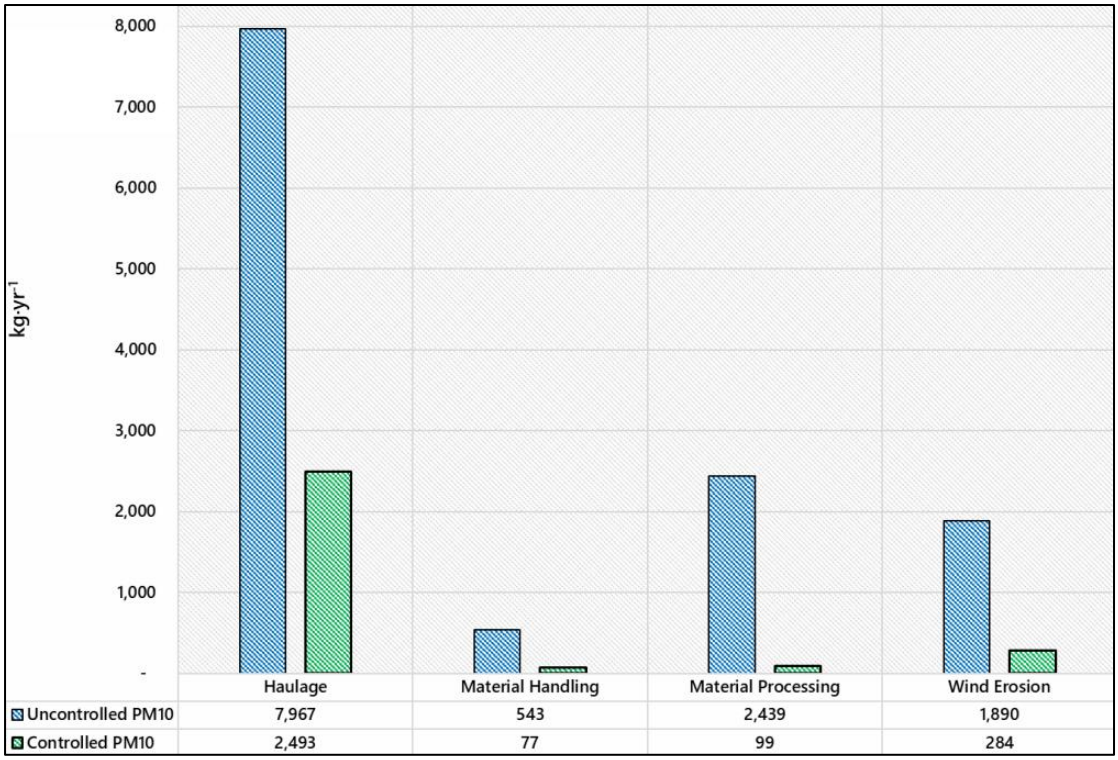


Figure 9. Controlled and Uncontrolled Annual PM_{10} Emissions (Source: Northstar, 2022)

As noted above, the amended layout subject to dispersion modelling results in a greater number of vehicle kilometres travelled external to the buildings, and therefore results in a greater quantity of particulate matter being generated. Calculations of annual emissions of TSP, PM_{10} and $PM_{2.5}$ resulting from the operation of the modified and proposed layout show that emissions would be 13%, 8% and 17% lower, respectively as a result of those changes.

4.4.5 Air Quality Impact Assessment

The predicted annual average particulate matter concentrations resulting from the proposed operations are presented in **Table 16** below.

TABLE 16. PREDICTED ANNUAL AVERAGE PARTICULAR MATTER CONCENTRATIONS

Receptor	Annual Average Concentration (µg·m^{-3})								
	TSP			PM_{10}			$PM_{2.5}$		
	Incremental Impact	Regional Background	Cumulative Impact	Incremental Impact	Regional Background	Cumulative Impact	Incremental Impact	Regional Background	Cumulative Impact
R1	1.5	46.2	47.7	0.4	20.6	21.0	<0.1	8.9	9.0
R2	1.3	46.2	47.5	0.4	20.6	21.0	<0.1	8.9	9.0
R3	0.7	46.2	46.9	0.3	20.6	20.9	<0.1	8.9	9.0
R4	0.4	46.2	46.6	0.2	20.6	20.8	<0.1	8.9	9.0
R5	0.6	46.2	46.8	0.2	20.6	20,8	<0.1	8.9	9.0
R6	0.6	46.2	46.8	0.2	20.6	20.8	<0.1	8.9	9.0
R7	0.5	46.2	46.7	0.2	20.6	20.8	<0.1	8.9	9.0
R9	<0.1	46.2	46,3	<0.1	20.6	20.7	<0.1	8.9	9.0
R10	0.6	46.2	46.8	0.2	20.6	20.8	<0.1	8.9	9.0
R11	0.2	46.2	46.4	<0.1	20.6	20.7	<0.1	8.9	9.0
R12	<0.1	46.2	46.3	<0.1	20.6	20.7	<0.1	8.9	9.0
Crit.			90			25			8
R8[(A)]									

The results indicate that predicted incremental concentrations of TSP, PM_{10} and $PM_{2.5}$ at all receptor locations (excluding the proposal-related receptor R8) are low (≤1.6% of the annual average TSP criterion, <1.8% of the annual average PM_{10} criterion and <0.1% of the $PM_{2.5}$ criterion).

The addition of existing background concentrations, results in predicted concentrations of annual average TSP being ≤53% and annual average PM_{10} being ≤85% of the relevant criteria at the nearest receptors (receptor R8 excluded).

The existing adopted annual average $PM_{2.5}$ regional background concentration is shown to be in exceedance of the relevant criterion, even without the operation of the proposal added.

Examination of the predicted $PM_{2.5}$ impacts which would result from the proposal indicates that these concentrations are predicted to be <0.1 µg·m^{-3} at all surrounding receptors (essentially an immeasurable change to background).

The inclusion of the best practice management dust control measures is shown to minimise offsite annual average $PM_{2.5}$ impacts to the maximum extent possible. The performance of the proposal does not in itself result in any exceedances of the annual average particulate matter impact assessment criteria.

In regard to the potential cumulative impact with the operation of the GWS landfill operations, SLR (2015) predicted annual average incremental impacts of ≤0.9 µg·m^{-3} (TSP), ≤0.5 µg·m^{-3} (PM_{10}), and ≤0.1

$\mu g \cdot m^{-3}$ ($PM_{2.5}$), at all surrounding receptors. Even with the addition of those maximum predicted concentrations, the conclusions drawn above regarding compliance with annual average air quality criteria would not materially change.

Further to the above, **Table 17** below presents the results for the maximum 24-hour average PM_{10} and $PM_{2.5}$ concentrations predicted to occur at the nearest receptors as a result of the proposal operations. This represents the worst-case scenario.

The analysis indicates that no additional exceedances of the 24-hour average impact assessment criterion for PM_{10} or $PM_{2.5}$ are likely to occur as a result of the proposal. The implementation of best practice emission controls results in the minimisation of PM_{10} and $PM_{2.5}$ concentrations at surrounding receptors as demonstrated in **Table 17** below.

TABLE 17: PREDICTED MAXIMUM INCREMENTAL 24-HOUR PM_{10} AND $PM_{2.5}$ CONCENTRATIONS

Receptor	Maximum incremental 24-hour average concentration ($\mu g \cdot m^{-3}$)	
	PM_{10}	$PM_{2.5}$
R1	8.1	2.0
R2	8.9	2.1
R3	6.9	1.5
R4	4.4	1.0
R5	5.4	1.2
R6	4.9	1.1
R7	3.6	0.8
R9	1.0	0.2
R10	2.7	0.6
R11	1.1	0.2
R12	1.3	0.3
Criterion	50	25
R8[(A)]	12.0	2.6

Table 18 presents the annual average dust deposition predicted as a result of the proposal. Annual average dust deposition is predicted to meet the criteria at all receptors where the predicted impacts are <10% of the incremental criterion at receptor locations.

Air quality impacts during construction would be limited to construction of the warehouses, sealing of the roads and minor earthworks. Any potential impacts during the limited construction activities would be managed through the considerate implementation of a Construction Environment Management Plan (CEMP), which would include an Air Quality Management Plan (AQMP) detailing a range of emissions controls.

In regard to the potential cumulative impact, the conclusions regarding compliance with annual average air quality criteria would not materially change.

