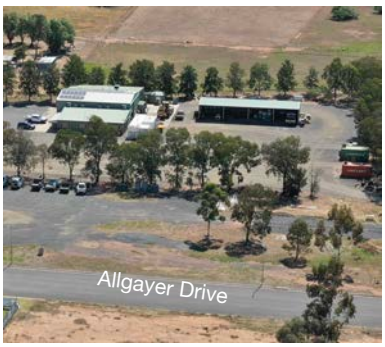
Mackellar Equipment Hire Pty Ltd



Environmental Impact Statement

PROPOSED WASTE FACILITY
LOTS 1 & 2 DP 1226992
No. 16 TORRENS ROAD
& No. 17-21 ALLGAYER DRIVE, GUNNEDAH NSW

Prepared by:

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December 2020

EIS DECLARATION

EIS prepared by:

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WARRIEWOOD NSW 2102

in respect of: Proposed waste facility at Torrens Road & Allgayer Drive, Gunnedah NSW

Development Application

Applicant name: MacKellar Equipment Hire Pty Ltd
Applicant address: c/- Outline Planning Consultants Pty Ltd
Suite 2301,Level 3, Quattro Building
No. 4 Daydream Street,
WARRIEWOOD NSW 2102

Land to be developed: Lots 1 & 2 DP 1226992 No. 16 Torrens Road & No.17-21 Allgayer Drive, GUNNEDAH NSW

Environmental Impact Statement

An Environmental Impact Statement (EIS) is attached

Pursuant to clause 6(f), Part 3, Schedule 2 of the *Environmental Planning & Assessment Regulation 2000*, and to the best of my knowledge, I declare that this Environmental Impact Statement:

• contains all available information that is relevant to the environmental assessment of the development to which the statement relates, and

• has been prepared in accordance with the requirements of the *Environmental Planning & Assessment Act 1979*, and

• it is true in all material particulars and does not, by its presentation or omission of information, materially misleading.

Name: Gary William Peacock, Director,
Outline Planning Consultants Pty Limited

Date: December 2020

Signature:

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Executive Summary

Overview

The proponent, MacKellar Equipment Hire Pty Ltd, seeks development consent for the establishment of a waste facility ("the Project") on land comprising part Lots 1 and 2 in Deposited Plan 1226992 on industrial zoned land at No.16 Torrens Road and No.17-21 Allgayer Drive, Gunnedah, in the Gunnedah LGA (the Project Site). It has a Capital Investment Value of $3.9 million and will employ up to 62 people during construction and up to 30 full-time operational staff. Refer to accompanying ***Figure 0.1*** *and* ***Figure 0.2****. This Environmental Impact Statement (EIS), prepared by Outline Planning Consultants Pty Ltd, accompanies the development application.*

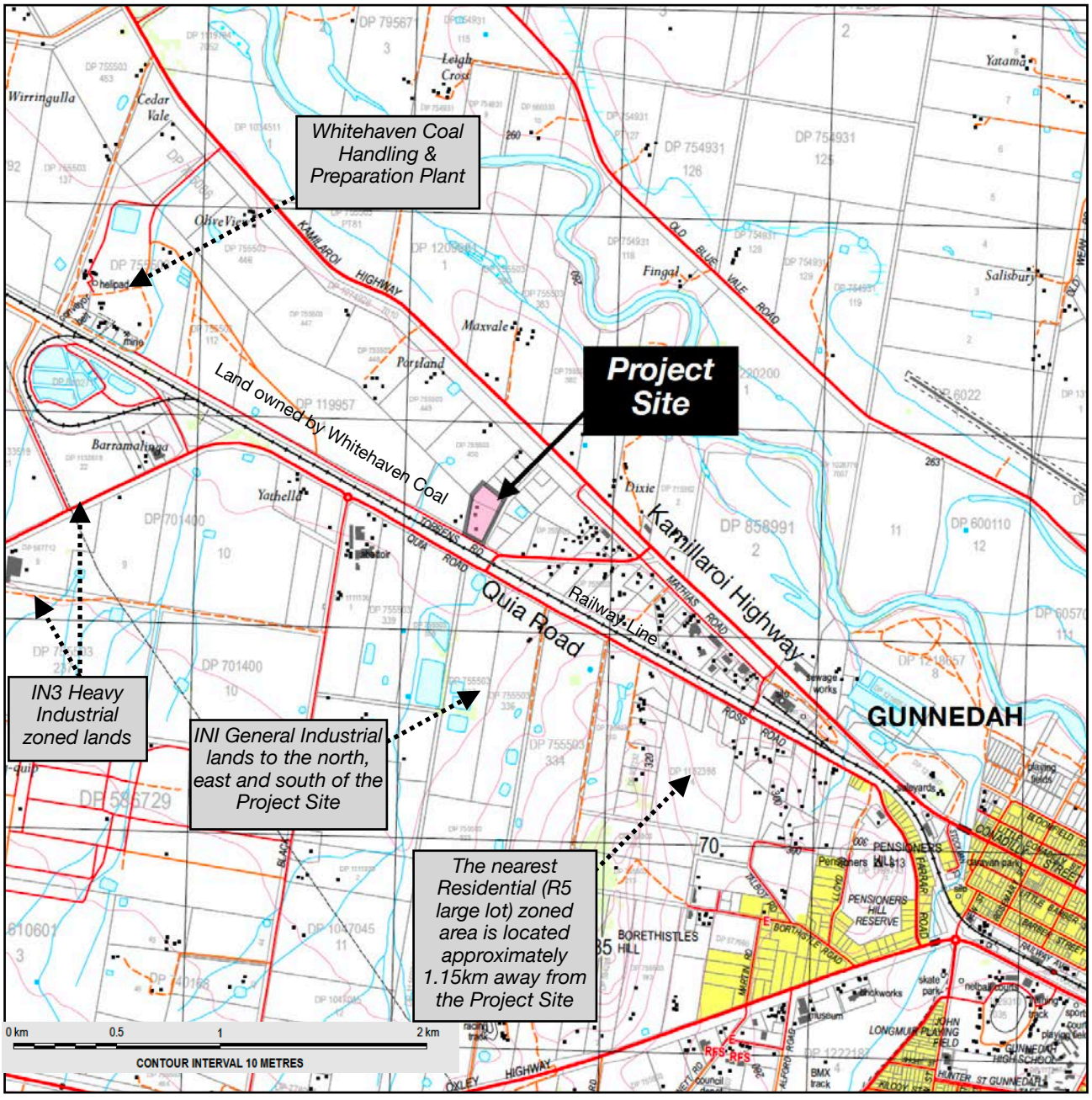


FIGURE 0.1: The Project Site is located in a designated industrial area on the western fringe of the township of Gunnedah

(Source: NSW Spatial Services Emerald Hill 8936-3S 1:25,000 topographic map)

■ *The Project Site and Existing Use*

MacKellar Excavations Pty Ltd (MEX), Gunnedah Quarry Products (GQP) and MacKellar Equipment Hire Pty Ltd (the MacKellar Group) are privately owned earthmoving, plant hire, quarrying and waste companies operating in the Greater Sydney Region, North West New South Wales and Queensland, and is headquartered at No. 16 Torrens Drive, Gunnedah. Current infrastructure at this location consists of a main office, manager's residence along with associated storage sheds, car and truck parking area and hardstand, as well as workshop. A waste facility will complement the above businesses, in particular having regard for the fact that MEX already owns and operates processing equipment at their quarry at Marys Mount, including screens, as well as other mobile plant and equipment, capable of being used in the proposed waste facility.

The Project Site has a combined area of 2.77ha. Refer ***Figure 0.2****. All of the Project Site is zoned IN1 General Industrial. Access to the Project Site is directly from Torrens Road, with side access to an industrial subdivision road, Allgayer Drive. Torrens Road then connects with Quia Road and thence to Kamilaroi Highway. All roads are bitumen sealed and already carry industrial traffic. Refer Photographs 0.1 and 0.2.*

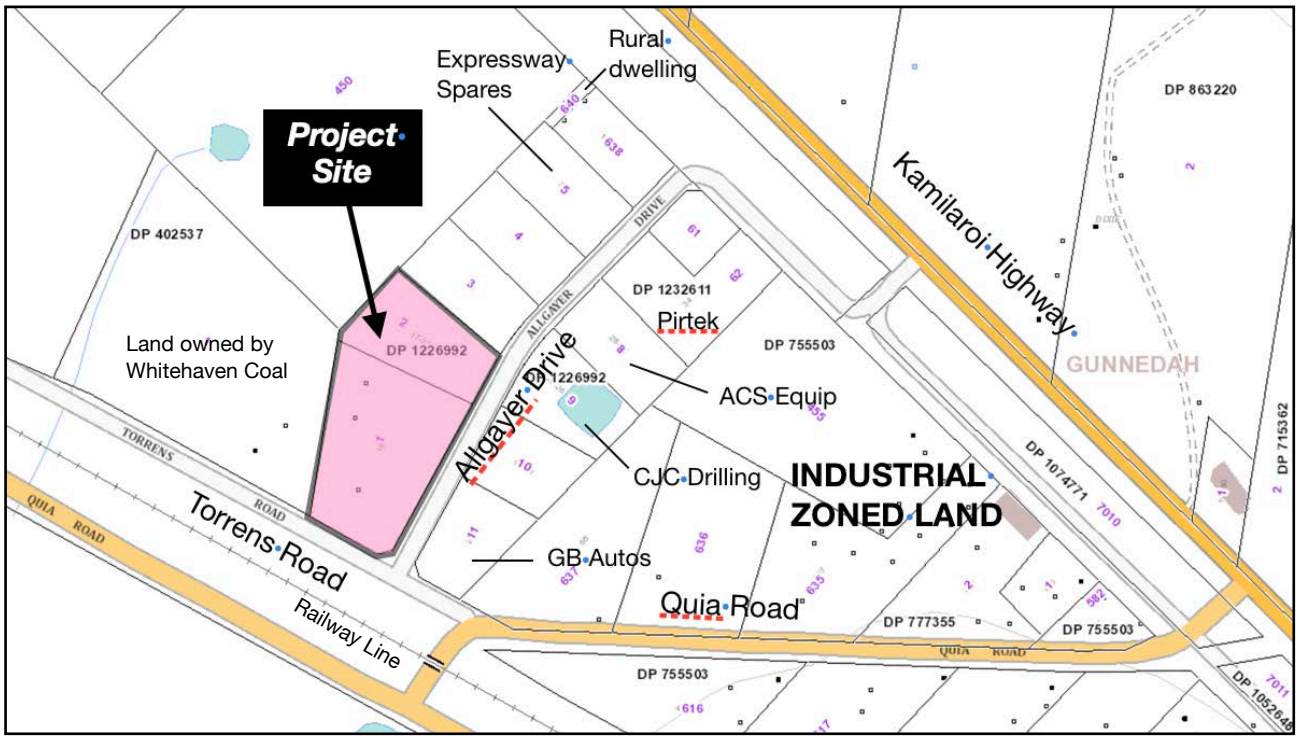


FIGURE 0.2: The Project Site and immediate surrounds

(Source: SIX Maps)

Other site features are summarised in the following:

- *The site is flat and well suited to use for industrial purposes.*
- *The Project Site is not flood-prone land.*
- *The Project Site is not identified as bushfire prone land.*
- *The Project Site and surrounds is cleared and developed for industrial purposes.*
- *The Project Site forms part of an established industrial area at Allgayer Drive. The Allgayer Drive ('Costalot') industrial estate is fully serviced and has bitumen sealed road access and and kerb and guttering.*
- *There are no known archaeological sites likely to occur on the Project Site.*

PHOTOGRAPH 0.1(above): Oblique aerial view of the project site from the north.

(Source: Stewart Surveys photograph taken October 2020)

PHOTOGRAPH 0.2(above): Oblique aerial view of project site and surrounds from the south.

(Source: Stewart Surveys photograph taken October 2020)

■ *The Proposed Waste Facility (The Project)*

Development consent is sought for a waste management facility, including resource recovery and waste transfer facility ("waste facility", "the Project") handling up to 250,000 tonnes per annum of waste for separating and sorting, processing or treating, temporary storage, or transfer or sale of recovered resources as set out in the following:

- *Excavated natural material and resource recovered material that meet the CT1 thresholds as per the guidelines: Excavated natural materials are not pre-classified waste types. Building and demolition projects are likely to include excavated natural materials which are typically generated during bulk earthworks and road and infrastructure repair. This would include Virgin Natural Excavated Material (VNEM along with Excavated Natural Material (ENM) and topsoils including but not limited to sand, clay, naturally occurring rock, shale and sandstone. This may include larger rocks and stones that would be suitable for production of road base and other products after processing at the Torrens Road facility. The guideline's CT1 thresholds identify the requirements for 'general solid waste' (GSW) and are commonly referred to in EPLs to aid in the definition of the waste type-a reasonable standard for defining the waste type. It is tentatively estimated that CT1 material would comprise about 50% of the intended waste stream ie. 125,000 tonnes per annum. [NOTE: Only soils and excavated natural material that meet the CT1 thresholds per the EPA's guidelines will be accepted].*

- *Contaminated soils: A smaller amount of waste to be accepted will be acid sulphate soils (PASS, ASS). It is tentatively estimated that this waste material would comprise up to about 10% of the intended waste stream ie. 25,000 tonnes per annum.*

- *Co-mingled and segregated Construction and Demolition (C&D) waste, tentatively estimated to comprise about 25-30% of the intended waste stream ie. 62,500-75,000 tonnes per annum. This type of waste includes but not limited to bricks, concrete, tiles, suitable slags and concrete batching waste, asphalt (including recycled asphalt profilings), rock/rail ballast spoils, and any other material meeting the definition of Construction and Demolition waste as defined in the EPA Waste Classification Guidelines Part 1: Classifying Waste.*

- *Commercial and Industrial (C&I) waste, tentatively estimated to comprise about 15% of the intended waste stream ie. 37,500 tonnes per annum. This type of waste includes but not limited to paper/cardboard, plastics, rubber, plasterboard, cement fibre board, ceramics, glass, styrene, and metal.*

- *It is anticipated that small quantities only of appropriately sealed asbestos waste will be delivered to the proposed waste facility- up to about 1,000 tonnes per annum. The aim will be to to store this waste on site in separate, secured storage facilities until sufficient quantity is achieved (about 33-38 tonnes) in order that it be economically trucked to an authorised asbestos waste disposal facility elsewhere. Any unexpected finds asbestos will also be stored on site in a secure storage.*

- *It is proposed to receive and to store lithium batteries derived from waste received- a hazardous waste. It will be stored on site in a secure storage shed until sufficient quantity is achieved in order that it be trucked to an authorised waste disposal or recycling facility elsewhere. It is anticipated that very small quantities only of this waste will be delivered to the proposed waste facility- up to about 0.5 tonnes.*

- *Processed waste to be transported from the site for either the purpose of reuse or landfill disposal.*

[NOTES: The mix of waste above is an estimate only, ultimately dependent on a range of factors including prevailing market conditions, access to the waste streams described above, prevailing government policies, and the like]. No other types of hazardous or special waste will be accepted at the site. No garden (green) waste, household waste or timber/ wood waste, tyres, liquid waste, chemical waste or putrescible waste will be accepted by the facility.

The recycled materials able to be produced including but not limited to soils and mulched material suitable for landscaping or rehabilitation and civil construction applications, aggregates, road-base, drainage material, dry paper/ cardboard and metals. The aim of the recycling process will be to produce end recycled products that meet EPA resource recovered orders while recovering a range of materials that may otherwise be disposed to landfill. All of the materials brought onto the site are taken from the site as products or as rejects for disposal at a licensed landfill. No materials are land-filled or otherwise disposed anywhere within the site.

With the exception of special waste (asbestos) and hazardous waste (batteries) all other waste not referred to above will be directed to a licensed landfill. Material would be transported to the site by MEX or contractors and the general public. The proposed waste facility can utilise other existing facilities already owned and used by MacKellar Group ("MEX"), including but not limited to diesel fuel tanks, heavy vehicles used to transport waste and recycled material to and from the site, office and staff amenities, parking, and stormwater detention, as well as screening plant and conveyors- the latter from MacKellar Excavations' Mount Mary quarry operation.

Refer ***Figure 0.3****.*

The major components of the proposed Project are summarised in the table immediately below.

Table 0.1: Key project elements

Project Element	***Description***
Wastes to be accepted at the waste facility	***General solid waste (CT1), contaminated soils, C&D waste, C&I waste, asbestos and lithium batteries- refer to details above.*** ***Hazardous waste:*** *Lithium batteries are also proposed to be stored at this proposed waste facility and until a sufficient quantity can be transported to a licensed landfill.* ***Special waste (asbestos):*** *Sealed asbestos to be stored on site. An unexpected finds protocol will apply to asbestos waste that is not identified at entry but found at the tip and spread area (ie. at the secondary inspection point). Such waste will be kept and stored on site until a sufficient quantity can be transported to a licensed landfill.* *No other types of hazardous or special waste will be accepted at the site.*
Amount of waste to be handled per annum	*Proposed to handle up to 250,000 tonnes of waste per annum.*
Existing development	*The Project Site forms a part of a recently developed industrial estate. The land has been cleared, levelled and developed for industrial uses. The land is currently used for hardstand, truck parking, offices, workshop, manager's residence and storage sheds. The project site is located in an industrial area and other industrial development is located in the vicinity.*
Area	*Approximately 2.77ha.*
Capital value	*The project has a capital value of $3.9 million.*
Employment	*The waste facility would directly employ 62 people during construction of the facility, and up to 18 on site staff onsite during the day-to-day operation of the facility, not including 12 truck drivers employed by the company to transport waste ie. up to 30 operational employees.*
Plant and equipment	*Mobile excavators fitted with shearing and grabbing attachments, trommel, conveyors and screens, crushing equipment (to be used on a campaign basis) as well as office, amenities, workshop, covered sheds, stockpiles and storage areas.*
Infrastructure	*Existing office building and sheds to be used for an administrative headquarters and storage, respectively. Site preparation works would involve sealing of any unsealed working surfaces with concrete to form a continuous hardstand area. Upgrade of existing stormwater management infrastructure which would include pipe upgrades, construction of a first flush detention and installation of water quality treatment devices. Removal of existing residence and relocation/repurposing of existing shed is proposed.*
Hours of Operation	*7.00 am and 6.00 pm Monday to Saturday, excluding public holidays.The operation of heavy machinery is only able to occur between 7.00am-5.00pm Monday to Friday. No waste facility operations to be undertaken on Sundays or public holidays. Construction hours would be 7.00am to 5.00pm Monday to Friday and 8.00am to 1.00pm Saturdays.*
Access and parking	*Vehicles carting waste would enter/exit the site from the existing main access on Torrens Road. Access is also available from two access points off Allgayer Drive for other vehicles, including access for fire fighting vehicles. These access points do not require upgrading. The existing car park and truck parking areas would continue to be be used for staff and visitor parking and heavy vehicle parking, respectively.*

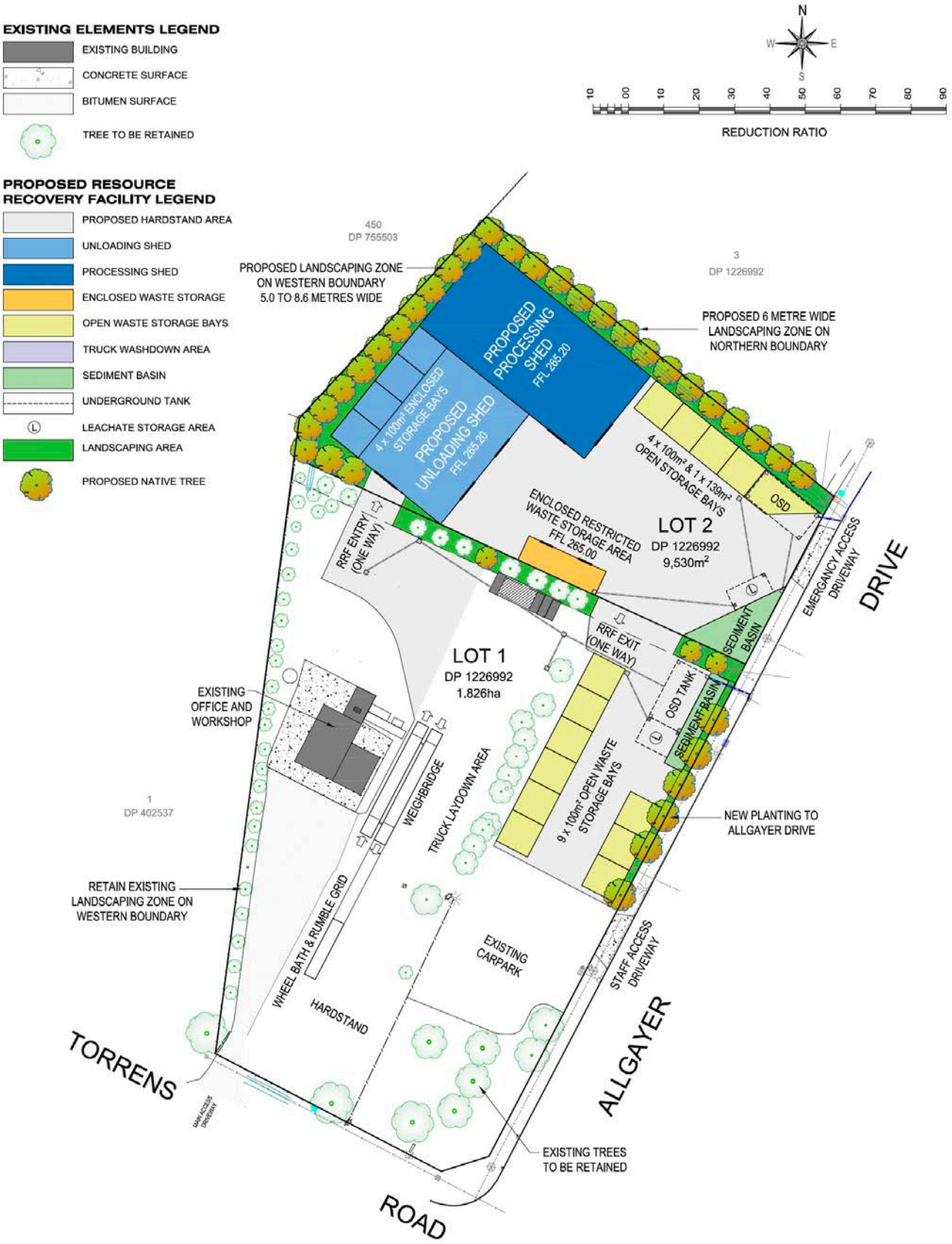


FIGURE 0.3: The proposed waste facility

(Source: Stewart Surveys & Martens & Associates, consulting engineers)

■ State Planning Considerations

Need for an EIS

"Development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes per year of waste" is classified as State significant development (SSD) under the Environmental Planning and Assessment Act 1979 (EP&A Act) as it meets the criteria in Clause 23(3) of Schedule 1 in State Environmental Planning Policy (State and Regional Development) 2011. A waste facility handling less than 100,000 tonnes per annum is regional development for the purposes of the above SEPP.

The proposed waste facility seeks consent to handle up to 250,000 tonnes of waste per annum, and is therefore classified as State Significant Development (SSD) pursuant to the provisions of clause 23(3) of Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011 being:

> *"Development for the purpose of* ***resource recovery or recycling facilities*** *that handle more than 100,000 tonnes per year of waste" (clause 23(3) of Schedule 7 of State Environmental Planning Policy (State and Regional Development) 2011).[our emphasis]*

As such, the Minister for Planning is therefore the consent authority for this proposed development. This means that the Minister or his delegate will determine the Development Application following an assessment by the Secretary of the NSW Department of Planning Industry and Environment.

Section 4.12(8) of the EP&A Act requires that an application for State Significant Development (SSD) must be accompanied by an Environmental Impact Statement (EIS). It states:

> "*(8) A development application for State significant development or designated development is to be accompanied by an environmental impact statement prepared by or on behalf of the applicant in the form prescribed by the regulations.*"

The accompanying EIS has been prepared in accordance with Schedule 2 of the Environmental Planning & Assessment Regulation 2000 (EP&A Regulation) and with the Secretary's Environmental Assessment Requirements (SEARS).

Integrated development Does Not Apply to SSD Application

Under the provisions of the Environmental Planning & Assessment Act 1979 (EP&A Act), SSD applications are not "integrated development" and do not require the concurrence of other state agencies – consultation with relevant public authorities occurs before the Planning Secretary issues the SEARS for the preparation of the EIS. In the assessment process, the Minister (or delegate) will consider all agency issues and will impose conditions and requirements as appropriate to satisfy agency concerns.

State Environmental Planning Policy (Infrastructure) 2007

Pursuant to clause 121(1) of State Environmental Planning Policy (Infrastructure) 2007 the waste facility, defined as a 'waste or resource management facilities', is permitted in a prescribed zone, which includes land zoned IN1 General Industrial.

■ Local Planning Considerations

Gunnedah Local Environmental Plan (LEP) 2012 is the comprehensive environmental planning instrument applying to the site at No.16 Torrens Road, Gunnedah. The project site is zoned IN1 General Industrial. The nearest Residential (R5 large lot) zoned area is approximately 1.15km away. Refer ***Figure 0.4****.*

The Dictionary to this LEP defines a resource recovery facility as a 'waste or resource management facility', an innominate use which is a permissible use in the IN1 zone.

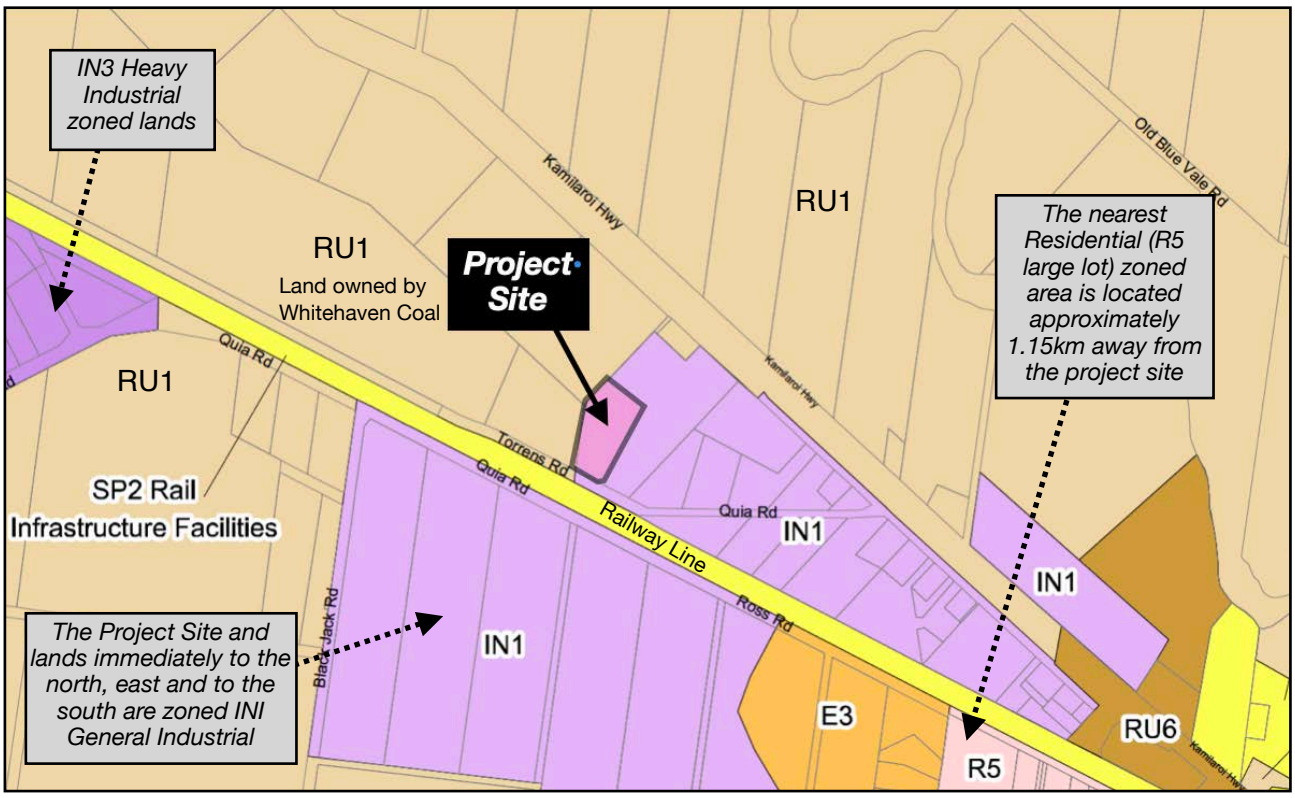


FIGURE 0.4: A waste facility is a permissible use in the IN1 General Industrial zone - the zoning applicable to the Project Site

(Source: Gunnedah Local Environmental plan 2012 Land Zoning map-Sheet LZN_005A)

▪ *Justification for Project*

Strategic Context

The proposed waste facility at Torrens Road will form a part of a much broader network of waste facilities across New South Wales. This waste facility, and many others like it in New South Wales, will have the ability to economically process waste from as far away as the greater Sydney region and beyond.

At present, the greater Sydney region, in particular, is already facing pressure as non-putrescible waste streams continue to grow in line with construction activity and major infrastructure projects. While in the longer term these levels of waste may be proportionately reduced with better recycling methods, the pressures of continued population growth, urban development and infrastructure programs will continue to create large ongoing waste streams.

With these pressures are set to continue, with limited opportunities for new recycling or landfill facilities being established in proximity to growing urban areas, other more distant sites are becoming increasingly attractive to accommodate these uses.

This makes it economic for more distant quarries and recycling facilities in regional New South Wales, like Gunnedah, to be able to accommodate some of this demand through back-loading of heavy transport vehicles. Combined with the introduction of the Queensland waste levy, which acts as a disincentive to relying on interstate landfill and recycling facilities, there will be an increased need for landfill and recycling facilities being established in NSW. The proposed landfill development is consistent with the NSW Government's direction in achieving the targets in the NSW Waste and Avoidance and Resource Recovery Strategy 2014-2021.

Statutory Planning

- *The proposed waste facility complies with relevant planning objectives, controls and guidelines. The use is permissible in the INI General Industrial zone pursuant to the provisions of Gunnedah Local Environmental Plan 2012 and State Environmental Planning Policy (Infrastructure) 2007.*
- *The Project Site contains no significant environmental constraints to development. Moreover, the Project achieves acceptable environmental amenity outcomes, including desirable outcomes for access and parking, acoustics, landscaping, design, and stormwater drainage, incorporating appropriate environmentally sustainable development measures both during the construction and operational phases.*

Suitability of the Site

- *The project site forms part of land that has been specifically developed to accommodate industrial uses such as that proposed.*
- *Related to the above point, the project site is within an existing industrial area surrounded by other compatible developments and land uses. Moreover, it is adequately separated from sensitive receivers.*
- *The project site has no significant constraints development generally, and can be developed for the purposes of the proposed waste facility.*
- *It is readily accessible to major transport links, and in particular the Kamilaroi Highway.*
- *It has sufficient area to allow external manoeuvring of vehicles and also the handling, storage and processing of waste materials within enclosed buildings.*
- *The proposed disturbance area has been previously disturbed and cleared by other industrial uses and/or work associated with construction of the Allgayer Drive industrial estate, which will ensure that the physical impacts of the proposed development (ie on biodiversity and heritage) would be minimal.*

Social, Economic

- *The Project would facilitate the recycling of a wide range of wastes with much of this material to be re-used elsewhere in New South Wales and Australia. It promotes recycling as an alternative to landfilling.*
- *The design of the new waste facility will create satisfactory operational and amenity outcomes.*
- *The project site is predominantly surrounded by other industrial developments. It has safe and adequate access to major transport routes and is suitable for the Project.*
- *The Project will support future industrial development in the Gunnedah region, without significant adverse environmental impacts.*
- *The Project will be privately funded and will generate a construction and operational jobs over the life of the project, as detailed elsewhere in this EIS. It has a Capital Investment Value of $3.9 million and will employ up to 62 people during construction and up to 30 full-time operational staff. The economic impacts of the proposal will be positive.*
- *The Project is in the public interest and should be approved, subject to appropriate conditions.*

▪ *Consultation*

*In accordance with the Secretary's Environmental Assessment Requirements (SEARS) consultation was undertaken with key public authorities including the NSW Department of Planning & Environment, EPA, Transport for NSW (TNSW) and Roads and Maritime Service (RMS), NSW Fire and Rescue (in lieu of the NSW Rural Fire Service), Red Chief Local Aboriginal Land Council and Gunnedah Shire Council, as well as with the local community (Fact Sheet distributed to residents- refer **Appendix I**) and others as a part of this project. Further opportunity for involvement of both government authorities and the local community will continue during the public exhibition phase of the assessment of the Project.*

■ *Environmental Impacts and Mitigation Measures*

This EIS provides an assessment of the environmental impacts of the proposed waste facility on the project site in accordance with the Secretary's Environmental Assessment Requirements (SEARS) for SSD 8530563 and after having prioritised all key SEARS issues of most relevance to this particular proposal found them to be acceptable. The EIS also provides details of the proposed measures to appropriately manage and mitigate potential impacts identified, arising from the Project. The mitigation measures proposed for the Project are practical, feasible and reasonable.

The Project will incorporate appropriate management and mitigation measures to ensure that satisfactory environmental outcomes ensue, and in particular:

- *The project site can accommodate the proposed processing capacity, having regard to the scope of the operations and its environmental impacts and relevant mitigation measures.*
- *Any hazards and risks associated with the proposed waste facility can also be appropriately managed.All hazards and risks associated with the Project (e.g. storage of combustible and flammable liquids, and fire) have been satisfactorily addressed.*
- *Appropriate waste management strategies are to be employed on site.*
- *Air quality impacts are acceptable.*
- *Noise levels from the main waste facility operational scenario (typical case) are predicted to comply with the daytime noise criteria at all receptors. The projected increase in traffic noise levels associated with the Project are predicted to comply with the criteria without the need for additional acoustic mitigation measures. During construction, noise levels are predicted to exceed the criteria at the receptors, however, the predicted impact is likely to be minor taking into account the temporary nature of the construction activities and respite periods throughout the construction program. Potentially noise affected neighbours would need to be informed about the nature of the construction stages and the duration of noisier activities, along with progress updates. The periodic use of a crusher on the site, expected to occur approximately once per month, for 1 to 2 days operation only, will result in some noise exceedances to nearest residences only whilst the crusher is working, however, at no time will the EPA's Amenity Noise criteria be exceeded. These residences adjoin the existing industrial area and other industrial uses. The crusher will be used inside the processing shed and additional noise management strategies are recommended during these times. With the implementation of the mitigation measures committed to in Section 4.2 of the EIS, impacts on residents, taken as a whole, should be acceptable.Any residual impacts would be managed through the mitigation measures proposed, in accordance with relevant NSW Environment Protection Authority (EPA) guidelines.*
- *The Project proposes measures that are consistent with the aims, objectives and guidelines contained in the NSW Fire and Rescue document entitled NSW Fire Safety in Waste Facilities, dated October 2019.*
- *The project site forms a part of a recently developed, serviced industrial estate:the 'Costalot' industrial subdivision. Most relevant issues would have been considered at the time of assessment of the 'Costalot' industrial subdivision, including biodiversity, groundwater, heritage, flooding and soils, prior to the land being approved and subsequently developed for industrial purposes. However, and erring on the side of caution, additional studies have been undertaken addressing heritage, contamination and biodiversity issues. The proposed Project is located within an existing industrial area and is not considered likely to result in excessive cumulative air, noise, traffic or amenity impacts. The proposed waste facility is to be confined to already cleared land within an industrial subdivision. With the exception of a few trees on site, no further clearing of land is proposed.*
- *Related to the above point, the site is currently developed for the purposes of a truck depot, administrative offices and workshop, hardstand area, sheds and fuel storage. The project site is within a fully serviced industrial area with multiple access points to local roads with drainage facilities and fire hydrants in place.*
- *A site environmental management plan is proposed to address management of both construction and operational phases of the Project. It will include an unexpected finds protocol to ensure that any contamination or sites encountered during construction or the operation of the project will be appropriately managed.*

■ *The proposed stormwater treatment process is considered to be effective in treating run-off from the site to the required standard, particularly in regards to the removal of oil and grease. The design of the waste facility satisfactorily manages stormwater and leachate runoff from the project site without having an adverse effect on the surrounding environment. Separate leachate and stormwater collection devices are proposed.*

■ *The Project will utilise existing access from Torrens Road for waste truck traffic, with additional parking provided where required. Vehicles associated with the project will be prohibited from queuing or parking on local roads in the vicinity of the site. The project site has good road access for heavy vehicles to waste sources, with vehicular access to the Kamilaroi Highway only a short distance away.*

■ *The proposed waste facility would have minimal impact on local intersections and would have minimal impact on local and regional roads. The existing access on site is suitable for the proposal.*

■ *The Project Site has extensive, well established stands of trees running along the western boundary, through the middle of the site (in both directions), and including a stand of large trees near the corner of Allgayer Drive and Torrens Road. This gives the site a good amenity value and provides an opportunity to screen the proposed development from numerous viewing points at project inception. These well established tree plantings will be supplemented by further extensive tree plantings on site, and in particular along the northern boundary and in the north-west corner of the site.*

■ *The area is generally industrial and there would be no night-time activities.*

Table 0.2: Key planning & environmental impacts addressed in EIS

Issue	**Assessed impact**
1. Strategic and statutory context	▸ *The project is of a type and scale that triggers the relevant criteria for State development/ infrastructure. The Project is classified as State significant development.* ▸ *A waste facility is a permissible use in the IN1 General Industrial zone under Gunnedah Local Environmental Plan 2012, as well as with State Environmental Planning Policy (Infrastructure) 2007.* ▸ *The land is suitable for the proposed use and is not contaminated in a manner that requires remediation under State Environmental Planning Policy No.55.* ▸ *The Project is considered to be not potentially hazardous or offensive and is generally consistent with the aims, objectives and requirements of State Environmental Planning Policy No.33.* ▸ *The Project is consistent with the New England North West Regional Plan 2036.* ▸ *The proposed waste facility is adequately separated from neighbouring residential zones and rural dwellings and riparian areas, and is located on flood-free land.* ▸ *The project site is not considered to be 'core koala habitat' for the purposes of State Environmental Planning Policy (Koala Habitat Protection) 2019.* ▸ *An Environment Protection License (EPL) will be required from the EPA, once consent is granted to the proposed waste facility.*
2. Suitability of the site	▸ *The project site forms part of an industrial estate that has been specifically developed to accommodate industrial uses, such as the Project.* ▸ *The project site is within an existing industrial area surrounded by other compatible developments and land uses. Moreover, it is adequately separated from sensitive receivers to enable potentially adverse environmental impacts (ie air and noise) to be adequately managed and/or mitigated.* ▸ *The project site has no significant constraints development generally, and can be developed for the purposes of the proposed waste facility.* ▸ *The project site is readily accessible to major transport links, including the Kamilaroi Highway and has sufficient area to allow external manoeuvring of vehicles and also the handling, storage and processing of waste materials within enclosed buildings.* ▸ *The proposed disturbance area has been previously disturbed and cleared by other industrial uses and/or work associated with construction of the Allgayer Drive industrial estate, which will ensure that the physical impacts of the proposed development (ie on biodiversity and heritage) would be minimal.*

3. Waste management	▸ *Each load presented at the facility is to be inspected and accepted/rejected. This is with the exception of asbestos-contaminated material, which will be either rejected or transferred to the an enclosed storage facility specifically set aside for this form of waste, for later disposal to a licensed landfill facility. Lithium batteries to be sorted and stored separately. Any other load containing other unwanted waste eg. Any other hazardous or restricted waste, will be rejected and diverted to the appropriate waste facility.* ▸ *General solid waste is anticipated to be a major source of waste to this facility. Initial blending to occur in the processing shed, with final mixing in stockpile/storage bay. This waste type has a very low hazard or fire risk.* ▸ *The unloading, sorting and recycling of waste will occur within covered sheds to minimise dust and noise and reduce the potential for wastewater runoff.* ▸ *Covering of loads to minimise the potential for waste spreading to surrounding locations during transport. Unloading of vehicles and processing will occur in covered sheds, minimising the spread of waste.* ▸ *Tyres to be separately processed/shredded in a stand-alone covered building on the site.* ▸ *Regular litter removal on the site.* ▸ *Provision for adequate security of the waste facility preventing unauthorised entry and illegal dumping.* ▸ *Accurate recording of waste volumes received at the waste facility.* ▸ *Implementation of a Pollution Incident Response Management Plan (PIRMP) for the operation of the waste facility, to contain action plans which are designed to assist staff and management to appropriately respond to any incident. To form a part of a site EMP.* ▸ *Induction and training about potential hazards for all employees, with staff to be provided with personal protective clothing and protective equipment.* ▸ *Provision of first aid treatment station.* ▸ *The proposed waste facility is generally consistent with the applicable aims, objectives and guidelines in the NSW Waste Avoidance and Resource Recovery Strategy 2014-21*
4. Hazards and risk	▸ *The project site forms a part of a recently developed industrial estate. All relevant issues would have been considered at the time, including biodiversity, groundwater, heritage, contamination, flooding and soils, prior to the land being developed for industrial purposes. In any case, additional site investigations have been undertaken. Refer to appendices for details.* ▸ *On site investigations reveal no potential for contamination.* ▸ *Fire and incident management can be managed to a satisfactory degree.* ▸ *Waste to be managed in accordance with Fire and Rescue NSW Fire safety in waste facilities guideline. [NOTE: The facility is not expected to be handling any significant volume of combustible waste].* ▸ *Mobile plant and vehicles will be fitted with fire extinguishers, with fire hose reels and fire hydrants also serving the proposed development. An additional two (2) fire hydrants proposed on site.Fire fighting equipment to be well maintained.* ▸ *Fire brigade vehicle access provided.* ▸ *A SEPP 33 Screening Test has been performed for this project and it finds that a Preliminary Hazard Analysis is not required. The assessment concludes that the Project is neither "potentially hazardous" or "potentially offensive".* ▸ *The proposed waste facility provides for pollution controls and management measures that will protect all aspects of the environment. With these controls in place there should be no meaningful risk to the environment in the locality.* ▸ *No remediation of the site is required.* ▸ *The landfill site is not bushfire prone land.* ▸ *No geotechnical limitations or flooding affectation apply.*
5. Air quality	▸ *Surfaces within unloading, processing and stockpiles to be either concrete or asphalt surfaces.* ▸ *Waste storage and processing areas are to be regularly cleaned and any residual waste removed.* ▸ *Wheel-wash to be used for outgoing haulage vehicles.* ▸ *Water sprays to be used in unloading and processing areas, or any other area with the potential to create dust.* ▸ *Activities on the project site are to be undertaken such that dust emissions from exposed stockpile areas will comply with the requirements of the 'Blue Book' eg. use of wet suppression techniques, where practicable.* ▸ *Monitoring and reporting of dust complaints.* ▸ *Air quality levels are predicted to be below applicable amenity criteria at nearest sensitive receptors.*

6. Noise and vibration	▸ *Operational hours to be strictly controlled ie. 7.00am to 5.00pm Monday to Saturday. No work to be carried out on Sundays or public holidays.* ▸ *Noise levels are predicted to be below applicable amenity criteria at nearest sensitive receptors.* ▸ *The waste facility is to be established in a zoned General Industrial area, surrounded by other industrial uses, and set back reasonably from residential uses and residential zoned areas.* ▸ *The noise generated by the waste facility similar to that generated by other industrial uses.* ▸ *Sheds and stockpiles to be used to shield/limit noise to neighbouring properties.* ▸ *Noise generating plant and equipment to be shielded by sheds.* ▸ *Plant and equipment will be regularly maintained and serviced, to minimise the potential for excessive noise impacts.* ▸ *Plant and equipment to be switched off when not in use.* ▸ *A register of (noise) complaints shall be maintained. If noise complaints occur, they will be registered, investigated and responded to in a timely manner to ensure issues are not repeated.*
7. Soil and water	▸ *Surface water controls are to be used to prevent the uncontrolled release of waters from the project site.* ▸ *Waste water will be managed in the facility by ensuring that the wastewater management system is monitored and maintained.* ▸ *Bunding to be employed.* ▸ *On-site detention (OSD) to be employed in the north-east corner of the project site.* ▸ *Leachate to be captured and stored separately from stormwater.* ▸ *Use of surface water management, as well as sediment and erosion controls.* ▸ *Discharges of polluted water offsite are not predicted.* ▸ *The waste facility will not impact flood behaviour.* ▸ *No groundwater or any groundwater dependent ecosystems likely to affected.* ▸ *Any spills are to be contained on site.*
8. Traffic and Transport	▸ *The Project is located in an existing industrial estate on the western outskirts of Gunnedah. Surrounding uses are generally industrial in nature. The project site has access to the subregional and regional road network via Torrens Road and Quia Road to Kamilaroi Highway, established roads that already accommodate predominantly industrial traffic.* ▸ *The local road network and key intersections operate at a good level of service, having significant spare capacity to accommodate traffic generated by the proposed waste facility. The intersections have relatively low peak traffic flows and good geometry and sight distances, with moderate turning demands, operating at a high level of service. Includes the intersection of Quia Road with the Kamilaroi Highway.* ▸ *The industrial nature of the this part of Gunnedah provides a road network suitable for heavy vehicles, and even the road on Allgayer Drive is wider than standard.* ▸ *The access for both inbound and outbound vehicles to the proposed waste facility will be from an existing, lawful access point from the site onto Torrens Road. The project site also enjoys a further two access points to Allgayer Drive, however, these will not be relied on by vehicles delivering or leaving with waste material. These access points will, however, be used by vehicular traffic associated with the existing MacKellar Group transport depot, including storage facilities, truck and car parking, as well as refuelling, offices and workshop operations.* ▸ *Traffic management plan to be prepared, aimed at ensuring the safety of employees, contractors, and the general public in and around the project site.* ▸ *In the interests of traffic and pedestrian safety, a low (20km/hour) speed limit to be applied to waste haulage vehicles on site.* ▸ *Control, monitoring, management and recording of all incoming and outgoing waste.* ▸ *Vehicle inspection and clearance is undertaken at the weigh bridge complex on all waste transport vehicles entering the project site.* ▸ *Traffic movements into and out of the site are to be in a forward direction.* ▸ *Loading and unloading of waste transport vehicles to be wholly conducted within the boundaries of the site. No vehicle queuing on local roads.* ▸ *All waste vehicle movements within the project site will be restricted to designated routes marked out by appropriate signage on site.* ▸ *Staff and visitor parking to be located in the southern section of the project site, on Lot 1, in the vicinity of the existing staff car park.*

9.Biodiversity	▸ *The project site is located within a recently developed industrial estate precinct and does not form a part of any critical habitat or is land mapped as being of biodiversity significance in the Gunnedah LEP 2012.* ▸ *The project site has been disturbed by extensive site works and establishment of hardstand areas and construction of sheds, buildings and other structures over most of the project site.* ▸ *A few trees on Lot 1 will be removed to make way for vehicular movement corridors, however, most of the existing tree plantings will be retained with most trees on Lot 2 to be removed, to make way for works associated with the proposed waste facility. Further boundary plantings proposed.* ▸ *None of this limited tree clearing affects any vegetation of significance to koalas.*
10.Visual	▸ *Extensive works involved over Lot 2, and to a lesser extent Lot 1. Buildings will be to an industrial scale and type, with additional screening plantings proposed to supplement existing significant tree plantings on site.* ▸ *Minimal tree clearing involved.* ▸ *The proposed development has a height bulk and scale in keeping with the industrial character of the surrounds.* ▸ *In terms of built form, the structures will be in keeping with the existing industrial area steel portal frame cladded structures, with finishes and colour palette complementing the existing industrial area.* ▸ *Existing tree plantings will assist in screening views of the proposed waste facility from adjacent public viewing points, supplemented by further boundary plantings.*
11. Heritage	▸ *The project site is already highly disturbed and is also predominantly covered in existing structures and hard surfaces. It forms a part of an industrial estate completed in 2016.* ▸ *Minimal potential for disturbing any archaeological site not already disturbed by past land use.* ▸ *No part of the project site is listed as a heritage item or known archaeological site. The project site is not identified as an Aboriginal place of heritage significance.* ▸ *No likely impacts.* ▸ *Notwithstanding the above, an unexpected finds protocol for Aboriginal sites forms a part of the proposed development.*

Overall, this EIS concludes that the proposed waste facility is in the public interest and is not predicted to cause significant environmental impacts or pose significant environmental risks.

