REPORT

Draft Environmental Impact Statement

Integrated Resource Recovery Facility, Fyshwick Block 8 and Block 12
Section 28 Division of Fyshwick 6-14 Tennant Street, Fyshwick ACT

Submitted to:

ACT Government: Environment, Planning and Sustainable Development Directorate

Proponent:

Hi Quality ACT Pty Ltd
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Prepared by:

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July 2020
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Submission of draft environmental impact statement, prepared pursuant to the Planning and Development Act 2007 and in accordance with section 50 of the Planning and Development Regulation 2008.

Environmental Impact Statement prepared by:

<table>
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<tr>
<th>Name</th>
<th>Jacinta McMahon</th>
<th>Todd Robinson</th>
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<tr>
<td>Qualifications:</td>
<td>Principal Engineer</td>
<td>Principal Environmental Planner</td>
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</table>
| Address:                     | Golder Associates Pty Ltd  
Level 8, 40 Mount Street, North Sydney, New South Wales 2060, Australia |
| In respect of:               | Fyshwick Integrated Resource Recovery Facility |

Applicant, proposal and land details

| Proponent name:              | Hi Quality ACT Pty Ltd  
Cnr Elizabeth Dr & Mamre Road,  
Kemps Creek NSW 2178 |
| Proposed development (project title): | Integrated Resource Recovery Facility |
| Land to be developed:        | 6-14 Tennant Street, Fyshwick ACT  
Block 8 and Block 12 Section 28 Division of Fyshwick on Deposited Plan 5618 |
| Lessee of land to be developed: | ACT Government – Tranteret Pty Ltd |
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EXECUTIVE SUMMARY

Introduction
Hi Quality Act Pty Ltd seeks the construction and operation of an Integrated Resource Recovery Facility, located at 6-14 Tennant Street, Fyshwick ACT (Block 8 & 12, Section 28 Division of Fyshwick on Deposited Plan 5618).

The project is a proposed multi-operational waste management hub that receives, processes and stores a number of materials and waste streams including:

- Commercial and Industrial waste (dry);
- Construction and Demolition waste;
- Liquid waste (grease trap, drilling mud and oily water);
- Wood waste;
- Soil; and
- Asbestos Containing Material.

The project will utilise new and existing infrastructure and buildings on Site to process and store these material streams with key infrastructure including a Soil Processing and Recovery Facility, Liquid Waste Processing Facility, Wood Processing Facility, Recycling Facility, and a Crushing and Screening Facility. The project will also provide for complementary site activities including a concrete pre-cast plant, a landscape yard and a maintenance workshop and continued operation of the concrete batching plant. Materials transported to the site are anticipated to total approximately 1.1 million tonnes per annum including approximately 500,000 tonnes per annum of non-waste materials for the existing Concrete Batching Plant, the pre cast concrete yard and the landscape yard. It is estimated over 950,000 tpa of saleable and beneficial reuse product will be produced at the site.

Existing Site Description

The existing site comprises Block 8 Section 28 and is transected by an ACT Government owned block (Block 12). Two access easements through Block 12 provide access between the northern and southern portion of the site.

The site is an irregularly shaped, predominantly hard stand area, within a commercial/industrial area and has an area of approximately 10.21 hectares. The site is currently occupied by Hi Quality Act Pty Ltd and has a number of existing industrial/commercial buildings that were previously utilised for concrete product manufacturing activities including a concrete batch plant. Operation of this concrete batching plant on the site operates in accordance with existing approvals and as previously utilised.

The northern portion of the site is approximately 69,835 m² in area and comprises three main buildings and several storage sheds. The southern portion is approximately 32,274 m² in area and comprises one large building, a small site office and two storage sheds. The nearest residential location is 1.3 kilometres to the South East of the site.
The Proponent
Hi Quality Act Pty Ltd is an Australian family owned business providing building and landscaping product supplies and waste management and resource recovery and recycling services in New South Wales, Victoria, the Australian Capital Territory and Queensland.

Statutory Framework

The Planning and Development Act 2007 provides a ‘planning and land system that contributes to the orderly and sustainable development of the ACT’.

The Planning and Development Act 2007 determines whether a development is assessable in the Code, Merit or Impact track.

Section 123 of the Planning and Development Act 2007 identifies assessment of the project as Impact Track requiring an Environmental Impact Statement. Specifically, the project includes activities identified in Schedule 4 of the Act: a recycling facility intended to handle more than 30kt of waste each year and the storage and transfer of asbestos containing material.

The National Capital Plan does not identify any requirements that apply to the site, therefore the project is assessed against the requirements of the Territory Plan, which identifies that Block 8 Section 28 is zoned as General Industrial and Industrial Mixed Use. However, no works associated with the project would take place on the land zoned for Industrial Mixed Use. The project satisfies the objectives of the land use zoning across the site including Industrial Mixed Use and General Industrial.

The project meets the definition of a Class A activity under the Environment Protection Act 1997 and hence will require separate approval for an Environmental Authorisation under the Environment Protection Act 1997.

Community Consultation

A comprehensive consultation process has been underway for the project since inception. Hi Quality ACT Pty Ltd has utilised a variety of methods to engage the community including letters and feedback forms to nearby property owners, lessees and local interest groups and drop in session. A website for the Project has also been provided and feedback received has been incorporate into the Environmental Impact Statement including where issues have been addressed on the project.

In addition to the planning and land authority within the Environment, Planning and Sustainable Development Directorate, consultation has also been undertaken with a number of government agencies and stakeholders including:

- ACT EPA;
- ACT NoWaste;
- EvoEnergy;
- Canberra Airport;
- IconWater and
- Further relevant government agency and regulatory officers associated with specific environmental issues.

Hi Quality ACT Pty is committed to maintaining regular contact with stakeholders with regard to the Integrated Resource Recovery Facility and have welcomed input to the project, with issues raised by stakeholders addressed throughout the Environmental Impact Statement.
Project Need and Justification

The project would result in a number of benefits that are consistent with relevant ACT legislative and policy objectives. These include:

- Providing a regional and cross border approach to waste management that would facilitate regional collaboration and promote regional economic development.
- Utilising proven and innovative waste treatment technology that would provide for more efficient resource recovery than previously available in the ACT, which may facilitate further waste management innovation.
- Increased resource recovery of the highest volume waste streams generated in the ACT including C&D, timber, concrete, asphalt and soils.
- Providing for the capacity to process waste streams understood to be not previously available in the ACT. This includes liquid wastes (grease trap and oily waste water).
- Being centrally located in the ACT thereby reducing the time, transport and further environmental costs associated with waste acceptance and reuse in the ACT.
- The capability to provide efficient and beneficial reuse of soils and further materials.
- The capability to make products (i.e. from existing concrete batching plant) that utilise materials received and processed on site to supply the local and surrounding regions.
- Becoming a centralised waste management hub that would result in reducing the overall waste management footprint within the ACT.

The project would make a significant contribution to resource recovery in the ACT through diversion of materials from landfill resulting in significant reduction in greenhouse gas in addition to facilitating job creation and generating products that are reusable in the ACT and wider region.

Project Alternatives

The do nothing option was not considered a feasible alternative as there is clear demand for increased resource recovery of waste streams as evident by relevant legislative, policy and strategy documents of the ACT that seek to reduce the environmental, economic and social impact of waste.

Extensive investigations were undertaken to consider the viability of developing the proposed Integrated Resource Recovery Facility at a number of geographically separate locations. The site is identified as preferred for the project based upon a number of factors. These include:

- having good existing road networks with access to the wider region;
- relatively few environmental and social constraints associated with the proposed land use that is also considered compatible with neighbouring developments and land uses;
- being consistent with relevant legislation, policy and strategies (including permissibility);
- efficiencies associated with utilising existing infrastructure and buildings on the site;
- having the appropriate size to enable acceptance of a number of different waste streams and processing of some of these materials to produce products that can be provided directly back to the local and regional markets;
- proximity to relevant product markets and waste generation sources within the ACT; and
availability of a centrally located site that is of sufficient size to enable a project that has the capacity and capability to provide a regional waste management solution for a number of differing waste streams. This further reduces the potential waste footprint by providing a central location for waste management thereby potentially reducing environmental and social impacts.

Utilising the existing infrastructure and buildings on the site has driven the design iterations and design alternatives for the Project together with issues such as the size, shape, access and environmental constraints and opportunities and the proposed waste streams to be accepted and processed at the site.

**Traffic and Transport**

A transport impact assessment has been completed by PeopleTrans to assess the anticipated transport implications of the project. This includes considerations of the existing traffic conditions surrounding the site, the traffic generating characteristics of the project, the suitability of access arrangements for the site and the transport impact of the project upon the surrounding road network.

The transport impact assessment identified that operation of the project is not expected to compromise safety or function of the surrounding road network and no road network upgrades are considered necessary. During peak operation the total site-generated traffic (combination of employee movements and movements required to process materials) is calculated to generate up to 75 vehicles in and 80 vehicles out. While peak operation is not calculated to occurring during road network peak hours, to provide a conservative worst-case assessment, the maximum hourly traffic generation of 80 vehicles was modelled to occur during this time with all traffic being further conservatively modelled to access the site via Newcastle Street/Barrier Street/Collie Street. The results of the assessment identify that operation of the Project is not anticipated to compromise safety or function of the surrounding road network (including key intersections) and no road network upgrades are considered necessary.

Construction traffic volumes are assessed as being lower than operational traffic in and out of the Site. Therefore, the impact on the surrounding road network will be less than when the Site is operational.

The transport impact assessment also confirms the suitability of the existing and proposed access points to the site with regard to sight lines and traffic volumes in addition to the internal haul road layout and proposed infrastructure for the project as assessed by vehicle swept path analysis and weighbridge queuing assessment.

**Utilities and Services**

The project would utilise existing utilities to the site for power, communications, gas, sewer and water supply, which would be augmented through onsite stormwater ponds.

**Materials and Waste**

The materials and waste chapter addresses the waste types, quantities, stockpiles and processing procedures of materials to be utilised by the project. This chapter also includes procedures for non-conforming waste management at the site in addition to transport and disposal of residual materials.

**Landscape and Visual**

The landscape and visual assessment was completed through determining and describing the existing landscape character of the site and surrounding areas. This assessment provides a baseline against which the potential visual impact of the proposed project is assessed.

The baseline component of the visual assessment addresses all of the existing elements of the site as well as the proposed infrastructure for operations (i.e. buildings, internal road network and other infrastructure). The
assessment identifies the extent to which the operations are currently visible from public roads, residences, work places and recreational areas located in surrounding areas.

The visual assessment (Chapter 9.0) identifies the project will be commensurate with the visual character of the Site and surrounding industrial area. The overall visual impact to viewers is generally considered to be low due to the developed nature of the surrounding landscape and location within an industrial zoned area. However, mitigation measures including screening vegetation along the northern and southern boundaries in addition to appropriate materials utilised for construction will further reduce the extent to which operations would be visible from surrounding areas of the site.

### Soils and Geology

Extensive investigation and studies of the existing site has been undertaken with regard to the potential impacts of the project upon soil, surface water and groundwater. These studies have included a Phase 1 (APPENDIX G) and Phase 2 (APPENDIX H) contamination site assessment in addition to an audit of the site. The findings of these studies provided input into the design of the project including proposed mitigation and management controls, guidelines and systems to reduce the potential impacts of the project (including contingency measures where applicable).

The results of all soil, water and leachate studies completed for the project indicate that site conditions do not preclude the project at the site. Appropriate design and management measures identified within the EIS would be implemented.

### Water Quality and Hydrology

The Water Quality and Hydrology chapter identifies the existing site conditions for hydrogeology, hydrology including identifying that the Site is not likely to be flooded during a 1% Annual Exceedance Probability flood event.

Existing ground and surface water quality is identified based upon the findings of the Phase 1 (APPENDIX G) and Phase 2 (APPENDIX H) contamination site assessments in addition to a Stormwater Assessment (APPENDIX J), with proposed surface water management and water use identified in the context of addressing potential impacts of the project as they relate to water. This includes the need and process for addressing such issues as potential for runoff contamination, erosion, soil loss and sedimentation, salinity and potential for increased peak discharge. Mitigation and management measures are identified including contaminant containment, erosion and sediment control in addition to details on surface water infrastructure for the project.

### Air Quality, Odour and Greenhouse Gas

An air quality and odour assessment has been completed to evaluate the odour and dust impacts of the project. Conservative dispersion modelling (modelling each emission source at maximum capacity for operating hours under worst case meteorological conditions) has been used to predict odour, dust deposition and particulate levels (including cumulative) of the site and the project taking into account the local meteorological conditions, dust and odour emission inventories, and regulatory requirements.

Dispersion modelling results demonstrate compliance with applicable criterion except for PM\(_{10}\) concentrations in one 24-hour period within the modelled year with the second highest 24 hour PM\(_{10}\) concentration assessed as not impacting on the nearest sensitive receptor. Given the conservative modelling and mitigation measures proposed the potential air quality impacts of the project are assessed as low.

A Greenhouse Gas Emissions assessment has been completed to provide a quantitative assessment of scope 1 and 2 emissions, calculating the project would generate approximately 418 tonnes of CO\(_{2}\)e during construction (Scope 1) and approximately 9,997 tonnes per annum of CO\(_{2}\)e during operation. Overall the
project will result in significantly reducing Greenhouse Gas emissions through recycling of waste materials and diversion from landfill, thereby reducing GHG and contributing to the reduction of impacts upon climate.

**Socio-Economic and Health**

An assessment of the socio-economic and health impacts of the project has been undertaken with a Health Impact Statement provided in APPENDIX L. The socio-economic and health impacts of the project are both negative and positive with direct and indirect benefits to the local, regional and state economies during construction and operation by providing for ongoing and efficient waste management and resource recovery within the ACT and surrounding area. The project will substantially assist in securing the waste management needs of the ACT thereby providing the community with equitable access to waste management services.

Direct economic benefits in the form of local employment opportunities during construction and operation of the Integrated Resource Recovery Facility would be realised through the generation of employment opportunities and potential income to local businesses, in addition to securing long term cost efficiencies such as aggregation (waste activities being located closer together) and densification of waste resources.

The Health Impact Assessment identifies that given the site’s proposed land use and proximity to sensitive receivers, the potential human health impacts of the project are within relevant regulatory criteria.

Overall the project is consistent with all relevant strategies for the site and surrounding area and the project provides for an accessible, reliable and affordable resource recovery facility within an area identified as appropriate for this activity.

**Noise**

Noise modelling was undertaken for worse case operational scenarios including all noise sources of the project operating at once under neutral and noise enhancing weather conditions during night time and daytime conditions in addition to the projected busiest hour of the day and night for vehicle traffic entering and exiting the Site (based on the transport impact assessment findings).

The Noise and Vibration assessment identified that the project will be in accordance with relevant regulatory criteria at noise sensitive receivers with the exception of two residential receivers for 6am to 7am during noise enhancing meteorological temperature inversion conditions. The Noise and Vibration assessment identifies this is largely due to the wood processing facility (primarily tub grinding) and the crushing and screening yard. As such, these activities are not proposed to be utilised during the period of 6am to 7am, resulting in the project being compliant with the relevant ACT noise policies for sensitive residential receivers. Further mitigation measures are proposed within the EIS that will ameliorate the effects of noise from the Project to the surrounding environment.

**Hazards and Risk**

The hazards and risk chapter address potentially hazardous scenarios including bushfire, aircraft operations and a range of other potentially hazardous scenarios as a result of the project. To address these scenarios and risks including their potential cause, consequence and safeguards, mitigation and management are identified and addressed with the hazards and risks chapter. This chapter also includes and discusses the bushfire risk assessment technical report completed by BlackAsh Bushfire Consulting. With appropriate design, mitigation and management measures it is identified that the project will result in a residual risk rating of low for identified hazards and risk of the project.

**Biodiversity**

Field investigation were completed to assess the potential direct and indirect impacts of the project upon biodiversity at the Site and surrounding area. The Ecological Assessment Report identifies that the site is
predominantly cleared of native vegetation and provides limited connectivity to bushland remnants and the Molonglo River catchment area as a result of historical land clearing and current land uses.

No threatened ecological communities or threatened plant species were identified at the site and it is concluded in the Ecological Assessment Report that it is highly unlikely that any threatened flora species, threatened or endangered ecological communities occur within the Study Area.

Other Issues
The Project will have a negligible impact upon known heritage items. This is confirmed by the ACT Heritage Council, which identify within the Scoping Document (Appendix A) “…that development of the subject block is unlikely to diminish the heritage significance of a place or result in damage to Aboriginal heritage places or objects.”

Recommendations
The Environmental Impact Statement includes a statement of commitments and recommendations outlining environmental management and monitoring measures proposed for the project as identified throughout the document. The commitments aim to reduce potential impacts of the project.

Next steps
Hi Quality Act Pty Ltd is seeking approval for the construction and operation of an Integrated Resource Recovery Facility. In accordance with relevant legislation, the ACT Environment, Planning and Sustainable Development Directorate has identified the form and content requirements of this Environmental Impact Statement, which is to be provided for assessment and determination of the project.

Once accepted by EPSDD, the next steps in the process are:

- Public Notification of the Environmental Impact Statement to enable the project assessment to be detailed to the community and stakeholders who may make representations regarding the project.
- Hi Quality Act Pty Ltd to consider and address the representations received during the public notification period on the project (as provided by EPSDD) within a revised Environmental Impact Statement.

Consultation with the community and stakeholders will continue throughout the assessment, determination and post determination such as during construction.

All submissions and information obtained during the public notification period will be used in accordance with the Privacy Act 1988. As such all representations received are regarded as public documents and any information contained in them may be published in subsequent assessment documents. If the author of a representation does not wish the information to be distributed, this needs to be clearly stated in the submission.
1.0 INTRODUCTION

1.1 Project Background

This draft Environmental Impact Statement (EIS) has been prepared on behalf of Hi Quality Act Pty Ltd (the Proponent) to support the construction of the Integrated Resource Recovery Facility, Fyshwick (the Project).

The Proponent is an Australian family owned business providing building and landscaping product supplies and waste management and resource recovery and recycling services in New South Wales, Victoria, the Australian Capital Territory and Queensland.

The Project is located on 6-14 Tennant Street, Fyshwick ACT (the Site) and is strategically located within an industrial zoned area in central Canberra. The Site is currently occupied by the Proponent and previously operated (and currently has approval) as a concrete product manufacturing facility.

The Project is a proposed multi-operational waste management hub that receives, processes and stores a number of waste streams including dry Commercial and Industrial (C&I) waste, Construction and Demolition (C&D) waste, liquid waste (grease trap, drilling mud and oily water), wood waste, soil and Asbestos Containing Material (ACM). The Project will utilise new and existing infrastructure and buildings on Site to process and store these waste streams with key infrastructure including a Soil Processing and Recovery Facility, Liquid Waste Processing Facility, Wood Processing Facility, Recycling Facility, and a Crushing and Screening Facility.

The Project will also provide for complementary site activities including concrete pre-cast plant, a landscape yard and a maintenance workshop and facilitate continued operation of the concrete batching plant.

Materials transported to the Site is anticipated to total approximately 1.1 million tonnes per annum (tpa), which includes approximately 500,000 tpa of non-waste materials are to be accepted at the existing Concrete Batching Plant, the pre cast concrete yard and the landscape yard.

The Project would result in a number of benefits that are consistent with relevant ACT legislative and policy objectives. These include:

- Providing a regional and cross border approach to waste management that would facilitate regional collaboration and promote regional economic development.
- Utilising proven and innovative waste treatment technology that would provide for more efficient resource recovery than previously available in the ACT, which may facilitate further waste management innovation.
- Increased resource recovery of the highest volume waste streams generated in the ACT including C&D, timber, concrete, asphalt and soils.
- Providing for the capacity to process waste streams understood to be not previously available in the ACT. This includes liquid wastes (grease trap and oily waste water).
- Being centrally located in the ACT thereby reducing the time, transport and further environmental costs associated with waste acceptance and reuse in the ACT.
- The capability to provide efficient and beneficial reuse of soils and further materials.
- The capability to provide products that utilise materials received and processed on site to supply the local and surrounding regions.
- Becoming a centralised waste management hub that would result in reducing the overall waste management footprint within the ACT.
The Project would make a significant contribution to resource recovery in the ACT through diversion of materials from landfill resulting in significant reduction in greenhouse gas in addition to facilitating job creation and generating products that are reusable in the ACT and wider region. It is estimated over 950,000 tpa of saleable and beneficial reuse product will be produced at the site with only approximately 100,000 tonnes per annum for landfill and disposal.

A Scoping Document for the EIS, provided in Appendix A, was issued by the ACT Environment, Planning and Sustainable Development Directorate (EPSDD) on 4 April 2019 (application number 201900001), which outlines the issues to address within the draft EIS.

The purpose of this draft EIS is to:

- Provide a detailed description of the Project;
- Identify the key potential environmental impacts and issues associated with the Project;
- Assess the key potential environmental impacts associated with the Project; and
- Outline the Proponent’s commitment to manage, where possible, any potential impacts identified.

Figure 1 presents the proposed layout for the Project.
Figure 1: Proposed Site Layout
1.2 The Proponent

Hi Quality Group was established over 50 years ago and proudly remains an Australian family owned business. The business is a diverse, dynamic organisation that can quickly respond to the needs and demands of its customers.

The company has grown from a single business as a bulk transport contractor to a multidisciplinary contractor and a major integrated natural resource and recycled products supplier with associated businesses.

Hi Quality Group operations located over four Australian States and Territories specialise in:

- Transport, logistics and plant hire;
- Civil and environmental services;
- Quarrying;
- Resource recovery and recycling;
- Waste management and landfill;
- Building and landscaping product supplies;
- Skip bins; and
- Property development.

Hi Quality Group has 14 operational sites that provide extended market coverage and efficient supply and are located at:

- Greater Sydney at Kemps Creek (2), Menangle, Brandown, Bringelly, Wallacia, Mt Hunter, Londonderry and St Marys;
- NSW Southern Highlands at Windellama and Oallen Ford;
- ACT at Fyshwick;
- Queensland at Yatala; and
- Victoria at Sunbury.

Hi Quality Group operate sites that have similar logistics, scale and/or operation to the Project and include:

- St Marys Resource Recovery facility: receives C&D waste, which is processed through crushing and screening. Products from this site include recycled concrete aggregates, roadbase materials and soils.
- Kemps Creek Central: receives C&D waste, which is processing through crushing and screening. Products from this site include recycled concrete aggregates, roadbase materials and soils.
- Menangle Quarry: produces sandstone, which is crushed and screened to produce construction material aggregates and sands. In addition the site receives concrete and brick, which is processed through crush and screen to produce recycled roadbase and sand products.
- Kemps Creek Landscape supplies: Selling river stone and sands, grass, mulch, blue metal aggregates, pavers, cement and other landscape products for private and commercial sale.
- Bringelly composting and landscape supplies: Selling river stone and sands, grass, mulch, blue metal aggregates, pavers, cement and other landscape products for private and commercial sale.
Brandown Waste and Recycling located at Cecil Park: The site carries out C&D processing through a sorting plant with recovered products of metals ferrous and non ferrous, masonry materials, fines for soil, wood for mulching and shredding. The site also provides Resource Derived Fuel processing and manufacture for Berrima cement works.

Oallen Ford quarry that provides for extraction, processing, stockpiling, sale and transport of quartzite, sand, gravel and related products.

Windellama quarry and landfill: that provides for clay extraction at the site in addition to a general solid waste (non-putrescible) landfill facility, concrete recycling facility, paper pulp recycling and the production of road making materials from recycled products. This site is located approximately 90 kilometres from the Site and as identified within Section 2.2, would be utilised to receive and dispose of residual material from the Project in addition to providing for operational contingency where required.

Sunbury, Victoria: providing a putrescible and non putrescible (solid inert) landfill in addition to accepting contaminated soils and asbestos materials. The site also provides for C&D processing through a sorting plant with recovered products of metals ferrous and non ferrous, masonry materials, fines for soil, wood for mulching and shredding and a quarry producing concrete aggregates and sands for concrete manufacture.

Hi Quality Group’s head office is situated at Kemps Creek, NSW, where general management and finance is located along with the transport division, maintenance workshop and landscaping yard.


Hi Quality Act Pty Ltd (the Proponent) is a wholly owned subsidiary within the Hi Quality Group.

1.3 Objectives and Justification

The key objective of the Project is to provide for more efficient resource recovery and beneficial reuse of key waste streams within the ACT and the wider region. This beneficial reuse of waste streams and further compatible ancillary activities will provide for the supply of products to the local and surrounding regions in an efficient and environmentally responsible manner. It is considered that there are a number of drivers for the strategic need and justification for the Project, that arise from environmental, economic and social considerations, which are framed by legislation, policy and strategy documents of the Commonwealth and the ACT. The Project supports key outcomes of the ACT Waste Management Strategy 2011-2025 that relate to resource recovery and provides a viable waste solution with significant environmental benefits.

Refer to Chapter 2 of the EIS, which further addresses the strategic need of the Project.

1.4 Structure of the EIS

The structure of the EIS is summarised in Table 1: and shows how it is structured to meet the requirements of the Scoping Document.

<table>
<thead>
<tr>
<th>Scoping Document Reference</th>
<th>EIS Reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cover page</td>
<td>Page i</td>
<td>Descriptors</td>
</tr>
<tr>
<td>Scoping Document Reference</td>
<td>EIS Reference</td>
<td>Description</td>
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<td>-----------------------------</td>
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</tr>
<tr>
<td>2. Glossary</td>
<td>Page xvi</td>
<td>Glossary</td>
</tr>
<tr>
<td>3. Executive Summary</td>
<td>Page xviii</td>
<td>Non technical description of Project</td>
</tr>
<tr>
<td>4. Introduction</td>
<td>Chapter 1: Introduction</td>
<td>Provides an overview of the need and description of the Project. Outlines the purpose of the EIS document.</td>
</tr>
<tr>
<td>5. Proposal Details</td>
<td>Chapter 2: Project Details</td>
<td>Provides an overview of the existing environmental setting for the Project. Provides a detailed description of the Project. Provides the strategic context and need including the internal and external drivers for the Project. Provides information on how the proposal reduces risk from climate change impact. Provides Alternatives for the Proposal.</td>
</tr>
<tr>
<td>6. Legislative Context</td>
<td>Chapter 3: Legislative Context</td>
<td>Provides information on the relevant legislation and environmental planning instruments that apply to the Project. Provides information on Sustainable development. Provides information on compatibility with the territory plan strategic direction.</td>
</tr>
<tr>
<td>7. Risk Assessment</td>
<td>Chapter 4: Risk Assessment</td>
<td>Details the risk analysis process by which key environmental issues are described.</td>
</tr>
<tr>
<td>8.2.1 – 8.1.5 Standard Requirements</td>
<td>Chapter 5 - 17</td>
<td>Environmental conditions and values, investigations, impacts, mitigation and residual risk.</td>
</tr>
<tr>
<td>8.2.1 Planning and Land Status</td>
<td>Chapter 5 Planning and Land Status</td>
<td>Addresses the potential risks identified by the Scoping Document on planning and land status.</td>
</tr>
<tr>
<td>8.2.2 Traffic and transport</td>
<td>Chapter 6: Traffic and Transport Appendix E: Transport Impact Assessment</td>
<td>Assesses the potential impacts on the transport networks from construction and operational traffic.</td>
</tr>
<tr>
<td>8.2.3 Utilities</td>
<td>Chapter 7: Utilities Appendix F: Site Servicing Investigations, 2012</td>
<td>Describes existing utilities. Assesses the potential impacts to the utilities networks from construction and operational activities.</td>
</tr>
<tr>
<td>8.2.4 Materials and Waste</td>
<td>Chapter 8: Materials and Waste</td>
<td>Describes material handling. Assesses the potential impacts associated to waste and material handling activities.</td>
</tr>
<tr>
<td>8.2.5 Landscape and Visual</td>
<td>Chapter 9: Landscape and Visual</td>
<td>Identifies important view points and assesses the potential visual impacts of the Project upon the amenity of the surrounding area.</td>
</tr>
<tr>
<td>Scoping Document Reference</td>
<td>EIS Reference</td>
<td>Description</td>
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<tr>
<td>8.2.6 Soils and Geology</td>
<td>Chapter 10: Soils and Geology Appendix G: Phase 1 Contamination Assessment Appendix H: Phase 2 Contamination Assessment Appendix I: Auditors Report</td>
<td>Describe existing site. Assesses existing and potential contamination impacts. Assesses the potential impacts upon surrounding soil and management systems to address these issues during construction and operation.</td>
</tr>
<tr>
<td>8.2.7 Water quality and Hydrology</td>
<td>Chapter 11: Water Quality and Hydrology Appendix J: Stormwater Assessment</td>
<td>Assesses the potential impacts on surface and ground water and management systems to address these issues during construction and operation.</td>
</tr>
<tr>
<td>8.2.8 Climate Change and Air Quality</td>
<td>Chapter 12: Air Quality, Odour and Greenhouse Gas Appendix K: Air Quality Impact Assessment</td>
<td>Assesses the potential impacts upon air quality and greenhouse gas generation during construction and operation of the Project.</td>
</tr>
<tr>
<td>8.2.9 Socio-economic and Health</td>
<td>Chapter 13: Socio-Economic and Health Appendix L: Health Impact Assessment</td>
<td>Assessment of the health, economic and social impacts of the Project.</td>
</tr>
<tr>
<td>8.2.10 Noise and Vibration</td>
<td>Chapter 14: Noise and Vibration Appendix M: Noise Impact Assessment</td>
<td>Assesses the potential impacts of noise during construction and operation of the Project.</td>
</tr>
<tr>
<td>8.2.11 Hazards and Risk</td>
<td>Chapter 15: Hazard and Risk Appendix N: Bushfire Risk Assessment</td>
<td>Assesses the hazards and risk (including bushfire and aircraft operations risk) associated with the Project.</td>
</tr>
<tr>
<td>8.2.12 Biodiversity</td>
<td>Chapter 16: Biodiversity Appendix O: Ecological Assessment Report</td>
<td>Assesses the potential impacts to habitats surrounding the Site during construction and operation.</td>
</tr>
<tr>
<td>11 Other Relevant Information</td>
<td>Chapter 17: Other Issues (Heritage)</td>
<td>Assesses the potential impact upon heritage due to the development of the Site.</td>
</tr>
<tr>
<td>9 Community and Stakeholder Consultation</td>
<td>Chapter 18: Stakeholder Consultation</td>
<td>Overview of community and stakeholder consultation undertaken for the Project.</td>
</tr>
<tr>
<td>Scoping Document Reference</td>
<td>EIS Reference</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
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</tr>
<tr>
<td>10 Recommendations</td>
<td>Chapter 19: Recommendations</td>
<td>Summary of Project commitments and monitoring requirements.</td>
</tr>
<tr>
<td>12 References</td>
<td>Chapter 20: References</td>
<td>References for the EIS</td>
</tr>
</tbody>
</table>

**13 Required Appendices**

<p>| 13.1 Final Scoping Document for the EIS | Appendix A – Scoping Document | A copy of the final scoping document |
| 13.2 Scoping Document Reference | Appendix B – Scoping Document Reference | A table that cross references the EIS to the scoping document. |
| 13.3 Proponent’s Environmental History | Appendix C – Proponents Environmental History | A summary of the Proponents Environmental History and performance on other sites owned and operated by the Proponent. |
| 13.4 Information Sources | Chapter 20: References and throughout EIS | Various information sources utilised for the EIS. |
| 13.5 Study Team | Appendix D – Study Team | A summary of the qualifications and experience of the study team. |
| 13.6 Specialist Studies | Appendix E – Transport Impact Assessment | Specialist studies undertaken as a part of the EIS |
|                      | Appendix F – Site Servicing Investigations, 2012 | |
|                      | Appendix G – Phase 1 Contamination Assessment | |</p>
<table>
<thead>
<tr>
<th>Scoping Document Reference</th>
<th>EIS Reference</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Appendix H – Phase 2 Contamination Assessment</td>
<td></td>
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<td></td>
<td>Appendix I – Auditors Report</td>
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<td></td>
<td>Appendix J – Stormwater Assessment</td>
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<td></td>
<td>Appendix K Air Quality Assessment</td>
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<td></td>
<td>Appendix L – Health Impact Assessment</td>
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<td></td>
<td>Appendix M – Noise and Vibration Assessment</td>
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<td></td>
<td>Appendix N – Bushfire Risk Assessment</td>
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<tr>
<td></td>
<td>Appendix O – Ecological Assessment Report</td>
<td></td>
</tr>
<tr>
<td>13.7 Research</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
2.0 PROJECT DETAILS

2.1 Site Description

2.1.1 Location of the Project

The Site is located at 6-14 Tennant Street, Fyshwick ACT. Table 2 summarises the identification, location and setting of the Site.

Table 2 Site Identification, Location and Setting

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Address</td>
<td>6 - 14 Tennant Street, Fyshwick ACT 2609</td>
</tr>
<tr>
<td>Approximate Area</td>
<td>102,109 m²</td>
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<tr>
<td>Current Land Use</td>
<td>Approved for concrete product manufacturing activities</td>
</tr>
<tr>
<td>Legal Property Description</td>
<td>Block 8 Section 28 Division of Fyshwick on Deposited Plan 5618</td>
</tr>
<tr>
<td>Approximate Geographic Co-ordinates</td>
<td>-33.333108, 149.182831</td>
</tr>
<tr>
<td>District</td>
<td>Canberra Central</td>
</tr>
<tr>
<td>Territory Plan Land Use Zoning</td>
<td>IZ1: General Industrial</td>
</tr>
<tr>
<td></td>
<td>IZ2: Industrial Mixed Use</td>
</tr>
</tbody>
</table>

2.1.2 Site Ownership and Lease Details

The current Commonwealth Lease, dated 8 June 2012 allows the lessee to use the premises for the purpose of manufacture and storage of concrete pipes and other concrete products. The current lessee for the Site is Tranteret Pty Ltd.

2.1.3 Current Landuse

Figure 2 presents the landuse zoning of the Site and surrounding locality.
Figure 2: Landuse zoning of the Site and Surrounding Locality (source: ACTMap June 2018)
2.1.4 **Surrounding Land Use**

The Site is located in an area of commercial/industrial development. The surrounding land uses are identified below.

<table>
<thead>
<tr>
<th>Direction</th>
<th>Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>Tennant Street, Industrial Mixed Use (IZ2)</td>
</tr>
<tr>
<td>South</td>
<td>Queanbeyan – Canberra Branch Railway, Industrial Mixed Use (IZ2) beyond including Canberra Outlet Centre</td>
</tr>
<tr>
<td>East</td>
<td>General Industrial (IZ1) adjacent to the Site (undeveloped), Non Urban River Corridor (NUZ4) beyond and Molonglo River</td>
</tr>
<tr>
<td>West</td>
<td>Industrial Mixed Use (IZ2) including Evo Energy substation, Bunnings Fyshwick and Domayne, Newcastle Street</td>
</tr>
</tbody>
</table>

According to the 2016 Census (ABS, 2016), the suburb of Fyshwick has a total residential population of 56, which represents less than 0.0001 percent of the ACT's total population. The nearest urban residential area is over 2 kilometres to the West, whilst the nearest residential location is 1.3 kilometres to the South East of the Site. A community facility is located approximately 700 m to the North West of the Site.

![Figure 3: Proximity of closest resident to the Site (source: ACTmapi June 2019)](image)

2.1.5 **Site History**

Rocla Pty Ltd leased the land from the ACT Government and in the late 1960s, early 1970s developed the Site into a concrete batch plant and concrete products factory. Prior to this, the land is understood to have been used for animal grazing. The southern portion of the Site was subleased to Adelaide Brighton Masonry Products Pty Ltd (Adbri) for similar land use in 2006.

2.1.6 **Purposes for which the land may be used**

The Site is currently zoned for General Industrial and Industrial Mixed Use under the Territory Plan (refer to Chapter 3 Legislative Context). However, as shown in Figure 2, the majority of the Site is zoned IZ1 General Industrial with the block touching on a small area of IZ2 to the west of the Site. The Project does not propose
works to take place on the land zoned for Industrial Mixed Use (IZ2). The type of activities proposed by the Project for the Site are considered appropriate in this zoning, subject to a development application.

The Site has a number of existing industrial/commercial buildings that were previously utilised for concrete product manufacturing activities including a concrete batch plant. As identified in Section 2.1.2, the current Commonwealth Lease (dated 8 June 2012) allows the lessee to use the premises for the purpose of manufacture and storage of concrete pipes and other concrete products. The operation of the existing concrete batching plant on the Site is in accordance with existing approvals and as previously utilised (i.e. the existing concrete batching plant is not part of the Project).

An application to vary the lease will be submitted separately to support the Project. It is considered that the proposed uses of the Project on the Site would be classified as:

- Waste transfer station;
- General industry;
- Bulk landscape supplies;
- Store;
- Industrial Trades;
- Recyclable Materials collection; and
- Recycling Facility.

2.1.7 Topography

The Site is located in a generally level area, with an elevation of approximately RL576 mAHD in the north west of the Site sloping down to approximately RL 571 mAHD in the south east (ACTmapi 2004 contours). The surrounding area generally slopes towards Molonglo River south east of the Site. Existing site contours are shown on Figure 4.

2.1.8 Climate

Meteorological conditions at the Site have been inferred from long term records for the Queanbeyan Bowling Club meteorological station (070072), which is located approximately 5 km south east of the Site. The mean annual rainfall would be in the order of 590 mm, the wettest months being October to January and the driest month being July. The mean number of days in a year with rain of 25 mm or higher would be in the order of 5 days. The mean maximum temperature would be in the order of 21 °C, and the warmest month would be January. The mean minimum temperature would be in the order of 6 °C, and the coldest month would be July.

2.1.9 Easements

The Site comprises Block 8 Section 28 and is transected by an ACT Government owned block (Block 12 Section 28) occupied by Evo Energy high voltage transmission lines. The Commonwealth Lease registered on 26 November 2012 for Block 12 Section 28 identifies two 10 m wide easements for access through Block 12 Section 28 to provide access between the north and south portions of Block 8 Section 28.

A 3 m wide stormwater easement runs along the southern boundary of the northern block.

Easements are shown in Figure 4.
Figure 4 Existing Site Plan
2.1.10 Existing Site Layout

The existing layout of the Site is presented in Figure 4. The Site is an irregularly shaped, predominantly hard stand area, commercial/industrial site with an area of approximately 10.21 hectares. The Site is currently occupied by the Proponent, with a number of industrial/commercial buildings remaining from the concrete batch plant, and concrete product manufacturing activities, which occurred on the Site.

The northern portion is approximately 69,835 m² in area and comprises three main buildings and several storage sheds. The southern portion is approximately 32,274 m² in area and comprises one large building, a small site office and two storage sheds. Mature pine trees provide screening along the northern, southern and western boundaries of the Site. There is existing perimeter landscaping along the northern, southern and eastern Site boundaries.

2.2 Project Description

2.2.1 Overview

The Project involves the construction and operation of an Integrated Resource Recovery Facility including:

- Landscape Yard;
- Concrete Pre-cast Facility;
- Wood Processing Facility;
- Grease Trap Waste Processing;
- Drilling Mud Processing;
- Oily Water Processing;
- Soil Processing and Recovery Facility;
- Asbestos Containing Material Storage;
- Recycling Facility;
- Crushing and Screening Facility; and
- Product Storage Area.

The Project also includes the following ancillary infrastructure; weighbridge, parking, wheel wash, truck fuelling area, maintenance workshop, administration and amenities and soils/aggregate laboratory.

The Project would primarily utilise existing buildings on the Site. Construction work would be limited to the new Recycling Facility building, Concrete Pre-cast Facility building, landscape storage building, weighbridge and office, roads, and hardstand areas.

**The Project does not include wood air burners and/or electrical generation as previously identified within the Scoping Document.**

The Site Layout for the Project is presented in Figure 1.

2.2.2 Access

The main entrance and exit to the Site would be through a newly constructed access on Tennant Street at the north west corner of the Site as shown in Figure 1. All heavy traffic would enter through this access point. Materials and waste loads would be directed through the weighbridges. Traffic entering the concrete precast yard would also use this entrance but would not pass over the weighbridge.
As shown in Figure 1 a separate second entrance is provided at the existing entrance to the Site on Tennant Street that would allow public access to the Landscape Yard. A third existing entrance is located on the western boundary that would be used infrequently for service vehicle access only.

Fencing would be established at the perimeter of the Site to restrict access from the public and to provide visual screening.

### 2.2.3 Internal Traffic Flows

The Landscape Yard and administration building traffic would use the western access driveway while all other traffic associated with the operation of the Site would use the eastern driveway. This would delineate public light vehicles from the heavy vehicle traffic improving site safety.

All vehicles accessing the main entrance would travel southbound and turn around at the roundabout to access the weighbridge. With the exception of vehicles heading to the Concrete Pre-Cast Facility, incoming and outgoing vehicles would be required to travel via the weighbridge. Internal haul roads would be unsealed and all facilities and processing areas within the Site would be accessed via the internal road network. The southern block would be connected to the northern block via an access easement through Block 12 as shown in Figure 1. An assessment of the internal road network is presented in the Traffic Impact Assessment (refer Chapter 6.0).

### 2.2.4 Parking

The Project would provide up to 20 parking spaces for truck and trailers south of the Workshop and up to 27 parking spaces for concrete trucks north of the Concrete Batching Plant. Parking for up to 84 staff would be provided east of the Landscape Yard and west of the Recycling Facility. A parking space for up to 8 visitors would be located north of the existing administration building. These designated parking areas would ensure there is no parking demand upon local roads.

### 2.2.5 Weighbridge

A double weighbridge would be installed at the main entrance to the Site and a single weighbridge at the entrance to the Landscape Yard. This would facilitate weighing, inspection and recording of incoming and outgoing material loads. The following infrastructure is associated with the weighbridge:

- Concrete ramps for vehicle access;
- Roof to protect weighbridge and customers from rain;
- Weighbridge office including amenities for the staff; and
- CCTV cameras for inspection of incoming loads.

### 2.2.6 Administration, Amenities

Existing buildings would be used for administration and amenities including offices, lunchrooms and amenities for the staff. The locations of administration and amenities are shown in Figure 1.

### 2.2.7 Soils/Aggregate Laboratory

A National Association of Testing Authorities (NATA) accredited soils laboratory would be set up in an existing building in the Northern Block as shown on Figure 1. The laboratory would focus on the testing of soils, aggregates and sands.
2.2.8 Maintenance Workshop

A Maintenance Workshop would be located in an existing site building south of the Liquid Waste Processing building. Spill protection measures would be installed at the Workshop. Activities would include on-site maintenance of equipment and vehicles.

2.2.9 Fuelling Area

West of the Truck Parking Area (Figure 1) would be a self bunded 40 foot fuel container and bunded fuelling area. The fuel storage container and fuelling area would be constructed according to AS 1940 The Storage and Handling of Flammable and Combustible Liquids (Standards Association of Australia) and ACT Environment Protection Authority Environmental Guidelines for Service Station Sites and Hydrocarbon Storage September 2011.

2.2.10 Landscape Yard

The Landscape Yard would be used for landscape product storage and sale to the public. Products may include:

- Paving, plastering and brickie sands
- River pebble and other types aggregates:
- Soil and garden mixes;
- Compost;
- Mulch;
- Wood chips;
- Aggregates;
- Bagged products such as cement and landscape supplies.

Approximately 100,000 tonnes per annum of material would be delivered to the Site from Hi Quality Group owned quarries including from Oallen Sand and Aggregates. Compost, organics material, cement and other bagged building products and landscaping supplies would also be delivered to the Site by Suppliers. Approximately 2,500 tonnes of loose compost and 1,800 tonnes of bagged compost would be received per year. Soil would be sourced from onsite (approximately 1,000 tonnes) and soil manufacturers. Wood chips would be sourced from the onsite Wood Processing Facility (refer to Section 2.2.13).

Approximately 20,000 tonnes of landscape materials would be stored at the Site at any one time. Landscape products would be stored in concrete bunkers and a new storage building located at the Northern end of the Landscape Yard.

A skid steer loader and manitou would be used for material handling and general maintenance at the Site. A GR900-15 automatic bagging machine would be utilised for bagging of soil and woodchips.

2.2.11 Existing Concrete Batching Plant

The existing Concrete Batching Plant and existing concrete batch plant infrastructure in the Southern block is shown in (Figure 1). While the Concrete Batching Plant and associated infrastructure is currently approved as part of the existing lease (refer to Section 2.1.6) and EA 1213. This EIS includes assessment of the concrete batching plant cumulative impacts including transportation of materials and material flow.

As such, the concrete batching plant would have a production capacity of approximately 150,000 m³ per year. Approximately 330,000 tonnes per annum of sand and aggregate would be primarily delivered from Hi Quality
owned quarries (Oallen Sand and Aggregates Quarry) and other quarries and approximately 20,000 tonnes from the crushing yard. Aggregate and sand would be transferred to the existing overhead bin system within the southern building via conveyor to the west of the building.

Approximately 50,000 tonnes of cement and fly ash delivered by local suppliers to the Site per annum to the existing silos. An overfill protection system comprising high-level alarm system and automatic cut-off to prevent over filling would be installed and operated on the silos.

Approximately 250,000 litres of admixtures and water would be delivered to Site per year. Admixtures would be stored in tanks bunded in accordance with the requirements of Australian Standards and the Dangerous Substances Act 2004.

Agitator trucks would enter the building through the eastern entrance of the Southern Building and would be loaded with a mixture of cement, fly ash, aggregate, sand, water and admixtures.

Plant and equipment associated with the operation of the concrete batching plant would include:

- 25 agitators;
- 2 tankers;
- Driver over bin storage system;
- Feed conveyor;
- Overhead storage bins;
- 3 Cement silos
- Weigh hoppers for water, cement and aggregate;
- Feed chute for material;
- Wash out bays;
- Recycled water stirrer;
- Rainwater storage tank; and
- Admixture storage tank.

Concrete wastes would be directed towards the Crushing and Screening Facility for recycling.

Batch water would be sourced from on site stormwater storage dams and supplemented by mains water supply.

Waste water from washout of agitators would be collected in the wash out area and allowed to settle. Solids may be recovered for re-use in the Crushing and Screening Facility or directed to Hi Quality Group’s Windellama landfill site or other appropriately licenced facility. Recovered waters would be drained to a central sump for reuse in concrete manufacture process and for truck wash out.

### 2.2.12 Concrete Pre-cast Facility

The Concrete Pre-cast Facility would be constructed within a new building approximately 50 m x 80 m at the North East corner of the Site with a production capacity of 50,000 m³ per year. The Concrete Pre-cast Facility would primarily produce engineered concrete building products.

The process equipment would primarily consist of:
- Slurry pumping system;
- Vibration platform;
- Overhead crane;
- Oiling equipment to prepare moulds.

Plant associated with the operation of the facility would comprise:

- 10 tonne forklift
- 15 tonne overhead crane
- Skid steer loader

Concrete required for concrete pre-cast production would be supplied from the on site Concrete Batching Plant by agitator trucks.

Approximately 30,000 tonnes steel reinforcement would be imported to the Site per year.

Precast moulds are oiled prior to filling. The filled mould is transferred to the vibration platform to settle the concrete. Then the exposed concrete is temperature tested and finished to create a smooth surface. The concrete would be placed in a set down area to set for up to 3 days and then stripped of the mould. The mould would be cleaned and returned to the process line. The concrete cast unit would be moved to a set down area for further curing for up to 10 days.

Approximately 15 tpa of concrete waste would be transferred to the Crushing and Screening Facility and approximately 10 tpa of metal off cuts would be transferred to the scrap metal stockpile.

Approximately 100,000 L per annum of process water would be serviced by the existing connection to mains water.

A typical layout of the Concrete Pre-Cast Facility is presented in Figure 5.
Figure 5: Typical Concrete Pre-Cast Facility Layout (SOURCE: Hi Quality)

2.2.13 Wood Processing Facility

The Wood Processing Facility would be located west of the Soil Processing and Recovery Facility as shown on Figure 1. The Wood Processing Facility would accept 40,000 tonnes per annum of wood waste loads and non contaminated wood waste from the Recycling Facility for wood chipping and reuse. Green waste would not be accepted at the Site.

The Wood Processing Facility is not proposing to include wood air burners and/or electrical generation as previously identified within the Scoping Document.

The following processes would be in place:

- Screening of incoming loads; and
- Wood chipping.

Stockpiling in the Wood Processing Facility would comprise the following with the maximum stockpile volumes presented in Table 13: Raw Timber to be sorted;

- Separated Contaminated timber to be landfilled;
- Clean Timber waiting to be chipped; and
- Wood Chip.

Incoming material would be inspected prior to processing to remove course contaminants such as plastics, metals and glass. Contaminated timber material such as chemically treated, painted, stained or manufactured timber would be removed by manual picking and would be disposed of to the Proponent’s Windellama site or an appropriately licenced facility. Alternatively depending on market, the contaminated timber material may be shredded for transport outside of the ACT as Refuse Derived Fuel (RDF). It is estimated 9,000 tonnes per
annum of contaminated timber material would be received based on typical contamination rates. Stockpiles of contaminated timber would not exceed the maximum stockpile volume before being transported offsite to a suitably licenced facility.

Following screening, the clean wood waste would undergo wood chipping. Wood chipping involves mulching/shredding to produce wood chips using equipment similar to that shown in Figure 6. The wood chips would be stockpiled temporarily prior to transfer to the Landscape Yard.