TABLE 18. PREDICTED ANNUAL AVERAGE DUST DEPOSITION			
Receptor	**Maximum incremental 24-hour average concentration (µg•m^{-3})**		
	Incremental Impact	**Regional Background**	**Cumulative Impact**
R1	<0.1	2.0	2.1
R2	<0.1	2.0	2.1
R3	<0.1	2.0	2.1
R4	<0.1	2.0	2.1
R5	<0.1	2.0	2.1
R6	<0.1	2.0	2.1
R7	<0.1	2.0	2.1
R9	<0.1	2.0	2.1
R10	<0.1	2.0	2.1
R11	<0.1	2.0	
R12	<0.1	2.0	2.1
Criterion	2.0		4.0
R8[(A)]	<0.1	2.0	2.1

4.4.6 Summary and Conclusion

The proposal has been designed to incorporate best practice particulate matter control, which includes the performance of all activities within enclosed, hardstand sheds. The reduction in vehicle kilometres afforded by the amended layout, will reduce predicted impacts by a further amount.

Based on the findings of the air quality impact assessment, it is considered that the current proposed layout and operation will be sufficiently controlled to ensure that exceedances (or additional exceedances in the case of 24-hour PM_{10} and $PM_{2.5}$) would not be experienced as a result of the proposed operation.

It is recommended that the proponent implements an Air Quality Management Plan (AQMP), including procedures for air quality monitoring to demonstrate compliance with the applicable criteria, and the recording, evaluation and actioning of any complaints.

4.5 WATER MANAGEMENT

All previously identified water management risk items, would be mitigated through the enclosure of the warehouses and sealing of paved areas of the Subject Site. As green waste is no longer proposed to be received by the facility, leachate would no longer be a concern.

Details of stormwater management are provided in the Water Cycle Management Report at **Appendix B12** and in the Civil Engineering Plans at **Appendix B4**, both prepared by Sparks and Partners. Modelling (including DRAINS and MUSIC) has been undertaken of the proposed water management measures and demonstrates that the proposed water conservation and stormwater management measures would meet the requirements of CDCP2015.

4.5.1 Water Conservation

Water usage reduction is to be achieved throughout the development through the use of a minimum of AAA rated water fixtures.

4.5.2 Rainwater Reuse

The proposed development will capture roof water from an 8,200m² area of the building roof. This collected roof water will be conveyed to combined total of 100,000L tank for storage and reuse (primarily for toilet flushing and irrigation).

A MUSIC water balance of the proposed reuse system has been completed to model the effectiveness and efficiency of the system. The MUSIC model determines the rainwater tank has an approximate efficiency of 66%. This efficiency results in an approximate reduction in the proposed demand on potable water supplies of 2,080,000L per year.

Dust suppression will be undertaken during the operation of the development to control dust generated by the activities and prevent dust from leaving the Subject Site. This will be undertaken through water misting and truck wash down as required. The final design of the system will be completed at the detailed design stage once final internal layout operations are finalised, with water supply being from a combination of on-site rainwater re-use and town water supply. The final sizing of the rainwater re-use system will be completed at the detailed design stage with the area of roof and rainwater tank volume determined in combination with the operational layout and water demand requirements. Ample allowance is provided in terms of roof area for rainwater capture and space for rainwater tanks.

4.5.3 Stormwater Quality

Water quality treatment measures will be employed to treat collected stormwater runoff prior to discharge to the Council drainage or river system located near Cambridge Ave and Georges River. A treatment train approach is proposed, consisting of rainwater tanks, pit filter baskets and a bio-retention basin.

Wheel wash areas will be provided accordingly for truck wash downs. Drainage for these areas will be segregated from the stormwater system with contaminated water treated appropriately on-site prior to disposal in accordance with EPA requirements and will be finalized at the detailed design stage.

MUSIC modelling has been undertaken of the proposed treatment measures, and the results are summarised in the following figure. **Table 19** below confirms compliance of the MUSIC modelling with CDCP2015.

TABLE 19. MUSIC MODEL FOR STORMWATER QUALITY

	Source Load	Residual Load	% Reduction Achieved	CCC % Reduction Requirement	Compliance with CCC Requirements
Total Suspended Solids (kg/yr)	12,000	1,070	91.1	80	YES
Total Phosphorus (kg/yr)	25	11.7	53.2	45	YES
Total Nitrogen (kg/yr)	172	88.9	48.3	45	YES
Gross Pollutants (kg/yr)	2,020	0.0051	100	90	YES

4.5.4 Stormwater Quantity

The proposed development has an approximate area of 10.2ha (97% of the total Subject Site area) draining to the proposed on-site detention (OSD) facility which includes 43,413m² hardstand/roads and 67,020m² roof.

The OSD has been sized, using DRAINS modelling, such that the post development rate of runoff for the 5-year to the 100-year ARI storm events does not exceed the rate of runoff from the pre-developed

Subject Site. OSD calculations and details are provided in the Water Cycle Management Report at **Appendix B12** and Civil Engineering Plans at **Appendix B4**, and a summary is shown in **Table 20** below.

The Subject Site drains below Cambridge Ave via an existing culvert that will drain to the OSD that is located on the southern side of Cambridge Ave. The proposed point of discharge is located south of Cambridge Ave to a creek that branches off of Georges River. Tailwater levels have been assumed with the 100-year ARI Tailwater level set at the top of bank.

TABLE 20. DRAINS MODEL FOR STORMWATER QUALITY

Storm Event (ARI year)	Pre-Development Peak Q (L/s)	Downstream Tailwater Level AHD	Post Development OSD Details					
			OSD Stage 1 Q (L/s)	OSD Stage 2 Q (L/s)	Weir Q (L/s)	Bypass Q (L/s)	Total Q (L/s)	Minimum OSD Volume (m^3)
5	1,000	11	348	535	0	104	987	2,026.2
10	1,860	11.5	302	508	0	116	926	2,360.2
20	2,350	12	262	489	84	132	967	2,900.4
50	3,370	12.5	236	442	1,360	147	2,185	3,144.1
100	3,920	13	202	378	2,340	163	3,083	3,221.6

4.5.5 Flooding

The Subject Site is prone to flooding being adjacent to the Georges River with predicted flood levels at the Subject Site of approximately 12.0-12.5m AHD in the 1 in 100-year storm event as per the *Upper Georges River Flood Study* prepared by the Department of Land and Water Conservation in conjunction with Liverpool City Council in December 2000.

The proposed building levels, ranging between 19.000 – 21.000 are well above the flood levels predicted in the *Upper Georges River Study* and there are no works proposed within 40m of Georges River.

Based on the above, the proposed development is not expected to change the level or frequency of floods along Georges River or impact other properties.

4.5.6 Monitoring and Maintenance

To ensure the continued efficient and correct operation of the proposed water management infrastructure a Maintenance and Monitoring Schedule is included in **Appendix B12.**

4.5.7 Summary and Conclusion

The proposed stormwater management system has been designed and modelled using DRAINS and MUSIC modelling, in order to ensure compliance with Council requirements and achieve the principles of water cycle management.

The proposed development has been shown to achieve reductions in potable water import through rainwater capture and on-Site re-use for non-potable functions. The development also achieves pollution reduction targets and employs OSD for the control of stormwater discharge from the Subject Site. Through the implementation of the Monitoring and Maintenance Schedule, the effectiveness, efficiency and integrity of the system would be maintained.

4.5.8 Soil and Water Management Plan

A Soil and Water Management Plan (**Appendix B9**) has been prepared by Edison Environmental and Engineering Pty Ltd, as an amendment to the existing Soil and Water Management Plan that applies to the overall Glenfield Waste Services Site under its current EPL. The document is intended to be submitted to the EPA and would form part of the Landfill Environmental Management Plan for the Subject Site.

The existing stormwater management design for the existing Glenfield Waste Services Site consists of the following:

- Surface runoff from rehabilitated areas passes unhindered across the completed areas of the Site and ultimately off-site as 'clean' runoff;
- Provisions for the management of active cells and pit water;
- Erosion control measures;
- Stormwater drainage swales;
- Buried pipework connecting the Eastern EHRL Underpass to the Western EHRL Underpass;
- Pumping stations located at the eastern and western rail underpasses to transfer stormwater into the southern basin;
- Three (3) stormwater detention basins with capacities of 6,542m^3 (northern basin), 7,491m^3 (southern basin) and 2,847m^3 (basin H), respectively;
- Basin H has not been constructed as the land remains covered with grass. No operational activities are conducted in Catchment H. Runoff passes unhindered across the completed areas of the Site and ultimately off-Site as 'clean' runoff;
- The actual capacity of the northern basin is 25,400m^3, being three (3) times its design capacity. The size of the northern basin was increased to provide additional water storage capacity for operational purposes;
- The temporary use of Catchment E has ceased and grass cover has been reinstated. Surface runoff from Catchment E passes unhindered across the completed areas of the Site and ultimately off-site as 'clean' runoff.