1. Introduction

1.1 EIS Requirements

1.1.1 State Significant Development: EIS Required

This Environmental Impact Statement (EIS) has been prepared by Outline Planning Consultants Pty Ltd to accompany a Development Application (DA) for a proposed waste facility to be established on land within an existing industrial estate on the western outskirts of Gunnedah, at No.16 Torrens Road and No.17-21 Allgayer Drive. The waste facility is proposed by MacKellar Equipment Hire Pty Ltd, the proponent. This EIS provides the information and environmental assessment necessary to help understand the project and its likely environmental consequences, and to assist in the assessment and determination of this project application.

Pursuant to the provisions of clause 32 of Schedule 3 of the *Environmental Planning and Assessment Regulation 2000* (NSW) (the EP&A Regulation) the proposed waste facility is a "*waste management facility*" that "*store, treat, purify or dispose of waste or sort, process, recycle, recover, use or reuse material from waste and "that comprises more than 200 tonnes per year of other waste material*" (clause 32(1)(a)(iv) of Schedule 3 of the EPA Regulation) and "*that sort, consolidate or temporarily store waste at transfer stations or materials recycling facilities for transfer to another site for final disposal, permanent storage, reprocessing, recycling, use or reuse and …that have an intended handling capacity of more than 30,000 tonnes per year of waste such as glass, plastic, paper, wood, metal, rubber or building demolition material*" (clause 32(1)(b)(iii) of Schedule 3 of the EPA Regulation).

The proposed waste facility is not considered to comprise a "*contaminated soil treatment works*", separately defined in clause 15 of Schedule 3 of the EPA Regulation as being works that *"treat more than 1,000 cubic metres per year of contaminated soil not originating from the site on which the development is located*" because the soils and spoil from construction projects proposed to be accepted at the proposed waste facility, including virgin excavated material (VENM), excavated natural material (ENM), general solid waste (GSW), potential and known acid sulphate soils, and soils and spoil from reinforced soil retaining walls (RSW), are not 'contaminated' soils *per se*.

[NOTE: The terms "contaminated" or "contaminated soil" are not defined in the Standard Instrument. It should also be noted that "*contaminated soil treatment works*" is limited in scope, only referring to "treatment" of contaminated soils, not "storage" (which is also proposed in this development application). Moreover, the "*contaminated soil treatment works*" would be ancillary to the dominant use, namely, that of a"*waste management facility*"[1].

The proposed waste facility would ordinarily be classed as 'designated development' by virtue of the above, however, under section 4.10 of the *Environmental Planning & Assessment Act 1979* (EP&A Act), the proposed development is not designated development due to its classification as State Significant Development (SSD). Clause 4.10 of the EP&A Act (Designated Development) states:

> *"(1) Designated development is development that is declared to be designated development by an environmental planning instrument or the regulations.*
>
> *(2)* ***Designated development does not include State significant development*** *despite any such declaration."*
> [our emphasis]

Section 4.12(8) of the EP&A Act, however, requires that an application for State Significant Development (SSD) must be accompanied by an Environmental Impact Statement (EIS). It states:

> "*(8) A development application for State significant development or designated development is to be accompanied by an environmental impact statement prepared by or on behalf of the applicant in the form prescribed by the regulations.*"

FOOTNOTE 1: Per decisions of Sheahan J in Toner Design Pty Ltd v Newcastle City Council [2012] NSWLEC 248 and Preston CJ in Chamwell Pty Limited v Strathfield Council [2007] NSWLEC 114.

State Environmental Planning Policy (State and Regional Development) 2011 defines those types of development that are SSD. Clause 8(1) of *State Environmental Planning Policy (State and Regional Development) 2011* states:

> "*8 Declaration of State significant development: section 4.36*
>
> *(1)* ***Development is declared to be State significant development*** *for the purposes of the Act if—*
>
> *(a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and*
>
> *(b)* ***the development is specified in Schedule 1*** *or 2.*" [our emphasis]

The proposed waste facility seeks consent to handle up to 250,000 tonnes of waste per annum, and is therefore classified as State Significant Development (SSD) pursuant to the provisions of clause 23(3) of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* being:

> *"Development for the purpose of* ***resource recovery or recycling facilities*** *that handle more than 100,000 tonnes per year of waste"* (clause 23(3) of Schedule 7 of *State Environmental Planning Policy (State and Regional Development) 2011*).[our emphasis]

Consequently, the Minister for Planning and Public Spaces (or delegate) is the consent authority for the proposed development under section 4.5(1) of the EP&A Act.

This means that the Minister or his delegate will determine the Development Application following an assessment by the Secretary of the NSW Department of Planning Industry and Environment.

State Environmental Planning Policy (State and Regional Development) 2011 relies on the definition of a resource recovery or recycling facility as defined in the Standard Instrument, as follows:

> "***resource recovery facility*** *means a building or place used for the* ***recovery of resources from waste****, including works or activities such as* ***separating*** *and* ***sorting****,* ***processing*** *or* ***treating*** *the waste, composting,* ***temporary storage****,* ***transfer or sale of recovered resources****, energy generation from gases and water treatment, but not including re-manufacture or disposal of the material by landfill or incineration."*[our emphasis]

The activities forming a part of the Project are highlighted in bold, above. The above definition embraces all of the activities proposed to be carried out as a part of the Project.

The Project will involve the separating, sorting and storage of all waste handled by this waste facility, with further processing proposed for much of this overall waste stream.

The definition of "waste" in Schedule 3 of the *Environmental Planning and Assessment Regulation 2000 (NSW) (the EPA Regulation) "Designated Development" may be of assistance in interpreting the meaning of "waste". It states:*

> *"****waste*** *includes any matter or thing whether solid, gaseous or liquid or a combination of any solids, gases or liquids that is discarded or is refuse from processes or uses (such as domestic, medical, industrial, mining, agricultural or commercial processes or uses). A substance is not precluded from being waste for the purposes of this Schedule merely because it can be reprocessed, re-used or recycled or because it is sold or intended for sale."*

Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) sets down the steps to be taken in preparing an EIS including a requirement to "*make a written application to the Planning Secretary for the environmental assessment requirements with respect to the proposed statement*."(Schedule 2, clause 3(1) of Part 2 the EP&A Regulation). Written application was made to the Planning Secretary who has provided environmental assessment requirements (SEARS) with respect to the proposed development, and they are to be found in **Appendix A** of this EIS.

This EIS has been prepared in accordance with Schedule 2 of the EP&A Regulation as set out in the accompanying Table 1.1.

Table 1.1: Schedule 2 EIS Requirements and where they are addressed in this EIS

Schedule 2 EIS Requirement	***Compliance***
1. Definitions	*The Minister is the determining authority.*
2. Environmental assessment requirements	*This EIS has been prepared in accordance with the requirements of the Planning Secretary.*
4. Integrated development	*Applicable to this project application, as an environment protection license (EPL) will be required once consent has been issued for the waste facility.*
6. Form of the environmental impact statement	*All of these matters have been addressed in the body of this EIS.*
7. Content of the environmental impact statement *1) An environmental impact statement must also include each of the following:* *(a) a summary of the environmental impact statement,* *(b) a statement of the objectives of the development, activity or infrastructure,* *(c) an analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure,* *(d) an analysis of the development, activity or infrastructure, including:* *(i) a full description of the development, activity or infrastructure, and* *(ii) a general description of the environment likely to be affected by the development, activity or infrastructure, together with a detailed description of those aspects of the environment that are likely to be significantly affected, and* *(iii) the likely impact on the environment of the development, activity or infrastructure, and* *(iv) a full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment, and* *(v) a list of any approvals that must be obtained under any other Act or law before the development, activity or infrastructure may lawfully be carried out,* *(e) a compilation (in a single section of the environmental impact statement) of the measures referred to in item (d) (iv),* *(f) the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4).*	*A summary of the EIS is provided in the Executive Summary at the commencement of this EIS document.* *A statement of the objectives of the proposed waste facility development is provided in Section 3.1 of this EIS document.* *An analysis of feasible alternatives are considered in Section 3.9 of this EIS document.* *A full description of the proposed waste facility is provided in Section 3 of the EIS.* *A general description of the environment likely to be affected by the proposed waste facility is provided in Section 4 of the EIS document.* *The likely impact on the environment of the proposed waste facility, activity or infrastructure is considered in detail in Section 4.3 of the EIS document.* *Mitigation measures are contained in Sections 3 and 4.2 of the EIS, supplemented by details contained in the specialist reports accompanying this EIS.* *A list of approvals that must be obtained are considered in Section 1.2 of the EIS.* *A compilation of mitigation measures to be employed at the waste facility is contained in Section 4.2 of the EIS.* *The justification for the project is contained in the Executive Summary and Section 3 of the EIS report. The compliance of the project with the principles of ecologically sustainable development are set out in Section 2.1.3 of the EIS.*

The EIS responds to the Secretary's Environmental Assessment Requirements (SSD 8530563) for the proposal, issued on 7 August 2020 by the Department of Planning Industry and Environment- refer **Appendix A** of this EIS.

In accordance with the issued SEARs, this EIS provides an assessment of the environmental impacts of the proposed new waste facility and sets out the mitigation and management measures, along any potential impacts arising from the proposed development. The form and content of this EIS has been prepared in accordance with clauses 6 and 7 of Schedule 2 of the EP&A Regulation.The EIS contains all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the EP&A Regulation.The land which is the subject of the development application (the Project Site, or Site), proposed for a a new waste facility (Project) lies within an area administered by Gunnedah Council. The Project Site is not subject to any prohibitive constraints such as flooding, bushfire hazards or ecologically sensitive land. As such, it is well suited to the proposed development. The capital investment value (CIV) for the proposed new waste facility is $3,909, 374 excluding GST- refer Appendix ?? For details.

1.1.2 Compliance with issued SEARS (SSD-8530563)

The general framework for an EIS is prescribed in Schedule 2 of the EP&A Regulation. The Secretary's Environmental Assessment Requirements (SEARS) were initially provided on 26 September 2019 (SEARS 1375) in respect of a waste facility handling 90,000 tonnes per annum. The project was subsequently amended to provide for a waste facility handling up to 250,000 tonnes per annum of waste, hence the need for a new SEARS, issued on 7 August 2020 (SSD-8530563) summarised in Table 1.2 below.

Table 1.2: Secretary's Requirements and where they are addressed in this EIS

Secretary's Environmental Assessment Requirements (SSD-8530563) Addressed in this EIS		
Item	***SEARS matter to address***	***Where addressed in this EIS***
Date of Issue EIS Specifications	*7 August 2020.*	
Applic. No.	*SSD-8530563.*	
General Requirements	*"The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000. In addition, the EIS must include:* *· a detailed description of the development including:* *- existing operations carried out on the site and how the site operates lawfully under the Environmental Planning and Assessment Act 1979 (EP&A Act) including any reliance on existing use rights and/or planning approvals and how these will be consolidated* *- accurate history of the site, including development consents* *- need for the proposed development* *- justification for the proposed development* *- likely interactions between the development and existing, approved and proposed operations in the vicinity of the site* *- plans of proposed building works* *· demonstration that the site is suitable for the proposed use in accordance with State Environmental Planning Policy No 55 - Remediation of Land* *· consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments* *· consideration of issues discussed in Attachment 2 (public authority responses to key issues)* *· risk assessment of the potential environmental impacts of the development identifying the key issues for further assessment"*	*Section 1.1* *Section 3* *Sections 2 & 4.1* ***Appendix B*** *Sections 3.9* *Section 4.3* *Section 3* *Section 2.3.5, 2.6* *Section 2* *Sections 2 &4* *Section 4.3*

	· detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: *- a description of the existing environment, using sufficient baseline data* *- an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes* *- a description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment* *· a consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.* *The EIS must also be accompanied by a report from a qualified quantity surveyor providing:* *· a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Regulation) of the proposal, including details of all assumptions and components from which the CIV calculation is derived. The report shall be prepared on company letterhead and indicate applicable GST component of the CIV;* *· an estimate of jobs that will be created during the construction and operational phases of the proposed development; and* *· certification that the information provided is accurate at the date of preparation."*	*Section 4.1* *Section 4.3* *Section 3 & 4.2* *Section 4.2* ***Appendix N***
Key Issues	*"**Statutory and strategic context*** *-detailed justification for the proposal and suitability of the site* *- detailed justification that the proposed land use (including the associated office space and residence) is permissible with consent* *- details of any proposed consolidation or subdivision of land* *- a detailed description of the history of the site* *-demonstration the proposal is consistent with the development standards applicable to the site, and justification for any contravention of these standards in accordance with clause 4.6 of the relevant local environment plan* *-demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, adopted precinct plans, draft district plan(s) and adopted management plans and justification for any inconsistencies. This includes, but is not limited to:* *o State Environmental Planning Policy No. 33 – Hazardous and Offensive Development* *o State Environmental Planning Policy No. 55 – Remediation of Land* *o State Environmental Planning Policy (Infrastructure) 2007* *o State Environmental Planning Policy (State and Regional Development) 2011* *o Gunnedah Shire Commercial and Industrial Land Use Strategy August 2008."*	*Section 3.9, Executive Summary, Section 2* *Section 4.1,* ***Appendix B*** *Section 2, 4.3* *Section 2, 4.3*
	*"**Suitability of the site*** *-details of all development consents and approved plans for the existing facility, including for all structures, plant and equipment* *- a detailed justification that the site can accommodate the proposed resource recovery facility, having regard to the scope of the operations of the existing facility and its environmental impacts and relevant mitigation measures*	***Appendix B*** *Section 3.9*
	*"**Community and Stakeholder Engagement*** *-a detailed community and stakeholder participation strategy which identifies who in the community has been consulted and a justification for their selection, other stakeholders consulted and the form(s) of the consultation, including a justification for this approach* *- a report on the results of the implementation of the strategy including issues raised by the community and surrounding occupiers and landowners that may be impacted by the proposal*	*Section 5*

	- details of how issues raised during community and stakeholder consultation have been addressed and whether they have resulted in changes to the proposal *- details of the proposed approach to future community and stakeholder engagement based on the results of the consultation."*	
	"Waste Management *-a description of the waste streams that would be accepted at the site including the maximum daily, weekly and annual throughputs and the maximum size and heights of individual stockpiles* *- details of the source of the waste streams to justify the need for the proposed processing capacity* *- a description of waste processing operations (including flow diagrams for each waste stream), including a description of the technology to be installed, resource outputs, and the quality control measures that would be implemented* *- details of how waste, including hazardous waste, would be stored (including the maximum storage capacity of each type of waste) and handled on site, and transported to and from the site, including details of how the receipt of non-conforming waste would be dealt with* *- details of consistency with the Standards for Managing Construction Waste NSW (2019)* *- details of the development's waste tracking system for incoming and outgoing waste* *- details of the quality of waste produced and final dispatch locations* *- details of the waste management strategy for development construction and ongoing operational waste generated* *- the measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the NSW Waste Avoidance and Resource Recovery Strategy 2014-21."*	*Sections 2, 3, 4.2 & 4.3* *Section 2.5*
	"Air Quality and Odour *-a quantitative assessment of the potential air quality, dust and odour impacts of the development in accordance with relevant Environment Protection Authority guidelines. This is to include the identification of existing and potential future sensitive receivers and consideration of approved and/or proposed developments in the vicinity* *- the details of buildings and air handling systems and strong justification for any material handling, processing or stockpiling external to a building* *- details of proposed mitigation, management and monitoring measures."*	*Sections 3,4.2 & 4.3*
	"Noise and Vibration *-a quantitative assessment of potential construction, operational and transport noise and vibration impacts in accordance with relevant Environment Protection Authority guidelines* *- details of the specific times of operation for all phases of the development and for all noise producing activities* - *cumulative impacts of other developments* - *details and justification of the proposed noise mitigation and monitoring measures.."*	*Sections 3,4.2 & 4.3*

	*"**Traffic and Transport*** *-details of all traffic types and volumes likely to be generated during construction and operation, including a description of haul routes* *- an assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model* *- detailed plans of the proposed layout of the internal road network, pedestrian.network and parking on site in accordance with the relevant Australian Standards* *- plans of any proposed road upgrades, infrastructure works or new roads required for the development* *- plans demonstrating how all vehicles associated with construction and operation awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network* *- details of the largest vehicle anticipated to access and move within the site, including swept path analysis* *- swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site"*	*Sections 3,4.1,4.2 & 4.3*
	*"**Hazards*** *-preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 - Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development, hazard identification covering all plant and processes including dust explosion hazards and a description of the proposed safeguards to be implemented.* *- should preliminary screening indicate that the project is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011)."*	*Sections 2, 3,4.2 and 6*
	*"**Fire and Incident Management** - including:* *-identification of the aggregate quantities of combustible waste products to be stockpiled at any one time* *- technical information on the environmental protection equipment to be installed on the premises such as air, water and noise controls, spill clean-up equipment and fire (including location of fire hydrants and water flow rates at the hydrant) management and containment measures* *- details regarding the fire hydrant system and its minimum water supply capabilities appropriate to the site's largest stockpile fire load* *- details of size and volume of stockpiles and their management and separation to minimise fire spread and facilitate emergency vehicle access* *- consideration of consistency with NSW Fire & Rescue draft Fire Safety Guideline – Fire Safety in Waste Facilities (February 2020)* *- detailed information relating to the proposed structures addressing relevant levels of compliance with Volume One of the National Construction Code (NCC).*	*Sections 2, 3,4.2 and 4.3*

	*"**Soil and Water*** *-an assessment of potential impacts to soil and water resources, topography hydrology, drainage lines, watercourses and riparian lands on or nearby to the site* *-a detailed site water balance, including identification of water requirements for the life of the project, measures that would be implemented to ensure an adequate and secure water supply is available for the proposal and a detailed description of the measures to minimise the water use at the site* *-characterisation of water quality at the point of discharge to surface and/or groundwater against the relevant water quality criteria (including details of the contaminants of concern that may leach from the waste into the wastewater and proposed mitigation measures to manage any impacts to receiving waters)* *-details of stormwater/wastewater/leachate management systems including the capacity of onsite detention systems, and measures to treat, reuse or dispose of water* *-a description of erosion and sediment controls* *-characterisation of the nature and extent of any contamination on the site and surrounding area"*	*Sections 3,4.2 & 4.3*
	*"**Biodiversity*** *- including an assessment of the proposal's biodiversity impacts in accordance with the Biodiversity Conservation Act 2016, including the preparation of a Biodiversity Development Assessment Report (BDAR) where required under the Act, except where a waiver for preparation of a BDAR has been granted."*	*Sections 2.3, 4.3*
	*"**Cultural Heritage and Aboriginal Cultural Heritage*** *- identification and description of the Aboriginal cultural heritage values that exist across the development and document in an Aboriginal Cultural Heritage Assessment Report (ACHAR). Consultation with Aboriginal people must be undertaken and documented in the ACHAR* *- a description of the impacts on Aboriginal cultural heritage values."*	*Section 4.3*
	*"**Visual*** *- an assessment of the potential visual impacts of the project on the amenity of the surrounding area."*	*Sections 4.1, 4.3*
Consultation	*During the preparation of the EIS, you must consult the relevant local, State and Commonwealth government authorities, service providers and community groups, and affected landowners. In particular, you must consult with:* *· Gunnedah Shire Council* *· Environment Protection Authority* *· Transport for NSW* *· Fire + Rescue NSW* *· Department of Planning, Industry and Environment, including:* *o Environment, Energy and Science Group* *o Crown Lands Division* *The EIS must describe the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.*	*Section 5*

▪ 1.2 Integrated Development Does Not Apply to SSD

Under the provisions of the EP&A Act, approvals may need to be obtained from other Government agencies, in addition to obtaining a development consent. If a proposal does require approval from another government agency, it will be dealt with it as an 'integrated development' application pursuant to s.4.46 of the EP&A Act.

However, SSD proposals are not integrated development and do not require the concurrence of other government agencies.

The granting of development consent under the EP&A Act for the application to develop the site for the purposes of a waste facility does not exhaust the approvals process necessary for the commencement of the project.

The *Protection of the Environment Operations Act, 1997* and the *Environmental Planning & Assessment Act 1979* (EP&A Act, under which this development application is to be determined) are interlocking, parallel schemes of regulation. The interlocking nature of the scheme is even more evident when the EP&A Act is considered. The scheme envisages that the requirements of the EP&A Act would need to be first obtained[2].

Once approved, the proposed waste facility will need to operate under the terms and requirements of an Environment Protection Licence (EPL) to undertake the scheduled activities (ie. waste facility) proposed under the *Protection of the Environment Operations Act, 1997.* The EPL would cover the waste materials that can be lawfully processed and stored, incident management, as well as environment protection licence reporting conditions.

▪ 1.3 EIS Project Team

The preparation of this EIS on behalf of Mackellar Equipment Hire Pty Ltd was undertaken and managed by Mr Gary Peacock BTP (UNSW), principal of Outline Planning Consultants Pty Ltd. Outline Planning Consultants Pty Ltd has relied upon the adequacy and accuracy of the other assessments and advice contained in the following reports, plans, and other information prepared by the following specialist consultant teams provided below, and should be read in conjunction with the following table.

Table 1.4: EIS Project Team

Specialist area of expertise	*Name of consulting firm*	*Names of specialist personnel*
Details of the proposed waste facility, including design, drainage and civil engineering, landscaping and operational aspects	*Martens & Associates, consulting engineers with input from Mackellar Equipment Hire Pty Ltd and Stewart Surveys (landscaping)- refer* ***Appendix C***	*Andrew Norris, Director Martens & Associates, Terry Harvey, Senior Engineer & Project Manager, Stanley Leung, Civil Engineer, & Kathryn Yigman Stewart Surveys*
Roads and traffic assessment	*Streetwise- refer* ***Appendix D***	*Andy Davis Traffic Engineer* *Craig Nethery Senior Engineer*
Hazards, risk assessment	*Martens & Associates and Outline Planning Consultants*	*Gary Peacock, Director Outline Planning Consultants Pty Ltd, Andrew Norris, Director Martens & Associates, Terry Harvey, Senior Engineer & Project Manager*
Air quality, greenhouse gas impacts	*Vipac- refer* ***Appendix E***	*Dr Stephen Thomas*
Noise impacts	*Vipac- refer* ***Appendix F***	*Peter Teague, Principal Consultant*
Surveying	*Stewart Surveys- refer* ***Appendix G***	*Kathryn Yigman, Director*
SEPP 44 Assessment	*Stewart Surveys- refer* ***Appendix H***	*Kathryn Yigman, Director*
ACHARS assessment	*Patrick Gaynor- refer* ***Appendix M***	*Patrick Gaynor*
Contamination assessment	*East-West - refer* ***Appendix L***	*Stephenie Cameron, Ashley Welch*
CIV assessment	*Lindsay Doyle & Associates- refer* ***Appendix N***	*Lindsay Doyle*

Except where otherwise indicated, the remaining parts of the EIS were prepared by Outline Planning Consultants.

FOOTNOTE 2: Newcastle & Hunter Valley Speleological Society Inc v Upper Hunter Shire Council and Stoneco Pty Limited (No2) [2010] NSWLEC 104 per Preston CJ, and most recently by the NSW Court of Appeal in Hunter Industrial Rental Equipment Pty Ltd v Dungog Shire Council [2019] NSWCA 147 decision dated 20 June 2019.

1.4 EIS Report Structure

The purpose of this EIS is to enable consideration of the implications of the proposed waste facility project. The EIS has been prepared in accordance with the EP&A Act and the EP&A Regulation and issued SEARS.

An overview of the layout of this EIS is provided below:

- The **Executive Summary** provides a brief overview of the proposed waste facility project and the EIS.
- **Section 1** introduces the landfill project, provides a summary of the EIS requirements for the Project, integrated development checklist, EIS project team, and the EIS report structure.
- **Section 2** outlines the planning and environmental context for the waste facility project, including the applicability of Commonwealth, state and local planning and environment legislation.
- **Section 3** contains a detailed description of the waste facility project, including management and mitigation measures proposed, along with alternatives to the project.
- **Section 4** contains a description of the existing environment affected by the waste facility project, a summary of the mitigation measures and commitments relating to the proposed waste facility, and an assessment of the key environmental issues and impacts relevant to the waste facility project.
- **Section 5** contains details of the consultation undertaken as part of the preparation of this EIS.
- **Section 6** contains a risk assessment of the waste facility project.
- **Section 7** contains a conclusion for the waste facility project.
- **Section 8** contains a list of abbreviations and a glossary of technical terms.

The appendices to the EIS present the following additional information including:

- The Secretary's Environmental Assessment Requirements (**Appendix A**).
- Existing approved industrial estate Allgayer Drive and Deposited Plan (**Appendix B**).
- Engineering drawings and reports by Martens & Associates (**Appendix C**).
- Roads and traffic assessment by Streetwise- refer **Appendix D**.
- Air quality, greenhouse gas impacts assessment by Vipac- refer **Appendix E**.
- Noise impact assessment report by Vipac- refer **Appendix F**.
- Site survey by Stewart Surveys- refer **Appendix G**.
- SEPP 44 report by Stewart Surveys and BDAR Exemption- refer **Appendix H**.
- Consultation- refer **Appendix I**.
- Soil Profile- refer **Appendix J**.
- Technical specifications- refer **Appendix K**.
- Contamination report by EastWest— refer **Appendix L**.
- ACHARS report by Patrick Gaynor- refer **Appendix M**.
- CIV report by Lindsay Doyle- refer **Appendix N**.

In addition to the above, the EIS contains additional information required by the issued SEARS including but not limited to the following- in the main provided in Section 4 of the EIS:

- An existing site survey plan drawn at an appropriate scale illustrating details including the location of the land, boundary measurements, area (in square metres) and north point, as well as the existing levels of the land in relation to buildings and roads.
- A locality/context plan.
- Drawings at an appropriate scale.

2.Statutory & Strategic Policy Context

The following section identifies relevant local, State and Commonwealth planning and environment legislation and discusses the application of these planning provisions relevant to the Project.

2.1 Environmental Planning & Assessment Act 1979

2.1.1 Overview, approvals process

The NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) governs planning and the assessment of development projects in New South Wales, including resource recovery facilities and waste transfer facilities. This planning legislation is administered by Department of Planning Industry & Environment and by local councils.

The proposed waste facility operation is classified as a '*Waste management facilities or works*' under clause 32(1) of Schedule 3 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation 2000), falling under the definition of a '*Waste management facilities or works*' under clause 32(1) of Schedule 3, namely:

> *"(1) Waste management facilities or works that store, treat, purify or dispose of waste or sort, process, recycle, recover, use or reuse material from waste and.."*

Pursuant to clause 23(3) of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* the project is classified as State Significant Development (SSD) for the purposes of the EP&A Act. The Minister for Planning is thus the consent authority under Section 4.5 of the EP& A Act.

It is a mandatory requirement that any SSD development application must be accompanied by an Environmental Impact Statement (EIS), prepared in accordance with the provisions of Division 4.7 of the EP&A Act. This EIS meets the minimum requirements of Schedule 2 the EP&A Regulation. It also responds to and addresses the Department of Planning Industry and Environment Secretary's Environmental Assessment Requirements (SSD-8530563), issued on 7 August 2020- refer **Appendix A**. In accordance with the SEARS, this EIS provides an assessment of the environmental impacts of the proposed waste facility and sets out the measures to mitigate and manage any potential impacts arising from the development. It also addresses relevant matters for consideration including the following:

- Details of the proposed waste facility.
- Assessment of potential environmental impacts of the proposed waste facility in accordance with the Secretary's Environmental Assessment Requirements (SEARS).
- Justification for the proposed waste facility, as well as details pertaining to proposed infrastructure.
- Measures proposed to mitigate any adverse impacts on the environment.

The proposed waste facility is to be sited on land within a recently developed industrial estate, constructed in 2016, located on the western outskirts of Gunnedah township. It is not considered to be an *'environmentally sensitive areas'* of State significance (as defined in *State Environmental Planning Policy (State and Regional Development) 2011*) given that:

- The land the subject of this project is not within the coastal waters of a declared State or Commonwealth wetland, rainforest or aquatic reserve or marine park.
- No part of the project site has been identified as being flood prone or being of high Aboriginal cultural significance or high biodiversity significance under the *Gunnedah Local Environmental Plan 2012* (Gunnedah LEP).
- No land here is reserved as a state conservation area under the *National Parks and Wildlife Act,1974*.
- No lands, places, buildings or structures listed on the State Heritage Register under the *Heritage Act, 1977* occur within the land the subject of this development application.

- No part of the project site is reserved or dedicated under the *Crown Lands Act, 1989* for the preservation of flora, fauna, geological formations or for other environmental protection purposes.
- The project site is located within a recently developed industrial estate precinct and does not form a part of any critical habitat.

Pursuant to clause 21(1) of *State Environmental Planning Policy (Infrastructure) 2007* the project falls under the definition of a *'waste or resource management facilities'* , a use permitted in a 'prescribed zone', which includes land zoned IN1 General Industrial- the current zoning of the project site- pursuant to clause 121(1) of this SEPP. It is also relevant to note that pursuant to Section 4.41of the EP&A Act, the following authorisations are not required for State significant development (SSD) including but not limited to the following:

- An Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*.
- A bush fire safety authority under section 100B of the *Rural Fires Act 1997*.
- Approvals under sections 89,90 and 91 of the *Water Management Act 2000*.

Furthermore, under Section 4.42 of the EP&A Act, a number of authorisations by government agencies cannot be refused and are to be substantially consistent with development consent for SSD including but not limited to the following:

- An environment protection licence under Chapter 3 of the *Protection of the Environment Operations Act 1997* (for any of the purposes referred to in Section 43 of that Act).
- A consent under Section 138 of the *Roads Act 1993*.

2.1.2 Consistency with objects of EP&A Act

The proposed resource recovery facility project the subject of this EIS is considered to be consistent with the objects of the Environmental Planning and Assessment Act 1979 (EP&A Act), as summarised in the following Table 2.1.

Table 2.1: Checklist of the Project against objects of EP&A Act 1979

Objects	***Consistency***
"(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,"	*The waste facility would facilitate the recycling of a wide range of wastes with much of this material to be re-used elsewhere in New South Wales and Australia. Other benefits that satisfy this object include the following:* ▸ *The design of the new waste facility will create satisfactory operational and amenity outcomes for the surrounding community.* ▸ *The project site is located in an industrial area predominantly surrounded by other industrial developments. It has safe and adequate access suitable for the proposal.* ▸ *The Project will support the future industrial development in the Gunnedah region, without significant adverse environmental impacts.* ▸ *The proposed new waste facility will be privately funded and will generate a construction and operational jobs over the life of the project, as detailed elsewhere in this EIS. The economic impacts of the proposal will be positive.* ▸ *The proposal responds to an identified need to provide ongoing waste disposal capacity for NSW.*
"(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,"	*The design of the proposed waste facility project has involved consideration of potential impacts including waste management, fire safety, traffic, water quality, air quality and noise impacts. The proposal incorporates design features to reduce the potential for adverse impacts during the establishment and operation of the Project. All of the above are considered to be consistent with the objectives of ecologically sustainable development.*

Objects cont.	***Consistency cont.***
"(c) to promote the orderly and economic use and development of land,"	*The proposed waste facility project promotes the orderly and economic use of a site specifically zoned for industry.* *It is also relevant to note that waste disposal and recycling facilities form a key part of the infrastructure necessary to support the orderly economic development of land in New South Wales.*
"(d) to promote the delivery and maintenance of affordable housing,"	*Not applicable to this project.*
"(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,"	*The proposed waste facility project is confined to land developed recently for the purposes of an industrial estate at Allgayer Drive.* *No loss of habitats or trees of significance arise from the project.The waste facility project has been sited and designed to minimise the impacts to the environment.* *Mitigation and management measures have been proposed to encourage the protection of the environment.*
"(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),"	*The site has no heritage listing. The project is confined to the footprint of the already approved industrial subdivision, where land disturbance was approved prior to the Allgayer Drive industrial subdivision being constructed. As such, no additional heritage impacts are anticipated.*
"(g) to promote good design and amenity of the built environment,"	*The design of this project is appropriate to an industrial area.*
"(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,"	*All buildings have been designed to accommodate the various waste storage and recycling uses proposed.* *Various mitigation and management measures to ensure that the proposed development make adequate provision for fire safety and the proper management of a waste facility such as that proposed.*
"to promote the sharing of responsibility for environmental planning between the different levels of government in the State, and"	*Noted.* *Once approved, the monitoring of the waste facility will be the shared responsibility of both Gunnedah Council (regarding the conditions of consent generally) and the EPA (regarding the operation of 'scheduled activities' associated with the resource recovery and waste storage uses under any license issued under the Protection of the Environment Operations Act, 1997).*
"(j) to provide increased opportunity for public involvement and participation in environmental planning and assessment."	*The EIS has been prepared following discussions with local and state government and others, in accordance with the requirements of the issued SEARS.*

Based on the above assessment, the Project is considered to be consistent with the objects of the EP&A Act.

The various assessments of the project have determined that the proposed waste facility will not result in any significant adverse impacts that cannot be satisfactorily mitigated or managed.

This Environmental Impact Statement confirms that the proposed waste facility can be undertaken in a manner which will not adversely impact on the natural or built environment but will promote the economic use of industrial-zoned land in a manner which will provide an improved level of resource management generally.

2.1.3 Sustainable development & ESD

The principles of ecologically sustainable development (ESD) are an element of the public interest which is a mandatory consideration. Clause 7(4) of Schedule 2 of the EP&A Regulation requires that the principles of ecologically sustainable development are to be considered in any EIS, as follows:

"*(4) The principles of ecologically sustainable development are as follows—*

*(a) the **precautionary principle**, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by—*

(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

(ii) an assessment of the risk-weighted consequences of various options,

*(b) **inter-generational equity**, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations*

*(c) **conservation of biological diversity and ecological integrity**, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,*

*(d) **improved valuation, pricing and incentive mechanisms**, namely, that environmental factors should be included in the valuation of assets and services."*

The above principles of ecologically sustainable development are considered in the following Table 2.2.

Table 2.2: Compliance of project with ESD principles

ESD principle	Compliance
The precautionary principle[3]	*Adopting the precautionary approach, various specialist studies have been undertaken to provide accurate information to not only assist with the evaluation and development of the Project, but also to confirm that no serious or irretrievable impacts are likely.* *The Project incorporates various mitigation and management measures to ensure that the waste facility will be run in a satisfactorily manner.* *As such, the Project adopts a precautionary approach aimed at preventing or limiting the potential for environmental harm.*
Inter-generational equity	*The Project is consistent with the NSW Government's direction in achieving the targets in the Waste and Avoidance and Resource Recovery Strategy 2014-2021 and in particular, avoiding and reducing the generation of waste, increasing recycling, and diverting more waste from landfill to alternative uses, such as recycling. If the Project were not to proceed future generations would be faced with one less recycling option available, as well as potentially higher costs for the processing and recycling of waste.*
Conservation of biological diversity and ecological integrity	*The Project is not considered likely to result in excessive air, noise, traffic or amenity impacts and is confined to already cleared, disturbed land within an existing established industrial subdivision. No further clearing of land is proposed. As such, and with the implementation of the mitigation measures proposed, there is expected to be no additional potential direct and indirect impacts on the biodiversity of the locality.*
Improved valuation, pricing and incentive mechanisms	*The Project seeks to achieve non-material well-being or "quality of life" by providing a resource recovery facility serving the broader community.* *Through good design, the general amenity of the local area will be maintained throughout and beyond the life of the proposed project through implementation of safeguard measures to mitigate any environmental impacts arising from the operation of the proposed waste facility.*

The basic principles of Ecologically Sustainable Development have thus been satisfied in the development and assessment of the Project.

FOOTNOTE 3: The precautionary principle is only activated if there are threats of serious or irreversible environmental damage and lack of full scientific certainty. If both elements are established, the precautionary principle applies-Telstra Corporation Ltd v Hornsby Shire Council [2006] NSWLEC 133 Preston CJ.

■ 2.2 Gunnedah Local Environmental Plan (LEP) 2012 & DCP

2.2.1 Compliance with Gunnedah LEP 2012

The Gunnedah LEP 2012 is the comprehensive environmental planning instrument applying to the project site. The LEP is a conventional, modern one based on the Standard Instrument Template.

LEP Aims

The compliance of the proposed waste facility development with the relevant aims of Gunnedah Local Environmental Plan LEP 2012 are set out in the accompanying Table 2.3.

Table 2.3: Compliance of the Project with Gunnedah LEP 2012 Aims

Gunnedah LEP Aim	***Assessment***
"(a) to to conserve and enhance, for current and future generations, the ecological integrity, environmental heritage and environmental significance of Gunnedah"	*The Project satisfies this aim. The proposed resource recovery facility is to be established on land within an already developed (and disturbed) industrial estate on the western fringe of Gunnedah.* *No significant adverse ecological or heritage or environmental impacts arise from the Project, as it will not result in any increase in the extent of vegetation clearing in the locality or removal of habitats for flora and fauna species, including the threatened koala.*
"(b) to promote the economic well being of the community in a socially and environmentally responsible way, focusing on new employment growth and a diversified economy"	*The development of this industrial site for the purposes of a waste facility accords with the zoning of the land and will assist in the promoting its orderly and economic use. It will also result in the generation of further employment opportunities for activities associated with the proposed waste facility.*
"(c) to encourage the proper management of productive agricultural land and prevent the fragmentation of agricultural holdings,"	*The proposed waste facility development sits within a zoned industrial area. It avoids productive agricultural land and does not involve the fragmentation of agricultural holdings, being located on land zoned for industrial purposes.*
"(d) provide opportunities for a range of new housing and housing choice"	*Not applicable to the project.*
"(e) to facilitate the provision and coordination of community services and facilities,"	*Not applicable to the project.*
"(f) to seek the provision of adequate and appropriate infrastructure to meet the needs of future development"	*The project site is within an established industrial estate, with a full range of services required for an industrial development, including town water, sewer, power, and telecommunications. The site also has dual frontage to two bitumen sealed roads leading back to major local and regional roads.*
"(g) to provide direction and guidance in the management of growth and development."	*The Project will assist in managing the growth of urban centres in the State, including the greater Sydney metropolitan area.*
"(h) to conserve the cultural and environmental heritage of Gunnedah."	*Any cultural issues would have presumably been dealt with prior to the grant of consent for the Allgayer Drive industrial subdivision and subsequent development of the estate and individual lots for industrial development. No work associated with a waste facility is to be undertaken outside of this approved industrial development area.*
"(i) to allow development in a way that minimises risks due to environmental hazards."	*The Project can be undertaken in a manner that will minimise risks due to environmental hazards. The proposed waste facility will contain mitigation measures that will act to ensure the prevention of any contamination of land or water. As such, risks are anticipated to be controlled to a satisfactory degree. The site is not mapped as being flood-prone land.*

Zoning of the Project Site & IN1 zone objectives

Gunnedah Local Environmental Plan (LEP) 2012 is the comprehensive environmental planning instrument applying to the site at No.16 Torrens Road, Gunnedah. Pursuant to the provisions of the Gunnedah LEP 2012 the project site is zoned IN1 General Industrial- refer **Figure 2.1**. The objectives of Zone IN1 General Industrial is as follows:

"1 Objectives of zone

- *To provide a wide range of industrial and warehouse land uses.*
- *To encourage employment opportunities.*
- *To minimise any adverse effect of industry on other land uses.*
- *To support and protect industrial land for industrial uses.*
- *To enable development that is associated with, ancillary to, or supportive of industry or industrial"*

The compliance of the project with the objectives of the IN1 General Industrial zone are set out in Table 2.4.

Table 2.4: Compliance of the Project with IN1 General Industrial Zone Objectives

IN1 Zone Objectives	***Compliance***
"To provide a wide range of industrial and warehouse land uses"	*Yes. The Project site is currently used for industrial purposes. The project seeks development consent for the establishment of another industrial use on the land, namely, that of a resource recovery facility.*
"To encourage employment opportunities"	*Yes. The Project will provide full-time and part-time employment for up to 6 persons and a further 3 administrative staff.*
"To minimise any adverse effect of industry on other land uses"	*Yes. The project site is within an established industrial estate, with a zoning that enables the establishment of a broad range of general industrial uses. The project will support the future industrial development in the Gunnedah region, including the immediate surrounds, without significant adverse environmental impacts.*
"To support and protect industrial land for industrial uses"	*Yes. The proposed waste facility is for an industrial use.*
"To enable development that is associated with, ancillary to, or supportive of industry or industrial.."	*The proposed waste facility is proposed on a site that currently houses the main office, manager's residence along with associated storage sheds, truck parking and access, fuelling point and workshops associated with the Mackellar Group of companies.*

A waste facility is an innominate use that is permissible in the IN1 General Industry zone. The Dictionary to the Gunnedah LEP 2012 a '*waste or resource management facility*' is not listed as a prohibited use in the IN1 zone. It is therefore permitted with consent, comprising an Item 3 'Permitted with consent use', namely, as '*Any other development not specified in item 2 or 4*'. The Land Use Table for the IN1 zone is reproduced in the following:

"2 Permitted without consent

Environmental protection works; Roads

3 Permitted with consent

Depots; Freight transport facilities; Funeral homes; Garden centres; General industries; Hardware and building supplies; Heliports; Industrial training facilities; Light industries; Liquid fuel depots; Neighbourhood shops; Oyster aquaculture; Places of public worship; Rural supplies; Tank-based aquaculture; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; ***Any other development not specified in item 2 or 4***

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Camping grounds; Caravan parks; Centre-based child care facilities; Commercial premises; Community facilities; Correctional centres; Eco-tourist facilities; Educational establishments; Entertainment facilities; Exhibition homes; Exhibition villages; Farm buildings; Forestry; Function centres; Health services facilities; Heavy industrial storage establishments; Heavy industries; Home-based child care; Home businesses; Home occupations; Home occupations (sex services); Jetties; Marinas; Mooring pens; Moorings; Pond-based aquaculture Public administration buildings;

Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Residential accommodation; Respite day care centres; Tourist and visitor accommodation; Wharf or boating facilities"
[our emphasis]

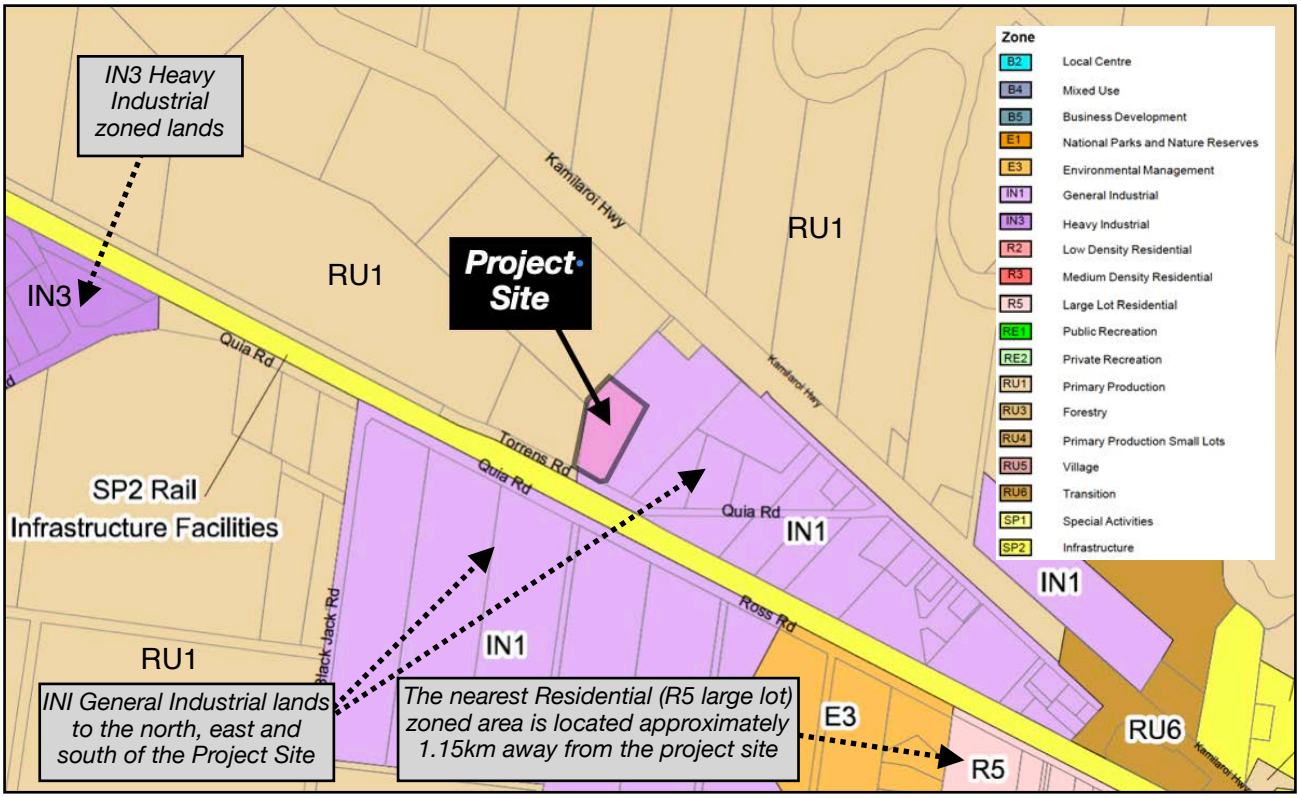


FIGURE 2.1: A waste facility is a permissible use in the IN1 General Industrial zone - the zoning applicable to the Project Site

(Source: Gunnedah Local Environmental plan 2012 Land Zoning map-Sheet LZN_005A)

A waste facility is defined in the in the Dictionary in the Gunnedah LEP 2012 as follows:

"waste disposal facility means a building or place used for the disposal of waste by landfill, incineration or other means, including such works or activities as ***recycling, resource recovery and other resource management activities****, energy generation from gases, leachate management, odour control and the winning of extractive material to generate a void for disposal of waste or to cover waste after its disposal.*

Note.

Waste disposal facilities are a type of ***waste or resource management facility****—see the definition of that term in this Dictionary.*

waste or resource management facility means any of the following:

(a) a ***resource recovery facility****,*

(b) a waste disposal facility,

(c) a ***waste or resource transfer station****,*

(d) ***a building or place that is a combination of any of the things referred to in paragraphs (a)–(c)****.*

waste or resource transfer station means a building or place used for the collection and transfer of waste material or resources, including the receipt, sorting, compacting, temporary storage and distribution of waste or resources and the loading or unloading of waste or resources onto or from road or rail transport.