![Figure 6: Example Wood Chipper (Source: Rotochopper 2018, CP-118 Wood Chip Processor, viewed 9 April 2018, http://www.rotochopper.com/equipment/specialized-equipment/wood-chip-processors.html)](image)

### 2.2.14 Grease Trap Waste Processing

Grease trap waste processing would be located in an existing building on the Northern Portion of the Site as shown in Figure 1. Approximately 25,000 tonnes of grease trap waste would be processed at the Site per annum.

Typical plant proposed for grease trap waste treatment includes:

- Receival Tanks;
- Solids Strainer;
- Dissolved air flotation (DAF) unit;
- Holding Tanks.

Grease trap waste would be delivered to Site in vacuum collection tankers. The tankers discharge the waste by vacuum pressure to the receival tank. Feed water would be dosed with lime and a coagulant to flocculate suspended matter. The suspended matter would be removed to a holding tank. The remaining liquid would be pumped into the DAF unit to further remove solids and sludges.
The clarified effluent would be tested prior to discharge to sewer under a Trade Waste Agreement. Discharge limits would be determined by Icon Water, with monitoring and verification as required by that Authority. Approximately 15,000 kL of liquid waste discharge to sewer is expected per annum.

Sludges and solids removed during the treatment process are transferred to sludge tanks. The residual sludge waste would be removed from Site by tankers for disposal to an appropriately licenced facility. Approximately 10,000 tpa of solids is proposed to be disposed.

The Grease Trap waste processing facilities would be bunded in accordance with Australian standards as would all liquid waste processing. The tanks and DAF unit would be fully enclosed and within a building.

The grease trap waste would be processed in general accordance with the NSW EPA ‘Treated Grease Trap Waste Order 2014’ and solids would be assessed for potentially beneficial reuse in NSW under the “Treated Grease Trap Waste Exemption 2014” subject to approvals etc.

2.2.15 Drilling Mud Processing

A Drilling Mud Processing plant would be located in an existing building on the northern portion of the Site as shown in Figure 1. The processing plant is contained within 2 x 40 ft containers. Approximately 30,000 tonnes of drilling mud waste would be processed at the Site per annum.

The Project would accept drilling mud from drilling operations. Drilling mud is a mixture of naturally occurring rock and soil and drilling fluid generated during the drilling or non-destructive hydroexcavation. It is anticipated the primary source of waste would be from hydroexcavation operations.

The process would involve separation of the soil particles from the drilling mud and process equipment would be as follows.

- Storage tank for incoming material;
- Feed pump;
- Shaker sieve to separate larger particles;
- Desilter hydrocyclone to separate small particles;
- Decanter centrifuge to remove smaller drill cuttings;
- Holding tanks for separated material and liquid;
- 1 loader.

Separated solids are placed on a drying pad for testing and once dry would be transported to the Soil Processing and Recovery Facility onsite.

Typical processing equipment is shown in Figure 7
Approximately 21,000 tonnes per annum of recovered solids would be transferred to the on site Soil Processing and Recovery Facility. Approximately 9,000 kL of liquid waste per annum would be tested and classified either for use on site for dust suppression or discharged to sewer under a Trade Waste Agreement with ICON Water.

**2.2.16 Oily Water Processing**

Oily Water Processing would take place in the northern building along with other liquid waste processing as shown on Figure 1. Approximately 5,000 tonnes per annum of Oily Water would be delivered to Site in tankers. Oily Water is wastewater that contains fats, oils and grease, sources include industrial facilities.

Typical processing equipment would include:

- Receival Tank;
- Holding Tanks;
- Solids strainer; and
- Oil Water Separator.

Incoming oily water would initially be strained to remove solid particles, the remaining liquid would be fed into the oil water separator. Filters would collect solids and small particles of oil. Oil is less dense than water and floats to the surface where it would accumulate and be pumped out.

Approximately 2,000 tpa of separated oils would be disposed to an appropriately licensed facility for treatment and reuse.

Approximately 3,000 tpa of liquid waste would be discharged to sewer under a Trade Waste Agreement. Discharge limits would be determined by Icon Water, with monitoring and verification as required by that Authority.
The Oily Water processing would be bunded in accordance with Australian standards.

### 2.2.17 Soil Processing and Recovery Facility

Approximately 250,000 tpa would be accepted at the Soil Processing and Recovery Facility with approximately 121,000 tpa of this coming from onsite Drill Mud Processing and 100,000 tpa of Soil and Fines from the Recycling Facility.

The Soil Processing and Recovery Facility would be located in the northern block east of the Wood Processing Facility (Figure 1). An earthen bund would surround the perimeter of stockpiles to contain sediment laden runoff from soil stockpiles and processing area.

Materials to be accepted for soil processing and recovery include:

- Waste soil loads;
- Excavated natural material;
- Soil from Drilling Mud Processing; and
- Soil and fines from recycling at the Site.

Waste classification of soil would be required prior to acceptance on site. Once accepted to Site, the Proponent would prepare an application for beneficial reuse of the material. Once approved, soil would be screened utilising a screen (similar to Figure 8) to recover any recyclable construction wastes such as concrete, brick and steel. Concrete and brick recovered by screening would be transferred to the Crushing and Screening Facility for further processing and is estimated at 20,000 tpa.

Any material that is not approved for beneficial re-use would be removed from the Site for disposal at High Quality Windellama landfill site or other appropriately licenced facility.

Stockpiling of soil would be in accordance with the requirements outlined in Chapter 7 Materials and Waste of the EIS. The maximum stockpile height would be 5 metres. Soil would be processed in 250 m$^3$ batches and stockpiles separated by project.

It is estimated 172,000 tpa would go to beneficial reuse and 58,000 tpa would be disposed to landfill and 20,000 tpa of oversized concrete would be recovered and transferred to the crushing yard. It is noted that the tonnage to landfill is potentially beneficially reusable as daily cover subject to EPA approvals.
2.2.18 ACM Storage
The Project would accept and temporarily store and transfer approximately 2,500 tpa of secured asbestos containing material (ACM). Two purpose built asbestos containing material disposal containers would be fully enclosed and located within an existing lockable building in the north portion of the Site located south of the Liquid Waste Processing building (Figure 1).

All incoming loads would be inspected and recorded at the weighbridge and escorted or instructed by the weighbridge operator through the Site to the disposal area. Any unpackaged ACM would be rejected from Site entry. A maximum of 45 tonne per week of ACM would be accepted and transported for disposal directly to an appropriate landfill licensed to accept asbestos waste. Maximum storage capacity at the Site would be 30 tonnes.

2.2.19 Recycling Facility
The Project anticipates receiving approximately 250,000 tonnes of C&D and dry C&I waste per annum for resource recovery. The Recycling Facility would be located in the new building on the northern portion of the Site as shown on Figure 1.

Construction and Demolition (C&D) and dry Commercial and Industrial (C&I) waste would be received.

- Construction and demolition waste (C&D) comprises bricks, concrete, paper, plastics, glass, metals and timber, being material resulting from the demolition, erection, construction, refurbishment or alteration of buildings or from the construction, repair or alteration of infrastructure-type development such as roads, bridges, dams, tunnels, railways and airports, and which is not mixed with any other types of waste and does not contain any asbestos waste.

- Commercial and industrial waste (C&I) comprising of inert, solid or industrial waste generated by businesses and industries (including shopping centres, restaurants and office) and institutions (such as
schools, hospitals and government offices), excluding building and demolition waste and municipal waste.

The new building would have an initial footprint of 70 m by 40 m and would later be extended to 120 m by 40 m. The concrete floor of the building would be graded to drain any leachate from the waste to a central point for collection. The building would be fitted with a dust suppression system and fire deluge system.

Vehicles would enter the building from the west and unload mixed waste on to the concrete tipping area. The maximum stockpile volume of incoming waste material inside the building is presented in Table 13. The waste would be manually pre-sorted with a loader spreading the material and a material handler with a grab attachment removing large items and recoverable material. Large items such as metal, concrete or wood that would not be suitable for processing through the sorting plant are removed at this stage. Recoverable materials may include, bricks, masonry, cardboard, paper, plastics, scrap metal, or wood.

Remaining mixed material would be pushed into a feed stockpile and loaded into a feed chute. The feed material would be shredded and then passed through a screen. Material continuing through the drumscreen would feed onto a sorting belt. Oversized material would be picked manually from the sorting belt. The remaining material would pass through a series of magnet, optical sorters and eddy current separators to remove metals and through various air separation plant to remove light material.

Recoverable materials would be stored in bunkers and loaded out on a regular basis to internal areas of the Site for further processing:

- Concrete, brick and masonry waste is directed towards the Crushing and Screening Facility.
- Scrap metal, paper, plastics and cardboard are removed to product storage areas.
- Clean wood waste is directed to the Wood Processing Facility.
- Soil fines and aggregates are delivered to the Soil Processing and Recovery Facility.

The maximum stockpile volume of combined recoverables inside the building is presented in Table 13. Approximately 17,500 tpa of residual waste is anticipated. The residual waste would be conveyed temporarily to a stockpile area inside the building. A secondary shredder would be located within the Recycling Facility building for shredding of larger items prior to bulk transport. Alternatively depending on market, the residual material may be shredded and bailed for transport outside of the ACT as RDF. The residual material would be collected and loaded out and disposed of to landfill at the Proponent’s Windellama site or other appropriately licenced facility.

The total amount of recoverable material from waste sorting is expected to be approximately as follows based on typical recovery rates.

- 2,500 tonnes per annum scrap metal
- 12,500 tonnes per annum paper and cardboard
- 12,500 tonnes per annum plastics
- 87,500 tonnes per annum to the Crushing and Screening Facility
- 100,000 tonnes per annum to the Soil Processing and Recovery Facility
- 17,500 tonnes per annum to the Wood Processing Facility

Plant equipment for the Recycling Facility includes:
- Material handler; and
- Loader.

Processing Equipment for the Recycling Facility includes:
- Shredders;
- Drumscreens;
- Flat Screens;
- Conveyors
- Magnets;
- Air separators;
- Optical separators

Example of optical sorting conveyor is shown in Figure 9.

The layout of the Recycling Facility is shown in Figure 10.

![Recycling Facility Layout](image)

**Figure 10: Recycling Facility Layout (Waltec)**

### 2.2.20 Crushing and Screening Facility

The Project includes an area for the crushing, grinding and separation of building and demolition waste materials into re-usable sizes. The Crushing and Screening Facility would process up to 200,000 tonnes per annum.

The following inert waste would be accepted for processing at the Crushing and Screening Facility:

- Concrete, bricks, masonry and tiles recovered from the Recycling Facility as well as separated materials received at the Site.
- Virgin excavated natural material (VENM) loads including clay, gravel, sand, soil and rock.
- Asphalt, roadbase and concrete waste from road and other types of construction.
- Source separated glass fines and imported sorted glass fines.

Incoming materials would be fed into the screening and crushing plant to generate resalable products.

Plant equipment would include:

- Front end loader;
- 35 tonne excavator;

Typical processing equipment would include:

- Mobile screen with four deck screen set up;
- Mobile jaw crusher;
- Screen feeder to cone crusher; and
- 5 conveyors from sizing screen.
- Dust suppression system

Figure 11: Example of mobile screen (Source: Terex Finlay, 3 Deck Tracked Mobile Horizontal Screen, January 2013)

The Proponent expects maximum incoming waste storage stockpiles awaiting processing and product storage stockpile in accordance with Table 13. The maximum stockpile height would be 5 metres.

Materials to be produced include recycled aggregates, recycled roadbase, recycled sand, recycled soil, glass fines. These materials are intended for beneficial reuse as road base, as aggregate and sand in concrete production, or sold off site to the construction industry.

The Crushing and Screening Facility is expected to produce:

- 65,000 tonnes per annum of roadbase
- 90,000 tonnes per annum of aggregates
- 5,000 tonnes per annum of scrap metal
- 5,000 tonnes glass fines
- 20,000 tonnes per annum of sand size material (to be transferred to the Concrete Batching Plant or sold separately)

Residual waste from screening is expected in the order of up to 500 tpa, which would be directed to the Proponent’s Windellama Landfill or other licenced facility and 14,500 tpa for beneficial reuse.

The approximate layout of the Crushing and Screening Facility is shown in Figure 12.
2.2.21 Product Storage Area

Product storage areas would be established in the locations shown in Figure 1. The maximum stockpile heights would be 5 metres.

Maximum stockpile sizes for scrap metal and tyres would be in accordance with Table 13.

Paper, cardboard and plastic would be stored in skip bins inside the Recycling Facility.

2.2.22 Wheel Wash

A self-contained wheel wash would be installed for trucks exiting the Site in the outbound lane. Sediment collected in the wheel wash would be regularly removed on an as-needs basis using an excavator and dried and processed in the Soil Processing and Recovery Facility or disposed to a licenced facility. Water for the wheel wash would be sourced from on site stormwater retention dams. Waste water from the wheel wash would be recirculated. Waste water generated by the wheel wash would be treated in the Liquid Waste Processing Facility.
2.2.23 Stormwater

Sediment laden stormwater runoff would be collected and directed to appropriately sized sedimentation ponds prior to discharge offsite. A catch dam would be located on the eastern boundary of the southern block and three dams in the south east corner of the northern block. In the northern block, the inlet dam would feed clean water to the on site detection pond and then to the outlet pond.

Stormwater from the outlet pond would be reused on Site for dust suppression, wheel wash and processing water where appropriate.

Refer to Chapter 11.0 Water Quality and Hydrology for further detail.

2.2.24 Utilities and Services

The Project would utilise the existing services to the Site including power, communications, sewage and water supply. The existing services are described in Chapter 7.0 Utilities.

2.2.25 Water Supply

Water demand would be met through a combination of:

- A connection to existing mains water supply via a 100 mm diameter domestic service line connecting to the 150 mm diameter water main located on the southern side of Tennant Street; and
Onsite stormwater ponds.

Refer Chapter 11.0 Water Quality and Hydrology for further detail.

2.2.26 Wastewater Management

The Project would utilise existing connection to sewer network for disposal of trade waste water. Discharge concentration limits designated by Icon Water through a Trade Waste Agreement would be verified prior to discharge.

Refer Chapter 7.0 Utilities for further detail.

2.3 Construction of the Project

Detailed construction methods would be determined at the time of construction in accordance with the project approval conditions. Estimated construction time would be staged lasting approximately 12 months. Construction would be carried out in accordance with the Construction Environmental Management Plan and Construction Quality Assurance Plan and would comprise the following activities:

- Bulk earthworks including dam construction
- Construction of Concrete Pre-cast Facility building
- Construction of earthen bund around Soil Processing and Recovery Facility
- Construction of Recycling Facility building
- Roadworks main for internal access routes up to roundabout
- Construction of wheel wash
- Construction of bunded fuelling area
- Installation of main entrance double weighbridge, single weighbridge and ancillary infrastructure
- Installation of landscape weighbridge and ancillary infrastructure
- Construction of landscape admin building
- Installation of concrete storage bunkers
- Construction of landscape material storage building
- Construction of stormwater management infrastructure
- Pavement and hardstand construction
- Remediation including removal of two above ground storage tanks, an inground tank and transformer and 10 m building scrape
- Demolition
- Vegetation Clearance
- Landscaping

**Bulk earthworks:** Minor earthworks. Minor regrading. Construction of access roads. Construction of drainage channels and four stormwater ponds. An earthen bund would be constructed around the perimeter of the Soil Processing and Recovery Facility.
Concrete Pre-cast Facility Building: The Concrete Pre-cast Facility would have a construction staged over a period of up to approximately 12 months and involve construction of a concrete slab and colour bond structure in the north east portion of the Site. Processing equipment would be delivered fully assembled. Conceptual Architectural drawings are presented in Appendix Q.

Recycling Facility Building: The Recycling Facility Building would have a construction staged over a period of up to approximately 9 months and involve construction of a concrete slab and colour bond structure in the central portion of the Northern block. Conceptual Architectural drawings for the Recycling Facility Building are presented in Appendix Q.

Entry Road Works: the construction of the internal access roads up to and including the roundabout would have a construction period of approximately 2 months and involve the preparation of base and sub-base layers, asphalt and sealing where required and associated stormwater drainage and collection.

Wheel wash and wash down areas: construction of the wheel wash and wash down areas would involve excavation, laying formwork, placing reinforcement, pouring concrete and curing.

Fuelling area: This would involve construction of concrete hardstand and bunding and would involve excavation, laying formwork, placing reinforcement, pouring concrete and curing.

Landscape weighbridge and weighbridge office: Construction of the weighbridge would have a construction period of approximately 4 weeks and involve installation of concrete access ramps, construction of weighbridge office. Conceptual Architectural drawings are presented in APPENDIX Q.

Double Weighbridge, Single Weighbridge and Weighbridge office: Construction of the weighbridges would have a construction period of approximately 4 weeks and involve installation of concrete access ramps, construction of weighbridge office and amenities building. The double weighbridge would be completed in two stages with the second bridge installed once site production requires a second weighbridge. Conceptual Architectural drawings are presented in Appendix Q.

Landscape Storage bunkers: This would involve preparation of a concrete floor slab and installation of precast concrete side walls at the landscaping yard.

Landscape admin building: Construction of the building would have a construction period of approximately 1 month. Conceptual Architectural drawings are presented in Appendix Q.

Landscape material storage building: Construction of a concrete slab and colour bond structure near the entrance to the Landscape Yard. Construction period of approximately 1 month. Conceptual Architectural drawings are presented in Appendix Q.

Stormwater management: Construction of sedimentation ponds, channels, culverts and drains would have a construction period of approximately 3 months.

Remediation: Removal of two above ground storage tanks, an inground tank and transformer and 10 m building scrape in accordance to the Phase 2 Contamination Assessment Remediation Action Plan (APPENDIX H) would have a construction period of approximately 2 weeks.

Demolition: Minor demolition of redundant structures and internal fittings would have a construction period of approximately 1 month.

Vegetation Clearance: Minor clearing in the north eastern corner of the site to prepare for construction of the new Site entrance would have a construction period of approximately 1 week.
2.3.1 Construction Equipment

Equipment necessary for the construction of the Project would include dozers, graders, compaction equipment, backhoes, excavators, rollers, truck, concrete pumping equipment, air compressors, concrete vibrators and saws, crushers, mobile cranes and welders.

2.3.2 Construction Environmental Management Plan

Prior to construction a Construction Environmental Management Plan (CEMP) would be prepared. All construction works would be undertaken in accordance with the construction environmental controls presented within the EIS and include consideration of relevant Project approval conditions.

2.3.3 Construction Hours

Due to the industrial site setting, hours of construction are proposed to be standard construction hours. The construction phase duration will be staged over a 12 month period.

2.3.4 Work Force

The construction workforce would vary throughout the construction period depending on the activities underway. Typically, the construction workforce would be 20 persons (under normal conditions) and vary up to 40 persons (during high activity events such as concrete pours).

2.4 Operation of the Project

2.4.1 Operational Equipment

On-site plant equipment would include:

- Front end loaders (4)
- Excavators (3)
- Hooklift trucks (2)
- Truck and dog tippers (15)
- Forklift (2)
- Agitators (25)
- Tankers (2)
- Overhead crane (1)
- Water carts (2)
- Material Handlers (2)
- Skid steer loader (2)
- Manitou (1)
- Shredder (1)
- Equipment Servicing Truck (1)
- Mobile Screen (1)
- Mobile Crusher (1)
2.4.2 Hours of Operation

It is proposed that the Project would receive waste and dispatch products 24 hours a day all year round, including public holidays. Processing Operations would be undertaken between 6 am and 6 pm.

The wood processing facility and the crushing and screening yard are not proposed to operate during the period 6am to 7am.

Public access hours would be between 6am and 6pm on weekdays and 8am to 4pm on weekends and public holidays.

2.4.3 Workforce

The Project would generate a major source for employment in the area. All workers would be appropriately trained and supervised to ensure correct operation of the Site. All maintenance work on the plant would be conducted by appropriately accredited and trained personnel. A total requirement of 84 personnel is estimated for the operation of the Project.

2.4.4 Environmental management during operation

A detailed description of environmental management during operation is provided in the following chapters:

- Traffic and transport – Chapter 6.0
- Materials and waste – Chapter 8.0
- Landscape and visual impact – Chapter 9.0
- Soil and Geology – Chapter 10.0
- Water Quality and Hydrology – Chapter 11.0
- Air Quality and Greenhouse Gases – Chapter 12.0
- Socio-economic and Health – Chapter 13.0
- Noise and Vibration – Chapter 14.0
- Hazards and Risk (including Bushfire and Airport Management) – Chapter 15.0
- Biodiversity – Chapter 16.0
- Heritage – Chapter 17.0

2.5 Justification and Strategic Need

2.5.1 Objective

The key objective of the Project is to provide for more efficient resource recovery and beneficial reuse of key waste streams within the ACT and the wider region. This beneficial reuse of waste streams and further compatible ancillary activities would provide for the supply of products to the local and surrounding regions in an efficient and environmentally responsible manner.

A review of the current market indicates a need for waste transfer, processing and recovery facilities to meet state targets and support ACT industry. The products and services offered by the Project would fill gaps in the ACT waste market (such as for liquid waste processing) and contribute to meeting current and future demand for waste processing and resource recovery.

With more efficient processing of C&I and C&D waste streams, the Project would result in higher diversion rates than is currently available, which would also result in increased beneficial reuse of materials to
contribute to a circular economy. For example, recycled sand, aggregate and soils from the proposed Crushing and Screening Facility would provide the opportunity for beneficial reuse as road base and aggregate in concrete production on the Site and/or sold off site to the local construction industry.

It is considered that there are a number of drivers for the strategic need and justification for the Project, that arise from environmental, economic and social considerations, which are framed by legislation, policy and strategy documents of the Commonwealth and the ACT.

2.5.2 National Waste Policy 2018


The National Waste Policy guides continuing collaboration between all Australian governments, businesses and industries and sets a path for Australia to transition toward a circular economy by introducing 14 strategies. The primary focus of the policy is on reducing and reusing waste, improving recycling and increasing beneficial reuse. The Project is directly consistent with the aims of the National Waste Policy.

2.5.3 ACT Waste Management Strategy

The ACT Waste Management Strategy 2011-2025 (the Strategy) is the principal waste strategy policy in the ACT, setting the management direction of waste towards 2025. The goal of the Strategy is to ensure that the ACT leads innovation to achieve full resource recovery and a carbon neutral waste sector and is supported by four key outcomes (supported by 29 sub strategies, refer to below) that would enable the achievement of those outcomes:

- Outcome 1. Less waste generated
- Outcome 2. Full resource recovery (rate of resource recovery over 90% by 2025)
- Outcome 3. A clean environment
- Outcome 4. A carbon neutral waste sector

As identified within the Strategy, a key issue for the ACT is the increasing level of waste production per capita (Outcome 1), which is influenced by factors including population growth, income and consumption levels. As a result, total disposal tonnages have grown by an average of 1.8% per annum, which is not being matched by resource recovery rates (Department of the Environment and Energy (2017) “Australian National Waste Report 2016”).

To address this issue, more efficient, sophisticated and proven technology resource recovery options (Outcome 2) are required that would better contribute to achieving the Strategy aim of 90% waste diversion from landfill. These resource recovery options should address the key sources of waste volumes generated in the ACT.

As specified in the Strategy the highest volume of waste generated in the ACT is C&D waste, which includes timber, concrete, asphalt and soil. Commercial waste recycling is also identified as a key priority.
The Project seeks to directly address this issue through not only recycling and recovering materials from C&D and C&I waste streams\(^1\), but facilitating the beneficial reuse of these materials through processing and re-processing on Site. In doing so, the Project seeks to construct and operate an Integrated Resource Recovery Facility that not only recycles and recovers waste materials, but facilitates and directly provides for the processing for beneficial reuse of these materials. The Project would also ensure controlled disposal of materials that are unsuitable for reuse and recycling.

The Strategy's identified Waste Management hierarchy aims to extract the maximum practical benefits from products while generating the minimum amount of waste. The Waste Management Hierarchy consists of:

1) avoid products becoming waste (reduce and reuse);

2) find an alternative use for waste (recycle and recover); and

3) ensure safe and appropriate disposal as a last resort.

The Project provides an Integrated Resource Recovery Facility that addresses all three aspects of the Waste Management Hierarchy as identified within the Strategy.

The Project would also support Outcome 2 (Full Resource Recovery) of the Strategy in developing markets for recyclable materials and strengthen regional connections through both receiving waste materials and supplying products to the local and surrounding regions. The Project would also facilitate the beneficial re-use of soils and further materials in new construction sites where possible without excessive transport or transaction costs.

The Project would contribute to increasing the rate of resource recovery in the ACT and would do so through providing for proven waste treatment.

The Strategy identifies 29 sub-strategies to address the four key outcomes. The Project addresses, and is directly aligned with a number of these strategies including:

- Strategy 2.1: Boost commercial waste recycling.
- Strategy 2.2: Recover organic and residual waste resources.
- Strategy 2.3: Develop markets for organic and residual waste resources.
- Strategy 2.9: Develop markets for recyclable materials and strengthen regional connections.
- Strategy 3.5: Manage hazardous waste.
- Strategy 3.6: Increase soil reuse and rehabilitation.
- Strategy 4.5: Ensure energy efficient waste collection and transport solutions.

The ACT NoWaste (May 2018) "Waste Feasibility Study Roadmap" provides key recommendations for achieving outcomes of the Waste Management Strategy as identified above. This includes recommendations on development of the Waste-to-Energy policy for the ACT.

\(^1\) The Project proposes to receive C&I comprising of inert, solid and industrial waste generated by businesses and industries (including shopping centres, restaurants and office) and institutions (such as schools, hospitals and government offices), excluding building and demolition waste and municipal waste.
2.5.4 ACT Waste-to-Energy Policy 2020-25

The ACT Government (2019) “Waste-to-Energy Policy 2020-2025” provides a framework to outline the ACT’s position on energy recovery and assessing waste-to-energy proposals. As stated in the Waste-to-Energy policy outcomes include:

- Production of, but not burning of RDF is permitted.
- The waste hierarchy be respected and recycling is not undermined.
- Improved resource recovery rates.

The policy also identifies that the production of Refuse Derived Fuels (RDF) are permitted, however, only residual waste is permitted to be used.

The Project is proposing to produce RDF from residual material to be produced on the Site that would otherwise go to landfill. Therefore, the Project is consistent with the aims and outcomes of the Waste-to-Energy policy, whilst contributing to achieving the ACT Waste Management Strategy’s key outcomes.

2.5.5 Sustainability Policy 2009

The ACT government has committed to sustainability through policy since 2003 with the release of People Place Prosperity: a policy for sustainability in the ACT. Since 2003 the policy has been updated highlighting the presence of sustainability as a key and permanent feature in the ACT’s key guiding principles.

The ACT’s “Sustainability Policy 2009” sets out the ACT Government’s policy commitment to sustainability that includes; embedding sustainability within its decision-making processes; promoting sustainability to the wider community and developing partnerships for sustainability with the ACT community.

A key theme of the sustainability policy is “minimising the ACT’s waste” and improve the rate of recycling from commercial and further waste streams, in addition to improving rates of reuse, minimising waste going to landfill and reducing greenhouse gas emissions. It is considered the Project is consistent with this policy with the EIS subject to a triple bottom line assessment as recommended within the sustainability policy.

2.5.6 ACT Climate Change Strategy 2019-2025

The ACT Climate Change Strategy 2019-2025 outlines principles to guide the ACT’s climate change response and identifies goals and actions to achieve those goals. These include goals to reduce greenhouse gas emissions and providing for waste avoidance and management. The Project is consistent with these goals providing for beneficial reuse and reducing waste to landfill that would generate greenhouse gas.

2.5.7 Waste Management and Resource Recovery Act 2016

Commencing in July 2017, the Waste Management and Resource Recovery Act 2016 (the Waste Act) and accompanying Waste Management and Resource Recovery Regulation 2017 seeks to facilitate good practice in waste collection, transportation, recovery and reuse.

Closely aligning with the Strategy’s key outcomes, the Waste Act’s objectives (as identified in clause 8 of the Waste Act) are to:

a) manage waste according to the following hierarchy:
   i. minimise the generation of waste;
   ii. maximise the recovery and re-use of resources;
   iii. minimise the amount of waste that goes to landfill; and
b) support innovation and investment in waste management; and

c) promote responsibility for waste reduction; and

d) promote best-practice waste management.

The Project directly and indirectly facilitates all three points of the Waste Act hierarchy, which is similar to the waste hierarchy discussion of the Strategy within Section 2.5.2. This includes seeking to construct and operate an Integrated Resource Recovery Facility that not only recovers a variety of waste materials (thereby minimising the generation of waste), but facilitating and directly providing for the processing of these materials for beneficial reuse.

Proposing a variety of products and waste services at the one central location, the Project both contributes to, and promotes responsibility for waste reduction and innovation and investment in waste management. Furthermore, in increasing the available capacity of the ACT waste market to accept and process waste streams the Project is supporting the promotion of best-practise waste management.

The Project is also consistent with the principles of the Waste Act, which support the objectives. These include:

a) inter-generational equity principle (inter-generational equity principle means that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations).

The Project seeks to provide appropriate waste management that is consistent with statutory and policy aims and objectives within the ACT to benefit future generations.

b) polluter pays principle (polluters should bear the appropriate share of the costs that arise from their activities).

The Project seeks to provide the opportunity for those producing waste materials to dispose of these materials appropriately.

c) precautionary principle (if there is a threat of serious or irreversible environmental damage, a lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

As identified within this EIS, it is considered the Project does not propose a threat of serious or irreversible environmental damage.

d) proximity principle (waste and recovered resources should be managed as close to the source of generation as possible).

The Project is located within a central location of the ACT and seeks to provide waste services and products to the local and regional area.

e) waste minimisation principle (waste is handled in a way that minimises and, if practicable, eliminates harm to the environment).

The Project seeks to minimise harm to the environment through providing for appropriate waste services that are managed in accordance with all appropriate legislation and as practicable, eliminates harm to the environment.
2.5.8 ACT Waste Feasibility Study

The ACT Waste Feasibility Study was established in mid-2015 to investigate how best to reduce waste generation, maximise resource recovery, minimise littering and illegal dumping, and achieve a carbon-neutral waste sector.

Informing the framework for the Waste Management and Resource Recovery Act 2016, drivers of the ACT Waste Feasibility Study included identifying a regional approach to waste management, forming partnerships with relevant stakeholders, investing in waste management, research and technology, ongoing communication and education with the public, collecting data regarding waste management, and managing appropriate legislation.

The ability to process these materials in the ACT would have beneficial outcomes including providing for lower environmental (transport) and economic costs and enabling the security of management of identified waste streams within the ACT. This regional approach to waste management is also understood to be supported by the EPA as it would facilitate regional collaboration and promote economic development at a regional level, a key theme of the ACT/NSW Memorandum of Understanding (MOU).

Providing cross border solutions for waste management benefiting the wider Capital Region and surrounding regional areas, an underlying theme of the ACT/NSW Memorandum of Understanding (MOU) for regional collaboration to promote economic development and improve resource management across borders.

2.5.9 ACT Government Market Sounding

As part of the ACT Waste Feasibility Study, the ACT Government released a market sounding for waste management in February 2017. The objective of the market sounding was to enable the Territory to set higher standards for resource management. Specifically, the Territory sought to consider waste solutions that:

- Increase resource recovery and reduce waste to landfill (outcomes 1 and 2 of the Strategy);
- Minimise environmental impacts and greenhouse gas emissions (outcomes 3 and 4 of the Strategy);
- Improve social outcomes; and
- Represent value for money.

It is considered that the Project proposes a waste solution that addresses all of these points (as addressed in this section of the Report). This includes contributing to increased resource recovery, resulting in reduced waste to landfill, minimising environmental impacts through providing additional capability and capacity to process waste streams that would otherwise require transport to facilities outside of the ACT, which also provides for better social and economic outcomes. This also represents value for money due to the proposed waste treatment technology that would provide for more efficient resource recovery in addition to improving efficiencies associated with strengthening linkages between the Proponent and the management of waste in the ACT.

2.5.10 Climate Change

The Project will contribute to reducing the risks from climate change impacts through significantly reducing Greenhouse Gas (GHG) emissions through recycling of waste materials and diversion from landfill. As presented in Figure 18 Waste Flows in Chapter 8.0 – Waste and Materials, potentially up to 460,000 tonnes of waste would be diverted from landfill each year as a result of the Project. Based on 2018 National Greenhouse Accounts Factors this would equate to approximately 300,000 tCO₂e.

Diversion of waste from landfill and recycling of waste materials is directly consistent with the waste management hierarchy (as detailed in 2.5.2), which is consistent with ACT Government policy on climate...
change including “AP2 – A new climate change strategy and action plan for the Australian Capital Territory 2012” (AP2) and ACT Climate Change Adaption Strategy, 2016 (Adaption Strategy) and the ACT Climate Change Strategy 2019-2025 that identify reducing waste sector emissions such as being proposed by the Project.

2.6 Alternatives Considered

2.6.1 Locations

Extensive investigations were undertaken by the Proponent to consider the viability of developing the proposed Integrated Resource Recovery Facility at a number of geographically separate locations.

Alternate locations were reviewed and based upon a range of issues the preferred location of the Project was determined. Issues considered include environmental constraints and opportunities, access and existing regulations in addition to commercial issues such as cost, size, availability.

Key criteria in site selection included:

- Permissibility
- Compatibility with surrounding land use
- Proximity to markets
- Suitability of the site for the intended use i.e. size, existing contamination/remediation requirements
- Environmental constraints

Locations and a summary of the key considerations at each location for the Project are as follows.

- Westpark Industrial Estate, Tralee Street and Pethard Road, Hume.
  - Commercial and Availability: Subdivision had not been approved and the identified timing for completion of subdivision was not suitable.
  - Commercial and Environmental constraint: access to site and potential impacts upon amenity to surrounding sites.
  - Access: Haul distance to access the site from majority of potential customers within the ACT.

- Monaro Industrial Park, Tralee Street, Hume.
  - Size: The site was considered too small to accommodate the Project.
  - Commercial and Environmental constraint: access to site and potential impacts upon amenity to surrounding sites.
  - Access: Haul distance to access the site from majority of potential customers within the ACT.

- 22 Tralee Street, Hume.
  - Environmental constraint: Significant groundwater and soil contamination requiring extensive remediation.
  - Commercial and Environmental constraint: access to site and potential impacts upon amenity to surrounding sites.
  - Access: Haul distance to access the site from majority of potential customers within the ACT.
111 High Street, Queanbeyan East.
- Size: The site was considered too small to accommodate the Project.
- Environmental constraint: Significant groundwater and soil contamination requiring extensive remediation.
- Regulatory: the site is not located within the ACT requiring additional legislative considerations.
- Access: Haul distance to access the site from majority of potential customers within the ACT.

15 Silva Avenue, Queanbeyan East.
- Size: The site was considered too small to accommodate the Project.
- Regulatory: the site is not located within the ACT requiring additional legislative considerations.
- Access: Haul distance to access the site from majority of potential customers within the ACT in addition to being constrained by existing access to site.

13 Barrier Street, Fyshwick.
- Size: The site was considered too small to accommodate the Project.
- Environmental constraint: Groundwater and soil contamination requiring remediation.
- Regulatory: potential permissibility issues with respect to the existing zoning of the site.

17 Barrier Street, Fyshwick
- Size: The site was considered too small to accommodate the Project.
- Environmental constraint: Groundwater and soil requiring remediation.
- Regulatory: potential permissibility issues with respect to the existing zoning of the site.

23 Geelong Street, Fyshwick
- Size: The site was considered too small to accommodate the Project.
- Environmental constraint: Proximity to residential land uses increased potential for impact upon amenity to surrounding land use.
- Regulations: potential permissibility issues with respect to the existing zoning of the site.
- Environmental constraint: Potential for groundwater and soil contamination based on previous land use.

6-14 Tennant Street, Fyshwick.

The site of the Project at 6-14 Tennant Street, Fyshwick was identified as preferred, based upon a number of factors. This includes:
- Regulations: The Project is permissible within the existing zoning and consistent with relevant legislation, policy and strategies.
- Access: The site has good existing road networks with access to the wider region and has proximity to relevant product markets and waste generation sources within the ACT;
Environmental and land use opportunity: The site is considered compatible with neighbouring developments and land uses and from initial consideration thought to have less environmental constraints than other sites considered.

Commercial and Size: The site is considered the appropriate size for the Project, to enable acceptance of waste streams and processing of materials to produce products that can be provided directly back to the local and regional markets.

Environmental land use opportunity: The site has potential efficiencies associated with utilising existing infrastructure and buildings on the Site.

2.6.2 Design

As identified within Section 2.6.1, the Site is identified as the preferred location for the Project and in doing so identified to utilise existing infrastructure and buildings on the Site. This has driven the design iterations and design alternatives for the Project together with further issues such as the size, shape, access and environmental constraints and opportunities and the proposed waste streams to be accepted and processed at the Site.

Alternative designs, layouts and treatment processes considered for the site during development of the Project include:

- Alternate Layout 1 - Construction of a new concrete batching plant in the north-east corner of the Site and use of the Southern Building for Liquid Waste Treatment. The current layout was preferred over Alternate Layout 1 as the current layout does not change the use or equipment and fit out of the Southern Building, resulting in better land use outcomes.

- Alternate Layout 2 – Construction of access across Block 12 through the centre of the block. The current layout was preferred over Alternate Layout 2 as the current layout uses the existing access across Block 12 resulting in better land use outcomes.

- Alternate Layout 3 – A perimeter bund was considered for the Site however based upon results of the visual and noise assessment was considered unwarranted.

- Alternate Layout 4 and Alternate Treatment Process 1 – Separate Heavy and Light Waste processing was considered to be located in separate buildings. However based upon review of market and separation technologies was included as one process within the recycling facility building.

- Alternate Treatment Process 2 – Wood Burner technology was considered for processing of wood chipped waste. However due to commercial reasons associated with wood burners these were removed from the Project.

2.6.3 Do Nothing Option

The do nothing option was not considered a feasible alternative as there is clear demand for increased resource recovery of waste streams as evident by relevant legislative, policy and strategy documents of the ACT that seek to reduce the environmental, economic and social impact of waste.
3.0 LEGISLATIVE CONTEXT

3.1 Overview of Statutory Approvals in the ACT

The ACT operates under a two-tier legislative planning framework whereby jurisdiction for planning approval may fall under either or both local ACT Government or Commonwealth Government requirements depending on the location of the works. The requirements for planning approval are described further below.

3.2 Commonwealth Approval Requirements

3.2.1 Environment Protection and Biodiversity Conservation Act

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) prescribes the Commonwealth’s role in environmental assessment, biodiversity conservation and the management of protected areas and species, populations and communities and heritage items. The approval of the Commonwealth Minister for the Environment is required for:

- An action that has, would have, or is likely to have a significant impact on Matters of National Environmental Significance (MNES);
- Actions that are likely to have a significant impact on the environment of Commonwealth land;
- Actions taken on Commonwealth land that are likely to have a significant impact on the environment anywhere; and
- Actions by the Commonwealth that are likely to have a significant impact on the environment anywhere.

MNES include:

- world heritage properties;
- national heritage places;
- wetlands of international importance (often called ‘Ramsar’ wetlands after the international treaty under which such wetlands are listed);
- nationally threatened species and ecological communities;
- migratory species;
- Commonwealth marine areas;
- the Great Barrier Reef Marine Park;
- nuclear actions (including uranium mining); and
- a water resource, in relation to coal seam gas development and large coal mining development.

The requirement for a Commonwealth approval is assessed through a referral process to the Commonwealth Department of Environment. If the Commonwealth Minister for Environment determines that a Project is likely to have a significant impact, the Project is assessed as a controlled action and approval of the Commonwealth Minister is required.

The need for a referral is based on two triggers. The first is that it must relate to MNES. The second is that it must have a significant impact on such matters. Through assessment within this EIS including the Flora and Fauna assessment (APPENDIX O) it has been determined that the Project will not result in a significant impact to MNES. Therefore, a referral is not required for the Project under the EPBC Act.
3.3 ACT Approval Requirements

3.3.1 Australian Capital Territory (Planning and Land Management) Act

The Australian Capital Territory (Planning and Land Management) Act 1998 establishes the National Capital Authority (NCA) with responsibilities to:

- Prepare and administer a National Capital Plan.
- On behalf of the Commonwealth, commission works to be carried out in Designated Areas in accordance with the Plan where neither a Department of State or the Commonwealth, nor any Commonwealth authority has the responsibility to commission these works.

In the Australian Capital Territory (Planning and Land Management) Act 1998 the NCA is the responsible authority for all development within designated areas, with proposed works to be assessed against the requirements of the National Capital Plan. The NCA also has the authority to write special requirements that may apply to any area within the ACT.

All works whether in Territory or designated land must be consistent with the principles and policies contained in the National Capital Plan, described below.

3.3.2 The National Capital Plan

The General Policy Plan in the National Capital Plan (NCP) identifies broad planning policy areas including Urban areas, Broadacre areas, rural areas and the National Capital Open Space System.

The Site lies within Urban Area as identified in the NCP.

Principles for Urban Areas

The NCP Principles for Urban Areas include:

- Canberra’s future growth is to be accommodated by continuing the development of distinct and relatively self-contained towns.
- A hierarchy of centres will be maintained, with each town having a centre acting as a focal point for higher order retail functions, commercial services, offices and community facilities.
- Industrial estates will continue to be located on the edge of the Urban Areas and have good accessibility to the national highway network for long-distance freight movements.

As Fyshwick is not identified as National Land or Designated Land, the ACT Planning Authority has jurisdiction over planning approvals for the Site.

As the NCP does not identify any requirements that apply to the Site, potential development applications will be assessed against the requirements of the Territory Plan. However, as the Territory Plan may not be inconsistent with the NCP, compliance with the former results in compliance with the latter.

3.3.3 ACT Planning Strategy

The vision of the “ACT Planning Strategy 2018” is to “…be a sustainable, competitive and equitable city that respects Canberra as a city in the landscape and the National Capital, while being responsive to the future and resilient to change.”

The Project is considered to be consistent with the intent and vision of the “ACT Planning Strategy 2018”, with Direction 3.6 identifying the goal of “reducing waste and improving resource efficiency” through “…reducing the amount of waste the ACT produces by avoiding, re-using and recycling waste.” This includes providing appropriate infrastructure and services that enable waste for resource recovery.
The location of the Project within the Fyshwick industrial precinct is also consistent with the ACT Planning Strategy, which identifies that the role of the industrial precincts of Fyshwick must be protected for industrial use.

3.3.4 Planning and Development Act 2007

The Planning and Development Act 2007 provides a ‘planning and land system that contributes to the orderly and sustainable development of the ACT’. Developments outside the Designated Areas identified in the NCP (described above) are assessed by the ACT Planning Authority against the requirements of this Act.

The Planning and Development Act 2007 determines whether a development is assessable in the Code, Merit or Impact track. There are no Code track proposals applicable for the Project.

3.3.5 Merit Track

Merit track developments must meet specific rules and criteria in the relevant development code as well as any applicable precinct or general codes.

Most development applications are assessable in the Merit Track unless they are of a type required to be in the Impact Track as described below.

3.3.6 Impact Track

There are 5 types of development application that are identified in Section 123 of the Act as requiring assessment as Impact Track, and hence must either be accompanied by a completed EIS, be exempted by the Minister, or subject to an Environmental Significance Opinion. These 5 types are discussed in Table 3 below.

Table 3: Development types identified in the ACT required to be assessed in the impact track

<table>
<thead>
<tr>
<th>Development</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) the relevant development table states that the impact track applies; or</td>
<td>Not Applicable. Refer to discussion at Table 4 below.</td>
</tr>
<tr>
<td>(b) the proposal is of a kind mentioned in schedule 4; or</td>
<td>Applicable. The Project is of a kind mentioned in Schedule 4 refer to discussion at Table 5 and Table 6 below.</td>
</tr>
<tr>
<td>(c) the Minister makes a declaration under section 124 in relation to the proposal; or</td>
<td>Not applicable. The Minister has not made a declaration that impact track applies to the Project.</td>
</tr>
<tr>
<td>(d) section 125 (Declaration by Public Health Act Minister affects assessment track) or section 132 (Impact track applicable to development proposals not otherwise provided for) provides that the impact track applies to the proposal; or</td>
<td>Not applicable. The Minister for Health has not made a declaration that impact track applies to the Project. The development is not a development that is ‘not otherwise provided for’</td>
</tr>
<tr>
<td>Development</td>
<td>Commentary</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
</tbody>
</table>
| (e) the Commonwealth Minister responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) advises the Minister in writing that the development proposed— (i) is a controlled action under that Act, section 76; and (ii) does not require assessment under that Act, part 8 (Assessing impacts of controlled actions) because a bilateral agreement between the Commonwealth and the Territory under that Act allows the proposal to be assessed under this Act. | **Not Applicable**  
There is not a potentially for significant impact to MNES and hence referral to the Commonwealth Minister has not occurred. |
Table 4: Development types identified in the IZ1 Development Table required to be assessed in the impact track

<table>
<thead>
<tr>
<th>Development</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Development that is not:</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>a. Exempt, code track or merit track development (see section 132 of the Planning and Development Act 2007); or</td>
<td></td>
</tr>
<tr>
<td>b. Prohibited development, other than development that is permitted under s137 of the Planning and Development Act 2007.</td>
<td></td>
</tr>
<tr>
<td>2. Development specified in schedule 4 of the Planning and Development Act 2007 and not listed as a prohibited use in this table.</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>3. Development that is authorised by a lease and listed as a prohibited use in this table.</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>4. Development declared under section 124 or section 125 of the Planning and Development Act 2007 and not listed as a prohibited development in this table.</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>5. Varying a lease to add a use assessable under the impact track.</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

The following tables list the triggers (Activities and Processes) for an EIS from Schedule 4 of the Planning and Development Act 2007.

The listed “activities” that require an EIS under Part 4.2 are generally for large-scale developments, or developments of a nature that make them more likely to result in an environmental impact. These are discussed in Table 5 below.

The listed “areas and process” that require an EIS under Part 4.3 and which may potentially apply to the project are listed in Table 6.