The proposal subject of this SSD would impact on the Soil and Water Management Plan as follows:

- Catchment H: reduction in area from 9.47ha to 3.17ha;
- Catchment F1: located outside of the Subject Site area and not considered further with the exception that the existing Southern Basin will be deleted;
- Catchment F2: reduction in area from 5.22ha to 1.5ha;
- Swale H and Basin H are not required as the part of Catchment H remaining within the amended EPL area is covered with grass and not used for operational purposes;
- Retention of permanent pumping station to transfer stormwater collected in the Eastern and Western Underpasses. Stormwater is piped via gravity from the Eastern to the Western Underpass. A pumping station consisting of a sump and pump are located in the Western Underpass;
- The Southern Basin is to removed which currently received pumped stormwater collected in the Eastern and Western Underpasses. Prior to the deletion of the Stormwater Basin, pumps in the Western Underpass will be direction north to the Northern Basin.

The existing Southern basin was designed to accommodate runoff from Catchments C1, C2, D1, D2, D3, F2 and G (24.49ha). Catchments C1, C2, D1, D2, D3, F2 and G have been added to the area used to calculate the Northern Basin volume (as shown in **Table 21** below). The minimum volume of the Northern Basin (taking into account runoff previously transferred to the Southern Basin) is calculated to be 12,914m^3. As noted above, the 'as built' capacity of the northern basin is 25,400m^3. Therefore, the volume of the Northern Basin exceeds the design capacity by a factor of two (2) times.

TABLE 21. STORMWATER BASIN VOLUMES		
Parameter	**Units**	**Northern Basin**
Catchment Area	Ha	43.0 (A1, A2, B1 PLUS C1, C2, D1, D2, D3, F2 and G)
Design Rain Event	%tile	90th percentile, 5-day event
Settling Zone Volume	m^3	12,630
Storage Zone Volume	m^3	285
Total Basin Volume	m^3	12,914
'As built' Volume	m^3	25,400

Stormwater basin capacities were calculated in accordance with Landcom *Managing Urban Stormwater- Soils and Construction* (2004) and are designed to accommodate runoff generated during the 90th percentile, five (5) day rainfall event. The inclusion of a provision for the chemical treatment of retained stormwater will ensure that discharge criteria can be met and also that stormwater dam capacity can be restored promptly following rain events.

The expansion of the Northern basin (a factor of three (3) times larger than the design requirement) will significantly reduce the frequency of pumped discharges and overflows from the basin.

A water quality monitoring programme is currently in place at the Subject Site including the monitoring of stormwater basins and stormwater discharges from the Subject Site. It is recommended that the current programming be expanded to include regular monitoring of retained stormwater, overflow, pumped discharges and storage levels in each stormwater basin.

For reference, the **Figures 10** and **11** below demonstrate the existing and proposed soil and water management infrastructure for the Subject Site.

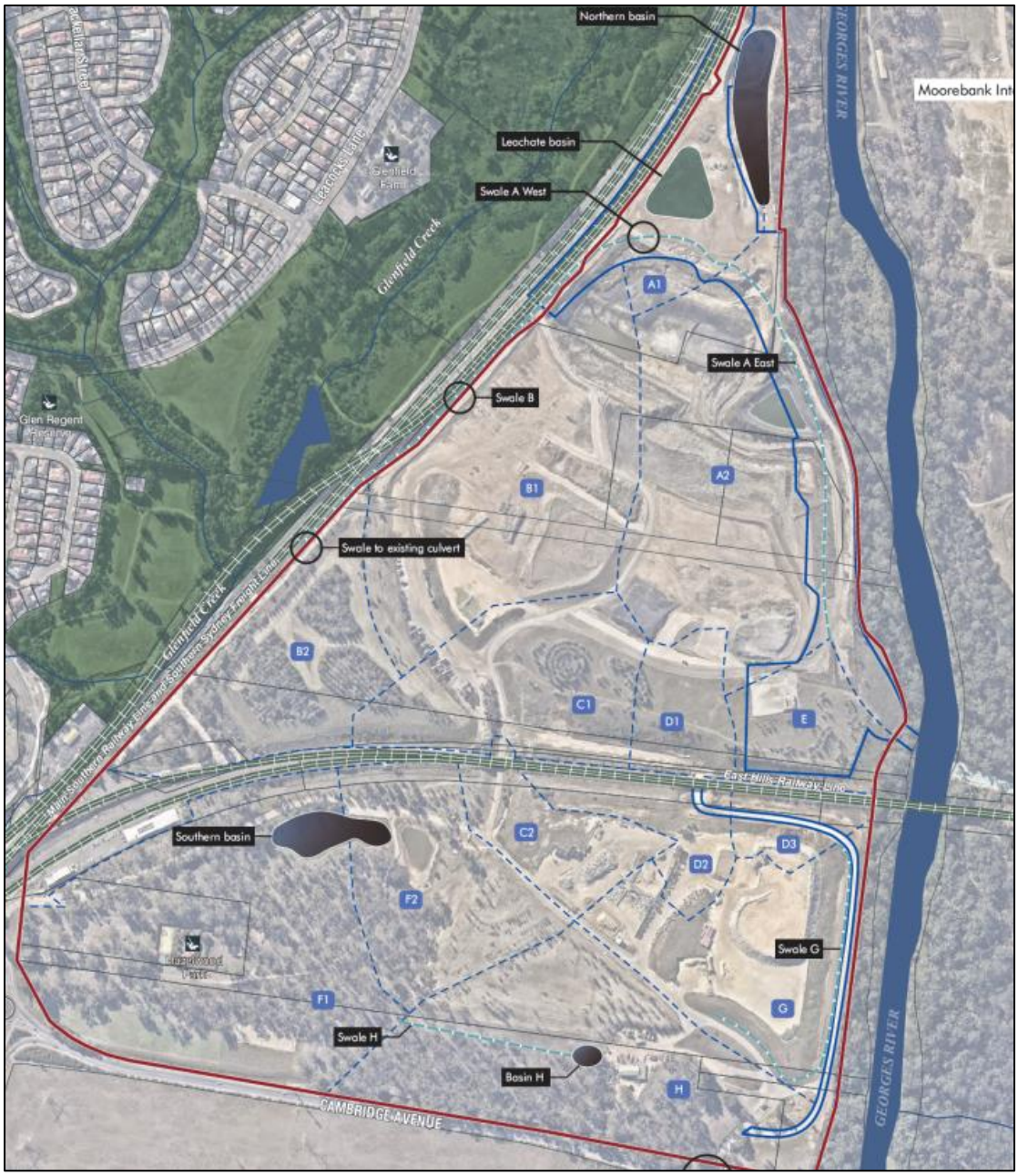


Figure 10. Existing Soil and Water Management Infrastructure (Source: Edison, 2021)