Note.

Waste or resource transfer stations are a type of ***waste or resource management facility****—see the definition of that term in this Dictionary."* [our emphasis]

The following Table 2.5 summarises the compliance of the proposed modification with other relevant provisions of the Gunnedah LEP 2012.

Table 2.5: Compliance of the Project with other relevant provisions of the Gunnedah LEP 2012

Gunnedah LEP 2012 provision	***Compliance***
Clause 1.9 Application of SEPPs	*Various state environmental planning policies prevail over the LEP as provided by section 3.28 of the EP&A Act. In particular, the provisions State Environmental Planning Policy (Infrastructure) 2007 applies. Refer also to Section 2.3 of the EIS for further details.*
Clause 4.1 Minimum subdivision lot size	*No lot size restrictions apply to land zoned IN1 Heavy Industrial (source: Gunnedah LEP 2012 Lot Size Map - Sheet LSZ_005A).*
Clause 4.3 Height of buildings	*No height of buildings restrictions apply to land zoned IN1 General Industrial (source: Gunnedah LEP 2012 Clause 4.3). The project complies with a FSR less than 0.6:1.*
Clause 4.4 Floor space ratio	*A floor space ratio (FSR) of 0.6:1 applies to the site (source: Gunnedah LEP 2012 Lot Size Map - Sheet FSR_005A). The Project complies with this FSR, having a proposed FSR of 0.14:1.*
Clause 5.1 Acquisition	*No part of the project site or immediate surrounds is identified in the LEP for acquisition (source: Gunnedah LEP 2012 Land Reservation Acquisition Map - Sheet LRA_001).*
Clause 5.2 Preservation of trees or vegetation	*The LEP provides: "This clause applies to species or kinds of trees or other vegetation that are prescribed for the purposes of this clause by a development control plan made by the Council." No such DCP controls or descriptions apply, the existing Council DCP 2012 silent on this issue.*
Clause 5.10 Heritage Conservation	*No part of the project site is listed as a heritage item or known archaeological site. (source: Gunnedah LEP 2012 Heritage Map - Sheet HER_00A). The project site is not identified as an Aboriginal place of heritage significance. As such, the provisions of clause 5.10 of the LEP, Heritage Conservation, do not apply.*
Clause 5.11 Bush Fire Hazard Reduction	*No part of the project site, proposed to accommodate the waste facility, are mapped as being bushfire prone land. (source: NSW Rural Fire Service website accessed January 2020). This clause of the LEP states:* *"Bush fire hazard reduction work authorised by the Rural Fires Act 1997 may be carried out on any land without development consent."*
Clause 6.1 Flood planning	*No part of the project site, proposed to accommodate the waste facility, is identified as "Flood planning area" on the Flood Planning Map (source: Gunnedah Local Environmental Plan 2012 Flood Planning Map - Sheet FLD_002). Refer* ***Figure 2.2****.*
Clause 6.5 Essential services ***"Development consent must not be granted to development unless the consent authority is satisfied that any of the following services that are essential for the development are available or that adequate arrangements have been made to make them available when required:*** ***(a) the supply of water,*** ***(b) the supply of electricity,*** ***(c) the disposal and management of sewage,*** ***(d) stormwater drainage or onsite conservation,*** ***(e) suitable road access."***	*Previously considered by Council prior to granting consent to the establishment of an industrial estate over what is now known as Allgayer Drive.* *The industrial estate, including the project site, is provided with full urban services.* *All stormwater runoff from activities associated with the the waste facility is to be suitably detained on site. The project site has suitable access to the regional road system via the existing approved access points.*

In addition to the above, the project site is not mapped as having acid sulfate soils potential, nor do any lot size restrictions apply.

The development of the Allgayer Drive industrial estate, which included the project site, was found by Gunnedah Shire Council to be an appropriate use in this location prior to being approved by Council in December 2015.

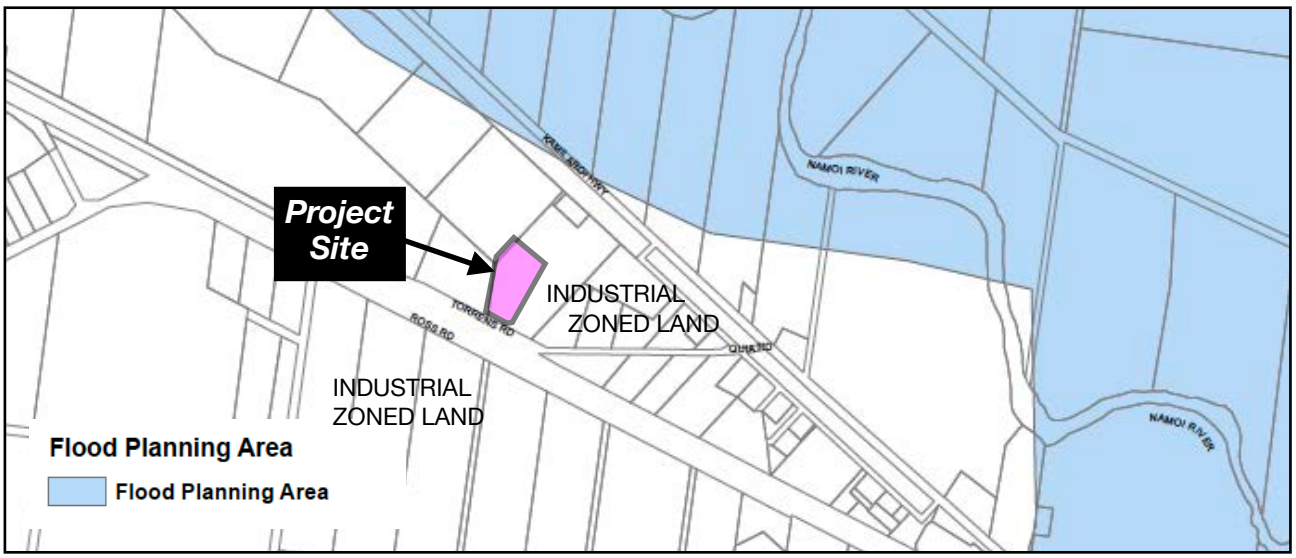


FIGURE 2.2: The Project Site is indicated as being flood free in the LEP

(Source: Gunnedah Local Environmental plan 2012 Flood Planning map Sheet FLD_005A)

Other Gunnedah LEP 2012 provisions

Other relevant LEP provisions applicable to the site are summarised below. The LEP mapping also shows that the project site is free from the following planning or environmental constraints:

- Drinking water catchment.
- Wetlands, riparian lands or other lands with a high ecological or environmental value.
- Scenic protection.
- Terrestrial biodiversity.
- Heritage-listed features, including Conservation Area, Aboriginal Place of Heritage Significance or Conservation Area- Landscape or like designations.

2.2.3 Gunnedah Development Control Plan 2012

In addition to the LEP, the provisions of Gunnedah Development Control Plan 2012 also apply to the project site. The relevant provisions of DCP 2012 applicable to the proposed landfill, not inconsistent with any environmental planning instrument, include the following:

- Side and rear building boundary setbacks are to comply with the BCA (clause 4.1 of the DCP). In this regard the project will comply with this requirement. Refer to Section 3 of this EIS for further details.
- A 7.5m primary and secondary road building setback applies (clause 4.1 of the DCP). In this regard the project complies with this requirement. Refer to Section 3 of this EIS for further details.
- "*Building elevations to the street frontage or where visible from a public road, reserve, railway or adjoining residential area are to incorporate variations in façade treatments, roof lines and building materials*" (clause 4.2 of DCP 2012). The buildings proposed reflect the intended industrial use ie. a waste facility, with landscaping employed- including well established stands of trees on the site-to improve views from nearby public roads.
- "*Industrial development proposed in close proximity to non-industrial uses must be compatible on both visual and operational grounds*" (clause 4.2 of DCP 2012). In this regard the project complies with these requirements. Refer to Section 3 of this EIS for further details.
- "*Applications must demonstrate adequate provision for storage and handling of solid wastes*." (clause 4.3 of DCP 2012). In this regard the project complies with these requirements. Refer to Section 3 of this EIS for further details.

- A Traffic Assessment is required to demonstrate the adequacy of roads, pavement impacts, site access, loading/ unloading, as well as on-site manoeuvring for the largest design vehicle (clause 4.4 of DCP 2012). In this regard the development application complies with this requirement. Refer to Streetwise traffic report in **Appendix D**.

- Parking for a waste facility of this size would be based on predicted peak vehicle use (clause 4.5 of DCP 2012). In this regard the project complies with these requirements. Refer to Section 3 of this EIS for further details.

- Landscaping is proposed in satisfaction of clause 4.6 of DCP 2012, however, the landscape strip fronting Allgayer drive is not as wide as that required under the DCP. Refer to Section 3 of this EIS for further details.

- Fencing required under certain circumstances (clause 4.7 of DCP 2012). Security fencing is proposed.

- Adequate loading and unloading facilities are to be provided on site. Adequate space and facilities are required to be provided wholly within the site (clause 4.8 of DCP 2012). In this regard the project complies with these requirements. Refer to Section 3 of this EIS for further details.

- Outdoor lighting to comply with AS 4282 Control of Obtrusive Effects of Outdoor Lighting (clause 4.9 of DCP 2012). In this regard it is intended that lighting will comply with this requirement.

- "Windows, doors and other wall openings shall be arranged to minimise noise impacts on residences where proposed within 400m of a residential zone" (clause 4.11 of DCP 2012). In this regard the project site is located 1.119km from the nearest residential (R5) zone.

[**NOTE**: Under the provisions of clause 11(a) of *State Environmental Planning Policy (State and Regional Development) 2011* development control plans do not apply to State Significant Development.]

2.2.4 Gunnedah Community Strategic Plan 2017-21

Gunnedah Shire Council delivers its services through an integrated planning approach, with the Gunnedah Community Strategic Plan 2017-21 being the 'co-ordinating' plan that sets the vision, direction and framework for the Gunnedah Shire for the next decade. The *Gunnedah Community Strategic Plan* recognises the strategic importance of diversifying the economic base of the Shire, for the Shire community. The Plan articulates a range of desired outcomes for 'Building the Shire's Economy' as well as engaging and supporting the community, retaining the quality of life, and protecting and enjoying Gunnedah's beautiful surrounds. The Project is compatible with Council's "Building Our Shire's Economy" vision for the Shire, and in particular:

- "*2.1 A growing population and diversified economy*". The project will support a diversity of industry in the LGA through the establishment of a new waste facility on an existing approved industrial zone on the western fringe of Gunnedah township. Additional employment opportunities will also ensue.

- "*2.2 Access to our goods, services and markets*". In this regard the new waste facility will utilise the existing transport routes available to the industrial area, including Quia Road, thus enabling direct access to markets and waste sources- the latter as far away as Sydney. Moreover, the management regime will aim to ensure that any emergencies are satisfactorily managed.

- "*2.4 The Gunnedah Shire is an attractive place to invest*". The new waste facility will ensure that further economic growth will ensue in the Gunnedah region.

The Project is compatible with Council's "Protecting and Enjoying Our Beautiful Surrounds" vision for the Shire , and in particular:

- "*4.1 Balance between development and environmental protection*". The project strikes such a balance. The proposed landfill operation will be contained within an existing, approved industrial estate. Any significant tree plantings are to be retained on site.

- "*4.5 Managed exposure and reduced contribution to climate change*". The Project will make a contribution in that it aims to recycle waste from surrounding sources, thus reducing the need for the dumping of waste into landfills. On-site the project includes measures to appropriately use water and to avoid pollution of downstream waterways.

- "*4.6 Our waste is sustainably managed and reduced*". The project is for a new waste facility, to accept various types of waste from various off-site sources. The project incorporates various measures to satisfactorily manage and to process waste once it is transported to the project site.

2.3 State Environmental Planning Policies (SEPPs)

State Environmental Planning Policies (SEPPs) deal with matters of State or regional environmental planning significance. They are made by the Governor on the recommendation of the Minister for Planning and may be exhibited in draft form for public comment before being published as a legal document. Typically, the SEPPs contain provisions which mean that they override the effect of any inconsistent provisions of local council local environmental plans, to ensure that there is consistency in their application across all local government areas in New South Wales, including Gunnedah Shire.Section 3.43(5)(b)) of the EP&A Act also provides that a provision of a DCP which is inconsistent with a provision of another planning instrument, including a SEPP, is of no effect[4].

The relevant SEPPs identified in the SEARS, requiring assessment in this EIS, are as follows:

- *State Environmental Planning Policy (Infrastructure) 2007*.
- *State Environmental Planning Policy No. 33 (Hazardous and Offensive Development).*
- *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 20017*.
- *State Environmental Planning Policy (Koala Habitat Protection) 2019.*
- *State Environmental Planning Policy No. 55 (Remediation of Land)*.
- *State Environmental Planning Policy (State and Regional Development) 2011.*

2.3.1 SEPP(Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 commenced on 1 January 2008. It applies to the whole of NSW, and aims to facilitate the effective delivery of infrastructure, including landfill developments, across the State through increased regulatory certainty and improved efficiency and flexibility in the location of that infrastructure, while also providing for adequate stakeholder consultation. Clause 2 of *State Environmental Planning Policy (Infrastructure) 2007* provides as follows:

"*2 Aim of Policy*

The aim of this Policy is to facilitate the effective delivery of infrastructure across the State by:

(a) improving regulatory certainty and efficiency through a consistent planning regime for infrastructure and the provision of services, and

(b) providing greater flexibility in the location of infrastructure and service facilities, and

(c) allowing for the efficient development, redevelopment or disposal of surplus government owned land, and

(d) identifying the environmental assessment category into which different types of infrastructure and services development fall (including identifying certain development of minimal environmental impact as exempt development), and

(e) identifying matters to be considered in the assessment of development adjacent to particular types of infrastructure development, and

(f) providing for consultation with relevant public authorities about certain development during the assessment process or prior to development commencing."

FOOTNOTE 4: A provision of a DCP which is inconsistent with a provision of another planning instrument, including a SEPP, is of no effect per Ironlaw Pty Limited v Wollondilly Shire Council (No 3) - [2014] NSWLEC 1057.

Clause 5(1) of *State Environmental Planning Policy (Infrastructure) 2007* provides that:

> *"A word or expression used in this Policy has the same meaning as it has in the Standard Instrument unless it is otherwise defined in this Policy.* [NOTE: The Standard Instrument–Principal Local Environmental Plan (the Standard Instrument) does not define waste.]
>
> *"**resource recovery facility** means a facility for the recovery of resources from waste, including such works or activities as separating and sorting, processing or treating the waste, composting, temporary storage, transfer or sale of recovered resources, energy generation from waste gases and water treatment, but not including re-manufacture of material or goods or disposal of the material by landfill or incineration.*

Clause 8(1) of *State Environmental Planning Policy (Infrastructure) 2007* provides that it will prevail to the extent of any inconsistency with any other environmental planning instrument.

Clause 121(1) of *State Environmental Planning Policy (Infrastructure) 2007* has the effect of rendering development for the purpose of "waste or resource management facilities" permissible in a 'prescribed zone', which includes land zoned IN1 General Industrial- the current zoning of the project site. [NOTE: A waste or resource management facility includes a resource recovery facility]

Clause 104 in conjunction with Schedule 3 of *State Environmental Planning Policy (Infrastructure) 2007* identifies what is considered to be traffic generating development requiring consultation with the Roads and Maritime Services (RMS). Schedule 3 identifies waste facilities of any size or capacity as a traffic generating activity under Column 1 of Schedule 3 and therefore this provision of this SEPP applies. A traffic and transport impact assessment has been prepared by traffic consultants Streetwise to identify and address the potential traffic implications of the project, and is summarised in Section 4.3 of this EIS and presented in **Appendix D**.

2.3.2 State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017

State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 (Vegetation SEPP) commenced on 25 August 2017. The Vegetation SEPP is part of a package of land management reforms introduced in a bid by the NSW Government to create a framework to regulate the clearing and removal of vegetation on rural and non-rural land in NSW. The Vegetation SEPP works together with the *Biodiversity Conservation Act 2016* and the *Local Land Services Amendment Act 2016* to create a framework for the regulation of clearing of native vegetation in NSW. The NSW Government's "FAQ Vegetation SEPP 2017" dated September 2017 states:

> "*The Vegetation SEPP will regulate clearing of native vegetation on urban land and land zoned for environmental conservation/management **that does not require development consent***". [our emphasis]

Given that the Project requires development consent, any vegetation clearing will thus be assessed as part of the development application assessment process under the EP&A Act, not under the Vegetation SEPP.

2.3.3 SEPP No. 33- Hazardous and Offensive Development

State Environmental Planning Policy No. 33– Hazardous and Offensive Development (SEPP 33) relates to "potentially hazardous" or "potentially offensive" developments, and requires specified matters to be considered by consent authorities when assessing such applications. The SEPP is applicable to the whole of NSW. Under SEPP 33, a potentially hazardous industry means a development for the purposes of any industry which, if the development were to operate without employing any measures to reduce or minimise its impact, would pose a significant risk to human health, life or property, or to the biophysical environment. SEPP 33 requires developments that are potentially hazardous to have a preliminary hazard analysis (PHA) prepared to determine the risk to people, property and the biophysical environment at the proposed location and in the presence of controls.

In this regard it is relevant that no hazardous, special liquid, or restricted solid or putrescible waste is to be accepted by the proposed waste facility, save for the handling of lithium batteries. In the case of the later, these batteries will be sorted from waste delivered to the project site and separately stored for later distribution to a licensed landfill. Sealed asbestos only will be accepted at the site, however, an unexpected finds protocol will apply if asbestos contamination

of waste is found after loads have been checked and accepted at the (inbound) weigh bridge.

However, should the above wastes be brought to the site, procedures are proposed describing how such contaminated waste would be identified and recorded in a register available for EPA inspection. A SEPP 33 Preliminary Risk Screening Assessment (PRSA) below has been performed for this project- refer to tables below. As can be seen for this test, SEPP 33 does not apply for this proposal and hence a Preliminary Hazard Analysis is not required.

Table 2.6: Checklist of information required in relation to the risk screening method

Item	Details
All dangerous goods and hazardous materials involved in the development	*Petrol Fuel (Blower, small engines, Degreaser (cleaning engines for repairs), Engine Coolant (plant engine coolant), Cleaning Agent (general cleaning), and Acetylene (part of oxy-acetylene kit used for repairs and maintenance of transport equipment).*
Dangerous goods classifications ***[NOTE: Does not apply in the case of any stored engine oil, hydraulic oil, transmission oil, greases to be stored elsewhere on the project site]***	*Petrol Fuel (3 PGII)* *Degreaser (3 PGII or III)* *Kerosene (Class 3)* *Coolant (3 PGIII)* *Cleaning Agent (8 PGII or III)* *Acetylene 2.1*
Quantities of dangerous goods	*Diesel Fuel storage having a capacity of approx. 67,000L (self-bunded) are to be removed from the site as a part of the project. Refer Photograph 2.1.* *Petrol fuel to be stored in workshop/ storage shed- Small 20 litre and 10litre drums.* *Kerosene fuel to be stored in workshop- 20 litre and 200 litres drums.* *Degreaser, Coolant, Cleaning Agent and pesticides to be generally stored in 20 litre drums in workshop. A 200 litre drum is also held for dispensing degreaser into smaller drums.* *Acetylene stored in compressed gas tank- locked and separate from other stored equipment.*
Existing site – dangerous goods	*All dangerous goods are currently stored in suitable containers in the workshop, adjoining the existing office. This practice would continue with the proposed waste facility.*
Distance from the boundary for each substance	*The existing depot satisfactorily stores the above goods in the workshop, adjoining the existing office. The storage facilities existing and proposed will be satisfactorily removed from residential properties, including the old homestead on the adjoining block of land owned by Whitehaven Coal, approx. 93m away from the nearest (existing) storage area.*
Weekly and annual number of deliveries (and quantities) of dangerous goods to and from the locality	*Periodic deliveries of other dangerous goods every few months on average.*
Site layout plan showing proposed development	*Refer Section 3 of EIS.*
Site layout plan showing proposed development, Local layout plan showing immediate neighbours and their activities, nearest residence	*The surrounding land is industrial land, with a large block of land to the west owned by Whitehaven Coal. Excluding the old homestead on this block of land, the nearest dwelling is 318m from the existing storage areas within the project site. It is proposed to remove this storage area from the site.*

In addition to the above, the disposal of lithium-ion batteries have been identified by the waste sector as a major combustion risk as one cell can cause a significant ignition source, and have been listed as a dangerous good with UN Nos. 3090, 3091, 3480 or 3481. In order to address this risk, ignition detection and extinguishing processes are proposed at the tipping point to minimise this risk. Moreover, it is relevant that Lithium-ion batteries will make up a very small component of total waste to be treated at the proposed waste facility.

The total existing storage capacity for diesel fuel at the Mackellar Equipment Hire Pty Ltd/Mackellar Excavations (MEX) depot is approximately 67,000 litres. (67kL). C1 Combustible liquids are defined as dangerous goods under NSW workplace legislation. The Threshold quantity for C1 combustible liquids is 10,000kg or L, and WorkCover NSW notified and manifests and emergency plans in place.

Given that measures are already in place to satisfactorily handle dangerous goods on the project site further analysis is not required and hence SEPP 33 does not apply in this regard.

PHOTOGRAPH 2.1(above): View from the north, looking over the existing self-bunded fuel storage (left hand side of photograph) and storage facility (right hand side of photograph), with main office building and transport depot workshop in middle of photograph. The fuel storage will be removed from the site, with the storage facility re-purposed as a restricted waste storage shed and relocated accordingly.

(Photograph taken 7 November 2019)

Combustible liquids are not classified as dangerous goods but are designated as either C1 or C2 combustible liquids (WorkCover NSW *Storage And Handling of Dangerous Goods Code of Practice 2005*).

Applying SEPP 33 requires an assessment of other hazards/risk factors outside the scope of the risk screening method described above in table 2.9.

An assessment of other types of hazards associated with the proposed waste facility is provided in the accompanying Table 2.7.

Table 2.7: Checklist- other types of hazards

Type of hazard	***Potentially hazardous?***
Any wastes that could be hazardous	*No. Wastes delivered to site will be inspected and will not be accepted if they contain hazardous materials, other than lithium-ion batteries. [NOTE: Lithium batteries are also proposed to be processed at this facility- a hazardous waste.No other types of hazardous or special waste will be accepted at the site.]*
Any incompatible materials (hazardous and non-hazardous materials)	*No. Refer to point above.*
Storage or processing operations involving high (or extremely low) temperatures and/or pressure.	*No.*
Types of activities the dangerous goods and otherwise hazardous materials are associated with (storage, processing, reaction, etc.)	*No. Refer to Table 2.9 for details.*
The possible existence of dusts within confined areas	*No. No crushing of waste is to be carried out on the site and processing is to be carried out within a shed, thus minimising dust generation.*
Incompatible, reactive or unstable materials and process conditions that could lead to uncontrolled reaction or decomposition.	*No.*

Based on the above assessment, there are no other hazards/risk factors outside the scope of the risk screening method associated with the proposal.In such circumstances the NSW Department of Planning Industry & Environment would deem the facility as non-hazardous and further risk assessment is not required. In this regard, it is concluded that SEPP 33 does not apply to the development and therefore a Preliminary Hazard Analysis is not required.

The air, noise, and water emissions from the proposal have been assessed to determine if it is classified as a potentially offensive industry. Vipac have determined that with the exception of the (intermittent) use of a crusher, noise and air emissions will not exceed the relevant criteria and will not lead to any unacceptable impacts on the amenity of the area. [NOTE: None of the noise impacts likely to be generated will exceed the relevant Amenity Criterion] Martens and Associates, consulting engineers, have determined that the proposed waste facility will not significantly increase runoff peak flows, discharge volume or the sediment load in runoff, nor will it result in any adverse water quality impacts. As such the proposed waste facility will not have a significant impact on flows or water quality in the receiving environment. With the exception of lithium batteries and (sealed) asbestos waste, no special, liquid, hazardous restricted solid or general solid waste (putrescible) wastes will be accepted at the project site. Based on the above, the Project will not result in unacceptable levels of pollution that will impact the amenity of the area. Therefore, the proposal is not a potentially offensive industry.

The project is not considered to be a potentially hazardous or potentially offensive industry

In conclusion, the project is not be considered either a potentially hazardous or a potentially offensive development.

There are already measures to manage Dangerous Goods on the project site- in the main serving the existing transport depot on the site. Additionally, the Project will incorporate further mitigation measures to ensure that any potential hazard is appropriately dealt with on site. This includes the following measures:

- The implementation of appropriate safe work procedures for the safe handling of the Dangerous Goods, including spill prevention and clean up requirements, the transport and storage of Dangerous Goods in accordance with the *Australian Dangerous Goods Code*.

- Given the nature of the waste to be accepted there should be minimal potential for polluted stormwater runoff affecting neighbouring residences. Accordingly, there is a low potential adverse effects from discharges on surrounding residential land uses.
- Mitigation measures are proposed to limit any hazardous or offensive discharges. For instance, existing fuel storage areas within the project site are appropriately bunded. The proposed waste facility will provide for pollution controls and management measures that will protect all aspects of the environment. Refer to section 3 for details of mitigation measures proposed in this regard. With these controls in place there should be no meaningful risk to the environment in the locality.

In addition to the above, it is also relevant to note that the project site is not affected by either flooding, mine subsidence or bushfire hazards.

2.3.4 SEPP (Koala Habitat Protection) 2019

State Environmental Planning Policy (*Koala Habitat Protection) 2019 (*the Koala SEPP) now replaces *SEPP 44 – Koala Habitat Protection* (SEPP 44). The Koala SEPP includes a new definition of 'core koala habitat' and the most up-to-date tree species data.The policy intent of SEPP 44 has been retained in the Koala SEPP and the former SEPP repealed on 1 March 2020.

The Koala SEPP applies to certain LGAs in NSW, including Gunnedah Shire Council. The Koala SEPP aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline. The Koala SEPP applies to each LGA listed in Schedule 1 of the policy, which includes Gunnedah LGA.

Part 2 of the Koala SEPP provides controls for development where there is no approved koala plan of management in place. Gunnedah Council has in place an adopted Koala Strategy, but does not in place a koala plan of management, approved by the Planning Secretary, as required by clause 14(1) of the Koala SEPP. Accordingly, the provisions of clauses 9 of the Koala SEPP apply. It states:

"9 Development assessment process—no approved koala plan of management for land
(1) This clause applies to land to which this Policy applies if the land—
(a) is identified on the Koala Development Application Map, and
(b) has an area of at least 1 hectare (including adjoining land within the same ownership), and
(c) does not have an approved koala plan of management applying to the land.
(2) Before a council may grant consent to a development application for consent to carry out development on the land, the council must take into account—
(a) the requirements of the Guideline, or
(b) information, prepared by a suitably qualified and experienced person in accordance with the Guideline, provided by the applicant to the council demonstrating that—
(i) the land does not include any trees belonging to the feed tree species listed in Schedule 2 for the relevant koala management area, or
(ii) the land is not core koala habitat."

A stand of trees in the south-east corner of Lot 1, proximate to the corner of Torrens Road and Allgayer Drive, is identified by pink shading on the Koala Development Application Map. The shaded section occupies an area of about 0.15ha. No other part of the project site is so identified. Lot 1 DP 1226992 has an area of 1.826ha.

As such, clause 9(1) of the Koala SEPP applies.

Kathryn Yigman of Stewart Surveys was engaged by MacKellar Excavations to conduct a State Environmental Planning Policy 44 (SEPP 44) assessment of the project site and the findings summarised below. A field survey was carried out over the site. The key findings of the preceding SEPP 44 assessment (**Appendix H**) are summarised in the following:

- The site investigations carried out on 23 May 2019 and 3 February 2020 did not encounter any Koalas on the site, or any evidence of past use of the vegetation on the site as Koala habitat.

- Historical observations of Koala activity on the site did not record any sightings on the subject site. There was one sightings east of the site between 2004 and 2014.

- The Gunnedah Koala Strategy does not map the vegetation on the subject site as being Koala habitat. Refer to **Figure 2.3**.

- The SEPP 44 Koala Feed tree species are estimated to make up 5% of the tree species on the site. Only two (2) Koala feed tree species listed under SEPP 44 was observed at the site, on Lot 1 near the Torrens Road/Allgayer Drive intersection. These were the *Eucalyptus populnea*, Bimble Box tree and *Eucalyptus albens*, White Box. There were no SEPP 44 feed trees species observed on Lot 2.

Based on the above, the site is not considered to be Potential or Core Koala habitat as defined by the Koala SEPP. Clauses 7 and 8 of the Koala SEPP states, inter alia, that if Council is satisfied that the land is not potential Koala habitat it is not prevented, because of this policy, from granting consent to the development application.

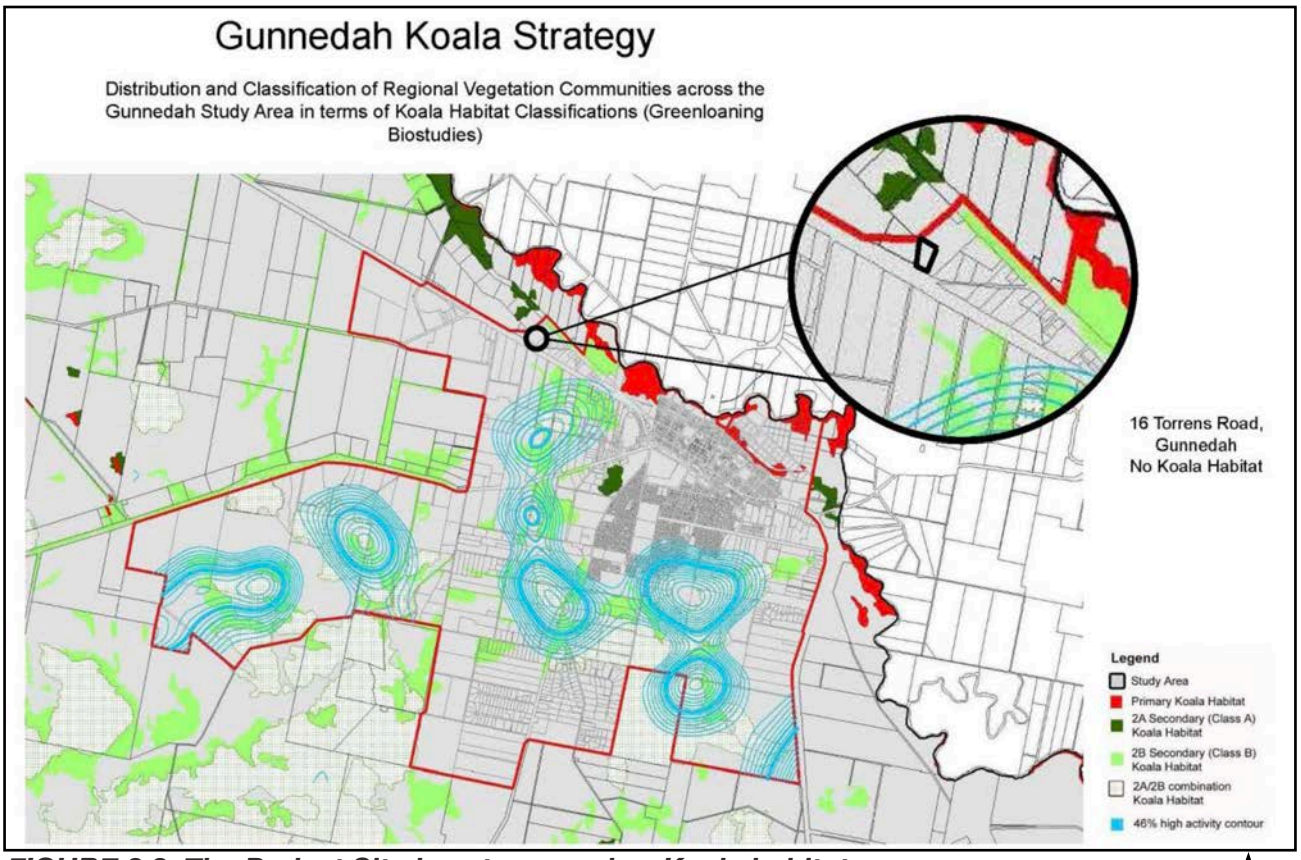


FIGURE 2.3: The Project Site is not mapped as Koala habitat

(Source: Gunnedah Shire Council, 21 October 2015, Gunnedah Koala Strategy)

2.3.5 SEPP No.55- Remediation of Land

State Environmental Planning Policy No. 55 (Remediation of Land) (SEPP 55) is applicable to the whole of NSW. This state planning policy is concerned with the remediation of contaminated land and sets out matters relating to contaminated land that a consent authority must consider in determining an application for Development Consent.

"Contaminated land" in SEPP 55 has the same meaning as it has in the EP&A Act, namely:

> "*contaminated land means land in, on or under which any substance is present at a concentration above the concentration at which the substance is normally present in, on or under (respectively) land in the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment*."

A search of the NSW EPA on-line register (http://www.environment.nsw.gov.au/prclmapp/) undertaken in January 2020

reveals that the NSW EPA holds no contaminated land records relating to the Project Site and properties within 1 km of the Project Site.

East West was requested to conduct a preliminary site investigation into past use of Lots 1 and 2 DP 1226992. Site history shows use of the land for agriculture, followed by the establishment of a site compound for Mackellar excavations in 2011, followed by works associated with the 'Costalot' industrial subdivision in 2016. East West conducted soil sampling of 14 samples to a depth of 0-150mm with augers to a depth of 1.5m depth and found that:

> *"There were no significant readings to indicate contaminants of potential concern observed in Lot 1 have migrated and contaminated the topsoil of Lot 2. Contaminants of concern were either below detection limits or well below the NEPM guidelines for the proposed commercial/industrial land use in all topsoil samples. …Therefore, on the basis of the investigations undertaken, the site at 16 Torrens Road, Lots 1 and 2 DP 1226992, Gunnedah NSW meets the adopted criteria for commercial/industrial D and is therefore suitable for the proposed use."*

There will be minimal soil disturbance and no groundwater interaction during the construction of the proposed waste facility-refer to EIS Section 3 for details. Therefore, there is very minimal potential for exacerbation of any potential soil contamination.

Based on the above, it is concluded that no further assessment under the provisions of SEPP 55 is warranted and the development is a permissible form of development, with consent, in accordance with clause 8(1) of SEPP 55.

2.3.6 State Environmental Planning Policy(State and Regional Development) 2011

The proposed waste facility seeks development consent to handle up to 250,000 tonnes of waste per annum, and is therefore classified as State Significant Development (SSD) pursuant to the provisions of clause 23(3) of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* being:

> *"Development for the purpose of* ***resource recovery or recycling facilities*** *that handle more than 100,000 tonnes per year of waste"* (clause 23(3) of Schedule 7).[our emphasis]
>
> [NOTE: Sub clause 8(2) enables the remainder of the proposed development to be also declared State Significant Development- applicable to the small component of the development that involves the treatment of contaminated soil and the disposal of unwanted waste to landfill.]

A waste handling more than 100,000 tonnes per annum is thus State Significant Development for the purposes of the above SEPP. As such, the proposed development will need to be notified and assessed and then determined by the Minister for Planning (or delegate), being the consent authority for this proposed development.

It is a requirement that any development application for SSD must be accompanied by an Environmental Impact Statement (EIS), prepared in accordance with the provisions of Division 4.7 of the EP&A Act.

Under the provisions of clause 11(a) of *State Environmental Planning Policy (State and Regional Development) 2011* development control plans do not apply to State Significant Development. It states, inter alia:

> *"11 Exclusion of application of development control plans*
>
> ***Development control plans*** *(whether made before or after the commencement of this Policy)* ***do not apply*** *to:*
>
> *(a)* ***State significant development****, ….."* [our emphasis]

2.3.7 Any Regional Environmental Plans

There are no regional plans that apply to the site.

2.3.8 Any Draft Local Environmental Plans

There are no draft local environmental plans that apply to the site, other than the draft LEP provision contained in draft "Gunnedah Housekeeping 2018" which seeks, inter alia, to allow 'landscaping material supplies' in the INI General Industrial zone. This draft planning instrument does not affect the Project.

■ 2.4 Strategic Context

2.4.1 NSW State Priorities

The NSW Government has identified a series of state priorities: to grow the economy; deliver infrastructure; protect the vulnerable; and improve health, education and public services across NSW. It also includes creating jobs and keeping our environment clean. The proposed new waste facility is consistent with a number of key planks of the above State priorities, as summarised in the accompanying Table 2.8.

Table 2.8: NSW State Priorities and the Project

NSW State Priorities	*How the Project Satisfies State Priorities*
Grow the economy, creating jobs	*The proposed waste facility will deliver:* ▸ *A new waste-related industry to the Gunnedah region, providing further diversity in the range of industries offered. The facility would provide a range of environmental and economic benefits for the region by recycling waste.* ▸ *Provide new jobs over the life of the Project, not only for workers directly working on the site but also workers in related industries such as transport and allied trades.* ▸ *It has a capital investment value of $3.9 million and would directly employ 62 people on site during construction and up to 30 people during operation.* ▸ *An ability to service local and regional industries eg. rehabilitation of soils used in the coal industry.*
Deliver infrastructure, transport	*The proposed waste facility will deliver:* ▸ *A new waste facility to the Gunnedah region, within an already established, recently constructed fully serviced new industrial estate in Gunnedah.* ▸ *Construction of a facility that aims to work in tandem with a proposed landfill project at Marys Mount quarry, to the west of Gunnedah.* ▸ *The project site is located within an existing industrial area, and is not considered likely to result in excessive cumulative air, noise, stormwater or traffic impacts. It has excellent direct access to local and regional road links.*
Keeping our environment clean	*The proposed waste facility will deliver:* ▸ *The protection of water quality in downstream environments.* ▸ *The protection of our environment through restricting the range of waste that will be handled at the facility.* ▸ *Avoiding dust potential by locating crushing facilities within an enclosed shed on the project site.* ▸ *Appropriate environmental mitigation measures are proposed.* ▸ *The site will be kept in a clean and tidy order during the operation of the Project.* ▸ *The proposed development will not have any significant environmental impacts.*
Waste avoidance and resource recovery	*The proposed waste facility will deliver the following:* ▸ *Significantly contribute to the NSW Government's Policy on Waste Reduction. The facility will be able to accept up to 250,000 tonnes of select waste materials from Sydney and other regional sources, sort and/or process it, and dispatch any unwanted waste to recipient companies for further processing and reuse.* ▸ *Related to the above, the establishment of a waste facility that will be run in conjunction with a proposed landfill facility operation at Marys Mount quarry, also run by interests associated with the Mackellar family companies.*

NSW 2021 is the NSW Government's strategic business plan for setting priorities for action and guiding resource allocation. NSW 2021 is a ten year plan to rebuild the economy, provide quality services, renovate infrastructure, restore government accountability and strengthen the local environment and communities. The Project incorporates various mitigation and on-site management measures to ensure that impacts on the surrounding community are minimised. The proposed waste facility will provide public benefits to the wider community through the generation of new jobs and investment in infrastructure.

2.4.2 NSW State Waste Policy

The NSW strategic policy framework for waste management incorporates policy to drive waste reduction and resource recovery.

The Project aligns well with these overall principles. Waste legislation that currently applies to NSW includes the *Waste Avoidance and Resource Recovery Act 2001* and *NSW Waste Avoidance and Resource Recovery Strategy 2014-21*, the latter providing a framework for maximising conservation of natural resources and minimising environmental harm from waste management and disposal of solid waste. The project meets the relevant objectives of this Strategy by assisting in reducing waste generation generally, increase recycling, diverting waste away from landfill through recycling, as well as creating more jobs in recycling. Further details of the measures proposed, consistent with the *NSW Waste Avoidance and Resource Recovery Strategy 2014-21,* are contained in Sections 3 and 6 of this EIS. Some of these measures are also summarised in Section 2.4.3 below. The Strategy aims to support investment in infrastructure, encourage innovation and improve recycling behaviour. It will also promote the development of new markets for recycled materials. Support from the Government for the waste management industry and councils will in-turn create more jobs and build better communities. The 20-Year-Waste Strategy Discussion Paper is expected to be released for consultation in 2020, with a draft strategy to follow. These phases will be accompanied by stakeholder engagement which will inform the final strategy. The proposed waste facility would assist the State in reducing waste to landfill as well as and creating local job opportunities.

2.4.3 National Waste Policy

The 2018 *National Waste Policy* provides a framework for collective action by businesses, governments, communities and individuals until 2030. According to the (Commonwealth) Department of Environment website the policy identifies five overarching principles underpinning waste management in a circular economy. These include:

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

The proposed waste facility would assist in resource recovery of waste, as well as managing waste as a resource to deliver economic, environmental and social benefits to the Gunnedah region generally. It will accept a range of waste products, including contaminated soils, but not domestic waste- the latter the responsibility of the local council. Any waste not capable of recycling will be transported off-site to a licensed landfill facility. [NOTE: A development application has been lodged for the establishment of a landfill within the quarry void at Marys Mount quarry to be run by a related Mackellar family company, Gunnedah Quarry Products Pty Ltd. The DA for the landfill was lodged in July 2020]

The overall objectives of the *National Waste Policy* are that all wastes, including hazardous wastes, are managed in a way that is consistent with Australia's international obligations, to protect human health and the environment. The proposed waste facility would be consistent with the aims and objectives of the National Waste Policy in terms of the following:

- Managing waste as a resource and improving resource recovery, whereby valuable material can be recovered from material that would otherwise be disposed to landfill.
- Protecting human health and the environment. The proposed waste facility adopts a range of environmental management measures appropriate to the risks posed, ensuring that the project's impact on the local environment is minimised to a satisfactory degree.
- Deliver economic benefits in terms of income generation and employment opportunities, as well as ensuring the protection of the environment and local amenity.

2.4.4 NSW Fire Safety in Waste Facilities Guideline

Fire and Rescue NSW (FRNSW) first released *Fire safety in waste facilities* guideline in October 2019, following consultation with the waste industry, with a revised version released on 27 February 2020. As was explained by FRNSDW "*this is not a guideline just for the waste industry; this is a guideline for the regulators, planners, certifiers, engineers and consultants etc. A fire safety study is not always required, hence why FRNSW provides prescriptive requirements guiding the relevant authority in their determination*". The *Fire safety in waste facilities* guideline document provides guidance on fire safety in waste facilities that receive combustible waste material, including adequate provision for fire safety and facilitate safe fire brigade intervention to protect life, property and the environment.

'Combustible waste material' is defined in the guideline to mean the following:

> *"combustible waste material – means any solid waste material that can readily ignite and burn under normal conditions, which includes:*
> • *paper and cardboard*
> • *wood and wood-based products*
> • *plastic*
> • *rubber*
> • *textiles*
> • *waste derived fuels such as refuse derived fuels (RDF), solid recovered fuels (SRF) and processed engineered fuels (PEF)*
> • *metal with combustible contaminants, and*
> • *any other waste material which may pose a notable fire risk like above."*

[NOTE: The *Australian Dangerous Goods Code* only applies to the transportation of goods and does not relate directly to the application of this guideline. Paper and cardboard are not volatile and considered to be 'flammable' thus are not dangerous to transport, but paper and cardboard are easily ignited, especially in a loose piled waste condition, and will readily burn within the waste facility .]

In the context of the above it is relevant to note that the proposed waste facility will be handling a limited range only of combustible waste material. Plastics and rubber pose a High fire risk, however, these materials will make up a very small proportion only of the C&D waste being handled at the proposed waste facility.

The proponent proposes various to make adequate provision for fire safety as prescribed by this guideline and meet the relevant 'acceptable solution' as described Appendix A of Fire and Rescue NSW *Fire safety in waste facilities* guideline. For instance, the proposed waste facility at Torrens Road Gunnedah will have four (4) fire hydrants installed, considered appropriate to the risks and hazards for the waste facility.

The approvals process for new waste facilities is depicted in Figure 1 of the Fire and Rescue NSW *Fire safety in waste facilities* guideline, illustrated in the accompanying **Figure 2.4**.

The compliance of the proposed waste facility with the key parts of the *Fire safety in waste facilities* guideline are summarised in the accompanying Table 2.9.[NOTE: The waste facility proposes to handle limited quantities only of combustible material. The existing storage shed is to be relocated and repurposed as a restricted waste shed and the contents relocated off-site.].