Three triggers for impact track assessment are identified. The Project includes an activity identified in Schedule 4 of the Act: a recycling facility intended to handle more than 30kt of waste each year, the Project includes storage and transport of asbestos containing material and proposes to store the placard quantity of a Schedule 11 hazardous chemical.
Table 5: Development Proposal requiring EIS - Activities

<table>
<thead>
<tr>
<th>Trigger</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  proposal for construction of a transport corridor including a major road, a dedicated bus way, a railway, or a light rail corridor</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>2  proposal that involves—</td>
<td></td>
</tr>
<tr>
<td>(a) electricity transmission line construction ... intended to carry ... a voltage of 132kV or more; or</td>
<td></td>
</tr>
<tr>
<td>(b) a coal electricity generating station; or</td>
<td></td>
</tr>
<tr>
<td>(c) an electricity generating station ... including gas, wind, hydroelectric, geothermal, bio-material, solar power or co-generation that is capable of supplying [20MW]; or ...</td>
<td></td>
</tr>
<tr>
<td>3  proposal for construction of a water storage dam—</td>
<td></td>
</tr>
<tr>
<td>(a) that will be at least 15m high ... ; or</td>
<td></td>
</tr>
<tr>
<td>(b) that will be at least 10m high if—</td>
<td></td>
</tr>
<tr>
<td>(i) the crest is not less than 500m in length; or</td>
<td></td>
</tr>
<tr>
<td>(ii) the capacity is at least 1 000 000m3</td>
<td></td>
</tr>
<tr>
<td>(c) in the river corridor zone under the territory plan; or</td>
<td></td>
</tr>
<tr>
<td>(d) on a continuously flowing river in a non-urban zone</td>
<td></td>
</tr>
<tr>
<td>4  proposal for construction of an airport or airfield ...</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>5  proposal for construction of a wastewater treatment plant (including a plant for the treatment of sewage or other effluent) that—</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>(a) will be less than 1km from the boundary of a residential block or unit in a residential or commercial zone; or</td>
<td></td>
</tr>
<tr>
<td>(b) will be able to treat each day more than—</td>
<td></td>
</tr>
<tr>
<td>(i) 2 500 people equivalent capacity; or</td>
<td></td>
</tr>
<tr>
<td>(ii) 750kL; or</td>
<td></td>
</tr>
<tr>
<td>(c) will have capacity to store more than 1kt of sewage, sludge or effluent; or</td>
<td></td>
</tr>
<tr>
<td>(d) will incinerate sewage or sewage products; or</td>
<td></td>
</tr>
<tr>
<td>(e) will have a capacity to treat more than 100ML of wastewater (excluding stormwater) each year; but</td>
<td></td>
</tr>
<tr>
<td>6  proposal for construction of a petroleum storage facility with a storage capacity greater than 500kL of petroleum products at 1 time</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>7  proposal for construction of a permanent venue for the conduct of motor racing events</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>8  proposal for use of land for a commercial landfill facility, other than for the disposal of virgin excavated natural material ...</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Trigger</td>
<td>Commentary</td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
</tr>
</tbody>
</table>
| 9       | proposition for the construction of a waste management facility that is—  
(a) an incineration facility for the destruction by thermal oxidation of waste including biological, veterinary, medical, clinical, dental, quarantine and municipal waste; or  
(b) for the sterilisation of clinical waste; or  
(c) for the storage, treatment, disposal, processing, recycling, recovery, use or reuse of regulated waste. | Triggered  
The Project includes storage and transfer of asbestos containing material. |
| 10      | proposition for a waste transfer station or recycling facility that sorts, consolidates or temporarily stores solid waste (including municipal waste) for transfer to another site for disposal, storage, reprocessing, recycling, use or reuse, if the transfer station—  
(a) is intended to handle more than 30kt of waste each year; or  
(b) will be less than 1km from the boundary of a residential block or unit in a residential or commercial zone; but  
(c) is not a small-scale waste management facility, on or near a residential block or near a residential unit, consisting of wheelie bins, small hoppers, or other small waste management bins or enclosures for the use of people living on the residential block or in the residential unit | Triggered  
The Project includes a recycling facility intended to handle more than 30kt of waste each year. |
| 11      | proposition that involves storage of the placard quantity of a Schedule 11 hazardous chemical … | Triggered  
The proposed placard and manifest quantities for hazardous chemicals (e.g. diesel and petrol) associated to the Project would likely exceed prescribed quantities identified in Schedule 11 of the Work Health and Safety Regulation 2011. |
Table 6: Development proposals requiring EIS - Areas and Processes

<table>
<thead>
<tr>
<th>Trigger</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 proposal that is likely to have a significant adverse environmental impact on 1 or more of the following, unless the conservator of flora and fauna provides an environmental significance opinion indicating that the proposal is not likely to have a significant adverse environmental impact: (a) a critically endangered species; (b) an endangered species; (c) a vulnerable species; (d) a conservation dependent species; (e) a regionally threatened species; (f) a regionally conservation dependent species; (g) a provisionally listed threatened species; (h) a listed migratory species; (i) a threatened ecological community; (j) a protected native species; (k) a Ramsar wetland; (l) any other protected matter</td>
<td>Not Triggered</td>
</tr>
<tr>
<td></td>
<td>The Project will not have an impact on any of these protected matters.</td>
</tr>
<tr>
<td>2 proposal involving— (a) the clearing of more than 0.5ha of native vegetation in a native vegetation area, other than on land that is designated as a future urban area under the territory plan, unless the conservator of flora and fauna produces an environmental significance opinion that the clearing is not likely to have a significant adverse environmental impact; or</td>
<td>Not Triggered</td>
</tr>
<tr>
<td></td>
<td>The Project does not involve clearing of native vegetation.</td>
</tr>
<tr>
<td>Trigger</td>
<td>Commentary</td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>(b) the clearing of more than 5.0ha of native vegetation in a native vegetation area, on land that is designated as a future urban area under the territory plan, unless the conservator of flora and fauna produces an environmental significance opinion that the clearing is not likely to have a significant adverse environmental impact</td>
<td></td>
</tr>
</tbody>
</table>

**3** proposal for development in a reserve, unless—
(a) the conservator of flora and fauna produces an environmental significance opinion that the proposal is not likely to have a significant adverse environmental impact; or
(b) the proposal is for minor public works to be carried out by or for the Territory in accordance with a minor public works code approved by the conservator of flora and fauna under the Nature Conservation Act 2014, section 318A

**Not Triggered**
The Project is not on land reserved for any of these purposes.

**4** proposal that is likely to have a significant adverse environmental impact on—
(a) a domestic water supply catchment; or
(b) a water use purpose mentioned in the territory plan (water use and catchment general code); or
(c) a prescribed environmental value mentioned in the territory plan (water use catchment general code) of a natural waterway or aquifer

**Not Triggered**
The Project is not considered to impact on these water use matters.
<table>
<thead>
<tr>
<th>5</th>
<th>Trigger</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>proposal that is likely to result in environmentally significant water</td>
<td>Not Triggered The Project would not be a significant</td>
</tr>
<tr>
<td></td>
<td>extraction or consumption, other than a proposal for an urban lake,</td>
<td>water user.</td>
</tr>
<tr>
<td></td>
<td>pond or retardation basin or a wastewater reuse scheme—(a) in an</td>
<td></td>
</tr>
<tr>
<td></td>
<td>existing urban area or on land that has been designated as a future</td>
<td></td>
</tr>
<tr>
<td></td>
<td>urban area; and (b) that is designed in accordance with the water</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sensitive urban design general code under the territory plan</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6</th>
<th>Trigger</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>proposal that is likely to have a significant adverse impact on the</td>
<td>Not Triggered The Project is not likely to have a</td>
</tr>
<tr>
<td></td>
<td>heritage significance of a place or object registered under the Heritage</td>
<td>significant adverse impact on any registered place or</td>
</tr>
<tr>
<td></td>
<td>Act 2004, unless—(a) the heritage council produces an environmental</td>
<td>object.</td>
</tr>
<tr>
<td></td>
<td>significance opinion that the proposal is not likely to have a</td>
<td></td>
</tr>
<tr>
<td></td>
<td>significant adverse impact; or (b) the proposal is the demolition of</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a building that is affected residential premises, and the heritage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>council has approved a statement of heritage effect in relation to the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>proposal</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7</th>
<th>Trigger</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>proposal involving land included on the register of contaminated sites</td>
<td>Not Triggered The Site is not included on the register</td>
</tr>
<tr>
<td></td>
<td>under the Environment Protection Act 1997 unless the authority produces</td>
<td>of contaminated sites under the Environment Protection</td>
</tr>
<tr>
<td></td>
<td>an environmental significance opinion indicating that the proposal is</td>
<td>Act 1997.</td>
</tr>
<tr>
<td></td>
<td>not likely to have a significant adverse environmental impact</td>
<td></td>
</tr>
</tbody>
</table>
8 proposal, other than on land in an existing urban area or land that is designated under the territory plan as a future urban area, with the potential to adversely affect the integrity of a site where significant environmental or ecological scientific research is being conducted by a government entity, a university or another entity prescribed by regulation

<table>
<thead>
<tr>
<th>Trigger</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Not Triggered&lt;br&gt;The Site is within an existing urban area.</td>
</tr>
</tbody>
</table>

### 3.3.7 Planning and Development Regulation 2008

The *Planning and Development Regulation 2008* provide the requirements associated with the preparation of the EIS documentation, providing the requirements associated with:

- The minimum information list that is required in the EIS documentation
- Requirements for EPSDD and agency/entity input in relation to the preparation and referral of scoping documents for an EIS (including timeframes that apply)
- Minimum contents for a Scoping document for an EIS
- Criteria for consultants that may prepare an EIS.

This EIS has been prepared in accordance with Section 50 of the Regulations and is considered to address all relevant requirements appropriately.

### 3.3.8 Principles of Sustainable Development

Section 9 of the *Planning and Development Act 2007* identifies the principles of sustainable development, which include the precautionary principle and the inter-generational equity principle that have previously been addressed in Section 2.5.7 as principles of the Waste Act. In addition, conservation of biological diversity and ecological integrity and appropriate valuation and pricing of environmental resources are further sustainability principles of the Planning and Development Act.

The Project has been designed to reduce the potential impacts upon biological diversity and enhance ecological integrity and that management and mitigation of potential impacts are in place to ensure that environmental resources and environmental quality is appropriately valued at the Site. This will in turn support sustainable economic growth and wellbeing that does not lower the quantity and quality of resources and/or impact upon health to the Site and surrounding area.

Direct economic benefits in the form of local employment opportunities during construction and operation of the Project would be realised through the generation of employment opportunities (providing 84 full time jobs during operation) and potential income to local businesses, through facilitating a circular economy and products that are reusable in the ACT and wider region.
3.4 Territory Plan
The object of the Territory Plan is to ensure, in a manner not inconsistent with the NCP, the planning and development of the ACT to provide the people of the ACT with an attractive, safe and efficient environment in which to live, work and have their recreation.

The Territory, the Executive, a Minister or a territory authority must not do any act, or approve the doing of an act, that is inconsistent with the Territory Plan.

The Territory Plan and associated maps define use, establish land use zones and identify reserved areas and identifies the Site (Block 8 Section 28) as zoned General Industrial and Industrial Mixed Use.

The Project is compatible with the principles in the Statement of Strategic Directions in the Territory Plan.

3.4.1 Industrial Mixed Use Zone
The Project does not propose works to take place on the land zoned for Industrial Mixed Use. Despite this, the Project would satisfy the relevant objectives of the land use zoning for Industrial Mixed Use. These objectives include:

a) Support the diversification and expansion of the ACT’s industrial base and employment growth
b) Facilitate investment in a wide range of industrial and related activities, with efficient land utilisation and provision of infrastructure
c) Provide convenient access for ACT and regional residents to industrial goods, services and employment opportunities, including by encouraging active travel and access to public transport.
d) Ensure that industrial development achieves high environmental standards of cleaner production, waste disposal, noise and air quality
e) Encourage the design and construction of industrial and commercial buildings that are energy efficient, functional and flexible
f) Ensure that development along major approach routes and major roads meets appropriate standards of urban design
g) Accommodate industry-associated retailing, services and other commercial uses without jeopardising an adequate supply of industrial land
h) Provide for a range of commercial and service activities at a scale that will protect the planned hierarchy of commercial centres and the Territory’s preferred locations for office development
i) Meet the need for a mix of lower rent bulky goods retailing, specialised industrial, commercial and service activities alongside general industry
j) Preserve and promote viable industries that can coexist with more commercially oriented uses
k) Make provision for small-scale services that support surrounding industrial activities, or which meet the needs of the local workforce

3.4.2 General Industry Zone
The Project satisfies the objectives of the current land use zoning - General Industry. According to the Territory Plan, General Industry zones aim to:

a) Support the diversification and expansion of the ACT’s industrial base and employment growth
b) Facilitate investment in a wide range of industrial and related activities, with efficient land utilisation and provision of infrastructure

c) Provide convenient access for ACT and regional residents to industrial goods, services and employment opportunities

d) Make provision for transport-related businesses in locations accessible to major road, rail and air links

e) Encourage the clustering of industrial activities according to the principles of industrial ecology

f) Ensure that industrial development achieves high environmental standards of cleaner production, waste disposal, noise and air quality

g) Encourage the design and construction of industrial and commercial buildings that are energy efficient, functional and flexible

h) Ensure that development along major approach routes and major roads meets appropriate standards of urban design

i) Make provision for manufacturing, warehouse and transport land uses requiring large land areas accessible to main interstate road and rail connections

j) Ensure that the use of land for predominantly industrial purposes is not jeopardised by the uncontrolled development of higher rent commercial uses such as retailing and offices

k) Provide small-scale services to meet the needs of the local workforce

The type of waste processing activities proposed by the Project for the Site are considered appropriate in this zoning subject to a development application.

Merit (and Impact) Track assessable uses in the General Industry Zone are identified in the IZ1 Development Table (below).

It is considered that the proposed uses on the Site will be accommodated under the following uses:

- Waste transfer station;
- General industry;
- Bulk landscape supplies;
- Store;
- Industrial Trades;
- Recyclable Materials collection; and
- Recycling Facility.
3.4.3 **Fyshwick Precinct Code**

Precinct Codes in the Territory Plan introduce location specific planning controls.

There are no controls in the Fyshwick Precinct Code that relate to the Site.

3.4.4 **Industrial Zones Development Code**

The Industrial Zones Development Code provides rules and criteria against which a future development application will be assessed. The rules and criterial are grouped into elements relating to:

- Building and Site Controls;
- Restrictions on Use;
- Built Form;
- Parking and Site Access;
- Amenity;
- Environment; and
- Services.

A review of the site concept plan has not identified any significant barriers to approval.
3.5  ACT Legislation

3.5.1  Environment Protection Act 1997

The Environment Protection Act 1997 provides for a broad range of measures to protect and enhance the environment.

Schedule 1 of the Environment Protection Act 1997 details activities that require environmental authorization. These are divided in the Class A and Class B activities.

- Class A activities require environmental authorisation from the Environment Protection Authority.
- Class B activities require either environmental authorisation or an environmental protection agreement.

The Project meets the definition of a Class A activity and hence the Proponent will require an Environmental Authorisation under the Environment Protection Act 1997.

This Authorisation will be negotiated in parallel with the planning approvals and other regulatory requirements.

3.5.2  Nature Conservation Act 2014

The Nature Conservation Act 2014 makes provision for the protection and conservation of native animals and native plants, and for the reservation of areas for these purposes.

The Nature Conservation Act 2014 describes measures for the protection of flora and fauna and requirements for management and use of reserved areas.

Under the Nature Conservation Act 2014 it is an offence to interfere with the nest of a native animal, kill or take a native animal except in accordance with a licence. Similarly, it is an offence to, except in accordance with a licence, take a plant that—

(a) has special protection status; or
(b) is a protected native plant; or
(c) is a native plant growing on unleased land.

An assessment of vegetation on the Site has identified the Project will have a negligible impact upon flora and fauna.

3.5.3  Heritage Act 2004

The purpose of the Heritage Act 2004 is to provide for the recognition, registration and conservation of places and objects of natural and cultural significance, and for other purposes.

Under sections 74 and 75 of the act it is an offence to diminish the heritage significance of a place or object and to engage in conduct that causes damage to an Aboriginal place or object.

As addressed in Chapter 17.0, the Site is likely to result in negligible impact to heritage significance with measures in place should heritage items or objects be identified during construction.

3.5.4  Tree Protection Act 2005

The purpose of the Tree Protection Act 2005 includes protecting trees and forests in the urban area and promoting the broad appreciation of trees in the urban environment.

The Tree Protection Act 2005 introduces the concept of protected trees and provides various measures to protect them. Protected trees include:
Registered trees. Trees registered on the ACT Tree Register under Part 7 of the *Tree Protection Act 2005*. There are no Registered Trees on the site.

Regulated trees. Living (native or non-native) trees (other than registered trees or palm trees) on leased land in a tree management precinct. Regulated trees must be of a certain size:

- 12 metres or more high; or
- have a trunk with a circumference of 1.5 metres or more, one metre from the ground;
- have a two or more trunks and the sum of their individual circumferences 1 m above the ground is 1.5 m or more; or
- have a canopy 12 m or more wide.

Both native and exotic trees are protected. However, if the tree is a pest plant (including *Pinus radiata*), under the *Pest Plants and Animals Act 2005* it cannot be a regulated tree.

The *Tree Protection Act 2005* prohibits the damaging of a protected tree without approval. The term damage includes killing, destroying, poisoning, ringbarking, felling, removing, lopping, pollarding, major pruning, or anything else that causes the tree to die, reduces its expected life span or significantly and adversely affects the tree’s health, stability or general appearance.

In addition, certain groundwork within the tree protection zone is prohibited without approval. The tree protection zone is:

- under the canopy of the tree; and
- within a two metre radius out from the canopy; and
- within a four metre radius surrounding the trunk as measured at one metre above natural ground level

Prohibited groundwork includes:

- Contaminating the soil with a substance poisonous to trees; or
- Cutting any roots within the tree protection zone which have a diameter greater than 50mm; or
- Changing the natural soil level (raising or excavating) more than 10cm over an area of 4m2 or larger.

The Project will result in negligible impact to regulated trees with appropriate management measures to be implemented should groundwork be proposed in proximity to regulated trees on the Site.

### 3.5.5 Water Resources Act 2007

The objects of the *Water Resources Act 2007* are:

(a) to ensure that management and use of the water resources of the Territory sustain the physical, economic and social wellbeing of the people of the ACT while protecting the ecosystems that depend on those resources; and

(b) to protect aquatic ecosystems and aquifers from damage and, where practicable, to reverse damage that has already happened; and

(c) to ensure that the water resources are able to meet the reasonably foreseeable needs of future generations.
The *Water Resources Act 2007* defines surface and ground water resources, as well as provides a definition of a “waterway” as:

(a) a river, creek, stream or other natural channel in which water flows (whether continuously or intermittently); or

(b) the stormwater system or any other channel formed (whether completely or partly) by altering or relocating a waterway mentioned in paragraph (a); or

(c) a lake, pond, lagoon or marsh (whether formed by geomorphic processes or by works) in which water collects (whether continuously or intermittently).

A person may apply to the Environment Protection Authority for a licence to do waterway work.

The Project will result in negligible impact to water resources and will have measures in place to protect Water Resource as discussed in Chapter 11.0.

### 3.5.6 Utilities (Technical Regulation) Act 2014

In accordance with the *Utilities (Technical Regulation) Act 2014*, regulated utility services must be designed, constructed, maintained and operated to meet the minimum safety, reliability and functional requirements of their installation, with the technical regulation concerned with the operation of utility services and the protection and maintenance of networks.

The technical requirements for utilities associated with the Project would be addressed in accordance with relevant technical codes of the *Utilities (Technical Regulation) Act 2014*.

### 3.5.7 Work, Health and Safety Regulation 2011

The *Work, Health and Safety Regulation 2011* provides a framework to secure the health and safety of workers and workplaces by protecting workers and other persons against harm to their health, safety and welfare through the elimination of risks arising from work.

To appropriately address the issues of health and safety in accordance with the regulation, an Occupational, Health and Safety plan will be implemented for the Site in accordance with site environmental management plans and include operational procedures and training for such issues as hazardous chemicals.
4.0 RISK ASSESSMENT

4.1 Pre-mitigation Risk Assessment

4.1.1 Risk Assessment Methodology

The matrix methodology outlined below has been adopted from ACT Planning & Land Authority "Preparation of an application for scoping" publication and is consistent with AS/NZS ISO 14004:2016 (environmental management systems) and AS/NZS ISO 31000:2018 (risk management).

The risk assessment for the Project within this EIS is guided by the risks identified within the Planning Report and the Preliminary Risk Assessment within (Golder, 2018). No new risks have been identified beyond those identified in the Planning Report.

Evaluating likelihood

The likelihood of an impact occurring is best described in terms of probability. Overlaying this is the need to recognise the uncertainty that may be associated with potential impacts, particularly during the preliminary risk assessment process. Best practice dictates that where there is scientific uncertainty, a precautionary approach is warranted, which will in turn identify a higher level of risk.

Each identifiable potential impact can be assigned a likelihood between ‘remote’ and ‘almost certain’.

Table 7 identifies the criteria used to determine the likelihood of an impact.

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Description</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote</td>
<td>May occur in exceptional circumstances</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Unlikely</td>
<td>Not expected to occur in most circumstances</td>
<td>1-20%</td>
</tr>
<tr>
<td>Possible</td>
<td>May occur</td>
<td>21-49%</td>
</tr>
<tr>
<td>Likely</td>
<td>Probably will occur</td>
<td>50-85%</td>
</tr>
<tr>
<td>Almost Certain</td>
<td>Expected to occur</td>
<td>&gt;85%</td>
</tr>
</tbody>
</table>

Evaluating consequence

The consequences of an impact requires a degree of subjective assessment, which may consist of several elements. For the purpose of the pre-mitigation risk assessment the elements considered are described in Table 8 and Table 9. Several of the elements are interrelated and a consequence is considered to be major if any one of the elements can be expected to be a major impact. A subjective decision is needed for each possible impact as to the level of consequence taking a balanced view of the impact against each of the elements.

The consequence of an impact used in the risk assessment is the reasonably foreseeable consequence.
Table 8: Evaluating consequence (General Elements)

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Magnitude</strong></td>
<td></td>
</tr>
<tr>
<td>Spatial</td>
<td>The area over which the impact will occur, from square metres to square</td>
</tr>
<tr>
<td></td>
<td>kilometres.</td>
</tr>
<tr>
<td>Intensity</td>
<td>The level of impact within the spatial area, from minor disruption to total</td>
</tr>
<tr>
<td></td>
<td>destruction. A low intensity impact over a large area could be worse than a</td>
</tr>
<tr>
<td></td>
<td>high intensity impact in a small area, depending upon other elements.</td>
</tr>
<tr>
<td><strong>Temporal</strong></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>The length of time of the impact, from a single event to a permanent change.</td>
</tr>
<tr>
<td>Timing</td>
<td>Short term events may create significant impacts if they occur often. They</td>
</tr>
<tr>
<td></td>
<td>may also coincide with particularly sensitive times in the receiving</td>
</tr>
<tr>
<td></td>
<td>environment such as breeding cycles.</td>
</tr>
<tr>
<td>**Ecological/</td>
<td></td>
</tr>
<tr>
<td>Physical**</td>
<td>Values</td>
</tr>
<tr>
<td></td>
<td>The quality of the receiving environment, generally identified through the</td>
</tr>
<tr>
<td></td>
<td>declaration of conservation areas, identification of protected species and</td>
</tr>
<tr>
<td></td>
<td>other features of natural conservation value.</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>The capacity of the receiving environment to regenerate or adapt to the</td>
</tr>
<tr>
<td></td>
<td>impact (resilience). The sensitivity of an environment to a potential impact</td>
</tr>
<tr>
<td></td>
<td>will require informed judgement.</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td></td>
</tr>
<tr>
<td>Number of</td>
<td>The number of people directly or indirectly affected through lost</td>
</tr>
<tr>
<td>people</td>
<td>opportunities for enjoyment or other values such as equity or existence</td>
</tr>
<tr>
<td></td>
<td>values.</td>
</tr>
<tr>
<td>Heritage</td>
<td>The impact on known or possible items of heritage or cultural value.</td>
</tr>
<tr>
<td>Political</td>
<td>The measure of the likely political implications or level of community</td>
</tr>
<tr>
<td></td>
<td>interest.</td>
</tr>
<tr>
<td><strong>Economic</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The financial cost of the impact through lost productivity or the cost of</td>
</tr>
<tr>
<td></td>
<td>remediation.</td>
</tr>
</tbody>
</table>
Table 9: Evaluating Consequence (project specific elements)

<table>
<thead>
<tr>
<th>Consequence</th>
<th>Minimal</th>
<th>Minor</th>
<th>Moderate</th>
<th>Major</th>
<th>Catastrophic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Magnitude</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spatial</td>
<td>Localised within 3m²</td>
<td>On the subject site</td>
<td>Impacts on neighbouring properties within a 100m radius</td>
<td>Impact on the division of Fyshwick</td>
<td>Impact to hundreds of hectares</td>
</tr>
<tr>
<td>Intensity</td>
<td>Low level behavioural, or conditional effect</td>
<td>Acute impacts on some species</td>
<td>Moderate impacts on growth, recruitment or survival rates</td>
<td>Lethal impacts on some species</td>
<td>Lethal for individuals or communities</td>
</tr>
<tr>
<td><strong>Temporal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>Single incident or transient event</td>
<td>Short term impact, single generation</td>
<td>Medium term</td>
<td>Long term, multiple generations</td>
<td>Permanent</td>
</tr>
<tr>
<td>Timing</td>
<td>Occurs outside breeding times</td>
<td>Occasional interruption of feeding or breeding</td>
<td>Interrupts one life cycle</td>
<td>Regularly interrupts life cycle</td>
<td>Permanent interruption of ecosystem life cycle</td>
</tr>
<tr>
<td><strong>Ecological</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Values</td>
<td>Previously disturbed areas</td>
<td>Parkland</td>
<td>Nature conservation area</td>
<td>Conservation area, listed species or other conservation feature of ACT significance</td>
<td>Wilderness, nationally threatened species or other conservation feature of national significance</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>Will recover completely</td>
<td>Will recover with some changes</td>
<td>Moderate change to ecosystem functioning</td>
<td>Significant change to ecosystem functioning</td>
<td>Will not recover</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of people</td>
<td>Some people indirectly impacted</td>
<td>Some people directly impacted or several indirectly</td>
<td>Several people directly impacted or many indirectly</td>
<td>Large number of people directly impacted</td>
<td>Loss of life</td>
</tr>
<tr>
<td>Consequence</td>
<td>Minimal</td>
<td>Minor</td>
<td>Moderate</td>
<td>Major</td>
<td>Catastrophic</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Heritage</td>
<td>Impact on item of minimal significance</td>
<td>Impact on multiple items of low significance</td>
<td>Impact on significant item</td>
<td>Impact on multiple significant items</td>
<td>Major impact on protected item</td>
</tr>
<tr>
<td>Political</td>
<td>Single negative press article</td>
<td>Multiple negative press articles</td>
<td>Significant public interest</td>
<td>Leads to an inquiry</td>
<td>Change of government</td>
</tr>
</tbody>
</table>

**Economic**

| Economic         | Minimal losses                                                          | Several thousand dollars lost revenue or remediation costs           | Half million dollars in lost revenue or remediation costs | One million dollars in lost revenue or remediation costs        | Several million dollars in lost revenue or remediation costs |

Based on the assessment of likelihood and consequence any foreseeable impact can be assigned a risk rating. **Table 10**: illustrates the risk rating process as a matrix. Increased consequence from left to right and increased likelihood from top to bottom. The resulting juncture of consequence and likelihood produces the risk rating on a scale of negligible to significant.

**Table 10: Risk Assessment Matrix**

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote</td>
<td>Remote</td>
</tr>
<tr>
<td>Unlikely</td>
<td>Unlikely</td>
</tr>
<tr>
<td>Possible</td>
<td>Possible</td>
</tr>
<tr>
<td>Likely</td>
<td>Likely</td>
</tr>
<tr>
<td>Almost certain</td>
<td>Almost certain</td>
</tr>
</tbody>
</table>

**4.1.2 Pre-mitigation Risk Assessment**

A pre-mitigation risk assessment is presented in **Table 11**. This includes consideration of the Preliminary Risk Assessment previously completed in the Request for Scoping Document for the Project, comments received from entities on the application and further identified risks for the Project. As identified within the Scoping Document and **Table 11**, each risk is identified as having a medium risk level or above and are further assessed and addressed within the relevant chapters of the EIS. The residual risk assessment is identified within each relevant chapter that assesses the risks identified within **Table 11**, which considers proposed mitigation and management measures identified for each issue.
<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
<th>Principle chapter addressed in the EIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning and land Status</td>
<td>Sterilisation of existing and future surrounding land uses</td>
<td>Medium</td>
<td>Chapter 5.0</td>
</tr>
<tr>
<td>Traffic and Transport</td>
<td>Increased traffic congestion and parking during construction</td>
<td>Medium</td>
<td>Chapter 6.0</td>
</tr>
<tr>
<td></td>
<td>Increased traffic congestion and parking during operation from waste delivery/transportation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reduced road safety due to increased traffic and truck movements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td>Impacts to existing infrastructure during construction and operation, especially to the existing electricity services</td>
<td>Medium</td>
<td>Chapter 7.0</td>
</tr>
<tr>
<td></td>
<td>Utility failure impacting operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials and waste</td>
<td>Increased waste to ACT landfill during construction and operation</td>
<td>Medium</td>
<td>Chapter 8.0</td>
</tr>
<tr>
<td></td>
<td>Impacts from receiving, storage and disposal of other hazardous waste that is not permitted to be handled on site</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spread/spill of waste, such as liquid waste, fuel or asbestos during operation, impacting the site, adjacent blocks and the environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impacts from excess stockpiling when operation disrupted or ceases</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Waste being spread during transport</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impact of increased quantity of waste entering the ACT from other jurisdictions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Theme</td>
<td>Risk Identified</td>
<td>Pre-Mitigation Risk Assessment</td>
<td>Principle chapter addressed in the EIS</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Landscape, visual and lighting</td>
<td>Visual impacts on the surrounding area from building bulk and scale, stockpiling and lighting the facility</td>
<td>Medium</td>
<td>Chapter 9.0</td>
</tr>
<tr>
<td>Soils and Geology</td>
<td>Contamination of soil from uncontrolled release/spill of fuel, asbestos and other waste</td>
<td>Medium</td>
<td>Chapter 10.0</td>
</tr>
<tr>
<td></td>
<td>Soil erosion due to operation and construction activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impacts from existing contamination on soil and groundwater</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Quality and Hydrology</td>
<td>Untreated stormwater or waste impacting on receiving land and downstream waterways</td>
<td>Medium</td>
<td>Chapter 11.0</td>
</tr>
<tr>
<td></td>
<td>Contamination of surface water or groundwater as a result of uncontrolled release/spill of fuel, asbestos and other waste</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leakage/seepage of liquid waste to soil and groundwater</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate Change and Air Quality</td>
<td>Dust generation and movement during construction and operation reducing air quality</td>
<td>Medium</td>
<td>Chapter 12.0</td>
</tr>
<tr>
<td></td>
<td>Hazardous emissions from the plant including cumulative impacts with other development in the air shed</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impacts on climate change, including diesel emissions from heavy vehicles</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emissions and smoke from wood burning causing air pollution.²</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

² Wood burning is not proposed as part of the Project.
<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
<th>Principle chapter addressed in the EIS</th>
</tr>
</thead>
</table>
| Socio-Economic and Health              | Facilities and materials storage providing harbour to vermin and pest animals which impact upon health and amenity  
|                                        | Odour from transport, storage and processing of waste impacting on amenity and health  
|                                        | Health risk associated with the air pollution from waste transportation, storage and processing.  
|                                        | Impact on Mugga Resource Management Centre operation due to redirected waste to the proposed facility.  
|                                        | Impact on health of workers and nearby residents from exposure to hazardous waste or harmful particles during operation.  
|                                        | Risk of other waste facilities not being able to accept the residual/recyclable waste.  | Medium                         | Chapter 13.0                          |
| Noise and Vibration                    | Noise and vibration impacts on the amenity of sensitive receivers during construction  
|                                        | Noise and vibration impacts on the amenity of sensitive receivers during operation.  | Medium                         | Chapter 14.0                          |
| Hazards and Risk                       | Fire or explosion originating in the facility impacting on surrounding land uses and human health  
|                                        | Risk of bushfire or fire on neighbouring sites impacting the proposed facility  
<p>|                                        | Hazard to aircraft operations during operation, including bird strikes  | Medium                         | Chapter 15.0                          |</p>
<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
<th>Principle chapter addressed in the EIS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>■ Critical infrastructure failure impacting on facility operations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Biodiversity        | ■ Impact on the vegetation within the powerline easement during construction and operation from parking, traffic access etc.  
                        | ■ Impact on flora and fauna as a result of polluted or sediment laden water entering the wetland and the Molonglo River. | Medium                       | Chapter 16.0                          |
5.0 PLANNING AND LAND STATUS

5.1 Environmental Conditions and Values
As identified within Chapter 2.0, the Project is located within an existing commercial/industrial development area that is comprised of industrial estates, hardstand areas and industrial and commercial complexes. The Site is bounded to the north by Tennant Street with industrial and commercial buildings beyond and to the west by industrial and commercial buildings. The Site is bound by vacant open space zoned General Industrial (IZ1) immediately to the east of the Site, which is comprised of grassland up to a tributary creek to the Molonglo River. The Queanbeyan-Canberra Branch Railway is located immediately south of the Site with industrial and commercial properties beyond.

5.2 Potential Impacts
As identified within the Scoping Document (APPENDIX A), a potential project risk is the sterilisation of existing and future surrounding land uses of the Site.

As has been identified within Chapter 3.0 Legislative Context, the Project is consistent with all applicable legislation that applies to the Site including ACT Government regulations and policies on permissibility and zoning, sustainability and waste management.

The Project is not considered to limit existing or future uses of the surrounding businesses/residences. The Site has previously been developed and utilised as a concrete manufacturing facility and the Project seeks to augment this use with resource recovery activities utilising new and existing industrial/commercial buildings and infrastructure on the Site. The Project is permissible within the existing zoning, and as will be demonstrated throughout the EIS, the potential environmental impacts of the Project are assessed as being in accordance with parameters set by ACT Government regulations and policies including for surrounding land uses. As such, it is not considered that the Project will limit existing or future uses for surrounding businesses/residences.

5.3 Residual Risks
Refer to Chapter 19.0 Recommendations for further information on the mitigation, management and commitments for the Project to ensure offsite impacts will meet the parameters set by ACT Government policies.

<table>
<thead>
<tr>
<th>Description</th>
<th>Discussion</th>
<th>Comment</th>
<th>Likelihood</th>
<th>Consequence</th>
<th>Residual Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning and land Status</td>
<td>Sterilisation of existing and future surrounding land uses</td>
<td>Located within an existing industrial area.</td>
<td>Remote</td>
<td>Major</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Project is consistent with the zoning of the Site and land use activities of the surrounding area.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The environmental impacts of the Project are</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Discussion</td>
<td>Comment</td>
<td>Likelihood</td>
<td>Consequence</td>
<td>Residual Risk</td>
</tr>
<tr>
<td>-------------</td>
<td>------------</td>
<td>---------</td>
<td>------------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>assessed as within acceptable parameters set by ACT Government policies for offsite impacts with mitigation, management and commitments proposed for the Project.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.0 TRAFFIC AND TRANSPORT

<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic and Transport</td>
<td>- Increased traffic congestion and parking during construction&lt;br&gt;- Increased traffic congestion and parking during operation from waste delivery/transportation&lt;br&gt;- Reduced road safety due to increased traffic and truck movements</td>
<td>Medium</td>
</tr>
</tbody>
</table>

6.1 Environmental Conditions and Values

A review of the existing traffic conditions was undertaken to characterise the existing road current traffic volumes, public transport access, pedestrian and cycle access. Complete analysis of the existing traffic conditions is provided in Appendix E.

**Local Area Travel Characteristics**

According to the 2016 Census, 92% of workers in Fyshwick currently travel to work by car as a driver and 5% by car as a passenger.

**Road Network**

The Site is located on Tennant Street, designated as a minor collector road. Access to Tennant Street is provided by Newcastle Street defined as a major collector road. Newcastle Street meets arterial road Monaro Highway in the west and arterial road Canberra Avenue in the east. The main roads in close proximity to the Site are summarised in **Figure 14** below.
Along Tennant Street there are two priority controlled Intersections. Along Newcastle Street, there are 3 signalised intersections and a roundabout in proximity to the Site.

Figure 15: Existing Intersections within the vicinity of the Site
Vehicle Movements

Vehicle movement counts were carried out at the key intersections identified in Figure 15 to establish a baseline for existing typical vehicle movements in the area. Intersection operation was evaluated using computer based modelling. Modelling indicated a good to satisfactory level of service at the key intersections.

Based on a review of the crash data sourced from Open Data by ACT Government between 2012 and 2017, there was a low to medium frequency of road crashes with 91% reporting property damage only and 9% resulting in injury. The frequency of pedestrian and cyclist crashes occurring near the Site was very low during this period.

Public Transport

The public transport network at the Site is currently considered moderate. The closest train connection, Canberra Railway Station, is located approximately 4.3 km west of the Site. There are three bus routes that service the area nearby the Site with bus stops on Newcastle Street, Iron Knob Street, Wollongong Street, Collie Street and Albany Street. Bus routes provide transport to and from Kingston, Griffith, Barton, Parkes, Campbell and City.

Cycle and Pedestrian Facilities

The Traffic Impact Assessment provides a description of the cycle and pedestrian facilities available nearby the Site.

6.2 Investigations

The Transport Impact Assessment was prepared to evaluate the transport impacts of the Project during construction and operation. Parking capacity, internal and external haul routes, and site access were investigated.

Modelling results confirm the suitability of the Site access points and internal haul road layout for the Project with the following assessments provided in Appendix E.

- Sight distance modelled at access points meets the requirements of AS2890.1:2004;
- Weighbridge queuing assessment indicates the location and operation of the two weighbridges provides sufficient storage for vehicle queuing within the site during peak operation;
- Vehicle swept path analysis shows the internal roads are designed to cater for vehicles up to B-Double Trucks.
- The Project generates a parking requirement of 84 spaces for employees as specified in the ACT Parking and Vehicular Access General Code. The Project will provide 85 spaces for employees, 20 spaces for truck and trailers, 8 spaces for visitors and 27 spaces for concrete trucks meeting the relevant parking requirements and ensuring there is no parking demand on local roads.

6.3 Potential Impacts

6.3.1 Operational Impacts

Traffic generated by the Project is dependent on the amount of materials processed and the number of employees at the Site with four possible routes to access the Site.

During peak operation the total site-generated traffic (combination of employee movements and movements required to process materials) is calculated to generate up to 75 vehicles in and 80 vehicles out as shown in Figure 16 and Figure 17. This traffic generated by the Project would not occur during the weekday AM, weekday PM or Saturday road network peaks. However, to provide a conservative worst-case assessment,
the maximum hourly traffic generation of 80 vehicles was modelled to occur during the road network peak hours and all traffic would access the site via Newcastle Street/Barrier Street/Collie Street. The results of the assessment identify that operation of the Project is not anticipated to compromise safety or function of the surrounding road network (including key intersections) and no road network upgrades are considered necessary.

![Figure 16: Total Generated Traffic – IN](image)

![Figure 17: Total generated traffic – OUT](image)

### 6.3.2 Construction Impacts

Construction traffic volumes are expected to be lower than operational traffic in and out of the Site. Therefore, the impact on the surrounding road network is expected to be less than when the Site is operational. As the operational impact is considered to be insignificant, construction traffic is also expected to have no substantial impact.
6.4 Proposed Mitigation Measures

The road network surrounding the Site is considered to have satisfactory capacity to cater for additional traffic generated by the Project during construction and operation.

Proposed parking supply for the Project will ensure there is no parking demand upon local roads and no mitigation measures are required for pedestrian or public transport networks.

A construction and operation traffic management plan would be prepared prior to construction and operation of the Project.

6.5 Residual Risks

Residual risks relating to traffic and transport are presented in the table below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Discussion</th>
<th>Comment</th>
<th>Likelihood</th>
<th>Consequence</th>
<th>Residual Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic and Transport</td>
<td>Increased traffic congestion and parking during construction</td>
<td>Unlikely to exceed capacity of existing road network</td>
<td>Unlikely</td>
<td>Minor</td>
<td>Very Low</td>
</tr>
<tr>
<td></td>
<td>The Project will meet the relevant parking requirements and ensure there is no parking demand on local roads.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic and Transport</td>
<td>Increased traffic congestion and parking during operation from waste delivery/transport</td>
<td>Large site to accommodate operations and will meet the relevant parking requirements and ensure there is no parking demand on local roads.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Unlikely to exceed capacity of existing road network.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic and Transport</td>
<td>Reduced road safety due to increased traffic and truck movements</td>
<td>Unlikely to exceed capacity of existing road network</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7.0 UTILITIES

<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
</tr>
</thead>
</table>
| Utilities           | ■ Impacts to existing infrastructure during construction and operation, especially to the existing electricity services  
                     ■ Utility failure impacting operations                                            | Medium                        |

7.1 Environmental Conditions or Values

Current utilities at the Site include, water, electricity, sewage, and telecommunications and stormwater drainage. The following information regarding existing assets was taken from the AECOM Site Servicing Investigation, dated 12 June 2012 (APPENDIX F).

Figure 4 presents the location of utilities onsite.

Power

Mains electricity is available to the Site. The Fyshwick Zone substation is located immediately west of the Site.

According to the AECOM site servicing investigation (AECOM Site Servicing Investigation Report, dated 8 June 2012), the northern portion of the Site is connected to the network via a high voltage underground distribution cable, which is connected to the overhead network that runs along the northern side of Tennant Street. The current distribution cable provides 250 kVA to the northern portion of the Site. A separate distribution cable connection to the southern portion from the Block 12 transmission lines also provides 250 kVA to the Site.

Communications

The Site would utilise existing connection to communication services on Tennant Street. The Site is connected to communication services on Tennant Street via a Telstra pit located on the southern side of Tennant Street.

As shown in Figure 4 and outlined in the 2012 AECOM site servicing investigation, there is also a shared trench containing Optus and Nextgen optical fibre and conduit and Defence owned optic fibre line along the alignment of the stormwater easement along the southern boundary of the northern portion.

Gas

As shown on Figure 4, according to the 2012 AECOM site servicing investigation, the northern portion of the Site connects to the 100 mm diameter steel gas main on the southern side of Tennant Street. The Site would not utilise existing service main connection to Jemena gas supply line on Tennant Street. There is no gas connection to the southern portion of the Site.

Sewage

The Site would utilise existing connection to sewage services. As shown on Figure 4, sewage is currently fed by a pump through a rising main to a main that connects inside the property boundary. According to the 2012 AECOM site servicing investigation, the sewage is pumped from the northern portion of the Site using an on-site centrifugal pump. According to site survey, a second sewer rising main is located north of the Concrete Batching Plant that services the southern block.
Water Supply
The Site is currently serviced by a connection to existing mains water supply via a 100 mm diameter domestic service line connecting to the 150 mm diameter water main located on the southern side of Tennant Street (AECOM 2012). Water supply demand would be met through a combination of mains supply and onsite water. This is described further in Chapter 11.0 Water Quality and Hydrogeology.

7.2 Potential Impacts
The Project would utilise existing connections to services at the Site. The proposed construction and operational demands are commensurate with the historical use of the Site and usage of utilities is not expected to significantly increase in comparison. However, where relevant the technical requirements for utilities would be addressed in accordance with relevant technical codes of the Utilities (Technical Regulation) Act 2014.

The Project would utilise the existing connection to the sewer network for wastewater management from liquid waste processing activities on the Site. Based on consultation with Icon Water, a Trade Waste Application will be lodged to permit discharge of treated wastewater from Drilling Mud Processing, Grease Trap Waste Processing and Oily Water Processing.

There is limited potential for damage to existing utilities through the construction of the Project. Further consideration of the location of these utilities would be applied during detailed design and prior to construction industry standard dial before you dig process and services location would be carried out.

Compatible sites owned by the Proponent provide operational contingency should site activities temporarily shutdown due to utility failure. For example, waste materials would be diverted to Hi Quality Group’s Windellama site should the Site be shutdown due to utility or infrastructure failure.

7.3 Residual Risk

<table>
<thead>
<tr>
<th>Description</th>
<th>Discussion</th>
<th>Comment</th>
<th>Likelihood</th>
<th>Consequence</th>
<th>Residual Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilities</td>
<td>■ Impacts to existing infrastructure during construction and operation, especially to the existing electricity services</td>
<td>Extent and intensity of construction is low. Operational demands commensurate with previous use of the site</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>■ Utility failure impacting operations</td>
<td>Materials to be temporarily diverted to Hi Quality sites with compatible operations should utilities fail.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
</tbody>
</table>
8.0 MATERIALS AND WASTE

<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
</tr>
</thead>
</table>
| Materials and waste  | ■ Increased waste to ACT landfill during construction and operation  
 ■ Impacts from receiving, storage and disposal of other hazardous waste that is not permitted to be handled on site  
 ■ Spread/spill of waste, such as liquid waste, fuel or asbestos during operation, impacting the site, adjacent blocks and the environment  
 ■ Impacts from excess stockpiling when operation disrupted or ceases  
 ■ Waste being spread during transport  
 ■ Impact of increased quantity of waste entering the ACT from other jurisdictions | Medium |

8.1 Environmental Conditions or Values

Historical land use allowed the lessee to use the premises for the purpose of manufacture and storage of concrete pipes and other concrete products.

The eastern side of the Site and areas surrounding buildings were identified as areas of potentially contaminated fill in the Phase 2 Site Investigation (refer APPENDIX H). Soil contaminants of concern include asbestos and total recoverable hydrocarbons (TRH). In the Northern Portion of the Site, in particular surrounding the former concrete manufacturing building, asbestos (at the surface) and TRH was detected above trigger levels.

Removal of 100mm soil 10m surrounding asbestos clad buildings and 2 ASTs, one below ground tank and a transformer will be undertaken in accordance with the requirements of the Remediation Action Plan (RAP) and Asbestos Management Plan. Refer Site Audit Report APPENDIX I.

The Project would increase the volume of waste and material handling at the Site as discussed in Section 8.2.4 below.

Potential impacts and proposed mitigation measures for the increase to waste and material handling is discussed below.

8.2 Potential Impacts

8.2.1 Construction Materials Imported

Construction materials that would be imported to the Site include:

■ General fill, road base, asphalt sealing and wearing course sourced from local suppliers for entrance roadworks and various earthworks.
- General construction materials for fit out of processing buildings, administration and amenities buildings and lab.
- Building materials including concrete, cladding and steel formwork for construction of the Recycling Facility Building, landscape storage building, Concrete Pre-cast Facility and weighbridges.
- Fencing for site perimeter.

Construction materials would be stored in designated lay down areas in accordance with the CEMP.

8.2.2 Onsite Construction Materials Handled

Key on-site materials that would be handled during the construction phase would include:

- Soil and fill materials;
- Vegetation; and
- Demolition Waste.

Some vegetation clearance is required in the north east area of the Site for the new site entrance.

During construction of the Project, redundant infrastructure and internal building fittings would be demolished and removed from Site in accordance with the RAP prepared as part of the Phase 2 site investigation (refer APPENDIX H) including:

- Two above ground storage tanks (ASTs) located in the central portion of the southern block;
- One below ground concrete tank in the northern block; and
- Former transformer on the southern block. Removal of ACM and asbestos in soil up to 100 mm in a radius of 10 metres around the asbestos clad buildings.

An Asbestos Management Plan (AMP) will be prepared to address future exposure scenarios from asbestos during future construction works and during site operations.

8.2.3 Construction Waste Generation

Recyclable materials would be recovered from construction and demolition and the residual waste transported to the Proponent’s Windellama Landfill or other appropriately licenced facility.

Contaminated soil and demolition waste including asbestos contaminated materials would be disposed of at the Proponent’s Windellama landfill or other appropriately licenced landfill facility.

Site waste would be generated, through offices, lunchrooms and maintenance activities. These waste streams could potentially include:

- General solid waste (putrescible) – mixed residual waste.
- General solid waste (non-putrescible) – recyclable materials (such as paper, plastic containers, glass containers and aluminium cans), cardboard and plastic packaging, and maintenance items consumables.

Containers for the disposal of site generated waste would be provided, including bins for the segregation of recyclables and general waste.

8.2.4 Operational Materials to be Handled

The Project seeks to process approximately 1,100,000 tonnes of material per annum. The nature, sources, location and quantity of materials to be handled onsite including the storage, stockpiling and disposal of material and waste is shown in the flow chart below.
Figure 18: Project Material Flows
**Figure 18** identifies that approximately 500,000 tpa of non-waste materials are to be accepted at the Site for the existing Concrete Batching Plant, the pre cast concrete yard and the landscape yard. Figure 18 also identifies that over 950,000 tpa of saleable and beneficial reuse product will be produced at the site with only approximately 100,000 tonnes per annum for landfill and disposal.

**Table 12** identifies the waste types associated to the Project in accordance with the ACT’s Environmental Standards: Assessment & Classification of Liquid & Non-light Wastes (June 2000).