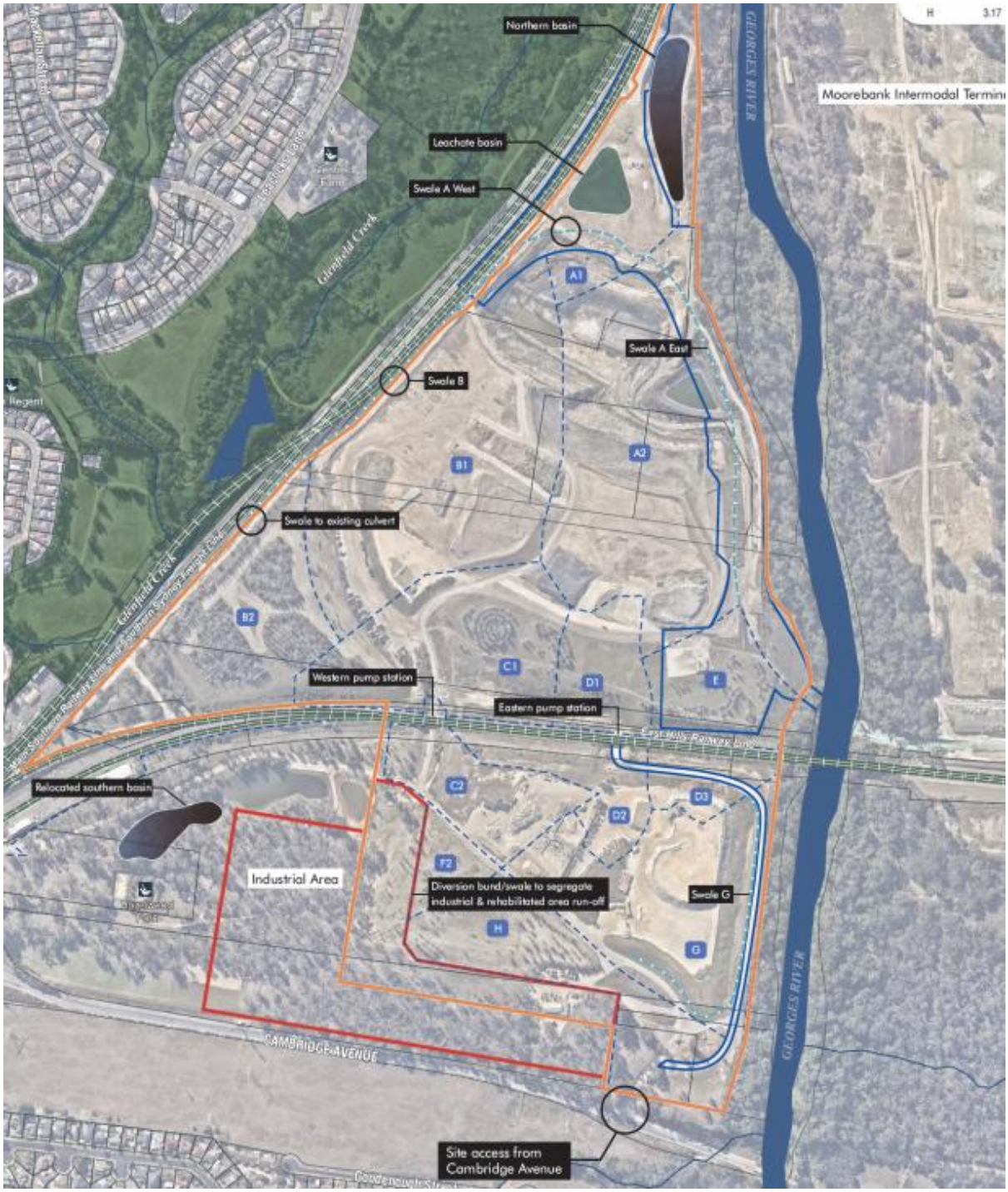


Figure 11. Proposed Soil and Water Management Infrastructure (Source: Edison, 2022)

4.6 TRAFFIC

A Transport Assessment (**Appendix B11**) has been prepared by Ason Group to address the traffic, transport and parking implications of the proposal, including compliance with relevant State and Local Government controls and Australian Standards. The Transport Assessment includes updated traffic surveys and assessment, but also references the original SSD report as necessary.

The Transport Assessment notes that it does not provide detailed assessment of the proposal in the longer-term future when Cambridge Ave upgrade works are completed (at this stage there is no

funding or exact timing for such works, but consultation with TfNSW is ongoing). Based on the traffic assessments undertaken, the proposal does not rely on such upgrade works.

4.6.1 Site Access

Based on consultation with TfNSW to-date, it is understood that early planning has commenced for a future upgrade and extension of Cambridge Ave. It is understood that a future connection from Cambridge Ave into the Subject Site is under investigation, and that this is likely to be a signalised 4-way intersection (also connecting into the lots to the south). However, at the time of writing, funding, timing and detailed design had not been confirmed.

Notwithstanding, the proposed development on the Subject Site is intended to become operational, regardless of the timing of the Cambridge Ave upgrade. Accordingly, it is expected that there will be two (2) stages of the access strategy, as follows:

Interim Access:

During the interim stage (prior to the Cambridge Ave upgrade), the Subject Site would be accessed via the existing access road connecting to Cambridge Ave adjacent to the eastern boundary of the Subject Site. Temporary all-weather access roads would be connected to the existing permanent haul roads. The east-west access road has been proposed as a one-way westbound road connecting to the north-south access road operating as a one-way northbound road. The intersection between the north-south access road and the existing haul road has been designed for right turn only access onto the haul road with no direct access to the northern Glenfield Waste Services Site.

Ultimate Site Access:

Ultimately, the Subject Site would be accessed via the new signalised 4-way intersection at Cambridge Ave, while maintaining a left-in/left-out access on the eastern access and the current connection at the western access point. It is noted that public access is only via the eastern gatehouse.

As noted above, the Cambridge Ave upgrade and new intersection are not part of this SSD and would be subject to ongoing, post-approval consultation with TfNSW and future applications.

4.6.2 Traffic Generation

Based on surveys, the Subject Site currently generates approximately 27 vehicular trips and 8 vehicular trips during morning and evening peak hours, respectively. The Subject Site peak hours do not coincide the road network AM peak hour (08:00 – 09:00) and PM peak hour (16:15 – 17:15).

Trip generation is estimated to remain consistent with the current operations. The proposal is anticipated to support 300 FTE jobs during construction and employ 20 staff during operation.

4.6.3 Weighbridge Operations

The existing weigh station is located 125m north of Cambridge Ave along the eastern access road, which is approximately 890m east of the roundabout of Cambridge Ave and Canterbury Road. The weigh station consists of two (2) weighbridges for vehicles entering and exiting the facility, both of which are approximately 20m in length and are capable of weighing 20m articulated vehicles.

Currently, the vehicles entering the weighbridge are divided into the following coded categories:

- ACCRW: Account holders that weighs in and out;
- BINCHN: Seeking space provided to store their bins;
- CHARITY: Customer type is charity and code determines price i.e. no levy;

- EQPSV: Equipment service vehicle;
- NO_TIP: Customer did not tip;
- REWEIGH: Not an account holder that weighs in and out – cash sales; and
- VISIT: Visitors Logged as on-site.

Currently, approximately 90% of the average daily traffic volume accessing the weighbridges consists of ACCRW and REWEIGH customers. The remaining customers consist of 7% of BINCHN, 2% of VISIT, CHARITY and EQPSV, and 0.1% of N0_TIP customers. Further, approximately 42% of the overall vehicles are regular customers that attend the Subject Site more than once per week.

Of all vehicles entering the Subject Site, 91% spend no more than five (5) minutes on the weighbridge. More specifically, vehicles with accounts (ACRRW) spend up to 30 seconds on the weighbridge and vehicles without accounts (REWEIGH) spend up to 60 seconds. The 9% balance of other vehicles may spend longer on the weighbridge, however given the low volumes it is unlikely the longer weighbridge time will result in queuing before the weighbridge.

The most common truck types accessing the Subject Site (accounting for 76% of vehicles) are generally 15-20m in length (including TRTRA, TRAIL, TRUCK and HOOK type trucks). Vehicles larger than 20m in length (B-Doubles) account for 5% of traffic, and vehicles smaller than 15m account for the balance of the traffic. Therefore, given the 125m of access road length before the weighbridge, a queue of six (6) to seven (7) heavy vehicles can be accommodated without any impact to Cambridge Ave. It is noted that a B-Double is the largest truck that will access the Subject Site.

The peak hour for vehicles entering the facility occurs between 12:00pm to 1:00pm on average, with the maximum hourly volume recorded being 31 vehicles. Accordingly, the Subject Site peak does not occur during road network AM and PM peak hours.

In summary, the current weighbridge operation is unlikely to result in a queue that will impact Cambridge Ave operations, given that:

- The current volume of vehicles is low, with a peak volume recorded of 31 vehicles per hour (outside road network peak);
- The time spent on the weighbridge is short, where most vehicles are processed within 60 seconds;
- The size of most vehicles accessing the facility is under 20m in length;
- The 125m-long access road before the weighbridge can accommodate a queue of six (6) to seven (7) vehicles under 20m in length.

Accordingly, the current operation of the weighbridges does not result in any traffic impact onto Cambridge Ave.

Further, the above operational particulars result in a theoretic capacity of the weighbridge to process approximately 90 vehicles per hour. Given that the existing peak hour volume of the Subject Site is recorded as 31 vehicles (outside road network peak hours), the weighbridge is capable of handling the existing demand as well as the projected demand of a 20% growth rate in five (5) years. (It is noted that the SSD itself would not generate additional traffic compared to the existing Glenfield Waste Services facility).