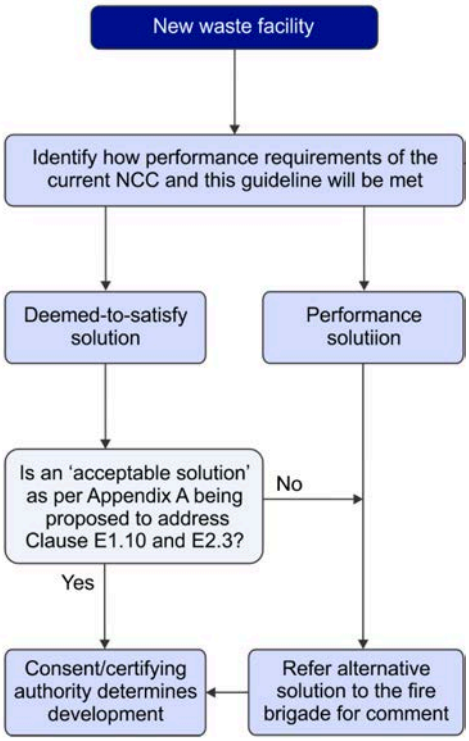


FIGURE 2.4: Development and planning pathways for waste facilities

(Source: Figure 1 of Fire and Rescue NSW Fire safety in waste facilities guideline Feb 2020)

Table 2.9: Fire Safety in Waste Facilities Guideline and the Project

NSW Fire Safety in Waste Facilities Guideline	***How the Project Satisfies Fire Safety in Waste Facilities Guideline***
Development and Planning (Section 7 of Guideline)	*The proposed waste facility achieves the following:* ▸ *The development complies with Clauses E1.10 and E2.3 of the NCC regarding combustible waste (sub-clause 7.2.1 of guideline).* ▸ *The Project makes adequate provision for fire safety and meets the 'acceptable solution' defined in Appendix A of the guideline- refer Section 3 for details (sub-clause 7.2.2 of guideline).* ▸ *Hazards have been identified- refer Section 2.3.3 of this EIS for details (sub-clause 7.2.3 of guideline).* ▸ *Combustible materials with a high fire risk (ie. plastic, rubber) will be present in the waste matrix, however, they will make up a small proportion only of all waste proposed to be handled by this waste facility. Adequate fire safety measures are proposed to process waste containing this material and to temporarily store any such waste, prior to disposal to a licensed landfill facility (sub-clauses 7.2.5-7.2.7 of guideline).* ▸ *The proposed waste facility will provide a safe, efficient and effective access, with access for firefighting vehicles available from both Torrens Road as well as from two access points on the Allgayer Drive street frontage. The Project will access to an adequate fire hydrant system (sub-clauses 7.4.1-7.5.8 of guideline).* ▸ *An automatic fire sprinkler system will be installed in the main processing shed, having a floor are greater than 1,000m^2 (sub-clause 7.6.1 of guideline).* ▸ *The waste facility is to have a fire detection and alarm system installed (clause 7.7 of guideline).* ▸ *The storage areas containing combustible waste will have an automatic smoke hazard management system installed (clause 7.8 of guideline).* ▸ *The waste facility will have an effective and automatic means of containing fire water run-off. The containment system is to be impermeable (i.e. sealed) and prevent fire water run-off from entering the ground or any surface water course. Bunding will be provided where necessary. Pollution control equipment such as stormwater isolation valves, water diversion booms, drain mats, shall be provided as necessary for the facility's emergency response procedures, and be kept readily accessible for the event of fire (clause 7.9 of guideline).*
Facility Operation and Management (Section 8 of Guideline)	*The Project will deliver:* ▸ *Storage and stockpiles shall be limited in size to reduce fire hazard. with the maximum height of any stockpile, loose piled or baled, not to exceed 4m, with storage bays separated by walls of at least 1m above the design height of any stockpile (clause 8.2 of guideline).* ▸ *Stockpiles of combustible waste material should be rotated to dissipate any generated heat and minimise risk of auto-ignition as required (clause 8.3 of guideline).* ▸ *The maximum width of stockpiles to be 20m if fire brigade vehicle access is provided down both sides of the stockpile, and 10 m if access is provided down one side of the stockpile only, with adequate separation between high fire risk and ordinary fire risk stockpiles. Lesser separation distances for smaller stockpiles.External stockpiles to be maintained so that all required fire brigade vehicle access (e.g. around buildings, between stockpiles and to hardstand areas) is always kept clear and unobstructed (clause 8.4 of guideline).* ▸ *Internal stockpiles of combustible waste material are to be maintained as determined by the operations plan, and appropriate to the building size/layout, compartmentation, installed safety systems, process equipment and plant etc. (sub-clause 8.5.1of guideline).* ▸ *An operations plan to be prepared (clause 8.6 of guideline).*

NSW Fire Safety in Waste Facilities Guideline cont.	***How the Project Satisfies Fire Safety in Waste Facilities Guideline cont.***
Workplace Fire Safety (Section 9 of Guideline)	*The proposed project will deliver:* ▸ *The waste facility operator to provide information, instruction and training to employees and other persons as necessary to ensure health and safety (sub-clause 9.2.1 of guideline).* ▸ *The waste facility operator to provide management procedures for general safety (sub-clause 9.2.2 of guideline).* ▸ *The waste facility operator to ensure adequacy for emergency access, the regular cleaning of the site, the regular control ignition sources (including vehicles and machinery), adequacy of stored combustible materials, signage and security measures to restrict unauthorised access and deter arson (sub-clauses 9.2.3-9.2.8 of guideline).* ▸ *The waste facility operator to develop an emergency plan for the waste facility, which is done in accordance with AS 3745–2010 Planning for emergencies in facilities (clause 9.3 of guideline).* ▸ *An Emergency services information package will keep the site in clean and tidy order during the operation of the project, as detailed in FRNSW guideline Emergency services information package and tactical fire plans, should be developed and provided by the waste facility operator (clause 9.4 of the guideline).* ▸ *Once the project is approved, the waste facility operator will have fire safety systems inspected and maintained by a competent fire safety practitioner, then issue a fire safety statement to the local Council and provide a copy to FRNSW, as required by clause 177 and 180 of the EPA Regulation (clause 9.5 of the guideline).*

2.4.5 New England North West Strategic Regional Land Use Plan

The *New England North West Strategic Regional Land Use Plan* was released by the Department of Planning Industry and Environment in September 2012. The *New England North West Strategic Regional Land Use Plan* aims to provide a framework for growth, environmental protection and dealing with competing land uses over the next 20 years. It is focussed around eight key areas each with several underlying objectives.

The key areas contained in the Plan include balancing agriculture and resource development, infrastructure, economic development and employment, housing and settlement, community health and amenity, natural environment, natural hazards and climate change and heritage.

The proposed waste facility would be consistent with the *New England North West Strategic Regional Land Use Plan*, and in particular in terms of the following:

- Deliver a new industry to the Gunnedah region, namely a waste facility, with flow-on employment and economic benefits (Direction 6).
- The establishment of a new industry within an existing, serviced and established industrial-zone (Directions 6 and 16).
- The proposed waste facility sits on land that is flood-free (Direction 12).
- The Project is situated on industrial land with excellent transport links to local and regional markets (Direction 13). Refer to **Figure 2.5**, being an excerpt from Figure 4 of the *New England North West Strategic Regional Land Use Plan*, highlighting how accessible Gunnedah is to regional markets, including markets in Sydney as well as Brisbane.
- Related to the above, no agricultural land, including mapped biophysical strategic agricultural land, is lost to the proposed waste facility (Direction 3).
- The Project adopts mitigation and management measures that will act to ensure that local amenity and the environment is afforded an acceptable level of protection. Moreover, and given that the project site forms a part of a recently developed industrial estate, the proposed waste facility will not impact on any known Aboriginal sites or significant habitats (Directions 11, 23 and 24).

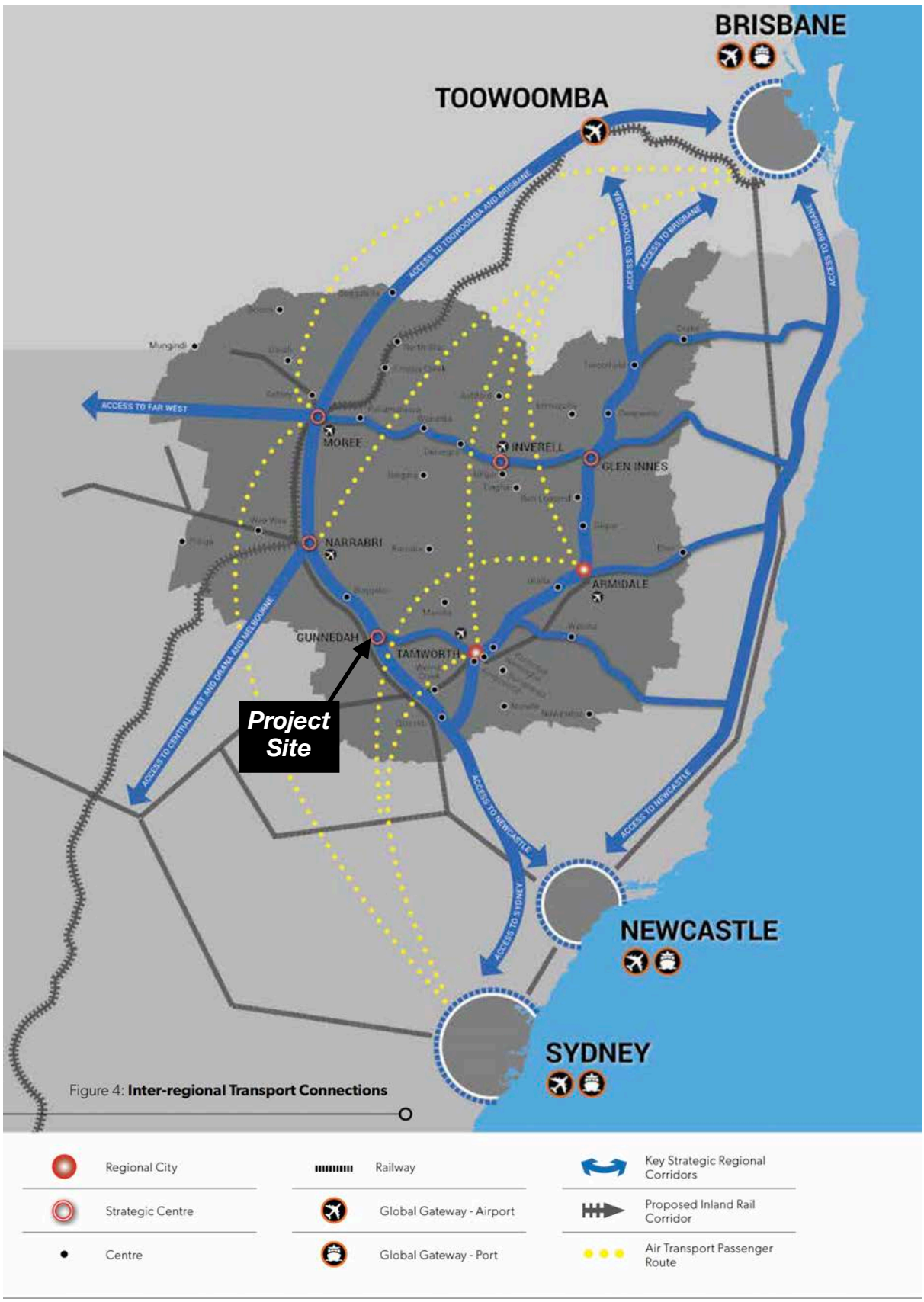


FIGURE 2.5: The Project Site is highly accessible to regional markets, including Sydney

(Source: Figure 4 New England North West Strategic Regional Land Use Plan)

2.4.6 Draft Remediation of Land State Environmental Planning Policy

The Explanation of Intended Effect for draft *Remediation of Land State Environmental Planning Policy* was exhibited from 31 January 2018 to 13 April 2018 and is yet to be gazetted. Transitional provisions are also proposed to be included in the draft SEPP that will apply to development applications lodged before the draft SEPP commences (such as this application).

2.4.7 Gunnedah Shire Commercial and Industrial Land Use Strategy

The objective of this strategy, prepared by Collie Pty Ltd and dated August 2008, was to prepare "*a strategic platform on which to base Council's future direction in respect to the zoning and management of industrial and commercial land in the development of a Gunnedah Local Environmental Plan, 2008*". It is relevant to note that at the time of writing of the report Council was in the process of considering a development application by the Mackellar group to subdivide industrial land in what is now known as Allgayer Drive. One of the objectives/actions arising from this strategy was to ensure that the potential for land use conflict with residential uses be minimised. This objective is realised in the zonings now applying to this industrial precinct and satisfactory buffering from other zoned residential areas.

■ 2.5 Protection of the Environment Operations Act 1997

The granting of development consent under the EP&A Act for the application to develop the proposed waste facility does not exhaust the approvals process necessary for the commencement of a waste recycling operation. Some waste-related activities require an environment protection licence issued by the NSW Environment Protection Authority (EPA). This includes activities such as storing, processing, transporting and disposing of waste, and recovering resources from the waste stream. The Gunnedah LGA falls outside of the 'regulated area' for the purposes of Schedule 1 of the *Protection of the Environment Operations Act, 1997.*

The *Protection of the Environment Operations Act, 1997* and and the NSW *Protection of the Environment Operations (General) Regulation 2009* provides an integrated system of licensing for industries, like waste facilities. Under the provisions of clause 34 of Schedule 1 of the *Protection of the Environment Operations Act, 1997* 'resource recovery' operations, which does not include the processing of contaminated soils but does include the recovery of waste tyres, must hold an Environment Protection License (EPL). This includes the following activities relevant to the project:

- Having on site at any time more than 2,500 tonnes or or 2,500 cubic metres of waste.
- Processing more than 12,000 tonnes per year of waste.
- Involves having on site at any time more than 200 kilograms of hazardous and other waste.
- Waste involves having on site at any time (other than in or on a vehicle used to transport the tyres to or from the premises) more than 5 tonnes of waste tyres or 500 waste tyres, or involves processing more than 5,000 tonnes of waste tyres per year.

The above provisions do not apply to the the waste to be sold or supplied from those premises as landscaping material, or if it comprises virgin excavated natural material or meets all of the conditions of a resource recovery order (made under clause 93 of the *Protection of the Environment Operations (Waste) Regulation 2014*) at the time it is received, or if an exemption has been granted under Part 9 of the *Protection of the Environment Operations (Waste) Regulation 2014*.

An EPL is also required for contaminated soil treatment pursuant to the provisions of clause 15 of Schedule 1 of the *Protection of the Environment Operations Act, 1997* and includes the following:

- Having the capacity to treat more than 1,000 cubic metres (2,000 tonnes) per year of contaminated soil received from off site.
- To treat (otherwise than by incineration) and store more than 30,000 cubic metres (60,000 tonnes) of contaminated soil.

The non-thermal treatment of waste is also separately listed under clause 41 of Schedule 1 of the *Protection of the Environment Operations Act, 1997.* This includes the non-thermal treatment of tyres. An EPL is required for 'waste storage' pursuant to the provisions of clause 42 of Schedule 1 of the *Protection of the Environment Operations Act, 1997.*

ss7 (1) and 50 (2) of the *Protection of the Environment Operations Act, 1997* makes it clear that the *Protection of the Environment Operations Act, 1997* and the EP&A Act (under which this DA is to be determined) are interlocking, parallel schemes of regulation.

The interlocking nature of the scheme is even more evident when the EP&A Act is considered, in particular Division 5 of Part 4 concerning integrated development (which applies here). The scheme envisages that the requirements of the EP&A Act would need to be first obtained[5]:

Once a development consent has been obtained, the proposed landfill would then to obtain and to operate under the terms and requirements of the issued consent together with the requirements of an Environment Protection License (EPL), the latter issued by the NSW EPA[6].

Any EPL issued would cover matters relating to landfill management including air, water, noise and waste emissions and impacts including but not limited to controls and details relating to the following:

- Description of the waste facility.
- Hours of operation.
- Waste to be accepted that the facility as defined under Schedule 1 of the *Protection of the Environment Operations Act, 1997*.
- Process and waste management. Any waste for processing, storage or resource recovery at the premises must be assessed and classified in accordance with the EPA *Waste Classification Guidelines* as in force from time to time.
- Monitoring and recording conditions.
- Recording of pollution complaints and cleaning up of any spills.
- Reporting conditions. An Annual Return must be prepared.

The NSW P*rotection of the Environment Operations (Waste) Regulation 2005* sets out provisions covering the manner in which waste is managed.

FOOTNOTE 5: per Newcastle & Hunter Valley Speleological Society Inc v Upper Hunter Shire Council and Stoneco Pty Limited (No2) [2010] NSWLEC 104 per Preston CJ, and most recently by the NSW Court of Appeal in Hunter Industrial Rental Equipment Pty Ltd v Dungog Shire Council [2019] NSWCA 147 decision dated 20 June 2019.

FOOTNOTE 6: This made clear by a June 2019 decision of the NSW Court of Appeal in Hunter Industrial Rental Equipment Pty Ltd v Dungog Shire Council [2019] NSWCA 147 at [166] and [177] states, inter alia:

> *"166. Land usage is subject to a range of statutory controls which, in broad terms, operate cumulatively. Thus, for the purposes of the operations carried out at Martins Creek, the appellants needed development consent under the Planning Act and also a licence under the Protection of the Environment Operations Act 1997 (NSW) (the 1997 Act).*
> *…….*
> *177. The evident purpose of s 50, and indeed s 58(6) of the [Protection of the Environment Operations Act 1997: "the 1997 Act"], is to ensure that the [EP&A Act] and the 1997 Act operate in tandem and do not result in conflicting permissions. Thus, if consent is required under the [EP&A Act], and has not been obtained, the EPA cannot grant a licence under the 1997 Act."*

Moreover, and related to [177] above, an EPL variation (or an EPL for that matter) cannot be lawfully issued if it is inconsistent with the issued development consent per the 14 November 2019 decision of Justice Pain in Hy-Tec Industries (Queensland) Pty Ltd v Tweed Shire Council [2019] NSWLEC 175.

It is also relevant to note that pursuant to Section 4.42 of the EP&A Act, should development consent be granted to the proposed SSD, an authorisation associated with the issue of an environment protection licence under Chapter 3 of the *Protection of the Environment Operations Act 1997* (for any of the purposes referred to in section 43 of that Act) cannot be refused if it is necessary for carrying out of the development and must be substantially consistent with the SSD development consent:

The EPA's *Standards for managing construction waste* (2019) are applicable to this project, given that a sizeable component of the intended waste stream will be from construction and infrastructure projects. Section 3 contains further details regarding the application of these Standards to the project, in particular in the training of staff and protocols. The accompanying Table 2.10 summarises the compliance of the project with these Standards.

Table 2.10: Checklist Summary-EPA Standards for managing construction waste

EPA construction waste Standard	*How the Project Satisfies Waste Standard*
Standard 1: Inspection requirements	*Compliance, and in particular:* ▸ *Trained personnel at Inspection Point 1 (weigh-bridge) to inspect/reject loads.* ▸ *Trained personnel at Inspection Point 2 (tip and spread, unloading area) to inspect and to sort waste loads.* ▸ *Training of all relevant personnel at to operation of POEO Act and its regulations (including the Waste Regulation) applicable, with training records to be kept.* ▸ *Rejected loads register to be maintained.*
Standard 2: Sorting requirements	*Compliance: waste accepted at the waste facility to be sorted and classified into individual listed waste types before being transferred to the waste storage area (and processing shed for further processing).*
Standard 3: Mixing of waste	*Compliance, as there will be no mixing of inspected and sorted construction waste with construction waste that has not been first inspected and sorted.*
Standard 4: Waste storage	*Compliance, and in particular:* ▸ *Waste which has been classified into an individual listed waste type, waste which meets the requirements of a resource recovery order or waste which meets the recovered fines specifications to be stored in a separate storage area for that type of waste- to be clearly labelled or signposted to indicate the individual type of waste being stored in that area.* ▸ *Each label or signpost must be legible and clearly visible.* ▸ *Signage to contain the wording 'awaiting validation if intended to meet the requirements of a resource recovery order.* ▸ *If waste is being stored outside of an enclosed bay, each stockpile of waste must be clearly delineated and separated from stockpiles of other listed waste types by a minimum of three metres from the base of the stockpile. NOTE: all waste to be stored in separate bays.* ▸ *Separate stockpiles containing the same listed waste type may touch at the base and are exempt from the three-metre separation requirement.* ▸ *Trained personnel to inspect, record and relocate waste if necessary.*
Standard 5: Transport requirements	*Compliance, as all construction waste will not be transported from the waste facility unless it has been inspected, sorted and stored in accordance with these Standards and the load of waste transported from the waste facility consists solely of an individual listed waste type or waste that meets the requirements of a resource recovery order or the recovered fines specifications.* *This excludes waste that has been rejected from the Torrens Road waste facility at inspection point 1.*

▪ 2.6 Contaminated Land Management Act 1997

The NSW *Contaminated Land Management Act 1997* is administered by the EPA. It establishes a process where the significant contamination of land is investigated and, where appropriate, remediated. In this regard the project site is not identified as 'contaminated' under this Act- refer to Section 2.3.5 and **Appendix L** of this EIS.

▪ 2.7 Work Health and Safety Act 2011

Any place of work has the legislated responsibility to ensure health and safety is maintained at the workplace at all times under the *Work Health and Safety Act 2011* and corresponding *Work Health and Safety Regulation 2017*. The person conducting a business or undertaking requires the person conducting a business or undertaking to identify hazards and manage risks to health and safety by implementing a hierarchy of control measures at their facility. The person conducting a business or undertaking must provide information, instruction and training to employees and other persons as necessary to ensure their health and safety. The person conducting a business or undertaking should assess the nature of combustible waste material, and processes used, to determine the fire risks and potential fire load. Unprocessed mixed waste or processed renewable material and by-product may present risks similar to dangerous goods, and require consideration of specific controls as per Part 7.1 Division 5 of the *Work Health and Safety Regulation 2017*. Clause 43 of the *Work Health and Safety Regulation 2017* requires the person conducting a business or undertaking to provide an emergency plan for their workplace, detailing emergency procedures for staff and occupants of the premises.

In addition to the above, compliance with the *Work Health & Safety Regulation 2017* will be required, which requires workers involved in asbestos identification, handling, control, removal or carrying out of asbestos-related work complete asbestos-related training, and workers involved in carrying out the removal of more than 10 square meters of non-friable asbestos (including within asbestos contaminated material), obtain and hold a non-friable asbestos removal licence training.

▪ 2.8 Water Management Act 2000

The *Water Management Act 2000* governs the issue of new water licences and the trade of water licences and allocations for those water sources (rivers, lakes and groundwater) in NSW where water sharing plans have commenced. The object of the *Water Management Act 2000* is to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations. The *Water Management Act 2000* also regulates the use of land where there may be interference with groundwater or where it involves works within 40m of of a watercourse. The Project site is more than 40m away from the nearest watercourse. Moreover, the Project does involves minor changes only to the existing landform and will not interfere with any groundwater. None of the preceding statutory triggers are thus activated by the proposed development.

As such, the Project will not trigger the need for a controlled activities approval under this Act.

▪ 2.9 Planning for Bushfire Protection 2019

The NSW Rural Fire Service's (RFS) *Planning for Bushfire Protection* 2019 is a document prepared by NSW Rural Fire Service (NSW RFS) that sets out the bushfire management requirements for developing on bushfire prone land. Section 10.3 of the *Environmental Planning and Assessment Act 1979* requires the identification of bushfire prone land through mapping. The NSW RFS Commissioner designates what constitutes bushfire prone land and how it is to be mapped. A check of the RFS website on 9 March 2020 reveals that the project site is not identified as comprising bushfire prone land.

2.10 Roads Act 1993

The NSW *Roads Act 1993* (Roads Act) regulates the carrying out of various activities on public roads. Under Section 138 of the Roads Act it is an offence to:

"(a) erect a structure or carry out a work in, on or over a public road, or

(b) dig up or disturb the surface of a public road, or

(c) remove or interfere with a structure, work or tree on a public road, or

(d) pump water into a public road from any land adjoining the road, or

(e) connect a road (whether public or private) to a classified road, otherwise than with the consent of the appropriate roads authority."

No new access point to Torrens Road will be required.

The Project presently does not involve any construction of a new access driveway or stormwater outlets onto Allgayer Drive, however, new fire hydrant connections will be required from existing mains running along Allgayer Drive, the latter involving disturbance within a road reserve. Approval will thus be required for this work, and other similar works that may be required, under Section 138 of the Roads Act from Gunnedah Shire Council for works within the road corridor of Allgayer Drive.

Under Section 4.41 of the EP&A Act, a consent under Section 138 of the Roads Act cannot be refused if it is necessary for carrying out SSD that is authorised by a development consent, and is to be substantially consistent with that development consent.

2.11 Other NSW Legislation, Licenses

In addition to specific requirements referred to in the development consent, site operations are to be conducted in accordance with all relevant New South Wales legislation. Other New South Wales legislation that may be applicable to the proposed resource recovery includes the following:

- *Local Government Act, 1993*.
- The *Waste Avoidance and Resource Recovery Act 2001* (WARR Act) aims to encourage the most efficient use of resources to reduce environmental harm and ensure that resource management is undertaken in a logical, sustainable and organised manner. The WARR Act promotes the preparation of a waste strategy for the state by the DG and aims to improve the responsibility for waste reduction in the industry. The objectives of the WARR Act include:
  - Encouraging the most efficient use of resources.
  - Reducing environmental harm.
  - Ensuring that resources are managed against the waste hierarchy of avoidance, resource recovery, and then disposal ('the three Rs").
  - Diversion of waste from landfill.
  - Ensuring industry takes part in reducing and dealing with waste.
  - Achieving integrated, state-wide waste and resource management planning and service delivery.

  The project generally satisfies these objectives, in particular those relating to industry taking part in reducing waste, the re-use of waste, and diverting waste from landfill. Details of the measures proposed are contained in Section 3 of the EIS.

2.12 Commonwealth Legislation

2.12.1 Environment Protection & Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) specifies generally that an approval from the responsible Commonwealth Minister is required to undertake controlled actions that include an action on any land that is likely to have a significant impact on a matter of national environmental significance. They include:

- World heritage properties. Not applicable.
- Places listed on the National HeritageRegister. Not applicable.
- Ramsar wetlands of international significance. Not applicable.
- Threatened flora and fauna species and ecological communities.
- Migratory species. Not applicable.
- Commonwealth marine areas. Not applicable.
- Nuclear actions(including uranium mining). Not applicable.
- Actions of development for coal seam gas or large coal mining on water resources. Not applicable.

If an action would, or is likely to, have a significant impact on any of the above categories it is deemed to be a Controlled Action requiring approval from the Commonwealth Environment Minister or the Minister's delegate.The Project is not deemed to be a 'controlled action' for the purposes of Section 75 and Section 87 of the *Environment Protection and Biodiversity Conservation Act 1999* given that it is situated on land recently developed (with the land fully disturbed) for the purposes of an industrial subdivision, at Allgayer Drive, Gunnedah.

[NOTE:The Federal Government has introduced in 2020 the *Environment Protection and Biodiversity Conservation Amendment (Streamlining Environmental Approvals) Bill 2020* to streamline the environmental assessment process for development. Separately, the Independent Review of the EPBC Act remains ongoing – with the Interim Report recently published.]

2.12.2 Native Title Act 1993

The *Native Title Act 1993* (NT Act) is administered by the National Native Title Tribunal. The NT Act prescribes that native title can be extinguished under certain circumstances, including the granting of freehold land. The project site is not subject to Native Title.

2.12.3 BCA/National Construction Code

The *Environmental Planning and Assessment Regulation 2000* requires development to comply with the *Building Code of Australia* (ie. *National Construction Code*- NCC) in force at the time of application. Deemed-to-Satisfy provisions of the NCC can be applied to the waste facility, if required.

2.13 Contributions

The relevant contributions plan for the site is the *Gunnedah Shire Council Section 94A Contributions Plan* dated January 2013. The plan enables Gunnedah Council to levy contributions on development within the Gunnedah LGA pursuant to s.7.11 (formerly s.94) of the EP&A Act 1979. This Section 94A Development Contributions Plan was adopted by Council at its Meeting of 19 December 2012 and came into force on 17 January 2013. A levy of 1.0% of the cost of any development in excess of $200,000 (CPI adjusted) applies, and includes industrial developments.

The contributions plan provides that Council may accept an offer by the applicant to provide an "in-kind" contribution (ie the applicant completes part or all of work/s identified in the plan) or through provision of another material public benefit in lieu of the applicant satisfying its obligations under this plan. These "in kind" contributions, however, would need to be subject of a voluntary planning agreement or similar legally binding agreement.

3.The Proposed Waste Facility

3.1 Project Overview and Objectives

3.1.1 Project Overview

Development consent is sought for a waste management facility, including resource recovery and waste transfer facility ("waste facility", "the Project") handling up to 250,000 tonnes per annum of waste for separating and sorting, processing or treating, temporary storage, or transfer or sale of recovered resources as set out in the following:

- Excavated natural material and resource recovered material that meet the CT1 thresholds as per the guidelines: Excavated natural materials are not pre-classified waste types. Building and demolition projects are likely to include excavated natural materials which are typically generated during bulk earthworks and road and infrastructure repair. This would include Virgin Natural Excavated Material (VNEM along with Excavated Natural Material (ENM) and topsoils including but not limited to sand, clay, naturally occurring rock, shale and sandstone. This may include larger rocks and stones that would be suitable for production of road base and other products after processing at the Torrens Road facility. The guideline's CT1 thresholds identify the requirements for 'general solid waste' (GSW) and are commonly referred to in EPLs to aid in the definition of the waste type-a reasonable standard for defining the waste type. It is tentatively estimated that CT1 material would comprise about 50% of the intended waste stream ie. 125,000 tonnes per annum. [NOTE: Only soils and excavated natural material that meet the CT1 thresholds per the EPA's guidelines will be accepted].

- Contaminated soils: A smaller amount of waste to be accepted will be acid sulphate soils (PASS, ASS). It is tentatively estimated that this waste material would comprise up to about 10% of the intended waste stream ie. 25,000 tonnes per annum.

- Co-mingled and segregated Construction and Demolition (C&D) waste, tentatively estimated to comprise about 25-30% of the intended waste stream ie. 62,500-75,000 tonnes per annum. This type of waste includes but not limited to bricks, concrete, tiles, suitable slags and concrete batching waste, asphalt (including recycled asphalt profilings), rock/rail ballast spoils, and any other material meeting the definition of Construction and Demolition waste as defined in the EPA Waste Classification Guidelines Part 1: Classifying Waste.

- Commercial and Industrial (C&I) waste, tentatively estimated to comprise about 15% of the intended waste stream ie. 37,500 tonnes per annum. This type of waste includes but not limited to paper/cardboard, plastics, rubber, plasterboard, cement fibre board, ceramics, glass, styrene, and metal.

- It is anticipated that small quantities only of appropriately sealed asbestos waste will be delivered to the proposed waste facility- up to about 1,000 tonnes per annum. The aim will be to to store this waste on site in separate, secured storage facilities until sufficient quantity is achieved (about 33-38 tonnes) in order that it be economically trucked to an authorised asbestos waste disposal facility elsewhere. Any unexpected finds asbestos will also be stored on site in a secure storage.

- It is proposed to receive and to store lithium batteries derived from waste received- a hazardous waste. It will be stored on site in a secure storage shed until sufficient quantity is achieved in order that it be trucked to an authorised waste disposal or recycling facility elsewhere. It is anticipated that very small quantities only of this waste will be delivered to the proposed waste facility- up to about 0.5 tonnes.

- Processed waste to be transported from the site for either the purpose of reuse or landfill disposal.

[NOTE: The mix of waste above is an estimate only, ultimately dependent on a range of factors including prevailing market conditions, access to the waste streams described above, prevailing government policies, and the like].

No other types of hazardous or special waste will be accepted at the site. No garden (green) waste, household waste or timber/wood waste, tyres, liquid waste, chemical waste or putrescible waste will be accepted by the facility. The recycled materials able to be produced including but not limited to soils and mulched material suitable for landscaping or rehabilitation and civil construction applications, aggregates, road-base, drainage material, dry paper/cardboard and metals. Refer to **Appendix D** for detailed project drawings.

The aim of the recycling process will be to produce end recycled products that meet EPA resource recovered orders while recovering a range of materials that may otherwise be disposed to landfill. All of the materials brought onto the site are taken from the site as products or as rejects for disposal at a licensed landfill. No materials are land-filled or otherwise disposed anywhere within the site.

With the exception of special waste (asbestos) and hazardous waste (batteries) all other waste not referred to above will be directed to a licensed landfill. Material would be transported to the site by MEX or contractors and the general public. The proposed waste facility can utilise other existing facilities already owned and used by Mackellar Group ("MEX"), including but not limited to diesel fuel tanks, heavy vehicles used to transport waste and recycled material to and from the site, office and staff amenities, parking, and stormwater detention, as well as screening plant and conveyors- the latter from MacKellar Excavations' Mount Mary quarry operation. Refer **Figure 0.3**. The major components of the proposed Project are summarised in the accompanying Table 3.1 below.

Table 3.1: Major Project Components

Project Element	***Description***
Wastes to be accepted at the waste facility	***General solid waste (CT1), contaminated soils, C&D waste, C&I waste, asbestos and lithium batteries- refer to details above.*** ***Hazardous waste:*** *Lithium batteries are also proposed to be stored at this proposed waste facility and until a sufficient quantity can be transported to a licensed landfill.* ***Special waste (asbestos):*** *Sealed asbestos to be stored on site. An unexpected finds protocol will apply to asbestos waste that is not identified at entry but found at the tip and spread area (ie. at the secondary inspection point). Such waste will be kept and stored on site until a sufficient quantity can be transported to a licensed landfill.* *No other types of hazardous or special waste will be accepted at the site.*
Amount of waste to be handled per annum	*Proposed to handle up to 250,000 tonnes of waste per annum.*
Existing development	*The Project Site forms a part of a recently developed industrial estate. The land has been cleared, levelled and developed for industrial uses. The land is currently- and lawfully- used for hardstand, truck parking, offices, workshop, manager's residence and storage sheds- the latter to be relocated and repurposed as a restricted waste shed. The project site is located in an industrial area and other industrial development is located to the south, south-east, east and north-east of the project site.*
Area	*Approximately 2.77ha.*
Capital value	*The project has a capital value of $3,909,374 excluding GST. Refer* ***Appendix N f****or details..*
Employment	*The waste facility would directly employ 62 people during construction of the facility, and up to 18 on site staff onsite during the day-to-day operation of the facility, not including 12 truck drivers employed by the company to transport waste ie. up to 30 operational employees.*
Plant and equipment	*Working operation, utilising mobile excavators fitted with grabbing attachments, conveyors and screens, as well as office, amenities, workshop, stockpiles and storage areas.*
Access and parking	*Vehicles carting waste would enter/exit the site from the existing main access on Torrens Road. Access is also available from two access points off Allgayer Drive for other vehicles, including access for fire fighting vehicles. These access points do not require upgrading. The existing car park and truck parking areas would continue to be be used for staff and visitor parking and heavy vehicle parking, respectively.*
Landscaping	*The project site contains existing well established stands of trees on the site: along the western boundary: the centre of the site; and near the corner of Torrens Road and Allgayer Drive. The project will involve further plantings along the western boundary (5.0-8.6m wide) and along the northern boundary (6.0m wide), with a landscaped strip also provided along the Allgayer Drive street frontage. These plantings will further assist in screening views of the project from neighbouring properties.*

Infrastructure	*Existing office building and sheds to be used for an administrative headquarters and storage, respectively. The processing facility is to be fully enclosed. This completely removes most of the potential pathways for pollutants to leave the site. Site preparation works would involve sealing of any unsealed processing area surfaces with concrete. Upgrade of existing stormwater management infrastructure which would include pipe upgrades, construction of a first flush detention and installation of water quality treatment devices. Additional fire hydrants to be installed in the northern section of the project site, to ensure compliance with NSW Fire and Rescue NSW (FRNSW) Fire safety in waste facilities guideline.Misting sprays to be used within the main shed instead of water sprinklers. Removal of existing residence and relocation/repurposing of existing shed is proposed.*
Hours of Operation	*7.00 am and 6.00 pm Monday to Saturday, excluding public holidays.The operation of heavy machinery is only able to occur between 7.00am-5.00pm Monday to Friday. No waste facility operations to be undertaken on Sundays or public holidays.* *Construction hours would be 7.00am to 5.00pm Monday to Friday and 8.00am to 1.00pm Saturdays.*

No materials are land-filled or otherwise disposed anywhere within the site. With the exception of special waste (asbestos) and hazardous waste (batteries) all other waste not referred to above will be directed to a licensed landfill.

The proposed waste facility can utilise other existing facilities already owned and used by the Mackellar Group, including but not limited to diesel fuel tanks, heavy vehicles used to transport waste and recycled material to and from the site, office and staff amenities, parking, and stormwater detention, as well as screening plant and conveyors- the latter from MacKellar Excavations' Mount Mary quarry operation. Processing would be undertaken with the above equipment, with an additional trommel used to sort and screen waste. All of the waste materials brought onto the site are to be taken from the site as either re-use products or as rejects for disposal at a licensed landfill.[NOTES:1. MacKellar Excavations Pty Ltd has lodged a DA in support of a proposed landfill operation at Marys Mount quarry- the subject of a separate development application. It is proposed that waste would be transported to the quarry site, once approved as a landfill, by Mackellar Group contractors. 2.The waste classification guidelines acknowledge that the pre-classification of waste (step 4) does not classify all types of general solid waste (non-putrescible). It does not appear to be the intent of the waste classification guidelines to restrict facilities such as the proposed waste facility from accepting only certain specifically pre-classified waste types, within the broad general solid waste (non-putrescible) categories. By accepting general solid waste (non-putrescible) generally the facility will enable the recovery of a wider range of materials and reducing the amount of material sent to landfill. 3. A consolidated summary of all the proposed environmental management and monitoring measures (mitigation measures), highlighting commitments included in the EIS, is to be found in Section 4.2.]

3.1.2 Project Objectives

The objectives of the Project include the following:

- To establish a waste facility on the site that will handle the types of waste outlined in the above, with a maximum of 250,000 tonnes of waste per annum to be handled at the facility. Most of this material will come from outside of the Gunnedah Shire.
- A maximum of approximately 6,436.5 cubic metres of waste to be stored/processed on the project site at any one time, or about 9,654.7 tonnes assuming 1.5 tonnes/cubic metre.
- To take advantage of existing industrial infrastructure on the project site, including offices, fire hydrants, urban services, hardstand areas and access to the local road system.
- To provide for a new industry in within an already established, recently constructed fully serviced new industrial estate on the western periphery of Gunnedah township.
- To provide treatment of waste including waste that either arises from or can service the needs of coal/energy-related development in the Gunnedah region.

- To accommodate the likely demand for waste treatment in line with construction activity and major infrastructure projects in New South Wales, and to accept waste from as far away as the greater Sydney region and beyond. In this regard Gunnedah is highly accessible to regional markets, including markets in Sydney as well as Brisbane. In so doing, the Project will assist in managing the growth of urban centres in the State, including the greater Sydney metropolitan area as well as significantly contribute to the NSW Government's Policy on Waste Reduction.
- Related to the above, the establishment of a waste facility that will be run in conjunction with a proposed landfill facility operation at Marys Mount quarry, also run by interests associated with the Mackellar family companies.
- To provide for a new, waste-related industry to the Gunnedah region, providing further diversity in the range of industries offered in the region. The facility would provide a range of environmental and economic benefits for the region by recycling waste, including the provision of additional employment opportunities and investment in infrastructure.
- Increase the number of jobs within waste services, recycling and recovery sectors in the Gunnedah region.
- Manage environmental impacts to the surrounding area to an acceptable degree by implementing various environmental management and mitigation measures.
- Once development consent has been granted, to obtain an Environment Protection Licence (EPL) from the NSW EPA for the waste facility.

3.2 Waste Process Proposed at Facility

3.2.1 Waste classification and Incoming Waste Quality Plan

Wastes accepted by the site are listed in Section 3.1 of the EIS. These wastes will be classified according to the *Waste Classification Guidelines - Part 1: Classification of Waste* (EPA 2014a). The following wastes will not be accepted at the proposed waste facility:

- Special waste (including clinical waste, asbestos-contaminated C&D or C&I waste, including waste tyres) but excluding sealed asbestos; or
- Anything classified as special waste under an EPA gazettal notice) as defined in EPA (2014a) Step 1; or
- Liquid waste as defined in EPA (2014a) Step 2 eg. solvents, oils and greases; or
- Wastes pre-classified as hazardous waste as defined in EPA (2014a) Step 3 eg. paints, dyes, pesticides[NOTE: with the exception of lithium batteries, which will be collected and stored until there is a sufficient quantity for transporting to a facility licensed to either process or dispose to landfill, or bituminous products (such as road sealing and asphalt) which are capable of recycling and re-use]; or
- General solid waste (putrescible) as defined in EPA (2014a) Step 3; or
- Waste possessing hazards as defined in EPA (2014a) Step 4; or
- Waste that requires chemical assessment to determine its classification as defined in EPA (2014a) Step 5.
- Waste that readily decays under standard conditions or does emits offensive odours or is capable of attracting vermin or other vectors or decaying waste is not to be accepted as defined in EPA (2014a) Step 6.

[NOTE: Steps five and six of the guidelines provide robust and accepted methods to identify waste types that are not pre-classified eg. excavated material that is not VENM. It is also noted that the excavated natural material (ENM) and excavated public road material resource recover orders (RRO) issued by the EPA specifically apply to the recovery and recycling of excavated materials. Other RROs allow the production of materials that are, in part, originated from excavated materials.]

If non-conforming (asbestos) waste is identified after a load is accepted, and depending on the volume found, will be stored in the non-conforming waste area and disposed of as described in this section of the EIS.

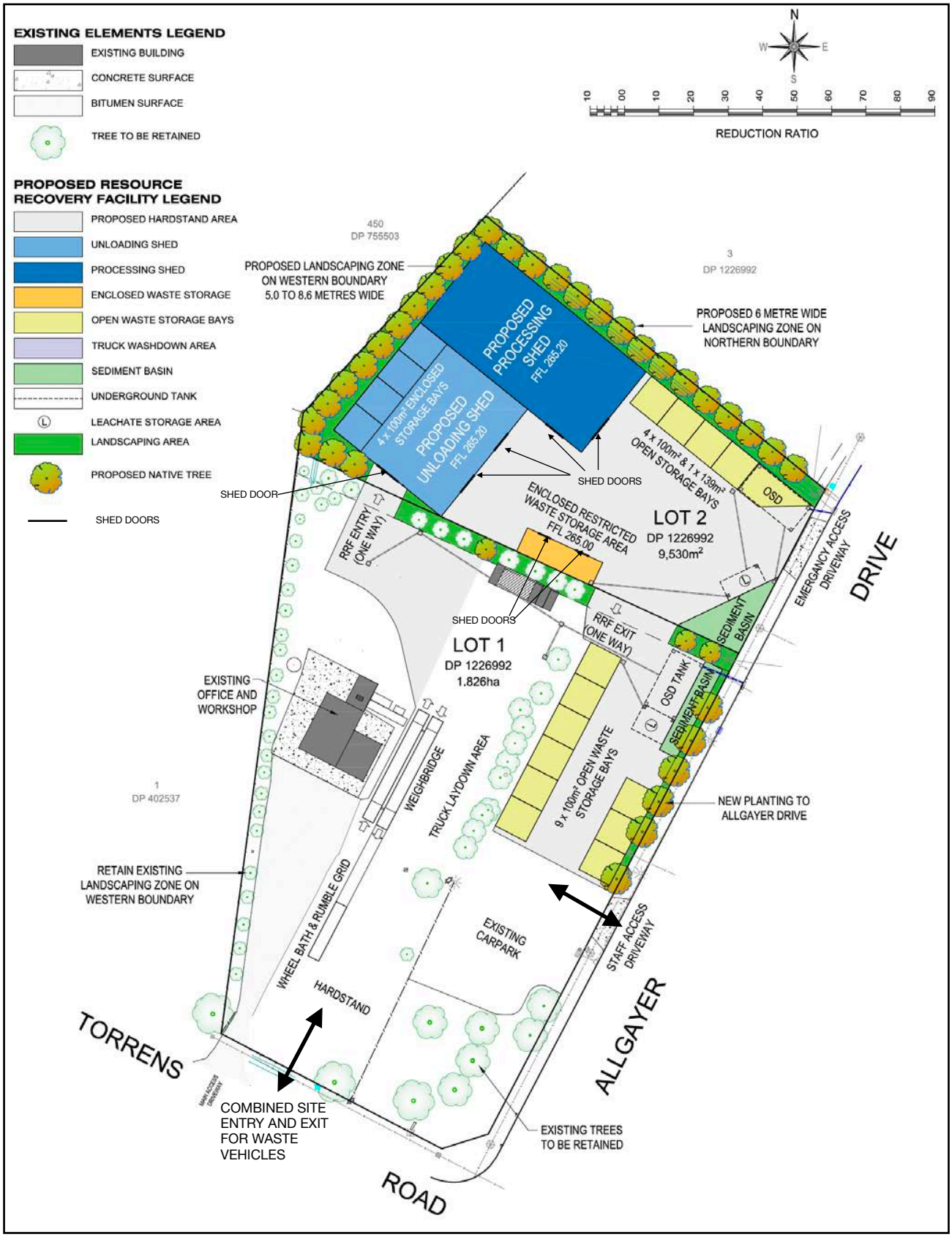


FIGURE 3.1: The proposed waste facility: site plan

(Source: Stewart Surveys, Martens & Associates, consulting engineers)

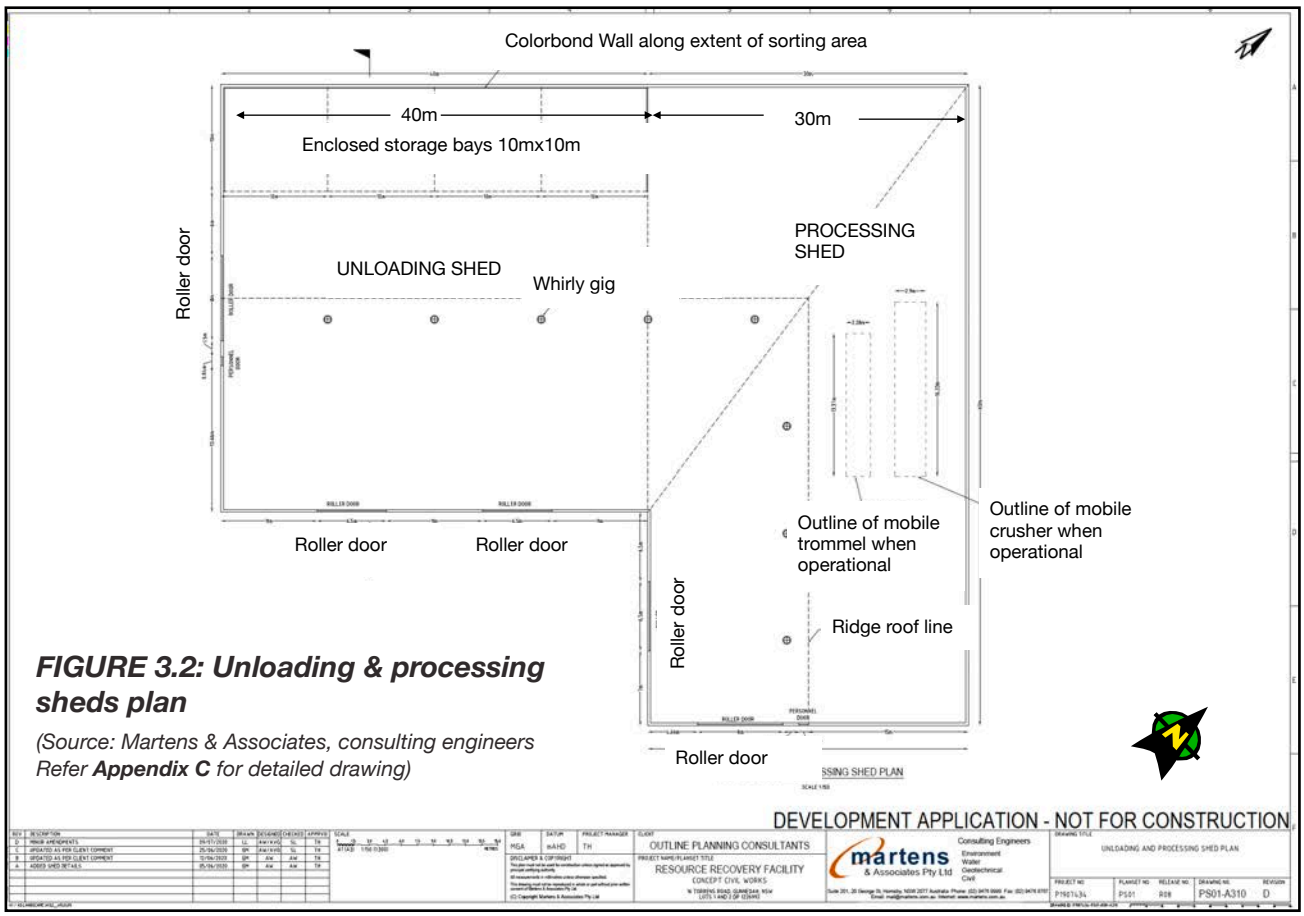


FIGURE 3.2: Unloading & processing sheds plan

(Source: Martens & Associates, consulting engineers
*Refer **Appendix C** for detailed drawing)*