**Table 12: Waste Types**

<table>
<thead>
<tr>
<th>Location</th>
<th>Waste Type</th>
<th>Classification</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Batching Plant</td>
<td>Construction and demolition waste</td>
<td>Non-liquid inert</td>
<td>Concrete batching would rely on imported materials from external sources and would also utilise material processed at the Crushing and Screening Facility such as sand and crushed concrete. Residual waste from the Concrete Batching Plant would be transferred to the Crushing and Screening Facility for further processing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>waste</td>
<td></td>
</tr>
<tr>
<td>Concrete Pre-cast Facility</td>
<td>Construction and demolition waste</td>
<td>Non-liquid inert</td>
<td>The Concrete Pre-cast Facility would utilise concrete from the Concrete Batching Plant. Residual waste from the pre-cast process would include scrap steel reinforcement and waste concrete.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>waste</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Processing Facility</td>
<td>Wood waste</td>
<td>Non-liquid inert</td>
<td>Wood waste is sorted and processed by wood chipping or sale in the Landscape Yard. Residual waste including contaminated timber from sorting would be transferred to an appropriately licenced facility.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>waste</td>
<td></td>
</tr>
<tr>
<td>Grease Trap Waste Processing</td>
<td>Grease trap waste</td>
<td>Group B liquid</td>
<td>Receival tanks for processing. Clarified effluent would be discharged to sewer. Separated sludges and solids would be transferred to an appropriately licenced facility.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>waste</td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td>Waste Type</td>
<td>Classification</td>
<td>Comments</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------</td>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Drilling Mud Processing</td>
<td>Drilling mud</td>
<td>Group A Liquid waste</td>
<td>To receival tanks for processing. The solids would be separated by screening and centrifuge. Separated solids would be transferred to the Soil Processing and Recovery Facility.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Processing waste water would be tested and reused on site or disposed to sewer under Trade Waste Agreement.</td>
</tr>
<tr>
<td>Oily Water Processing</td>
<td>Oily water</td>
<td>Group A liquid waste</td>
<td>To receival tanks for oil water separation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Oil sent to appropriately licenced facility.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Discharged to sewer under Trade Waste Agreement.</td>
</tr>
<tr>
<td>Soil Processing and Recovery Facility</td>
<td>Soil</td>
<td>Non-liquid inert waste</td>
<td>Sampling and testing followed by screening.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Soil approved for beneficial reuse would be sold and transferred off site.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Soil not approved for beneficial reuse would be disposed of to an appropriately licenced facility.</td>
</tr>
<tr>
<td>ACM Storage</td>
<td>Asbestos</td>
<td>Non-liquid Industrial waste</td>
<td>Stored in purpose built enclosed bins inside building.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Transferred to appropriately licensed landfill.</td>
</tr>
<tr>
<td>Recycling Facility</td>
<td>Construction and demolition waste and dry commercial and industrial waste:</td>
<td>Non-liquid inert waste</td>
<td>Unloaded to waste sorting area and sorted to recover recyclable materials.</td>
</tr>
<tr>
<td></td>
<td>■ Bricks</td>
<td></td>
<td>Scrap metal is stored for sale. Tyres are stored, shredded and removed to a licensed landfill. Glass, paper and cardboard is separated and either process further for</td>
</tr>
<tr>
<td></td>
<td>■ Concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td>Waste Type</td>
<td>Classification</td>
<td>Comments</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------</td>
<td>-------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>▪ Paper and cardboard</td>
<td></td>
<td>sale or transferred to a licenced facility for further processing.</td>
</tr>
<tr>
<td></td>
<td>▪ Timber</td>
<td></td>
<td>Bricks, aggregate, concrete to onsite Crushing and Screening Facility for processing.</td>
</tr>
<tr>
<td></td>
<td>▪ Metal</td>
<td></td>
<td>Clean timber to Wood Processing Facility for processing.</td>
</tr>
<tr>
<td></td>
<td>▪ Plastics</td>
<td></td>
<td>Soils to the Soil Processing and Recovery Facility</td>
</tr>
<tr>
<td></td>
<td>▪ Glass</td>
<td></td>
<td>Residual waste including contaminated wood waste to an appropriately licenced landfill facility.</td>
</tr>
<tr>
<td>Crushing and Screening Facility</td>
<td>▪ Concrete</td>
<td>Non-liquid inert waste</td>
<td>Materials are processed by crushing and screening into resalable products and for use in the Concrete Batching Plant and Concrete Pre-cast Facility.</td>
</tr>
<tr>
<td></td>
<td>▪ Aggregate</td>
<td></td>
<td>Residual wastes from processing or contaminated materials would be disposed of to an appropriately licenced facility.</td>
</tr>
<tr>
<td></td>
<td>▪ Soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Asphalt</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Glass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Storage Area</td>
<td>▪ Scrap metal</td>
<td>Non-liquid inert waste</td>
<td>Scrap metal is stored for sale, tyres are stored, shredded and removed to landfill, paper and cardboard is transferred to a licenced facility for further processing.</td>
</tr>
<tr>
<td></td>
<td>▪ Paper and cardboard</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Tyres</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Glass</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The proposed maximum stockpile sizes are summarised in Table 13. The stockpiles have been designed to allow for waste to be temporarily stored at each location. Maximum stockpile height would be 5m and materials would not be stored for >6 months in general accordance with the South Australia EPA Guideline for stockpile management: Waste and waste derived products for recycling and reuse (April 2017). Siting of stockpiles within the designated storage areas would consider material type and required buffer distances to buildings, roads and other material stockpiles in accordance with fire management controls.
Table 13: Maximum Stockpile Sizes

<table>
<thead>
<tr>
<th>Location</th>
<th>Stockpile material</th>
<th>Approximate Tonnes per annum</th>
<th>Maximum stockpile volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape Yard</td>
<td>Sands and aggregate</td>
<td>100,000</td>
<td>20,000 t</td>
</tr>
<tr>
<td>Concrete Batching Plant</td>
<td>Sand and aggregate</td>
<td>330,000</td>
<td>5000 tonnes</td>
</tr>
<tr>
<td>Concrete Pre-cast Facility</td>
<td>Concrete Products</td>
<td>120,000</td>
<td>2000 tonnes</td>
</tr>
<tr>
<td>Wood Processing Facility</td>
<td>Raw timber</td>
<td>40,000</td>
<td>5,000 m³</td>
</tr>
<tr>
<td></td>
<td>Wood Chips</td>
<td>Depends on market demand</td>
<td>5,000 m³</td>
</tr>
<tr>
<td></td>
<td>Contaminated wood waste</td>
<td>9,000</td>
<td>500 m³</td>
</tr>
<tr>
<td></td>
<td>Clean wood</td>
<td>30,000</td>
<td>3,000 m³</td>
</tr>
<tr>
<td>Recycling (Stockpiling within the building)</td>
<td>Incoming waste</td>
<td>250,000</td>
<td>5,000 m³</td>
</tr>
<tr>
<td></td>
<td>Residual waste</td>
<td>17,500</td>
<td>5,000 m³</td>
</tr>
<tr>
<td></td>
<td>Recoverable materials</td>
<td>232,500</td>
<td>10,000 m³</td>
</tr>
<tr>
<td>Product Storage Area</td>
<td>Scrap metal</td>
<td>7,510</td>
<td>1,000 m³</td>
</tr>
<tr>
<td></td>
<td>Waste tyres</td>
<td>1,000</td>
<td>150 m³</td>
</tr>
<tr>
<td></td>
<td>Paper and Cardboard</td>
<td>12,500</td>
<td>500 m³</td>
</tr>
<tr>
<td>Crushing and Screening Facility</td>
<td>Incoming Waste -Aggregate, sand, soil, rock, concrete, bricks, masonry and tiles, glass</td>
<td>200,000</td>
<td>50,000 tonnes</td>
</tr>
<tr>
<td></td>
<td>Product</td>
<td>160,000</td>
<td>50,000 tonnes</td>
</tr>
<tr>
<td>Soil Processing and Recovery Facility</td>
<td>Incoming and Processed Soil</td>
<td>250,000</td>
<td>10,000 m³</td>
</tr>
</tbody>
</table>

8.2.5 Operational Waste Generation

Site waste would be generated, through offices, lunch rooms and maintenance activities. These waste streams could potentially include:

- General solid waste (putrescible) – mixed residual waste.
- General solid waste (non-putrescible) – recyclable materials (such as paper, plastic containers, glass containers and aluminium cans), cardboard and plastic packaging, and maintenance items consumables.
Containers for the disposal of site generated waste would be provided, including bins for the segregation of recyclables and general waste.

### 8.2.6 Hazardous Materials and Chemicals

Typical hazardous materials and chemicals associated to operation of the Project are identified in Table 14 below. The materials and chemicals would be stored per Australia Standard requirements. A register of hazardous chemicals used, handled or stored would be maintained along with current safety data sheet for each hazardous chemical.

The regulator will be given written notice if a quantity of a Schedule 11 hazardous chemical or group of Schedule 11 hazardous chemicals that exceeds the manifest quantity is used, handled or stored.

An outer warning placard will be prominently displayed if the total quantity of a Schedule 11 hazardous chemical or group of Schedule 11 hazardous chemicals used, handled or stored exceeds the placard quantity.

Risks associated with hazardous materials and chemicals are addressed in Chapter 15.0 Hazard and Risk.

**Table 14: Hazardous materials and chemicals**

<table>
<thead>
<tr>
<th>Material</th>
<th>GHS Classification</th>
<th>ADG Classification</th>
<th>Max Estimated Quantity Onsite</th>
<th>Storage Location</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable Liquids)</td>
<td>Category 4</td>
<td>Not classified as a dangerous good by the ADG code</td>
<td>42,000 Litres</td>
<td>Fuelling Area</td>
<td>Diesel</td>
</tr>
<tr>
<td>Flammable gases (various)</td>
<td>Category 1</td>
<td>2.1</td>
<td>1 tonne</td>
<td>Maintenance Workshop</td>
<td>Autogas and forklift gas for plant</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Minor quantities of repair, pest control and cleaning products.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acetylene for welding and machinery repairs.</td>
</tr>
<tr>
<td>Non-flammable, non-toxic gases</td>
<td>-</td>
<td>2.2</td>
<td>80 Kg</td>
<td>Maintenance Workshop</td>
<td>Argoshield Universal for use during welding and machinery repairs.</td>
</tr>
</tbody>
</table>
### 8.2.7 Screening Incoming Waste

All incoming waste loads would pass through the weighbridge where information on the incoming waste type would be recorded and loads subject to inspection to confirm acceptability. Following inspection, the vehicle would be weighed and a pre-receipt issued. The waste would be directed towards the relevant processing area for unloading. The vehicle would be weighed exiting the Site so that an accurate estimate of the weight of the unloaded waste could be undertaken. Any vehicle to be reloaded would pass through the weighbridge a third time when leaving the site to record outgoing material loads. The following procedures would be followed to screen incoming waste:

- Signs at the entrance, which clearly indicate the types of wastes that are accepted and those that are not accepted.
- All incoming vehicles would enter via the weighbridge, where the vehicle registration number would be entered.
- Customer declares type and source of waste.
- Screen and check incoming waste at the weighbridge via overhead CCTV by the Weighbridge Operator. All loads must be uncovered for inspection.
- If the Weighbridge Operator is suspicious about the waste load, the load would be inspected further.
- If waste is from an industrial source an application for disposal would be submitted by Customer and assessed and approved by the Proponent’s personnel.
- The plant operators in the receival areas would inspect the waste as it is discharged from the vehicle, to check for non-conforming waste and easily extractable, bulk recyclable waste.

Any vehicles carrying prohibited materials would be declined entry and vehicle details recorded and reported to the EPA as required.

### Non Conforming Waste Management

Any materials that do not fall into the categories described in Table 13 above would not be accepted at the Site. This includes, but is not limited to, waste classified as hazardous, Group C and hazardous liquid waste. Some specific waste types that would not be accepted at the Fyshwick Integrated Resource Recovery Facility include:

- Municipal waste;
- Food waste;
- Clinical waste; and
- Garden waste.

The following provision would be in place at the Site if unacceptable wastes are identified. Detailed procedures would be presented in the OEMP.

- Loads of excluded wastes identified at the weighbridge including unpackaged asbestos, would be notified to the customer as unacceptable by the weighbridge operator and the customer would be refused entry. The customer would be informed of the correct waste disposal procedure or location.
- Loads or partial loads of excluded waste identified at the facility would be asked to be removed from site by the customer. The customer would be informed of the correct waste disposal procedure or location.
- Loads or partial loads of excluded waste identified at the unloading area, would be asked to be removed from the site by the customer and the customer would be informed of the correct waste disposal procedure or location. Where no customer can be identified, the Proponent would remove the excluded waste and transfer to an appropriately licenced facility.
- Asbestos loads would be wet down and packaged by the Proponent, where no customer can be identified.
- Non-conforming loads would be documented and reported as required.

**Waste Processing**

The Project would implement the following management procedures in waste processing activities.

**Wood Processing**

Incoming wood waste would be visually inspected to ensure that only natural timbers are processed. Any chemically treated, painted and/or stained and manufactured timber products would be removed from the incoming waste stream and stockpiled for removal from site to landfill or appropriately licenced facility. After sorting, the natural wood waste would be broken down into appropriate sizing for stockpiling. Depending on demand, the sorted wood would be broken down into wood chips by grinding onsite.

**Grease Trap Waste Processing**

Grease Trap waste would be treated generally in accordance with the NSW EPA ‘Treated Grease Trap Waste Order 2014’.

Grease trap waste would be delivered to site by tanker. The tankers would discharge the incoming waste to receiving tanks for processing. Clarified effluent would be tested prior to discharge to sewer in accordance with the Trade Waste Agreement. Discharge limits would be determined by Icon Water, with monitoring and verification as required.

Residual sludges and solids would be transferred to sludge tanks and removed from Site by tankers for disposal to an appropriately licenced facility. These solids would be assessed for potentially beneficial reuse in NSW under the ‘Treated Grease Trap Waste Exemption 2014’ subject to approvals etc.

A Spill Management Plan would be developed for the Liquid Waste Processing Facility and included in the Site OEMP.

**Drilling Mud Processing**

In accordance with Information Sheet No 8 - Requirement for the Classification and Reuse of Drilling Mud Waste in the ACT the producer of the drilling mud would be required to provide a copy of the preliminary site
assessment prior to acceptance at the Site. Upon delivery, the Proponent would record the following information and retain a record for a period of at least two years:

- Preliminary Site Assessment (undertaken in accordance with EPA Information Sheet 7) including test results confirming no contamination is present;
- Date and quantity of waste received;
- Name and address of the producer; and
- Registration number of the transporter’s vehicle used to transport the drilling mud.

The tanker would discharge the drilling mud to the receiving tank for processing. Separated solids would be sampled and tested prior to transfer to the soil processing and recovery area. Water from the dewatering process would be tested and classified for beneficial reuse on site for dust suppression or discharged to sewer in accordance with the trade waste agreement.

If the preliminary site assessment shows the drilling mud to be from a potentially contaminated or contaminated site, the incoming load would be directed to an appropriate licensed facility.

A Spill Management Plan would be developed for the Liquid Waste Processing Facility and included in the Site OEMP.

**Oily Water Processing**

Pre-classification documentation for incoming Oily Water would be inspected prior to acceptance at the Site. The incoming loads would be evaluated based on source as well as visual appearance, odour etc.

The tankers would discharge to the receival tank for processing. Separated oil would be transferred to a licenced facility for further processing. Liquid waste would be tested in accordance with the trade waste agreement and discharged to sewer.

A Spill Management Plan would be developed for the Liquid Waste Processing Facility and included in the Site OEMP.

**Soil Processing and Recovery Facility**

In accordance with ACT Guidance for undertaking preliminary contamination investigations for development/lease variation purposes prepared by Access Canberra (Environment Protection Information Sheet 7) incoming soil loads would be pre-classified by the producer, prior to acceptance on Site.

Once delivered to the Site, the material would be stockpiled for sampling and testing to support beneficial reuse reporting for submission to the EPA in accordance with the ACT Government Requirements for the Reuse and Disposal of Contamination Soil in the ACT last updated by Access Canberra in July 2017 (Environment Protection Information Sheet 4), NSW EPA “continuous process” recovered fines order 2014, and NSW EPA excavated natural material order 2014.

Bunding would be constructed at the perimeter of the facility to control any sediment and runoff from the area.

**ACM Storage**

Incoming ACM loads would be inspected and accompanying documentation recorded at the weighbridge and transferred to the secured ACM storage area for unloading, storage and transfer to an appropriately licenced facility. A permanent record or receipt of acceptance shall be kept and maintained up to date at all times.
Recycling

Co-mingled waste loads would be recorded at the weighbridge. Recoverable materials would be separated from the incoming waste stream for further processing onsite or removal from site. Residual waste from processing would be temporarily stockpiled and regularly disposed of at the Proponent's Windellama Landfill or other appropriately licenced facility.

Glass Fines Processing

Recovered glass fines would be source separated and received primarily from material recovery facilities or glass recyclers. The processed material would be stockpiled and undergo sampling and testing to confirm chemical suitability for beneficial reuse as per the ACT EPA advice. A certificate of compliance would be required prior to transport off site. The glass fines would be blended with crushed aggregate and sands in the Crushing and Screening Facility.

Crushing and Screening Facility

Incoming material to the Crushing and Screening Facility would be inspected at the weighbridge and during unloading in order to detect any contaminated material. Contaminated materials would be temporarily stockpiled and removed from Site to the Proponent's Windellama Landfill or other appropriately licenced facility.

Products that are processed at the Crushing and Screening Facility would be sampled and tested prior to sale or reuse on site to verify physical properties as per Australian Standard test methods.

Transport and Storage of Asbestos Waste

The transport and storage of asbestos waste would be carried out in accordance to the ACT Government Requirements for the Transport and Disposal of Asbestos Contaminated Wastes (Environment Protection Information Sheet 5, October 2016). The following are required for the transport of ACM to and from the Site.

- Incoming and outgoing transport vehicles would be inspected to ensure the vehicle is covered and leak proof to prevent any spillage or dispersal of the waste.
- Vehicles offloading ACM would be cleaned prior to leaving site to ensure all residual asbestos waste is removed.

Once transferred to Site, the ACM would be unloaded in the proposed enclosed ACM storage bins within a dedicated building. The storage would meet the following requirements.

- The enclosed ACM storage containers would have a close fitting sealed cover to prevent the emission of any dust and any spillage of the waste.
- The container would be marked with the words 'DANGER – ASBESTOS WASTE ONLY – AVOID CREATING DUST' in letters not less than 50mm and complying with Australian Standard AS-1319-Safety Signs for the Occupational Environment.
- The building would be secured to prevent access from unauthorised personnel and ensure ACM is stored separately to other waste types.
- Asbestos waste which is not packaged per the ACT EPA and Worksafe guidelines would not be accepted at the Site.

Asbestos waste would be disposed at Hi Quality Group's Windellama landfill a licenced facility or an appropriately licenced facility as outlined below.
Transport of Waste In and Out of NSW

Transport of controlled waste in and out of ACT is controlled by the Environment Protection Regulation 2005 and “National Environment Protection Measure” (NEPM) for the Movement of Controlled Waste between States and Territories (June 1998). Controlled wastes are listed in Parts 1 and 2 of Schedule 1 of the Protection of the Environment Operations (Waste) Regulation 2014. The controlled wastes that would require tracking in and out of the ACT include:

- Contaminated soil;
- Oily water;
- Grease trap waste;
- Effluent from processing of liquid wastes;
- Tyres; and
- Asbestos.

The following conditions would be met prior to transport of waste in or out of the ACT in accordance with the ACT Government Responsibilities of Controlled Waste Transporters in the ACT (Environment Protection Information Sheet 2).

1) Classification of the waste as a controlled waste that is subject to NEPM requirements.

2) Attainment of a consignment authorisation from the NSW Environment Protection Authority Hazardous Waste Regulation.

3) Confirmation of authorisation of the licensed controlled waste transporter to travel within NSW. The following information would be collected from the waste transport licence issued by the NSW EPA Hazardous Waste Regulation.
   a. Name of transporter(s);
   b. Address of transporter(s);
   c. Vehicle registration number(s);
   d. Name(s) of transit state(s)/territory or territories;
   e. Transport licence number(s);
   f. Date of transport; and
   g. Type of transport.

4) Completion of Part 1 of the waste transport certificate that includes information on the waste including waste codes and quantity, Site address, licence number and contact details and consignment authorisation number.

5) Report the dispatch of each consignment of controlled waste to the NSW EPA Hazardous Waste Regulation and return the relevant waste transport certificate dockets to the nominated agencies. Where more than one transporter is involved in transporting waste from the Site to the destination facility, each party must obtain a written receipt from the other noting consignment authorisation number, date, time and location of the hand over.
Written confirmation of the receipt of waste from the destination facility in NSW is required within 14 days after the date the waste was transported. The EPA would be notified if no confirmation of receipt is provided within 14 days. If a destination facility refuses to accept a controlled waste load for any reason, the EPA must be immediately notified in writing.

6) Retain copy of all documentation for at least 12 months

**Disposal to Landfill at Windellama**

Hi Quality’s Minda Landfill is located in Windellama, NSW approximately 70 kilometres north east of the Site. The landfill is owned and operated by Hi Quality Group under Environment Protection Licence 10398 (9 March 2018). Permitted waste types at the landfill include up to 120,000 tonnes General solid waste (non-putrescible).

Up to approximately 95,500 tonnes per annum of residual wastes from processing and sorting activities at the Site could be disposed of at the Windellama landfill. As shown Section 8.2.4, the following approximate annual residual waste loads are expected to be transferred to Windellama or an appropriately licenced facility for disposal.

- 9,000 tonnes wood waste;
- 7,000 tonnes residual sludges from Drilling Mud Processing Facility;
- 17,500 tonnes non recoverable C&D and dry C&I waste;
- 500 tonnes non recoverable from Crushing and Screening Facility;
- 58,000 tonnes contaminated soil;
- 2,500 tonnes ACM; and
- 1,000 tonnes waste tyres.

The projected waste flows from the Project to Windellama Landfill are within the permitted annual waste disposal limits identified in Environment Protection Licence 10398.

Hi Quality’s Windellama site also represents the primary operational contingency should any Site activity or process undergo a temporary shutdown or in the case of waste oversupply, waste could be directed to the Hi Quality Windellama site.

**8.3 Project Mitigation Measures**

This Chapter has assessed the potential impacts associated with the management of waste at the Site and identified management processes that would be implemented on the Site to mitigate those impacts.

**8.3.1 Construction Mitigation Measures**

Measures to mitigate the effect of the construction waste streams would be incorporated into the Project’s CEMP, and would include the following information:

- Procedures to manage construction waste streams, including characterisation, handling, storage, classification and tracking to prevent uncontrolled waste migration to surrounding areas.
- Mitigation measures for avoidance and minimisation of waste materials.
- Procedures and targets for reuse and recycling of waste materials.
8.3.2 Operational Mitigation Measures

To ensure that the Project's waste management operations would have a minimal impact on the surrounding environment the management processes and design of the facility would act to mitigate potential impacts.

Waste management processes proposed to be incorporated for the Site include:

- Characterisation of waste streams accepted at the facility.
- Procedures for weighbridge activities – including screening of incoming loads, weighing of incoming and outgoing vehicles, weighbridge data recording and archiving, and weighbridge inspection schedule.
- Unloading procedure for each waste stream – including screening and sorting.
- Procedure for containment of spills, leaks and contaminated runoff.
- Procedures for management of non-conforming loads and materials.
- Procedures for ensuring the Site remains clean and tidy and prevent waste spreading.
- Procedures for loading materials.
- Operational contingencies – should any Site activity or process undergo a temporary shutdown or in the case of waste oversupply.
- Roles and responsibilities for compliance.
- Procedures for inspection, monitoring, review and auditing.

Design features of the facility would include:

- Provision of recycling bins and general waste bins for use by staff, customers and vehicle drivers.
- Bunded liquid waste discharge areas.

Prevention of Waste Spreading

The mitigation measures proposed to be in place to prevent waste spreading from the Site include:

- Load covering signs located along the site access road.
- A self-contained wheel wash would be installed for trucks exiting the Site. Soil and dust adhering to the undercarriage and wheels of trucks would be removed at the wheel washes prior to departure from Site.
- Entry and exit signage to advise transport operators that they can be fined for any litter on public roads resulting from the improper transport of waste materials.
- Fencing, landscaping and bunding surrounding the site to control windblown litter.
- Enclosed buildings for unloading and sorting of waste.
- Management of stockpiles to control size and emissions.
- Spill management and bunding as required.
- Transport of wastes would be undertaken in accordance with the relevant guidelines.
- The transport and storage of asbestos waste would be carried out in accordance with the relevant guidelines.
Contingency for Oversupply/Shutdown

Should any operations at the Site be temporarily shut down or if there was an oversupply of incoming waste, waste could be diverted directly to a licensed facility such as Windellama Landfill. Stockpile limits are stated within this EIS.

Increased waste to ACT landfill

For the most part residual wastes are planned to be disposed of at Hi Quality Group’s Windellama Landfill. Therefore, there will not be an increase waste volume to ACT landfill.

Impact of increased quantity of waste entering the ACT from Other Jurisdictions

The Project intends to accept waste predominantly from the ACT.

Residual waste is proposed to be disposed of to Hi Quality Windellama Landfill in NSW or appropriately licenced facility.

Transport of controlled waste in and out of ACT would be undertaken in accordance with the Environment Protection Regulation 2005 and “National Environment Protection Measure” (NEPM) for the Movement of Controlled Waste between States and Territories (June 1998) and ACT Government Responsibilities of Controlled Waste Transporters in the ACT (Environment Protection Information Sheet 2).

8.4 Residual Risk

Residual risks relating to materials and waste are presented in the table below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Discussion</th>
<th>Comment</th>
<th>Likelihood</th>
<th>Consequence</th>
<th>Residual Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials and Waste</td>
<td>Increased waste to ACT landfill during construction and operation</td>
<td>Residual wastes during construction and operation to be directed to Hi Quality Windellama Landfill.</td>
<td>Possible</td>
<td>Minor</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Impacts from receiving, storage and disposal of other hazardous waste that is not permitted to be handled on site</td>
<td>Incoming waste would be screened in accordance with the procedures identified in Section 8.2.7 to reduce the likelihood of receiving non conforming waste materials. from possible to unlikely.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Spread/spill of waste, such as liquid waste, fuel or asbestos during operation, impacting the site, adjacent</td>
<td>Proposed spill and leak management controls and litter mitigation controls would reduce the overall likelihood from possible to unlikely.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>Description</td>
<td>Discussion</td>
<td>Comment</td>
<td>Likelihood</td>
<td>Consequence</td>
<td>Residual Risk</td>
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<tr>
<td>blocks and the environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impacts from excess stockpiling when operation disrupted or ceases</td>
<td>Proposed operational contingency to divert materials to other Hi Quality Group sites such as Windellama Landfill would reduce the overall consequence from moderate to minor.</td>
<td>Possible</td>
<td>Minor</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Waste being spread during transport</td>
<td>Proposed control measures identified in Section 8.3.2 would reduce the overall likelihood from possible to unlikely.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Impact of increased quantity of waste entering the ACT from other jurisdictions</td>
<td>Residual waste is proposed to be disposed of to the Hi Quality Windellama Landfill in NSW thereby reducing the overall consequence from moderate to minor and residual risk rating from medium to low.</td>
<td>Possible</td>
<td>Minor</td>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>
9.0 LANDSCAPE AND VISUAL

<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape, visual and lighting</td>
<td>Visual impacts on the surrounding area from building bulk and scale, stockpiling and lighting the facility</td>
<td>Medium</td>
</tr>
</tbody>
</table>

9.1 Environmental Conditions or Values

The predominant existing visual features of the Site comprise:

- Concrete manufacturing buildings in the northern and southern block.
- Product storage buildings in the centre of the northern block and along the western boundary.
- High voltage transmission lines transecting the Site within Block 12.

The Project intends to primarily utilise existing buildings and proposes land use activities similar to the surrounding area of the Site and previously undertaken at the Site.

A visual impact assessment has been undertaken for the Project including photomontages of the Project as provided in Figure 24 and Figure 28.

9.1.1 Local Landscape Setting

Screening

Mature pine trees provide screening to the site along the western, northern and southern boundary of the Site. The trees along the northern boundary and southern boundary are quite dense (distance less than 5m between trees).

Along the northern site boundary, a vegetated soil bund varying between approximately 0.5 m to 2 m high provides additional screening along Tennant Street.

A wire fence with mesh screening along the western and northern boundary of the northern block provides additional screening along the Site boundary.

The blocks located immediately south of the Site between the railway line and Site are vegetated with mature trees, weeds, bushes and grasses and there is chain mesh fence with mesh screen along the railway easement.

Surrounding Landuse

The Project is located within a predominantly industrial area, with the Site zoned IZ1 General Industrial (IZ1) and Industrial Mixed Use (IZ2) and the surrounding area primarily zoned as Industrial Mixed Use (IZ2) or General Industrial, comprising industrial estates, hardstand areas and light industrial and commercial complexes.

The Site is bounded to the north by Tennant Street with industrial and commercial buildings beyond and to the west by industrial and commercial buildings. The Site is bound by vacant open space zoned General Industrial (IZ1) immediately to the east of the Site comprising grassland up to a tributary creek to the Molonglo River. The Queanbeyan-Canberra Branch Railway is located immediately south of the Site with industrial and commercial properties beyond.
The nearest urban residential area is over 2 kilometres to the West (Figure 19), whilst the nearest residential location is 1.3 kilometres to the South East of the Site (refer to Figure 3). A community facility is located approximately 700 m to the North West of the Site.

![Figure 19 Proximity to Residential Zoned Area (Source: ACTmapi November 2018)](image)

**Topography**

The Site, which is mostly level, has an elevation of approximately RL 576 mAHD in the north west of the Site sloping down to approximately RL 571 mAHD in the south west (ACTmapi 2004 contours).

Based on May 2014 ACTmapi contours, the surrounding land falls to the south east towards a tributary creek of the Molonglo River at approximate RL 564 m. The land to the north is generally flat with industrial sites on the northern side of Tennant Street at approximate RL 577 m. Land to the west slopes upwards towards Newcastle Street approximately 270 m from the Site at an estimated RL 586 m with industrial sites backing onto the Site. The land to the south of the Site generally slope towards the east, from approximate RL 577 m to RL 566 m.

### 9.2 Visual Impact Methodology

The landscape and visual impact assessment utilises visual sensitivity levels, which consider the nature of the viewer’s location and sensitivity to change, the magnitude of visual impacts based on the scale and proximity of the Project in relation to the viewer and the overall impacts both the sensitivity and the magnitude together.

The visual impact assessment on the landscape character of the site and surrounding area are described below.
9.2.1 Viewpoints

View sheds and potentially significant views and vistas to and from the Site were initially identified through desktop assessment and on ground assessment of the surrounding area and on site on the 12 July 2018 identifying the following issues:

- Pedestrians and motorists along Tennant Street and the southern end of Gladstone Street.
- Workers and customers of industrial and commercial properties north of the Site on Tennant Street and south of the site on Beaconsfield Street.
- Train passengers and workers south of the Site on the Canberra – Queanbeyan railway line.
- The closest residential properties are located approximately two kilometres west of the Site. There is no view of the Site from this location.
- Observations from potential viewers of the Site are predominantly screened by existing vegetation.

Based on the above issues and further visual analysis, seven separate viewpoints were identified for further assessment. These are shown in Figure 20 and detailed further in Section 9.3.2.

- Viewpoint 1 – from 17 Tennant Street looking south.
- Viewpoint 2 – from corner of Tennant Street and Gladstone Street looking south.
- Viewpoint 3 – from 191 Gladstone Street looking south.
- Viewpoint 4 – from the western boundary of the northern block looking north.
- Viewpoint 5 – from 9 Beaconsfield Street looking north.
- Viewpoint 6 – from the southern Site boundary looking south.
- Viewpoint 7 - from vacant block south east of the Site looking north west.
9.2.2 Visual Sensitivity

Visual sensitivity is a measure of how critically a change to the existing landscape is viewed by people from different areas. The assessment is based on the number of people affected, land use, and the distance of the viewer from the Project. For example, a significant change to a landscape that is not frequently seen may result in a low visual sensitivity although its impact on the landscape may potentially be high.

There are three general guiding principles that help determine visual sensitivity:

- Visual sensitivity decreases as the viewer distance increases.
- Visual sensitivity decreases as the viewing time decreases.
- Visual sensitivity can also be related to viewer activity (e.g. a person viewing an affected site whilst engaged in on site or nearby recreational activities would be more strongly affected by change than someone passing the area in a motor vehicle.

Sensitivity ratings are defined as high, moderate or low as shown in Table 15.

9.2.3 Visual Effect

Visual effect is defined as a parameter that describes the “…appearance of these changes and the resulting effect on visual amenity” (Knight, 2009). Visual effect is the interaction between a project and the existing
visual environment and can be articulated through levels of visual contrast between a project and the setting in which it is placed and viewed. The visual effect caused by the Project is expressed as low, moderate or high, which are defined as follows:

- **Low Visual Effect**: When a proposal blends in with the existing viewed landscape and does not impact the viewer.
- **Moderate Visual Effect**: When a proposal is visible and contrasts with the existing viewed landscape. However, viewer exposure time is limited, obstructed by existing vegetation or the level of exposure is minimal.
- **High Visual Effect**: When a proposal has a high visual contrast to the surrounding landscape with little or no available natural screening or integration created by vegetation or topography.

### 9.2.4 Visual Impact

Visual impact is the result of the combined consequence of visual sensitivity and visual effect. Similar to the risk assessment process outlined in Chapter 4.0 of the EIS in relation to likelihood and consequence, the combinations of visual sensitivity and visual effect would result in an visual impact assessment of high, moderate or low as shown in Table 15.

<table>
<thead>
<tr>
<th>Visual Sensitivity</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Low Impact</td>
<td>Low Impact</td>
<td>Moderate Impact</td>
</tr>
<tr>
<td>Moderate</td>
<td>Low Impact</td>
<td>Moderate Impact</td>
<td>High Impact</td>
</tr>
<tr>
<td>High</td>
<td>Moderate Impact</td>
<td>High Impact</td>
<td>High Impact</td>
</tr>
</tbody>
</table>

### 9.3 Potential Impacts

The Project aims to predominantly utilise existing buildings on the Site with the proposed location of buildings, infrastructure and stockpiles having considered the potential visual impacts of the Project.

The main visual impacts associated with the Project are anticipated to be infrastructure and buildings including:

- Weighbridges and weighbridge office;
- Concrete Pre-cast Facility Building (approximately 14 m high);
- Landscape Storage Building; and
- Recycling Facility Building (approximately 14 m high).

Based upon the anticipated visual impacts of the Project, photomontages have been utilised for 2 viewpoints (viewpoints 3 and 5 of Figure 20) to aide in assessment of the visual impact of the Project. These photomontages provide a visualisation of the visual effect of the Project and show the expected view during operation, based on the Concept design (refer to Chapter 2.0 for further detail).
9.3.1 Visual Impact Analysis

9.3.2 Viewpoints

Viewpoint 1 is located close to the existing entrance to the Site on Tennant Street looking south into the Site. The view into the Site is screened by the existing pine trees and earthen bund located along the northern Site boundary. The proposed landscape storage building located in the north west corner of the landscape yard would be slightly visible from Tennant Street.

![Figure 21 Viewpoint 1 - 17 Tennant Street looking south (Source: Google Maps, viewed 22 November 2018)]

Viewpoint 2 is located on the corner of Tennant Street and Gladstone Street looking south into the Site. Views into the Site are screened by the existing pine trees and earthen bund located along the northern Site boundary. The existing building proposed to house the Wood Processing located in the centre of the northern block is partly visible. The proposed Recycling Facility Building south of the existing building would similarly be partially visible from Tennant Street.
Figure 22: Viewpoint 2 - Corner of Tennant Street and Gladstone Street

Viewpoint 3 is located opposite the north east corner of the Site where the new site entrance is proposed. The Concrete Pre-cast Facility would be visible from the Site entrance as shown in the photomontage in **Figure 24**.

The northern boundary existing screening planting would be supplemented with planted screening as shown on the proposed site layout **Figure 1**.

Figure 23: Viewpoint 3 - Location of proposed new site entrance in north east corner of Site
Figure 24: Photomontage Viewpoint 3

Viewpoint 4 is located on the western border of the Site looking north. Views into the Site would be screened by shrubs and vegetation along the western border of the Site. There are no windows overlooking the Site from the existing Domayne building on the adjacent block and Viewpoint 4 shows that the Site is screened by mature pine trees along the western boundary.
Figure 25: Viewpoint 4 – West of the site looking north. The Domayne building is visible in this photo on the left.

Figure 26 and Figure 27 present Viewpoint 5 from the north west corner of 9 Beaconsfield Street industrial property and from the northern boundary of 9 Beaconsfield Street closest to the Project, Viewpoints 5a and 5b respectively. Existing trees screen the view of the existing Concrete Batching Plant building on the southern block of the Site.

Figure 29 presents the Viewpoint 6 looking out from the Site to buildings to the south. As shown in Figure 29, several of these two storey industrial buildings have windows that overlook the Site.

The Project would supplement existing vegetation with further screen planting on the southern boundary as shown on the proposed site layout Figure 1.
Figure 26: Viewpoint 5a - Northern boundary of 9 Beaconsfield Street

Figure 27: Viewpoint 5b - Northern boundary 9 Beaconsfield Street
The view observed from Viewpoint 7 is dominated by dense screening vegetation located along the southern boundary of the Site.
**9.3.3 Visual Sensitivity Analysis**

Utilising the matrix for assessment of the overall visual impact (Table 15) the visual sensitivity analysis of each viewpoint is provided in Table 16.

**Table 16: Visual Sensitivity Analysis of the Proposal**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewpoint 1 – 17 Tennant Street looking south.</td>
<td>Low</td>
<td>The Project and viewpoint will be commensurate with the visual character of the surrounding industrial area and would result in limited change to the existing landscape.</td>
<td>Low</td>
</tr>
<tr>
<td>Viewpoint 2 - from corner of Tennant Street and Gladstone Street looking south.</td>
<td>Low</td>
<td>The Project and viewpoint will be commensurate with the visual character of the surrounding industrial area. Buildings on Site may be partially visible from Tennant Street, but the distance, land use and people affected at this viewpoint will result in a sensitivity rating of low.</td>
<td>Low</td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>-----------------------</td>
</tr>
</tbody>
</table>
| Viewpoint 3 - from 191     | Low                | Medium
Gladstone Street looking south. | Buildings on Site may be partially visible from Tennant Street and this is the location of the proposed new entrance to the Site, resulting in a change to viewer visual effect of the existing landscape. | Low Impact |
| Viewpoint 4 – from the western boundary of the northern block looking north. | Low | Low
The viewpoint is screened by existing vegetation. There are no windows overlooking the Site from the adjacent building offsite. | Low Impact |
| Viewpoint 5 – from 9 Beaconsfield Street looking north. | Low | Low
Buildings on Site may be partially visible from Beaconsfield Street industrial property closest to the Site. However, this will predominantly be the existing concrete batching plant, thus the visual effect will have minimal change. | Low Impact |
| Viewpoint 6 – from the southern Site boundary looking south | Low | Low
Buildings on Site may be partially visible from Tennant Street and this is the location of the proposed new entrance to the Site, resulting in a change to viewer visual effect of the existing landscape. | Low Impact |
### Viewpoint 7 - from vacant block south east of the Site looking north west.

<table>
<thead>
<tr>
<th>Visual Sensitivity</th>
<th>Visual Effect</th>
<th>Overall Visual Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Low</td>
<td>Low Impact</td>
</tr>
</tbody>
</table>

The viewpoint will be commensurate with the visual character of the surrounding industrial area and be unchanged from the existing trees that screen the view to the Site.

---

**9.3.4 Summary of the Landscape and Visual Impacts During Construction**

Visual impacts during construction would be short term, visual impacts during construction would include:

- Construction machinery for roadworks and earthworks;
- Cranes for installation of processing equipment; and
- Stockpiling of materials.

**9.3.5 Summary of the Landscape and Visual Impacts During Operation**

The visual sensitivity, visual effect and overall visual impact of viewpoints during operation of the Project shown in Figure 20 have been assessed.

The weighbridge office, Recycling Facility building and Concrete Pre-cast Facility will be visible from the new site entrance at Viewpoint 3 (refer to Figure 24) to the north of the Site. However, this would be mitigated with the planting of additional screening vegetation along the northern boundary, which will supplement the existing screening along the northern boundary of the Site including at Tennant Street and Gladesdale Street. These streets have also been assessed as having low to medium visual sensitivity and visual effect due to being located within an existing industrial area with traffic volumes (refer to Chapter 6.0) and existing screening and as such, the potential visual impacts along the northern boundary are considered to be low.

To the south of the Site, views from the industrial buildings on Beaconsfield Street overlooking the Site are predominantly screened along the southern boundary. This screening would be further supplemented by additional planting south of the Concrete Batching Plant to mitigate potential impacts to occupants of Beaconsfield Street Industrial buildings.

To the west of the Site, views from the industrial building on the south of the Domayne building on Block 2 Section 28 are screened by vegetation including mature pine trees along the western boundary of the Site. Potential impacts to occupants of the Domayne building is assessed as low, as there is no outlook over the Site and consequently low visual sensitivity and visual effect.

Material stockpiles would be located within Product Storage areas, south of the Concrete Pre-cast Facility. Offset from the northern boundary of the Site, it is unlikely that material stockpiles would have a significant impact on the visual amenity of viewers of the Site. Further information on proposed stockpile size restrictions is provided in Chapter 8.0 Materials and Waste.

**9.4 Project Mitigation Measures**

Mitigation measures proposed for the Project include:
- Maintenance of existing screening vegetation;
- Additional planting of screening vegetation along the northern and southern boundaries;
- Cladding and Paintwork to be in keeping with the surrounding environment; and
- Perimeter chain wire fencing to be constructed and lined with shade cloth material.

9.5 Residual Risk

The visual features of the Project will be commensurate with the visual character of the Site and surrounding industrial area. Together with the existing and future screening it is considered there is a low to medium visual effect and visual sensitivity across the Site. As identified within Chapter 2.0, the Site has previously been developed and utilised as a concrete manufacturing facility and the Project seeks to develop and augment this use with resource recovery activities.

Overall landscape and visual impacts of the Project are assessed to be low.

<table>
<thead>
<tr>
<th>Description</th>
<th>Discussion</th>
<th>Comment</th>
<th>Likelihood</th>
<th>Consequence</th>
<th>Residual Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape, visual and lighting</td>
<td>Visual impacts on the surrounding area from building bulk and scale, stockpiling and lighting the facility</td>
<td>Existing vegetation screening. Structures proposed are similar in nature to existing buildings. (i.e. Recycling Facility, and landscape storage building). Activities similar to industrial activities of previous operations. Compatible Industrial zoning surrounding site.</td>
<td>Possible</td>
<td>Minor</td>
<td>Low</td>
</tr>
</tbody>
</table>
10.0 **SOILS AND GEOLOGY**

<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soils and Geology</td>
<td>Contamination of soil from uncontrolled release/spill of fuel, asbestos and other waste</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Soil erosion due to operation and construction activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impacts from existing contamination on soil and groundwater</td>
<td></td>
</tr>
</tbody>
</table>

### 10.1 Environmental Conditions and values

#### 10.1.1 Geology

According to Geology of the Canberra 1:100,000 Sheet Area, the local geology comprises Silurian volcanics of the Canberra Lowlands. Silurian Volcanics includes the Colinton Volcanics, Mount Painter Volcanics, Laidlaw Volcanics and the Cappanana Formation. Lithologies include various Ignimbrites and tuffs with minor siltstone, shale, sandstone and limestones. Alluvial material is common and bedrock tends to be highly weathered.

#### 10.1.2 Soils and Landscapes

Based on a review of Soil Landscapes of the Canberra 1:100,000 Sheet, the site is located within the Williamsdale soil landscape. The landscape is characterised by undulating rises, fans, valley flats and depressions with gently inclined slopes to flats < 10% with local relief between 5 – 50 m and elevation 520 – 730 m. There is little to no rock outcrop and long low angle footslopes are the dominant landform element.

Soils with the Williamsdale soil landscape are typically moderately deep (50-150 cm), moderately well-drained Red and some Brown Chromosols (Red and Yellow Podzolic Soils) and Red and Brown Kandosols (Red and Yellow Earths) occur on upper slopes of rises and fans. Shallow (<50 cm) Leptic Tenosols and Rudosols (Lithosols) occur where bedrock is close to the surface. Lower slopes and drainage lines are dominated by moderately to very deep (100 - >150cm), imperfectly to moderately well-drained Brown and Yellow Chromosols (Yellow Podzolic Soils, Solodic Soils and Solodized Solonetz Soils) with some Brown Kandosols (Yellow Earths). On better drained low sloping land, Red and Brown Kandosols (up to 25% of the landscape) are found in preference to Yellow Chromosols.

Following original development of the site, shallow soils of the Williamsdale profile to depths between 0.1 m and 0.3 m have likely been stripped or significantly altered on the site during vegetation clearance and construction of the buildings, gravel hardstand and internal roads. The bedrock and deeper soil profile of Brown and Yellow Chromosols (Williamsdale profile) are likely remaining.

During Site investigation for the Phase 2 Assessment (refer **APPENDIX H**), natural material underlying the fill was characterised as a sandy clay or clay, likely to be residual roils or extremely weathered ignimbrite bedrock.

The site is located within the South Canberra Hydrogeological Landscape management area MA5 – Lower Slope - Colluvial. Actions associated to management area MA5 relate to minimisation of groundwater recharge and maximisation of runoff and drainage.
10.2 Investigations

10.2.1 Existing Fill

Fourteen boreholes were drilled at the Site in July 2018 as part of the Phase 2 Assessment (APPENDIX H). According to records of subsurface ground conditions, the depth of fill was generally 0.5 to 1.5 m with the exception of the south-east of the northern and southern block where fill extended to 3.5 m. Filling depths indicate the Site was levelled by cutting in the north west and filling in the south east.

The fill material encountered was generally described as clayey sandy gravel, sandy clay, sandy gravel, sand, gravelly sand or silty sandy gravel. Eleven test pits were excavated across the Site and some concrete, metal, plastic and pipe observed. This indicates that reject products from concrete batching may have been used as fill material.

10.2.2 Existing Soil Contamination

Investigation of existing soil contamination was undertaken as part of the Phase 2 Assessment (refer APPENDIX H). The findings from the site investigation relating to soil contamination at the Site are summarised below.

Asbestos

The Phase 2 Assessment identified ACM fragments on the ground surface and in the soil surrounding the footprint of the proposed Liquid Waste Processing building. Asbestos was also identified in the south east corner of the northern block in an area of historical filling.

As part of the site remediation works ACM and asbestos in soil up to 100mm in a radius of 10 metres around the asbestos clad buildings will be removed from site. Refer Site Audit Report APPENDIX I.

Petroleum Sources

Exceedances of ecological criteria of Total Recoverable Hydrocarbons (TRH) in soil were reported at the Site. Based on recommendations from the Phase 2 Assessment given the proposed land use, it is considered that further assessment or management of TRH in soil is not warranted.

Two above ground storage tanks (ASTs) and former transformer located in the southern block and one below ground concrete tank in the northern block require decommissioning and disposal as part of the remediation actin plan (refer Phase 2 Report APPENDIX H and Site Audit Report APPENDIX I).

10.3 Potential impacts

10.3.1 Contamination

Contaminated surface water runoff would potentially be generated from rainwater that comes into contact with refuelling, wash down and waste processing areas. Uncontrolled runoff could infiltrate underlying soil and impact on soil quality. Management Strategy and mitigation measures for the management of surface water and control of contaminated surface water are provided in Section 11.4.1.

Similarly, a contaminant spill or leak would pose a risk for soil contamination. However, the likelihood of contamination due to a spill or leak is low as potential contaminants would be stored in bunded areas and/or contained in buildings as outlined in Section 10.4.

10.3.2 Erosion and soil loss

According to Geology of the Canberra 1:100,000 Sheet Area minor gully erosion is common and widespread. In urban areas, erosion hazard is high for concentrated flows and wind and moderate for non-concentrated flows. Erosion is most likely to occur during major rainfall events and heavy wind.
There is potential for erosion during construction and operation, particularly during any excavation activities. Any erosion would be accentuated by the movement of construction plant, and other vehicles and by rainfall and runoff. There is also potential for rain and wind-induced erosion of unsecured product and waste stockpiles. Uncontrolled soil erosion and sedimentation may impact water quality of nearby Molonglo River.

10.4 Project Mitigation Measures

10.4.1 Remediation

Based on the outcome of the Phase 2 Assessment and the Site Audit Report the following remedial actions were identified for the Site:

- Removal of two above ground storage tanks (ASTs) located in the central portion of the southern block;
- Removal of a below ground concrete tank in the northern block;
- Removal of the former transformer on the southern block; and
- Removal of 100mm ACM and asbestos impacted soil at a 10 metre radius surrounding asbestos clad buildings.

The remedial works and validation testing would be undertaken in accordance with the RAP (APPENDIX H).

10.4.2 Contaminant Containment

Spill procedures would be developed to mitigate the potential impacts on the environment. These procedures would be documented in the CEMP and OEMP.

Mitigation measures to manage contaminated runoff, spills and leaks would include:

- Fuelling areas and fuel and dangerous good and hazardous chemical storage would be bunded.
- Waste unloading and processing areas within buildings would have floor sloped and bunding such that any spills or runoff would be contained within the building.
- A perimeter bund and sediment controls would be constructed surrounding the Soil Processing and Recovery Facility.
- ACM storage containers and transport vehicles would be sealed.
- Spill kits would be stored adjacent to all activities and made available to all vehicles.
- All facilities and equipment used in the construction and operation of the site will be maintained appropriately to minimise spills and leaks of contaminants.

A discussed in the Remediation Action Plan (APPENDIX H), an Asbestos Management Plan would also be prepared to address future exposure scenarios from asbestos during construction and operational works.

In addition, an unexpected finds protocol is presented in the Phase 2 Site Investigation Report (refer APPENDIX H). Any unexpected contaminated material encountered during construction would be isolated to prevent disturbance of the material and exposure to workers. An assessment of the material would be undertaken to determine remedial actions.

10.4.3 Erosion and Sediment Control

The Site CEMP and OEMP would contain a range of appropriate erosion and sediment control measures that would be required for implementation, monitoring and maintenance during the construction and operation of the Project. These may include:
- Erection of silt fences, sediment barriers and/or straw bales at strategic locations;
- Construction of temporary sediment retention pond during construction;
- Regular inspection and maintenance of sediment and erosion control structures;
- During operation, any sediment laden stormwater runoff would be collected and treated in stormwater dams (refer Chapter 11.0);
- Protecting and retaining vegetation and surface cover where possible;
- Using designated access roads and paths;
- Vehicular paths and access shall be controlled so as to prevent tracking of sediment onto adjoining roadways;
- Minimise disturbed areas and stabilise as soon as practicable;
- Treatment and testing of collected sediment laden runoff water to confirm compliance with relevant criteria prior to release;
- Existing stormwater course and adjacent areas will be left undisturbed;
- Manage stockpiles through the use of sediment and erosion control measure including use of concrete storage bunkers, sediment fencing and bunding around stockpiles and covers;
- Material stockpiles would be located outside limits of drainage lines;
- All loads entering and leaving the site will be covered;
- Weather forecast will be monitored to identify hot, windy and/or dry conditions when dust rise might be significant.