In the instance that, at the peak flow of two (2) vehicles per five (5) minutes (ie. 31 vehicles per hour), both vehicles were heading to the sorting shed with materials for recycling, it is noteworthy that the sorting shed has been designed to accommodate this, as follows:

- The covered dock is 32m wide;
- Two (2) trucks could pass through the opened door and reverse to a demarcated tipping cell (noting there are several 100m² tipping areas for loads to be dumped); and
- When tipped and cleared, those trucks would depart while newly marshalled trucks enter.

In reality, even heavy demand would be capable of being accommodated on the Subject Site given the extensive queue capacity of the Subject Site with several hundred meters of dual carriageway storage capacity.

Accordingly, the proposed development is not expected to create any material impact on Cambridge Ave and as such is deemed supportable.

4.6.4 Intersection Performance

The key intersections in the vicinity of the Subject Site are shown in **Figure 12** and include the following:

- Cambridge Ave Eastern Site Access;
- Cambridge Ave Canterbury Rd; and
- Railway Pde/Western Site Access.

Figure 12. Key Intersections (Source: Ason Group, 2021)

The baseline (2021) SIDRA modelling is summarised in **Table 22** below.

TABLE 22. BASELINE SIDRA MODELLING

Intersection	Period	Degree of Saturation (DoS)	Intersection Delay	Level of Service (LoS)	Max Queue (m)
Cambridge Ave/ Eastern Site Access	AM	0.498	38.5	C	1.4
	PM	0.467	18.8	B	0.1
Cambridge Ave/ Canterbury Rd	AM	0.444	15.2	B	19.2
	PM	0.559	14.2	A	31.5
Railway Pde/ Western Site Access	AM	0.218	8.9	A	0.5
	PM	0.176	8.9	A	0.1

In summary, all key intersections currently operate at a satisfactory Level of Service (LoS C or better) during the AM and PM peak hours. The existing access crossovers include relatively low traffic turning into Cambridge Ave.

To assess potential impacts of the Proposed Development, SIDRA analysis has again been undertaken for a future 2026 Project Case scenario. Strategic future year traffic projects (EMME data) have been obtained from TfNSW for the core study network, in light of the rezoning and population projections for the adjacent Glenfield Precinct over the next 10-20 years. SIDRA modelling results are summarised in **Table 23** below.

TABLE 23. 2026 PROJECT CASE SIDRA MODELLING

Intersection	Period	DoS	Intersection Delay	LoS	Max Queue (m)
Cambridge Ave/ Eastern Site Access	AM	0.599	76.5	F	2.6
	PM	0.548	30.9	C	0.2
Cambridge Ave/ Canterbury Rd	AM	0.533	17.5	B	4.2
	PM	0.674	14.9	A	55.9
Railway Pde/ Western Site Access	AM	0.261	8.9	A	0.1
	PM	0.207	8.9	A	0.1

Accordingly, with the exception of the Cambridge Ave/Eastern Site Access during the AM peak, all other key intersections are expected to operate at a satisfactory Level of Service (LoS C or better) during the AM and PM peak hours.

Whilst the Cambridge Ave/Eastern Site Access intersection is expected to operate at LOS F during the AM peak, it should be noted that the 76.5 second intersection delay during the AM peak is due to right turn movements from the Subject Site access (approximately four (4) vehicles per hour). The delay time on Cambridge Ave is still satisfactory for both westbound (31.4 seconds, LoS C) and eastern traffic (12.6 seconds, LoS A). Additionally, despite the 76.5 second delay time, given the low right turn traffic demand, the 95th percentile queue length at the Eastern Site Access during the AM peak is expected to be only 2.6m.

Therefore, it is deemed that the proposed development would not result in any material impact on the surrounding road network and key intersections.

Furthermore, it is important to note that by the time Cambridge Ave is upgraded and new intersections are developed by TfNSW, the eastern access point will be reconfigured to left-in/left-out only which resolves the delay for the right turn movements.

In summary, the proposal will not increase the vehicular traffic generation of the Subject Site and as such it will not have any additional operational impact on Cambridge Ave.

4.6.5 Parking

The Subject Site currently generates minimal demand for car parking, which is accommodated on-site across multiple informal car parking areas.

Trip generation is estimated to remain consistent with the current operations, and therefore minimal demand for car parking would be generated.

As such, the parking rates under CDCP2015 would not be applicable in light of the specific operational particulars of the proposal. (It is also noted that CDCP2015 provides general industrial rates only and no rates specifically for a materials recycling facility).

Notwithstanding, for reference purposes the CDCP2015 industrial rates have been applied to the proposed built form, resulting in a calculated requirement for 278 parking spaces. In response, the proposal provides 139 parking spaces with additional spare capacity provided informally across the Site. Whilst representing a numeric shortfall compared to the CDCP2015 rates, it is noted that the Subject Site would accommodate the estimated peak of 20 staff. Therefore, it is reasonable to expect that the on-site car parking demand of the Subject Site would remain minimal and the theoretic parking requirements as per CDCP2015 are surplus to the actual parking demand.

It is noted that the proposal would not increase the staff numbers. As such, the development proposes a total of 24 formally line marked on-site car parking spaces. Furthermore, a total provision of 139 car parking spaces have been indicatively allowed in the event that Council would require additional spaces for future proofing of the Subject Site. It is considered that the 24 spaces would sufficiently accommodate the parking demand of this SSD with no adverse parking impacts on the surrounding road network based on the immediate operation of the development.

Adopting the BCA requirement for one (1) in 100 spaces to be accessible, a minimum of three (3) accessible spaces would be required.

All car parking spaces should be designed with reference to Australian Standard AS 2890.1, and AS 2890.6 for accessible spaces.

The Transport Assessment also provides recommendations regarding the provision of bicycle parking/storage facilities. In the absence of CDCP2015 bicycle rates, reference is made to DPE's *Planning Guidelines for Walking and Cycling 2004*. Based on a rate for staff bicycle parking to be provided at 3-5% of staff numbers and visitor bicycle parking at 5-10% of staff numbers, two (2) to three (3) bicycle spaces would be required to accommodate the 20 staff on the Subject Site and associated visitors. Bicycle parking/storage facilities should be provided in accordance with Australian Standard AS2890.3.

For commercial (service) vehicle parking, the Transport Assessment outlines the following general requirements (noting that CDCP2015 does not provide specific loading requirements for a materials recycling facility):

- Each industrial unit shall be provided with a loading bay;
- Provision shall be made for all loading and unloading to take place wholly within the designated loading area;
- No loading or unloading shall be carried out across parking spaces, landscaped areas, pedestrian aisles or on roadways;
- Each industrial building having a GFA more than 1500m² shall provide a loading area to allow for a heavy rigid vehicle to manoeuvre on-site;
- Heavy rigid vehicle swept turning paths shall be provided demonstrating that a heavy rigid vehicle can enter and exit the Subject Site in a forward direction; and
- Where it is proposed to service the Subject Site with articulated vehicles exceeding 12.5m in length, swept turning paths are to be provided for that vehicle type.

The Transport Assessment notes states that appropriate loading and unloading facilities/areas respond to specific on-site demand for the proposed development and have been designed with reference to the relevant Australia Standards. Relevant swept paths analysis is included in Appendix C of the Transport Assessment.

4.6.6 Construction Traffic Management Plan

A detailed Construction Traffic Management Plan (CTMP) would be provided as part of detailed construction planning and is anticipated to be required as a condition of consent.

General principles for managing construction traffic have been incorporated in the Transport Assessment, and are summarised as follows:

Potential Haulage Routes:

The potential haulage route to and from the Subject Site would be via Cambridge Ave from Campbelltown Road. TfNSW currently identifies Campbelltown Road as a 25/26m B-doubles route and part of Cambridge Ave as a heavy vehicle approved route with travel conditions. It is expected that construction vehicles will also utilise the existing access crossovers on Cambridge Ave to access the Subject Site.

Construction Hours:

Construction works would be undertaken during standard construction-working hours, which are anticipated to be 7am-6pm Monday to Friday, 7am-1pm Saturday, and no planned work on Sundays and Public Holidays. It may, on occasion, be necessary to undertake night works to minimise disruption to traffic or for oversize deliveries, under special permit.

Construction Traffic Generation and Impact:

Light vehicle traffic generation would be generally associated with contractor movements to and from the Subject Site, with trips expected to arrive in the morning and depart in the evening. Parking would be provided on-site.