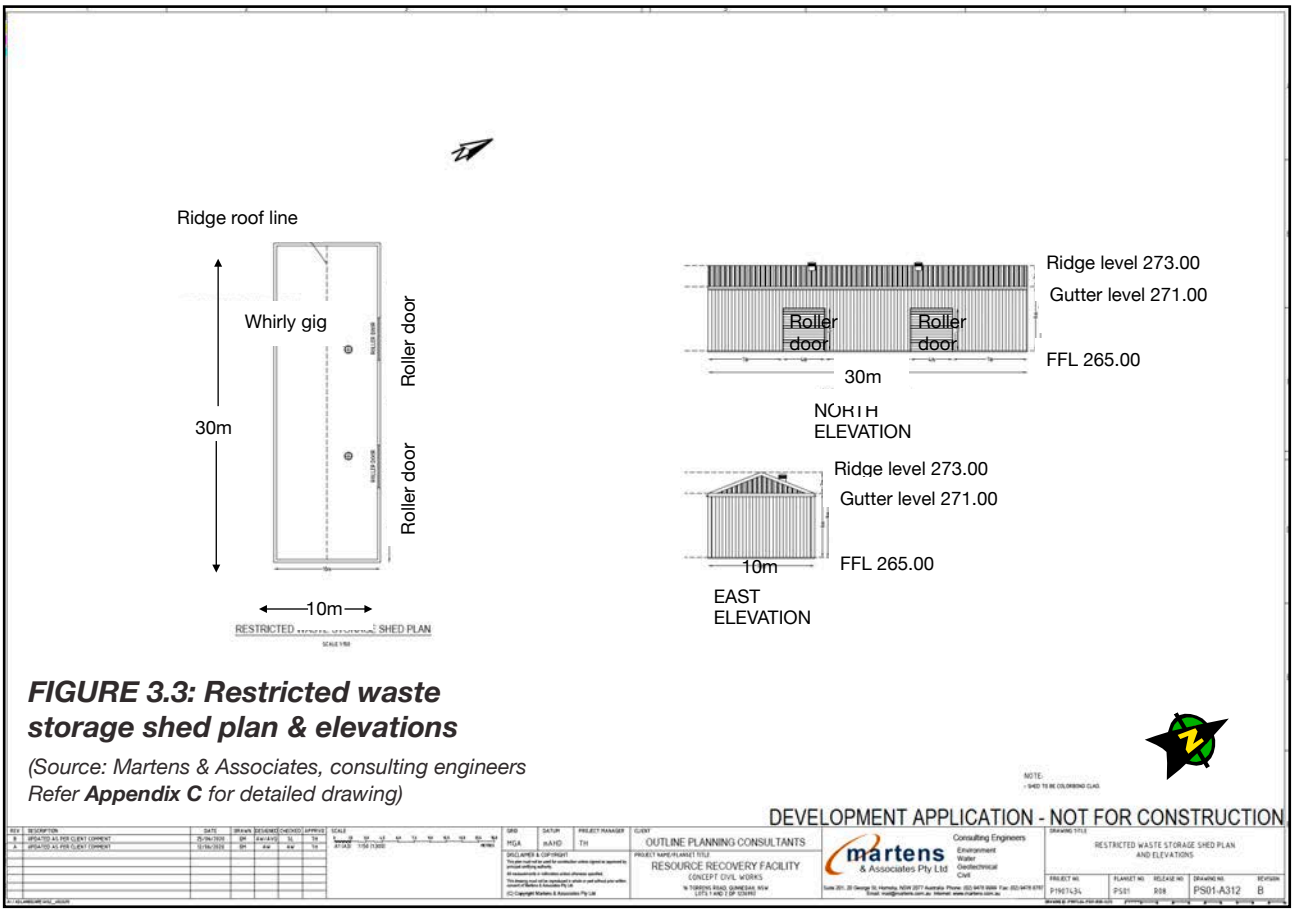


FIGURE 3.3: Restricted waste storage shed plan & elevations

(Source: Martens & Associates, consulting engineers
*Refer **Appendix C** for detailed drawing)*

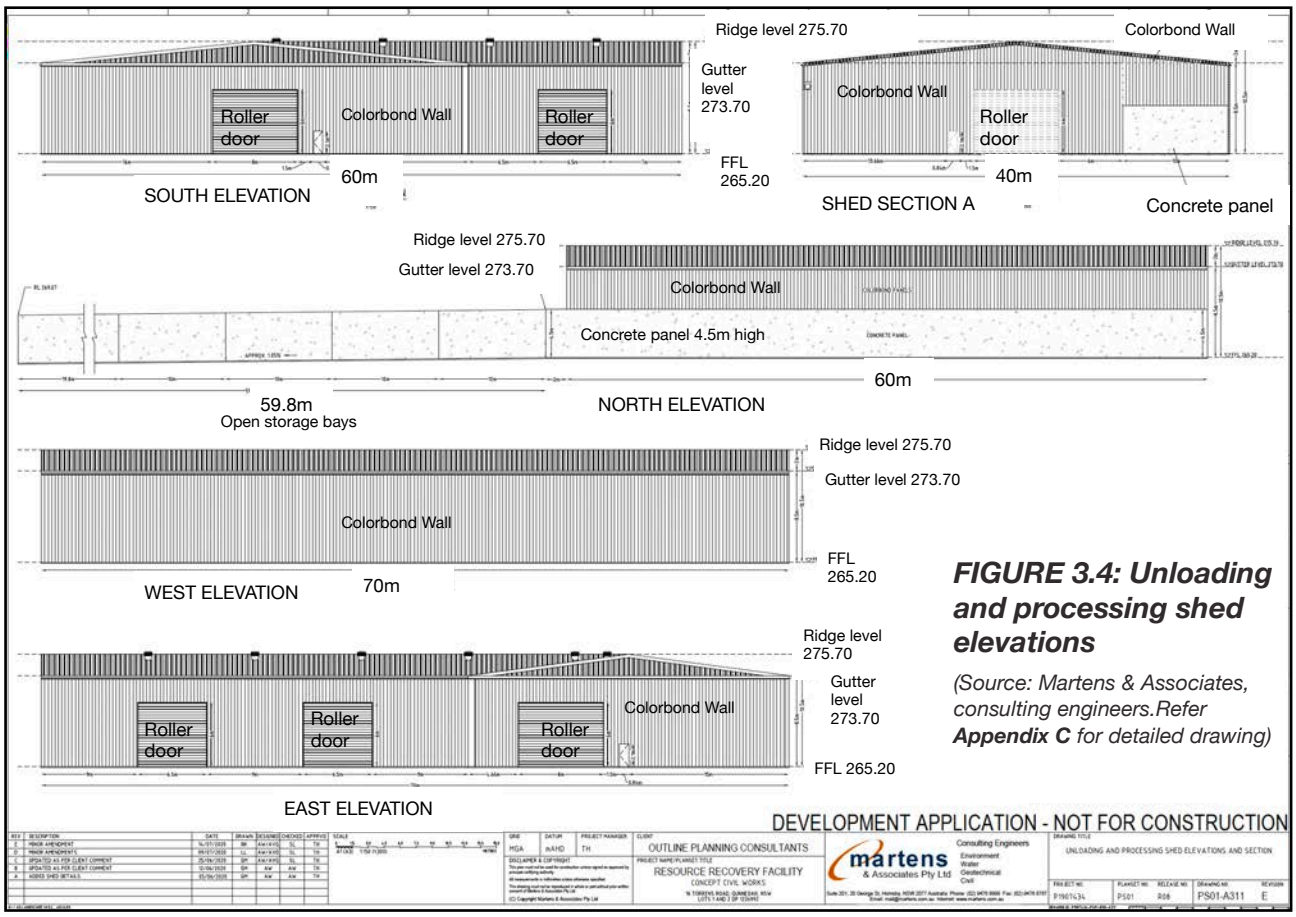


FIGURE 3.4: Unloading and processing shed elevations

*(Source: Martens & Associates, consulting engineers.Refer **Appendix C** for detailed drawing)*

The facility will adopt an Incoming Waste Quality Plan to include the following key elements:

- Advising of the wastes to be accepted at the Torrens Road waste facility- refer to list above.
- Advising of the wastes that will not be accepted at the Torrens Road waste facility- refer to list above.
- Related to the above, a notice to staff will be given immediately if hazardous materials or conditions are found onsite that are in unprotected environments including the following:
  - Flammable or explosive liquids or gases.
  - Toxic materials.
  - Noxious or explosive chemicals.
- Installation of suitable warning signage at the Torrens Road entry to the site advising of the above restrictions regarding waste accepted and not accepted at the waste facility.
- Training staff who will be working on the site on waste inspection and asbestos awareness and management, as well as involving those staff in education programs at material source locations to minimise the risk of unwanted waste entering the waste supply chain and being accepted onto the premises. As part of any site induction and training staff will be trained in waste processing generally including the following:
  - Waste tracking.
  - Waste identification and classification.
  - Procedures for dealing with non-confirming waste.

  This training ensures that staff receive adequate training to be able to recognise and handle any hazardous or other prohibited waste. Refer Section 3.4 for further training requirements of staff working at the waste facility.
- Setting down of contingency actions if unacceptable waste materials is identified, including preparation of a rejected load register and reporting to the EPA, or for other contingency events, including fires, spills or equipment failures.

■ Empowering waste inspectors to reject loads considered 'suspect' or odorous. A rejected loads register is to be maintained, containing the following details:

- Date and time on which the load of waste was rejected.
- Vehicle Registration (including any trailer(s)) transporting the rejected load of waste both to and from the facility.
- Customer.
- Waste type in the rejected load of waste and the reason the load of waste was rejected.

■ Products produced for direct sale will be tested in accordance with requirements of the relevant resource recovery exemption.

■ Waste monitoring and reporting. Each weigh-bridge will record details of incoming and outgoing waste truck traffic including the following:

- Date.
- Vehicle Registration.
- Customer.
- Waste type including nature and origin of the waste, certification.
- Gross and Tare Weight.

3.2.2 Resource recovery wastes

The resource recovery processes that would occur on the site are described below according to the waste type. On average, 905 tonnes per day of waste would be delivered to the Torrens Road Gunnedah site in a range of vehicles including 0.5-tonne domestic trailer loads, 8-tonne rigid trucks and 30 tonnes + heavy articulated trucks. Trucks are to be inspected and weighed on arrival (and departure, with the difference in weight being the waste payload). The trucks are then directed to unload in the covered unloading area where waste will be sorted, processed and prepared for transfer to the processing shed for further processing.

■ Excavated material that meets CT1 thresholds

This material would be mechanically sorted and shredded by front-end loader in the unloading shed prior to either crushing and/or screening in the processing shed. Then it would be mechanically screened by the trommel in the processing shed and blended for re-use, followed by transfer to the on site storage bins. Any contaminated residue would be removed for landfilling at a licensed facility. Refer **Figure 3.5**.

■ Contaminated soils (ASS and PASS)

Acid sulfate soils (ASS) would be blended with lime on site, verified such that it is capable of reverting to GSW and ultimately disposed to landfill (unless an Exemption is granted), in accordance with the EPA's neutralising techniques outlined in the *ASS Manual* and *Waste classification guidelines: Part 4: Acid Sulfate soils* requirements. Following neutralisation, the waste must be chemically assessed to determine whether there are any other contaminants that may affect how the waste is classified for disposal. Any licensed landfill where the material will ultimately be disposed of will be informed that the actual ASS has been treated in accordance with the neutralising techniques outlined in the ASS Manual and that the waste has also been classified in accordance with Part 1 of the *Waste Classification Guidelines*. Potential acid sulfate soils (PAAS) will be treated in accordance with the same EPA requirements. Potential ASS must be kept wet at all times during excavation and subsequent handling, transport and storage, until they can be disposed of safely.Refer **Figure 3.6**.

PHOTOGRAPH 3.1 (above): Typical acid sulfate soil.

(Photograph source: Queensland Government website "Identifying acid sulfate soils")

Construction and Demolition (C&D) waste

This material would be mechanically sorted and shredded by front-end loader in the unloading shed prior to either crushing and/or screening in the processing shed in accordance with the NSW EPA Minimum Standards for Managing Construction and Demolition Waste in NSW (October 2016).

The resultant material would be separated into various components and stockpiled for either resale as a recycled product with material not suited to recycling removed to a licensed facility.

PHOTOGRAPH 3.2 (above): Typical C& D, C&I waste.

(Photograph source: ENV Solutions)

Waste including concrete, bricks and tiles would be crushed on a campaign basis before being mechanically screened and stockpiled in the storage bins as aggregate, sand and road base for sale. Refer **Figure 3.7**.

Commercial and Industrial (C&I) waste

The waste would be mechanically sorted and shredded by front-end loader in the unloading shed prior to either crushing and/or screening in the processing shed. The resultant material would be separated into its various components and stockpiled for either resale as a recycled product with material not suited to recycling removed for landfilling at a licensed facility.

Bricks, concrete and tiles would be crushed on a campaign basis before being mechanically screened and stockpiled as aggregate, sand and road base for sale. Refer **Figure 3.7**.

Asbestos and lithium batteries

These materials will be suitably stored in a stand-alone restricted waste storage facility.

It is estimated that no more than about 33-38 tonnes of asbestos waste and about 0.5 tonne of lithium batteries will be stored on site at any one time.

Refer **Figure 3.8** and **Figure 3.9**.

PHOTOGRAPH 3.3 (above): Typical sealed asbestos waste.

(Photograph source: QLD Government website)

Waste stream flow diagrams

The flow diagrams for each major waste stream are depicted in the accompanying **Figures 3.5 to 3.9**.

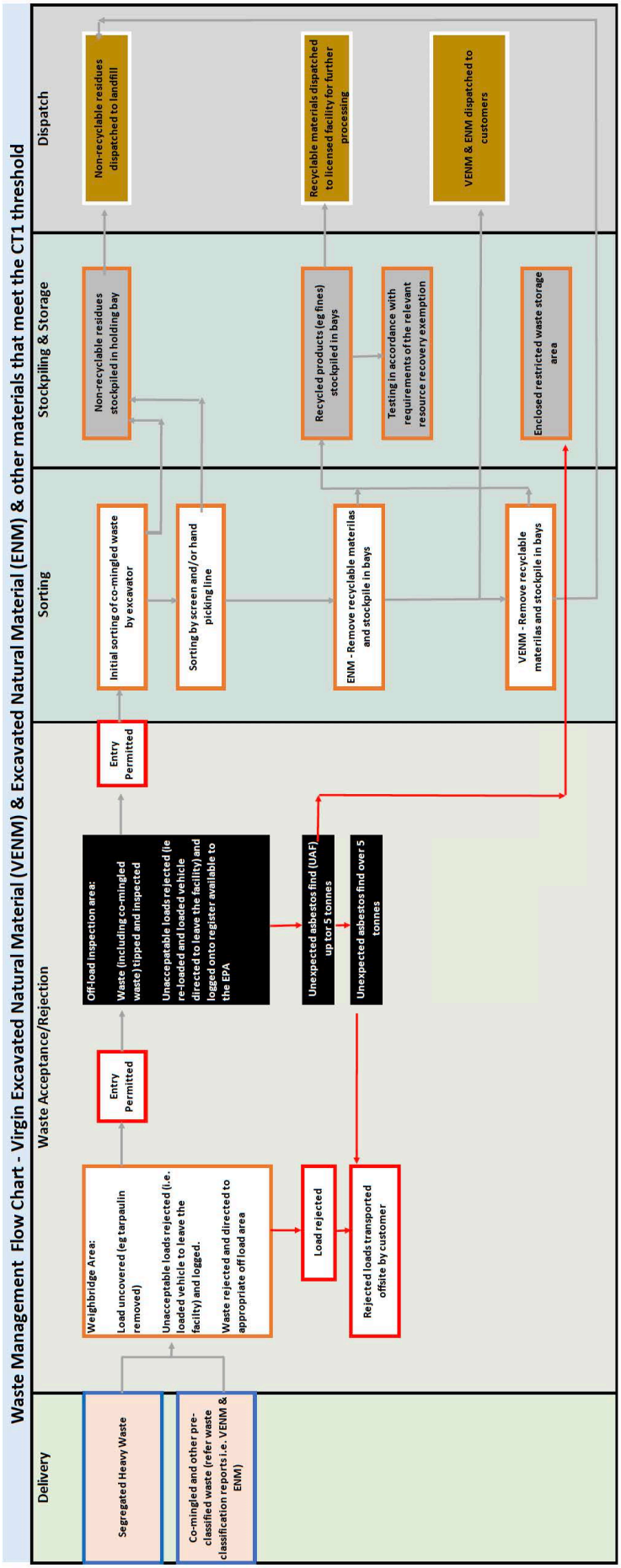


FIGURE 3.5: Waste Stream Flow Chart: CT1 Soils

(Source: Mackellar Equipment Hire)

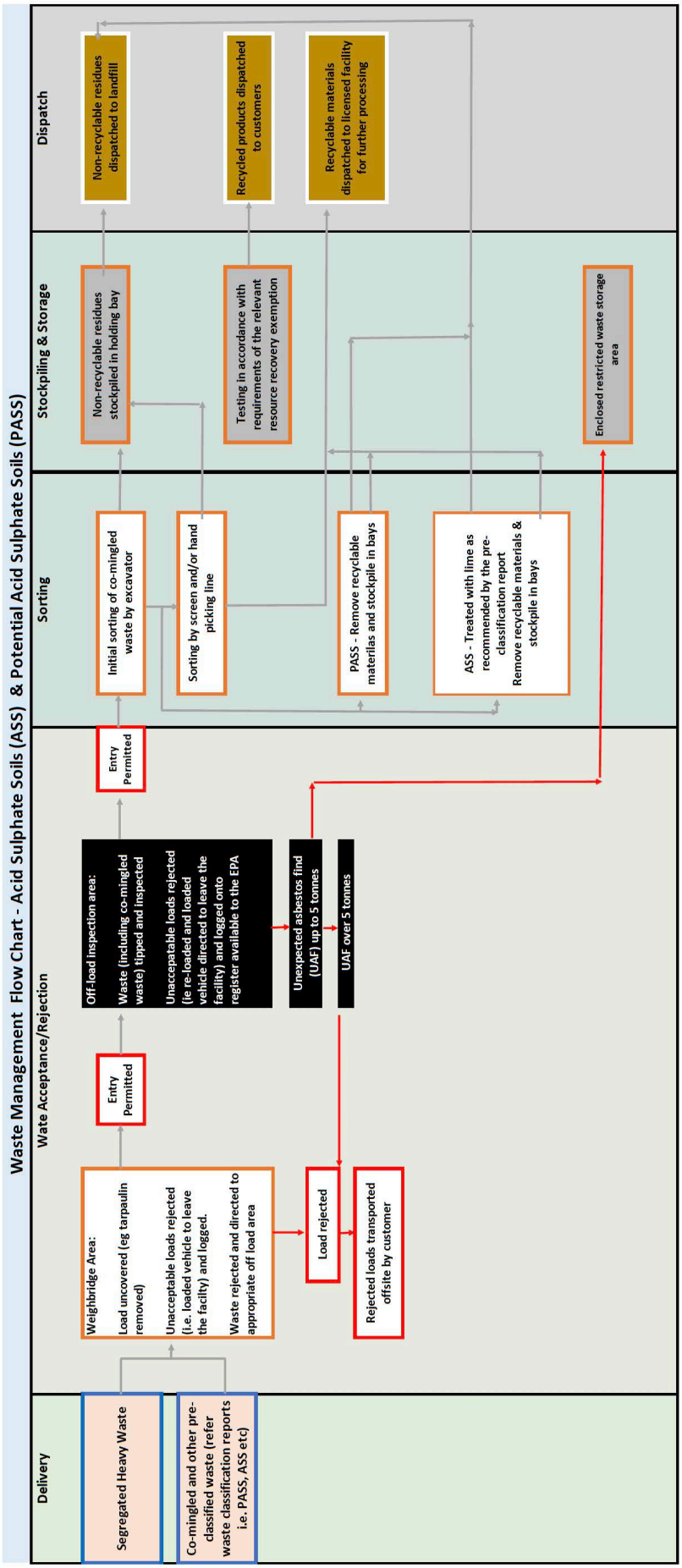


FIGURE 3.6: Waste Stream Flow Chart: ASS and PASS

(Source: Mackellar Equipment Hire)

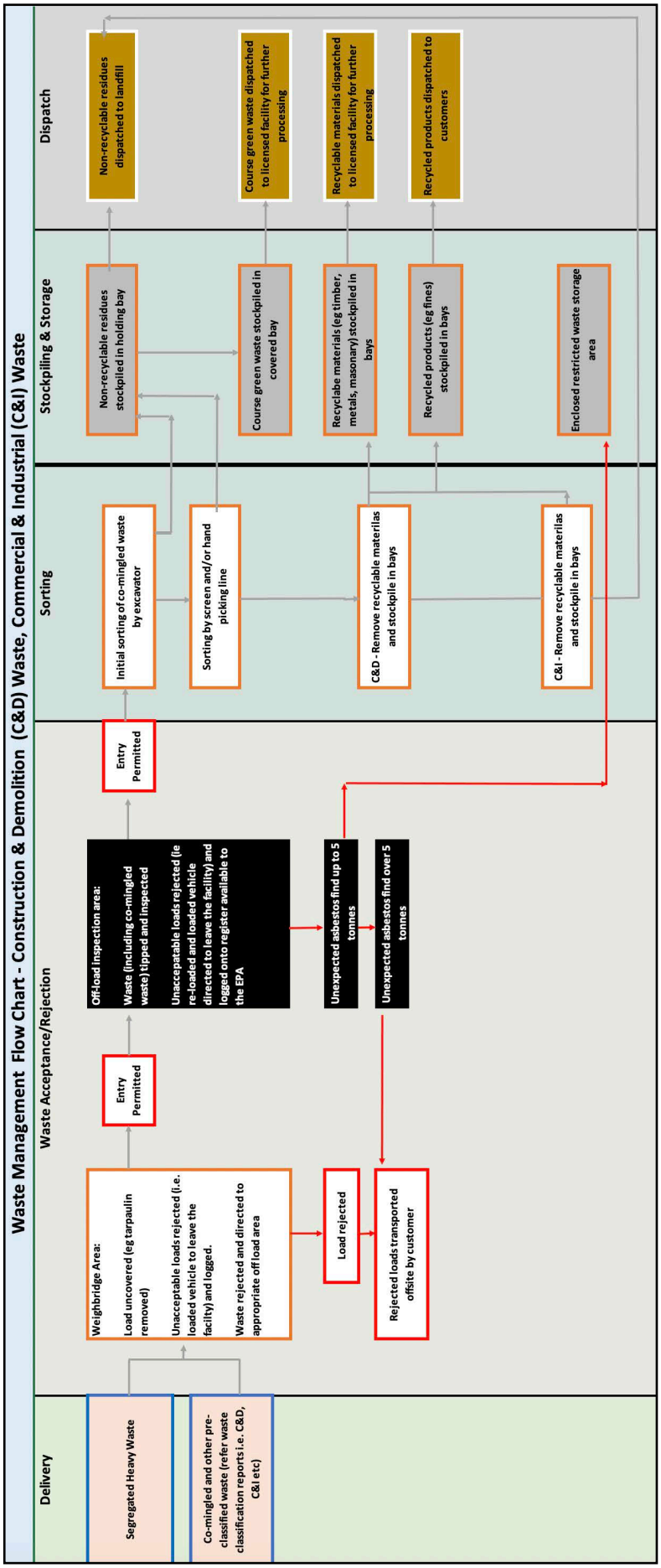


FIGURE 3.7: Waste Stream Flow Chart: C & D Waste and C & I Waste

(Source: Mackellar Equipment Hire)

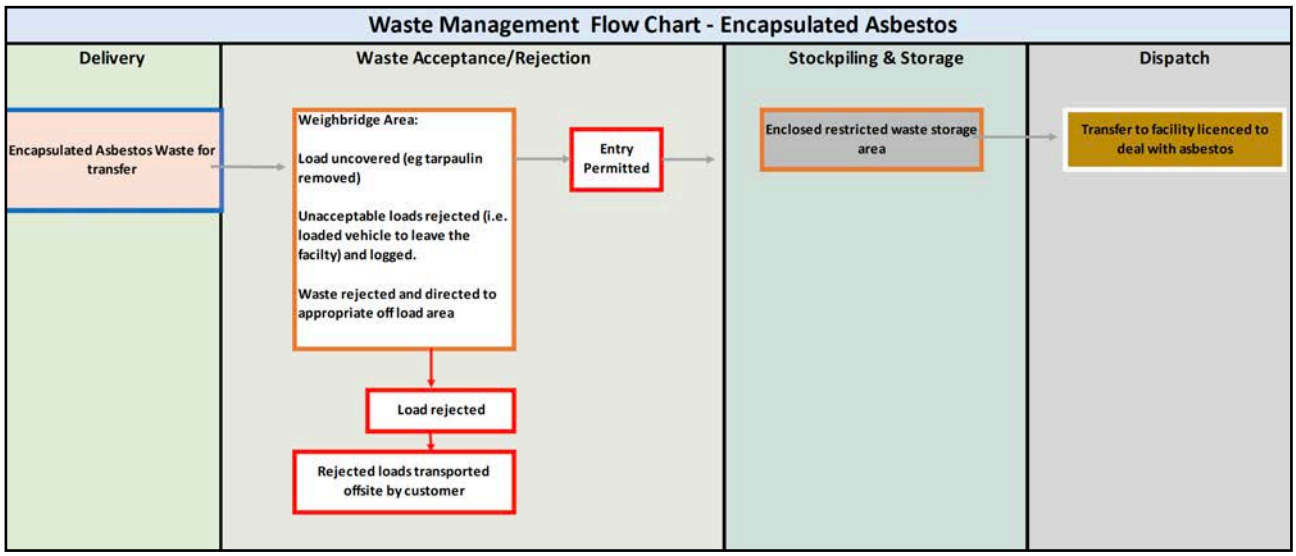


FIGURE 3.8: Waste Stream Flow Chart: Sealed Asbestos Waste

(Source: Mackellar Equipment Hire)

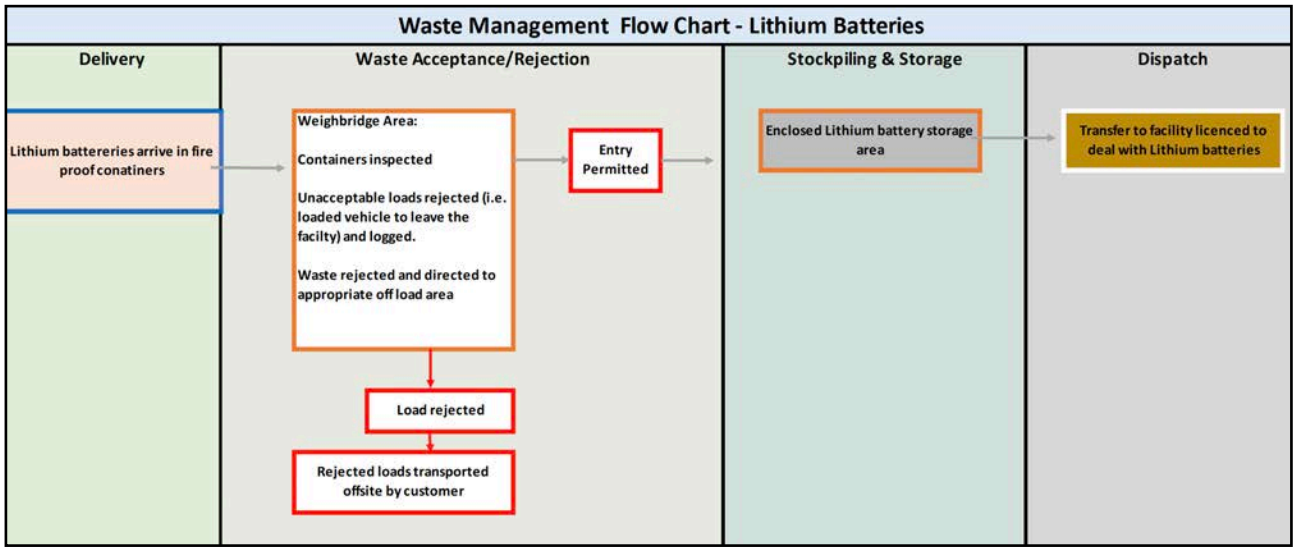


FIGURE 3.9: Waste Stream Flow Chart: Lithium Batteries

(Source: Mackellar Equipment Hire)

3.2.3 Resource recovery products

The proposed waste facility will unlock value by transforming the above waste into materials capable of use for a wide range of applications (refer **Figure 3.2** for examples), including but not limited to the following:

- **Road base (crushed concrete):** Suitable for use on roads where tradition quarried products would be applied. The material is compliant to Council specifications and RMS specification RMS 3051 for the supply of material as either a base course (DGB20) or sub-base (DGS40, DGS20) layer in pavements.
- **Road base (crushed concrete/brick/tile/asphalt (Rap)/ Cement fibre board):** Suitable for use on roads with a traffic loading of less than $1x10^6$ ESA as either a base course or sub-base.
- **Recovered railway ballast**.
- **General fill soil (ENM) or topsoil**.
- **Select Fill (capable of using all wastes including blends of material to comply with council and RMS specifications):** Material placed directly on the sub-grade to improve sub-grade performance. Can also be used as engineering fill to raise site levels, particularly in road embankments or beneath buildings. Engineered fill should have a CBR of at least 5%. This product could also be used as a capping material used for railway pavement applications.
- **Bedding Material (crushed concrete/brick/cement fibre board/ screened gravelly soil):** Screened material with about a 7mm maximum particle size used as a support for paving blocks, pipe bedding, concrete under slab fill, retaining walls, block infill, cycleways or on lightly trafficked access-ways.
- **Drainage medium (crushed concrete/brick):** Backfilling material for stormwater pipes, sewer pipes or sub-surface drainage lines.
- **General fill – Hardstand material:** All recycled materials crushed and screened to a sizing requirement for specific applications can be utilised as a general or engineered fill in road making applications. This includes soils/ clay that have been processed screen to meet the requirements of NSW EPA recovered Fines or meet the definition of Excavated public road material.

Refer **Figure 3.10**.

DGB 20 | Select fill | Recycled aggregate

FIGURE 3.10: Examples of resource recovery products

(Source: Mackellar Equipment Hire)

The recycled material above will be compliant with applicable NSW EPA orders including but not limited to the following:

- Cement Fibre Board.
- Coal ash.
- Excavated Natural Material (ENM).
- Excavated public road material.

- Mulch.
- Plasterboard.
- Reclaimed asphalt pavement.
- Recovered Aggregate.
- Recovered Fines.
- Recovered railway ballast.
- Recovered glass sand.

3.2.4 Transportation of waste

Waste will be delivered to site by a variety of vehicles, typically by 'truck and dog' and other multiple axle heavy vehicles of in excess of 32 tonnes, up to 43 tonnes carrying capacity or more, with a smaller component of traffic comprising single trucks carrying loads of as little as 0.5 tonne up to say 27 tonnes as well as vehicles hauling trailers. an average of 20 heavy vehicle trips a day would be entering the waste facility, with another 20 laden vehicles exiting the site to deliver to customers around Gunnedah and further afield.

Vehicles will access the site from the Torrens Road entry/exit having travelled from Oxley Highway and Kamilaroi Highway, thence to Quia Road and Torrens Road, all of these routes being suitable for heavy vehicles. Refer Photograph 3.1. Trucks are not expected to remain on the site for any extended period of time as the trucks would be processed as they come in. Therefore, parking for waste trucks would not be required. Furthermore, the site layout has been designed using *AustRoads Design Vehicles and Turning Path Templates* and to accommodate worst case queuing of trucks entering the site.In accordance with the issued SEARS, swept path analyses plans have been prepared by Martens & Associates, consulting engineers, for a range of vehicle sizes, ranging from articulated heavy vehicles (AV) (**Figure 3.11**) and B-doubles (**Figure 3.12**) [NOTE: similar swept path to truck and dog], to heavy rigid vehicles (HRV) and medium rigid vehicles (MRV) (**Figures 3.13 to 3.14**, respectively), to larger domestic vehicles like SUVs (**Figure 3.15**).

PHOTOGRAPH 3.4 (above): Typical heavy haulage vehicle- 8 axle truck and dog articulated heavy vehicle with a current lawful payload of up to 45 tonnes. View of MEX trucks in existing hardstand truck parking area on the project site, with existing landscaping and GB Autos building in rear.

(Photograph taken 13 August 2019)

FIGURE 3.11: Swept path analysis Articulated Vehicle (AV), typically 19m long and waste unloading zones

(Source: Martens & Associates, consulting engineers)

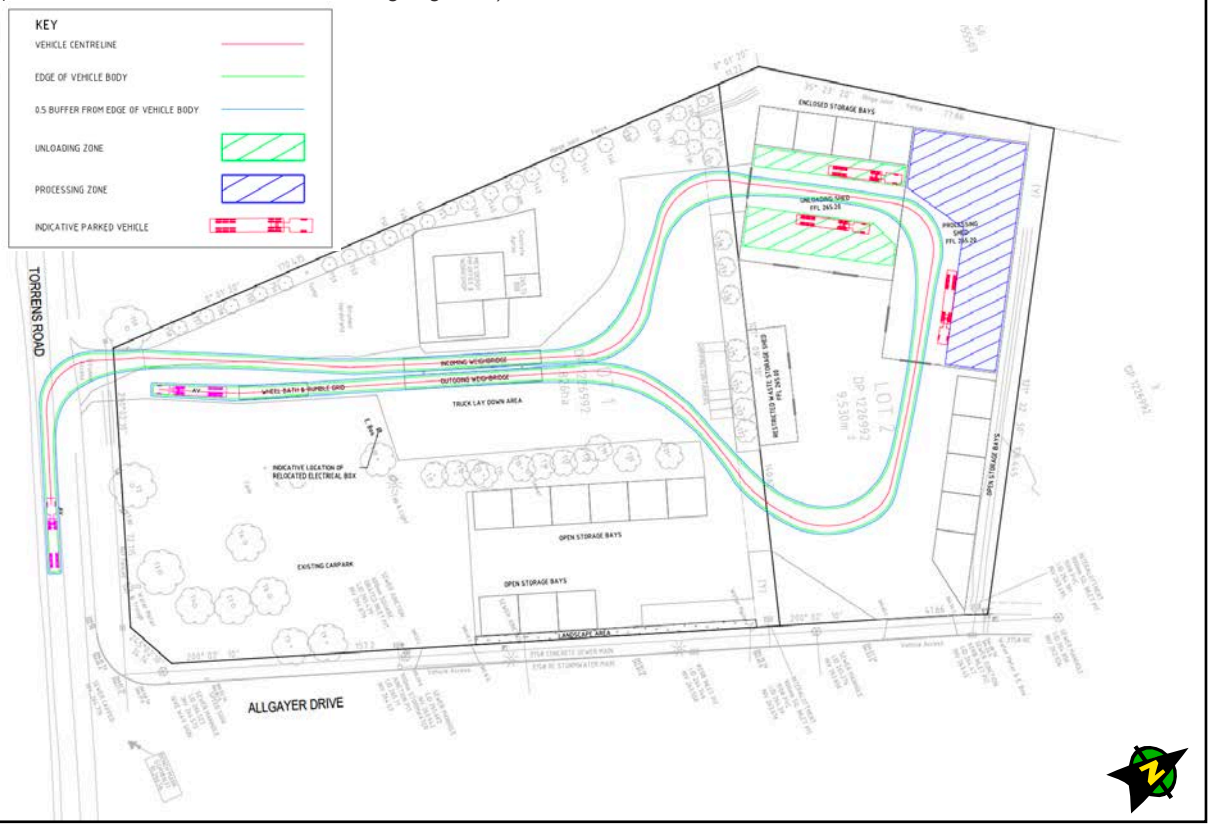


FIGURE 3.12: Swept path analysis B-Double, typically less than 20m long and waste unloading zones

(Source: Martens & Associates, consulting engineers)

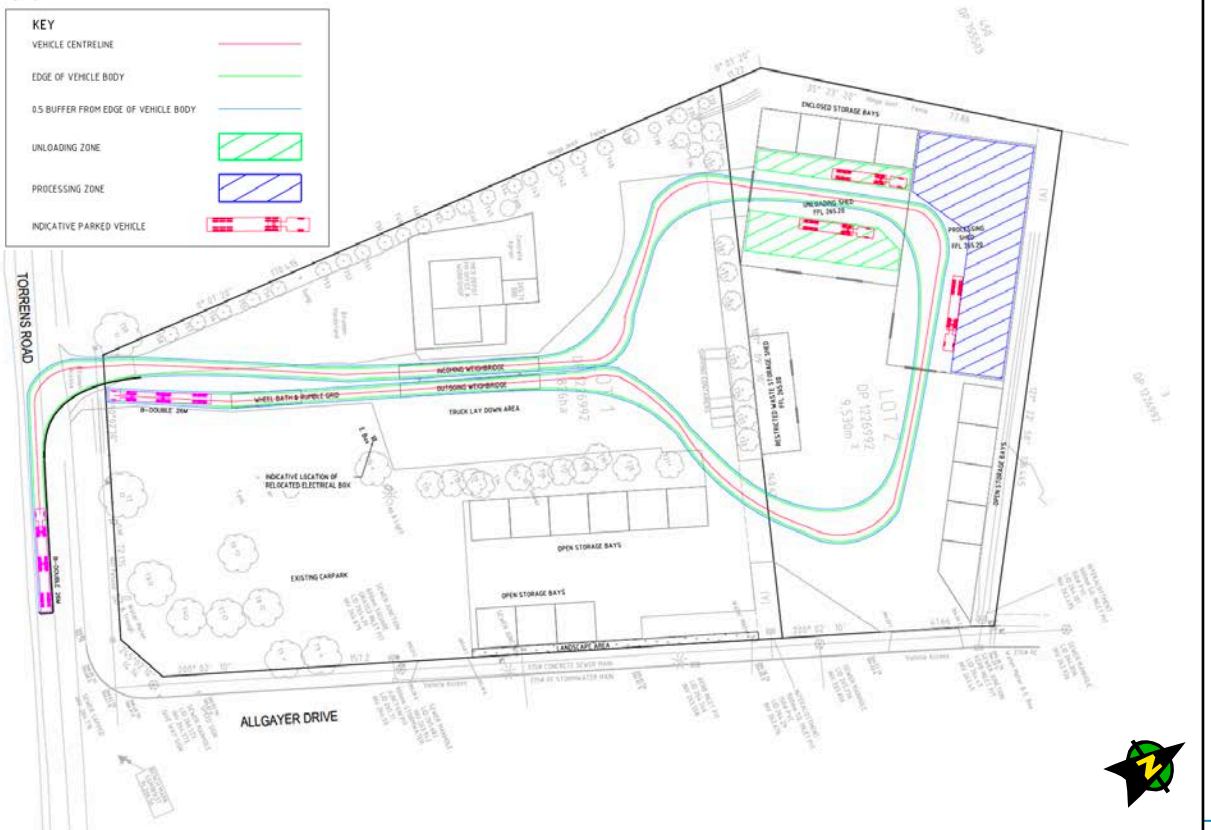


FIGURE 3.13: Swept path analysis Heavy Rigid Vehicle (HRV), typically 12.5m long and waste unloading zones

(Source: Martens & Associates, consulting engineers)

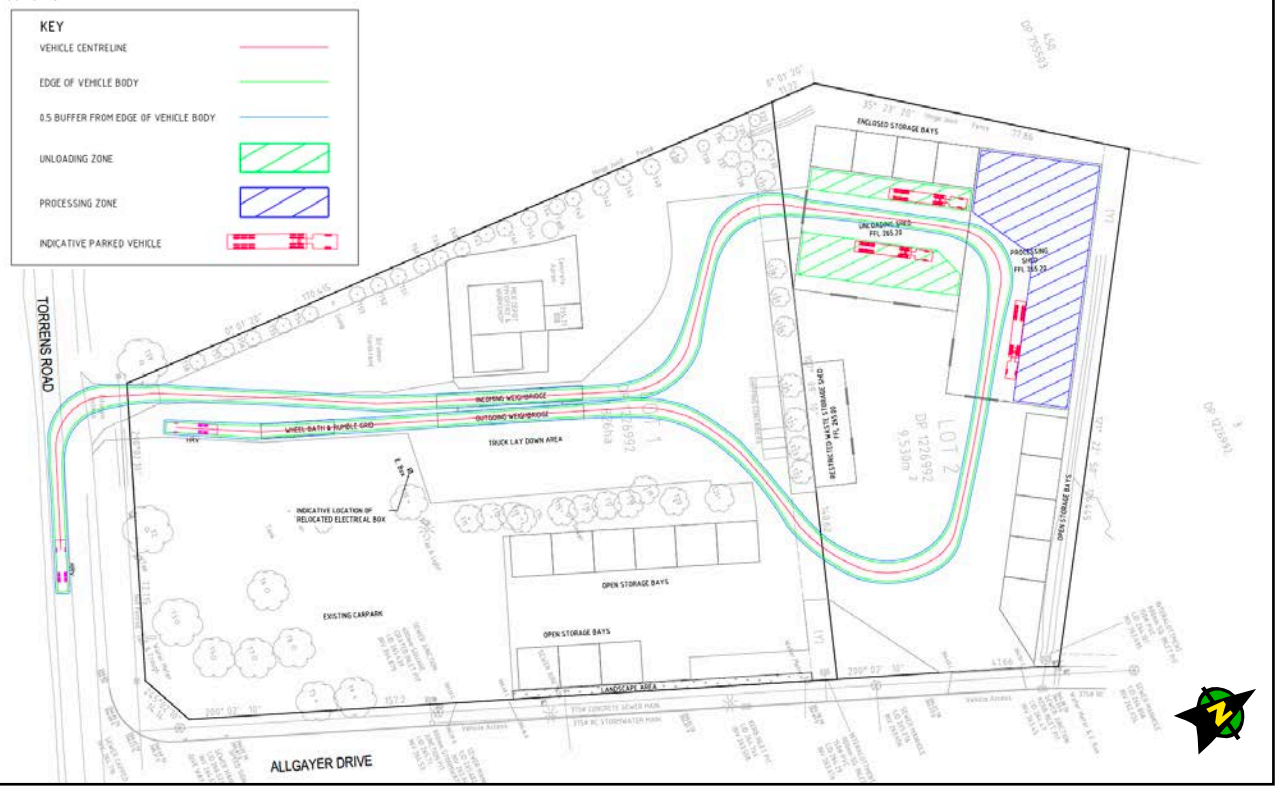


FIGURE 3.14: Swept path analysis Medium Rigid Vehicle (MRV), typically 9m long and waste unloading zones

(Source: Martens & Associates, consulting engineers)

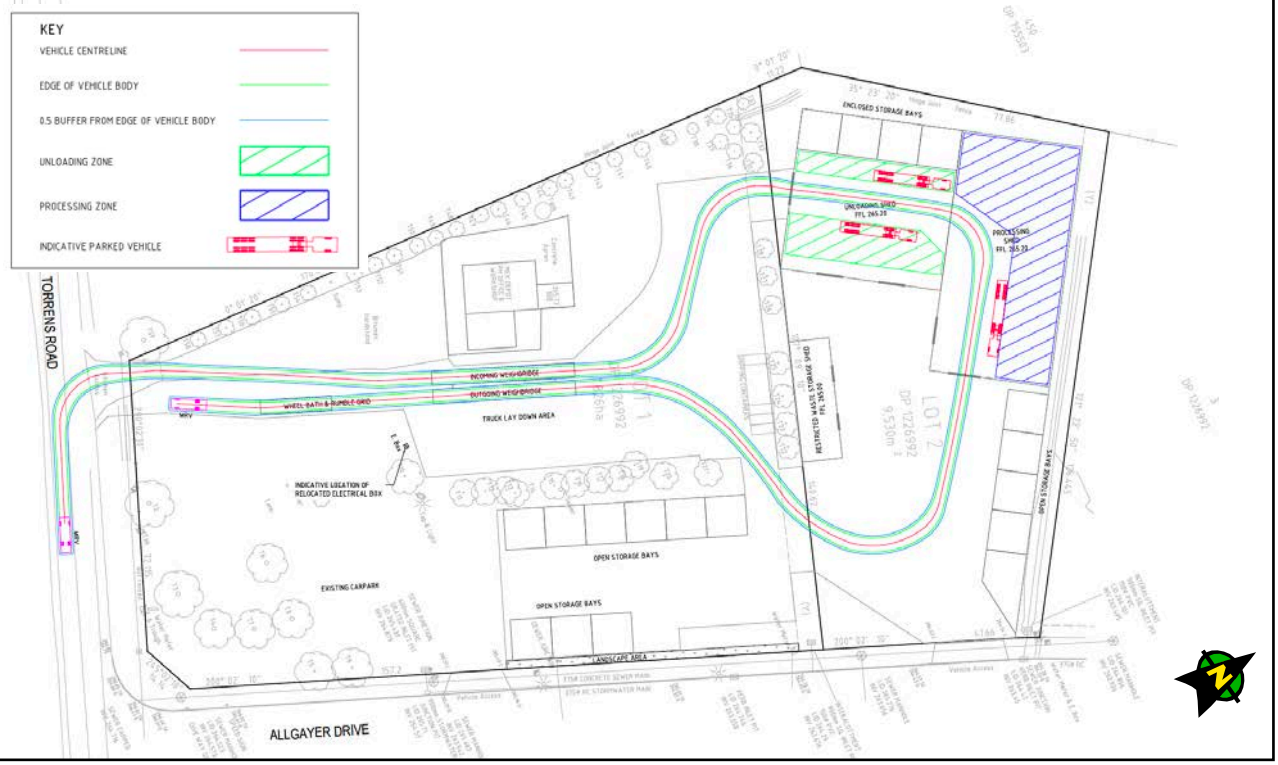
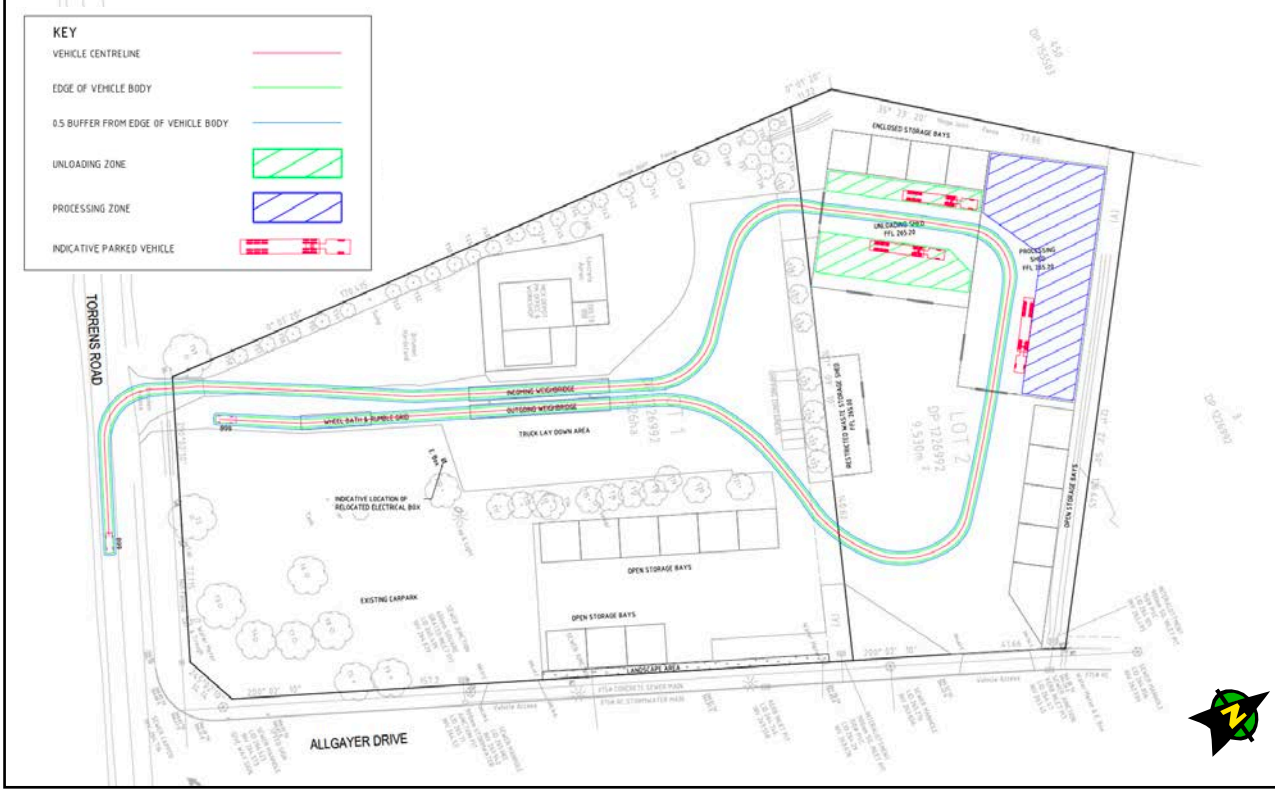


FIGURE 3.15: Swept path analysis B99 Vehicle and waste unloading zones

(Source: Martens & Associates, consulting engineers)



It is estimated that delivery of waste to the site should take between an estimated 14-16 minutes, which allows for an incoming vehicle entering the site and be weighed and checked, travel to the unloading area, weighing and invoicing at the outgoing weigh bridge and departing the site. Similarly, it should take between an estimated 14-16 minutes for the dispatching of waste loads, including allowance for an incoming empty vehicles entering the site and weighing at the weigh bridge, loading of material from the stockpile bays, and weighing of outgoing vehicles. Refer to section 3.2.5 for further details.