10.5 Residual Risk

Residual risks relating to soils and geology are presented in the table below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Discussion</th>
<th>Comment</th>
<th>Likelihood</th>
<th>Consequence</th>
<th>Residual Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soils and Geology</td>
<td>Contamination of soil from uncontrolled release/spill of fuel, asbestos and other waste</td>
<td>Fuelling areas, dangerous good and hazardous chemical storage would be bunded, ACM storage containers and transport vehicles would be sealed and spill kits would be stored adjacent to all activities and</td>
<td>Possible</td>
<td>Minor</td>
<td>Low</td>
</tr>
<tr>
<td>Description</td>
<td>Discussion</td>
<td>Comment</td>
<td>Likelihood</td>
<td>Consequence</td>
<td>Residual Risk</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Soil erosion due to operation and construction activities</td>
<td>Minimal earthworks and sedimentation pond unlikely to result in soil erosion with mitigation</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Impacts from existing contamination on soil and groundwater</td>
<td>The Remediation Action Plan provided in <strong>APPENDIX H</strong> provides suitable mitigation and management.</td>
<td>Possible</td>
<td>Minor</td>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>
11.0 WATER QUALITY AND HYDROLOGY

<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Quality and Hydrology</td>
<td>■ Untreated stormwater or waste impacting on receiving land and downstream waterways</td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ Contamination of surface water or groundwater as a result of uncontrolled release/spill of fuel, asbestos and other waste</td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ Leakage/seepage of liquid waste to soil and groundwater</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td></td>
</tr>
</tbody>
</table>

11.1 Environmental Conditions and Values

11.1.1 Hydrogeology

A review of Canberra 1:100 000 map sheet indicates the site is located in the South Canberra Hydrogeological Landscape. The area covers approximately 146 km² and extends from the southern shoreline of Lake Burley Griffin to the southern edge of Tuggeranong, and from the Lower Molonglo Valley in the northwest to the Symonston Hydrogeological Landscape on the east. The sub catchments are typically small (<100ha) and are highly urbanised.

There is an unconfined to semi-confined aquifer in fractured rock and saprolite with lateral flows through the unconsolidated sediments on lower slopes and in flow lines. Depth to the water table typically ranges from 2 – 8 m below ground level. Hydraulic gradient is gentle ranging from <10 – 30%. Groundwater monitoring undertaken at the Site by Douglas Partners in 2010 measured groundwater depths between 2.4 m and 4.8 m below ground level.

A bore search of records held by the Environment Protection and Water Regulation indicated there were no licensed groundwater bores located within 1 km of the Site. The closest bore was located just over 1 km south east of the Site and there were 4 additional bores located within approximately 2 km of the site. A summary of the groundwater bore information is presented in Table 17.

Table 17: Summary of groundwater bore search (ACTmapi)

<table>
<thead>
<tr>
<th>ACT Bore ID</th>
<th>Type</th>
<th>Approximate Location</th>
<th>Standing water level (mbgl)</th>
<th>Bore depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>188</td>
<td>ACT Monitoring Bore</td>
<td>1010 m south east</td>
<td>15.70</td>
<td>90m</td>
</tr>
<tr>
<td>186</td>
<td>ACT Monitoring Bore</td>
<td>1420 m north west</td>
<td>2.85</td>
<td>12m</td>
</tr>
<tr>
<td>56</td>
<td>Groundwater Abstraction Bore</td>
<td>1640 m north east</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>183</td>
<td>ACT Monitoring Bore</td>
<td>1880 m west</td>
<td>2.10</td>
<td>60m</td>
</tr>
<tr>
<td>182</td>
<td>ACT Monitoring Bore</td>
<td>2020 m west</td>
<td>1.93</td>
<td>60m</td>
</tr>
</tbody>
</table>
The Site is located within the Central Molonglo water management area (WMA). The WMA covers both surface and groundwater resources. The maximum available groundwater for extraction in the WMA is 685 ML according to the National Water Commission 2011. Management policies for the Central Molonglo WMA are provided in Section 11.8 of the Territory Plan 2008.

11.1.2 Hydrology

The Site is located within the Molonglo Catchment approximately 460 m west of the Molonglo River and approximately 1.85 km east of Jerrabomberra Creek. The Molonglo River flows through the catchment from the south east, and its tributary, the Queanbeyan River from the south west. Both the Molonglo River and Jerrabomberra Creek feed into artificial Lake Burley Griffin. The catchment landscape is largely urbanised and feature waterways, concrete lined drainage channels and lakes constructed for large stormwater flows.

11.1.3 Riparian Lands

According to ACTmapi the closest ACT Important Wetlands are located approximately 2.4 km north west of the Site.

11.1.4 Flood

The ACTmapi Flood Map shows the flooding extent for riverine flooding of the nearby Molonglo River. A review of the ACTmapi Flood Mapping indicates the Site is not likely to be flooded during a 1% Annual Exceedance Probability (AEP) flood event. The site is located approximately 75 m to the west of the 1% AEP flood level area.

11.1.5 Water Supply

The Site is currently serviced by an existing mains water supply as described in Chapter 7.0 Utilities.

11.1.6 Site Hydrology

A Storm Water Assessment of the Site has been completed by Golder and is provided within APPENDIX J.

The Site is located in a generally level area, with an elevation of approximately RL576 mAHD in the north west of the site sloping down to approximately RL571 mAHD in the south west (ACTmapi 2004 contours). The surrounding area generally slopes towards Molonglo River south east of the Site.

According to a site servicing investigation undertaken by AECOM in 2012, the Site currently connects to the stormwater network via a 450mm diameter stormwater main located on the northern side of Tennant Street. There are six 300 mm diameter mains that connect to sumps on the southern side of Tennant Street. The northern portion of site currently connects to the stormwater network via a main at the eastern end of the block. A 3m wide stormwater easement that runs along the southern boundary likely connects to a headwall outlet on the eastern boundary of the northern portion. Most of the stormwater runoff generated in the northern portions drains by overland flow south east along Block 12 before draining towards Molonglo River east of the Site.

The southern block drains north by overland flow towards Block 12 and then south east towards the Molonglo River. The Molonglo River is part of the Murrumbidgee catchment and flows north west towards Lake Burley Griffin. There is no existing connection to the stormwater network along Tennant Street from the southern portion of Site.

Existing surface water features and drainage have been presented in Figure 31.
Figure 31: Existing surface water features
11.2 Investigations

11.2.1 Existing Ground Water Quality

During the Phase 2 environmental investigation (refer APPENDIX H) six groundwater monitoring wells were installed at the Site. The boreholes were located in areas of concern identified by the Phase 1 investigation (refer APPENDIX G), surrounding existing site buildings and areas of historical filling. Sampling of the wells was undertaken on 26 and 27 July to assess the existing groundwater quality.

Groundwater analytical results showed that concentrations of Benzene, Toluene, Ethylbenzene, Xylenes & Naphthalen (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), Semi Volatile Organic Compound (SVOCs) and Volatile Organic Compound (VOCs) were either below respective limits of reporting or less than the adopted criteria. Concentrations of TRH and metals exceeded the adopted criteria. TRH concentrations exceeding the adopted drinking water criteria is likely associated to the former substation on the northern block. Given that on-site groundwater extraction is not occurring and unlikely to occur in the future given the low hydraulic conductivity and availability of mains water supply, further investigation of TRH is not considered warranted. Concentrations of dissolved metals in water were generally below the ANZECC-ARMCANZ (2000) 95% trigger values for fresh water, with the exception of chromium, copper and zinc. No clear contaminant source was identified, however is likely the results of surface water infiltration through the upper soil profile. It is noted that copper and zinc were detected in the surface water samples analysed and as such may be associated to general regional conditions.

11.2.2 Existing Surface Water Quality

During the Phase 2 environmental investigation (refer APPENDIX H) four off-site surface water samples were proposed for collection east of the Site. At the time of sampling the two locations east of the Site within the Molonglo River tributary creek were dry. It is noted that potential contaminant loads originating from the Site through the creek may not have been captured. The two samples collected were located upstream and downstream of the Site on the Molonglo River. The samples collected were tested to assess existing surface water quality.

The surface water analytical results showed that concentrations of TRH, BTEX, PAHs, PCBs, SVOCs and VOCs were below respective limits of reporting. Concentrations of metals in surface water were generally below the ANZECC-ARMCANZ (2000) 95% trigger values for fresh water, with the exception of copper and zinc. Given that the similar metal concentrations were detected upstream and downstream of the Site, it is considered that elevated heavy metals are associated with general regional conditions.

11.2.3 Proposed Surface Water Management

The construction of the Project will involve minor excavation for the preparation of roads, foundations and building footings. The developed site is to consist of buildings, sealed and unsealed roads, with areas of unsealed compacted soil surfaces to remain. Based on the concept site plan, a concept surface water management plan has been developed as presented in Figure 32. The plan has been developed to minimise surface water impacts to the site, environment, and adjacent properties.

Natural drainage lines will direct overland flow from catchments in the Northern Block and the Southern Block, to Dams. Culverts will be used where channels are required to cross roadways. The Proposal does not block any existing drainage lines. Areas have been allocated for 1 dam in the Southern Block and 3 dams in the Northern Block.

The inlet pond in the Northern Block will collect sediment, the pond has been sized to allow for clean out of sediment by excavator. The inlet pond will feed clean water to the middle on site detention (OSD) pond and outlet pond to manage the discharge off site. Clean water from the outlet pond will be reused on site for dust suppression and processing activities.
Figure 32: Stormwater management concept design
11.2.4 Proposed Water Use

Estimated water usage at the Site is expected to be in the order of 20,000 kL per annum. The primary uses of water are as follows:

- Dust suppression including:
  - Water cart on haul roads to minimise wheel generated dust;
  - Sprays on stockpile to minimise wind blown dust;
  - Sprays installed on crushing and screening plant and conveyors as required; and
  - Wheel and truck washing.

Approximate proposed annual water usage at the Site is summarised in the table below.

Table 18: Proposed Water Use

<table>
<thead>
<tr>
<th>Operation</th>
<th>Project Water Usage (kL/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff toilet and basin use</td>
<td>50</td>
</tr>
<tr>
<td>Landscape maintenance</td>
<td>270</td>
</tr>
<tr>
<td>Dust Suppression</td>
<td>15,350</td>
</tr>
<tr>
<td>Wheel Wash</td>
<td>2,920</td>
</tr>
<tr>
<td>Concrete Precast Facility washdown</td>
<td>100</td>
</tr>
<tr>
<td>Other Processing</td>
<td>1310</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20,000 kL/annum</td>
</tr>
</tbody>
</table>

The primary sources of water for operation of the Project include:

1) Recycled water from onsite stormwater detention dams: The water used for dust suppression and landscape maintenance would be sourced from on-site stormwater detention ponds. Catchment areas reporting the onsite sedimentation ponds are expected to be ‘clean’ areas. Contaminated runoff would be segregated by bunding and other controls identified in Section 10.4.2. The runoff from ‘clean’ areas would be collected and stored in the inlet pond located in the northern block and sediment allowed to settle.

2) Recirculation of wash water within the Concrete Precast Facility.

3) Recirculation of wash water within the Wheel Wash.

4) 9,000 kL per annum from drill mud recycling for dust suppression.

5) Mains water would be used for staff amenities and to make up shortfall where the above sources are not sufficient.
11.3  Potential Impacts

11.3.1  Petroleum Sources
Based on Phase 2 investigations, TRH was detected in groundwater sampled near the former concrete manufacturing plants in the northern and southern blocks. Given that on-site groundwater extraction is not occurring and future on-site groundwater extraction is unlikely given the low hydraulic conductivity and availability of mains water, further investigation of TRH is not warranted.

There were no significant petroleum hydrocarbon impacts detected in groundwater in the vicinity of fuel infrastructure in the southern block.

A Remediation Action Plan has been prepared to manage the potential risks associated with other sources on the site (refer APPENDIX H). This remediation action plan has been endorsed by the auditor (refer to APPENDIX I).

11.3.2  Heavy Metals
Heavy metals, primarily copper and zinc concentrations exceeding the adopted criteria for the Phase 2 Assessment were detected in groundwater and surface water. It is considered that the results may be indicative of background concentrations and therefore no further investigation is warranted.

11.3.3  Catchment Rainfall-runoff Response
The different land uses on the site have been categorised as hardstand (buildings, paved areas), compacted soil, and vegetated areas. Different land uses promote different rainfall-runoff responses from the catchment. For example, a hardstand area will have zero infiltration and smoother surface roughness, resulting in a higher peak flow and smaller runoff concentration time compared to a vegetated catchment with initial and continued infiltration, and rougher surface roughness. Different land uses also dictate the types of contaminants expected on the Site.

The Project affects the land uses onsite, which results in changed rainfall runoff response of the catchment. The land use areas onsite and changes from the development have been presented in Table 19. Overall increase to hardstand and compacted soil areas, and reduced vegetation areas can have a worsening impact to the catchment’s rainfall runoff response. It is expected that peak flows reporting to discharge locations would increase, with soil loss expected from the catchment resulting in erosion and sedimentation impacts. The potential impacts have been assessed within the Stormwater Assessment (APPENDIX J) and discussed in the following section and the proposed mitigation actions to minimize the surface water risks are presented in Section 11.4.

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Existing (ha)</th>
<th>Developed (ha)</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardstand (roofed and paved areas)</td>
<td>0.5</td>
<td>2.6</td>
<td>+520</td>
</tr>
<tr>
<td>Compacted soil</td>
<td>6.5</td>
<td>5.9</td>
<td>-9.23</td>
</tr>
<tr>
<td>Vegetated</td>
<td>3.2</td>
<td>1.8</td>
<td>-43.75</td>
</tr>
</tbody>
</table>

11.3.4  Increased Peak Discharge
Decreases in vegetated areas and increases in hardstand and cleared areas most often result in increased peak discharge from catchments. This can have flood impacts on downstream environments, as well as...
increased risk of erosion and sedimentation. Peak flows were estimated in accordance with the Australian Rainfall and Runoff (ARR) 2019 guidelines (Ball, et al., 2019) using Drains software (DRAINS Version 2019.09) (refer to APPENDIX J). These potential adverse impacts can be managed through the proposed effective surface water management on site which has been discussed as part of Section 11.4.

**11.3.5 Erosion, soil loss and sedimentation**

Soil losses in the catchment results in sedimentation in runoff. Sediment in runoff from disturbed lands is considered a major source of pollutants. Sediment and other suspended solids can:

- affect the growth of aquatic plants;
- impact the suitability of habitats for some aquatic flora and fauna;
- reduce the aesthetic appeal of water; and
- reduce the capacity of downstream channels and water bodies, worsening flood impacts.

Effective surface water management practices would be implemented by the Proponent to mitigate the impacts of changed catchment conditions as part of the Project. These are discussed in Section 11.4.

**11.3.6 Runoff contamination**

Due to the nature of operating a resource recovery facility, there will be potentially environmentally harmful contaminants such as oils, hydrocarbons, and other chemicals on the site. In the event of a spill or leak, surface water contamination may result in a potential adverse impact of the development.

The risks associated with contaminated runoff has been mitigated by design of the facility and spill management procedures as discussed in Section 11.4.

**11.4 Proposal Mitigation Measures**

**11.4.1 Contaminant Containment**

Mitigation measures would be implemented in accordance with the Site CEMP and OEMP to control contaminants during construction and operation. The following contaminant containment measures are proposed in addition those identified in Section 10.4.2.

In the unlikely event of a contaminant spill or leak, it is expected that such contamination will be contained through implementation of appropriate spill management procedures detailed within the OEMP. The topography across the site is quite flat, which also limits the potential reach of any spills or leaks and the likelihood of contaminants reaching discharge locations on site.

Uncontrolled runoff of contaminated surface water from refuelling, washdown and waste processing areas would similarly pose a risk of groundwater or surface water contamination. Mitigation measures to manage the migration of contaminated runoff would include bunding, drains and enclosed processing areas. Mechanisms to reduce the risk of failure of the runoff management systems is described below.

**11.4.2 Erosion and sediment control**

Cleared land can be susceptible to erosion and sedimentation, which can result in adverse impacts such as instability issues, excessive sediment deposition, and sediment pollution of waterways. To minimise the impact of the development on the environment, erosion and sediment control strategies would be implemented on site during construction and maintenance of the Site as follows in addition to those identified in Section 10.4.3.
Fit the Project to the existing topography, soils, and vegetation. The Project utilises natural drainage lines at the Site;

Schedule construction works to minimise soil exposure during rainy season;

Utilise vegetation in drainage channels to slow runoff velocities and filter pollutants;

Keep sediment on-site by using sediment basins, and other sediment traps or sediment barriers where necessary;

Regular monitoring and maintenance of surface water infrastructure; and

Monitor and inspect site frequently and correct problems promptly.

By adhering to these erosion and sediment control principles, adverse impacts of the Project are minimised. Refer to APPENDIX J for further details.

11.4.3 Surface Water Infrastructure

Infrastructure for the management of surface water on the site has been guided by Design Standards for Urban Infrastructure – 1 Stormwater by Transport Canberra and City Services unless otherwise stated. On site detention ponds, channels and culverts have been designed for the storage and conveyance of 10% AEP storm event in accordance with ACT Government(minor storm for industrial areas).

The design of the surface water management system ensures conveyance of flows to minimise erosive impacts of runoff within the Site, and detention of runoff volume so as to not exceed flow rates of the existing development. Refer to APPENDIX J for further details.

The capacity of existing surface water infrastructure, namely the 650 mm diameter culvert in the Northern Block, and V-drain south of the Southern Block, have been verified to be sufficiently sized to convey runoff from the new developed catchments.

As part of the Project surface water management, sediment control and onsite detention measures would comprise a total of four water storage bodies. These storages have different functions and their dimensions were calculated based on the requirements specified in the following sections. The following list describes the functionality of the dams:

Northern Dams:

- Dam 1 – Inlet sediment collection dam.
- Dam 2 – Water retention dam “retarding basin” and sediment collection dam.
- Dam 3 – Outlet water dam.

Southern Dam:

- Dam 4 – Inlet sediment collection dam.

Table 20 summarises the capacity and sizing for all the water storages.

Table 20: Proposed water storages

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Dam 1</th>
<th>Dam 2</th>
<th>Dam 3</th>
<th>Dam 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Area (m²)</td>
<td>562.8</td>
<td>700</td>
<td>616.5</td>
<td>191.6</td>
</tr>
<tr>
<td>Base Area (m²)</td>
<td>122.05</td>
<td>274.61</td>
<td>307.35</td>
<td>46.7</td>
</tr>
</tbody>
</table>
### 11.4.4 On Site Detention

Due to the changes in land use and impermeable cover on the Site, it is expected that peak flows discharging off site would increase without mitigating actions. In order to avoid worsening of flooding in downstream environments, minimum on site detention (OSD) requirements were determined for the Site and incorporated into the design of the concept stormwater management design as an OSD basin.

The OSD refers to Site Storage Requirements (SSR) which restricts flows to a Permissible Site Discharge (PSD) so as not to adversely affect the downstream catchment.

In lieu of specific guidance in *Design Standards for Urban Infrastructure – 1 Stormwater* by Transport Canberra and City Services, OSD PSD and SSR values were calculated using an iterative process comparing the pre-development and developed catchment conditions based on the following equations.

A PSD is a flow rate calculation that is required to ascertain the pre-development discharge off site. The flow rate is then used as a restriction for the post development discharge so the existing hydrological regime downstream to the Site is unchanged.

\[
PSD_{1\% AEP} = F1 \times F2 \times 4.67 \times Area \times I_{1\% AEP}^{2\% AEP} \quad (l/sec)
\]

*Where PSD is the permitted peak discharge from the basin*

\[
I_{1\% AEP}^{2\% AEP} (mm/hr) \text{ is the one hour } 2\% \text{ AEP rainfall intensity at the site}
\]

\[
F1 \text{ is the factor for existing impervious cover}
\]

\[
F2 \text{ is the factor reflecting variations in area from a 1ha base}
\]

\[
Area \text{ (ha) is the tributary area draining to the OSD basin}
\]

For the Site, the PSD for the 1% AEP storm was estimated to be 7.5 m$^3$/s.

A SSR is a storage volume required upstream to the site discharge location to attenuate the PSD set at the discharge location.

\[
SSR_{1\% AEP} = F3 \times F4 \times 2.25 \times PSD_{1\% AEP}/F2 \quad (m^3)
\]

*Where PSD is the permitted peak discharge from the basin*

\[
I_{1\% AEP}^{2\% AEP} \text{ (mm/hr) is the one hour 2% AEP rainfall intensity at the site}
\]

\[
F1 \text{ is the factor for existing impervious cover}
\]

\[
F2 \text{ is the factor reflecting variations in area from a 1ha base}
\]
Area (ha) is the tributary area draining to the OSD basin

The required storage volume to contain excess runoff from a 1% AEP storm is estimated to be 129.5 m$^3$ for the Project and the Site, which is conservatively accounted for in the storage of Dam 2.

The controlled released of water from the Site is aimed to facilitate a non-altered flow with no adverse impacts from the increased impervious cover run-off of the project site to the downstream environment. Consequently, proposed stormwater management at the Site will ensure minimal adverse impacts from increased discharge from the Site to downstream environments. Refer to APPENDIX J for further details.

11.4.5 Sediment Treatment

Due to the large area of exposed soil on site, sedimentation due to land disturbance is likely to be the most relevant water quality issue for the Project.

Erosion and Sedimentation Controls would be in place as described in Section 11.4.2.

In order to capture sediment prior to the discharge of runoff off site, and therefore minimise adverse project impacts, sediment basins have been included in the stormwater management infrastructure on the Site. The sediment basins have been designed in accordance with Landcom’s ‘Blue Book’ for a Type D sediment soil, and sized for 5-day, 90th percentile rainfall depth and consist of Dam 1 (Northern Block) and Dam 4 (Southern Block) to suitably provide treatment of runoff from the Site.

A sediment basin located in the northern block would be designed to treat runoff from the catchments in the Northern block as well as diverted catchment of the Southern block as shown in Figure 32. The Northern Block sediment basin is to have a volume of minimum 565 m$^3$ to provide the sediment treatment to prevent adverse sediment pollution into the receiving environment. Table 21 provides a calculation summary of sediment basin sizing.

Table 21: Sediment basin sizing calculation summary

<table>
<thead>
<tr>
<th>Design parameters</th>
<th>Comment</th>
<th>Units</th>
<th>Northern Block</th>
<th>Southern Block</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rainfall, 90th %ile 5-day</td>
<td>Calculated from historical rainfall data</td>
<td>mm</td>
<td>23.0</td>
<td>23.0</td>
</tr>
<tr>
<td>Volumetric runoff coefficient, Cv</td>
<td>From IECA for clay loam soils, conservative estimate</td>
<td>-</td>
<td>0.315</td>
<td>0.315</td>
</tr>
<tr>
<td>Catchment Areas, A</td>
<td>Delineated from survey data and surface water management plan, consists of catchment reporting to the basin.</td>
<td>ha</td>
<td>5.2</td>
<td>3</td>
</tr>
<tr>
<td>Volume of sediment settling zone, Vs</td>
<td>$V_S = 10 \times R \times C_v \times A$</td>
<td>m$^3$</td>
<td>377</td>
<td>217</td>
</tr>
<tr>
<td>Volume of sediment storage</td>
<td>Based on 50% of Vs</td>
<td>m$^3$</td>
<td>188</td>
<td>109</td>
</tr>
<tr>
<td>Total volume of basin</td>
<td></td>
<td>m$^3$</td>
<td>565</td>
<td>326</td>
</tr>
</tbody>
</table>
11.4.6 Water Monitoring

As concluded in the Phase 2 Assessment (APPENDIX H), ongoing monitoring associated to site contamination is not required.

Ongoing operational groundwater and surface water environmental monitoring requirements would be documented in the Site OEMP as identified within the Stormwater Assessment (APPENDIX J).

11.5 Residual Risk

<table>
<thead>
<tr>
<th>Description</th>
<th>Discussion</th>
<th>Comment</th>
<th>Likelihood</th>
<th>Consequence</th>
<th>Residual Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Quality and Hydrology</td>
<td>Untreated stormwater or waste impacting on receiving land and downstream waterways</td>
<td>Segregation of clean surface water from potentially contaminated water. Surface water runoff to be contained within the site and stored in on site detention dams.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Contamination of surface water or groundwater as a result of uncontrolled release/spill of fuel, asbestos and other waste</td>
<td>Fuelling areas, and hazardous chemical storage would be bunded in accordance with Australian Standards ACM storage containers and transport vehicles would be sealed. Spill kits would be stored adjacent to all activities and made available to all vehicles.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Leakage/seepage of liquid waste to soil and groundwater</td>
<td>Unloading and treatment of liquid waste contained within Liquid Waste Processing Facility building. The floor is sloped and bunding installed such that</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>Description</td>
<td>Discussion</td>
<td>Comment</td>
<td>Likelihood</td>
<td>Consequence</td>
<td>Residual Risk</td>
</tr>
<tr>
<td>-------------</td>
<td>------------</td>
<td>---------</td>
<td>------------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>any spills or runoff would be contained within the building.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12.0 AIR QUALITY, ODOUR AND GREENHOUSE GAS

<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
</tr>
</thead>
</table>
| Climate Change and Air Quality and Odour | ■ Dust generation and movement during construction and operation reducing air quality  
■ Hazardous emissions from the plant including cumulative impacts with other development in the air shed  
■ Impacts on climate change, including diesel emissions from heavy vehicles  
■ Emissions and smoke from wood burning causing air pollution\(^3\) | Medium |

12.1 Environmental Conditions or Values

12.1.1 Existing Climate Meteorological data

A representative metrological dataset was sourced from 2017 from the Canberra Airport Bureau of Meteorology weather station located approximately 3 km north east of the Site. 2017 was chosen based on having conservative annual average wind speeds and frequency of calms (lower than period average annual average wind speed and higher than period average frequencies of low wind speeds and calms). Data availability for 2017 was also high.

Wind data statistics and wind roses are presented in the Air Quality Assessment in APPENDIX K.

12.1.2 Sensitive Receivers

The closest sensitive receiver is the childcare centre approximately 700 m to the north-west of the Site. Further sensitive receivers (residential) are located approximately 1300 m to 1500 m from the Site.

12.1.3 Impact Assessment Criteria

The ACT EPA is currently in the process of formalising its policy position regarding air emissions and as such currently adopts the South Australian Environment Protection (Air Quality) Policy 2016 (Air EPP) (SA EPA, 2016) and associated South Australian Environmental Protection Authority (SA EPA) modelling guidelines. However, the SA EPA Ambient Air Quality Assessment guidelines contains very little model-specific guidance and to address this, where appropriate, model settings guidance has been referenced from the NSW modelling guidelines (NSW EPA, 2016). This includes dust deposition criteria to assess nuisance or amenity impacts, whilst odour impacts were evaluated against the SA Air EPP assessment criterion of 2 ou (99.9th percentile, 3-minute average).

Refer to Table 22 that presents the air quality criteria utilised for the Air Quality assessment.

---

\(^3\) Wood burning is not proposed as part of the Project.
Table 22: Impact Assessment Criteria

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Criteria</th>
<th>Units</th>
<th>Averaging period</th>
<th>Statistic</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM10</td>
<td>50</td>
<td>μg/m³</td>
<td>24-hour</td>
<td>Maximum</td>
<td>(SA EPA, 2016)</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>μg/m³</td>
<td>Annual</td>
<td></td>
<td>(NSW EPA, 2016)</td>
</tr>
<tr>
<td>PM2.5</td>
<td>25</td>
<td>μg/m³</td>
<td>24-hour</td>
<td>Maximum</td>
<td>(SA EPA, 2016)</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>μg/m³</td>
<td>Annual</td>
<td></td>
<td>(SA EPA, 2016)</td>
</tr>
<tr>
<td>TSP</td>
<td>90</td>
<td>μg/m³</td>
<td>Annual</td>
<td></td>
<td>(NSW EPA, 2016)</td>
</tr>
<tr>
<td>Dust deposition&lt;sup&gt;4&lt;/sup&gt;</td>
<td>2</td>
<td>g/m²/month</td>
<td>Annual</td>
<td></td>
<td>(NSW EPA, 2016)</td>
</tr>
<tr>
<td>Odour</td>
<td>2</td>
<td>odour units</td>
<td>3-minute&lt;sup&gt;5&lt;/sup&gt;</td>
<td>99.9th %tile</td>
<td>(SA EPA, 2016)</td>
</tr>
</tbody>
</table>

12.1.4 Existing Air Quality Background Levels

Air quality criteria for particulate matter relate to cumulative impacts and not just from the proposed activities (excluding dust deposition). Therefore, consideration of background particulate levels is required when using these criteria to assess potential impacts. For this assessment, a methodology similar to the Victorian State Environmental Protection Policy (Victorian Government Gazette, 2001) guidelines, was used to determine appropriate background concentration utilising data from the Canberra Airport Bureau of Meteorology weather station located north west of the Site. The results are summarised in Table 23.

Table 23: Background particulate concentration (2017) (Table 5.1, APPENDIX K)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>24-hour 70&lt;sup&gt;th&lt;/sup&gt; percentile (µg/m³)</th>
<th>Annual average (µg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM&lt;sub&gt;10&lt;/sub&gt;</td>
<td>11</td>
<td>9.7</td>
</tr>
<tr>
<td>PM&lt;sub&gt;2.5&lt;/sub&gt;</td>
<td>6.6</td>
<td>5.8</td>
</tr>
<tr>
<td>TSP&lt;sup&gt;6&lt;/sup&gt;</td>
<td>23</td>
<td>20</td>
</tr>
</tbody>
</table>

<sup>4</sup> Maximum increase in deposited dust level (insoluble solids)

<sup>5</sup> Calculated using the peak-to-mean ratio of 1.82 from the hourly average

<sup>6</sup> Double the PM<sub>10</sub> concentration
12.2 Investigations

Key potential air quality impacts associated with the Project include:

- Greenhouse gas emissions; and
- Odour and dust emissions during construction and operation of the Project.

12.2.1 Greenhouse Gas Emissions Assessment

A greenhouse gas emissions assessment was undertaken for the Project. Method 1 from the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* incorporating the *National Greenhouse and Energy Reporting (Measurement) Amendment (2018 Update) Determination 2018* was used to estimate emissions from the construction and operation of the Project.

12.2.2 Air Quality Assessment

The Air Quality Assessment (*APPENDIX K*) utilised guidelines in accordance with 12.1.3. The following investigation was undertaken:

- Preparation of dust and odour emission inventories;
- Processing of meteorological data;
- Dispersion modelling;
- Post processing of predicted ground level concentrations; and
- Assessment of impacts.

*Dust and odour emission inventories*

The Air Quality Assessment estimated emissions for each potential source of the Project for a worst-case operation scenario. Refer to *APPENDIX K* for the assumptions associated with emission estimation for the Project. Emissions of TSP, PM$_{10}$, PM$_{2.5}$ are assessed to be associated with dust from the following activities of the Project:

- Material loading and unloading;
- Crushing and Screening;
- Wind Erosion; and
- Wheel Generated Dust (from paved and unpaved roads).

Odour emissions were also estimated for the storage of loose compost material in the Landscape Storage Yard.

A summary of estimated emissions from the Project is provided in Table 24.

**Table 24: Estimated Project emissions (refer Table 7.1, APPENDIX K)**

<table>
<thead>
<tr>
<th>Activity</th>
<th>TSP</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>TSP</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>g/s</td>
<td>% of total emissions</td>
<td></td>
<td>g/s</td>
<td>% of total emissions</td>
<td></td>
</tr>
<tr>
<td>Loading/unloading</td>
<td>4.1 x 10$^{-1}$</td>
<td>1.3 x 10$^{-1}$</td>
<td>3.1 x 10$^{-2}$</td>
<td>10%</td>
<td>14%</td>
<td>21%</td>
</tr>
<tr>
<td>Crushing</td>
<td>1.9 x 10$^{-2}$</td>
<td>7.6 x 10$^{-3}$</td>
<td>4.4 x 10$^{-4}$</td>
<td>0.46%</td>
<td>0.83%</td>
<td>0.30%</td>
</tr>
</tbody>
</table>
### Activity

<table>
<thead>
<tr>
<th>Activity</th>
<th>TSP (g/m²)</th>
<th>PM₁₀ (g/m²)</th>
<th>PM₂.₅ (g/m²)</th>
<th>TSP (%)</th>
<th>PM₁₀ (%)</th>
<th>PM₂.₅ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>5.8 x10⁻²</td>
<td>3.5 x10⁻²</td>
<td>5.3 x10⁻³</td>
<td>1.4%</td>
<td>3.8%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Wind erosion (stockpiles)</td>
<td>1.5 x10⁻¹</td>
<td>7.4 x10⁻²</td>
<td>1.1 x10⁻²</td>
<td>3.5%</td>
<td>8.0%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Wheel generated dust (paved roads)</td>
<td>1.2 x10⁻⁰</td>
<td>2.2 x10⁻²</td>
<td>3.3 x10⁻³</td>
<td>29%</td>
<td>2.4%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Wheel generated dust (unpaved roads)</td>
<td>2.3 x10⁻⁰</td>
<td>6.5 x10⁻¹</td>
<td>9.7 x10⁻²</td>
<td>54%</td>
<td>70%</td>
<td>65%</td>
</tr>
<tr>
<td>Odour emission rate (ou.m³/s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compost Storage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dispersion modelling**

Dispersion modelling was performed using CALPUFF. Industry standard controls for both odour and dust emissions were adopted in dispersion modelling and consideration for activities sited within enclosed buildings including, liquid waste processing, waste sorting and recycling. Modelled emission source locations are shown in Figure 33.
Figure 33: Emission Source Locations
12.3 Potential Impacts

The Project does not include wood air burners and/or electrical generation as previously identified within the Scoping Document. Therefore, impacts from this activity have not been assessed.

12.3.1 Greenhouse Gas Emissions

Project fuel and electricity consumption were estimated to calculate greenhouse gas emissions as summarised in Table 25.

Key assumptions included:

- Construction period 20 weeks (construction to be staged over 12 months)
- Operation 16 hours per day, 50 weeks per year
- Construction and Operation Equipment listing per Section 2.3.1 and Section 2.4.1.
- Energy Content Factor for diesel 38.6 GJ.kL.
- Energy Content Factor for electricity 0.82 kg CO$_2$e/kWh.

Estimated Project Annual Net GHG Emissions are presented in the following Table.

Table 25: Estimated GHG Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>Estimated GHG Emissions (t CO$_2$e) per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Emissions – Construction (Scope 1)</td>
<td>418</td>
</tr>
<tr>
<td>Fuel Emissions – Operation (Scope 1)</td>
<td>8,660</td>
</tr>
<tr>
<td>Electricity Emissions – Construction (Scope 2)</td>
<td>-</td>
</tr>
<tr>
<td>Electricity Emissions – Operation (Scope 2)</td>
<td>1,337</td>
</tr>
<tr>
<td><strong>Total Emissions</strong></td>
<td><strong>10,415</strong></td>
</tr>
</tbody>
</table>

12.3.2 Air Quality

Dispersion modelling results presented in the Air Quality Assessment (APPENDIX K) demonstrate compliance with relevant criteria shown in Table 26 except for PM$_{10}$ concentrations in one 24-hour period within the modelled year. Figure 34 shows that the second highest 24 hour PM$_{10}$ concentration does not impact on the nearest sensitive receptor. The methodology of the dispersion model is conservative given each emission source is modelled at maximum capacity for the operating hours throughout the year and the likelihood that all emission sources would be operating concurrently and under meteorological conditions required for exceedance and elevated background concentrations is considered low. Considering this, the assessment demonstrates that there is low risk to air quality associated with the Project.

---

7 Includes High Quality Truck Movement to Windellama Landfill
8 Electricity emissions during construction are considered to be negligible
Figure 34: Comparison of Predicted 24 hour PM$_{10}$ Concentrations

The modelling results are summarised in Table 26.
Table 26: Dispersion modelling results (refer Table 9.1, APPENDIX K)

<table>
<thead>
<tr>
<th>Receptor ID</th>
<th>TSP</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>Deposition</th>
<th>Odour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Averaging Period</td>
<td>Annual</td>
<td>24-hour$^7$</td>
<td>Annual</td>
<td>24-hour$^6$</td>
<td>Annual</td>
</tr>
<tr>
<td>Units</td>
<td>µg/m³</td>
<td>µg/m³</td>
<td>µg/m³</td>
<td>g/m²/month</td>
<td>odour units</td>
</tr>
<tr>
<td>Criteria</td>
<td>90</td>
<td>50</td>
<td>25</td>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>Closest sensitive Receptor</td>
<td>23</td>
<td>50</td>
<td>18</td>
<td>13</td>
<td>7.1</td>
</tr>
</tbody>
</table>

12.4 Project Mitigation Measures

12.4.1 Construction

Construction of the Project would involve some earth works to establish new roads, site entrance, building slabs and surface water infrastructure. The following measures would be implemented to manage dust and odour.

- Dust suppression on haul routes and during earth works.
- Controlled access point for site vehicles.
- Temporary wheel wash

12.4.2 Operation

The following measures will be implemented on-site for both the construction and operational phases of the Project to ensure it is energy efficient and GHG emissions are mitigated where feasible.

- Idling time of plant and equipment would be limited;
- Regular maintenance to ensure compliance with relevant construction equipment standards;
- Overnight lighting limited to that necessary for operations, security and emergency access; and
- Equipment would be fitted with exhaust controls.

The Project aims to significantly reduce GHG emissions through recycling of waste materials and diversion from landfill. As shown in Figure 18 in Chapter 8.0 Waste and materials, it is estimated up to 460,000 tonnes of waste would be diverted from landfill each year. Based on 2018 National Greenhouse Accounts Factors this would equate to approximately 300,000 tCO$_2$e.

During operation, the following air quality mitigation measures would be in place to meet air quality criteria.

- Liquid waste processing and C&D and C&I recycling would be enclosed within buildings.
- Dust suppression by watering of internal haul routes.
- Water sprays at loading and unloading zones.

---

$^7$ Maximum

$^{10}$ 99.9th Percentile
### 12.5 Residual Risk

Residual risks relating to climate change, air quality, odour and greenhouse gases are presented in the table below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Discussion</th>
<th>Comment</th>
<th>Likelihood</th>
<th>Consequence</th>
<th>Residual Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate Change and Air Quality</td>
<td>Dust generation and movement during construction and operation reducing air quality</td>
<td>The Air Quality Assessment demonstrates compliance with relevant criteria.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Hazardous emissions from the plant including cumulative impacts with other development in the air shed</td>
<td>The Air Quality Assessment demonstrates compliance with relevant criteria.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Impacts on climate change, including diesel emissions from heavy vehicles</td>
<td>Overall the Project will significantly reduce GHG emissions through recycling of waste materials and diversion from landfill.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
</tbody>
</table>
13.0 SOCIO-ECONOMIC AND HEALTH

<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-Economic and Health</td>
<td>Facilities and materials storage providing harbour to vermin and pest animals which impact upon health and amenity</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Odour from transport, storage and processing of waste impacting on amenity and health</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health risk associated with the air pollution from waste transportation, storage and processing (such as wood burning)¹¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impact on Mugga Resource Management Centre operation due to redirected waste to the proposed facility.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impact on health of workers and nearby residents from exposure to hazardous waste or harmful particles during operation.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk of other waste facilities not being able to accept the residual/recyclable waste.</td>
<td></td>
</tr>
</tbody>
</table>

¹¹ Wood burning is not proposed as part of the Project.

13.1 Environmental Conditions or Values

The Site is centrally located within the ACT within an existing industrial area that has good transport networks to the wider region. The Site is zoned General Industrial and Industrial Mixed Use and is surrounded by Industrial mixed use, open space and transport and services zonings, which are compatible land uses with the Project.

No sensitive receivers or heritage items or areas are identified within proximity to the Site with the nearest residential receivers approximately 1300 m to 1500 m to the South East (Figure 3), in addition to a childcare centre located approximately 700 m north-west of the Site.

The closest residential location to the West is over 2 kilometres to the Site in Narrabundah. According to the 2016 Census (ABS, 2016), Fyshwick has a total residential population of 56, which represents less than 0.0001 percent of the ACT’s total population.

13.2 Investigations

The socio-economic and health impacts of the Project have been assessed on an iterative basis as part of the EIS, considering the relevant assessments completed as part of this EIS. A Health Impact Assessment is also provided within APPENDIX K of the EIS.
13.3 Potential Impacts

The Project does not include wood air burners and/or electrical generation as previously identified within the Scoping Document. Therefore, impacts from this activity have not been assessed.

Socio-Economic

As identified within Chapter 2 of the EIS, there is a clear demand for increased resource recovery of waste streams as evident by applicable and relevant legislation and policy for the Site and the identification and assessment of waste streams that are proposed to be accepted and processed by the Project. In addressing this need, the Project also represents value for money due to the proposed waste treatment technology that would result in more efficient resource recovery and improving efficiencies associated with strengthening linkages between the Proponent and the management of waste in the ACT.

The Project has the capacity and capability to provide a regional waste management solution for differing waste streams, thereby reducing the potential waste footprint of the ACT (and consequent economic and social impacts) and providing the community with equitable access to waste management services.

Providing a central location for waste management would secure long term cost efficiencies such as aggregation (waste activities being located closer together) and densification of waste resources that will reduce the economic and social costs associated with recovery of resources that would otherwise go to landfill and the consequent costs associated with transportation of these waste streams resulting in significant reduction in greenhouse gas generation.

Direct economic benefits in the form of local employment opportunities during construction and operation of the project would be realised through the generation of employment opportunities (providing 84 full time jobs during operation) and potential income to local businesses, through facilitating a circular economy and products that are reusable in the ACT and wider region.

The socio-economic costs upon property values and housing are considered negligible, as the Project is a compatible land use with the surrounding area and has sufficient distance to residential and other sensitive receivers.

Health Impact

The Health Impact Assessment provides an analysis of relevant technical studies as they relate to human health identifying that while the Project may potentially have some negative impacts in relation to amenity (i.e. air, noise), they are within relevant regulatory criteria and consequently the likely impacts upon human health will be low (APPENDIX K of the EIS).

Management measures for the acceptance, handling and processing of waste are proposed as part of the Project to reduce risk of exposure to potential hazardous waste on or off the Site (refer to Chapter 8.0) in addition to a range of further hazardous and risk scenarios associated with human health as identified and addressed within Table 31 in Chapter 15.0 Hazards and Risk of the EIS. This includes potential human health risks associated with vermin and potential air and odour impacts from the transport, storage and processing of waste streams of the Project.

Furthermore, while there is potential for spills and leaks of hazardous materials and chemicals stored/used onsite the volumes of these chemicals are not expected to create a significant release hazard to human health (refer to Table 14). Despite this, measures to manage spills and leaks of hazardous materials and chemicals are provided in relevant chapters throughout the EIS including Chapter 15.0.
13.4 Proposal Mitigation Measures

The health impact assessment identifies that given the Site’s proposed land use that is consistent with previous land use and existing zoning, and the Site’s proximity to sensitive receivers, the potential human health impacts of the Project are relatively low while socio-economic benefits of the Project are achieved.

Overall the Project is consistent with all relevant regulatory strategies for the Site and surround area and will provide for an accessible, reliable and affordable resource recovery facility within an area identified as appropriate for this activity. No additional mitigation measures are identified within this chapter or within the Human Health Assessment (APPENDIX K), taking into consideration the mitigation and management measures proposed for further issues such as air quality and hazards and risks.
### 13.5 Residual Risk

<table>
<thead>
<tr>
<th>Description</th>
<th>Discussion</th>
<th>Comment</th>
<th>Likelihood</th>
<th>Consequence</th>
<th>Residual Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-Economic and Health</td>
<td>■ Facilities and materials storage providing harbour to vermin and pest animals which impact upon health and amenity.</td>
<td>The design and management of appropriate waste handling within buildings, together with further design and management such as the Site being shaped to be free draining to prevent ponding of water and attraction of birds, mosquitos and/or vermin. Refer to Table 31 (Chapter 15.0 Hazards and Risk) for further mitigation in relation to this issue.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>■ Odour from transport, storage and processing of waste impacting on amenity and health</td>
<td>As identified within the Air Quality Assessment, the Project is assessed as being within relevant air quality regulatory requirements (including odour, dust deposition and particulate matter) at sensitive receiver locations.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>■ Health risk associated with the air pollution from waste transportation, storage and processing</td>
<td>As identified within the Air Quality Assessment, the Project is assessed as being within relevant air quality regulatory requirements (including odour, dust deposition and particulate matter) at sensitive receiver locations.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>Impact on Mugga Resource Management Centre operation due to redirected waste to the proposed facility.</td>
<td>As identified within chapter 2, the opportunity to manage waste in accordance with the waste hierarchy is a key policy driver of the project including to “maximise the recovery and re-use of resources”. The variety of waste streams proposed by the Project will ensure that the impact upon Mugga Resource Management Centre operation is unlikely.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Impact on health of workers and nearby residents from exposure to hazardous waste or harmful particles during operation.</td>
<td>As identified within the Air Quality Assessment, the Project is assessed as being within relevant air quality regulatory requirements (including odour, dust deposition and particulate matter) at sensitive receiver locations. Implementation of a site OH&amp;S plan in accordance with environmental management plans and the Work Health and Safety Regulation will be implemented including operational maintenance procedures and training in accordance with environmental management plans.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Risk of other waste facilities not being able to accept the residual/recyclable waste.</td>
<td>Should any operations at the Site be temporarily shut down or if there was an oversupply of incoming waste, waste could be diverted directly to a licensed facility such as Windellama Landfill, which is operated by the Proponent. Refer to Section 8.2.7 which addresses this issue further.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>
14.0 NOISE AND VIBRATION

<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
</tr>
</thead>
</table>
| Noise and Vibration        | ■ Noise and vibration impacts on the amenity of sensitive receivers during construction  
                             | ■ Noise and vibration impacts on the amenity of sensitive receivers during operation.                      | Medium                        |

14.1 Environmental Conditions or Values

As previously identified within the EIS, the Site is located within a general industry and industrial mixed use zone and is surrounded by industrial mixed use and general industrial land uses.

14.1.1 Existing Climate

Analysis of prevailing weather condition in the area identified noise enhancing meteorological scenarios for both day and night periods and as such, the Noise and Vibration Assessment (APPENDIX M) assesses three meteorological conditions including a neutral and noise enhancing day time scenario and night time noise enhancing conditions.

14.1.2 Noise Receiver Locations

 Receivers that were assessed as part of the Noise and Vibration Assessment are shown in Figure 35. They include industrial receivers (R1 to R12) approximately 40-60 m from the Site, residential receivers (R13 to R15) approximately 1300 to 1500 m from the Site, urban recreation (R16 and R17) 420 to 520 m from the Site, in addition to a childcare centre (R18) located approximately 700 m north-west of the Site.
14.2 Investigations

Key potential noise and vibration impacts associated with the Project include:

- Noise and vibration impacts upon the amenity of sensitive receivers during construction and operation of the Project.

14.2.1 Noise assessment

The Noise and Vibration assessment (APPENDIX M) was undertaken with consideration of the ACT EPA (2010) Noise Environment Protection Policy (Noise EPP), designed to assist in the understanding of the Environment Protection Act 1997 (the Act) and Environment Protection Regulation 2005 (the Regulation) as they apply to noise.

The Noise EPP and the Act identifies seven noise zones based on land use policies in the ACT. The zones have set noise standards that must meet day (7.00am to 10.00pm Monday to Saturday and 8.00am to
10.00pm Sundays and Public Holidays) and night (10.00pm to 7.00am Monday to Saturday and 10.00pm to 8.00am Sundays and Public Holidays) criteria. The relevant land use zone criteria is summarised in Table 27. In the case where two different noise zones meet, the average (rounded up to the nearest dB) is taken as the noise standard for that boundary.

**Table 27: Noise Criteria Standard**

<table>
<thead>
<tr>
<th>Zone</th>
<th>Zone Type</th>
<th>Day</th>
<th>Night</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Industrial Areas</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>B</td>
<td>City Centres and Town Centres</td>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td>C</td>
<td>Land in group centres, corridor sites and office sites</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>D</td>
<td>Land in a commercial C4 zone (other than city, town or group centres)</td>
<td>50</td>
<td>35</td>
</tr>
<tr>
<td>E</td>
<td>Land (other than city, town or group centres) in a restricted access recreation zone or a broad acre zone</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>F</td>
<td>Land (other than city, town or group centres) in a commercial C5 zone, a TSZ2 services zone a community facility zone or a leisure and accommodation zone</td>
<td>Same as the noise standard for the adjoining noise zone with the loudest noise standard for the time period</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>All other land, other than in the Central Nation Area (Fairburn)</td>
<td>45</td>
<td>35</td>
</tr>
</tbody>
</table>

Note: 1. Based on the ACT Noise Measurement Manual (ACT, 2009) and the Noise EPP, it is inferred that the noise levels are assessed as $L_{A_{10,T}}$ dB(A) where $T$ is no less than 5 minutes and no greater than 15 minutes.

In addition to the noise criteria standards identified within Table 27, the Australian Association of Acoustic Consultants provides a recommended noise assessment procedure for childcare centres titled “Technical Guideline for Child Care Centre Noise Assessment 2013”. This assessment procedure has been utilised recommending the following criteria for external noise impact upon children in child care centres:

- The $L_{A_{eq-1hr}}$ intrusive noise level from industry, road traffic or rail noise at any location within an outdoor play area should not exceed 55 dB(A).
- The $L_{A_{eq-1hr}}$ intrusive noise level from industry, road traffic or rail noise within the indoor play or sleeping areas should not exceed 40 dB(A).

Typically buildings provide 10 dB of attenuation of external noise levels when windows are open for ventilation. This equates to an $L_{A_{eq-1hr}}$ intrusive 50 dB external noise level.

The noise criteria standards were compared to noise modelling undertaken as part of the Noise and Vibration assessment (APPENDIX M).

The noise modelling takes into consideration the sound power level of the proposed site operations, activities and equipment, and applies adjustments for attenuation from geometric spreading, acoustic shielding from
Intervening ground topography, ground effect, meteorological effects and atmospheric absorption (refer to APPENDIX M for the specifics of these considerations associated with the modelling).