Heavy vehicle traffic would be generated by the delivery of construction equipment and material. Based on the estimated construction staff number, the construction traffic volumes are expected to be lower than the volumes anticipated for the SSD once it becomes operational. Deliveries are likely to occur outside of the peak network traffic periods and would have limited (if any) impact to traffic on the surrounding road network. Given the key intersections are anticipated to operate at acceptably when the proposal is completed, it can be assumed that the intersections would satisfactorily accommodate the lower volumes of construction traffic.

As noted above, a detailed CTMP would be prepared post-approval, prior to commencement of works.

4.6.7 Summary and Conclusion

The Transport Assessment concludes that the proposal is supportable from traffic engineering and transport planning perspectives.

4.7 FIRE SAFETY

The amended proposal has been designed to be capable of compliance with current fire safety standards. It is requested that this is included as a condition of consent.

4.8 BUILT FORM

The revised proposal includes the construction of two (2) warehouse buildings on the Subject Site. The proposed built form would comply with the 12m maximum building height pursuant to CLEP2015, and would be of a scale, bulk and mass consistent with the character of industrial areas.

Further, the proposed built form would be suitably setback from the Subject Site boundaries and street frontages, and landscaping would be provided around the perimeter of the Subject Site and adjacent to the Cambridge Ave street frontage. The proposed setbacks and landscaping would soften the appearance of the built form and reduce the visual scale of the buildings.

Considering the nearest residential receivers (which are located to the south and west), given the significant separation distances (with road infrastructure located within the separation buffer between residences and the proposed warehouses), generous setbacks, landscape screening, and compliant building height, the proposed built form would not be highly perceptible in outlooks from residential areas and would result in no unacceptable visual impact.

The location of the proposed building footprint in the context of the nearest residential areas, is shown in **Figure 13** below, noting separation distances, setbacks and landscape screening.

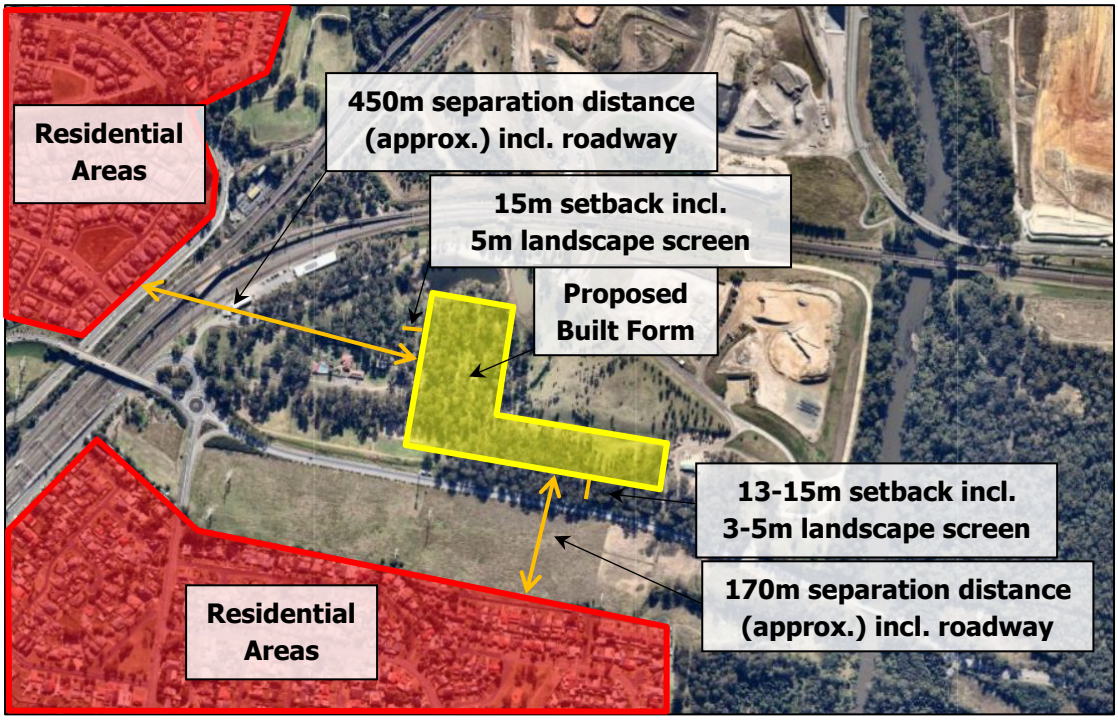


Figure 13. Location of Proposed Development in Respect of Residential Receivers (Source: Nearmap, 2021)

PART E CONCLUSION

All key Issues previously raised as part of the RTS process have been duly considered and satisfactorily addressed, as confirmed within this Amendment Report and the revised Consultant Reports and Plans.

The key Issues distilled from the referral Submissions and addressed throughout this Amendment Report, are summarised as follows:

5.1 VEGETATION CLEARING AND BIODIVERSITY

The extent of vegetation clearing has been reduced by approximately 2.4ha, from 9.5ha down to 7.11ha. The vegetation to now be cleared connects directly to the proposed development.

This vegetation includes both the State listed Cumberland Plain Woodland CEEC, and Federally listed Cumberland Plain Shale Woodlands and Shale Gravel Transition Forest CEEC.

The BDAR (**Appendix B3**) describes that within the development footprint, the majority of the CEEC is in poor condition with a depauperate shrub layer and a managed and grazed ground layer that has a high abundance of exotic species.

Notwithstanding the poor condition of the CEEC to be impacted, the BOS is automatically triggered as the project is SSD. Accordingly, the BDAR calculates the credits required to be purchased in accordance with the BAM.

Further details of biodiversity are provided in the BDAR at **Appendix B3**.

5.2 NOISE

Industry best practice has been achieved through the internalisation of all operations within warehouses. The Noise Assessment confirms that, based on the operational scenario inclusive of all acoustically significant plant and equipment, predicted noise levels would comply with all applicable criteria at all times for all residential receivers.

Road traffic noise associated with the project is expected to be minimal given the relatively small increase in proposed traffic volumes compared to existing volumes. The proposal's traffic generation represents less than 2% of existing daily traffic on Glenfield Road. The corresponding increase in road traffic noise would remain below 2dB which, according to the RNP, is unlikely to require consideration of mitigation.

Construction noise impacts are predicted to be below the relevant noise goals at all noise sensitive locations. Notwithstanding, recommendations have been provided with the aim of minimising construction noise impacts at nearby noise sensitive receivers.

Further details are provided in the Noise Assessment at **Appendix B7**.

5.3 AIR QUALITY

The amended design of the proposal represents industry best practice in air quality control. This has been principally achieved through the internalisation of all operations and stockpiles within fully enclosed warehouses, and the sealing of all hardstand and paved areas of the Subject Site.

The Air Quality Impact Assessment provided in **Appendix B2** assesses the potential emissions generated as a result of all activities at the Subject Site in the context of relevant criteria established in key legislation and guidelines. The assessment concludes that the proposal would achieve compliance

with all relevant criteria and assessment categories. Where, in the case of 24-hour PM_{10} and $PM_{2.5}$, pre-existing exceedances have already been recorded, the proposal would not unacceptably exacerbate the existing exceedance.

Further details are provided in the Air Quality Impact Assessment at **Appendix B2**.

5.4 WATER MANAGEMENT

All previously identified water management risk items, would be mitigated through the enclosure of the warehouses and sealing of paved areas of the Subject Site. As green waste is no longer proposed to be received by the facility, leachate would no longer be a concern.

The development will adopt a stormwater management system incorporating rainwater reuse, stormwater quality and stormwater quantity measures. In summary, roof water capture and reuse for non-potable functions, would result in an approximate reduction in the proposed demand on potable water supplies of 2,080,000L per year.

Water quality treatment measures will employ a treatment train approach, consisting of rainwater tanks, pit filter baskets and a bio-retention basin. MUSIC modelling confirms compliance with CDCP2015.

Stormwater quality would be addressed through an OSD system, which has been sized using DRAINS modelling and demonstrated to ensure that the post development rate of runoff for the 5-year to the 100-year ARI storm events does not exceed the rate of runoff from the pre-developed Site.