Out of hours truck parking for MEX vehicles will be available in the designated location on the project site. Parking movements will be overseen by the traffic controller at the beginning and end of each day.

3.2.3 Inspection and unloading of unprocessed waste

The layout of the proposed waste facility is illustrated in the accompanying **Figure 3.1**. Trucks transporting waste would enter the project site from the Torrens Road entry and make their way to the weigh-bridge for weighing and inspection and classification, prior to unloading. Refer to **Figures 3.11 to 3.15** for location of waste unloading zones.

There will be two main screening points for identification of the type of waste received at the waste facility:

- At the weigh-bridge verified in accordance with clause 36(3)(f) of the NSW Waste Regulation (**Inspection Point 1** per *Standards for managing construction waste in NSW*). The operator of the weigh-bridge will seek details from the waste truck driver as to contents of load, certification of the incoming waste material if required, as well as a visual inspection of the load (by CCTV) before directing the vehicle to enter the facility. All incoming waste will be inspected against a proposed incoming waste quality management plan prior to being accepted- refer Section 3.2.1.

- In the initial tip and spread inspection/unloading area (**Inspection Point 2** per EPA's *Standards for managing construction waste in NSW*) the operator of the front end loader will inspect the waste as it is discharged from the waste truck, to check for non-conforming waste and easily extractable, bulk recyclable waste.

The weigh-bridge will be the primary source within the waste facility for tracking waste, including monitoring the quantity, type and source of waste received on site, and the quantity, type and quality of the outputs produced on site.

The driver will then deliver the waste to the nominated waste unloading or storage area -the tip and spread area- where it will be tipped and further inspected. All operations, including stockpiling, screening, picking, pre-sorting, and sorting of unprocessed waste will occur within covered sheds. No mixing of inspected and sorted waste with waste that has not been inspected and sorted will be permitted.

At the site entry all loads will be inspected by trained staff who will conduct a preliminary inspection for contaminants (e.g. asbestos). If these loads are initially accepted and contaminated asbestos material is found after unloading the contaminated material in the tip and spread area will be transferred direct to a secure shed for storage (**Inspection Point 3** per *Standards for managing construction waste in NSW*) and ultimate disposal to a landfill licensed to accept such material.

If a load of any other non-conforming waste is identified prior to unloading, the vehicle would be directed to an appropriate disposal facility elsewhere.

If a non-conforming waste is identified during deposition of the waste in the unloading area, the deposition of the waste will immediately stop. The non-conforming waste would then be reloaded into the vehicle that transported the waste to the site and directed to transport the waste to an appropriate facility, with all actions documented. [NOTE: The project seeks consent to permit the storage- but not the processing- of soil contaminated with asbestos, along with sealed asbestos waste, like roof sheeting. Refer also to 3.2.6 for further discussion]

All asbestos waste will be stored until such time as there is sufficient material to truck to a landfill facility licensed to accept this type of waste. Protocols consistent with the EPA's *Draft Protocol for Managing Asbestos during Resource Recovery of Construction and Demolition Waste* will be implemented].

Trucks would then exit the project site accessing the a proposed new weigh-bridge and wheel-wash facility before exiting the project site. Trucks exiting the site will be re-weighed as they leave the site to determine the mass of the load delivered. Any rejected loads will be immediately reloaded for removal from the site and recorded in a 'rejected load' register. The proposed waste facility is expected to employ a total of 9 staff at full capacity comprising 3 administrative staff and 6 (waste) processing staff.

A range of mobile plant (eg. screen/trommel, crushing plant, excavator, front-end loader) and a screening/picking line, will be used to handle and process the waste for each waste type.

Some waste will not able to be recycled onsite. This waste material will be stockpiled prior being sent for further off-site recycling or disposal at a licensed facility. Recycled products generally will be dispatched by heavy vehicle for sale or further processing at another facility. Non-recyclable residues will generally be dispatched to a licensed landfill by heavy vehicle.Testing of recycled material must meet the requirements of a Resource Recovery Order. A Resource Recovery Exemption must be complied with by the user of the material where required. Waste processing will include sorting, screening and blending (of soil). There will be no crushing, grinding or shredding of waste on site.

3.2.4 Sorting of unprocessed waste

Vehicles would enter the building from the west and unload co-mingled mixed waste on to the concrete tipping and unloading area. The waste would be manually pre-sorted with a loader and/or excavator spreading the material and a material handler with a grab attachment removing recoverable material. Recoverable materials may include, bricks, masonry, cardboard, paper, plastics, or scrap metal.

The following waste types have the potential to limit the effectiveness of the operations and therefore will be targeted for separation from the general waste stream, where feasible, for recycling or reuse.

This would include but not be limited to the following:

- Bricks, tiles and concrete.
- Larger concrete or other building materials.
- Large metal or steel products.
- Larger cardboard products.
- Larger C&D or C& I waste not included in the above.
- Oversize waste products generally that will not be able to be processed on site.

Lithium batteries will be sorted from the waste stream for later storage until such time as there is sufficient material to truck to a landfill facility licensed to accept this type of waste.

3.2.5 Main processing area

With the exception of asbestos waste, all other sorted material will then be processed in the main processing shed using a mobile, diesel-powered trommel (refer Photograph 3.5 of typical trommel) and/or a mobile crushing plant (refer Photograph 3.6), the latter brought in on a campaign (as needed) basis from Marys Mount Quarry, which a related Mackellar Group (MEX) company operates. Both plant will operate within the processing sheds only. In the interests of minimising noise and vibration impacts, only one of these plant will operate at any one time.

A trommel is a mechanical screening machine used to separate materials, including the solid-waste processing industries. It consists of a perforated cylindrical drum that is normally elevated at an angle at the feed end which will screen waste to various specifications depending on intended final use. Trommel screens are widely used for the accurate sizing and separation of materials including soil, rock and aggregates.

PHOTOGRAPH 3.5 (above): Loading of waste into a typical tracked trommel (Anaconda). The trommel itself is on crawler tracks and can be easily moved if required. To the left and right of the trommel are the conveyors, which deposit processed waste into stockpiles.

(Source: Anaconda website)

Unprocessed waste material is initially fed by front-end loader into the feed chute of the trommel, where it then enters the drum screen, and due to the inclination and rotation of the roller device, the material on the screen surface will turn over and roll, so that the qualified (processed) end product will be discharged through the outlet at the bottom of the drum, with the unqualified (reject) material discharged through the outlet at the side of the drum. Different screen materials can be used according to intended end-use requirements. The roller device adopts an effective fully sealed structure, which is dust-free. Refer Photograph 3.6.

Soil material won from the above process is then inspected for assessment as to what standard it can be resold/reused for and placed in the holding bays for retesting, if required. Other material screened off during the above process will be sorted again by the team and sent to their allocated holding bays, ready to be resold/reused or sent to landfill.

PHOTOGRAPH 3.6 (above): Typical crushing plant at MEX Marys Mount Quarry (McCloskey J50 shown in photo), to be used on a campaign basis at the proposed waste facility.
(Photograph taken 13 August 2019)

3.2.6 Storage of asbestos material and unexpected finds protocol

Sealed asbestos only is to be accepted at the waste facility. However, should any asbestos containing material (ACM) be detected after an incoming load has been unloaded (ie. at Inspection Point 2) it will be subject to an unexpected finds protocol which would include the following: notification of management; provision of adequate safety equipment for staff proximate to the unloading point; preventing unauthorised personnel from entering the area; appropriate controls (eg. sediment controls) to be implemented to prevent spread of potential contamination, wetting the material upon discovery (low pressure water only); encapsulating/sealing the material; and then storage in a sealed shed prior to disposal to a licensed landfill capable of accepting the material. Any customer bringing in a load containing more than 5 tonnes of asbestos waste will be required to reload their delivery vehicle and remove the material from the site. For any smaller loads of asbestos material (ie. less than 5 tonnes), most likely contained in domestic trailer loads, the material will be bagged and stored in the restricted waste storage shed.

[NOTES: 1.High-pressure water sprays or compressed air, brooms or anything else that might release asbestos into the air are to be avoided. Asbestos contaminated soils must not be wetted down to saturation point. 2.The material shall be placed into an asbestos waste bag and labelled as asbestos waste. 3. For anything other than the discovery of a fragment of asbestos the work area containing the asbestos find should be clearly demarcated to communicate risk to others, with barriers and warning signs put into place.].

Records are to be kept of the asbestos material encountered, including:

- Whether it is friable asbestos or non-friable asbestos. Non friable asbestos may include cement-bound asbestos (e.g. fibro cement in the form of small fragments, flat sheets, corrugated roofing, or pipe) or other bonded forms of asbestos (e.g. bitumen, textured coatings and floor tiles may also contain asbestos). Friable forms of asbestos including lagging and insulation may be seen as fibrous material which flakes and powders easily. It is often very difficult to identify the presence of asbestos by sight.
- The date when the asbestos was identified.
- The source of the asbestos material.
- The name of the person who brought the asbestos to the project site.
- The material may need to be tested b a qualified assessor or contractor to confirm the presence of asbestos.

3.3 Site Components Proposed Waste Facility

The proposed waste facility will benefit from existing facilities already established on the project site associated with the current operations of Mackellar Equipment Hire Pty Ltd and related companies MacKellar Excavations (MEX) & Gunnedah Quarry Products (GQP). This includes the existing office/administration building, fuel storage/supply, truck parking and manoeuvring areas, staff car park, weigh-bridge, workshop, landscaping, manager's residence, hardstand, existing lawful access points, as well as existing services infrastructure. The main components of the proposed waste facility are illustrated in **Figures 3.1-3.4** and are as follows:

- The sheds containing the unloading and main processing shed are linked, having a combined floor area of 3,400m^2. The shed containing restricted waste is physically separated from this shed. All sheds are to be enclosed, covered , and constructed in Colorbond. A 4.5m high concrete wall runs along almost the entire northern boundary of the site. The unloading and processing shed has an L-shaped design with a maximum width of 70m and maximum length of 60m in length, with a height to the gutter of 8.5m and a maximum height of 10.5m. The exiting storage shed on the site will be relocated and repurposed as the restricted waste shed. It is 10m in width and 30m in length, with a floor area of 300m^2, with a maximum height of 8m. The materials currently stored in this shed will be relocated to another property, removed from and not forming a part of the project site. Refer also to **Appendices C** and **K** for further details.
- A concrete slab for the sheds described above.
- Hard surfacing of the site in a material such as concrete or asphalt, with a perimeter kerb to contain runoff, including water from fire fighting vehicles in the event of a fire.
- An on-site surface water management system, including on-site detention (OSD) system and leachate collection.
- Provision for an additional two (2) fire hydrants facing the Allgayer Drive street frontage, with a fire detection system, fire hose reels and automatic fire sprinklers also to be installed.
- Provision of adequate access for fire fighting vehicles and equipment in compliance with the requirements of the National Construction Code (NCC/BCA) and Fire+Rescue NSW guideline *Access for fire brigade vehicles and firefighters*.
- Dedicated on-site parking spaces for staff, including one disabled space.
- Connection to existing infrastructure, including drainage.
- Provision for two weigh bridges, with a wheel wash-down installed for outbound waste vehicles.
- Existing administration building and workshop, containing main office, amenities including lunch room and toilets.

- Product bays, which will be 3 metres high and block- walled.
- Relocation of the existing self-bunded diesel storage tank to an off-site location.
- A mobile trommel (Anaconda or similar) to be used to process waste, to be also housed in the processing shed area. A crusher from MEX' existing Marys Mount Quarry will be used on a campaign basis a few times a month to crush waste suitable for crushing.
- An enclosed picking line inside the main shed that extends outside along a portion of the western boundary.
- Boundary fencing to a maximum height of 1.8 m on all boundaries.
- Waste/product stockpiles. All stockpiles will maintain a minimum 6m unobstructed access on each accessible side, to enable access by fire fighting vehicles.
- Truck parking and manoeuvring areas.
- An emergency plan is to be developed for the facility covering such matters as worker safety as well as fire emergency protocols.

3.3.1 Weigh-bridges, wheel wash and office area

The project site currently provides a large office and administration building already in place, housing the offices of Mackellar Equipment Hire Pty Ltd and related companies MacKellar Excavations (MEX) & Gunnedah Quarry Products (GQP). This existing building will house staff responsible for management of the proposed waste facility. Refer Photograph 3.7. The proposed weigh-bridges will be located in a position adjoining the existing office/administration building. It is proposed to weigh all incoming heavy trucks carrying waste. All loads will be inspected at this weigh-bridge.

PHOTOGRAPH 3.7 (above): View of main office and workshops, with adjoining hardstand areas, at the site, looking to the north-east.

(Photograph taken 13 August 2019)

The weigh bridges will serve incoming and outgoing trucks associated with the waste operation. CCTV cameras will be installed between the two weigh bridges, enabling remote inspection of incoming loads from the administration office prior to being accepted on site. The area serving outgoing trucks will include wash-down facilities. This will comprise a self-contained wheel wash, provided in front of the weigh-bridge for trucks leaving the site. Water used in the wheel wash will be lost through evaporation, and on tires leaving the wash, so periodic replenishment will be required. Sediment in the wheel wash will be regularly removed using an excavator or front-end loader. If required, a third above-ground weigh-bridge will be installed in the same location, to improve servicing of incoming and outgoing vehicles.

3.3.2 Processing, unloading and storage sheds, FSR

The majority of unprocessed waste tipping, storage and processing will occur within the unloading/tipping shed, the processing shed and waste storage shed, to be constructed as part of the site establishment works. The main processing shed and storage shed will be fully enclosed. By enclosing these facilities, air quality, noise and surface water impacts will be significantly mitigated. A modest overall FSR of 0.14:1 is proposed (site area is 27,790m^2).

The processing shed will be a fully enclosed building with roller doors open during the day. Keeping doors open during operational hours will have benefits for the site, including natural lighting for site employees, natural ventilation, temperature control and general worker amenity. The unloading shed will have a roof and sides facing the site boundary, but will be open to the internal operating area. The waste storage shed will be fully enclosed and closed for all but unloading and loading purposes. All sheds will be built in Colorbond steel. Processing within the shed is described in Section 3.2.5. It is proposed to install and use a water misting system in the unloading and processing shed. Misting sprays are operated to suppress dust without producing runoff and the water flow can be adjusted to achieve this result. The water misting system in the unloading shed and in the processing shed will be utilised at all times when handling, sorting, loading and unloading activities are being undertaken inside the building. These misting sprays will be used instead of water sprinklers. Details of the sheds proposed and changes in overall site floor space are summarised in the accompanying Table 3.2. Refer to section 3.3.7 for further details and typical specifications as well as **Appendix K**.

Table 3.2: Total floor area: existing + processing, unloading and storage sheds

Building	*Function of building/shed*	*Existing Floor area (m^2)*	*Proposed Floor area (m^2)*	*Building height*
Admin and workshop	*Contains administration for MEX business and workshop for repair of plant and equipment.*	*300m^2*	*300m^2 (Building to be retained)*	*6.6m*
Caretakers residence + demountable building	*The dwelling and demountable building were originally transported to the site prior to MEX acquiring the site. To be relocated to another off-site location.*	*119m^2*		*3.4m*
Unloading and tipping area (shared with processing area)	*Vehicles would enter this building from the south-west and unload co-mingled mixed waste on to the concrete tipping and unloading area. The waste would be manually pre-sorted prior to further processing. Fully enclosed, but will be open to the internal operating area.*		*1,600m^2 (40m x 40m)*	*10.5m*
Processing area (shared with unloading and tipping area)	*The proposed processing shed contains the mobile trommel screen, used to separate materials, including the solid-waste processing industries, and conveyors (+ crusher on a campaign basis).Fully enclosed.*		*1,800m^2 (60m x 30m)*	*10.5m*
Waste storage shed	*The existing storage shed is to be relocated and repurposed as as a restricted waste storage shed. This storage facility is to be be fully enclosed.*	*300m^2*	*300m^2 (10m x 30m)*	*9.0m*
TOTAL FLOOR SPACE		***719m^2 (FSR of 0.025:1)***	***4,000m^2 (FSR of 0.14:1)***	

3.2.3 Landscaping

Existing landscaping will be largely retained, save for the removal of a number of trees ear-marked for truck access and movement areas in the vicinity of the unloading and processing areas, as well as removal of a low hedge near the site entry from Torrens Road. Existing landscaping on site includes well-established buffer plantings along the western boundary of the project site, as well as tree plantings near the intersection of Allgayer Drive and Torrens Road, as well as well-established tree plantings separating Lot 1 from Lot 2 - refer Photographs 3.8 and 3.9. Further landscaping is proposed within a 6m wide corridor along the northern boundary of the site, as well as the NW boundary of Lot 2. Refer **Figure 3.16**.

PHOTOGRAPH 3.8 (above): View of existing vehicular access point to the project site from Torrens Road. Note landscaping at entry. Views not possible of that part of the site proposed for unloading of waste and processing areas. NOTE: Transportable dwelling and outbuilding to be transferred off-site

(Photograph taken 13 August 2019)

PHOTOGRAPH 3.9 (above): View of existing vehicular access point from Torrens Road within the site. Existing MEX office and workshops in rear of photograph, with tree plantings located along western boundary (left hand side of photograph). Views not possible of that part of the site proposed for unloading of waste and processing areas.

(Photograph taken 13 August 2019)

3.3.4 Site security and signage

A chain mesh fence will be erected around the entire project site to a height of 1.8m, with barbed wired on top. Signage will include a sign at the entrance to the site on Torrens Road with the name of the facility, opening hours and a telephone number for a phone that will be attended whenever the site is accepting waste or operating.

3.3.5 Site access and parking

The project site enjoys existing sealed access and egress points from both Torrens Road (one access point- refer Photographs 3.3 and 3.4) and from two separate access points from Allgayer Drive. The entry and exit point for all waste-related vehicular traffic will be Torrens Road, currently provided with dual entry and exit lanes located within a single crossover. The Torrens Road access point will not require any further modification in order to service the proposed waste facility.The waste facility has been designed in order for all waste-related truck traffic to enter and exit the site in a forward direction. Apart from movements in the vicinity of the weigh bridges, loading and unloading areas, covered areas, and waste stores, traffic movement around the site will be largely unrestricted.The project site is currently provided with hardstand areas throughout. The covered loading areas, stockpiles and processing areas will be sealed.

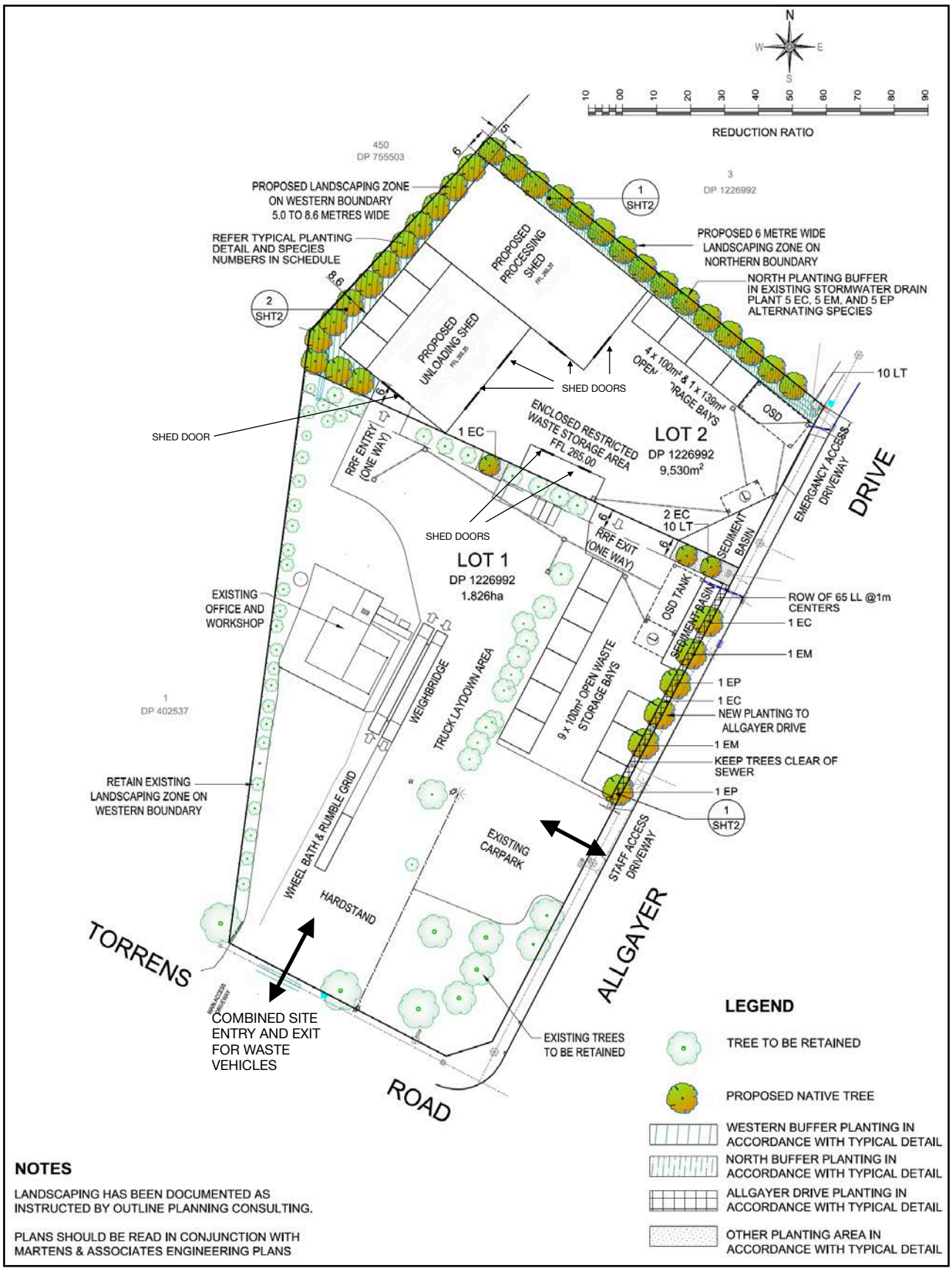
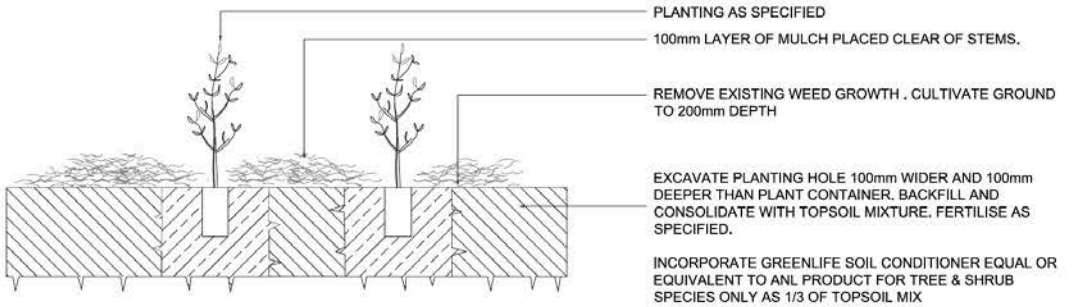


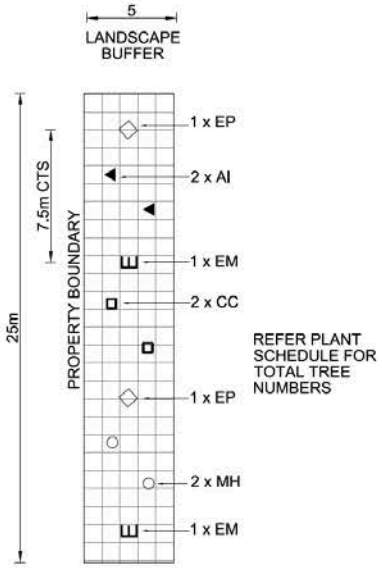
FIGURE 3.16: Landscaping proposed

(Source: Kathryn Yigman, Stewart Surveys)



1 TYPICAL PLANTING DETAIL

0 100 200 500mm



2 TYPICAL WESTERN BOUNDARY PLANTING DETAIL TO BE REPEATED

WESTERN BUFFER PLANT SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	POT SIZE	WESTERN BUFFER QUANTITY	NORTH BUFFER QUANTITY	ALLGAYER DRIVE QUANTITY	OTHER AREAS QUANTITY	TOTAL QUANTITY
TREES									
EC	Eucalytpus crebra	Ironbark	14	200mm	-	5	2	3	10
EM	Eucalytpus melliodora	Yellow Box	16	200mm	8	5	2	-	15
EP	Eucalytpus populnea	Bimble Box	12	200mm	8	5	2	-	15
SHRUBS									
AI	Acacia itraphylla	Willow-leaf Wattle	2	50x50x90	12	-	-	-	12
CC	Callistemon citrinus	Red Bottlebrush	2	50x50x90	12	-	-	-	12
MH	Melaleuca hypericifolia	Red Flowering Paper Bark	3	50x50x90	12	-	-	-	12
STRAP LEAVED PLANTS									
LL	Lomandra longifolia	Lomandra / Matt Rush	1	50x50x90	-	-	65	-	65
LT	Lomandra 'Tanika'	Dwarf Lomandra	1	50x50x90	-	10	-	10	20

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CLIENT: MACKELLAR EQUIPMENT HIRE
PROJECT: LOT 1 & 2 IN DP1226992
DRAWN BY: KY
OUR REFERENCE: 5179
DATE: 16 NOVEMBER 2020
TITLE: PROPOSED RESOURCE RECOVERY FACILITY 16 TORRENS ROAD, GUNNEDAH LANDSCAPE DETAILS
REDUCTION RATIO: SHOWN
DRAWING: Sheet 2 of 2

FIGURE 3.16 cont.: Landscaping proposed

(Source: Kathryn Yigman, Stewart Surveys)

All vehicle movement inside the project site, as well as access and egress, will be strictly controlled. A surface water management system to mitigate the release of untreated stormwater runoff will be installed, with the site's surface graded towards the sediment control pit located in the north-east corner of Lot 2.

The project site already provides a large car park for staff associated with the operation of other Mackellar Group companies, as well as parking for haulage vehicles. There is sufficient space to provide additional car parking for employees at the proposed waste facility. Car parking spaces will be dimensioned in accordance with the Australian Standards. The proposed development, including the existing Mackellar Group depot, will make provision for a total of about 17 car parking spaces (including 2 disabled car parking spaces), one secure class 2 staff bicycle spaces and one motorcycle space (NOTE: subject to Construction Certificate plan details).

The parking dimensions, internal circulation, aisle widths, kerb splay corners, head clearance heights, ramp widths and grades of the car parking areas are in conformity with the current relevant *Australian Standard AS2890.1*. Each disabled person's parking space must comply with the current relevant *Australian Standard AS2890.6 – Off-street parking for people with disabilities*. This requirement will be reflected on the Construction Certificate plans. The provision of suitable line-marking and painted signage delineating vehicular flow movements will also be provided within the car parking areas.

3.3.6 Storage bins/bays/stockpiles

The waste storage bins/bays/stockpiles are designed in accordance with the Martens & Associates Development plans (See **Appendix C**). Given that the demand for and supply of the various waste materials will vary over time, flexibility will be applied in terms of the percentage breakdown in waste streams and specific types of waste that will be stored in the storage bins/stockpiles, in particular, the external storage bins/stockpiles, over any period of time. As such, the waste facility design should be considered as indicative only in this regard.

Storage areas (**Inspection Point 3** per *Standards for managing construction waste in NSW*) are to be inspected each day, with any errant waste types moved to the correct area. Records are to be kept of wastes being kept in the wrong area. Records of each inspection carried out by trained personnel will be kept at the Torrens Road waste facility for a period of three years from the date of the inspection.

In accordance with Fire and Rescue NSW *Fire safety in waste facilities* guideline, all stockpiles will have a maximum width of less than 10m where fire access is provided down one side of the storage bin/stockpile only and 20m where access is available to both sides. Based on storage method and fire risk of materials, a minimum separation of 20m is to be maintained between external stockpiles per the Fire and Rescue NSW *Fire safety in waste facilities* guideline. Covered areas attached to buildings or structures, such as areas under awnings and undercrofts, should not encroach into the minimum separation distance unless protected by an automatic fire sprinkler system. The minimum separation distances can be reduced, if required, when the storage bin/stockpile is separated by masonry wall.

External storage bins/stockpiles are to be maintained so that all buildings access and egress points kept clear and unobstructed. External storage bins/stockpiles are to be maintained so that all required fire brigade vehicle access (e.g. around buildings, between stockpiles and to hardstand areas) is always kept clear and unobstructed per the Fire and Rescue NSW *Fire safety in waste facilities* guideline. Internal storage bins/stockpiles are to be separated by masonry walls and are to be located side by side. Any separating masonry wall, revetment or pen will extend at least 1m above and at least 2m beyond the each external storage bin/bay/stockpile. Internal stockpiles will have a minimum of 10 m unobstructed access on each accessible side of each building.

The outputs storage area comprises six waste storage bays, varying in size and dimension. The total storage capacity of the waste storage bays is about 1,500 cubic metres, equivalent to approximately 2,250 tonnes. In addition, up to 1,000 tonnes of waste would also be stored within the tipping/unloading floor at any one time, with another 1,000

tonnes of waste held within the processing shed at any one time. The asbestos waste storage would hold up to approximately 40 tonnes of asbestos waste at any one time. As a result, the Proposal is seeking approval for the storage of up to 9,654.7 tonnes tonnes of waste at any one time, with a maximum of about 1,500 tonnes of waste delivered to the site on any one day , or average of about 905 tonnes or about 20 laden trucks per day (NOTE: 40 laden trucks/day modelled as a 'worst case' scenario in the traffic assessment- refer section 4.3 and **Appendix D**).

3.3.8 Fuel storage

Diesel fuel for plant and equipment used on the project site will be accessed from an existing above-ground, self-bunded tank (approximately 30,000 L) located in to the north of the main office building and workshop. The storage complies with the relevant Australian Standard/s. Plant and vehicle diesel tanks will be filled from a bowser located next to the diesel tank. Refer Photograph 3.10.

PHOTOGRAPH 3.10 (above): View of existing fuel supply and service vehicle, near the existing administration building, with surrounding hardstand area.

(Photograph taken 13 August 2019)

3.3.7 ACM & waste lithium battery storage

The Project would accept and temporarily store and transfer approximately 2,500 tonnes per year of secured asbestos material (**Inspection Point 3** per *Standards for managing construction waste in NSW*). The asbestos storage would be located in the northern portion of the project site. Asbestos containing material (ACM) disposal containers would be fully enclosed and stored in an existing building. All incoming loads would be inspected and recorded at the weigh bridge and escorted or instructed by the operator through the project 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 a landfill licensed to accept asbestos waste. Maximum storage capacity would be 30 tonnes.

Batteries should be **stored** in a well-ventilated, dry area kept between 40 and 80 degrees Fahrenheit. They should be **stored** away from direct sunlight, heat sources, and water. **Batteries** should be stacked so that they're stable and won't be bumped, knocked over or otherwise damaged. If the disposed battery is punctured or short circuited, this remaining energy can be released rapidly and potentially cause a fire. This can be problematic in waste reprocessing centres that contain other waste streams and where the condition of the batteries is unknown. In general, most battery waste is mixed, and although some automated sorting exists, a large amount of manual sorting is still required. This is mostly due to inconsistencies related to chemistry type and the poor labelling of battery wastes.

3.3.8 Stormwater, Leachate Control

Stormwater and leachate will be managed in accordance with the Martens & Associates development details in **Appendix C**.

Leachate

Any leachate generated at the premises must not come into contact with stormwater or any stormwater infrastructure. A separate drainage system has been designed to capture and store any leachate, ensuring it is not mixed in with the general stormwater system.

Stormwater

NSW EPA stormwater retention targets have been adopted for the site. Two (2) on-site detention (OSD) sediment basins are planned, one collecting stormwater runoff from the proposed waste facilities on Lot 2, the other collecting stormwater runoff from the proposed waste facilities on Lot 1. The site will be graded to allow runoff from the external hardstand areas to flow overland to the two OSD pits. Clean runoff from the roof of the processing and unloading area will be collected into water reuse tank storage.

Containment of water from fire events

Proposed bunds and OSD sediment basins on lots 1 and 2 will be fitted with a manual shut-off valve on the outlet pipe during fire events.

3.3.9 Dust Control

The waste facility is to be maintained in a condition which minimises or prevents the emission of dust from the site and from activities that have the potential to generate dust. Trucks entering and leaving the site that are carrying loads of waste must be covered at all times, except during loading and unloading. All exiting traffic will leave via a wheel wash and weigh bridge.The universal use of the wheel wash will reduce material brought off the site and improve stormwater quality and dust generated off site from transport vehicles.

▪ 3.4 Workforce and Hours of Operation

The proposed waste facility will normally operate and accept waste deliveries between 7.00 am and 6.00 pm Monday to Saturday, excluding public holidays. The operation of heavy machinery is only able to occur between 7.00am-5.00pm Monday to Friday. No waste facility operations to be undertaken on Sundays or public holidays. Construction hours would be 7.00am to 5.00pm Monday to Friday and 8.00am to 1.00pm Saturdays.public). It is estimated that 62 people will be engaged to undertake the construction of the waste facility. Once production is at full capacity, the waste facility is expected to be operated by up to 18 employees, as follows:

- Two (2) staff in the administration building.
- One (1) weigh bridge operator.
- Two (2) front-end loader operators.
- Four (4) employees for sorting and picking.

- One (1) site supervisor.
- Two (2) mechanics.
- Four (4) sales staff for product in and out.
- One (1) safety officer.
- One (1) compliance and quality officer.

This does not include the existing 28 employees responsible for administration, repairs and maintenance or transport of material- the latter providing employment for twelve (12) drivers. There are no contractors expected to work onsite except for service suppliers and possible additional maintenance and repair workers.

All on-site staff will will undergo before undertaking any task required at the waste facility, including training on: the requirements of the POEO Act and its regulations (including the Waste Regulation) applicable to the operations at the Torrens Road waste facility; the requirements of the environment protection licence for the waste facility, with reference to the waste conditions and the wastes permitted to be received; and the requirements of applicable EPA and other applicable Standards. In regard to the latter, compliance with the *Work Health & Safety Regulation 2017* will be required, which requires workers involved in asbestos identification, handling, control, removal or carrying out of asbestos-related work complete asbestos-related training, and workers involved in carrying out the removal of more than 10 square meters of non-friable asbestos (including within asbestos contaminated material), obtain and hold a non-friable asbestos removal licence training.

All records of the training undertaken for the above is to be kept at the waste facility and made available to an authorised officer of the EPA if requested.

3.5 Plant and Equipment

Indicative plant and equipment to be used at the Torrens Road waste recycling and transfer facility is listed in Table 3.3. This information has been used in noise and air quality assessments.

The actual equipment used may vary but Mackellar Equipment Hire Pty Ltd will ensure that noise and air quality compliance requirements are met.

Table 3.3: Typical Plant & Equipment Proposed Waste Facility

Use on site	***Description***
Haulage vehicles	*Typically a'Truck and dog' truck configuration with other multiple axle heavy vehicles, capable of carrying loads of between 33-43 tonnes+ payload per truck load. Refer Photograph 3.4. Larger truck loads are possible if road trains are used to haul waste material to and from the waste facility.*
Weigh-bridge	*Use of two weigh-bridges, one for weighing incoming trucks carrying waste, the other weigh-bridge for outgoing vehicles (with wheel-wash), with optional third weigh-bridge should demand warrant.*
Trommel	*Mechanical screening machine used to separate, blend and to sort waste materials. It consists of a perforated rotating cylindrical drum. Diesel powered.* *Anaconda TD516R tracked trommel or similar. Refer to* ***Figures 3.2-3.3*** *showing the technical specifications for this machine and Refer Photograph 3.6.*
Front end loader/excavator	*Unloading and loading trucks. Moving waste and products. Two(2) Caterpillar 972M loaders or similar. Refer Photograph 3.11 showing an existing Mackellar group owned Caterpillar front-end loader loading a truck.*
Water cart	*Refer to Photograph 3.11 for typical water cart. The water cart would have a capacity of 9,000 litres.*
Fork lift	*Used to move waste material, including sealed asbestos.*

PHOTOGRAPH 3.11 (left): Typical water cart to be used on site.
(Source: Mackellar Excavations)

3.6 Fire Safety

3.6.1 Existing fire safety measures in place

The existing Mackellar Group operations on site incorporate the following fire safety measures, provided within the existing main office building and adjoining workshop:

- Perimeter vehicle access for emergency vehicles around the building for emergency vehicles.
- Two (2) fire hydrants fronting Torrens Road, with fire hydrants currently provided on land on the opposite side of Allgayer Drive.
- Two (2) fire hose reels serving the front and rear respectively of the office/workshop building.
- Portable fire extinguishers serving the workshop areas as well as the main office, with an additional CO2 fire extinguisher also provided.
- Smoke detectors to be installed, designed so the smoke layer does not descend below 4 m above floor level.

3.6.2 Additional fire safety measures proposed

The proposed resource recovery facility incorporates the following relevant additional 'acceptable solutions' per the NCC and Appendix A of the Fire and Rescue NSW *Fire safety in waste facilities* guideline. [NOTE: The facility is not expected to be handling any significant volume of combustible waste- refer Section 3.1 for details]. The 'acceptable solution' applies to the case of a typical waste facility that handles unprocessed co-mingled recyclable waste material. The following additional fire safety measures are proposed to service the proposed waste facility:

- Vehicle access for emergency vehicles around the building for emergency vehicles, enabling emergency vehicles to travel in a forward direction. Adequate firefighter access is provided to the building, fire safety systems and equipment.
- Two (2) additional fire hydrants to be provided on the site, fronting Allgayer Drive, with potential booster if required. To be located at least 10m clear of any storage bins/stockpiles.
- A fire hose reel system to be installed to Australian Standard AS 2441 providing coverage for both internal and external storage bins/stockpiles.
- Portable fire extinguishers provided, including a CO2 fire extinguisher. To be provided to serve the waste facility in accordance with the relevant provisions of BCA Clause E1.6 and AS 2444-2006.

- A fire detection and alarm system is installed to *Australian Standard AS 1670.1* and designed for the fire scenarios and environment (e.g. visual flame detectors, infrared detectors, heat detectors/probes). Manual alarm points are installed for staff to initiate alarm of fire.
- Misting spray to be provided in main processing shed instead of water sprinklers.
- Fire brigade vehicle access is capable of being provided between external storage bins/bays/stockpiles.
- The external areas of the site to be level, clear of all rubbish and combustible materials, and enclosed by fences or walls constructed of non-combustible construction.
- The fences or walls to be of sufficient height to prohibit unauthorised persons from entering.
- Each internal stockpile complies with the minimum of 1,000 m^2 specified in the 'acceptable solutions' set down in Appendix A of the Fire and Rescue NSW *Fire safety in waste facilities* guideline. Internal stockpiles will maintain a minimum of 6m unobstructed access on each accessible side.
- The individual storage bays that contain the different waste product (as identified above) shall be separated by concrete construction. Those storage bays containing combustible materials (i.e. timber, plastics, and paper / cardboard) shall not be located next to each other.
- Suitable provisions shall be provided for the retention of contaminated water run-off.
- A system of emergency lighting and exit signs shall be throughout the building in accordance with the relevant provisions of BCA Part E4 and AS 2293.1-2005.
- An automatic smoke exhaust system to be provided to serve any building in accordance with the relevant provisions of BCA Specification E2.2b and AS/NZS 1668.1-2015. Further, smoke reservoirs may be required at roof level to contain smoke at designated internals, including above the processing area.
- An operations plan is to be documented and implemented for stockpile management and a copy is be included within the Pollution Incident Response Management Plan (PIRMP) emergency information package. An emergency plan is to be provided for staff and other persons at the waste facility in the event of fire.

3.6 Construction of the Project

It is proposed that a Construction Management Plan be prepared prior to any on site construction works commencing. An outline of the practices to be adopted during the construction stage of the Project is provided below. Refer to accompanying **Figure 3.17**, showing works proposed during the construction phase. It is estimated that 62 people will be engaged to undertake the construction of the waste facility. The project site is already partly developed for industrial purposes, however, the additional works will be required in order to facilitate the Project, including construction of the following:

- Covered areas and sheds.
- Relocating and repurposing of existing storage shed on the site for the purposes of housing restricted waste.
- Installation of two (2) additional fire hydrants on the site, fronting Allgayer Drive.
- Waste and product bays.
- Weigh bridges and associated wash bays.
- Marking traffic/pedestrian circulation and parking bays.
- Signage at the site entry and internal to the site, including directional signage.
- Installing gates and repairing/replacing fencing.
- Upgrading the surface water management system with On Site Detention (OSD) as well as associated stormwater pipes/pits.
- Removal of transportable dwelling near the Torrens Road entry and adjacent relocatable shed.
- Landscaping.

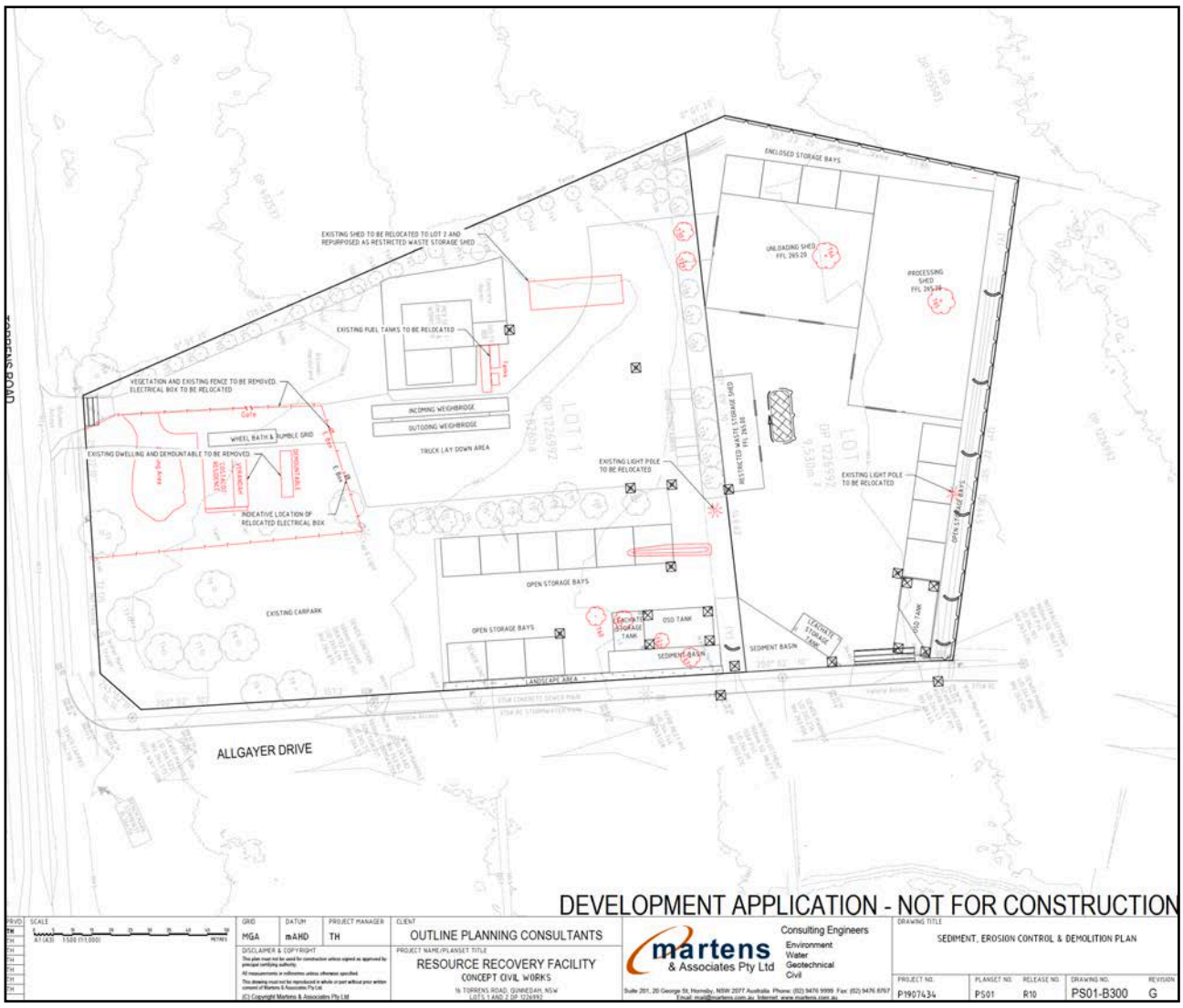
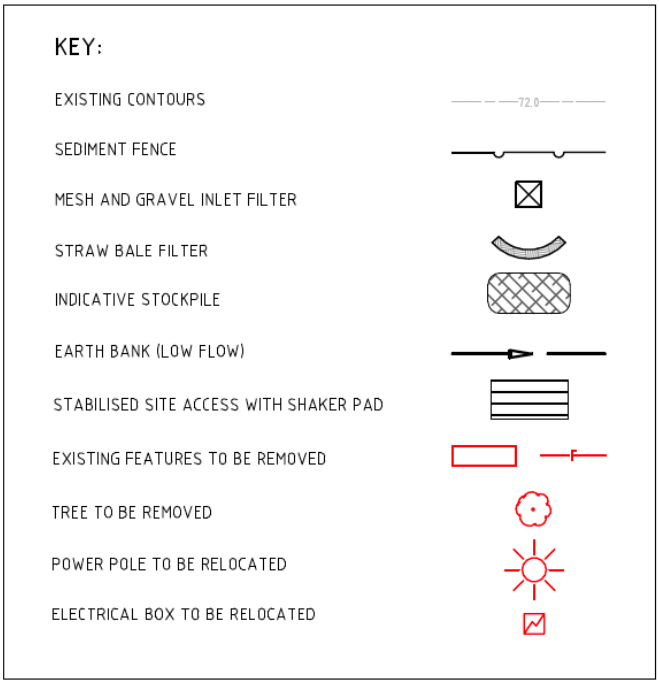


FIGURE 3.17: Works proposed for construction stage of the project

(Source: Martens & Associates, consulting engineers)



The site is already connected to mains water, sewer, electricity and telecommunications.