Modelling was undertaken for a worse case operational scenario including all noise sources operating at once under neutral and noise enhancing weather conditions. This is a worst case scenario as individual plant items would operate intermittently, and internal movements and equipment are likely to fluctuate throughout the day.

As identified in Chapter 2.0 the Project is proposed to receive waste and dispatch products 24 hours a day with processing operation hours of 6am to 6pm weekdays. Therefore, in addition, modelling a scenario of night time truck movements for deliveries, the modelling scenario for processing operations has been completed for both night time and day time conditions (operations between 6am-7am are considering part of the night time period).

In addition to measuring all operative plant running simultaneously over a 15 minute period, the modelling also includes 73 heavy vehicles entering and exiting the facility and using the weighbridge in the projected busiest hour of the day and 19 heavy vehicles entering and exiting the Site during the busiest night time hour (as identified within the Traffic Impact Assessment APPENDIX E).

14.2.2 Vibration Assessment

Impacts from vibration can be considered both in terms of effects on building occupants (human comfort) and the effects on the building structure (building damage). Of these considerations, the human comfort limits are the most stringent and therefore have been utilised for the purpose of assessment.

14.3 Potential Impacts

14.3.1 Noise

Project modelling of the scenarios demonstrate that operational noise and night time truck movements generated by the Project will comply with their respective criteria at all identified receivers with the exception of the R2 industrial receiver, which is expected to experience a noise level 1 dB above criteria during the day (Table 28).

### Table 28: Predicted Noise Levels

<table>
<thead>
<tr>
<th>Receiver ID</th>
<th>Standard Zone</th>
<th>Criteria (dBA L10)</th>
<th>Predicted Noise Level (dBA L10)</th>
<th>Morning period (Inversion 6am to 7am)</th>
<th>Night (10pm to 6am) (Inversion, Trucks Only)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Day</td>
<td>Night</td>
<td>Neuteral Wind</td>
<td></td>
</tr>
<tr>
<td>R1 (Industrial)</td>
<td>A</td>
<td>65</td>
<td>55</td>
<td>62</td>
<td>60</td>
</tr>
<tr>
<td>R2 (Industrial)</td>
<td>A</td>
<td>65</td>
<td>55</td>
<td>66</td>
<td>65</td>
</tr>
<tr>
<td>R3 (Industrial)</td>
<td>A</td>
<td>65</td>
<td>55</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>R4 (Industrial)</td>
<td>A</td>
<td>65</td>
<td>55</td>
<td>61</td>
<td>62</td>
</tr>
<tr>
<td>R5 (Industrial)</td>
<td>A</td>
<td>65</td>
<td>55</td>
<td>60</td>
<td>61</td>
</tr>
</tbody>
</table>

Golder
<table>
<thead>
<tr>
<th>Receiver ID</th>
<th>Standard Zone</th>
<th>Criteria (dBA L10)</th>
<th>Predicted Noise Level (dBA L10)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Day (Neutral)</td>
<td>Day (3m/s Easterly Wind)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Day</td>
<td>Night</td>
</tr>
<tr>
<td>R6 (Industrial)</td>
<td>A</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R7 (Industrial)</td>
<td>A</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R8 (Industrial)</td>
<td>A</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R9 (Industrial)</td>
<td>A</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R10 (Industrial)</td>
<td>A</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R11 (Industrial)</td>
<td>A</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R12 (Industrial)</td>
<td>A</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R13 (Residential)</td>
<td>E</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>R14 (Residential)</td>
<td>E</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>R15 (Residential)</td>
<td>E</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>R16 (Urban Open Space)</td>
<td>F</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R17 (Urban Open Space)</td>
<td>F</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R18 (Childcare Centre)³</td>
<td>50</td>
<td>50</td>
<td>42</td>
</tr>
</tbody>
</table>

Note: 1. Day is defined as 7.00am to 10.00pm Monday to Saturday, 8.00am to 6.00pm Sundays and Public Holidays.  
2. Night time period is from 10pm-7am.  
3. Based on 40 dBA internal noise + 10dB to correct for predicted external noise level.

Results for the early morning period (6am to 7am) during noise enhancing meteorological temperature inversion conditions show potential exceedances at the industrial receivers, R16 (urban open space), in addition to potential exceedance at the nearest residential receivers to the south east and south west of the Site (R13 and R14 respectively).

As identified within the Noise and Vibration Assessment (APPENDIX M), the potential noise exceedances are predominantly due to the Wood Processing Facility (primarily tub grinding) and the crushing and screening yard. Excluding these activities during 6am to 7am and winter temperature inversion conditions results in a 5-9 dB reduction at the nearest residential receiver (and R16 urban open space) to below the night time noise criteria (Table 29). Similarly, excluding these activities during 6am to 7am during winter temperature inversion conditions, noise impacts are expected to reduce by 3-7 dB at the nearest industrial receivers with the resultant noise levels ranging from 56-63 dB at these receivers (Table 29).
As shown in Table 29 all non-industrial receivers are predicted to comply with relevant criteria during the morning period. Further noise management measures are proposed in Section 14.4 to further reduce these predicted noise levels and contribute to addressing potential exceedances at the nearest commercial/industrial receivers during morning period operations.

### 14.3.2 Vibration

Proposed operational equipment for the Project that is identified as vibration intensive is provided in Table 30.

---

**Table 29: Mitigated Operational Noise Levels (No Wood Processing, Cushing/Screen Operations)**

<table>
<thead>
<tr>
<th>Receiver ID</th>
<th>Criteria (dBA L10)</th>
<th>Predicted Noise Level (dBA L10)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Day</td>
<td>Night</td>
</tr>
<tr>
<td>R1</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R2</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R3</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R4</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R5</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R6</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R7</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R8</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R9</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R10</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R11</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R12</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R13</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>R14</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>R15</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>R16</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R17</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>R18</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>
Table 30: Vibration Intensive Operational Equipment

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Location</th>
<th>Distance to closest receiver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crusher</td>
<td>Crushing and screening yard</td>
<td>75 metres</td>
</tr>
<tr>
<td>Vibration Platform</td>
<td>Concrete pre cast facility</td>
<td>65 metres</td>
</tr>
</tbody>
</table>

Due to the distance of this equipment from the closest receivers, the anticipated vibration is identified as being imperceptible and will remain under the vibration limits for human comfort and building damage as identified within the Noise and Vibration assessment (APPENDIX M). No further mitigation or management is required with regard to potential vibration impacts of the Project.

14.4 Project Mitigation Measures

A worst case scenario of the Project has been assessed by the Noise and Vibration assessment (APPENDIX M) predicting that noise levels at all non industrial receivers (including residential/sensitive receivers) will comply with all relevant noise and vibration criteria when operation of the wood processing yard tub grinder and crushing and screening yard do not commence until 7am.

While the noise modelling is considered to be conservative, the Project will propose the following measures to mitigate noise associated with the Project.

- Operation of the wood processing yard tub grinder and crushing and screening yard, will not commence until 7am.
- Proposed plant and equipment will be selected and maintained to achieve the sound power levels outlined in the Noise and Vibration assessment (APPENDIX M) particularly with regard to tub grinders, crushers and shredders.
- Plant and equipment will be maintained and not generate excessive noise.
- Broadband reversing alarms will be utilised in place of traditional beeper reversing alarms.
- Machinery will be operated in a manner that reduces maximum noise level events.
- Site awareness training / environmental inductions will include a section on noise mitigation techniques / measures to be implemented when on the Site.
## 14.5 Residual Risk

<table>
<thead>
<tr>
<th>Description</th>
<th>Discussion</th>
<th>Comment</th>
<th>Likelihood</th>
<th>Consequence</th>
<th>Residual Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise and Vibration</td>
<td>Noise and vibration impacts on the amenity of sensitive receivers during construction</td>
<td>Construction is of limited duration with standard construction hours and would be in accordance with a CEMP (including transport, air and noise subplans).</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Noise and vibration impacts on the amenity of sensitive receivers during operation.</td>
<td>With mitigation, noise levels at all sensitive receivers will be below relevant noise and amenity criteria.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
</tbody>
</table>


### 15.0 HAZARDS AND RISK

<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazards and Risk</td>
<td>Fire or explosion originating in the facility impacting on surrounding land uses and human health</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Risk of bushfire or fire on neighbouring sites impacting the proposed facility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hazard to aircraft operations during operation, including bird strikes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Critical infrastructure failure impacting on facility operations</td>
<td></td>
</tr>
</tbody>
</table>

### 15.1 Environmental conditions and values

This chapter addresses the hazards and risks associated with the construction and operation of the Project.

The Planning Report and Scoping Document identifies potentially hazardous scenarios associated with the proposal including fire, hazard to aircraft operations and critical infrastructure failing.

Potential hazardous scenarios identified include:

- Loss of containment, fuel or oil leading to environmental pollution and possible fire if an ignition source is present.
- Fire at the Site (waste material).
- Fire in site vehicles, infrastructure and/or buildings.
- Bushfire at site boundary.
- Delivery and/or processing of waste not licenced to be accepted at the Site.
- Air quality (including dust and odour).
- Noise generation.
- Loss of containment of stormwater from storage ponds.
- Waste spreading offsite.
- Stormwater and flooding impacts.
- Biological hazards.
- Amenity (including spread by litter, vermin and pests).
- Injury to public (accessing unauthorised areas).
- Disruption to Services.
- General Occupational Health and Safety Hazards.
To address the hazardous scenarios including their potential cause, consequence and safeguards, mitigation and management are identified and addressed in Table 31. In addition, specific investigation and assessment on the potential hazard and risk rated as medium or above is provided within this chapter including aircraft operations during operation (including bird strikes) and bushfire.
Table 31: Hazard Identification Scenarios

<table>
<thead>
<tr>
<th>Event</th>
<th>Cause / Comments</th>
<th>Potential Consequences</th>
<th>Prevention / Protection / Mitigation / Management / Safeguards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of containment, fuel or oil.</td>
<td>Mechanical failure of site or public vehicles</td>
<td>Environmental damage if spill is not contained</td>
<td>▪ Regular inspections and maintenance</td>
</tr>
<tr>
<td></td>
<td>Possible fire if ignition source is present.</td>
<td>Risk of Fire</td>
<td>▪ Any spills cleaned up immediately. Spill kits located at appropriate location on site with staff appropriately trained in their use.</td>
</tr>
<tr>
<td></td>
<td>Loss of containment of hydraulic oil from equipment</td>
<td>Personnel hazard and damage to property</td>
<td>▪ Spill containment to be managed in accordance with AS 1940.</td>
</tr>
<tr>
<td></td>
<td>Possible ignition of stockpiled combustible materials.</td>
<td>Damage to infrastructure</td>
<td>▪ Site emergency response plan including emergency contact numbers provided within management system for the site.</td>
</tr>
<tr>
<td></td>
<td>Possible ignition of stockpiled combustible materials.</td>
<td>Environmental damage if spill is not contained.</td>
<td>▪ Fire protection (including fire extinguishers, separation distances etc. provided and inspected periodically.</td>
</tr>
<tr>
<td></td>
<td>Possible ignition of stockpiled combustible materials.</td>
<td>Risk of fire spreading across site and to adjoining properties</td>
<td>▪ Separation distances in accordance with AS 1940 and as advised within the Bushfire Report (APPENDIX N).</td>
</tr>
<tr>
<td></td>
<td>Possible ignition of stockpiled combustible materials.</td>
<td>Personnel hazard and damage to property.</td>
<td>▪ No smoking around plant equipment.</td>
</tr>
<tr>
<td></td>
<td>Possible ignition of stockpiled combustible materials.</td>
<td>Personnel hazard and damage to property.</td>
<td>▪ Appropriate stockpiling in designated areas</td>
</tr>
<tr>
<td></td>
<td>Possible ignition of stockpiled combustible materials.</td>
<td>Personnel hazard and damage to property.</td>
<td>▪ No smoking at stockpile locations.</td>
</tr>
<tr>
<td></td>
<td>Possible ignition of stockpiled combustible materials.</td>
<td>Personnel hazard and damage to property.</td>
<td>▪ Ongoing monitoring by operators to ensure potential fire situations are identified and addressed appropriately.</td>
</tr>
<tr>
<td></td>
<td>Possible ignition of stockpiled combustible materials.</td>
<td>Personnel hazard and damage to property.</td>
<td>▪ Fire management strategy to be provided as part of the OEMP.</td>
</tr>
<tr>
<td></td>
<td>Possible ignition of stockpiled combustible materials.</td>
<td>Personnel hazard and damage to property.</td>
<td>▪ Training to site personnel.</td>
</tr>
<tr>
<td></td>
<td>Possible ignition of stockpiled combustible materials.</td>
<td>Personnel hazard and damage to property.</td>
<td>▪ Site emergency response plan including emergency contact numbers provided within management system for the site.</td>
</tr>
<tr>
<td>Event</td>
<td>Cause / Comments</td>
<td>Potential Consequences</td>
<td>Prevention / Protection / Mitigation / Management / Safeguards</td>
</tr>
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</tr>
</tbody>
</table>
| Fire in site vehicles, infrastructure and/or buildings | Overheating of combustible materials. Ignition of flammable material or combustible material | Damage to property/vehicles Personnel hazard Environmental damage if spill is not contained. Risk of fire spreading across site and to adjoining properties | Training of operators. Maintenance of vehicles. No smoking outside of designated areas. Fire suppression systems serviced and inspected periodically. Water supplies – fire hydrant spacing, sizing and pressures should comply with AS2419.1 – 2005. Training and procedures in place for fire management within the environmental management plans for the Site. Site emergency response plan including emergency contact numbers provided within the CEMP and OEMP for the Site. Regular maintenance/housekeeping of buildings. Wind-blown litter is to be controlled. Spillage of flammable materials to be cleared up immediately. Appropriate measures to reduce the threat of fire spreading including mitigation and management identified within the Bushfire Report (APPENDIX N). This includes:  
- At the commencement of building works and in perpetuity, an Asset Protection Zone (APZ) should be established and maintained to the site boundaries from buildings, as per Figure 36 of this report. The APZ within the site shall be established and maintained as an inner protection area.  
- Access / egress arrangements – roads are designed to provide safe access around the site and to water supply for emergency services  
- Construction Standards (BALs) – Concrete Pre-cast Facility would be constructed in accordance with AS3959 for BAL 12.5;  
- Water supplies – fire hydrant spacing, sizing and pressures should comply with AS2419.1 – 2005. |
<table>
<thead>
<tr>
<th>Event</th>
<th>Cause / Comments</th>
<th>Potential Consequences</th>
<th>Prevention / Protection / Mitigation / Management / Safeguards</th>
</tr>
</thead>
</table>
| Bushfire at site Boundary         | External cause                                | Threat to people, property and environment on site   | - Measures as identified within the Bushfire Report *(APPENDIX N)* including:  
  - Flammable materials must be removed from site fencing.  
  - Bushfire evacuation / emergency management – the Proponent would develop plans to ensure compliance with current guidelines in the event of a bushfire.  
  - Access / egress arrangements – roads are designed to provide safe access around the site and to water supply for emergency services.  
  - Water supplies – fire hydrant spacing, sizing and pressures should comply with AS2419.1 – 2005.  
  - An APZ be established and maintained to the site boundaries from buildings, as per **Figure 36** of this report. The APZ within the site shall be established and maintained as an inner protection area. |
| Delivery and/or processing of waste not licenced to be accepted at the Site. | This may include delivery and/or processing of waste streams classified as hazardous, Group C and hazardous liquid waste. | Generation of toxic fumes  
Personnel exposure to toxic substances | - Waste screening Strategy (refer to **8.2.7**).  
- Operational procedures for management of waste as to be provided in environmental management plans. |
| Particulate generation (dust and odour) | Generation of dust and odour from operation of heavy equipment. | Personnel hazard and potential offsite impacts. | - Maintaining equipment and plant appropriately.  
- Covering waste loads  
- Further measures as identified within relevant chapters of the EIS. |
| Noise generation                  | Generation of noise from operation of heavy equipment. | Personnel hazard and potential offsite impacts. | - Maintaining equipment and plant appropriately.  
- Adhering to existing hours of construction and operation.  
- Use of Personal Protective Equipment. |
<table>
<thead>
<tr>
<th>Event</th>
<th>Cause / Comments</th>
<th>Potential Consequences</th>
<th>Prevention / Protection / Mitigation / Management / Safeguards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of containment of surface water from storage dams.</td>
<td>Leak or overflow at storage dams</td>
<td>Surface water and/or groundwater contamination if not contained appropriately.</td>
<td>- Further measures as identified within relevant chapters of the EIS in relation to Noise and environmental management plan documentation.</td>
</tr>
<tr>
<td>Biological hazards</td>
<td>Exposure</td>
<td>Threats to people and the environment, on site personnel and/or spread of disease offsite.</td>
<td>- Management and mitigation in accordance with Chapter 11.0 of the EIS in addition to management measures to be identified within the OEMP.</td>
</tr>
<tr>
<td>Waste spreading offsite</td>
<td>Waste not being stored/stockpiled appropriately</td>
<td>Personnel hazard and potential offsite impacts.</td>
<td>- Permitting the general public access to approved designated areas of the Site only.</td>
</tr>
<tr>
<td>Injury to public (accessing unauthorised areas)</td>
<td>Entry/access of unauthorised persons to site areas</td>
<td>Potential injury to person on site.</td>
<td>- Appropriate waste screening (refer to Chapter 8.2.7).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Litter control.</td>
</tr>
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<td></td>
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<td></td>
<td>- Vermin and pests controlled as to be outlined in environmental management plans.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Hygiene practices and Personal Protective Equipment.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>- Implementation of a site OH&amp;S plan.</td>
</tr>
<tr>
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<td></td>
<td>- Fencing and bunding surrounding the site to control windblown litter.</td>
</tr>
<tr>
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<td></td>
<td>- Enclosed buildings for unloading and sorting of waste.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>- Management of stockpiles to control size and dust emissions.</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>- Spill management and bunding as required.</td>
</tr>
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<td></td>
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<td></td>
<td>- Security of the site would be maintained during operation and construction including security fencing, which is locked when after hours of operation and/or when not in use.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Not allowing unauthorised persons access to designated approved areas of the site.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Appropriate signage and controls to direct unauthorised people appropriately.</td>
</tr>
<tr>
<td>Event</td>
<td>Cause / Comments</td>
<td>Potential Consequences</td>
<td>Prevention / Protection / Mitigation / Management / Safeguards</td>
</tr>
<tr>
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<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Disruption to services hazards</td>
<td>Disruption of underground or overhead services (electricity, and telecommunications) during construction.</td>
<td>Impact upon people and property.</td>
<td>- Services would be located on site prior to construction. Where appropriate services would be relocated prior to construction to ensure potential disruptions are reduced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Should any operations at the Site be temporarily shut down or if there was an oversupply of incoming waste, waste could be diverted directly to a licensed facility such as Windellama Landfill. Refer to Chapter 8.0, which addresses this issue further.</td>
</tr>
<tr>
<td>General occupational health and safety hazards to workers during construction and operation</td>
<td>Working in proximity to industrial equipment and workplaces</td>
<td>Personnel hazard</td>
<td>- Operational maintenance procedures and training in accordance with environmental management plans.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Implementation of a site OH&amp;S plan in accordance with environmental management plans and the Work Health and Safety Regulation.</td>
</tr>
</tbody>
</table>
15.2 Bushfire Risk Assessment

Blackash Bushfire Consulting (Blackash) has completed a bushfire risk assessment titled BlackAsh Bushfire Consulting (December 2018) Bushfire Risk Assessment and Management Plan (Bushfire Risk Assessment) provided in **APPENDIX N**. The Bushfire Risk Assessment was prepared in accordance with NSW Planning for Bushfire Protection 2006 (PBP) and Australian Standard for Construction of Buildings in Bushfire Prone Areas AS 3959.

**Objectives**

PBP provides objectives for the Bushfire Risk Assessment including:

- The aim of PBP is to use the NSW development assessment system to provide for the protection of human life (including fire fighters) and to minimise impacts on property from the threat of bushfire, while having due regard to development potential, onsite amenity and the protection of the environment.
- Afford occupants of any building adequate protection from exposure to a bushfire.
- Provide for defendable space to be located around buildings.
- Provide appropriate separation between a hazard and buildings, which, in combination with other measures, prevent direct flame contact and material ignition.
- Ensure that safe operational access and egress for emergency service personnel and occupants is available.
- Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads, in the asset protection zone.
- Ensure that utility services are adequate to meet the needs of firefighters (and others assisting in bushfire fighting).

**Assessment factors for bushfire risk**

Assessment factors for bushfire risk include climate conditions, vegetation (bushfire fuels), topography (effective slope) on and surrounding the Site. The vegetation surrounding the Site was determined to be grassland with small pockets of remnant woodland. The worst case slope was determined to be 0 – 5 degrees downslope with pockets of upslope areas. A conservative fire danger index (FDI) was adopted to be 100 based on local government areas surrounding the Site.

15.3 Potential Impacts

15.3.1 Bushfire risk

Utilising the assessment factors identified in Section 15.2, **Figure 36** combines the aspect, vegetation classification and slopes (upslope and 0 – 5 degrees downslope) for a credible worst case scenario to determine the Bushfire Attack Level (BAL) as designated in Australian Standard for Construction of Buildings in Bushfire Prone Areas (AS3959).

The Bushfire Attack Level (BAL) was determined to be BAL12.5 for built elements within the Site (refer to **APPENDIX N**). Note this is the lowest construction level in the Australian Standard for Construction of Buildings in Bushfire Prone Areas (AS3959). In addition the northern block construction of the proposed Concrete Pre-cast Facility building also requires compliance with BAL 12.5 construction standards.

The Bushfire Risk Assessment identifies that the Site has adequate access for firefighting and fire management purposes with utility services appropriate to meet the needs of firefighters (and others assisting in bushfire fighting).
Mitigation and management measures for fire (including potential bushfire) and further hazardous scenarios are summarised in Table 31.
Figure 36: Bushfire attack levels (BALs) within the site boundary (extracted from Blackash Bushfire Risk Assessment)
15.4 **Aircraft Operations**

The Site is located approximately 1.6 km south west from Canberra Airport within an existing industrial area and proposed to operate 24 hours a day, seven days a week.

15.4.1 **Investigation**

The potential impacts of the Project on aircraft associated with Canberra Airport have been assessed through an assessment against the Department of Infrastructure, Regional Development and Cities: Safeguarding Advisory Group (November 2018) “National Airports Safeguarding Framework” (NSAF).

15.4.2 **Potential Impacts**

**Site Lighting**

Lighting at the Site would be required 24 hours a day during operational hours.

According to NASF Guideline E – *Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airport*, the Site is located outside the 4 light control zones for ground light interference shown in **Figure 37**.

![Guideline E Attachment 1 to Lighting Guidelines](image)

**Figure 37**: Attachment 1 to Lighting Guidelines (Department of Infrastructure, Regional Development and Cities: Safeguarding Advisory Group (November 2018) “National Airports Safeguarding Framework”, Guideline E)
Lighting would be configured to direct light inward and downward toward the Site and would be unlikely to risk distraction to pilots.

**Building Height**

The NASF Guideline F – Managing the Risk of Intrusions into the Protected Airspace of Airports provides guidance on the protrusion of tall structures such as buildings, cranes and trees into operational airspace of airports. Based on the detailed Site survey (03153.02_DT_003.pdf dated 07 August 2018) elevation contours and required minimum 45 m clearance within the inner horizontal surface to airports, required operational airspace at the Site was estimated at RL 620 m AHD.

As per the detailed Site survey, the maximum existing building height on the Site is approximately RL 598 m AHD, which is well below the minimum clearance. No new buildings or structures at the Site are proposed above this height.

**Wildlife Strike Risk**

The NASF Guidelines, Guideline C – Managing Wildlife Strike Risk in the Vicinity of Airports provides guidance on managing risk of collisions between wildlife and aircraft at or near airports where that risk may be increased by presence of wildlife attracting land uses.

Guideline C provides guidance on land uses that present a risk of attracting wildlife, and as a ‘non-putrescible waste facility – transfer station’, the Project is identified as having a moderate wildlife attraction risk. However, compared to identified moderate to high ‘wildlife attraction risk’ sites including Jerrabomberra Wetlands Nature Reserve (high), Mount Pleasant Nature Reserve (moderate), Playing Fields (moderate) and the Fairbairn Golf Course (moderate) the Project is considered to result in a lower relative risk to airport operations due to size, location, proposed land use and management measures (including handling of non-putrescible waste within buildings). In addition, the risk of bird strike at Canberra Airport is comparably low relative to many other Australian airports situated in coastal areas where flocking birds are more likely to be present.

Guideline C also identifies that as the Project is located within a 3 km radius of Canberra Airport, mitigation and management measures are required, which are provided in Section 15.5.1.

### 15.5 Proposed mitigation measures

#### 15.5.1 Potential Management and Mitigation Measures

In addition the mitigation and management measures identified in Table 31, the following mitigation and management measures would also be implemented for the Project in relation to hazards and risk issues:

- C&I and C&D waste would be handled within buildings on the Site.
- The Site would be operated and maintained in accordance with management plans to reduce the potential attraction of wildlife (i.e. appropriate waste screening, litter control and hygiene practises).
- Waste tyres stockpiles sizes are limited and collected tyres would be shredded on site prior to regular transport off site for disposal. This would reduce risks associated to water collecting in tyres providing a breeding ground for vermin and mosquitos.
- The Site would be shaped to be free draining to prevent ponding of water and attraction of birds, vermin and mosquitos.
- A Monitoring program post-construction would be undertaken to assess the presence of wildlife and requirement for further mitigation measures.
## 15.6 Residual risks

Residual risks relating to hazards and risk are presented in the table below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Discussion</th>
<th>Comment</th>
<th>Likelihood</th>
<th>Consequence</th>
<th>Residual Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazards and Risk</td>
<td>Fire or explosion originating in the facility impacting on surrounding land uses and human health</td>
<td>Mitigation measures as identified within Table 31 including suitable fire suppression systems, training and response plans and separation distances in accordance with AS 1940 and as advised within the Bushfire Risk Assessment (APPENDIX N).</td>
<td>Remote</td>
<td>Major</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Risk of bushfire or fire on neighbouring sites impacting the proposed facility</td>
<td>The Site is predominantly cleared with an appropriate APZ to be maintained in addition to suitable water supplies, and flammable materials to be removed from site fencing.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Hazard to aircraft operations during operation, including bird strikes.</td>
<td>Given the Site’s location within an existing industrial area and proposing an industrial land use and height that is in keeping with the surrounding area, the project is unlikely to present a hazard to aircraft operations. Furthermore the design and management of appropriate lighting, handling of C&amp;I and C&amp;D waste within buildings, together with further design and management will appropriately mitigate hazard to aircraft operations to low.</td>
<td>Remote</td>
<td>Major</td>
<td>Low</td>
</tr>
<tr>
<td>Description</td>
<td>Discussion</td>
<td>Comment</td>
<td>Likelihood</td>
<td>Consequence</td>
<td>Residual Risk</td>
</tr>
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</tr>
<tr>
<td>Critical infrastructure failure impacting on facility operations</td>
<td>Services would be located on site prior to construction. Where appropriate services would be relocated prior to construction to ensure potential disruptions are reduced. Should any operations at the Site be temporarily shut down or if there was an oversupply of incoming waste, waste could be diverted directly to a licensed facility such as Windellama Landfill, which is operated by the Proponent. Refer to Chapter 8.0, which addresses this issue further.</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>
16.0 BIODIVERSITY

<table>
<thead>
<tr>
<th>Environmental Theme</th>
<th>Risk Identified</th>
<th>Pre-Mitigation Risk Assessment</th>
</tr>
</thead>
</table>
| Biodiversity        | ■ Impact on the vegetation within the powerline easement during construction and operation from parking, traffic access etc.  
                      ■ Impact on flora and fauna as a result of polluted or sediment laden water entering the wetland and the Molonglo River. | Medium                        |

16.1 Environmental Conditions or Values

16.1.1 Significant Species, Vegetation Communities and Registered Trees

Based upon a desktop search of ACTmapi, the following significant species and vegetation communities were identified as having the potential to occur within proximity to the Site:

■ Hoary Sunray (Leucochrysum albicans) listed as endangered under the *Environment Protection and Biodiversity Conservation Act 1999*.

■ Connectivity for Planning and Development – a core habitat and linkages with low to moderate colonisation potential was detected along the southern boundary of the southern portion up to 15m inside the boundary.

■ Vegetation community – amenity planting native vegetation (APN), exotic grassland (EXG) and native grassland (NG) was identified within the site boundary.

Furthermore, two threatened ecological communities (TECs) were identified on the Department of the Environment’s EPBC Act Protected Matters Search Tool as potentially occurring within the Study Area:

■ Natural Temperate Grassland of the Southern Tablelands of NSW and the Australian Capital Territory (Endangered, EPBC Act).

■ *White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland* (Critically Endangered, EPBC Act).

16.2 Investigations

Based upon the desktop findings, field investigations were completed to assess the potential direct and indirect impacts of the Project upon the Site and surrounding area (identified as the study area within the Ecological Assessment Report (EAR) provided in APPENDIX O).

The EAR assessed the ecological significance of threatened flora and fauna species, and Endangered Ecological Communities (EECs) that occur, or have the potential to occur, within the area to be impacted upon by the Project. Completed during the optimal survey season for most ACT threatened flora and fauna, the field investigations included:

■ Assessing and mapping the vegetation within the study area.

■ Identifying the presence of, or habitat for, flora and fauna species and ecological communities listed as threatened pursuant to the EPBC Act (i.e. Matters of National Environmental Significance) and the *Nature Conservation Act 1980* (NC Act).
- Identifying any flora species considered 'rare or uncommon' in the ACT.
- Identifying areas which meet the criteria for 'Native Vegetation' pursuant to the NC Act.
- Assessment of any key habitat values (e.g. waterways, hollow-bearing trees).

The findings of the field investigation are discussed in the remainder of this chapter and provided in full in the EAR provided in APPENDIX O.
Figure 38: Ecological Features of the Study Area (as adopted from the Ecological Assessment Report provided in APPENDIX O)
16.3 Potential Impacts
As identified within the EAR, the Study Area is predominantly cleared of native vegetation and provides limited connectivity to bushland remnants and the Molonglo River catchment area (East of the Site) as a result of historical land clearing and current land uses. In addition, parts within the Study Area have been disturbed to the point that they retain very low or no natural values (comprising of industrial infrastructure and buildings) with numerous weeds common to pastoral lands occurring at varying levels of infestation throughout the Site.

While a number of dams/detention basins have previously been constructed within the southern part of the study area, it is considered that the potential habitat provided by these waterbodies/courses is not considered to be of any greater significance than that provided by the many other similar features throughout the locality.

Despite considerable survey effort expended within the Study Area, the two TECs identified on the Department of the Environment’s EPBC Act Protected Matters Search Tool were not identified during investigation. As a result, these TECs are not considered to inhabit the Study Area. In addition, no threatened plant species (EPBC Act and/or NC Act) were recorded within the Study Area during the field investigation including those identified within the ACTmapi or Protected Matters Search Tool desktop inquiries.

Given the results of the completed desktop assessment and field investigation, it is considered highly unlikely that any threatened flora species or threatened ecological communities occur within the Study Area.

The Project has the potential to impact upon habitat (foraging, roosting, breeding resources etc.) for threatened fauna species in the Study Area as a result of clearing during construction of the Project. Developments and other proposed activities may impact upon threatened species by causing the loss or disturbance of limiting foraging and breeding resources. This may include tree hollows, suitable roost sites and/or specialised foraging habitats that have restricted distribution. However, no threatened fauna species were recorded within the Study Area during investigation.

As identified previously within the Planning Report, the EAR identifies that the history of the Site has highly reduced the potential quality of the ecological community throughout the study area, being predominantly cleared of native vegetation previously and providing limited connectivity to bushland remnants. As such, recorded vegetation types within the study area do not conform with the NC Act listed EEC.

Given the results of the desktop assessment and field investigations of the Study Area, it is concluded in the EAR that the Project is unlikely to significantly impact upon any EPBC Act and NC Act listed threatened flora and fauna species. Consequently, the risk of the Project is considered to be low.

16.4 Proposal Mitigation Measures
No mitigation measures are identified, given the Project is unlikely to result in impacts upon listed flora and fauna.

16.5 Residual Risk

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<thead>
<tr>
<th>Description</th>
<th>Discussion</th>
<th>Comment</th>
<th>Likelihoo d</th>
<th>Consequen ce</th>
<th>Residua l Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodiversity</td>
<td>Impact on the vegetation within the powerline easement during construction and operation from parking, traffic access etc.</td>
<td>The Site is predominantly cleared of native vegetation and no threatened flora species,</td>
<td>Unlikely</td>
<td>Minor</td>
<td>Low</td>
</tr>
<tr>
<td>Description</td>
<td>Discussion</td>
<td>Comment</td>
<td>Likelihood</td>
<td>Consequence</td>
<td>Residual Risk</td>
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<tr>
<td></td>
<td>Impact on flora and fauna as a result of polluted or sediment laden water entering the wetland and the Molonglo River.</td>
<td>threatened or endangered ecological communities are identified at the Site.</td>
<td>Possible</td>
<td>Minor</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>The Site is predominantly cleared of native vegetation and provides limited connectivity to bushland remnants and the Molonglo River catchment area as a result of historical land clearing and current land uses.</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
17.0 OTHER ISSUES (HERITAGE)
17.1 Heritage Assessment
17.1.1 Environmental Condition

Review of the ACTmapi Heritage Map obtained from the Heritage Unit, Environment, Planning and Sustainable Development Directorate, shows that there are no heritage items within the footprint of the Site. The closest registered heritage area is located approximately 460 m to the east of the Site surrounding the Molonglo River. Approximately 520 m south of the Site, south of Canberra Avenue further heritage areas are identified.

![ACT Heritage Register Plan (ACT Mapi)](image)

Figure 39: ACT Heritage Register Plan (ACT Mapi)

17.1.2 Potential Impacts

The Project will have a negligible impact upon known heritage items. This is confirmed by the ACT Heritage Council, which identify within the Scoping Document

Review of the ACT Heritage Register identifies that the subject block contains no registered or recorded heritage places or objects, and due to previous ground disturbance is likely to be of low archaeological potential.

For this reason, the Council considers that development of the subject block is unlikely to diminish the heritage significance of a place or result in damage to Aboriginal heritage places or objects, and no heritage assessment is required as part of the Environmental Impact Statement.
17.1.3 Proposed Mitigation Measures

In accordance with the *Heritage Act 2004*, should heritage places or objects be identified during construction works, an Unanticipated Discovery Protocol will be utilised. This protocol will include:

- Stop works at the heritage site, to allow for assessment and management in accordance with Sections 74 and 75 of the *Heritage Act 2004*;
- Report the discovery to the site supervisor immediately;
- Define an exclusion zone around the heritage site, within which no works or related activities (such as vehicle parking and stockpiling) is to occur. If needed, temporary fencing will be installed to define the exclusion zone;
- Engage heritage advisors to assess the nature of the heritage site and its potential heritage significance. Advisors should have expertise in the type of heritage encountered, and where an Aboriginal place or object has been found, Representative Aboriginal Organisations should be consulted;
- Report the find to the ACT Heritage Council within 5 working days in accordance with section 51 of the *Heritage Act 2004*; and
- Seek ACT Heritage Council advice on *Heritage Act 2004* approvals or further advice required prior to commencement of works.

17.1.4 Residual Risk

Residual risk assessments were not required as no medium or above risks were identified within the pre-mitigation risk assessment in relation to heritage.
18.0  STAKEHOLDER CONSULTATION

To inform the development of this EIS, the Proponent sought feedback from government and regulatory agencies and the local community between July 2018 and May 2020. As advised by EPSDD, guidance for the community consultation process has been in accordance with ACT Government (2017) “Pre DA Community Consultation Guidelines for Prescribed Developments”. The valuable and insightful feedback received has allowed the Proponent to develop a comprehensive EIS that has carefully considered the needs of the community and requirements of regulatory and government agencies.

This chapter outlines:

- the consultation methodology and purpose;
- the community and stakeholder engagement activities undertaken;
- how stakeholders were identified;
- the promotional activities used to inform the community and identified stakeholders of the Project and ways to provide feedback and;
- the feedback raised and how this feedback has been addressed in the EIS.

Materials and correspondence related to this chapter are provided in APPENDIX P.

18.1  Objective of Consultation

The Proponent is committed to undertaking meaningful community and stakeholder engagement and consultation throughout the life of the Project. A Project community and stakeholder engagement strategy was implemented for the Project in July 2018 with the key objectives of providing accessible and fit-for-purpose communication and stakeholder consultation activities that:

- generates optimum community awareness of the draft EIS and the assessment process of the Project;
- provides accessible and sufficient opportunity for stakeholder input;
- provides accurate and timely information concerning the Project; and
- informs stakeholders and the broader community about the main features, related issues and benefits of the Project, identifying and addressing stakeholder feedback during the preparation of the draft EIS.

18.2  Consultation Methodology

1)  Stages of consultation

Consultation was undertaken in three stages:

- July-September 2018
- September 2019
- May 2020

Stage 1 consultation took place in July through September 2018 and engaged government and regulatory agencies to help shape the scope of this EIS and better understand ACT regulatory requirements. The community groups of Inner South Canberra Community Council and Old Narrabundah Community Council were also contacted with the intent of introducing the Project to the wider community and identifying future contacts.
Stage 2 consultation took place during September 2019 and focused on creating a general awareness of the Project amongst resident and community groups seek early feedback from near neighbours.

Stage 3 consultation supported the early community consultation by expanding the number of stakeholder groups that were engaged and undertaking proactive follow up with these community/resident and business groups. By broadening the list of identified stakeholder groups and undertaking increased proactive engagement, greater numbers of and more detailed feedback submissions were received from the local community and representative community and resident groups.

2) Identifying community stakeholders

The Proponent identified a number of near-neighbour businesses and community, resident and business groups to seek feedback from. Stakeholder organisations representing the local residents and businesses were selected based on their geographical location to the Project. However, as the Site is located in Fyshwick - a busy industrial and retail hub, frequented by community members and businesses throughout the ACT region - it was recognised that the broader community may also have an interest in the project and promotional activities targeting the broader ACT community were also undertaken. More information on stakeholder identification can be found in Section 18.3.

3) Identifying and undertaking consultation activities

The Proponent recognised that a broad suite of engagement activities was required to ensure there were accessible and convenient methods by which the community were able to provide feedback. Communication Link were engaged by the Proponent for Stage 3 identifying feedback opportunities to be made available including via phone/text, online, mail and in-person. Consultation activities, such as online drop-in sessions, were held on multiple occasions by Communication Link at varying times of the day and week in an effort to make the sessions accessible for those community members with limited available time.

COVID-19

It should be noted that the stage 3 consultation activities were scheduled as COVID-19 restrictions came into effect. As a result, face-to-face consultation were not possible and were successfully refocused to interactive online platforms, which are detailed in Section 18.4.

4) Identifying communication channels (Promotional activities)

A communication plan was developed to guide the strategic delivery of promotional activities to promote the Project and the engagement opportunities. Promotional activities included emails, door-knocks, newspaper advertising, websites and mail. These channels were chosen as they provided a broad range of methods to communicate the Project information and target identified stakeholder groups. A summary of the promotional activities used is provided in Section 18.5.

18.3 Identify Community Stakeholders

The process of identifying community stakeholders included consideration of individuals and groups geographically located close to the Site. Due to their proximity, these stakeholders could naturally be considered as having a higher level of interest or concerns about potential impacts as a result of construction and operation of the Project.

As the overarching consultation strategy required the use of both broad and targeted communication channels, identified stakeholder representative groups were also engaged to assist in sharing the information more broadly across their respective communities.
The broader ACT community was also considered an interested stakeholder group given the central role Fyshwick plays within the ACT industrial, retail and social landscape.

Table 32 provides the list of the groups identified, outlines their relationship to the Project and the level of engagement undertaken with each stakeholder group.
<table>
<thead>
<tr>
<th>Stakeholder group</th>
<th>Relationship to the project</th>
<th>Method of engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential community groups</td>
<td>Represents near-by residents that may have concerns about environmental, health and traffic impacts as well as concerns regarding impacts to the general amenity of the Fyshwick business district.</td>
<td>Information about the Project has been made available via community engagement activities (refer to Section 18.4) and communication channels such as the public notice and website (refer to Section 18.5). In addition, these groups have been contact directly with feedback encouraged.</td>
</tr>
<tr>
<td>Deakin Residents Association</td>
<td></td>
<td></td>
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<tr>
<td>Forrest Residents Association</td>
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<tr>
<td>Griffith/Narrabundah Community Association</td>
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<tr>
<td>Inner South Canberra Community Council</td>
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<tr>
<td>Kingston and Barton Residents Association</td>
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<td></td>
</tr>
<tr>
<td>Old Narrabundah Community Council</td>
<td></td>
<td></td>
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<tr>
<td>Redhill Residents Group</td>
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<td></td>
</tr>
<tr>
<td>Yarralumla Residents Association</td>
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<td></td>
</tr>
<tr>
<td>Business representative groups</td>
<td>Represents the Fyshwick business community who may have concerns about health and traffic impacts and how the general amenity of Fyshwick may be affected, which in-turn may be perceived as impacting business trade.</td>
<td>Information about the Project has been made available via community engagement activities (refer to Section 18.4) and communication channels such as the public notice and website (refer to Section 18.5). In addition, these groups have been contact directly with feedback encouraged.</td>
</tr>
<tr>
<td>Group</td>
<td>Stakeholders</td>
<td>Concerns</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Near neighbour businesses and property owners / lessees</td>
<td>Businesses on Tennant, Iron Knob and Beaconsfield Streets, Fyshwick</td>
<td>May have concerns about changes to local traffic, health impacts and how the general amenity of Fyshwick may be affected, which in-turn may be perceived as impacting business trade.</td>
</tr>
<tr>
<td>Local recreational, volunteer conservation, Landscape management, land care organisations</td>
<td>Molonglo Conservation Group (Member of ACT Landcare)</td>
<td>May have a general interest in the project with concerns that their operations will be affected.</td>
</tr>
<tr>
<td>Broader ACT community</td>
<td>Friends of Grasslands</td>
<td>As Fyshwick is a busy industrial and retail hub, frequented by community members and businesses throughout the ACT region, some within the broader community may have concerns about environmental, health and traffic impacts as well as concerns regarding impacts to the general amenity of the Fyshwick business district.</td>
</tr>
</tbody>
</table>
18.4 Community Engagement Activities

A variety of community engagement activities were undertaken to seek feedback and raise awareness of the Project with community stakeholders throughout the development of the Project and the draft EIS. Community consultation activities undertaken in preparation of this EIS are listed below:

SEPTEMBER 2018

- Emails and phone calls to community groups
- Provision of email address to receive feedback via email
- Provide postal address for written feedback to be posted
- Provide phone number to answer questions from community members

SEPTEMBER 2019

- Near neighbour visits, accompanied with feedback form and letter, to businesses in Fyshwick
- Letters and emails with feedback forms, to community groups
- Establishment of website with Project details
- Provision of dedicated feedback email address to receive feedback via email
- Provide postal address for written feedback to be posted
- Provide dedicated phone number to answer questions from community members

MAY 2020

- Updated dedicated Project consultation website;
- Host three online drop-in sessions via dedicated website;
- Invite email and phone feedback from the general community; and
- Provide dedicated phone number to answer questions from community members.

1) Stage 1 Emails and phone calls

Emails and phone calls to key community groups introducing the Project and seeking initial feedback.

2) Stage 2 Near-neighbour visits with letter and feedback form

A letter providing details about the Project and a feedback form were hand-delivered on the 2 September 2019 at the commencement of the Stage 2 consultation by the Proponent. This was provided in person to property owners and lessees that surrounded the Site (refer to Figure 1) to provide the opportunity to informally discuss the Project and raise any concerns or issues directly with the Proponent.
Figure 40: Community locations of neighbour visits, letter and feedback form (completed 2 September 2019).

The letter provided to near neighbours included the following information:

- the material streams proposed to be received, processed and stored at the Site;
- proposed infrastructure and site activities;
- facility benefits;
- the assessment process for the Project;
- a preliminary layout of the Project; and
- advice on providing input to the draft EIS including project contact details (website, email, mail and/or feedback form).

The letter and feedback form were hand-delivered by the Proponent to identified property owners and lessees in the vicinity of the Site including Tennant Street, Collie Street, Newcastle Street, Iron Knob Street, Beaconsfield Street and the Canberra Outlet Centre (refer to Figure 1). As identified in point 3, the letter and feedback form was also posted to local community and community groups identified within the Scoping Document (APPENDIX A) with available postal details. A copy of the letter and feedback form can be found in APPENDIX P, attachment 1.
Five responses were received through this channel via the feedback form, which are provided in APPENDIX P Attachment 2, which are also addressed in Table 33. In addition, informal feedback was received in person by the Proponent during delivery of the letter and feedback form.

3) Letters were sent to the community groups

The letter and feedback form provided in Appendix P, attachment 1, were mailed and emailed to community groups identified in the Scoping document with available contact details as further identified in Section 18.5.

4) Feedback email account

The Proponent established a dedicated email account, which was promoted in all communication channels and was an important tool to receive detailed submissions from the community. This was the most popular channel used by the community to contribute feedback. Twenty-one feedback submissions were received via email during consultation Stage 2 and 3.

5) Dedicated phone number and postal address

The community were encouraged to engage with the Project over the phone or by post. These two options ensured accessibility of engagement channels for those with minimal ICT resources. Feedback via text message was received on three occasions. Four pieces of feedback were received through this channel - three text messages and one phone call.

6) Online presence - dedicated project website (hiqualityfyshwick.com)

A project website was setup during Stage 2 consultation to provide information on the Project including preliminary layout, waste streams, site buildings and infrastructure, assessment process and methods to inform community input on the Project (hiquality.com.au/fyshwick). The link to this website also included the letter and feedback form provided to neighbours of the Site (as discussed in this section above).

To enhance the third stage of consultation, the existing Hi-Quality Project webpage (hiquality.com.au/fyshwick) was replaced with a bespoke and simplified standalone website created solely for the purpose of informing the community about the Project and enabling the hosting of online drop-in sessions. This new website hosted all relevant information about the Project and methods to provide feedback. The website will be updated as the assessment progresses, including hosting the draft EIS and links to the relevant assessment information as it is provided by the EPSDD.

7) Online drop-in sessions

In the interests of public safety in response to COVID 19, drop-in sessions were hosted through the Project website’s online chat function by Communication Link on behalf of the Proponent. These sessions operated in much the same way as public face-to-face drop-in sessions with subject matter experts assisting with answering community concerns and recording feedback. Questions and feedback submitted by visitors to the drop-in sessions were received and responded to in real-time via a chat dialogue box. The times and dates of the online drop-in sessions were:

- 10am to 12pm, Saturday 9 May
- 4pm - 6pm, Tuesday 12 May
- 12pm - 2pm, Thursday 14 May
Four people participated in the online drop-in sessions with feedback from participants focused on traffic, asbestos, fire risks and general waste management and transport. A screen shot of an active online drop-in session can be found in Appendix P, Attachment 3.

18.5 Promotional channels

A number of promotional channels were used to reach out to targeted and broader stakeholder groups and inform them of the Project and opportunities to contribute to the development of the EIS. Some channels also served as engagement tools that both informed about the Project and provided a platform to provide feedback. A summary of the promotional channels is provided below.

SEPTEMBER 2018

Emails to key community groups, which we understood were distributed to community group members.

SEPTEMBER 2019

- Provide Project information via the Hi-Quality company website.
- Letter and feedback form drop off to near-neighbour locations.
- Mail out of letter and feedback form to identified community groups.

MAY 2020

- Establish a dedicated Project consultation website.
- Emails to key stakeholder groups, including resident/business and community associations.
- Follow-up phone calls to key stakeholder groups, including resident/business and community associations.
- Public notice placed in the Canberra Times on Wednesday 6 May.

1) Online presence - Hi-Quality company webpage and dedicated Project website

To support the Stage 2 consultation, a webpage on the Project was established by the Proponent on its existing company website (hiquality.com.au) during consultation in September 2019. The webpage included information on the Project such as layout, waste streams, site buildings and infrastructure, assessment process and methods to inform community input. The link to the website was included in the letter and feedback form.

To enhance Stage 3 consultation, the existing Hi-Quality Project webpage was replaced with a bespoke and simplified standalone website (hiqualityfyshwick.com) created solely for the purpose of informing the community about the Project and enabling the hosting of online drop-in sessions. This new website hosted all relevant information about the Project and methods to provide feedback. The website will be updated as the assessment progresses, including hosting the draft EIS and links to the relevant assessment information as it is provided by the regulator.

2) Letter drop off to near neighbour businesses

Whilst already discussed as a key engagement activity, the distribution of a letter outlining the Project proposal, which was accompanied with a feedback form (outlined in Section 17.4) also played a promotional role by ensuring information was received by near-neighbour businesses. Letter distribution areas are outlined in Figure 1.
During the letterbox drop, feedback was informally received from business owners on the northern side of Tennant Street identifying a concern with truck and potential employees using on street parking in the surrounding area with one business owner identifying the site location was unsuitable and should be in Hume. Further informal feedback was provided by business owners on Beaconsfield Street identifying potential concerns with noise and dust issues associated with the concrete plant. Three businesses enquired about utilising the Site for supply and recycling of concrete, waste disposal and other services such as landscape supply once operational.