Further details, including MUSIC and DRAINS models, are provided in the Water Cycle Management Report at **Appendix B12** and in the Civil Engineering Plans at **Appendix B4.**

Further, the updated Soil and Water Management Plan (**Appendix B9**), confirms that stormwater basin capacities have been calculated in accordance with Landcom *Managing Urban Stormwater- Soils and Construction* (2004) and are designed to accommodate runoff generated during the 90th percentile, five (5) day rainfall event. The inclusion of a provision for the chemical treatment of retained stormwater will ensure that discharge criteria can be met and also that stormwater dam capacity can be restored promptly following rain events. The expansion of the Northern basin (a factor of three (3) times larger than the design requirement) will significantly reduce the frequency of pumped discharges and overflows from the basin.

A water quality monitoring programme is currently in place at the Subject Site including the monitoring of stormwater basins and stormwater discharges from the Subject Site. It is recommended that the current programming be expanded to include regular monitoring of retained stormwater, overflow, pumped discharges and storage levels in each stormwater basin.

5.5 TRAFFIC

Traffic generation would not increase proportionally with the increased capacity of the facility as the trucks *already* travel to the Subject Site to access the Glenfield Waste Disposal Service.

Based on SIDRA modelling, the Transport Assessment concludes that the proposal would not have any additional operational impact on Cambridge Ave including for the 2026 Project Case.

Full details are provided in the Transport Assessment at **Appendix B11.**

5.6 FIRE SAFETY

The amended proposal has been designed to be capable of compliance with current fire safety standards. It is requested that this is included as a condition of consent.

Accordingly, this Amendment Report (including supporting documentation) demonstrates that the proposed development can be accommodated without generating unacceptable impacts for the environment or surrounding land uses.

Following the formal exhibition period and previous RTS, consultation has been ongoing with DPE and relevant State Agencies. Accordingly, this Amendment Report and the amended proposal are the products of collective work to address and resolve all key issues previously identified.

In response to the key issues identified, all recommendations and mitigation measures will be implemented across the Subject Site. This will take place throughout both the proposed development's construction and operational phases. Mitigation measures include administrative commitments from the Proponent as well as a combination of environmental management commitments, which have been drawn from the relevant environmental disciplines.

It is considered that this Report and its Appendices provide DPE with all the information necessary for the SSDA assessment to be finalised and determination made.

APPENDIX A
UPDATED MITIGATION MEASURES

PLANNED MANAGEMENT AND MITIGATION MEASURES FOR THE PROPOSED DEVELOPMENT

By:	Glenfield Waste Services
In relation to:	Proposed State Significant Development Application: Proposed Materials Recycling Facility
Subject Site:	Cambridge Ave, Glenfield (Lot 1 DP 113201, Lot 2 DP 333578, Lot 3 DP 736881, Lot 3 DP 735524, Lot 91 DP 1155962)

Glenfield Waste Services (GWS) plan to undertake the construction and operation of the proposed Materials Recycling Facility, in accordance with the following conditions.

Key terms and abbreviations used in this Statement include the following:

Approval	The Minister's Approval of the Proposed Development
BCA	Building Code of Australia
Council	Campbelltown City Council
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
EP&A Act	*Environmental Planning and Assessment Act 1979*
GWS	Glenfield Waste Services
Project	The Proposed Development as described in this Amendment Report
Secretary General	Secretary General of DPE (or delegate)
Subject Site	Land to which the proposal applies
WorkCover	NSW WorkCover

7.1 ADMINISTRATIVE COMMITMENTS

Commitment to Minimise Harm to the Environment

1. GWS will commit to implement all reasonable and feasible measures, to prevent and/or minimise any harm to the environment, that may result from the construction or operation of the Proposed Development.

Subdivision Certificates

2. GWS will ensure that separate development consent and Subdivision Certificates are obtained, prior to formal registration of the individual allotments with the NSW Land Registry Services.

Occupation Certificates

3. GWS will ensure that Occupation Certificates are obtained prior to the occupation of the facility.

Terms of Approval

4. GWS would carry out the proposal generally in accordance with the:

    a) Environmental Impact Statement;
    b) Architectural Drawings prepared by L Form Architects;
    c) Management and Mitigation Measures; and
    d) Any Conditions of Approval.

5. If there is any inconsistency between the above, the Conditions of Approval shall prevail to the extent of the inconsistency.

6. GWS would ensure compliance with any reasonable requirement(s) of the Secretary-General of DPE arising from DPE's assessment of:

    a) Any reports, plans, programs, strategies or correspondence that are submitted in relation to this Approval; and

    b) The implementation of any recommended actions or measures contained in reports, plans, programs, strategies or correspondence submitted by the Project Team as part of the application for Approval.

Structural Adequacy

7. GWS would ensure that all new buildings and structures on the Subject Site are constructed in accordance with the relevant requirements of the BCA.

Operation of Plant and Equipment

8. GWS would ensure that all plant and equipment used on-site, is maintained and operated in proper and efficient manner, and in accordance with relevant Australian Standards.

Construction Traffic Management Plan

9. GWS would ensure that a Construction Traffic Management Plan is prepared and submitted to DPE. This Plan would:

    a) be submitted to the Secretary-General for approval prior to the commencement of construction;
    b) describe the traffic volumes and movements to occur during construction;
    c) detail proposed measures to minimise the impact of construction traffic on the surrounding network, including driver behaviour and vehicle maintenance; and
    d) detail the procedures to be implemented in the event of a complaint from the public regarding construction traffic.

Construction Environmental Management Plan

10. Prior to the commencement of construction, a Construction Environmental Management Plan (CEMP) would be prepared that addresses the following:

    a) Land Contamination;
    b) Air Quality;
    c) Waste Classification; and
    d) Erosion and Sediment Control Plan.

Monitoring of State of Roadways

11. The Applicant will monitor the state of roadways leading to and from the Subject Site and will take all necessary steps to clean up any adversely impacted road pavements as directed by Council.

Waste Receipts

12. A permanent record of receipts for the removal of both liquid and solid waste from the Subject Site should be kept and maintained up to date at all times. Such records will be made available to authorised person upon request.

7.2 SPECIFIC ENVIRONMENTAL COMMITMENTS

Noise

13. Construction on the Subject Site would only be undertaken between 7am and 6pm Monday to Friday, and 7am and 1pm on Saturdays. No construction will be permitted at the Subject Site on Sundays or public holidays. The following specific measures are proposed throughout the construction and operational phases of development:

    a) Prompt response to any community issues of concern;
    b) Noise monitoring on-site and within the surrounding areas;
    c) Refinement of on-site noise mitigation measures and plant operating procedures where practical;
    d) Preparation of a formal noise management plan including noise monitoring program;
    e) For equipment with enclosures, ensure door and seals are well maintained and kept closed when not in use;
    f) Keep plant and equipment well maintained, regular inspection and maintenance of equipment to ensure it is good working order;
    g) Equipment not to be operated until it is maintained or repaired;
    h) Regularly train workers (i.e. toolbox talks) to use equipment in ways to minimise noise;
    i) Operate mobile plant in a quiet, efficient manner;
    j) Switching off vehicles and plant when not in use; and
    k) Incorporate clear signage at the Site including relevant contact numbers for community enquiries.

14. Further mitigation measures outlined within the Noise Assessment prepared by SLR (2022) would be undertaken to ensure all acoustic criteria thresholds are complied with during the construction phase of the Proposed Development.

Construction Traffic

15. During construction:

    a) all trucks entering or leaving the Site with loads, will have their loads covered;
    b) trucks associated with the Project do not track dirt onto the public road network; and
    c) the public roads used by these trucks are to be kept clean.

Dust Management

16. During the construction phase of the proposal, all reasonable and feasible measures to minimise dust generation by the proposal. These include:

Source	Control Measures
General	
Visual Inspection	Carry out visual inspections of the Subject Site during preparatory and construction activities and employ measures (where necessary) to minimise any visible air pollution generated by the project.
Regular Maintenance	Regularly inspect and perform maintenance on dust control using the latest technologies (i.e. water sprays nozzles) and measures to ensure the effectiveness of such controls.
Erosion Control Structures	Silt and other material removed frequently from around erosion control structures to ensure deposits do not become a dust source.
Vegetated Buffers	Retain existing vegetation where appropriate and implement additional vegetated buffers around the boundary of the Subject Site to provide a physical barrier to the transportation of pollutants in the direction of sensitive receptors.
Waste Materials	Cleared vegetation, demolition materials and other combustible waste materials will not be burnt on-site. All waste materials to be appropriately contained (in skips, bins) and covered during adverse weather conditions and handled in accordance with the Waste Management Plan.
Wind Blown Dust Sources	
Disturbed Areas	▪ Disturb only the minimum area necessary. ▪ Stabilise all disturbed areas as soon as practicable to prevent or minimise windblown dust. ▪ Regularly assess weather conditions to identify adverse weather conditions that are unfavourable in terms of dust levels at receptor locations surrounding the Site (such as on dry days, during strong winds).
Stockpile/s	▪ Water sprays and/or covers will be employed for material stockpiles, particularly during adverse weather conditions, to minimise dust generation. ▪ Stockpiles will be covered overnight. ▪ Use of chemical dust suppressants will also be used where necessary. ▪ Fencing, bunding or shelterbelts will be used to reduce ambient wind speeds (in some areas).
Transportation (Trucks)	▪ Truck loads will be covered with tarpaulin or lid prior to transport of dusty materials by road. ▪ Minimise truck queuing and unnecessary trips through logistical planning of materials delivery and work practices. ▪ Reduce vehicle / truck idling times. ▪ Maintain a following distance of trucks of 20 seconds minimum to allow for dust clouds generated by the lead truck to dissipate. ▪ Install a truck wheel wash or shaker grid to remove any loose dirt.