During construction, noise levels are predicted to exceed the criteria at the receptors. However, the predicted impact is likely to be minor taking into account the temporary nature of the construction activities and respite periods throughout the construction program. Potentially noise affected neighbours would need to be informed about the nature of the construction stages and the duration of noisier activities, along with progress updates.

3.6.1 Initial site works and site preparation

Prior to works commencing

Prior to construction works being undertaken on the project site, all necessary planning and investigations will be undertaken to mitigate and control impacts arising from the proposed works.

Security fencing is to be erected around the perimeter of that part of the project site the subject of any staged building work. The security fencing will be erected prior to commencement of any excavation or construction works, and is to be maintained in a state of good repair and condition until completion of that construction work. Adequate toilet facilities are already provided on the work site.

Site earthworks

Minimal excavation or reshaping of the land is required- refer to levels have been shown on the Engineering Plans prepared by Martens & Associates. Prior to concrete and other new hardstand areas being formed, the site will be minimally graded to ensure that the site is provided with appropriate drainage. Refer to earthworks cut/fill plan in accompanying **Figure 3.18**.

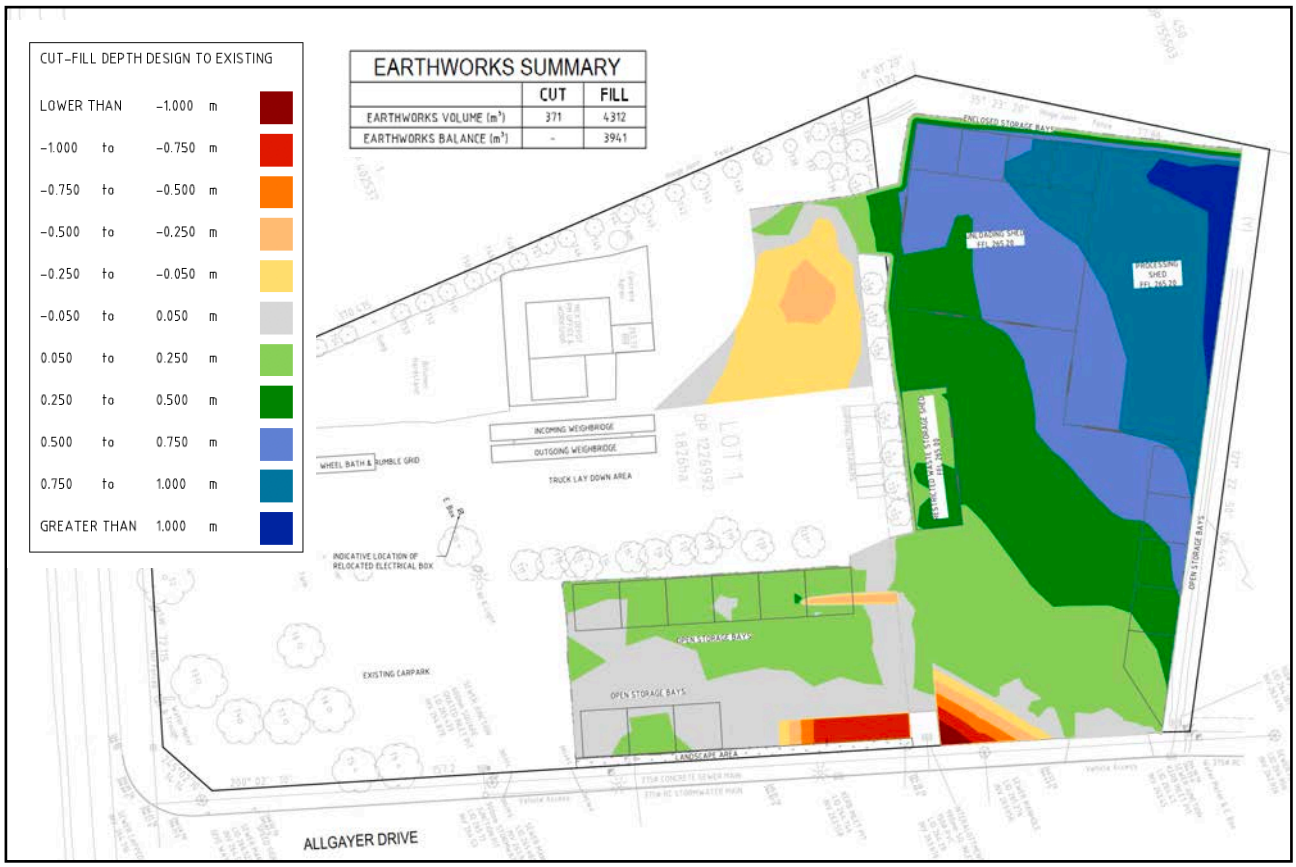


FIGURE 3.18: Cut and fill required for construction stage of the project

(Source: Martens & Associates, consulting engineers)

Tree removal

In order to accommodate the proposed waste facility it will be necessary to remove all existing trees from Lot 2, where most of the works will occur, with the removal of only a few trees on Lot 1. It is envisaged that all removed trees will be transported off site to a registered waste disposal facility or recycled/mulched on-site. The hedge adjoining the caretakers cottage will also be removed to make way for a hardstand area.

Demolition

No demolition works *per se* are required, however, it is proposed that the existing dwelling and adjacent transportable shed on the project site, fronting Torrens Road, will be transported off site to another location- the latter being the subject of a separate development application. Existing services will be disconnected prior to removal. Once the structure has been removed from this location the land will be reinstated and a wheel-wash located will be then established in the north-west corner of the dwellings curtilage.All surface rubbish material and asbestos material, if encountered during/after removal of the dwelling, should be appropriate disposed off-site to an approved landfill. [NOTE: The existing dwelling was transported to the site prior to the Mackellar group acquiring the property].

Site remediation

There will be no site remediation required, given the minimal preparatory site works or excavation required.

3.6.2 Site works

Construction Environmental Management Plan

Prior to construction commencing on the project site 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.

Site works generally

The construction works will be carried out generally as follows:

- Hours of work will be restricted to 7:00 am to 5:00 pm Monday to Friday, 8:00 am to 5:00 pm Saturdays with no work allowed on Sundays and public holidays.
- During the carrying out of site works, the site will be fully enclosed to prevent unauthorised access. A new security fence/ hoarding will be installed around the work areas, to achieve an appropriate level of security.
- Dust control measures are to be implemented.
- All construction access to the site will be through nominated driveways for the duration of the works (from Allgayer Drive). Existing diesel storage and dwelling to be removed off site, and storage shed relocated.
- Prior to commencement of any works, dilapidation reports of adjacent properties and Council's footpath and road will be carried out, where required.
- A traffic management plan will be prepared for the construction generally in accordance with the the transport/ traffic report, prepared by Streetwise (refer **Appendix D**, accompanying the Development Application).
- Allgayer Drive will be used as the main means for construction vehicles to access and leave the site.
- Access is available to existing toilet facilities on the site, within the main office building.
- Provision of waste and recycling bins at strategic location on site. Construction waste bins to be also provided. Bins to be removed from the site on a regular basis.
- Compliance with authorities requirements for site amenities and safety.
- On site treatment of stormwater run-off. Refer to Martens & Associates engineering plans for details in **Appendix C** accompanying the Development Application.

- All material handling during the works will be carried out within the confines of the site.
- Earthworks to be closely monitored as detailed in AS3798 -2007.

Construction process

The likely sequence of pre-construction and construction activities to be undertaken are set out below, summarised in the following:

- Equipment and machinery transferred to the project site. Includes establishment of site compounds and facilities.
- Construction of protective/construction fencing and establishment of erosion and sedimentation control measures.
- Fencing of areas not to be disturbed by construction activities and clearing/earthworks and building works. Includes the installation of drainage measures.
- Construction of buildings, drainage, and other associated works.
- Clean up and restoration of disturbed areas following the completion of construction.

Sorting area, processing and storage sheds

The construction of the above sheds and working floors would have a construction period of approximately 3 months and involve construction of a concrete slab and colour bond structure in the northern portion of the project site. Processing equipment would be delivered fully assembled.

Weigh bridge and wheel wash

The weigh bridges would have a construction period of approximately 4 weeks and involve installation of concrete access ramps, and construction of weigh bridge and recording facilities inside the existing administration building as well as CCTV. The construction of the wheel wash and wash down areas would involve excavation, laying formwork, placing reinforcement, pouring concrete and curing.

Unexpected finds protocol: Aboriginal during construction

If any any Aboriginal objects be exposed during construction works:

- All work must stop immediately in that area.
- Heritage NSW, a part of the Department of Premier and Cabinet (formerly Office of Environment and Heritage), must be advised of the discovery in writing.

Stormwater management

Construction of on site detention (OSD) and stormwater drainage would have a construction period of approximately 2 months.

Storage bays

This would involve preparation of a concrete floor slab and installation of precast concrete side walls.

Landscaping

Further boundary landscaping would be undertaken once all buildings, drainage na hardstand areas were constructed.

3.6.3 Erosion and sediment control

Erosion and sediment control measures are to be implemented during the carrying out of any on-site works in accordance with the “Blue Book” (*Managing Urban Stormwater – Soils and Construction* by Landcom, NSW Department of Housing 4th edition 2004). Refer to plans prepared by consulting engineers Martens & Associates Pty Ltd, which accompany this DA. Refer Figure 3.17. Erosion and sedimentation control will minimise the amount of sediment that would enter the downstream environment. Mitigation measures will include:

- Temporary sediment basins are proposed on the project site to accept stormwater runoff from all proposed works areas. Any contaminated material will be removed from any areas intended for on site detention works.
- A shakedown pad will be installed at the entrance to any development area within the project site.
- Minimising the area of disturbance during construction and the adopting of the following construction practices:
  - Sediment controls are installed.
  - Minimise the area exposed.
  - Preserve existing undisturbed stands of vegetation not earmarked for development or disturbance.
- To control surface water flows through each stage of the development in a manner that:
  - Diverts clean run-off around disturbed areas. and minimise surface run-off.
  - Disturbed areas promptly rehabilitated.
  - Trap sediment on site.
- Carry out regular monitoring and maintenance of erosion and sediment control measures and rehabilitation works until the site is stabilised.

3.6.4 Traffic management

A Traffic Control Plan (TCP) is to be prepared as part of an overall site environmental management plan and is to be implemented for all vehicle and pedestrian movements around the proposed works, in accordance with NSW RTA (2006) *Traffic Control at Work Sites Manual*.

Different sized trucks will be used during construction, although it is expected that most trucks can be rigid types for the delivery of construction material (e.g. concrete agitator trucks). Special traffic control measures would be prepared in the instance where oversize precast materials or plant is to be transported to the project site. All loading and unloading of excavation and construction machinery, excavation and building materials is to occur within the site boundaries or stockpiled along the road reserve fronting the site boundary. All loading and unloading operations are to comply with relevant WorkCover and other statutory regulations. Council's road systems will be maintained during the construction works period. Any damage to Council's infrastructure within the road reserve by construction operations will be repaired and/or reinstated.

3.6.5 Construction signage

Signage is to be displayed in a prominent position on that part of the project site on which building and allied works are proposed. The signage will list the following details:

- The name, address and telephone number of the Principal Certifying Authority.
- The name of the Principal Contractor and an after-hours telephone number.
- That unauthorised entry to the site is prohibited.
- Hours of construction as per the consent.

Signage will be maintained while construction work is being carried out and is to be removed upon completion.

All contractors working on the project site will be required to display on site their twenty-four (24) hour contact telephone number, which is to be clearly visible and legible from any public place adjoining the project site.

3.6.6 Construction hours of operation

The proposed working hours for construction works on site will be as follows:

- Monday to Saturday- 7:00am to 5:00pm.
- No work on Sundays and gazetted Public Holidays.

Any additional works outside these hours will require permission from Gunnedah Council for special requirements- such as oversized deliveries.

3.6.7 Construction equipment

The equipment necessary for the construction of the Project would would be expected to include some or all of the following: dozers; graders; compaction equipment; heavy vehicles; backhoes; excavators; rollers; concrete trucks and pumping equipment; welders; air compressors; concrete vibrators and cutting equipment; and mobile cranes.

▪ 3.7 Monitoring and Recording of Operation of Waste Facility

3.7.1 Monitoring records generally

The results of any monitoring required under the terms of any subsequently issued EPL will be recorded and retained as follows:

- Records to be kept in a legible form, or in a form that can readily be reduced to a legible form.
- Records to be kept for at least 4 years after the monitoring or event to which they relate took place.
- Any records will be capable of being produced in a legible form to any authorised officer of the EPA who requests to see them.

3.7.2 Monitoring waste loads

The operator of the waste facility will keep record of each load of waste received a the site, with records kept of the following:

- A copy of the waste classification report in accordance with the EPA's *Waste Classification Guidelines*.
- The quantity (in tonnes) of the soil received.
- The date and time that the soil was received.
- The registration number of the vehicle transporting the soil to the site.
- The name and contact details of the company or individual delivering the soil to the site.
- The source(s) and address from where the soil was received.

The above records must be retained at the premises for at least 4 years after the receipt of the load of the soil.The record must be produced to any authorised officer of the EPA upon request.

3.7.3 Recording of pollution complaints

The operator of the waste facility will keep a legible record of all complaints made in relation to pollution arising from any activity to which any subsequently issued EPL applies, including details of the following:

- Record the date and time of the complaint and the method by which the complaint was made.
- The nature of the complaint and any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect.
- The action taken by the operator in relation to the complaint, including any follow-up contact with the complainant.
- If no action was taken by the licensee, the reasons why no action was taken.
- Records of any complain to be kept for at least 4 years after the complaint was made.
- The record of any complaint to be produced to any authorised officer of the EPA who asks to see them.

The operator of the waste facility will operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the site.

3.8 Construction Waste Management

During construction, wastes generated on the site would typically be managed and minimised by a combination of waste planning and on site controls. Waste planning would include designing buildings to minimise on site cutting of components, and maximising on site assembly tasks, careful ordering of materials such as sand and building products to match quantities with amounts required, and on time ordering rather than having materials stored on site for months before being used and segregating materials and providing weather protection for stored materials on site, to maximise their fitness for use. Other on-site waste mitigation measures during the construction of the waste facility would include the following:

- Developing and implementing a Construction Waste Management Plan.
- Segregating wastes generated on site, and using different skip bins for recycling and waste, with separate bins for different recyclable materials.
- Ensuring all waste disposal bins are clearly marked.
- Keeping records of quantities of waste and recycled materials disposed of, and the destinations of these materials and ensuring that wastes are only disposed of to licensed facilities.

3.9 Project Justification

3.9.1 Strategic Context

The proposed facility at Torrens Road will form a part of a much broader network of waste facilities across New South Wales. This waste facility, and many others like it in New South Wales, will have the ability to economically process waste from as far away as the greater Sydney region and beyond. At present, the greater Sydney region is already facing pressure as waste streams continue to grow in line with construction activity and major infrastructure projects. While in the longer term these levels of waste may be proportionately reduced with better recycling methods, the pressures of continued population growth, urban development and infrastructure programs will continue to create large ongoing waste streams. With these pressures are set to continue, with limited opportunities for new recycling or landfill facilities being established in proximity to growing urban areas. This makes it economic for more distant quarries and recycling facilities in regional areas, like Gunnedah, to be able to accommodate some of this demand through back-loading of heavy transport vehicles. Combined with the introduction of the Queensland waste levy, which acts as a disincentive to relying on interstate landfill and recycling facilities, there will be an increased need for landfill and recycling facilities being established in NSW.

This makes it economic for more distant quarries and recycling facilities in regional areas, like Gunnedah, to be able to accommodate some of this demand through back-loading of heavy transport vehicles. Combined with the introduction of the Queensland waste levy, which acts as a disincentive to relying on interstate landfill and recycling facilities, there will be an increased need for landfill and recycling facilities being established in NSW.

The development is consistent with the NSW Government's direction in achieving the targets in the Waste and Avoidance and Resource Recovery Strategy 2014-2021 and In particular:

- Avoiding and reducing the generation of waste.
- Increasing recycling. The above strategy targets recycling rates by 2021-22 of 80% for construction and demolition (C&D) waste and 70% for commercial and industrial (C&I) waste.
- Diverting more waste from landfill to alternative uses, such as recycling and energy recovery.

The proposed development will provide much needed infrastructure that will support this waste strategy.

3.9.2 Statutory Planning

- The proposed waste facility complies with relevant planning objectives, controls and guidelines. The use is permissible in the INI General Industrial zone.
- The project site contains no significant environmental constraints to development. Moreover, the proposal achieves acceptable environmental amenity outcomes, including desirable outcomes for access and parking, acoustics, landscaping, design, and stormwater drainage, incorporating appropriate environmentally sustainable development measures both during the construction and operational phases.

3.9.3 Suitability of the Site

- The project site forms part of land that has been specifically developed to accommodate industrial uses such as the proposed waste facility.
- Related to the above point, it is within an existing industrial area surrounded by other compatible developments and land uses. Moreover, it is adequately separated from sensitive receivers to enable potentially adverse environmental impacts (ie air and noise) to be adequately managed and/or mitigated.
- The project site has no significant constraints development generally, and can be developed for the purposes of the proposed waste facility.
- It is readily accessible via major transport links, in particular, the Kamilaroi Highway.
- It has sufficient area to allow external manoeuvring of vehicles and also the handling, storage and processing of waste materials within enclosed buildings.
- The proposed disturbance area has been previously disturbed and cleared by other industrial uses and/or work associated with construction of the Allgayer Drive industrial estate, which will ensure that the physical impacts of the proposed development (ie on biodiversity and heritage) would be minimal.

3.9.4 Environmental Management, Mitigation Measures

The development will have in place appropriate management and mitigation measures to ensure that satisfactory environmental outcomes ensue and In particular:

- The project site can accommodate the proposed processing capacity, having regard to the scope of the operations and its environmental impacts and relevant mitigation measures.
- Any hazards and risks associated with the proposed waste facility can also be appropriately managed.All hazards and risks associated with the project (e.g. storage of combustible and flammable liquids, and fire) have been satisfactorily addressed.
- Appropriate waste management strategies are to be employed on site.
- Air quality and noise impacts from the proposal would be satisfactory and any residual impacts would be managed through the mitigation measures proposed, in accordance with relevant NSW Environment Protection Authority (EPA) guidelines.
- The Project proposes measures that are consistent with the aims, objectives and guidelines in the NSW *Fire Safety in Waste Facilities* guideline dated October 2019.
- The project site forms a part of a recently developed industrial estate. Most relevant issues would have been considered at the time, including biodiversity, groundwater, flooding and soils, prior to the land being developed for industrial purposes. The proposed development is located within an existing industrial area and is not considered likely to result in excessive cumulative air, noise, traffic or amenity impacts. The waste facility is confined to already cleared land within an industrial subdivision. With the exception of clearing of a few selected trees on site, no further clearing of land is proposed.

- The proposed stormwater treatment process is considered to be effective in treating run-off from the site to the required standard, particularly in regards to the removal of oil and grease.
- The proposed waste facility will utilise existing access from Allgayer Drive, with additional parking provided where required. Vehicles associated with the project will be prohibited from queuing or parking on local roads in the vicinity of the site. The project site has good road access for heavy vehicles to waste sources, with vehicular access to the Kamilaroi Highway only a short distance away.
- The proposed waste facility would have minimal impact on local intersections and would have minimal impact on local and regional roads. The existing access on site is suitable for the proposal.
- The area is generally industrial and there would be no night-time activities.

3.9.5 Social, Economic

- The waste facility would facilitate the recycling of a wide range of wastes with much of this material to be re-used elsewhere in New South Wales and Australia.
- The design of the new waste facility will create satisfactory operational and amenity outcomes for the surrounding community.
- The project site is predominantly surrounded by other industrial developments. It has safe and adequate access is suitable for the proposal.
- The Project will support the future industrial development in the Gunnedah region, without significant adverse environmental impacts.
- The proposed new waste facility will be privately funded and will generate a construction and operational jobs over the life of the project, as detailed elsewhere in this EIS. The economic impacts of the proposal will be positive.
- The Project is in the public interest and should be approved, subject to appropriate conditions.

3.9.6 Consideration of alternatives

Do nothing

The project site is currently already developed for the handling of large vehicles, which includes provisions for a number of entry/exit points to the site, a weigh bridge, large storage facility, workshop, fuel depot and administrative headquarters of the Mackellar Group- key prerequisites necessary for the establishment of a waste facility on the site. Stated another way, the project site has in place the infrastructure required to handle a waste facility of the type proposed, along with the space to satisfactorily accommodate the proposed use. Over the last decade or more the NSW waste industry has changed significantly with the drive to set up additional recycling facilities in the State. In other words, the establishment of a new recycling facility makes both environmental and economic sense.

The ‘Do nothing’ option is considered to be not consistent with the various waste and resource recovery policy initiatives and strategies of the NSW State Government and would not be a positive outcome. Moreover, if the project site is not developed for the purpose of a waste facility, it will be developed for some alternative industrial purpose. Under this scenario, the opportunity for a new recycling industry waste to be established in Gunnedah will be lost.

Alternative land use or alternate site

The project site is zoned industrial, thereby preventing residential and/or commercial development. The proposed waste facility is classed as industrial use and is therefore a suitable use for the project site. The relocation to an alternative site would seem less than ideal given the superior features of the project site, and in particular in terms of the following:

- Appropriate IN1 General Industrial zoning.
- The fact that it is surrounded by an industrial area, with reasonable buffers/setbacks to neighbouring residences.

- Excellent transport links to the regional road system from the project site.
- Need to relocate existing Mackellar group facilities to another site- a costly exercise and waste of resources.

These benefits of the site remain, and it would be difficult to find a better site that would fulfil operational requirements and the ability to utilise existing capital and administrative infrastructure already in place on the project site.

4. Existing Environment, Environmental Assessment & Mitigation Measures

4.1 Existing Environment

4.1.1 Regional Context and Site Description

The site of the proposed waste facility (Project Site) is within a recently constructed industrial estate located to the west of Gunnedah, in the Gunnedah local government area (LGA). Refer **Figures 4.1-4.3** and **5.1**. Gunnedah Shire is located in the North West Slopes Region of north-west New South Wales, about 450 kilometres north of the Sydney CBD, and about 650 kilometres south of the Brisbane CBD. Gunnedah Shire is bounded by Narrabri Shire in the north, the Tamworth Regional Council area in the east, Liverpool Plains Shire in the south, and Warrumbungle Shire in the west. The Gunnedah LGA has an estimated (ABS 2018) population of 12,661 persons. The township of Gunnedah comprises the largest settlement with the the LGA, having an estimated (ABS 2018) population of 10,101 persons. The surrounding rural area of this LGA has an estimated (ABS 2018) population of 2,479 persons. Refer **Figure 4.1**.

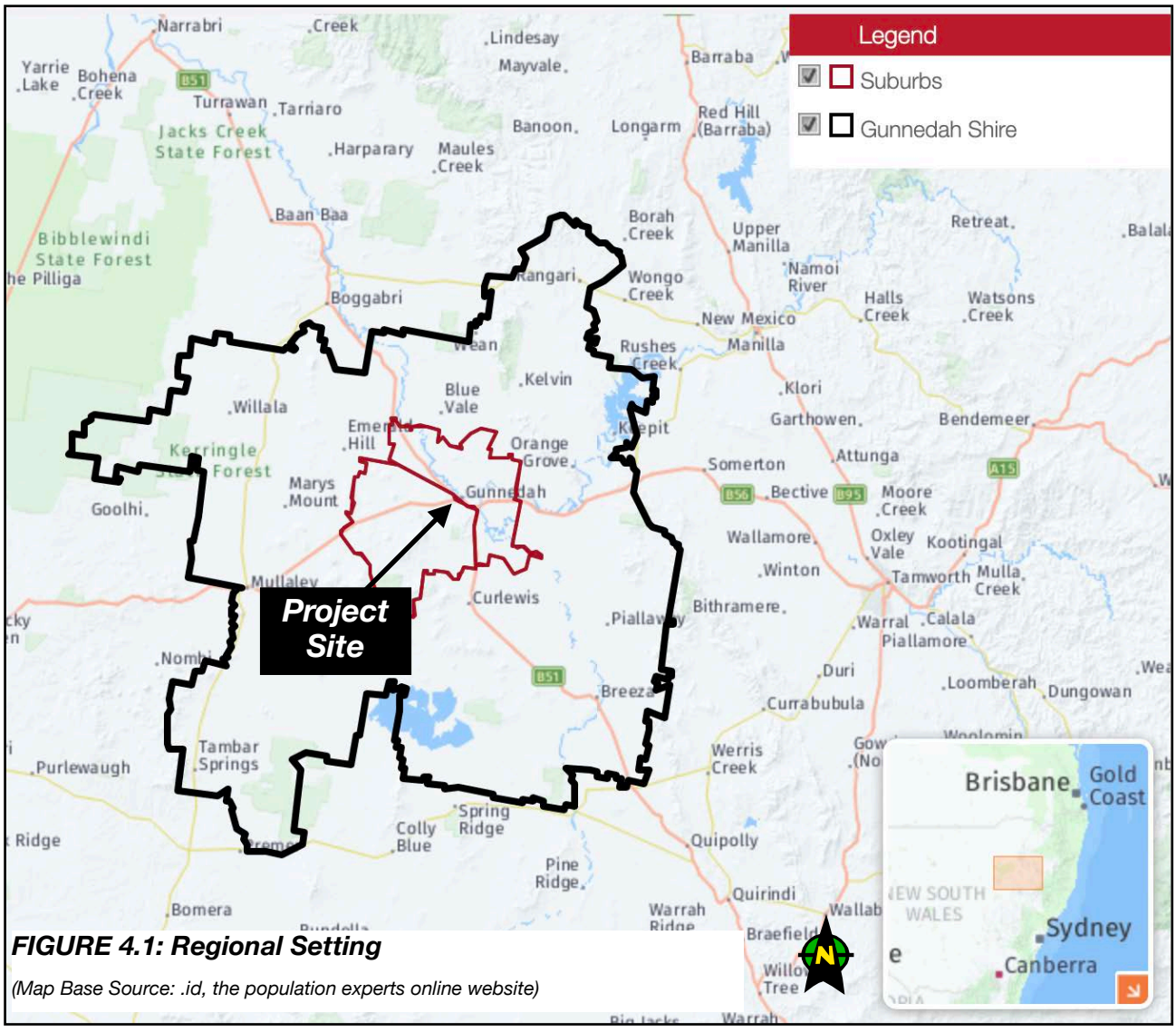


FIGURE 4.1: Regional Setting

(Map Base Source: .id, the population experts online website)

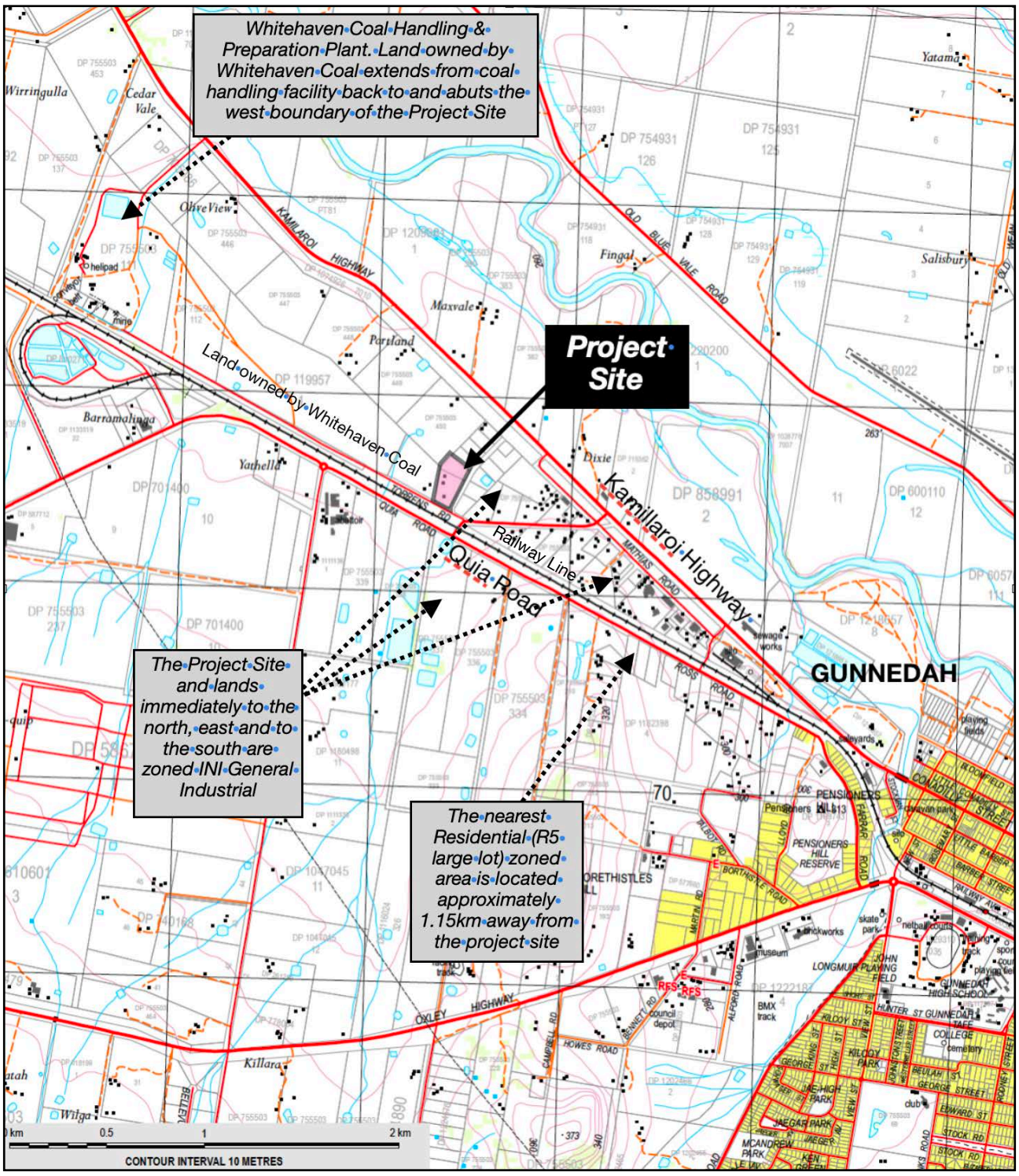


FIGURE 4.2: The Project Site is located in a designated industrial area on the western fringe of the township of Gunnedah, well removed from zoned residential areas

(Source: NSW Spatial Services Emerald Hill 8936-3S 1:25,000 topographic map)

4.1.2 Description of the Project Site

Site Details & Context

The Project Site comprises Lots 1 and 2 in Deposited Plan (DP) 1226992 at No.16 Torrens Road and 17-21 Allgayer Drive, respectively, at Gunnedah. The Project Site has a combined area of 2.779ha with a frontage to Torrens Road of approximately 75 metres and to Allgayer Drive of just over 200 metres. The Project Site has a depth from Allgayer Drive ranging from about 75m to 140m. Lots 1 and 2 both have drainage easements 6m wide along their northern boundaries. Lot 1 has an area of 1.826ha and Lot 2 has an area of 0.9530ha. Refer **Figures 4.3-4.4**.

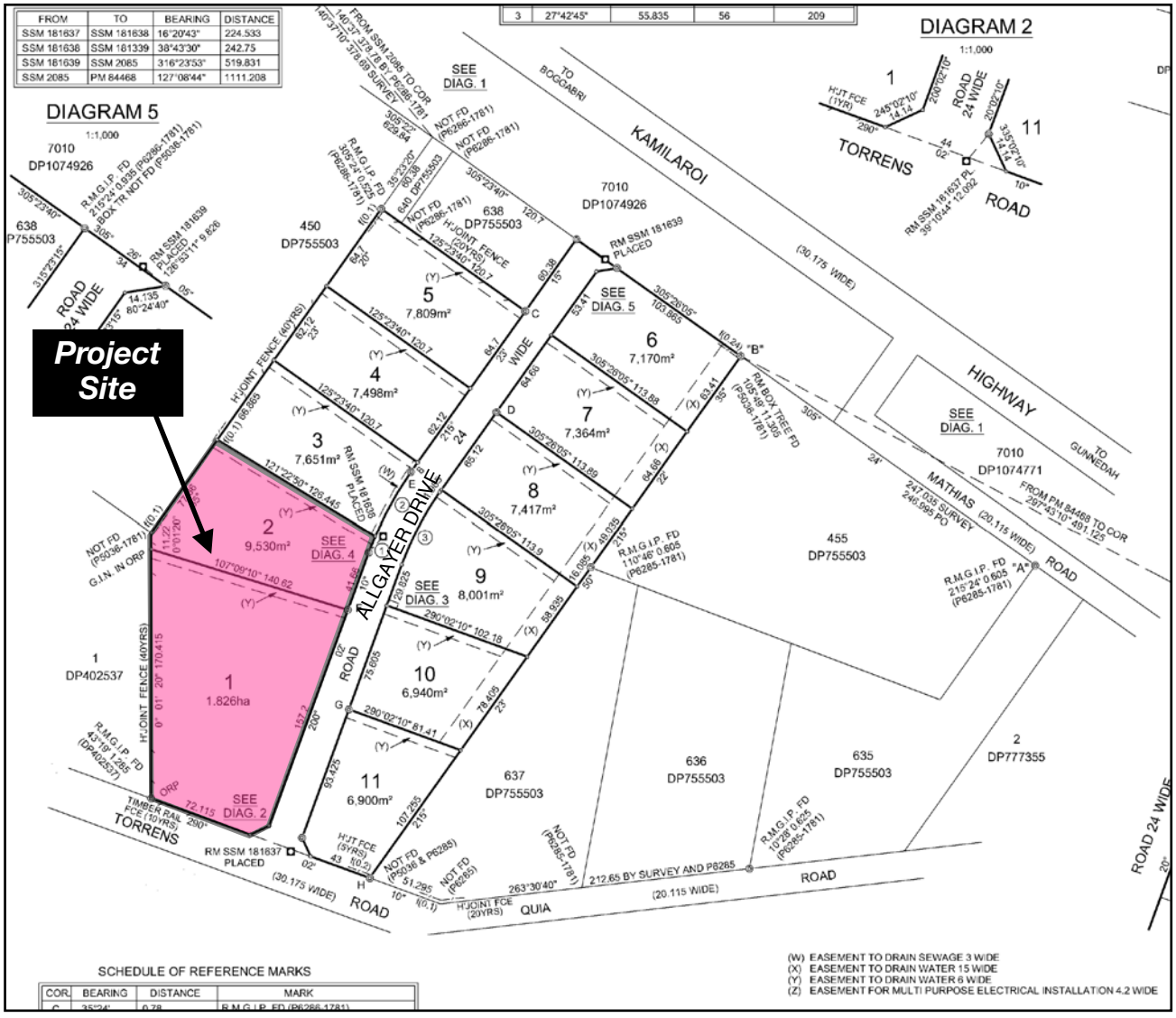


FIGURE 4.3: The Project Site: Deposited Plan (coloured)

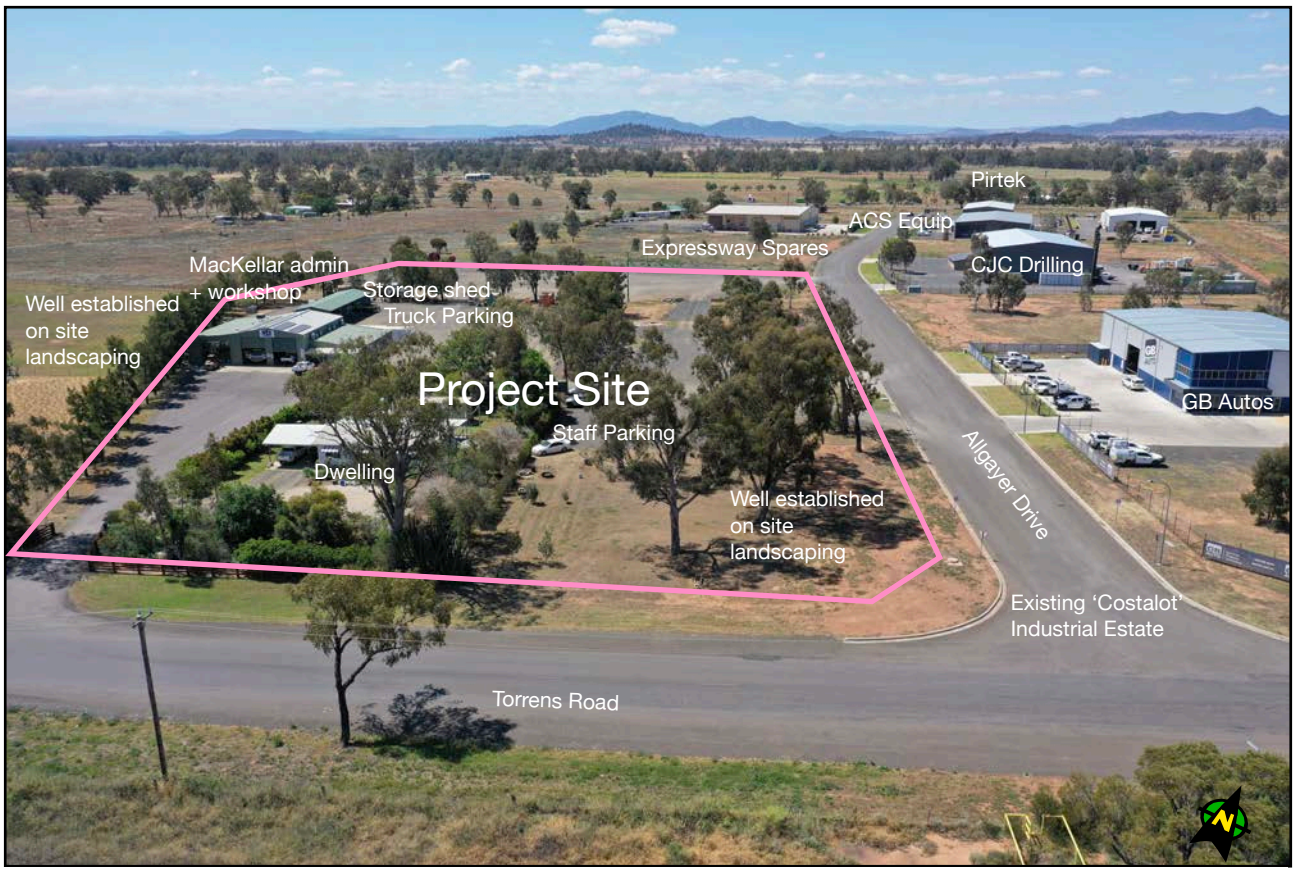
The project site is located approximately 4km west of Gunnedah and is between the Kamilaroi Highway and Torrens Road. The project site forms a part of a 11-allotment industrial subdivision fronting Allgayer Drive, known as the 'Costalot' subdivision, approved by Gunnedah Shire Council in December 2015 (DA 610514.003) and completed in December 2016. Refer **Appendix B** for details. The industrial subdivision was owned and developed by Mackellar Equipment Hire. Refer to accompanying Photographs 4.1 and 4.2, taken during construction of the 'Costalot' industrial development.

PHOTOGRAPHS 4.1 & 4.2 (above, below): Laying of services for 'Costalot' industrial subdivision 2016 on the project site.

(Source: Mackellar Equipment Hire)

PHOTOGRAPH 4.3 (above): Oblique aerial view of the project site from the north.

(Source: Stewart Surveys photograph taken October 2020)



PHOTOGRAPH 4.4 (above): Oblique aerial view of project site and surrounds from the south.

(Source: Stewart Surveys photograph taken October 2020)

Locational Suitability

The Project Site is suitable for the proposed waste facility development having regard for a range of factors including but not limited to the following:

- The project site forms part of an established industrial subdivision at Allgayer Drive. The project site is cleared and developed, in the main, for industrial purposes. The subdivision is fully serviced and has fire hydrants, bitumen sealed road and and kerb and guttering. It is reasonably buffered from surrounding residential uses. [NOTE: effective controls are also proposed to prevent any environmental nuisance or loss of amenity.] Refer Photographs 4.3 and 4.4.

- Related to the above, the project site is located within a zoned industrial area. A waste facility is a permissible use in the IN1 General Industrial zone.

- The project site is within close proximity and has ease of access to major transport routes. Moreover, the proposed waste facility will have good road access that does not pass through urban residential or other sensitive areas such as schools and hospitals.

- The site is flat and well suited to use for ongoing industrial purposes, with more than sufficient space to accommodate the proposed waste facility, with minimal earthworks required.

- The project site is not identified as comprising bushfire prone land, nor is it identified in the Gunnedah LEP as comprising flood prone land, with no known ecological or archaeological potential. The project site is already disturbed by industrial development uses.

Existing Development

MacKellar Excavations Pty Ltd (MEX), Gunnedah Quarry Products (GQP) and Mackellar Equipment Hire Pty Ltd ("Mackellar Group") are privately owned earthmoving, plant hire and quarrying companies based in the Gunnedah area of north-west New South Wales. The Mackellar family business is headquartered at No. 16 Torrens Drive, Gunnedah.

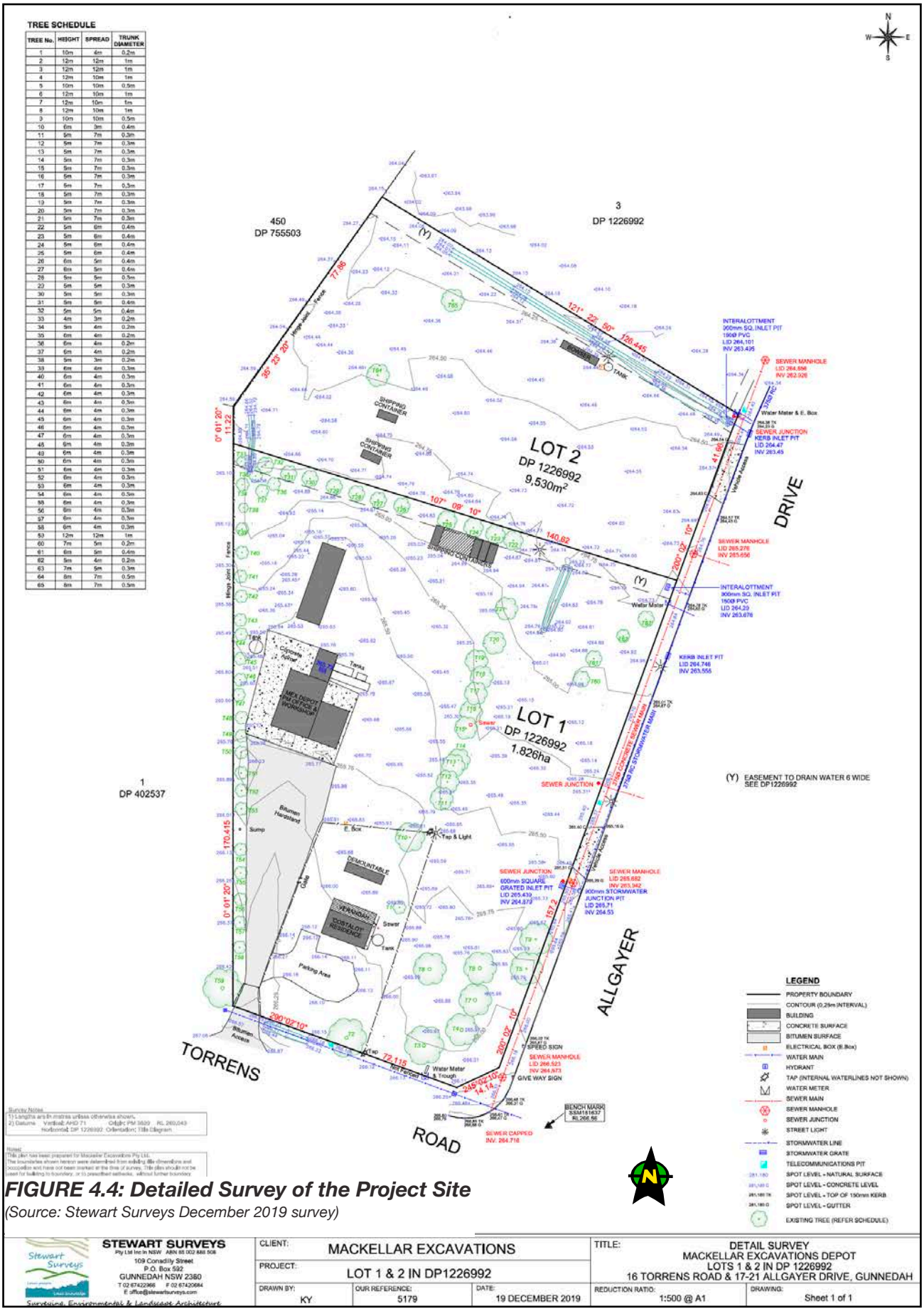
Current infrastructure at this location consists of a main office, manager's residence along with associated storage sheds, parking area and hardstand, large storage shed, fuel tank, as well as workshop. A new waste facility will complement the above businesses, in particular in the treatment of contaminated soil, given that MEX already has processing equipment, including screens, as well as other mobile plant and equipment capable of being used in the proposed facility. Access to the project site is directly from Torrens Road, with side access to an industrial subdivision road, Allgayer Drive. Torrens Road then connects with Quia Road and thence to Kamilaroi Highway. All roads are bitumen sealed. Refer **Figure 4.4** and to the accompanying photographs 4.5-4.8.

Existing Services

The project site has adequate services provision to accommodate the proposed waste facility, as summarised in the following.