3) **Mailing and emailing of project letter**

During the second stage of consultation, the Project letter outlined in Section 18.4, was also mailed or emailed to identified community groups with available contact details including the Jerrabomberra Residents Association, Griffith/Narrabundah Community Association, Old Narrabundah Community Association and the Inner South Canberra Community Council in September 2019 to inform them of the Project and inform them of opportunities to provide feedback. A copy of the letter can be found in Appendix P, attachment 1.

4) **Emails to key stakeholder groups, including resident/business and community associations**

In the lead up to Stage 3 consultation, emails were sent to a number of identified nearby resident, community and business groups. The emails provided a brief description of the Project, described ways to contribute feedback and encouraged distribution of the email to respective members and constituents of those groups. The list of organisations contacted is listed below:

- Deakin Residents Association
- Forrest Residents Association
- Fyshwick Business Association
- Griffith Narrabundah Community Association
- Inner South Canberra Community Council
- Kingston and Barton Residents Association
- Old Narrabundah Community Council
- Redhill Residents Group
- Yarralumla Residents Association

Feedback was formally received from representatives of the Inner South Canberra Community Council, the Old Narrabundah Community Council and the Griffith/Narrabundah Community Association. These responses have been incorporated into the stakeholder feedback table – Table 32. The Project information was also distributed by these groups and the Fyshwick Business Association directly to members, via social media channels and, where applicable, on their respective websites. Examples of these communication activities are shown in Appendix P, attachment 4.

5) **Follow up phone calls to key stakeholder groups, including resident/business and community associations**

During Stage 3 consultation, phone calls were made to the identified resident, community and business groups where phone contacts were available. Phone calls were made to representatives of the Inner South Canberra Community Council, the Old Narrabundah Community Council and the Griffith/Narrabundah Community Association.
18.6 Media coverage
The Project received media attention on two occasions during the engagement periods. This media attention provided a valuable resource in promoting the Project. The two media reports are highlighted below.


The RIOTACT, Fyshwick waste hub proponent dumps plan to burn wood, 12 May 2020 - https://the-riotact.com/fyshwick-waste-hub-proponent-dumps-plan-to-burn-wood/375366?utm_medium=facebook&utm_source=ra&fbclid=IwAR0sWlWcQKQXAWI2o9422iSGO1ESmxySNRFo2UYeDhI8jcObZzl5g3DVw

18.7 Government and Regulatory Agency Consultation
In addition to community engagement and consultation, regulatory stakeholder and government agencies were consulted to inform the EIS and Project planning. This commenced with the Pre-Application meeting held with ACT Government regulators and government agencies on the 24 July 2018.

During the Pre-application meeting the following regulators were consulted and provided input on the Project:

- ACT EPA
  Provided advice and input on the contamination assessment requirements and impact assessments to be completed as part of the EIS.

- Strategic Planning
  Noted that the area to the east of the Site is being considered for future development, and that an airport hazard assessment may be required due to proximity to Canberra Airport.

- Impact Track
  Identified triggers for impact track assessment and provided outline of approvals process and required consultation.

- Transport Canberra and City Services
  Confirmed requirement for traffic impact assessment for the project

- Icon Water
  Advised that a trade waste application would be required to be submitted and recommended on site water reuse where allowable.

- Conservation Planning and Research
  Identified potential significant species of flora and fauna that may be present at the Site and confirmed requirement to undertake a flora and fauna investigation.

- Development Application Gateway
  Identified clauses from the Industrial Zone Development Code to be addressed.

- Development Application Leasing
  Advised a valuation report is required and variation to current crown lease.
Additional stakeholder meetings

In addition to the Pre-Application meeting, a number of further stakeholder meetings were held with regulators during preparation of the EIS. These are summarised as follows:

- ACT EPA meeting, held 22 August 2018, to discuss potential contamination at the Site and need for a Site Audit.
- ACT NoWaste meeting, held 22 August 2018, to discuss requirements under the ACT Waste Management and Resource Recovery Act including license application requirements, risk and potential dust and air quality management and controls.
- Evoenergy meeting, held 27 July 2018 and 16 August 2018, via email and telephone to discuss the authorisation requirements for access easement through Block 12.

Responses to feedback from regulatory and government agencies are provided in Table 34.

18.8 Community and Stakeholder Feedback – What we heard

The engagement activities undertaken in both the second and third stages of community consultation received a total of 27 individual contributions in addition to informal responses during the letterbox drop. Predominant themes identified in the feedback received included:

- A preference for the Site to be located elsewhere, with alternative suggestions of Hume, ACT or near the ACT Mugga Lane Resource Management Centre in Symonston;
- Traffic and parking impacts;
- Air, odour and dust impacts;
- Noise;
- Containment and handling of asbestos;
- Waste being brought into the ACT from surrounding regions;
- Contamination runoff offsite;
- The acceptance and processing of flyash;
- Processing and storing chemicals at the Site;
- Understanding the proposed innovative technologies used to process and recover the waste not currently in use in the ACT; and
- General opposition to the Project.

Feedback received on the Project to-date has informed iterations of the Project design and where relevant have been addressed through technical assessments within the EIS. Issues identified during consultation have influenced how the Project has been assessed and the potential adoption of mitigation measures to reduce residual risk. This includes consideration of the mitigation management framework of “avoid, mitigate, offset” to ensure that residual risks are in accordance with relevant stakeholder regulatory policy parameters and community concerns. The complete list of feedback items by the community and regulator/government stakeholders and responses to that feedback is provided in Table 33.
### Table 33: Community and stakeholder feedback addressed within the EIS

<table>
<thead>
<tr>
<th>No</th>
<th>Date of feedback</th>
<th>Consultation source</th>
<th>Feedback</th>
<th>How feedback is addressed in the EIS</th>
</tr>
</thead>
</table>
| 1  | 9 May 2020      | Email               | Dear Sir/Madam  
I have glanced through your proposal and have the following questions:  
You mentioned various sites had been investigated does this include an area in the vicinity of the prison and the industrial area of Hume?  
- This area is serviced by the Monaro Highway which is about to receive an upgrade. It is a dual highway easily accessed by the surrounding regional areas.  
- As far as I am aware it does not impact any nearby water way.  
- There is often a serious traffic snarl on the corner of Collie and Newcastle Streets.  
- The series of traffic lights on Newcastle Street could add to traffic problems.  
- It would be at a significantly further distance from Old Narrabundah and nearer the industrial area of Hume.  
- Domayne, Bunnings and the various other businesses in the vicinity of Collie, Tennant and Newcastle Streets are busy on weekends while Hume is relatively quiet. | Site Location  
As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints.  
A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts.  
Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS. |
<table>
<thead>
<tr>
<th>No</th>
<th>Date of feedback</th>
<th>Consultation source</th>
<th>Feedback</th>
<th>How feedback is addressed in the EIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>11 May 2020</td>
<td>Phone</td>
<td>I see that wood burning is no longer in scope, but will you be burning off other waste types? How do you process liquid wastes?</td>
<td><strong>Burning Waste</strong></td>
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</table>

I would also like to have definition of, “Surrounding Regional Areas”. Does this include the Sydney area?

Being a resident of Old Narrabundah, I am firmly opposed the plant being situated in Fyshwick.

**Traffic**

The Transport Impact Assessment (Appendix E) includes considerations of the existing traffic conditions surrounding the site, the traffic generating characteristics of the project, the suitability of access arrangements for the site and the transport impact of the project upon the surrounding road network. The design of the site layout is provided to reduce potential transport impacts and the Transport assessment conservatively assumed that the site peak hour coincides with the road network peak hour. The Transport assessment identifies that operation of the Project is not anticipated to compromise safety and function and the surrounding road network and is assessed as having satisfactory capacity to cater for additional traffic generated by the Project during construction and operation. Section 6.3 and Appendix E of the EIS provides further detail of the potential transport impacts of the Project.

With regards to the question of defining “surrounding regional areas”, a strict definition of what regions are included in the transportation of materials to and from the Site is not defined as this is based on commercial arrangements and operational contingency. It is anticipated that waste will predominantly be sourced from within the local ACT region.
<table>
<thead>
<tr>
<th>No</th>
<th>Date of feedback</th>
<th>Consultation source</th>
<th>Feedback</th>
<th>How feedback is addressed in the EIS</th>
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<tr>
<td></td>
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<td>Is it by a chemical process and if so, what are the polluting impacts of this? What are the economical benefits? Although you say there will be 80 jobs created, wont they be taken from another waste resource centre, is there room for another waste centre here in Canberra? You say that there will be additional waste recovery abilities at this proposed site, not currently available in Canberra. What are these? Hume is regarded as a “centre of excellence for waste recovery” why is it not at this location.</td>
<td>The Project does not include wood air burners and/or electrical generation and there will be no burning of other waste types as part of the Project. Processing Liquid Waste The Project seeks to accept and process a variety of liquid wastes, including grease trap waste (refer Section 2.2.14 of the EIS), drilling mud (refer Section 2.2.15 of the EIS), oily water (refer Section 2.2.16 of the EIS). How each will be processed and stored is provided in the relevant sections of the EIS identified above and in Section 8.2.4 and Table 12. The treatment technologies are primarily separation technologies, with the treated water suitable for discharge to sewer in accordance with a Trade Waste Agreement. The Proponent is committed to maintaining appropriate environmental standards at the Facility. Liquid waste and chemicals at the site will be transported, handled and stored in bunding within the liquid waste building in accordance with relevant guidelines and Australian Standards. In addition, operational mitigation measures related to spill containment are identified within Section 8.3.2 and Section 10.4.2 and 11.4.2 of the EIS. Economic Direct economic benefits of the Project are in the form of local employment opportunities during construction and operation of the Integrated Resource Recovery Facility. In addition, the</td>
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<td>No</td>
<td>Date of feedback</td>
<td>Consultation source</td>
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<td>How feedback is addressed in the EIS</td>
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<td>Project would secure long term cost efficiencies such as aggregation (waste activities being located closer together) and densification of waste resources that will reduce the economic and social costs associated with recovery of resources that would otherwise go to landfill and the consequential costs associated with transportation of these waste streams resulting in significant reduction in greenhouse gas generation.</td>
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<td>It is considered there is a demand for increased resource recovery of waste streams that the Project can provide as evident by applicable and relevant legislation and policy as detailed in Chapter 2 of the EIS.</td>
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<td>Waste recovery abilities not currently available to the ACT include liquid waste processing of grease trap waste. The Site will also bring a number of treatment technologies together, thereby increasing the resource recovery opportunities at the one location and provide a unique service in the ACT. As shown in Figure 18 of the EIS, there are a number of materials that are accepted and processed through more than one facility on the Site. For example material processed at the Recycling Facility may then go onto the Crushing and Screening Facility, the Wood Processing Facility, the Soil Processing Facility and/or product storage at the Site. This aims to increase efficiency, resource recovery and create greater beneficial reuse. For more information on proposed resource recovery and material flows refer to Chapter 8.</td>
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<tr>
<td>No</td>
<td>Date of feedback</td>
<td>Consultation source</td>
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<td>How feedback is addressed in the EIS</td>
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<td></td>
<td><strong>Site Location</strong></td>
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<td>As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints.</td>
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<td>A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts.</td>
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<td>Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.</td>
</tr>
<tr>
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<tr>
<td>3</td>
<td>9 May 2020</td>
<td>Drop-in session 1</td>
<td>What benefit does the company consider that it will bring to the ACT by establishing a recycling facility in Fyshwick?</td>
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<td>Why has a site been chosen that is within the ACT, but very close to the NSW border?</td>
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<td>Has NSW knocked back a similar proposal?</td>
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<td></td>
<td>Why has Hume not been chosen instead, or a site closer to other recycling facilities at Mugga Lane?</td>
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<td>Will holding tanks and settling ponds for liquid waste pollute the Molonglo River or contaminate aquifers?</td>
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<td>What guarantee is there that accidental spills will not occur, or that stormwater runoff will not be a problem?</td>
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<td></td>
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<td></td>
<td>How much odour is likely to be produced? Other concern is that odour will affect retail businesses in Fyshwick</td>
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</table>

**Benefits**

This Project will benefit the ACT by helping to divert more materials from landfill through increased resource recovery of the highest volume waste streams generated in the ACT (including construction and demolition waste, timber, concrete, asphalt and soils) and provide for beneficial reuse and creation of products that can be reused across the ACT region. The site will also create 84 full-time jobs during operation. The Project would also secure long term cost efficiencies associated with aggregation and densification of waste resources that would otherwise go to landfill and the consequential costs associated with transportation of these waste streams resulting in significant reduction in greenhouse gas generation. More information about benefits to the ACT community can be found in Chapter 1, Section 2.5, Section 13.3 and throughout the EIS as outlined in the Executive Summary.

**Similar NSW Projects**

At the time of writing we are not aware of a similar facility being ‘knocked back’ in NSW, however we cannot know all applications that are made. Information about NSW planning approvals may be found by contacting the NSW Department of Planning, Industry and Environment.

**Site Location**

As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding...
How feedback is addressed in the EIS

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- land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints.

A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts.

Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.

**Water Pollution**
There are no settling ponds proposed for liquid waste. All liquid waste would be contained in purpose built processing tanks which will be bunded in accordance with relevant guidelines and Australian Standards and within the Liquid Waste Building. In
addition, operational mitigation measures related to spill containment are identified within Section 8.3.2 and Section 10.4.2 and 11.4.2 of the EIS.

Potential impacts of the Project upon water are identified in Section 11.3 including the potential for runoff contamination, which have been addressed through the design of the facility and operational management measures (Section 11.4).

**Air Quality**

An assessment of Air Quality and Odour for the Project has been completed in accordance with the Scoping Document and is presented in Appendix K. Conservative dispersion modelling (modelling each emission source at maximum capacity for operating hours under worst case meteorological conditions) has been used to predict odour, dust deposition and particulate levels (including cumulative) of the site and the project taking into account the local meteorological conditions, dust and odour emission inventories, and regulatory requirements. Chapter 12 of the EIS summarises the findings of the technical assessment including the potential air and odour impacts of the Project.

Dispersion modelling results demonstrate compliance with applicable criterion for odour with further design and mitigation measures to reduce potential odour impacts as identified in Section 12.4 of the EIS. Given the conservative modelling and mitigation measures proposed the potential air quality impacts of the project are assessed as low.
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| 4  | 9 May 2020       | Drop-in session 1   | The ACT’s total waste stream is 1 million tonnes of which only about 250,000 tonnes goes to landfill. Given Canberra has experienced toxic bushfire smoke early this year, I am very concerned about possible air quality impacts from the wood burning. Can you please advise what level of particulates will be released from the curtain air burners. Does it still include wood burning and, if not, why is the document on the ACTPLA website not the most recent one? Okay, I note the proposal also includes multiple types of flammable and toxic materials. What risk management approaches will be used to minimise and mitigate the risk of fire? Yes, it's not only bushfire risk. There have been several fires in recent years on-site at the nearby Access Recycling facility, so I'd like to know what measures Hi-Quality will take to minimise the risk of fires that start on the site. Finally, and this is a big question, why should we trust Hi-Quality to respect the ACT’s environmental protection laws when the company has been fined several times in NSW for breaches of NSW EPA requirements? I found that information very easily by googling. | Wood Burning  
Wood burning, this is no longer part of this proposal. This is stated in the EIS.  
Air Quality  
An assessment of Air Quality and Odour for the Project has been completed in accordance with the Scoping Document and is attached as Appendix K. Conservative dispersion modelling (modelling each emission source at maximum capacity for operating hours under worst case meteorological conditions) has been used to predict odour, dust deposition and particulate levels (including cumulative) of the site and the project taking into account the local meteorological conditions, dust and odour emission inventories, and regulatory requirements. Chapter 12 of the EIS summarises the findings of the technical assessment including the potential air and odour impacts of the Project. Dispersion modelling results demonstrate compliance with applicable criterion except for PM10 concentrations in one 24-hour period within the modelled year with the second highest 24 hour PM10 concentration assessed as not impacting on the nearest sensitive receptor. The assessment identifies design and mitigation measures to reduce potential odour impacts as identified in Section 12.4 of the EIS. Given the conservative modelling and mitigation measures proposed the potential air quality impacts of the project are assessed as low. |

Bushfire
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<td>So far this year the inner south has experienced some of the worst air quality in the world from the bushfire smoke, many thousands of people had damage from the unprecedented hailstorm, and now we have COVID. We will not accept any long-term damage to our air and water quality or other damage to our environment. There are people living within a kilometre of the site and we are perplexed that Hi-Quality chose Fyshwick which is in central Canberra rather than Hume which is much further away from homes. I mentioned Hume because that was designated years ago as the primary ACT location for resource management and landfill, so that makes more sense than Fyshwick. On the other hand, I'm sure that Tuggeranong residents also will not want something there if it involves Canberra becoming a dumping ground for 1 million tonnes of material coming from outside the ACT. I can't see the business case for this project unless Hi-Quality plans to bring most material from interstate, and we will not tolerate a situation in Canberra similar to what happened in Ipswich in Queensland that became a dumping ground for Sydney waste.</td>
<td>A Bushfire Risk Assessment has been completed for the Project (refer to Appendix N of the EIS) and Chapter 15 summarises this assessment in addition to the potential risk and mitigation of fire originating at the Site due to vehicle, materials and/or loss of containment (Table 31 of the EIS). Procedures for operational management including risk of fire, housekeeping, stockpile management will also be provided in the site operational environmental management plan. Site Location As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints. A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the</td>
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<td>until the Queensland Government put a stop to it. I've also made a record of this chat session and may share some of the answers on social media so people are kept informed.</td>
<td>potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts.</td>
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<td>Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.</td>
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<td>Demand</td>
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<td>It is considered there is a demand for increased resource recovery of waste streams that the Project can provide as evident by applicable and relevant legislation and policy as detailed in Chapter 2.5 of the EIS.</td>
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<td>In addition, the Project proposes to accept not only waste but non waste materials for processing on the Site to produce beneficial products. Refer to Figure 18 of the EIS for a summary of the total material flows proposed as part of the Project. Figure 18 identifies that approximately 500,000 tpa of non waste materials are to be accepted at the Site for the existing Concrete Batching Plant, the pre cast concrete yard and the landscape yard.</td>
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<td>Environmental Management</td>
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<td>The Proponent will operate in accordance with applicable legislation, licenses and conditions of consent that would be provided with approval of the Project. The Proponent has</td>
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<td>5</td>
<td>12 May 2020</td>
<td>Text message</td>
<td>I say no to this waste proposal</td>
<td>Noted. The Proponent is confident that the Project will be of benefit to the local community, bringing in employment and resource recovery services not currently available in the ACT. For more information on the benefits of the Project refer to Chapter 1, Section 2.5, Section 13.3 and throughout the EIS as outlined in the Executive Summary.</td>
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| 6  | 13 May           | Email               | Please accept these questions for answer via email this week as part of the on line drop in sessions today and tomorrow. I am unable to handle portals and suchlike. I will appreciate the attention you give to them. I hope that it will be OK if I need to ask more questions as a result of the replies you send that I can do this as a follow up. 1. What is the purpose of bringing Asbestos contained material to Fyshwick - i.e. how do you propose to use or handle it? Why shouldn’t it go straight to landfill? | Asbestos  
The purpose of accepting asbestos containing material at the facility is to provide a consolidation and transfer point for smaller quantities of asbestos prior to transport to landfill. Thus enabling more efficient transport of asbestos.  
All transport and storage of asbestos containing material would be carried out in accordance with the ACT Government requirements for the transport and disposal of asbestos contaminated wastes. Further information on asbestos transport and handling can be found in Section 2.2.18 of the EIS, in addition to Section 8.2.7 on the procedures for the screening of incoming waste at the Site including for Asbestos containing material. |
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<td>2</td>
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<td>2. You claim to use proven and innovative waste treatment technology. What are the innovative technologies that are proposed to be used at Fyshwick and where?</td>
<td>Innovation</td>
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<td>3. While I understand that burning the wood has been abandoned, will any other processes entail any other types of combustion technology?</td>
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<td>4. What chemicals will need to be stored on site for use in your proposal as a whole?</td>
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<td>5. How do you propose to transport and handle the flyash identified in your concrete batching activity? From where will it be sourced?</td>
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<td>6. Can you briefly describe the process for making RDF/PEP in your waste recycling facility. How/where is this material intended to be used?</td>
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<td>7. What new uses do you propose to apply for when you lodge a Lease Variation?</td>
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<td>8. Name the alternative geographic locations you have considered for this development. Was Hume one of those and why was it rejected?</td>
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<td>9. Why was there no mention of the CRS development in Ipswich street, under assessment, in assessing the need for your proposal?</td>
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**Innovation**

The Site will bring a number of treatment technologies together, thereby increasing the resource recovery opportunities at the one location and provide a unique service in the ACT. As shown in Figure 18 of the EIS, there are a number of materials that are accepted and processed through more than one facility on the Site. For example material processed at the Recycling Facility may then go onto the Crushing and Screening Facility, the Wood Processing Facility, the Soil Processing Facility and/or product storage at the Site. This aims to increase efficiency, resource recovery and create greater beneficial reuse. For more information on proposed resource recovery and material flows refer to Chapter 8.

**Wood Burning**

Wood burning has been removed from the proposal and there is no intention to be burning any waste materials at the Site.

**Chemical Storage**

Section 8.2.6 and Table 14 provides a breakdown of the types of chemicals proposed to be stored and handled at the Site.

**Fly Ash**

Fly ash is transported via a tanker and stored onsite in silos. The fly ash is provided by a third-party. The source varies according to supply and commercial arrangements.
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|    |                 |                     | 10. Will the Draft EIS contain an economic | RDF  
impact assessment for the effect your proposal will have on other recycling businesses in the ACT?  
11. What company has been commissioned to prepare the Draft EIS?  
12. Have any baseline studies been done for Tennant street/Fyshwick to establish background noise levels and air quality? Do you propose to do a cumulative impact assessment for your DA taking into account established background levels plus the CRS proposal and other like industries in Fyshwick, for air, noise, water, soil and odour impacts?  
13. What do you propose to do with the results of this “community consultation”? Could you please consider publishing all the questions with answers on either Hi-Qual or Communication Link websites so everyone can read the information provided in responses. |

RDF  
Refer to Section 2.2 Project Description. Residual waste from resource recovery is shredded and bailed. The RDF will then be transported out of the ACT to an appropriately licenced facility.  

Lease Variation  
The intention is to apply for uses related to general industry and waste recycling. A complete list of inclusions proposed under the variation is provided in Section 2.1.6.  

Site Location  
As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints.  

A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and
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How feedback is addressed in the EIS

of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts.

Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.

**Other proposals**
When assessing the Project we have considered existing facilities or those already under construction or have planning approval.

**Economic**
The EIS has addressed the Scoping Document as provided in Appendix A. This includes a Socio-Economic assessment, which is provided within Chapter 13 of the EIS, in addition to the Project Need and Justification which is addressed in Chapter 2.

**EIS**
The EIS has been prepared by Golder Associates Pty Ltd

**Air Quality**
An assessment of Air Quality and Odour for the Project has been completed in accordance with the Scoping Document and is
Conservative dispersion modelling (modelling each emission source at maximum capacity for operating hours under worst case meteorological conditions) has been used to predict odour, dust deposition and particulate levels (including cumulative) of the site and the project taking into account the local meteorological conditions, dust and odour emission inventories, and regulatory requirements. Chapter 12 of the EIS summarises the findings of the technical assessment including the potential air and odour impacts of the Project. Dispersion modelling results demonstrate compliance with applicable criterion except for PM10 concentrations in one 24-hour period within the modelled year with the second highest 24-hour PM10 concentration assessed as not impacting on the nearest sensitive receptor. The assessment identifies design and mitigation measures to reduce potential odour impacts as identified in Section 12.4 of the EIS. Given the conservative modelling and mitigation measures proposed the potential air quality impacts of the project are assessed as low.

**Noise**

An assessment of Noise for the Project has been completed in accordance with the Scoping Document and is presented in Appendix M and Chapter 14 of the EIS. The noise assessment includes conservative modelling of all noise sources operating at once under neutral and noise enhancing weather conditions identified that the Project will operate in accordance with relevant regulatory criteria. The assessment identifies design and
### Community Consultation

With regards to the provision of community consultation information, all formal feedback responses have been made available in Table 32 and a listening report has been published on the Project website (hiqualityfyshwick.com).

### How feedback is addressed in the EIS

 mitigation measures including reducing specific activities during morning time periods as discussed in Section 14.3.1 and Appendix M. Given the conservative modelling and mitigation measures proposed the potential noise impacts of the project are assessed as low.

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<td>7</td>
<td>13 May 2020</td>
<td>Text message</td>
<td>No</td>
<td>Noted</td>
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<td>The Proponent is confident that the Project will be of benefit to the local community, bringing in employment and resource recovery not currently available in the ACT while addressing regulatory drivers for increased resource recovery. For more information on the benefits of the Project refer to Chapter 1, Section 2.5 and throughout the EIS as outlined in the Executive Summary.</td>
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<td>8</td>
<td>13 September 2019</td>
<td>Feedback form</td>
<td>Below are some of the areas of concern that we have discussed: • Staff health (airborne pollution from the waste processing and in particular Asbestos particulates.</td>
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<td>With regards to comments pertaining to asbestos, all transport and storage of asbestos containing material would be carried out in accordance with the ACT Government requirements for the transport and disposal of asbestos contaminated wastes. Further information on asbestos transport and handling can be found in Section 2.2.18 of the EIS, in addition to Section 8.2.7 on the</td>
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<td>• Pollution settling on the vehicles parked outside of our office and spoiling the paint surface of the vehicles.</td>
<td>procedures for the screening of incoming waste at the Site including for Asbestos containing material.</td>
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<td>• Odour from the facility, especially from the breakdown of soil and industrial waste chemicals.</td>
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<td>• Truck and car parking for the new business staff when the facility is in production</td>
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<td>• Traffic and traffic management along Tennant Street in the building phases of the facility, it is bad enough now with using illegal bollards to stop parking near the entrance of 6 Tennant Street. There will be a significant (100-200) amount of daily truck movements on Tennant Street, based on your estimates of 1.1 million tonnes /pa. This will cause significant issues with the lease holders on the opposite side of the road trying to move in and out.</td>
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<td>• Parking of trucks prior to deliveries and loading, especially in the mornings when loading facility is not open or full.</td>
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<td>• Contamination of the creek in the easement and then into the Molonglo River from the Dams (1,2,3 and 4) via the creek when the dams flood.</td>
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**Dust Deposition and Odour**

An assessment of Air Quality and Odour for the Project has been completed in accordance with the Scoping Document and is attached as Appendix K. Conservative dispersion modelling (modelling each emission source at maximum capacity for operating hours under worst case meteorological conditions) has been used to predict odour, dust deposition and particulate levels (including cumulative) of the site and the project taking into account the local meteorological conditions, dust and odour emission inventories, and regulatory requirements. Chapter 12 of the EIS summarises the findings of the technical assessment including the potential air and odour impacts of the Project. Dispersion modelling results demonstrate compliance with applicable criterion except for PM10 concentrations in one 24-hour period within the modelled year with the second highest 24 hour PM10 concentration assessed as not impacting on the nearest sensitive receptor. The assessment identifies design and mitigation measures to reduce potential odour impacts as identified in Section 12.4 of the EIS. Given the conservative modelling and mitigation measures proposed the potential air quality impacts of the project are assessed as low.

**Traffic**
The Transport Impact Assessment (Appendix E) includes considerations of the existing traffic conditions surrounding the site, the traffic generating characteristics of the project, the suitability of access arrangements for the site and the transport impact of the project upon the surrounding road network. The design of the site layout is provided to reduce potential transport impacts including all truck and employee vehicle parking to be located on site during operation and construction. The Transport assessment conservatively assumed that the site peak hour coincides with the road network peak hour and identifies that operation of the Project is not anticipated to compromise safety and function and the surrounding road network. The Site is assessed as having satisfactory capacity to cater for additional traffic generated by the Project during construction and operation. Section 6.3 and Appendix E of the EIS provides further detail of the potential transport impacts of the Project.

**Stormwater**

A stormwater assessment is provided within Appendix J and summarized in Chapter 11.0 of the EIS, which includes surface water management (Section 11.2.3) at the Site. In the design of the project Dams 1, 2, 3 and 4 are clean sedimentation and stormwater dams. Potential impacts of the Project upon water are identified in Section 11.3 including the potential for runoff contamination, which have been addressed through the design of the facility and management measures for contamination containment (Section

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<td><strong>The Transport Impact Assessment</strong></td>
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<td><strong>includes considerations of the</strong></td>
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<td><strong>existing traffic conditions</strong></td>
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<td><strong>surrounding the site, the</strong></td>
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<td><strong>traffic generating</strong></td>
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<td><strong>characteristics of the project,</strong></td>
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<td><strong>the suitability of access</strong></td>
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<td><strong>arrangements for the site and</strong></td>
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<td><strong>the transport</strong></td>
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<td><strong>impact of the project upon the</strong></td>
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<td><strong>surrounding road network. The</strong></td>
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<td><strong>design of the site layout is</strong></td>
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<td><strong>transport impacts including all</strong></td>
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<td><strong>truck and employee vehicle</strong></td>
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<td><strong>parking to be located on site</strong></td>
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<td><strong>assumed that the site peak hour</strong></td>
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<td><strong>surrounding road network. The</strong></td>
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<td><strong>and operation. Section 6.3 and</strong></td>
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<td><strong>Appendix E of the EIS provides</strong></td>
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<td><strong>further detail of the potential</strong></td>
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<td><strong>transport impacts of the Project.</strong></td>
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**Stormwater**

A stormwater assessment is provided within Appendix J and summarized in Chapter 11.0 of the EIS, which includes surface water management (Section 11.2.3) at the Site. In the design of the project Dams 1, 2, 3 and 4 are clean sedimentation and stormwater dams. Potential impacts of the Project upon water are identified in Section 11.3 including the potential for runoff contamination, which have been addressed through the design of the facility and management measures for contamination containment (Section
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<td>11.4). Mitigation and management measures in relation to spills are identified in Section 8.3.2 (Materials and Waste), 10.4.2 (Soils and Geology) in addition to those within Section 11.4 related to contaminant containment. As identified within the EIS a spill management plan would also be developed and included in the Site operational environment management plan.</td>
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<td>Feedback form</td>
<td>Asbestos dust airbourne particles. Dust from dirt roads/rubbish etc. There's already excessive dust from the site. Increased truck activity/traffic problems. Staff parking, will it be on your site? Smells or odours</td>
<td><strong>Asbestos</strong>&lt;br&gt;All transport and storage of asbestos containing material would be carried out in accordance with the ACT Government requirements for the transport and disposal of asbestos contaminated wastes. Further information on asbestos transport and handling can be found in Section 2.2.18 of the EIS, in addition to Section 8.2.7 on the procedures for the screening of incoming waste at the Site including for Asbestos containing material.</td>
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<td><strong>Dust and Odour</strong>&lt;br&gt;An assessment of Air Quality and Odour for the Project has been completed in accordance with the Scoping Document and is attached as Appendix K. Conservative dispersion modelling (modelling each emission source at maximum capacity for operating hours under worst case meteorological conditions) has been used to predict odour, dust deposition and particulate levels (including cumulative) of the site and the project taking into account the local meteorological conditions, dust and odour emission inventories, and regulatory requirements. Chapter 12</td>
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of the EIS summarises the findings of the technical assessment including the potential air and odour impacts of the Project. Dispersion modelling results demonstrate compliance with applicable criterion except for PM10 concentrations in one 24-hour period within the modelled year with the second highest 24-hour PM10 concentration assessed as not impacting on the nearest sensitive receptor. The assessment identifies design and mitigation measures to reduce potential odour impacts as identified in Section 12.4 of the EIS. Given the conservative modelling and mitigation measures proposed the potential air quality impacts of the project are assessed as low.

Traffic
The Transport Impact Assessment (Appendix E) includes considerations of the existing traffic conditions surrounding the site, the traffic generating characteristics of the project, the suitability of access arrangements for the site and the transport impact of the project upon the surrounding road network. The design of the site layout is provided to reduce potential transport impacts including all truck and employee vehicle parking to be located on site during operation and construction. The Transport assessment conservatively assumed that the site peak hour coincides with the road network peak hour and identifies that operation of the Project is not anticipated to compromise safety and function and the surrounding road network. The Site is assessed as having satisfactory capacity to cater for additional traffic generated by the Project during construction and

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|    |                 |                     | ASADA and the Department of Defence occupy approximately 3,000m² of the PBS building at 5 Tennant St, Fyshwick. Your proposal for initial feedback on the proposal for an Integrated Resource Recovery Facility at 6-14 Fyshwick was forwarded to our landlord (PBS) who we understand has provided a response. We offer the following general concerns on the proposal, based upon the documentation provided, however moving forward our intention is that formal feedback will be directed through our Landlord. ASADA and Defence have potential concerns of the impacts on the operations, including the safety and amenity to our workforces. These include:  
- The impact on the number of heavy vehicle movements in Tennant Street (e.g. via Tennant or Gladstone Streets)  
- Impacts on the parking on Tennant Street  
- Noise impacts from the proposed facility  
- Arrangements to ensure that air pollution or particulates are contained to the site, etc | **Asbestos**  
All transport and storage of asbestos containing material would be carried out in accordance with the ACT Government requirements for the transport and disposal of asbestos contaminated wastes. Further information on asbestos transport and handling can be found in Section 2.2.18 of the EIS, in addition to Section 8.2.7 on the procedures for the screening of incoming waste at the Site including for Asbestos containing material.  
**Noise**  
An assessment of Noise for the Project has been completed in accordance with the Scoping Document and is presented in Appendix M and Chapter 14 of the EIS. The noise assessment includes conservative modelling of all noise sources operating at once under neutral and noise enhancing weather conditions identified that the Project will operate in accordance with relevant regulatory criteria. The assessment identifies design and mitigation measures including reducing specific activities during morning time periods as discussed in Section 14.3.1 and Appendix M. Given the conservative modelling and mitigation measures proposed the potential noise impacts of the project are assessed as low. |
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<td>■ Particular information on the containment and handling of asbestos.</td>
<td><strong>Air Quality</strong>&lt;br&gt;An assessment of Air Quality and Odour for the Project has been completed in accordance with the Scoping Document and is attached as Appendix K. Conservative dispersion modelling (modelling each emission source at maximum capacity for operating hours under worst case meteorological conditions) has been used to predict odour, dust deposition and particulate levels (including cumulative) of the site and the project taking into account the local meteorological conditions, dust and odour emission inventories, and regulatory requirements. Chapter 12 of the EIS summarises the findings of the technical assessment including the potential air and odour impacts of the Project. Dispersion modelling results demonstrate compliance with applicable criterion except for PM10 concentrations in one 24-hour period within the modelled year with the second highest 24 hour PM10 concentration assessed as not impacting on the nearest sensitive receptor. The assessment identifies design and mitigation measures to reduce potential odour impacts as identified in Section 12.4 of the EIS. Given the conservative modelling and mitigation measures proposed the potential air quality impacts of the project are assessed as low.</td>
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<td><strong>Traffic and Parking</strong>&lt;br&gt;The Transport Impact Assessment (Appendix E) includes considerations of the existing traffic conditions surrounding the site, the traffic generating characteristics of the project, the suitability of access arrangements for the site and the transport</td>
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<td>11</td>
<td>12 September 2019</td>
<td>Feedback form</td>
<td>Traffic and road congestion are a serious concern for Tennant/Collie St will not cope with all the trucks!</td>
<td>Impact of the project upon the surrounding road network. The design of the site layout is provided to reduce potential transport impacts including all truck and employee vehicle parking to be located on site during operation and construction. The Transport assessment conservatively assumed that the site peak hour coincides with the road network peak hour and identifies that operation of the Project is not anticipated to compromise safety and function and the surrounding road network. The Site is assessed as having satisfactory capacity to cater for additional traffic generated by the Project during construction and operation. Section 6.3 and Appendix E of the EIS provides further detail of the potential transport impacts of the Project.</td>
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The Transport Impact Assessment (Appendix E) includes considerations of the existing traffic conditions surrounding the site, the traffic generating characteristics of the project, the suitability of access arrangements for the site and the transport impact of the project upon the surrounding road network. The design of the site layout is provided to reduce potential transport impacts including all truck and employee vehicle parking to be located on site during operation and construction. The Transport assessment conservatively assumed that the site peak hour coincides with the road network peak hour and identifies that operation of the Project is not anticipated to compromise safety and function and the surrounding road network. The Site is assessed as having satisfactory capacity to cater for additional traffic generated by the Project during construction and operation.
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| 12 | 13 September 2019 | Feedback form       | As the owner of 5 Tennant Street we and our tenants have the following concerns; Noise, air pollution, heavy vehicle movements, increased traffic on Tennant St - both during and when in operation, already limited on-street car parking | **Noise**
As identified within Appendix M and Chapter 14 of the EIS, the noise and vibration assessment includes conservative modelling of all noise sources operating at once under neutral and noise enhancing weather conditions identified that the Project will operate in accordance with relevant regulatory criteria. The assessment identifies design and mitigation measures including reducing specific activities during morning time periods as discussed in Section 14.3.1 and Appendix M. Given the conservative modelling and mitigation measures proposed the potential noise impacts of the project are assessed as low. |
|    |                  |                     |          | **Air Quality**
An assessment of Air Quality and Odour for the Project has been completed in accordance with the Scoping Document and is attached as Appendix K. Conservative dispersion modelling has been used to predict odour, dust deposition and particulate levels (including cumulative) of the site and the Project taking into account the local meteorological conditions, dust and odour emission inventories, and regulatory requirements. Chapter 12 of the EIS summarises the findings of the technical assessment including the potential air and odour impacts of the Project. Dispersion modelling results demonstrate compliance with applicable criterion except for PM10 concentrations in one 24- |
hour period within the modelled year with the second highest 24 hour PM10 concentration assessed as not impacting on the nearest sensitive receptor. Given the conservative modelling and mitigation measures proposed the potential air quality impacts of the project are assessed as low.

**Traffic and Parking**

The Transport Impact Assessment (Appendix E) includes considerations of the existing traffic conditions surrounding the site, the traffic generating characteristics of the project, the suitability of access arrangements for the site and the transport impact of the project upon the surrounding road network. The design of the site layout is provided to reduce potential transport impacts including all truck and employee vehicle parking to be located on site during operation and construction. The Transport assessment conservatively assumed that the site peak hour coincides with the road network peak hour and identifies that operation of the Project is not anticipated to compromise safety and function and the surrounding road network. The Site is assessed as having satisfactory capacity to cater for additional traffic generated by the Project during construction and operation. Section 6.3 and Appendix E of the EIS provides further detail of the potential transport impacts of the Project.

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| 13 | 15 May 2020      | Email               | I strongly object to siting the proposed waste disposal facility in Fyshwick, an increasingly busy commercial, not industrial, area. It should | Site Location
As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding |
be located at a site in Hume as previously designated by the ACT Government.

A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts.

Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.

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| 14 | 15 May 2020      | Email               | This communication is responding to the HAVE YOUR SAY process open to receive comment until Sunday 17 May 2020 conducted by | Scoping Document  
The Scoping Document was provided in accordance with regulatory requirements of EPSDD. For your information the requested figures have been generated within ACTmapi |
Communication Link on behalf of High Quality Group Pty Ltd.
The Scoping Document NI2019-181 granted on 3 April 2019 by George Cilliers, Delegate of ACTPLA is for an Integrated Resource Recovery Facility on Block 8 and Block 12 Section 28 Division Fyshwick at 6-14 Tennant St Fyshwick, a 10 hectare site near to the Molonglo River corridor. In the first instance could you please respond in writing to the following list numbered 1 - 18 and email any requested attachments to XXXX in reply;

1. Provide a clear copy as an attachment of Fig 3 Vegetation Communities (ACT mapi) on page 16 of the Golder Report for the Integrated Resource Recovery Facility, Fyshwick;
2. Provide a clear copy as an attachment of Fig 5: Regional Bushfire Management Zones on page 18 of same:
3. Provide a clear copy as an attachment of Fig 6: Proposed Site Layout from page 21 of same;
4. Provide as an attachment a copy of the lease for Block 8 Section 28 Division of Fyshwick on Deposited Plan 5618;

The EIS provides a comprehensive assessment of the impacts of the Project including updated figures in relation to those requested. These are as follows:

1. Figure 2 Ecological Features of the Study Area: Appendix O: Ecological Assessment Report.
2. Figure 36 of the EIS Bushfire Attack Levels (BALs) within the site boundary and figures identified within Appendix N: Bushfire Risk Assessment.
3. Figure 1 of the EIS Proposed Site Layout.
4. The lease is not provided with the EIS as it is not requested in the Scoping Document by EPSDD. However, details of the existing lease are discussed in the EIS including sections 2.1.2 and 2.1.6 of the EIS.
5. The current lessee for the Site is Tranteret Pty Ltd.
6. Discussion of the current lease is provided in Section 2.1.6 of the EIS. As detailed within section 2.1.6, the current Commonwealth Lease (dated 8 June 2012) allows the lessee to use the premises for the purpose of manufacture and storage of concrete pipes and other concrete products.
7. As discussed in Section 2.1.6 of the EIS, an application to vary the lease will be submitted concurrently with this application to support the Project. It is considered that the proposed uses of the Project on the Site would be classified as:
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<td>5. Who is the registered lessee of Block 8 Section 28;</td>
<td>• Waste transfer station;</td>
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<td>6. What is the use of the current lease;</td>
<td>• General industry;</td>
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<td>7. With reference to the Development Tables of the Territory Plan what new or additional uses are sought in a variation of purpose as far as proposed at this point in time;</td>
<td>• Bulk landscape supplies;</td>
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<td>8. Could you provide copies of the approved DA or Notice of Decision that allow the site work already undertaken since 2017 as evidenced in aerial images on MAPi and observation;</td>
<td>• Store;</td>
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<td>9. Was asbestos removed in demolition which has occurred since 2017;</td>
<td>• Industrial Trades;</td>
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<td>10. Where has the soil most likely contaminated given the prior use of the site been deposited;</td>
<td>• Recyclable Materials collection; and</td>
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<td>11. At what stage will the soils to be received at the site be assessed;</td>
<td>• Recycling Facility.</td>
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<td>12. What classification of soils will be accepted for processing in the facility;</td>
<td>8. The need to provide copies of approved DAs is not required by the Scoping Documentation (Appendix A).</td>
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<td>13. As the assessment of alternative sites would previously have been undertaken please provide details of other locations considered because there are many which would not deliver the cumulative impact of this Fyshwick block particularly in regard to</td>
<td>9. The EIS does not seek to address matters outside the scope of the Project.</td>
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<td>10. A contamination assessment has been undertaken at the Site including Appendix G (Phase 1 Contamination Assessment), Appendix H (Phase 2 Contamination Assessment) and Appendix I (Auditors Report). The results of these are discussed in Chapter 109 of the EIS.</td>
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<td>11. As identified in Section 2.2.17 of the EIS Waste Classification of soil would be required prior to acceptance on site. Once accepted to Site, Hi Quality would prepare an application for beneficial reuse of the material.</td>
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<td>12. Soils meeting beneficial reuse criteria would be accepted at the site.</td>
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<td>13. As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and</td>
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<td>the congested road access and egress through Fyshwick. We will now have the only two entry roads to the suburb which cross the railway line plus Tennant St impacted with heavy vehicle traffic bringing waste that in neither case is generated in Fyshwick. You would be aware that the 2017 TCCS Waste Feasibility’s formal Market Sounding in which you participated, identified the Hume Waste Precinct as the location of future major waste facilities including recycling;</td>
<td>Environmental and further constraints. A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts. Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.</td>
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<td>14.</td>
<td>Could you please confirm that the future draft EIS should the Minister decide no action then requires a following DA for the Integrated Resource Recovery Facility to be assessed under the Impact Track;</td>
<td>14. Once the EIS process is complete, the EIS would accompany the Development Application lodged in the Impact Track.</td>
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<td>15.</td>
<td>With incineration of 31,000tpa of wood removed from the project has the intended annual tonnage of waste to be handled at the site altered from that amount proposed initially;</td>
<td>15. The intended annual tonnage of material streams to be handled at the Site is set out in Figure 18 of the EIS.</td>
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<td>16.</td>
<td>What is the method intended for use in the production of RDF/PEF;</td>
<td>16. RDF is discussed in Section 2.2 Project Description. Residual waste from resource recovery is shredded and</td>
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<td>17.</td>
<td>It is apparent that High Qual is already in operation at the site with various piles of waste and bulk materials in stalls. Under</td>
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Environmental and further constraints. A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts. Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.

14. Once the EIS process is complete, the EIS would accompany the Development Application lodged in the Impact Track.

15. The intended annual tonnage of material streams to be handled at the Site is set out in Figure 18 of the EIS.

16. RDF is discussed in Section 2.2 Project Description. Residual waste from resource recovery is shredded and
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<td>what authority such as an EPA Authorisation or Waste Facility Licence has the company undertaken this work; 18. Could you please provide the dB SPL of each machine you intend to use when the site is fully operational. This does not require knowledge of a final operational number but merely the noise level output for the type of machine already intended for future use</td>
<td>bailed. The RDF will then be transported out of the ACT to an appropriately licenced facility. 17. As discussed in Section 2.1.6 of the EIS the operation of the existing concrete batching plant on the Site is in accordance with existing approvals (i.e. the existing concrete batching plant is not part of the Project). 18. Adopted Sound Power Levels are provided in Table 5.2 of the Noise and Vibration Assessment (Appendix M of the EIS).</td>
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<td>In respect of accountability and transparency of process and dealings with the public would you be able to provide a list of every question to HAVE YOUR SAY with its corresponding answer for publication, for example, on the ISCCC website or on request. The collating of individual concerns with one general response is pap process. According to the limited six hours made available in the chat time HAVE YOUR SAY process each person is receiving individual response. It is therefore possible to share every question and this would be welcomed. Secondly, there are some issues in points 1-7 to be addressed in the draft EIS as follows;</td>
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<td>1. Please respect that digital files must not exceed 20MB each. In EIS201700053 for an MRF on Ipswich St Fyshwick, CRS failed to observe this requirement and caused significant angst because the documents would not load at Officeworks and the waste company had to provide A3 colour documents in order to be legible. When approached for assistance, a CRS Director asked for $100 from retirees to cover the cost of a hard copy of the draft EIS. That was looked upon as reprehensible and not great for the company’s public image;</td>
<td>The further points of 1 to 7 on EIS are noted. The EIS provides an assessment of the environmental impacts of the Project with mitigation and management measures identified for issues throughout the EIS. These measures are consolidated in Chapter 18 of the EIS. The EIS has been prepared in accordance with the requirements of the Scoping Document provided in Appendix A of the EIS. EPSDD has requested that the EIS be provided in hardcopy and digital formats in accordance with regulation as part of the public notification process. These will be provided to EPSDD for distribution/public exhibition. Assessments will be in accordance with the Scoping Document and applicable regulatory requirements. The Contaminated Site Audit is provided in Appendix I of the EIS. With regards to chemical storage, Section 87.2.6 and Table 14 provides a breakdown of the types of chemicals proposed to be stored and handled at the Site.</td>
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<td>2. Will you consider providing a hard copy of the draft EIS on request as you would in NSW;</td>
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<td>3. Please be advised it is required to take account of the worst case scenario in environmental and traffic reporting;</td>
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<td>4. It is appropriate and relevant that Hi Qual address the potential cumulative impacts of the Integrated Resource Recovery Facility as noted in General Principles for Sustainable Development at 1.4 in the Statement of Strategic Directions of the Territory Plan;</td>
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<td>5. Will you be conducting an EIS process with concurrent DAs in accord with the P&amp;D Act;</td>
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<td>6. Would it be possible to receive a digital copy of the Contaminated Site Audit when available;</td>
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<td>7. What chemicals will be stored onsite to service the various processes;</td>
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<td>It is regrettable that residents and traders are unable to get together in a public forum for various presentations which would also provide High Quality the opportunity to better explain the company’s choice of location and nature of its operation and what benefit of the facility for all.</td>
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<td>It is also regrettable to note that HAVE YOUR SAY community comment has already been vandalised on community notice boards in inner south Canberra. It is to be assumed that this company does not welcome public exposure of this dirty waste project proposed to handle every year 24/7 far more than the whole of Canberra’s current annual waste production.</td>
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15 16 May 2020 Email PLEASE … no major waste hub for Fyshwick!!
It’s a shameful proposal and will impact those of us living in the inner south neighbourhoods. Why is the government willing to risk the health and safety of Canberra citizens? I can only imagine that there must be money involved…our health and safety is FAR MORE IMPORTANT!!

Site Location
As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints.

A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts.

Further information regarding the selection of the site and...
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| 16 | 17 May 2020      | Email               | I wish to lodge my objection to the below “Hi-Quality Groups Waste proposal for Tennant Street, Fyshwick”. Firstly I wish to point out that Fyshwick is zoned IZ2 - Industrial Mixed Use Zone (see file:///C:/Users/uksi/Downloads/2008-27.PDF). Section L of and this states:  

The following Zone Objectives apply specifically to West Fyshwick:  

i) Encourage Canberra’s regional role for food processing, wholesaling, distribution and marketing  

ii) Cluster uses which are compatible with and complementary to existing facilities, particularly with regard to food processing and warehousing and the markets, including some small scale food retailing  

iii) Protect the safety and amenity of food related enterprises. How is this proposal possibly fitting in with this. Note that despite the potential risks to the markets, both the Flute bakery and Hungry Jacks are right near Bunnings (proposal is for site next to Bunnings) which means this type of activity is illegal. There is also consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.  