Source	Control Measures
Activity Generated Dust Sources	
Internal Road Dust	▪ Roads and trafficked areas will be watered down using a water cart and/or sprinkler to minimise the generation of dust. ▪ Haulage vehicles will be restricted to the most direct route and minimal manoeuvring areas to prevent indiscriminate driving over non-active areas. ▪ Haul roads and hard stand areas will have designated speed limits (i.e. generally 20 km/hour). ▪ Enforce speed limits on all on-Site vehicles to minimise wheel-generated dust. ▪ Stabilise access roads and work areas as soon as practicable to prevent or minimise windblown dust. ▪ Maintain roads on a regular basis to ensure roads are clearly marked, pot holes and corrugations are eliminated, and extra material build up is removed or redistributed on the road. ▪ Chemical dust suppressants used where necessary.
External Road Dust	▪ Vehicles causing dirt tracks out onto main roads would be cleaned on a regular basis to prevent this becoming an additional source of dust. ▪ Material spillages would be cleaned up promptly.
Excavation	▪ Apply water sprays to trucks and loading points for dust suppression.
Loading and Dumping	▪ Stockpiles will be minimised wherever possible.
Plant and Equipment	▪ All plant and equipment used during activities will be maintained and operated in a proper and efficient condition. ▪ Reduce idling times of trucks and other machinery. ▪ Fixed plant should be located as far from local receptors as possible.
Excessive Dust Events	
Internal Roads	▪ Employ additional water spraying / water carts. ▪ Further reduce speed on haul roads during high winds. ▪ Halt traffic movements.
Stockpiles	▪ Treat stockpiles with appropriate measures to avoid dust.

Waste Management

17. GWS will ensure that all waste generated on-site during operation is classified in accordance with OEH's *Waste Classification Guidelines: Part 1 Classifying Waste* and disposed of to a facility that may lawfully accept the waste.

Erosion and Sediment Control

18. GWS will install silt traps during the construction phase to ensure there are no pollutants or sediments that exit the Subject Site or unacceptable impacts result on surrounding vegetation or waterways.

Protection of Vegetation

19. GWS will mark the clearance boundaries prior to commencement of construction to ensure that there is no unnecessary removal of vegetation.

20. GWS will implement pre-clearance protocols.

21. GWS will provide on-site supervision of habitat tree felling and relocation of fauna.

22. GWS will implement a soft felling operation.

23. GWS will implement a Construction Environmental Management Plan.

Aboriginal Cultural Heritage

24. Environmental Property Services recommend that an Aboriginal Site Impact Recording form be completed and lodged for Sites GWD 3 and GWD 4.

25. Following completion of the development, signage will be installed on the Aboriginal history of the region. This recommendation will be carried out as part of a separate project to dedicate a riparian corridor as signage in this area would be more useful than on the Site.

26. The Construction Management Plan will include protocols for training staff and contractors on the relevant heritage issues, legislative requirement and recommendations of the AHMS report.

27. Consultation between GWS and the RAPs will be maintained throughout the design and construction stages.

28. The following protocol for unexpected finds will be adopted:

Discovery of Unanticipated Aboriginal Objects

All Aboriginal objects and places are protected under the NPW Act. It is an offence to knowingly disturb an Aboriginal Site without a consent permit issued by OEH. Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations. These may include notifying the OEH and Aboriginal stakeholders.

Discovery of Unanticipated Historical Relics

Relics are historical archaeological resources of local or State significance and are protected in NSW under the *Heritage Act 1977*. Relics cannot be disturbed except with a permit or exception/exemption notification. Should unanticipated relics be discovered during the course of the project, work in the vicinity must cease and an archaeologist contacted to make a preliminary assessment of the find. The Heritage Council will require notification if the find is assessed as a relic.

Discovery of Aboriginal Ancestral Remains

Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity the following protocol must be adhered to:

a) Immediately cease all work at that location and not further move or disturb the remains.
b) Notify the NSW Police and OEH's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location.
c) Do not recommence work at that location unless authorised in writing by OEH.

Historic Heritage

29. Relics are historical archaeological resources of local or State significance and are protected in NSW under the Heritage Act 1977. Relics cannot be disturbed except with a permit or exception/exemption notification. Should unanticipated relics be discovered during the course of the Project, work in the vicinity must cease and an archaeologist contacted to make a preliminary assessment of the find. The Heritage Council will require notification if the find is assessed as a relic.

Ecologically Sustainable Development

30. GWS would investigate the following ESD measures in respect of:

a) Sustainability Management Principles

- Complete best-practice commissioning of all equipment and plant in the Proposed Development.
- Complete a Climate Risk Assessment with enacting sustainability design principles, to enable a more resource-resilient development.
- Commit to the ongoing efficient performance of the Proposed Development on energy and water grounds.

b) Indoor Environment Quality Principles

- Increase the amount and quality of fresh air within the working environment.
- Provide a quieter acoustic and softer lighting environment and enhance views and daylight.
- Use low embodied-energy materials and more durable product with a longer lifespan.

c) Energy Principles

- Create major new initiatives to lower peak power demands and reduce energy consumption at both peak and off-peak parts of the day.

d) Water Principles

- Improve and increase recycled onsite water storage and rainwater for landscape irrigation and WC and urinal flushing. This will improve efficiency and lower usage of potable water.

e) Material Principles

- Build using materials that are more sustainably sourced or have sustainability credentials. Recycled material should be used wherever possible.
- Minimise the environmental impact of the products used through the life cycle of the building.
- Divert 90% or more of water at the Site away from landfill.

f) Emission Principles

- Fit the buildings with new-age technology away from such devices as cooling towers, thereby reducing workers exposure to airborne aliments such as legionella.

Bushfire Protection

31. GWS will ensure that:

    a) Fire hydrants to be installed to comply with AS 2419.1 – 2005 Fire Hydrant Installations - System Design, Installation and Commissioning (AS 2419).
    b) Where overhead electrical transmission lines are installed no part of a tree should be closer to a powerline than the distance specified in "Guideline for managing vegetation near power lines" issued by Department of Energy, Utilities and Sustainability (ISSC 3, December 2005).
    c) Gas services are to be installed and maintained in accordance with AS/NZS 15962008.
    d) Use cladding materials for the external surfaces of the development which are fire retardant materials such as metal sheeting, pre-cast cement panels or masonry.
    e) Undertake regular inspections and maintenance of the Managed Lands or curtilage/landscaped areas/hard standing areas within the proposed development according to PBP (RFS, 2019).
    f) Ensure that future landscape plantings within the Subject Site are in accordance with the requirements of Appendix 4 of Planning for Bushfire Protection (RFS 2019).

Hazards and Risks

32. The development will not store hazardous materials as defined in the Australian Dangerous Goods Code or NSW Planning-Storage and Handling of Dangerous Goods Code of Practice 2005.

33. A Project Emergency Response Plan will be developed, maintained and implemented.

34. Employee inductions will cover aspects of fire prevention.

35. A formal facility close down procedure will be prepared and implemented to ensure any smouldering fires are noted and extinguished.

36. A Combustible Stockpile Management Plan will be developed, maintained and implemented.

37. A water cart will be available on the Subject Site.

38. The Facility will be securely fenced to discourage intruders.

39. Fire-fighting systems will be designed and installed compatible with NSW Fire Brigade systems.

40. Mobile plant and vehicles will be fitted with appropriate fire extinguishers.

APPENDIX B
SUPPORTING INFORMATION