Zoning  

As identified in Section 2.1.6 of the EIS, the Site is zoned General Industrial and Industrial Mixed Use under the Territory Plan (refer to Chapter 3 Legislative Context). As shown in Figure 2 of the EIS, the majority of the Site is zoned IZ1 General Industrial with the block touching on a small area of IZ2 to the west of the Site. The Project does not propose works to take place on the land zoned for Industrial Mixed Use (IZ2). The type of activities proposed by the Project for the Site are considered appropriate in this zoning, including the zoning objectives as addressed in Section 3.4 of the EIS.  

Site Location  

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A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition
potential threat to the Fyshwick markets. This will effect Narrabundah home prices. There are residential sites in Fyshwick itself a short walking distance away. Hume is a non-residential area which was the other proposed site and has a rail that could be reopened. This will substantially increase traffic flow, especially at existing current ‘choke’ points including the Canberra avenue round about that has two major schools on or really near that point. Another major ‘choke point is the Hume highway Ipswich street intersection. This proposal smells of government corruption by one or more individual driving this issue given everything that is wrong with it.

How feedback is addressed in the EIS

to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts.

Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.

Traffic
The Transport Impact Assessment (Appendix E) includes considerations of the existing traffic conditions surrounding the site, the traffic generating characteristics of the project, the suitability of access arrangements for the site and the transport impact of the project upon the surrounding road network. The design of the site layout is provided to reduce potential transport impacts and the Transport assessment conservatively assumed that the site peak hour coincides with the road network peak hour. The Transport assessment identifies that operation of the Project is not anticipated to compromise safety and function and the surrounding road network and is assessed as having satisfactory capacity to cater for additional traffic generated by the Project during construction and operation. Section 6.3 and
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<tr>
<td>17</td>
<td>17 May 2020</td>
<td>Email</td>
<td>Thank you for the opportunity to make comments on this proposal. I would like to make just five points.</td>
<td>Appendix E of the EIS provides further detail of the potential transport impacts of the Project.</td>
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</table>

1. Fyshwick is a major retail centre with outlets such as Bunnings and Domayne situated close to the proposed site for an integrated resource recovery facility. In the Golder Planning Report, it is stated that the plan is to build a waste-management hub that will process approximately one million tonnes of waste per annum, including facilities for processing grease, drilling mud and oily water. This is equivalent to more than the total waste processed currently in the ACT and would be equivalent to moving the Mugga Way waste management facility to Fyshwick!! Quite clearly this scale of operation would be unacceptable. What is being proposed has no place in an area of retail outlets.

2. I was told in my chat session that the burning of wood for energy, which is contained in the Golder Report, was no

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A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts.

Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.
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<tr>
<td>1.</td>
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<td>longer being included in the proposal. What other changes are being proposed?</td>
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<td>2.</td>
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<td>3. I was told in my chat session that the estimated number of trucks moving daily to and from the facility was not known, but would be included in the EIS. I was also told that the route for the trucks was not known but would be included in the EIS. It is impossible to make sensible comments on this proposal when critical information is not available.</td>
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<td>3.</td>
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<td>4. A chat session might be satisfactory for changing settings on a computer, but it is totally unsuitable for considering a proposal of the size proposed by the Hi Quality Group, particularly when the proposal has not been finalised. There should be fresh consultation sessions with the community when the proposal is finalised.</td>
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<td>4.</td>
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<td>5. Somewhere close to the Mugga Way facility in Hume may be a much better option for what is being proposed.</td>
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<td>Demand It is considered there is a demand for increased resource recovery of waste streams that the Project can provide as evident by applicable and relevant legislation and policy as detailed in Chapter 2.5 of the EIS. In addition, the Project proposes to accept not only waste but further materials for processing on the Site to produce beneficial products. Refer to Figure 18 of the EIS for a summary of the material flows proposed as part of the Project. Figure 18 identifies that approximately 500,000 tpa of non waste materials are to be accepted at the Site for the existing Concrete Batching Plant, the pre cast concrete yard and the landscape yard.</td>
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<td>Project Description A comprehensive project description is provided in Chapter 2 of the EIS. This includes discussion on alternate treatment processes that are not part of the Project as discussed in Section 2.6.2 of the EIS.</td>
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<td>Traffic Truck movements and their proposed route to and from the Site are identified and assessed within the Transport Assessment for the Project (Appendix E of the EIS). We note that the opportunity to address the findings of the Transport Impact Assessment and further assessments provided in the EIS can be made during the public notification period.</td>
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Consultation Process
The purpose of the drop-in sessions prior to lodgement of EIS is to develop a comprehensive EIS that considers the feedback from the community and requirements of regulatory and government agencies. The opportunity for community stakeholders to provide further feedback on the EIS will be during the public notification period.

With regards to feedback about the online drop-in sessions, due to COVID-19 restrictions, alternative methods by which to seek and record community feedback were required in lieu of face-to-face community engagement. The online drop-in sessions provided an accessible way of achieving this. Information regarding their purpose, objectives and outcomes are outlined in this Chapter of the EIS. We also note that further consultation sessions will be held during public notification of the EIS.

Site Location
As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints.

A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including
Table 2.2: Summary of feedback and how it is addressed in the EIS

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<td>18</td>
<td>17 May 2020</td>
<td>Email</td>
<td>I do not support the proposal for a waste and transfer station in Fyshwick. Rather than importing waste into the ACT, I believe that the ACT government would do better to build a soft plastics recycling plant in Hume where we can recycle soft plastics and make a real contribution to solving the waste problem and making useful items from the soft plastics. This plant would preferably be government run so it can best coordinate with the waste collection and recycling in the ACT. I hope you will consider this alternative proposal to the retrograde idea for a Waste plant in Fyshwick.</td>
<td>environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts. Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.</td>
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**Site Location**

As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints. A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site
### How feedback is addressed in the EIS

is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts.

Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.

**Source of Waste**
The Project plans to accept waste from predominantly within the ACT.

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<td>I live in Narrabundah and I say NO to a second Major Waste Hub Proposal for Fyshwick. I say No to building major waste facilities next to residential suburbs.</td>
<td>Noted.</td>
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**Site Location**
As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints.

A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of
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<td>20</td>
<td>17 May 2020</td>
<td>Email</td>
<td>Fyshwick is a suburb of inner south Canberra with limited blocks available for general, ie heavy industrial uses. There is Section 30 Blocks 11 and 12 set for future zoning variation which is concerned with Eastlake and Section 28 Block 8 (Hi Qual) Block 12 (gov custodian) Block 13 and Block 18 only. Additionally, the rail corridor allows heavy rail infrastructure. Most Fyshwick Crown leases include a caretaker’s residence in the uses of the land. From the 2011 to the 2016 Census, the number of residents in the suburb has doubled to 66.</td>
<td>developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts. Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.</td>
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<td>Fyshwick is predominantly a light industrial area and is home to service, large retail and commercial businesses which over time have in turn relocated from the town and group centres in line with the business model for Canberra. The thriving Fyshwick businesses contribute $2.3 billion annually to the ACT economy. Similar to cities around the world the character of this inner suburb, within 4km of Parliament and public service offices, popular tourist destinations and tourist accommodation and the airport, is evolving into a place for people to enjoy to come and to spend time. With this changing business model for Canberra the historical location of dirty heavy industry at the Tennant St site is no longer relevant. This proposed dump, for that is what is happening when waste is constantly onsite, takes in views over the Molonglo River corridor. You must understand that there is now and will continue to be considerable concern in the residential and trading community relating to human health and safety and to the environmental impacts of this proposal, which aims to introduce a major waste facility into our inner south. There is grave concern for the impact of the unnecessary introduction of dirty existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts. Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS. 1. A Stormwater and hydrological Assessment (Appendix J of the EIS) has been completed for the Site and the Project, which is further addressed in Chapter 11 of the EIS including the potential for contamination of receiving land and downstream waterways. Potential impacts of the Project upon water are identified in Section 11.3 including the potential for runoff contamination, which have been addressed through the design of the facility and management measures of contamination containment (Section 11.4). Mitigation and management measures in relation to spills are identified in Section 8.3.2 (Materials and Waste), 10.4.2 (Soils and Geology) in addition to those within Section 11.4 related to contaminant containment. As</td>
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<td>industry on the economy of Fyshwick and on the wider ACT economy. None of this proposed waste is generated in the area. Although High Quality can ignore the CRS major waste facility in its draft EIS, rail terminal and one freight facility are already approved. Community is doubly impacted given the only roads across the railway line are Ipswich and Newcastle Streets. These are important access roads to Fyshwick, the Monaro Highway, Queanbeyan, and the residential suburbs of the inner south and Woden Valley. This community needs your attention to each concern numbered 1 – 38 as follows; 1. From a cursory examination of the ACT MAPI viewer, it is apparent that the natural course of water from the site is to the east into the nearby Molonglo River. Will a hydrological survey be conducted to identify dangers to the river from contaminated runoff and contaminated flow below the surface? How does Hi Qual intend to manage the protection of the river and have you communicated with the Molonglo Conservation Group? ACT ratepayers do not want to pay for any clean-up which is often the case in the identified within the EIS a spill management plan would also be developed and included in the Site operational environment management plan. 2. As outlined in Section 11.2.3 of the EIS, the inlet pond in the Northern Block will collect sediment. The inlet pond will feed clean water to the middle on site detention (OSD) pond and outlet pond to manage the discharge off site. Clean water from the outlet pond will be reused on site for dust suppression and processing activities. Also refer to Section 11.4 of the EIS on proposed mitigation measures of Contaminant Containment (Section 11.4.1), including erosion and sediment control (Section 11.4.2) and surface water infrastructure (Section 11.4.3). 3. The Proponent would operate the Site in accordance with regulatory requirements including development approval conditions for the site when issued. 4. We note that the total volume of material to be handled at the site is not only waste but materials to be processed at the Site. A breakdown of material flows is provide in Figure 18 of the EIS. Figure 18 identifies that approximately 500,000 tpa of non waste materials are to be accepted at the Site for the existing Concrete Batching Plant, the pre cast concrete yard and the landscape yard. Figure 18 also identifies the residual volume expected to landfill. The residual will be</td>
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<td>wake of waste industry operations worldwide. It is noted there is no legislation in the ACT which would require the responsibility that now exists in NSW;</td>
<td>deposited at an appropriately licenced landfill, which may potentially be at the Windellama site as stated in Section 8.2 of the EIS.</td>
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<td>Importantly, how will the runoff sediment from the site be controlled? This is unclear;</td>
<td>5. The intended annual tonnage of material streams to be handled at the Site is setout in Figure 18 of the EIS.</td>
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<td>3.</td>
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<td>What financial guarantee can High Quality offer given its poor record in regard to NSW environmental matters. Will the company take responsibility for clean up on departure;</td>
<td>6. The Project description is provided in Chapter 2 of the EIS including Section 2.2.24 on utilities identifying the Project utilising the existing services to the Site including power, communications, sewage and water supply. The existing services at the Site are further described in Chapter 7 of the EIS.</td>
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<td>4.</td>
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<td>From the approximate 1 million tpa of waste to be introduced into Fyshwick and handled at the site what tonnage of residue will be deposited in landfill as I understand to be trucked to Windellama in the Southern Highlands, some 100km distance;</td>
<td>7. An assessment of Air Quality and Odour for the Project has been completed in accordance with the Scoping Document and is attached to the EIS as Appendix K. Conservative dispersion modelling (modelling each emission source at maximum capacity for operating hours under worst case meteorological conditions) has been used to predict odour, dust deposition and particulate levels (including cumulative) of the site and the project taking into account the local meteorological conditions, dust and odour emission inventories, and regulatory requirements. Chapter 12 of the EIS summarises the findings of the technical assessment including the potential air and odour impacts of the Project. Dispersion modelling results demonstrate compliance with</td>
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<td>5.</td>
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<td>With the RDA/PEF now removed from the operation what will be the increased tonnage of waste to landfill;</td>
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<td>6.</td>
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<td>With the incineration aka waste to energy now taken out of the mix in line with ACT Policy, will you consider solar panels to power the site or would the dust be too great;</td>
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<td>7.</td>
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<td>Around Lithgow St presently where Tigerwaste processes concrete there is</td>
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<td>massive pollution of concrete dust containing silica, visibly deposited on and penetrating into the surrounding buildings. How will this dust be controlled on your site given surrounding properties on Tennant St some of which process food have already noted increased dust into their premises from your current onsite operations;</td>
<td>applicable criterion except for PM10 concentrations in one 24-hour period within the modelled year with the second highest 24-hour PM10 concentration assessed as not impacting on the nearest sensitive receptor. The assessment identifies design and mitigation measures to reduce potential odour impacts as identified in Section 12.4 of the EIS. Given the conservative modelling and mitigation measures proposed the potential air quality impacts of the project are assessed as low.</td>
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<td>13. Please identify each process the operation will introduce to this heavily populated business area;</td>
<td>shown in Figure 18 of the EIS, there are a number of materials that are processed through more than one facility such as material processed at the Recycling Facility may then go onto the Crushing and Screening Facility, the Wood Processing Facility, the Soil Processing Facility and/or product storage at the Site to produce beneficial materials that can be reused. This aims to increase efficiency, resource recovery and create greater beneficial reuse. For more information on proposed resource recovery and material flows refer to Chapter 8 of the EIS.</td>
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<td>14. Fires in waste facilities are more frequent than in the type of businesses surrounding the Tennant St site or in Fyshwick in general with the exception of the waste metal facilities on Lithgow and Cessnock Streets. Licensed waste facilities in the ACT have all experienced fires some of which have continued for days and one of which at Mitchell caused the lockdown of a large area of Belconnen. Although you may be aware that there was a bushfire which reached a scrap metal facility in Beard, causing lockdown in Queanbeyan most recently as January 2020, it is recorded that most of the Canberra waste fires have started onsite. How will you address this danger increased in waste facilities and what toxicity would be expected in air particles from a fire in your waste given that C&amp;D waste is highly flammable and fly ash is to be handled;</td>
<td>11. As identified in addressing point 10, the Site will bring a number of proven treatment technologies together, thereby increasing the resource recovery opportunities at the one location and provide a unique innovative service in the ACT. Refer to Chapter 2 of the EIS for further details on the facilities and technologies proposed to be utilized at the Site.</td>
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<td>15. Have you met with the Canberra Airport management to discuss the introduction of a major waste facility within its 3km defined</td>
<td>12. With regards to chemical storage, Section 8.2.6 and Table 14 provides a breakdown of the types of chemicals proposed to be stored and handled at the Site.</td>
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<td>13. Project details including processes proposed to be utilized on the Site are provided in Chapter 2 of the EIS.</td>
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<td>14. A Bushfire Risk Assessment has been completed for the</td>
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<td>area given the Tennant St site is less than 2km distance from mid runway of the airport;</td>
<td>Project (refer to Appendix N of the EIS) and Chapter 15 summarises this assessment in addition to the potential risk and mitigation of fire originating at the Site due to vehicle, materials and/or loss of containment (Table 31 of the EIS). Procedures for operational management including risk of fire, housekeeping, stockpile management will also be provided in the site operational environmental management plan.</td>
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<td>16. Where will the asbestos be sourced;</td>
<td>15. The Proponent has engaged with a number of government agencies and stakeholders including Canberra Airport. As addressed in Section 15.4 of the EIS, the Project has been assessed against the Department of Infrastructure, Regional Development and Cities: Safeguarding Advisory Group (November 2018) “National Airports Safeguarding Framework” (NSAF).</td>
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<td>17. How will the asbestos be safely stored and handled on the site;</td>
<td>16. It is the Proponents intention that waste including asbestos are predominantly from within the ACT. Asbestos transport and handling procedures are provided in Section 2.2.18 of the EIS, in addition to Section 8.2.7 on the procedures for the screening of incoming waste at the Site including for Asbestos containing material. All transport and storage of asbestos containing material would be carried out in accordance with the ACT Government requirements for the transport and disposal of asbestos contaminated wastes.</td>
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<td>18. Which landfill will receive the asbestos? Please give the location;</td>
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<td>19. Traffic congestion is already apparent on roads from the major Canberra Ave and Hindmarsh Drive/Newcastle St intersection right to the Tennant St entrance of High Quality. What changes do you envisage to traffic control in order to accommodate your heavy vehicles? Will there be additional truck activated traffic lights provided as has to occur on Ipswich St for the approved rail terminal operation;</td>
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<td>20. Given your proposal is to transport by road into Fyshwick more waste than is produced in the whole of the ACT, will waste be sourced from Victoria; Please provide tonnage and composition;</td>
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<td>21. Given your proposal is to transport by road into Fyshwick more waste than is produced in the whole of the ACT, what waste will be</td>
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<td>sourced from NSW. Please provide tonnage and composition;</td>
<td>17. Refer to response 16 that addresses this issue.</td>
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<td>22. Given NSW no longer has a cap of 150km on the transport of waste by road what are the possible sources and locations for the fly ash from incineration of waste of unknown content and origin intended to be included in concrete pipe production onsite;</td>
<td>18. Refer to response 16 that addresses this issue. The specific site proposed to accept asbestos containing material will be licensed to accept this waste and will be dependent upon commercial arrangements.</td>
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<td>23. Is the handling of fly ash to be considered a new “innovative technology”;</td>
<td>19. The Transport Impact Assessment (Appendix E) includes considerations of the existing traffic conditions surrounding the site, the traffic generating characteristics of the project, the suitability of access arrangements for the site and the transport impact of the project upon the surrounding road network. The design of the site layout is provided to reduce potential transport impacts and the Transport assessment conservatively assumed that the site peak hour coincides with the road network peak hour. The Transport assessment identifies that operation of the Project is not anticipated to compromise safety and function and the surrounding road network and is assessed as having satisfactory capacity to cater for additional traffic generated by the Project during construction and operation. Section 6.3 and Appendix E of the EIS provides further detail of the potential transport impacts of the Project.</td>
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<td>24. The concern with fly ash is that it contains toxic 2.5 and smaller particles, a danger to human health and impacting air quality. Where would you be using Liddell power station as a source because waste of unknown content is handled there. Perhaps this is the case for all sources of fly ash;</td>
<td>20. The intention of the Project is to accept waste</td>
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<td>25. How will the fly ash be contained in transport;</td>
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<td>26. How will the fly ash be contained in onsite operations;</td>
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<td>27. As fly ash is porous in a mix what value is it to add to the proposed products;</td>
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<td>28. When your trucks are coming from interstate during the business day and also I understand at night in order to alleviate the traffic situation, it will be nigh</td>
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impossible to regulate arrivals and departures the further the distance the waste is to be transported. What measures do you intend to take to stagger arrivals;

29. With the intention to handle 1 million tpa of various waste how do you intend to address congestion of trucks both onsite and at intersections through Fyshwick and lined up in the surrounding streets waiting for access. This bank up of heavy vehicles currently occurs at Mugga dump which will, over the same period of time, be in receipt of far less waste on a far larger site than the proposed Fyshwick Hi Qual operation;

30. Will any trucks coming into Canberra from the north be routed off the Monaro Highway at the Dairy Flat off ramp into Newcastle St or is there no regulation on the routes and timing concerning heavy vehicles entering and exiting Fyshwick;

31. The B-double route for heavy vehicles identified in the 2016 Freight Strategy is via Newcastle St for through traffic. Would you please require trucks servicing the Tennant St site to exit the Monaro Highway at Hindmarsh Drive and not at the Dairy Rd end of Newcastle St. Ipswich St is the

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<td>21.</td>
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<td>Refer to response 20 that addresses this issue.</td>
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<td>22.</td>
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<td>Fly ash is proposed to be transported via tanker and stored onsite in secure silos at the existing concrete batching plant. The fly ash would be provided by a third-party and where this is sourced from varies according to supply, availability and commercial arrangements. Fly ash is not considered innovative technology. Fly ash is a commonly used ingredient in concrete and its use in concrete is a positive method of reusing a waste product. Any material that is transported in or out of NSW would be tracked in accordance with the Environment Protection Regulation 2005 and “National Environment Protection Measure” (NEPM) for the Movement of Controlled Waste between States and Territories (June 1998).</td>
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<td>direct route used by most inner south and Queanbeyan traffic between Canberra Ave and the Monaro Highway and it is single through lanes. The CRS proposed operation and approved rail terminal will seriously add to the present congestion at the on/off ramps there and has already been approved to insert an extra set of truck activated lights 100m from the existing lights at Wiluna St. The resulting increased risk of accidents involving heavy vehicles is apparent along Ipswich St and at the intersections of Ipswich and Newcastle Streets and the on/off ramps connecting to the Monaro Highway. Should Hi Qual contribute to further heavy vehicle congestion at that end of Newcastle St it will not be in the interests of the broader public good; 32. Your traffic survey needs to address more than the entry/exit to the Tennant St site but take account of the existing congestion in the broader Fyshwick and inner south area; 33. To this end have you considered approaching the ACT Government to allow Hi Qual to install a low level crossing</td>
<td>23. Refer to response 22 that addresses this issue. 24. Refer to response 22 that addresses this issue. 25. Refer to response 22 that addresses this issue. 26. Refer to response 22 that addresses this issue. 27. Refer to response 22 that addresses this issue. 28. A Transport Impact Assessment of the Project is provided in Appendix E. Operational management of the Site including traffic arrivals will be completed in accordance with a Traffic management plan to be approved by the determining authority prior to operation. 29. The Transport Impact Assessment (Appendix E) includes considerations of the existing traffic conditions surrounding the site, the traffic generating characteristics of the project, the suitability of access arrangements for the site and the transport impact of the project upon the surrounding road network. The design of the site layout is provided to reduce potential transport impacts and the Transport assessment identifies that the design of the internal haul road layout and location of the weighbridge will not result in queuing of trucks at the Site and that operation of the Project will not compromise safety and</td>
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<td>over the railway line in order that heavy vehicle access and egress could occur at the southern end of the site, thus avoiding monumental heavy vehicle traffic along Newcastle St and reducing the risk to human health and safety from the introduction of heavy diesel vehicles;</td>
<td>function of the surrounding road network. Section 6.3 and Appendix E of the EIS provides further detail of the potential transport impacts of the Project.</td>
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<td>30.</td>
<td>The potential routes to access the Site are identified within Figure 6.9 of the Transport Impact Assessment (Appendix E).</td>
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<td>31.</td>
<td>Refer to response 29 and 30 to address this issue.</td>
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<td>32.</td>
<td>Refer to response 29 that addresses this issue.</td>
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<td>33.</td>
<td>Refer to response 29 that addresses this issue.</td>
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<td>34.</td>
<td>With regards to feedback on suitable locations for the site, as identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints. A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the</td>
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<td>overflow location that is not at the site should the need arise;</td>
<td>zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts. Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.</td>
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<td>36. When there are existing alternative sites including outside of the ACT and in the ACT Broadacre corridor which would be further removed from traffic congestion and IZ.2 commercial and retail, it is pertinent that a responsible company would have given consideration to such areas as Symonston and Hume both IZ1-General industry;</td>
<td>35. Stockpiling of the materials to be received and processed at the Site are identified in Chapter 2 and Chapter 8 (including Table 13) of the EIS providing proposed maximum stockpile sizes. As identified within Section 8.2.7 of the EIS, should operational contingency be required materials could be directed to the Windellama landfill site owned and operated by the Proponent.</td>
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<td>37. There is ample flat land on which it would be more suitable to locate a major waste facility such as the proposed Integrated Resource Recovery Facility distant from any river corridor and outside of the 3km distance from Canberra Airport and not endangering human health and safety with the introduction of significant diesel heavy vehicles in a highly populated area;</td>
<td>36. Refer to response 34, which addresses this issue.</td>
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<td>38. Please justify that Fyshwick is more central and more functional access/egress than Hume, Symonston or Mugga, areas of less traffic congestion and population density. There are 5 sets of traffic lights to be negotiated between Canberra Ave and the site. For heavy vehicles coming from the</td>
<td>37. Refer to response 34, which addresses this issue.</td>
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<td>38. Refer to response 34, which addresses this issue.</td>
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<td>south on the Monaro Highway there is an additional set of traffic lights to turn into Hindmarsh Drive. The rejected locations offer greater land area and are more directly connected with the Monaro Highway in the case of Symonston and Hume. I accept that a number of these concerns will be taken on notice and addressed in the draft EIS. However, I expect reply to those questions to which you have already given close consideration in order to prepare the application for the ACTPLA Scoping Document, NI2019-181. In particular, the issue of deciding on the location in Fyshwick and what other locations were considered can be available for public information already. Additionally, the nature of the “innovative technologies” of the integrated resource recovery would already be researched and decided and could be made public just as the tonnage of waste to be handled at the site has long been announced. The sources of the various wastes to deliver economic advantage must also be known and could be made public in the first instance.</td>
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<td>21</td>
<td>17 May 2020</td>
<td>Email</td>
<td>I herewith would like to voice my strong opposition to the proposed Hi Quality waste hub and recycling facility at Tennant Street, Fyshwick. Recycling is an essential and legitimate process, but it should not be located in the Inner South suburb of Fyshwick, a few km from the parliamentary triangle, the airport, residences, childcare centres and schools and immediately next to well-patronized retail stores. The ACT government has designated Mugga Lane and Hume as areas for waste treatment facilities and an approval of Hi Quality at Tennant Street is in violation of this planning. In January of this year, Canberra temporarily turned into the most polluted capital in the world. Thirty-one people died because of the extremely heavy air pollution (Canberra Times, March 24, 2020). Waste facilities are a known fire hazards and when in January of this year Site Location As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints. A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social</td>
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fires hit the recycling centre in Underwood Street in Beard, a bad situation was made worse with highly toxic smoke in residential areas. Already in 2018, two toxic fires occurred at the scrap metal yard at Beard and since 2014, eight fires have been recorded at that at Lithgow Street, Fyshwick (Eastlaker, March 20, 2020).

Naturally Hi Quality will give all possible assurance that comprehensive precautions will be taken. But with an unprecedented rise in temperatures and aridity predicted for the future, such precautions could well be insufficient when an unexpected situation arrives. We received a taste of this last summer. In view of this fact it seems irresponsible to permit the establishment of a large scale recycling facility where any accident or unforeseen circumstances could severely impact not only on the health of a large part of Canberra’s population, but also on a retail area contributing $2.3 billion annually to the ACT economy.

The ACT produces up to 1.000.000 tonnes of waste annually. A large amount of this is dealt with at Hume and Mugga Lane in an upgraded recycling facility and a landfill gas-to-energy impacts.

Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.

**Demand**

It is considered there is a demand for increased resource recovery of waste streams that the Project can provide as evident by applicable and relevant legislation and policy as detailed in Chapter 2.5 of the EIS. In addition, the Project proposes to accept not only waste sourced predominantly within the ACT but non waste materials for processing on the Site to produce beneficial products. Refer to Figure 18 of the EIS for a summary of the total material flows proposed as part of the Project. Figure 18 identifies that approximately 500,000 tpa of non waste materials are to be accepted at the Site for the existing Concrete Batching Plant, the pre cast concrete yard and the landscape yard.

**Traffic**

With regards to the question of transportation of materials to and from the Site this is not defined within the EIS as this is based on commercial arrangements and operational contingency. For example, should site activities temporarily be shutdown due to utility or infrastructure failure, materials could be diverted to Hi Quality’s Windellama site in NSW (refer to Section 8.3.2 of the EIS for further details). The Windellama site is also identified as a
station capturing methane for which LGI Ltd. has recently been awarded a new 15-year contract (Canberra Times, September 22, 2019). With the separate collection of food and organics (FOGO) from 2023, household garbage is projected to be reduced by up to 50 per cent. This material should be turned into fertilized soil and bio fuel by means of anaerobic digestion, a process which over 70 per cent of respondents favour according to the ACT Waste-to-Energy survey. Icon Water is considering anaerobic digestion instead of incinerating sewerage sludge, and one plant could service both. This would also reduce greenhouse gasses produced by the incineration of sewerage sludge.

Hi Quality proposes to recycle some 1,300,000 tonnes of waste annually. Where is this waste to come from? Do Canberrans have to suffer as waste is trucked in from outside the ACT so that one company can make large profits? The great investment for this outsized recycling plant will mean that it will be there for generations to come, with ever more waste trucked in from outside the ACT to keep up profits as Canberrans do their best to protect the environment by learning to efficiently

How feedback is addressed in the EIS

potential site for disposal of residual materials in Section 8.2 of the EIS. This does not exclude providing residual material to further landfills but would result in not increasing waste volume to landfill in the ACT. Any material that is transported in or out of NSW would be tracked in accordance with the Environment Protection Regulation 2005 and “National Environment Protection Measure” (NEPM) for the Movement of Controlled Waste between States and Territories (June 1998).

Bushfire

A Bushfire Risk Assessment has been completed for the Project (refer to Appendix N of the EIS) and Chapter 15 summarises this assessment in addition to the potential risk and mitigation of fire originating at the Site due to vehicle, materials and/or loss of containment (Table 31 of the EIS). Procedures for operational management will also be provided in the site operational environmental management plan.
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<td>recycle and reducing the amount of waste produced. If Hi Quality wants to establish a plant in the ACT it should only be done under the following conditions:</td>
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|    |                  |                     | - Recycle ACT waste only.  
- Be located in the designated area for waste treatment of Hume and Mugga Lane  
- Preferably set up a plant for anaerobic digestion which does not exist in the ACT at present and where the waste stream will increase as the population, like elsewhere, learns to use recyclable cat litters, nappies, paper bags, etc. |
|    |                  |                     | In the final instance the approval of the Hi Quality proposal in its present form boils down to the question whether the ACT's elected law makers will fall victim to the sales talk and over-optimistic promises of a company aiming to make large profits from waste in the ACT, or whether they will have the foresight and wisdom to protect the health, well-being and environment of future generations of Canberrans. |
| 22 | 18 May 2020      | Email               | At this time with restricted public gatherings and no possibility of holding public meetings on the bigger issues of concern to the community we                                                                 | Site Location  
As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding |
wish to pass on a summary of the electronic feedback ONCC has received from residents on the proposal from the Hi-Quality Group Integrated Resource Recovery Facility at 6-14 Tennant Street, Fyshwick. We have received an overwhelming number of comments stating that residents do not want a waste site in Fyshwick.
Our ACT government made their intentions clear to ACT residents in 2017 when they identified the Hume Waste Precinct as the location for future major waste facilities and we expect that the Government would abide by that commitment. We do not expect Fyshwick to become the ACT waste centre and we do not expect ACT to become the cheap dumping ground for other states waste, instead those states should put in place processes for the disposal of their own waste just like ACT has with the great resources already established at Mugga.
We hope that our Government is hearing the voices of residents saying NO to using Fyshwick as our waste centre (no matter how appealing an offer is made to them to allow waste into Fyshwick). We expect our public servants to follow the government’s decision of land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints.

A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts.
Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.
### How feedback is addressed in the EIS

<table>
<thead>
<tr>
<th>No</th>
<th>Date of feedback</th>
<th>Consultation source</th>
<th>Feedback</th>
<th>Site Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>18 May 2020</td>
<td>Email</td>
<td>2017 and redirect the proponents to land at Hume and from there the proposal can be scrutinised to see if it is of benefit to ACT residents.</td>
<td>As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints. A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of</td>
</tr>
<tr>
<td>24</td>
<td>18 May 2020</td>
<td>Email</td>
<td>I would be grateful if you would provide the results or data collected from the initial September 2019 round of communication consultation on the proposal for a major waste facility to handle more waste than produced in the ACT at Tennant St Fyshwick. This public feedback should be available as soon as possible. All data would have been recorded for separate dates with individual comment and response and would lose intelligence if put through the blander to the public or in the mix with the current round.</td>
<td>With regards to the request to provide the feedback received in September 2019, this information can be found in this Table (Table 32). Each feedback item is dated.</td>
</tr>
</tbody>
</table>
### Site Location
As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints.

A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and

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</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>19 May 2020</td>
<td>Email</td>
<td>As a long-term resident of Narrabundah I must protest at this further attempt to convert this area of Fyshwick into a waste disposal area. The waste hub proposed for the old Shell site on Ipswich street has rightly been condemned by all businesses and residents of surrounding suburbs, and this proposal similarly smells. My partner and I recently walked up on Isaacs ridge, and even from that distance we were repulsed by the odour from the Mugga tip. The abominations proposed for Fyshwick would be</td>
<td>developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts. Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.</td>
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<td>even closer to us in Narrabundah, Red Hill, and even the much-vaulted Kingston Foreshore. I most strongly urge you to stop these waste sites from being built in our prime industrial suburb. Please leave our waste area where it is, at Mugga</td>
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<td>existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts. Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.</td>
</tr>
<tr>
<td>26</td>
<td>19 May 2020</td>
<td>Email</td>
<td>Hi, I am writing to you to let you know that as a Narrabundah resident, I do not want a waste facility in Fyshwick. There are far too many issues that will arise (health and safety and environmental) for local residents that we don't want. They can build there facility somewhere else where it is not so close to local residents.</td>
<td>Noted</td>
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<td></td>
<td><strong>Site Location</strong></td>
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<td></td>
<td>As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints.</td>
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<td></td>
<td>A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites were investigated and reviewed to consider the viability of developing the Project. Based upon a range of issues including environmental constraints and opportunities, access and</td>
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<tr>
<td>27</td>
<td>19 May 2020</td>
<td>Text message</td>
<td>You must be joking! Why bring traffic and waste to Fyshwick, near the lake and Kingston? Please stop.</td>
<td>existing regulations and permissibility of the zoning, in addition to commercial issues such as cost, size and availability the Site is considered preferred. However the proposed site at Fyshwick is a suitable zoning, the location as it is a centrally located and of sufficient size to provide a regional waste management solution for a number of waste types. This further reduces the potential waste footprint by providing a central location for waste management thereby reducing environmental and social impacts. Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS. The EIS provides an assessment of the environmental impacts of the Project with mitigation and management measures identified for issues throughout the EIS. These measures are consolidated in Chapter 18 of the EIS.</td>
</tr>
</tbody>
</table>

**Site Location**

As identified within Section 2.6 of the EIS, key criteria in site selection included: Permissibility, Compatibility with surrounding land use, Proximity to markets, Suitability of the site for the intended use (i.e. size, existing contamination/remediation requirements) and Environmental and further constraints.

A number of locations were considered including locations within Queanbeyan East, Hume and Beard. Alternative sites...
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Further information regarding the selection of the site and consideration of alternatives including the “do nothing” option can be found in Section 2.6 of the EIS.

Traffic
The Transport Impact Assessment (Appendix E) includes considerations of the existing traffic conditions surrounding the site, the traffic generating characteristics of the project, the suitability of access arrangements for the site and the transport impact of the project upon the surrounding road network. The design of the site layout is provided to reduce potential transport impacts and the Transport assessment conservatively assumed that the site peak hour coincides with the road network peak hour. The Transport assessment identifies that operation of the
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<td>Project is not anticipated to compromise safety and function and the surrounding road network and is assessed as having satisfactory capacity to cater for additional traffic generated by the Project during construction and operation. Section 6.3 and Appendix E of the EIS provides further detail of the potential transport impacts of the Project.</td>
</tr>
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</table>
### Table 34: Agency feedback addressed within the EIS

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Issue Identified</th>
<th>Where addressed within the EIS</th>
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</thead>
<tbody>
<tr>
<td>ACT Health</td>
<td>▪ Air quality and odour (including cumulative impacts)</td>
<td>▪ Appendix K (Air Quality and Odour Assessment) and Section 12.0 Air Quality, Odour and Greenhouse Gas</td>
</tr>
<tr>
<td></td>
<td>▪ Transport impacts associated with waste</td>
<td>▪ Appendix E (Transport Impact Assessment) and Section 6.0 Traffic and Transport</td>
</tr>
<tr>
<td></td>
<td>▪ Contamination runoff and general contamination</td>
<td>▪ Appendix G (Phase 1 Contamination Assessment), Appendix H (Phase 2 Contamination Assessment) and Appendix I (Auditors Report), Section 10.0 Soils and Geology, Section 11 Water Quality and Hydrology</td>
</tr>
<tr>
<td></td>
<td>▪ Vermin and pests</td>
<td>▪ Section 8.0 Waste Management</td>
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<td></td>
<td>▪ Design of water bodies to prevent mosquito nuisance</td>
<td>▪ Section 15.0 Hazards and Risk</td>
</tr>
<tr>
<td>ACT EPA</td>
<td>▪ Requirement for Site Audit</td>
<td>▪ Appendix I (Auditors Report)</td>
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<td></td>
<td>▪ Potential contamination at the Site including to surface water.</td>
<td>▪ Appendix G (Phase 1 Contamination Assessment), Appendix H (Phase 2 Contamination Assessment) and Appendix I (Auditors Report), Section 10.0 Soils and Geology, Section 11 Water Quality and Hydrology</td>
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<tr>
<td></td>
<td>▪ Air quality management and controls.</td>
<td>▪ Appendix K (Air Quality and Odour Assessment) and Section 12.0 Air Quality, Odour and Greenhouse Gas</td>
</tr>
<tr>
<td>Transport Canberra and City Services</td>
<td>▪ Need for a transport impact assessment that includes waste handling procedures of hazardous wastes.</td>
<td>▪ Appendix E (Transport Impact Assessment) Section 6.0 Traffic and Transport Section, Section 8.0 Materials and Waste</td>
</tr>
<tr>
<td>Stakeholder</td>
<td>Issue Identified</td>
<td>Where addressed within the EIS</td>
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<tr>
<td>ACT NoWaste</td>
<td>▪ Waste acceptance and handling</td>
<td>▪ Section 8.0 Materials and Waste</td>
</tr>
<tr>
<td></td>
<td>▪ potential for dust and air quality management and controls.</td>
<td>▪ Appendix K (Air Quality and Odour Assessment) Section 12.0 Air Quality, Odour and Greenhouse Gas</td>
</tr>
<tr>
<td></td>
<td>▪ Business interruption risk</td>
<td>▪ Section 8.0 Materials and Waste (operational contingency/business interruption)</td>
</tr>
<tr>
<td></td>
<td>▪ Market risk of saleable products</td>
<td></td>
</tr>
<tr>
<td>Impact Track</td>
<td>▪ Management of Regulated Activities ensuring there are adequate processes and controls around the handling of ACM.</td>
<td>▪ Section 8.0 Materials and Waste</td>
</tr>
</tbody>
</table>
18.9 Future and Ongoing Consultation

The Proponent is committed to providing the opportunity for community and stakeholder input during assessment, determination and the construction and operation of the Project.

In addition to the consultation that has been completed to-date, the following consultation activities will be undertaken upon acceptance of the draft EIS of EPSDD:

- The draft EIS will be placed on public notification by EPSDD with the EIS being made publicly available at locations to be advised by EPSDD.
- The draft EIS will be provided by EPSDD to relevant Government agencies and entities to inform potential submissions to EPSDD on the Project.
- During the notification period, stakeholders including the broader community will be invited to submit written representations in response to the draft EIS.
- The Proponent will provide a near neighbour letter box drop to inform the area around the Site about opportunities to provide feedback on the draft EIS.
- The Proponent will host further virtual drop-in sessions for the community to address/clarify potential questions on the draft EIS.

Stakeholder and community feedback received during the notification period will be addressed in the Revised EIS to be completed after public notification. This includes the representations received, issues raised and a response to the issues identified. It should be noted that these representations on the draft EIS should be addressed/provided to EPSDD to be addressed in the revised EIS.
19.0 RECOMMENDATIONS

19.1 Overview

Measures to monitor and where identified, to avoid, mitigate manage and/or offset the potential impacts of the Project have been identified throughout the EIS and are provided in summary within this chapter of the EIS within Table 35.

The recommendations may be revised in response to submissions during public notification of the draft EIS, further data collection and design development. The final recommendations would be considered as part of the impact track DA process for the Project. Following determination of the development application, the EIS and its recommendations would guide subsequent phases of the Project including environmental management plans for construction and operation.

Table 35: Recommendations

<table>
<thead>
<tr>
<th>Issue</th>
<th>Summary of mitigation, management and commitments</th>
</tr>
</thead>
</table>
| General                | - The Proponent would implement the Project in accordance with the EIS and conditions of approval as provided by the determining authority.  
- A Construction Environmental Management Plan would be prepared and implemented to guide environmental management and monitoring activities during construction. The CEMP would include specific environmental issue sub-plans to reduce potential impacts and in accordance with relevant commitments identified within the EIS and within this table. A monitoring program shall be conducted throughout the construction period to monitor compliance with the CEMP.  
- An Operational Environmental Management Plan (OEMP) would be prepared and implemented to guide environmental management and monitoring activities during operation as identified within the EIS in addition to further specific issues identified within this Table. |
| Traffic and Transport  | A construction and operation traffic management plan would be prepared prior to construction and operation of the Project. |
| Materials and Waste    | Measures to mitigate the effect of the construction waste streams would be incorporated into the Project’s CEMP, and would include the following information:  
- Procedures to manage construction waste streams, including characterisation, handling, storage, classification and tracking to prevent uncontrolled waste migration to surrounding areas.  
- Mitigation measures for avoidance and minimisation of waste materials.  
- Procedures and targets for reuse and recycling of waste materials.  
Waste management processes proposed to be incorporated into the Project’s OEMP, include:  
- Characterisation of waste streams accepted at the Site. |
## Issue

### Summary of mitigation, management and commitments

- Procedures for weighbridge activities – including screening of incoming loads, weighing of incoming and outgoing vehicles, weighbridge data recording and archiving, and weighbridge inspection schedule.
- Unloading procedure for each waste stream – including screening and sorting.
- Procedure for containment of spills, leaks and contaminated runoff.
- Procedures for management of non-conforming loads and materials.
- Procedures for ensuring the Site remains clean and tidy and prevent waste spreading.
- Procedures for loading materials.
- Operational contingencies – should any Site activity or process undergo a temporary shutdown or in the case of waste oversupply.
- Roles and responsibilities for compliance.
- Procedures for inspection, monitoring, review and auditing.

Design features of the facility would include:

- Provision of recycling bins and general waste bins for use by staff, customers and vehicle drivers.
- Bunded liquid waste areas.

The mitigation measures proposed to be in place to prevent waste spreading from the Site include:

- Load covering signs located along the site access road.
- A self-contained wheel wash would be installed for trucks exiting the Site. Soil and dust adhering to the undercarriage and wheels of trucks would be removed at the wheel washes prior to departure from Site.
- Entry and exit signage to advise transport operators that they can be fined for any litter on public roads resulting from the improper transport of waste materials.
- Fencing, landscaping and bunding surrounding the site to control windblown litter.
- Enclosed buildings for unloading and sorting of waste.
- Management of stockpiles to control size and emissions.
- Spill management and bunding as required.
- Transport would be undertaken in accordance with the relevant guidelines.
## Issue

<table>
<thead>
<tr>
<th>Summary of mitigation, management and commitments</th>
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<tbody>
<tr>
<td>■ The transport and storage of asbestos waste would be carried out in accordance with the relevant guidelines.</td>
</tr>
<tr>
<td>■ Should any operations at the Site be temporarily shut down or if there was an oversupply of incoming waste, waste would be diverted directly to a licensed facility.</td>
</tr>
</tbody>
</table>

### Landscape and Visual

- Maintenance of existing screening vegetation
- Additional planting of vegetation along the northern and southern boundaries
- Cladding and Paintwork to be in keeping with surrounding environment.
- Perimeter chain wire fencing to be constructed and lined with shade cloth material.

### Soils and Geology

Based on the outcome of the Phase 2 Assessment (APPENDIX H) the following remedial actions are identified for the Site:

- Removal of two above ground storage tanks (ASTs) located in the central portion of the southern block;
- Removal of a below ground concrete tank in the northern block;
- Removal of the former transformer on the southern block; and
- Removal of 100mm ACM and asbestos impacted soil at a 10 metre radius surrounding asbestos clad buildings.

Spill procedures would be developed to mitigate the potential impacts on the environment. These procedures would be documented in the CEMP and OEMP.

Mitigation measures to manage contaminated runoff, spills and leaks would include:

- Fuelling areas and fuel and dangerous good and hazardous chemical storage would be bunded.
- Waste unloading and processing areas within buildings would have floor sloped and bunding such that any spills or runoff would be contained within the building.
- A perimeter bund and sediment controls would be constructed surrounding the Soil Processing and Recovery Facility.
- ACM storage containers and transport vehicles would be sealed.
- Spill kits would be stored adjacent to all activities and made available to all vehicles.
- All facilities and equipment used in the construction and operation of the site will be maintained appropriately to minimise spills and leaks of contaminants.
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<tr>
<th>Issue</th>
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<tr>
<td></td>
<td>■ an Asbestos Management Plan would also be prepared to address future exposure scenarios from asbestos during construction and operational works.</td>
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<td>■ An unexpected finds protocol presented in the Phase 2 Report (refer APPENDIX H) would be adopted. This includes that any unexpected contaminated material encountered during construction would be isolated to prevent disturbance of the material and exposure to workers. An assessment of the material would be undertaken to determine remedial actions.</td>
</tr>
<tr>
<td></td>
<td>Erosion and sediment control measures that would be required for implementation, monitoring and maintenance during the construction and operation of the Project (as to be detailed in the Site CEMP and OEMP) would include:</td>
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<td>■ Erection of silt fences, sediment barriers and/or straw bales at strategic locations;</td>
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<td></td>
<td>■ Construction of temporary sediment retention pond during construction;</td>
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<td>■ Regular inspection and maintenance of sediment and erosion control structures;</td>
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<td></td>
<td>■ During operation, any sediment laden stormwater runoff would be collected and treated in stormwater dams (refer Chapter 11);</td>
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<td>■ Protecting and retaining vegetation and surface cover where possible;</td>
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<td>■ Using designated access roads and paths;</td>
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<td>■ Vehicular paths and access shall be controlled so as to prevent tracking of sediment onto adjoining roadways;</td>
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<td>■ Minimise disturbed areas and stabilise as soon as practicable;</td>
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<td>■ Treatment and testing of collected sediment laden runoff water to confirm compliance with relevant criteria prior to release;</td>
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<td>■ Existing stormwater course and adjacent areas will be left undisturbed;</td>
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<td>■ Manage stockpiles through the use of sediment and erosion control measure including use of concrete storage bunkers, sediment fencing and bunding around stockpiles and covers;</td>
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<td>■ Material stockpiles would be located outside limits of drainage lines;</td>
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<td>■ All loads entering and leaving the site will be covered;</td>
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<td>■ Weather forecast will be monitored to identify hot, windy and/or dry conditions when dust rise might be significant.</td>
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<tr>
<td>Water Quality and Hydrology</td>
<td>■ The key salinity management focus is to manage urban development and associated runoff. Deep drainage during excavation activities would be</td>
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### Issue

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<tr>
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<tr>
<td>managed through stormwater diversion and drainage and would be detailed in the CEMP.</td>
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<tr>
<td>Mitigation measures to manage the migration of contaminated runoff would include bunding, drains and enclosed processing areas. Mechanisms to reduce the risk of failure of the runoff management systems is as follows:</td>
</tr>
<tr>
<td><strong>Erosion and sediment control strategies:</strong></td>
</tr>
<tr>
<td>- Fit the Project to the existing topography, soils, and vegetation. The Project utilises natural drainage lines at the Site</td>
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<tr>
<td>- Schedule construction works to minimise soil exposure during rainy season</td>
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<tr>
<td>- Utilise channel linings or vegetation in drainage channels to slow runoff velocities</td>
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<tr>
<td>- Keep sediment on-site by using sediment basins, and other sediment traps or sediment barriers where necessary</td>
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<tr>
<td>- Regular monitoring and maintenance of surface water infrastructure</td>
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<tr>
<td>- Monitor and inspect site frequently and correct problems promptly.</td>
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<tr>
<td>- The design of the surface water management system ensures conveyance of flows to minimise erosive impacts of runoff within the site, and detention of runoff volume so as to not exceed flow rates of the existing development.</td>
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<tr>
<td>- The capacity of existing surface water infrastructure, namely the 650 mm diameter culvert in the Northern Block, and V-drain south of the Southern Block, have been verified to be sufficiently sized to convey runoff from the new developed catchments.</td>
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<td>- Appropriate Surface and groundwater water monitoring would be detailed within the OEMP.</td>
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### Climate Change, Air Quality, Odour and Greenhouse Gases

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<thead>
<tr>
<th>The following measures would be implemented to mitigate and manage dust and odour during construction:</th>
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<td>- Dust suppression on haul routes and during earth works.</td>
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<td>- Controlled access point for site vehicles.</td>
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<td>- Temporary wheel wash.</td>
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<td>During operation, the following air quality mitigation measures would be in implemented:</td>
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<tr>
<td>- Liquid waste processing and C&amp;D and C&amp;I recycling enclosed within buildings.</td>
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<td>- Dust suppression by watering of internal haul routes.</td>
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| Stakeholder Consultation | A Stakeholder Strategy would be implemented throughout the delivery of the Project. Provided within environmental management documentation the Stakeholder Strategy would provide procedures for communication with stakeholders, procedures for the dissemination of information to the community, identification of the communication channels available for the community and stakeholders to provide feedback on the Project, a protocol for the Project to respond to any enquires or feedback and for managing site visits and property inspections. |
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