Table 4.1: Existing Services Availability

Service	*Availability to Project Site*
Telecommunications and Electricity	*Existing services connection to the project site. Mobile phone coverage is available on the site.*
Town Water	*There is an existing reticulated water main connection serving the Allgayer Drive industrial subdivision, including the project site. Refer **Figure 4.4**. Two existing fire hydrants are on the project site, located on the Torrens Road street frontage.*
Sewer	*Existing sewerage connection to the Allgayer Drive industrial subdivision, including the project site. Sewerage access exists within the property and no additional facilities will be required. Toilet & shower facilities exist at MacKellar Excavations workshop and office facilities located within 55 metres of the proposed facility. Refer **Figure 4.4**.*



TREE No.	HEIGHT	SPREAD	TRUNK DIAMETER
1	10m	4m	0.2m
2	12m	12m	1m
3	12m	12m	1m
4	12m	10m	1m
5	10m	10m	0.5m
6	12m	10m	1m
7	12m	10m	1m
8	12m	10m	1m
9	10m	10m	0.5m
10	6m	3m	0.4m
11	5m	7m	0.3m
12	5m	7m	0.3m
13	5m	7m	0.3m
14	5m	7m	0.3m
15	5m	7m	0.3m
16	5m	7m	0.3m
17	6m	7m	0.3m
18	5m	7m	0.3m
19	5m	7m	0.3m
20	5m	7m	0.3m
21	5m	7m	0.3m
22	5m	6m	0.4m
23	5m	6m	0.4m
24	5m	6m	0.4m
25	5m	6m	0.4m
26	6m	5m	0.4m
27	6m	5m	0.4m
28	5m	5m	0.5m
29	5m	5m	0.3m
30	5m	5m	0.3m
31	5m	5m	0.4m
32	5m	5m	0.4m
33	4m	3m	0.2m
34	5m	4m	0.2m
35	6m	4m	0.2m
36	6m	4m	0.2m
37	6m	4m	0.2m
38	5m	3m	0.2m
39	6m	4m	0.3m
40	6m	4m	0.3m
41	6m	4m	0.3m
42	6m	4m	0.3m
43	6m	4m	0.3m
44	6m	4m	0.3m
45	6m	4m	0.3m
46	6m	4m	0.3m
47	6m	4m	0.3m
48	6m	4m	0.3m
49	6m	4m	0.3m
50	6m	4m	0.3m
51	6m	4m	0.3m
52	6m	4m	0.3m
53	6m	4m	0.3m
54	6m	4m	0.3m
55	6m	4m	0.3m
56	6m	4m	0.3m
57	6m	4m	0.3m
58	6m	4m	0.3m
59	12m	12m	1m
60	7m	5m	0.2m
61	6m	5m	0.4m
62	5m	4m	0.2m
63	7m	5m	0.3m
64	8m	7m	0.5m
65	8m	7m	0.5m

FIGURE 4.4: Detailed Survey of the Project Site

(Source: Stewart Surveys December 2019 survey)

Site Features

The site is in a dedicated and partly developed industrial area on the western outskirts of Gunnedah township. This industrial area, constructed on 2016 and now undergoing progressive development for industrial-related uses, is unlikely to be important in maintaining existing natural processes or natural systems of the area, nor does it exhibit any richness of diversity of flora, fauna or landscapes, or endangered species. The land has been used for industrial purposes and is currently substantially disturbed.

There are several mature native trees within the subject site, however, these trees were planted by Mackellar Equipment Hire Pty Ltd as a part of their transport depot development, and prior to the construction of the industrial estate.

The Stewart Surveys SEPP 44 assessment of the site in May 2019 and February 2020 finds that the project site does not trigger the provisions of this SEPP.

Lot 1 contains the MacKellar Excavations depot and offices, located in the western section of this allotment. Along the western boundary of Lot 1 is a planted row of Casuarina trees and along the northern boundary and through the middle of the site is a row of planted Iron Bark trees. These trees separate the MacKellar Excavations depot area from the eastern section of Lot 1, currently used for truck and staff car parking. The site contains an area of grass with native trees at the junction of Torrens and Allgayer Drive, gravel car parking area and vacant land used for material storage. A manager's residence is located in the southern section of the site, fronting Torrens Road, which is surrounded by mature plantings. The species in this area of the site are a mix of exotic and native planted trees and shrubs.

PHOTOGRAPH 4.5 (above): View from Allgayer Drive the east, looking towards the main office and workshop (centre of photo), with staff car park in left foreground. A row of planted trees run in a north-south orientation through the middle of Lot 1 and along the northern boundary of Lot 1. These plantings will assist in screening views of the proposed waste facility from this vantage point

(Photograph taken 3 February 2020)

PHOTOGRAPH 4.6 (above): View from Lot 2 looking back towards Allgayer Drive the east, with existing industrial buildings fronting Allgayer Drive in rear of photograph

(Photograph taken 3 February 2020)

Lot 2 is a cleared level block with a large gravel pad and a refuelling station on the northern side. There were seven trees observed on Lot 2, including two large Eucalyptus trees within the gravel pad area and a row of trees planted along the western boundary of the site. The trees comprised three Eucalyptus species (not SEPP 44 Koala feed tree eucalyptus) and four Kurrajong trees (*Brachychiton populneus*). There were no SEPP 44 feed trees species observed on Lot 2.

The project site is located within the Namoi River catchment. Stormwater flows from higher areas around the railway line and Quia Road underpass, to the south, flows towards the Allgayer Drive industrial subdivision where it is then channelised through the industrial estates drainage system and thence to the north towards the Namoi River.

The existing soils at the site can be described as a sandy clay loam (Chromosol), characterised by a yellowish brown A horizon, a reddish brown B horizon, and yellowish red C horizon (source NSW Land Information System eSpade soil profile report for site immediately north of and adjoining the Allgayer Drive industrial subdivision- refer **Appendix J**.). The description of the soils described above is confirmed by reference to Photographs 4.1 and 4.2, as well as to the geotechnical investigation undertaken as a part of the 'Costalot' industrial subdivision (source: Northwest Projects Pty Ltd: *Pavement Design for New Road Industrial Subdivision- Costalot' Boggabri Road, Gunnedah* dated July 2013). The soil profile has a high permeability, is well drained with no signs of salinity (salting) evident. The proposed waste facility will be similar industrial activity to that established on the site and surrounds, with little or no disturbance of existing soils/subsoils on the site.

A formal heritage assessment was not required by the SEARS request. The project site is already highly disturbed and is also predominantly covered in existing structures and hard surfaces.

The project site is not mapped as being a Flood Planning Area under the Gunnedah LEP 2012 (Source: Gunnedah Local Environmental plan 2012 Flood Planning map Sheet FLD_005A). Refer **Figure 4.5**.

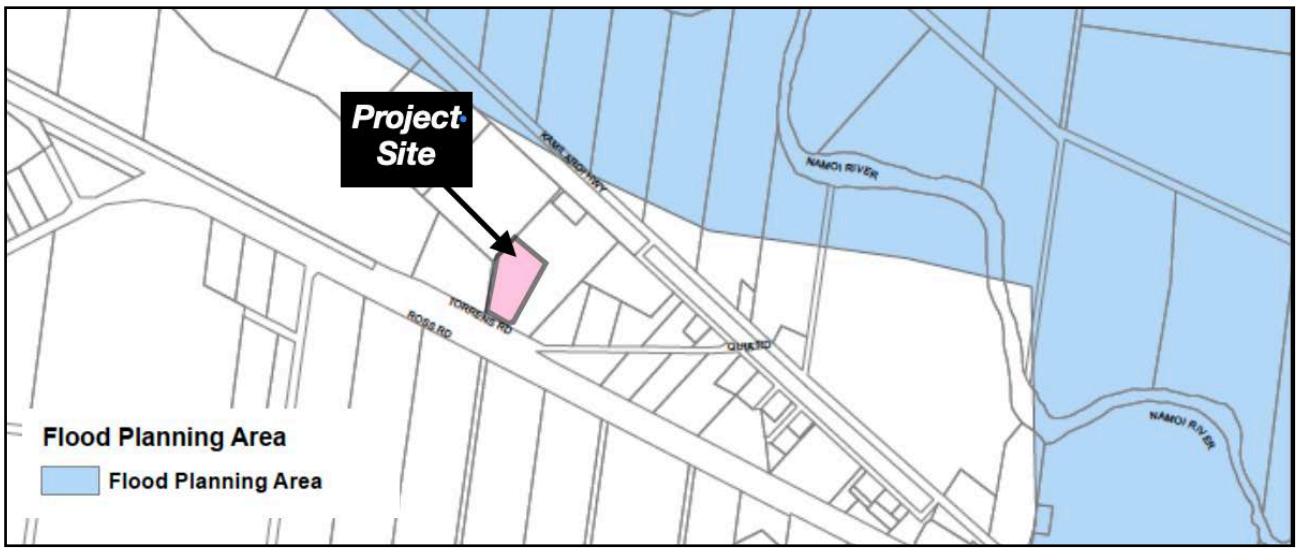


FIGURE 4.5: The Project Site is indicated as being flood free in the LEP

(Source: Gunnedah Local Environmental Plan 2012 Flood Planning map Sheet FLD_005A)

4.1.3 Surrounding Development

Adjacent Industrial Uses

The Project Site is located within the Allgayer Drive industrial estate with the adjacent land uses being industrial based. Refer **Figures 4.6-4.7** and **5.1** and accompanying Photographs 4.5 to 4.8. Refer also to Photographs 4.3 and 4.4.

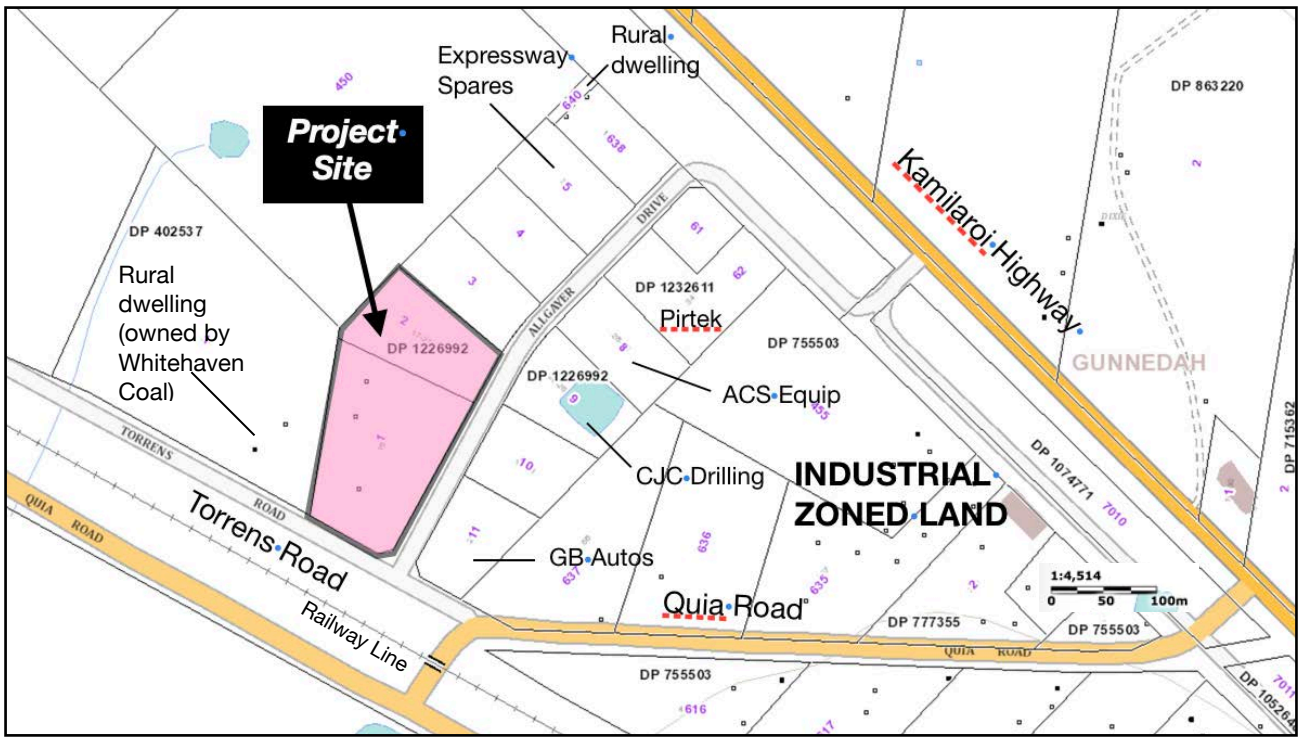


FIGURE 4.6: The Project Site and surrounding industrial uses

(Source: SIX maps)

PHOTOGRAPH 4.5 (above): View from project site looking across Allgayer Drive to the adjacent GB Auto repair workshops and office building, to the the east.
(Photograph taken 13 August 2019)

PHOTOGRAPH 4.6 (above): View from project site looking across Allgayer Drive to the adjacent CJC Drilling contractors industrial building, to the the east.
(Photograph taken 13 August 2019)

(Refer to Figure 4.23 for survey details of building locations and heights)

PHOTOGRAPH 4.7 (above): View from Allgayer Drive to the ASC Equip industrial buildings, to the the north-east.
(Photograph taken 13 August 2019)

PHOTOGRAPH 4.8 (above): View from Allgayer Drive to the Pirtek industrial buildings, to the the north-east.
(Photograph taken 13 August 2019)

To the north of the project site is an Expressway Spares industrial building and heavy machinery repairs workshop, three allotments removed from the project site- refer photograph. Like the other industrial uses in Allgayer Drive, Expressway Spares is a major supplier to the earthmoving industry, as well as catering to the mining, general contracting and rural sectors. This includes supplying spare parts as well as undertaking repairs to heavy machinery on their premises. Further to the east of the project site are lands extensively developed for industrial purposes.

Rural Dwellings

To the north of adjoining the Expressway Spares industrial development, is a rural dwelling, located some 230m away from the northern boundary of the project site-refer photograph. The next closest rural dwelling is located approximately 270m away from the northern boundary of the project site. Both of these properties rely on access to the Kamilaroi Highway for their site access. Another three (3) rural dwellings lie within 500m of the project site: to the east (two dwellings, about 425m and 480m away); and to the north-east (one dwelling about 390m away).

To the west of the project site is a rural dwelling, located some 59m away from the western boundary of the project site. This property forms a part of a much larger property holding owned by Whitehaven Coal-refer to photograph.

Refer **Figure4.7** and accompanying Photographs 4.9 and 4.10 immediately below.

PHOTOGRAPH 4.9 (above): View from Allgayer Drive to the nearest rural dwelling some 230 metres to the north-west of the northern boundary of the project site.
(Photograph taken 13 August 2019)

PHOTOGRAPH 4.10 (above): View from project site to the neighbouring rural dwelling to the west, owned by Whitehaven Coal, seen through the tree plantings on the western boundary of the project site.
(Photograph taken 13 August 2019)

Whitehaven Coal Handling and Preparation Plant (CHPP)

Approximately 1.2km to the west of the project site is the huge coal handling facility owned and operated by Whitehaven Coal. It sits on a large property holding that stretches as far east as the common boundary with the project site. Refer **Figures 4.2** and **4.6**.

Coal is transported to the CHPP by road, with the main site access from the Kamilaroi Highway. A rail loading facility is co-located with the CHPP to load washed and raw coal onto trains for transport to domestic and export markets.

The current consent allows Whitehaven to process up to 3 million tonnes per annum (Mtpa) of run-of-mine coal and dispatch up to 4.1 Mtpa of coal from the rail loading facility. These coal transport trains run past the project site daily.

Former Abattoir Site: Solar Generation Works

In 2016 a a solar generation works was approved on land to the south of the project site, at No. 131 Quia Road, Gunnedah.

This project has not proceeded to date.

The project entailed the construction of a 27 MW solar energy generation facility, a 272 lot subdivision (community title) within proposed lot 24, with each title being created over a 100 kilowatt solar array, and construction of an electrical substation and adjoining storage shed within proposed Lot 9. This approved projects is sited on land having a total area of 141ha and comprising the former abattoir site. Prior to the grant of consent for this project, Development Approval No. 374181 applied for the subdivision of the former abattoir site into 90 industrial lots over 9 stages and installation of all relevant infrastructure and roads. The development has been physically commenced and the development consent is currently active.

FIGURE 4.7: Aerial/cadastral overlay showing Project Site and surrounding uses

Source: SIX maps)

4.1.4 Climate, Noise Environment

Climate

The project site lies within the Gunnedah Shire of NSW, which experiences a cool and moderately dry climate.

The Gunnedah metrological station records show that temperatures are warmest from November to March and coolest from June to August. Monthly-average daily maximum temperatures are highest in January (32.2 degrees Celsius [°C]) and monthly-average daily minimum temperatures are lowest in July (4.8°C).

The long-term average annual rainfall recorded at the Gunnedah Resource Centre Bureau of Meteorology (BoM) Meteorological Station No. 055024 was 632.9 mm. Rainfall is reasonably well distributed throughout the year, however there is a slight peak in the summer months and marginally lower rainfall in autumn. On average, January is the wettest month of the year and August is the driest. The wetter months of December, January and February also have a reasonably low number of mean rain days, suggesting the higher volumes of rainfall are associated with higher intensity storms falling over shorter periods of time. The region is also susceptible to extended periods of drought.

Evaporation records are available from the Gunnedah Resource Centre meteorological station, which has recorded average annual evaporation levels of approximately 1,853 mm. The highest monthly-average evaporation is in December (250.5 mm), and the lowest monthly-average evaporation is in June (61.7 mm). Measured monthly-average evaporation exceeds the measured monthly-average rainfall in all months.

The long term wind roses recorded at the Gunnedah Resource Centre at 9am and 3pm are provided in the accompanying **Figure 4.8**. Winds are predominantly from the south-east at 9am and from the north-west and south-east at 3pm. Stronger winds, in excess of 40km/hour or 11.1m/second, occur infrequently, mostly from the south-east.

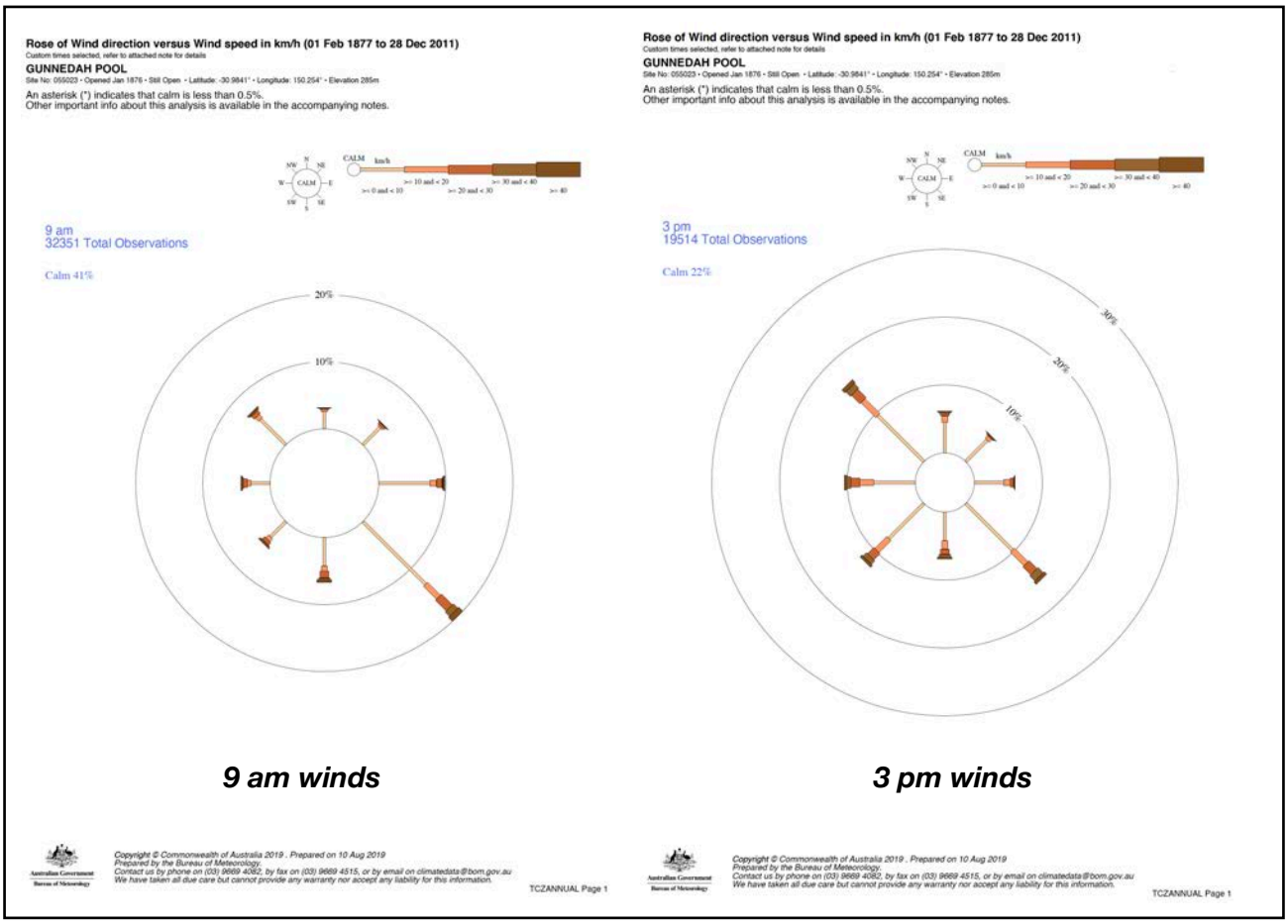


FIGURE 4.8: Annual Wind Roses for Gunnedah

(Map Source: Bureau of Meteorology (BoM) Gunnedah Resource Centre Meteorological Station No. 055024)

Existing Noise, Air Environment

For the purpose of assessing the background/ambient noise and air, ambient measurements were measured by VIPAC at the nearest sensitive locations-refer to **Appendix F**. These background levels were then assessed in terms of likely impacts associated with the proposed waste facility operation.

4.1.5 Land Use & Settlement Pattern

Gunnedah Shire & Region

The project site is located in the Gunnedah Shire in northern NSW. Gunnedah Shire is a largely rural area, with most of the population living in the township of Gunnedah and the villages of Breeza, Carroll, Curlewis, Mullaley and Tambar Springs.

The project site lies within a zoned industrial area on the western outskirts of Gunnedah township. Rural land within the Gunnedah Shire is predominantly used for agriculture, particularly wheat and crop growing, cattle and sheep grazing and pig raising, with coal mining being a major industry. Tourism is also an important industry. With the development of the local coal mines there has been an increase in the demand for industrial land from mine service companies looking to establish a presence in the Gunnedah region. Most of the industries recently established in the Allgayer Drive industrial estate would fit into this category of industrial use. Refer Section 4.3 for details.

The project site forms a part of the North Gunnedah Industrial Area, located on the western outskirts of Gunnedah, approximately 1km in a direct line from the Gunnedah Central Business District. The North Gunnedah Industrial Area covers a total area of approximately 48ha. It contains a range of industries businesses including fuel depots, equipment hire businesses, freight and transport businesses and mining/agricultural machinery sales and service. The largest block within this industrial area, the 'Costalot' land, was developed in 2016 by MacKellar Equipment Hire Pty Ltd.

The Shire's primary commercial area is the Gunnedah CBD. The Shire encompasses a total land area of about 5,000 square kilometres. The Shire's primary commercial area is the Gunnedah CBD. Health care facilities are provided at Gunnedah District Hospital and a number of aged care facilities. Refer **Figure 4.9**.

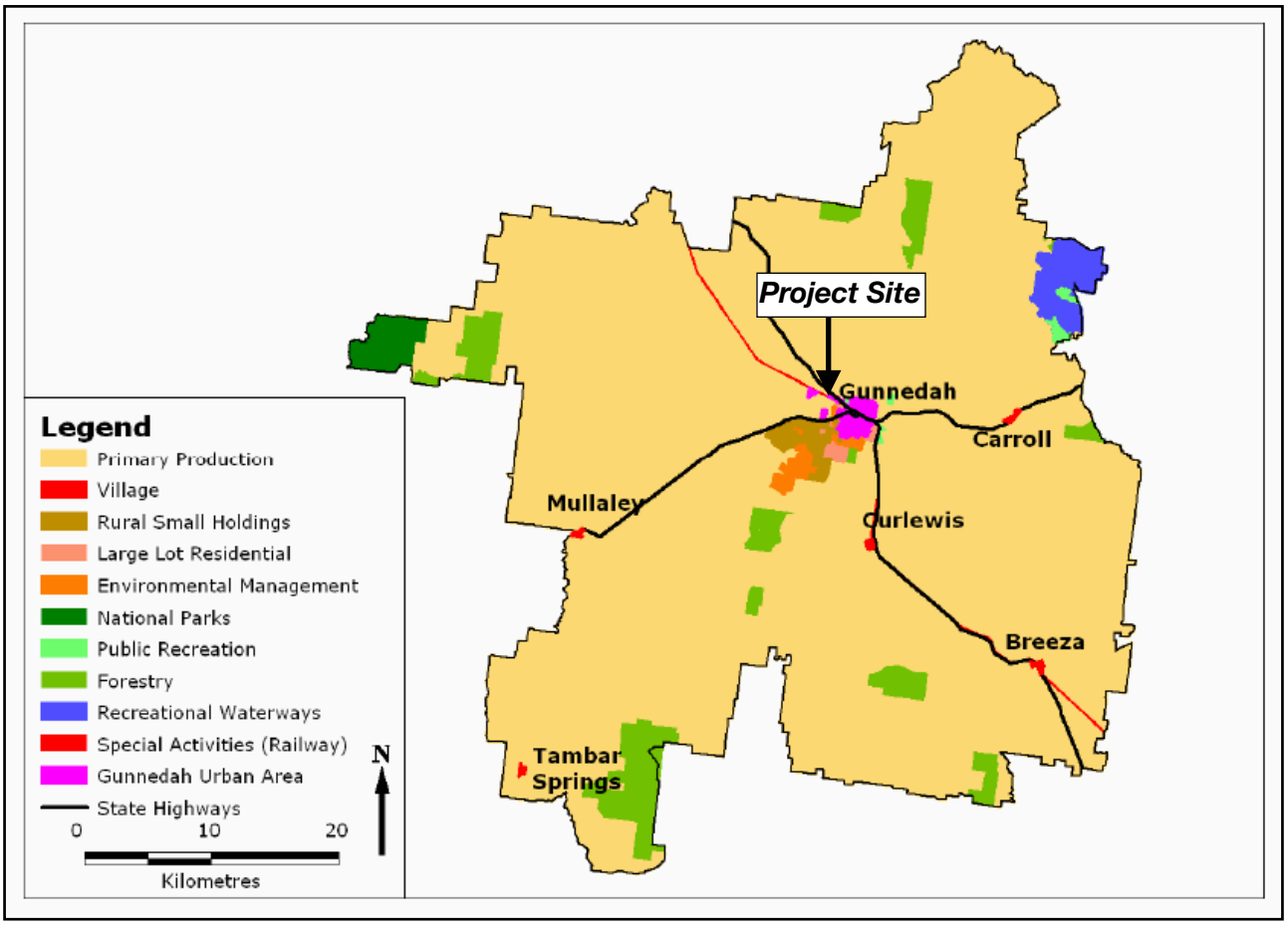


FIGURE 4.9: Generalised land use Gunnedah Shire

(Map Base Source: Edge Land Planning March 2007 Map 7.3)

Gunnedah Shire Population

The Census usual resident population of the Gunnedah Shire in 2016 was 12,215, living in 5,513 dwellings with an average household size of 2.43 person per household. Gunnedah township had an estimated population of 10,013 at the 2016 census, or almost 82% of the total Shire population. The population is little changed from that recorded at the 2011 Census- 12,519 residents- but represents an increase over the Shire population recorded a decade ago- 11,782 residents, recorded at the time of the 2006 Census. (Source: Australian Bureau of Census and Statistics id the population experts website October 2017).

Forecasts suggest that this trend of modest population growth will continue into the near future (Department of Planning & Environment 2016 *NSW State and Local Government Population and Household Projections, and Implied Dwelling Requirements*), with forecast annual growth in population of between 0.4-0.7%% between 2011 and 2036, equivalent to a total growth for that period of 1,100 persons or 8.8%. Refer Table 4.2.

Table 4.2: Population & projected population growth Gunnedah LGA 2011-2036

Totals	2011	2016	2021	2026	2031	2036
Total Population	12,500	12,800	13,050	13,300	13,450	13,600
Total Households	5,050	5,200	5,350	5,450	5,550	5,700

(Source: Department of Planning & Environment 2016 *NSW State and Local Government Population and Household Projections, and Implied Dwelling Requirements*)

Australian Bureau of Census and Statistics (ABS) analysis of age groups of the Gunnedah Shire in 2016 compared to Regional NSW shows that there was a higher proportion of people in the younger age groups (under 15) and a lower proportion of people in the older age groups (65+).

Overall, 20.6% of the population was aged between 0 and 15, and 19.0% were aged 65 years or more, compared with 18.4% and 20.6% respectively for Regional NSW.The major differences between the age structure of the Gunnedah Shire and Regional NSW in 2016 were:

- A larger percentage of persons aged 0 to 4 (7.5% compared to 5.8%).
- A larger percentage of persons aged 25 to 29 (6.5% compared to 5.5%).
- A larger percentage of persons aged 5 to 9 (7.2% compared to 6.4%).
- A smaller percentage of persons aged 65 to 69 (5.4% compared to 6.4%).

Gunnedah Shire Industry and Employment

Since 2004 there has been a steady, sustained increase in job availability in the Gunnedah Shire, due in large measure to an increase in employment arising from the boom in mining in the area.

These employment levels have levelled out since 2014, however. Refer **Figure 4.10**.

Mining is the likely trigger for growth in service sectors, such as goods related industries and household services, with agriculture accounting for the next largest employment growth sector. More Gunnedah Shire residents worked in mining than any other industry in 2016.

Mining jobs in Gunnedah Shire have grown to just under 14% of the employed workforce workforce in 2016 (source: Bureau of Census and Statistics id the population experts website February 2020). Refer **Figure 4.11**.

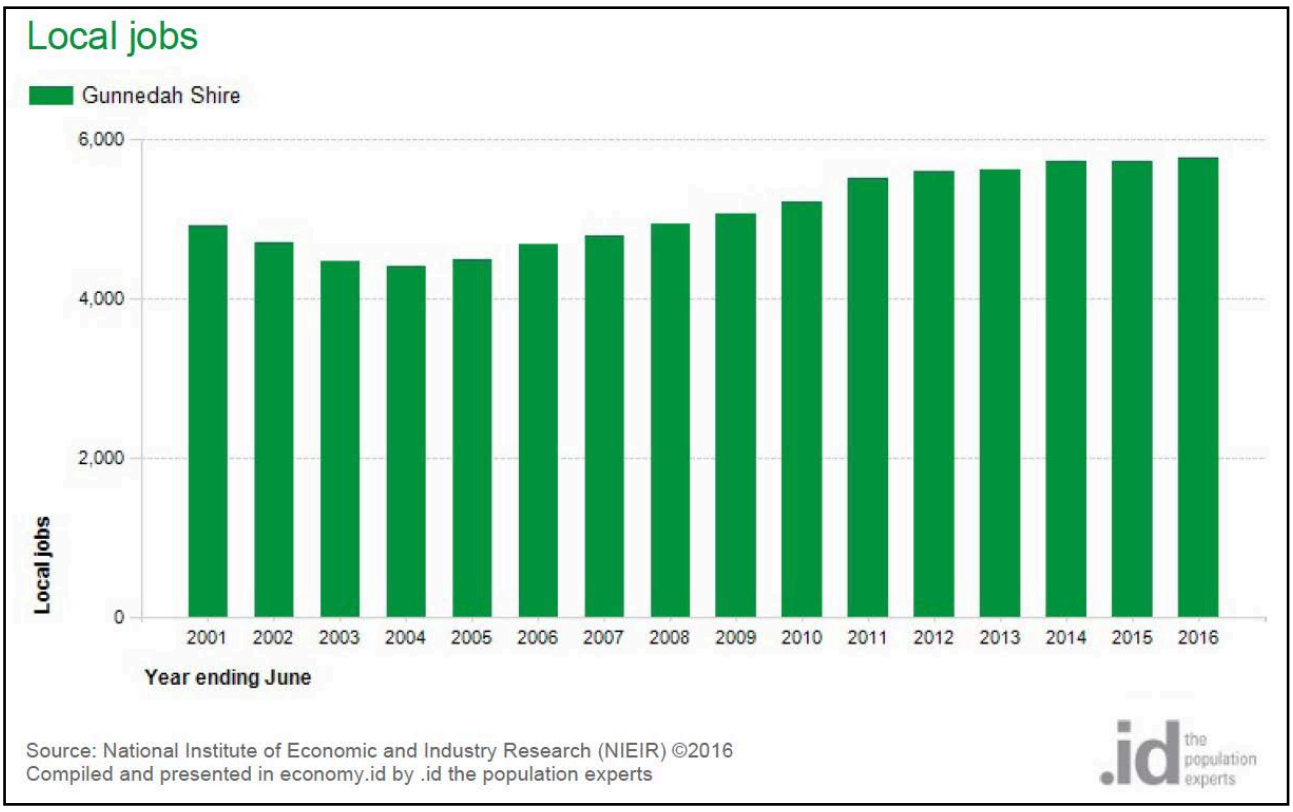


FIGURE 4.10: Gunnedah Shire Local Jobs 2001-2016

(Source: Australian Bureau of Census and Statistics id the population experts website October 2017)

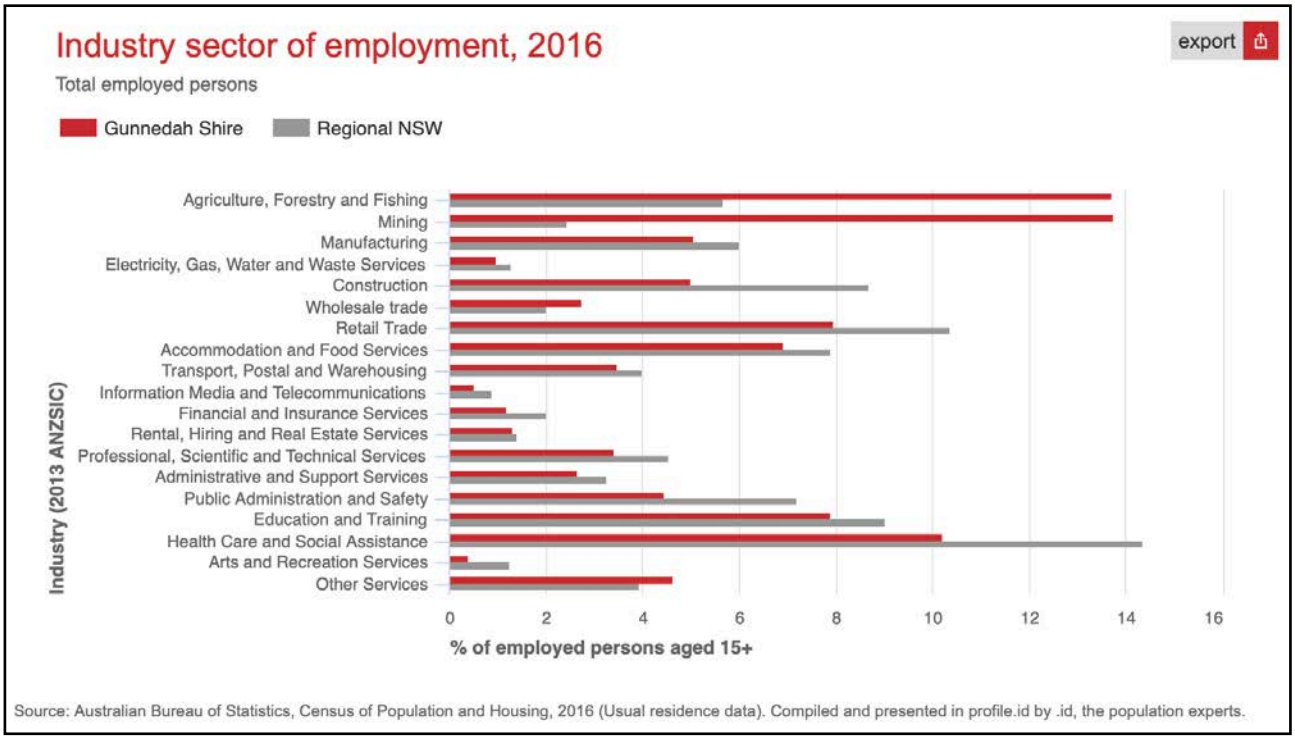


FIGURE 4.11: Gunnedah Shire Industry Sector of Employment 2016

(Source: Australian Bureau of Census and Statistics id the population experts website February 2020)

4.1.6 Roads & Traffic

Existing Roads Network

The surrounding road network is described in this Section. Further details of road conditions have been provided by traffic consultants Streetwise- refer EIS **Appendix D**. The proposed development site is located approximately 3kms west of the Gunnedah CBD. The site is located within a relatively new industrial precinct, adjacent to the railway line. The site is accessed from Torrens Road, which intersects with Quia Road, which connects the industrial area with the Kamilaroi Highway to the north, and the Oxley Highway to the south.

Torrens Road

Torrens Road is the entry point to the proposed waste facility on the site. Torrens Road is an industrial standard rural road which provides access to a new industrial precinct approximately 3km west of Gunnedah. Between the proposed development site and Quia Road, Torrens Road is 7m wide (2 x 3.5m) with variable width shoulders. At its eastern end, Torrens Road connects industrial development, including the project site, with Quia Road and the surrounding arterial road network.

Allgayer Drive

Allgayer Drive is an industrial standard road which provides access through the northern end of the new industrial precinct approximately 3 kms west of Gunnedah. Allgayer Drive is 13m wide (2 x 3.5m) with kerb & gutter both sides.

Quia Road/Ross Road

Ross Road is located west of the Gunnedah township and runs adjacent to the railway line. Ross Road is a 3km long rural road which connects Quia Road with the Oxley Highway. Quia Road is a sealed rural road which connects Goolhi Road to the Gunnedah township, via the intersection with Blackjack Road roundabout. The length is approximately 16.2km. The road has a 6-7m wide bitumen seal on an 8-9m wide gravel formation. The speed limit is generally 100kph, reducing to 80kph near the Gunnedah town limits.

The road is generally flat, with large radius bends and minimal grades. Pavement and surface condition is generally good. Quia Road is generally 2 lanes in either direction with sealed or gravelled shoulders. The lane widths are generally 3 - 3.5m wide. The road surface is sealed and is generally in good condition. The roadway has previously been approved as a haul road for local quarries to allow laden semi-trailers and truck & dogs to deliver to sites south & east of Gunnedah via the Oxley Highway. .

AADT Traffic Volumes

StreetWise obtained historical average annual daily traffic (AADT) flows traffic data for various sites on the Oxley Highway and Kamilaroi Highway, from the RMS website.

While the data is located at sites not directly connected to the project site, the data gives an indication of the relatively low volumes in this part of the state, and also the minimal annual increases in traffic flows recorded.It shows:

- The Oxley Highway 20km west of Gunnedah carried 1,052 vehicles (AADT 2011).
- The Oxley Highway near the Gunnedah overhead railway bridge carried 6,250 vehicles (AADT 2011).
- The Oxley Highway 1.5km east of Wilkinson Street, on the eastern side of Gunnedah township, carried 3,683 vehicles (AADT 202018).
- The Kamilaroi Highway 20km west of Gunnedah carried 1,052 vehicles (AADT).

4.1.7 Landscape

Visual Assessment Criteria

The landscape character and visual significance of land needs to be considered in the context of a range of factors, including landscape features, visual prominence and context in the overall landscape. The general visual character of land is established through an assessment of its topographic characteristics, land use and settlement pattern, ability to be viewed by others and vegetation cover. In this context it is relevant to note that the project site is within a zoned industrial area and, with the exception of the western side, surrounded by existing industrial development.

The aim of the landscape and visual impact assessment is to identify, evaluate and predict potential key visual impacts arising from the proposed landfill development, considered further in this section of the EIS.

The visual quality of a site can be assessed in terms of the relative scenic quality of that landscape and the degree of visual prominence. Scenic quality is determined by classifying the natural landscape features into three classes on the basis of their variety. These are as follows:

High Scenic Quality	-	Distinctive Variety
Moderate Scenic Quality	-	Common Variety
Low Scenic Quality	-	Minimal Variety

The method of classification is based on the assumption that scenic quality increases as relief and topographic ruggedness increases, vegetation become more diverse, natural and agricultural landscapes increase and altered landscapes decrease. Landscapes with a High Scenic Quality includes landform or land cover of outstanding, unusual, distinctive or diverse character. Moderate Scenic Quality landscapes includes landform or land cover which tend to be common throughout the region and are not outstanding in visual quality. Landscapes with a Low Scenic Quality include those areas with features of minimal diversity or variety and includes all areas not found under the other classes.

Generally, industrial areas comprise land with a Low scenic quality or sensitivity to visual change.The landscape and visual sensitivity criteria are summarised in the accompanying Table 4.3.

Table 4.3: Site selection factors considered

Sensitivity Class	*Landscape Sensitivity Criteria*	*Visual Sensitivity Criteria*
High	*Landscape characteristics or features with little or no capacity to absorb change without fundamentally altering their present character.* *Landscape designated for its international or national landscape value* *Outstanding example in the area of well cared for landscape or set of features.*	*Views orientated towards a proposed development.* *Users of outdoor recreational facilities, on recognised national cycling or walking routes or in national designated landscapes*
High-Medium	*Landscape characteristics or features with a low capacity to absorb change without fundamentally altering their present character* *Landscape designated for regional or county-wide landscape value where the characteristics or qualities that provided the basis for their designation are apparent. Good example in the area of reasonably well cared for landscape or set of features*	*Road users in nationally designated landscapes or on recognised scenic routes, likely to be travelling to enjoy the view.* *Users of outdoor recreational facilities, in locally designated landscapes or on local recreational routes that are well publicised in guide books*

Medium	*Landscape characteristics or features with moderate capacity to absorb change without fundamentally altering their present character Landscape designated for its local landscape value or a regional designated landscape where the characteristics and qualities that led to the designation of the area are less apparent or are partially eroded or an undesignated landscape which may be valued locally – for example an important open space* *An example of a landscape or a set of features which is neutral or mixed character*	*Oblique views of a proposed development.* *Users of primary transport road network, orientated towards the development, likely to be travelling for other purposes than just the view.*
Medium-Low	*Landscape characteristics or features which are reasonably tolerant of change without determent to their present character. No designation present or of little local value. An example of an un-stimulating landscape or set of features*	*Primary transport road network users likely to be travelling to work with oblique views of the development or users of minor road network.* *People engaged in active outdoor sports or recreation and less likely to focus on the view.*
Low	*Landscape characteristics or features which are tolerant of change without detriment to their present character No designation present or of low local value. An example of monotonous unattractive visually conflicting or degraded landscape, industrial landscapes.*	*Road users on minor access roads travelling for other purposes than just the view.* *People engaged in work activities indoors, with limited opportunity for views of the development.*

Visual Assessment of Project Site

In terms of overall visual prominence, the project site has none. In general, views of the project site tend to be localised only, seen only from close proximity only to the south and from the east, with the site also able to viewed from closest neighbouring rural residences to the north. Refer **Figure 4.7**. Existing on-site tree plantings on the project site also assist in 'softening' the overall visual appearance of existing industrial buildings on the site. Refer **Figure 4.4** and Photograph 4.3.

Due to its setting in flat terrain, in an industrial setting with views principally from within the industrial area, with minimal landscaping, the project site is considered to have a Low to Medium-Low landscape sensitivity and visual sensitivity. This makes the landscape here tolerant or reasonably tolerant of visual change without detriment to its present character.

4.2 Summary of Mitigation Measures & Commitments

4.2.1 SEARS Requirements

The issued SEARS requires that the EIS contain a consolidated summary of all the proposed environmental management and monitoring measures (mitigation measures), highlighting commitments included in the EIS. These measures are summarised in the accompanying Table 4.4 and Table 4.5, covering the construction and operational stages of the project, respectively. The mitigation measures will be included as part of a site environmental management plan (EMP) that will cover both the construction and operational stages of the project.

4.2.2 Mitigation Measures: Construction Stage Commitments

Table 4.4: Summary of Mitigation Measures: Construction Stage

Environmental Issue	*Source of potential environmental impact*	*Mitigation measures during construction*
Pre-construction investigations, establishment	*To avoid the potential damage to existing services and other infrastructure.*	▸ *Existing condition and dilapidation survey of roads, light poles, and other government infrastructure. The Dilapidation Report will include a photographic survey of existing public roads, kerbs, footpaths, drainage structures, street trees and any other existing public infrastructure within the immediate area of the project site.* ▸ *Prior to start of construction on-site, licenses and approvals and worker training are required. Prior to commencing construction activities, all of the Head Contractor's employees shall attend a project induction workshop carried out by the Head Contractor. This shall be documented and all participants are to sign an attendance sheet.* ▸ *Notice shall be given to Gunnedah Council at least two (2) days prior to works commencing in accordance with Clause 104 of the EP&A Regulation 2000.* ▸ *Site development compound established and fenced off. Exclusion zones, including fenced exclusion zones, will be set up. Appropriate signage will be placed on areas at the entrance to the work zone, indicating the works area and restricted access to the site.*
Waste management	*During construction including sheds, stormwater devices, new weigh-bridge and bins.*	▸ *Waste mitigation strategies during construction would include the requirement for construction waste generated on site will be removed by a licensed waste contractor and sorted for recycling off-site.* ▸ *Use of pre-fabricated materials reduces the potential for generation of on-site construction waste.* ▸ *Use of existing toilet facilities provided on site.*
Hazards and risk, including fire	*Fires, fuel/chemical leaks and spills.*	▸ *Existing hazards and risks associated with the operation of the existing depot are managed through the existing Mackellar Group management system which includes workplace health and safety management, and pollution incident response and emergency management eg. for fires, fuel spills and accidents.* ▸ *Mobile plant and vehicles will be fitted with fire extinguishers.* ▸ *Accesses to be managed to accommodate the turning path of all construction and any other heavy vehicles requiring access to the site eg. fire fighting vehicle. Use of existing lawful access points to the site, from Torrens Road and from Allgayer Drive.*

Environmental Issue	***Source of potential environmental impact cont.***	***Mitigation measures/risk treatment during construction cont.***
Compliance reporting	*Oversight of the construction stage*	*A Compliance Monitoring and Reporting Program to be prepared in accordance with the required Compliance Reporting Post Approval Requirements (Department Planning & Environment 2018) must be submitted to the Department and the Certifier.*
Signage	*Site security, stopping of unauthorised access to the site during the construction stage*	*A sign is to be erected and maintained in a prominent position on the site in accordance with Clause 98A(2) of the Environmental Planning and Assessment Regulation 2000 indicating all of the following:* ► *The name of the principal contractor (if any) for the building work and a telephone number on which that person may be contacted outside working hours,* ► *The name and address and telephone number of the Principal Certifying Authority (PCA) for the work (if relevant).* ► *Stating that unauthorised entry to the construction site is prohibited.*
Air quality	*Generation of dust during construction.*	*Mitigation measures proposed include the following:* ► *The project site is within an established industrial area connected to mains town water, which can be used, as well as water trucks (if required), for dust suppression.* ► *Most of the site is already hardstand.* ► *Construction hours to be strictly controlled ie. 7.00am to 5.00pm Monday to Saturday, with no work to be carried out on Sundays or public holidays.* ► *Construction activities to be undertaken such that dust emissions from exposed soil areas comply with the requirements of the 'Blue Book' eg. use of wet suppression techniques on all potential dust sources, where practicable, where additional fill is required.* ► *Contractors and staff to be trained to implement dust minimisation measures.* ► *Site speed limit of 20km/hour to be imposed.* ► *Covering of all truck loads.* ► *Public roads used by these trucks are to be kept clean.* ► *Any dust complaints to be recorded, identifying cause(s) and remedial measures put into place in a timely manner.*
Noise and vibration	*Noise and vibration from construction vehicles and works.*	► *Construction hours to be strictly controlled ie. 7.00am to 5.00pm Monday to Saturday. No work to be carried out on Sundays or public holidays.* ► *During construction, noise levels are predicted to exceed the criteria at the receptors. Potentially noise affected neighbours will be informed about the nature of the construction stages and the duration of noisier activities, along with progress updates.* ► *Conducting particularly noisy activities for short durations, that is, allowing for intra-day respite periods, where practical.* ► *Progress noise monitoring could also be conducted during construction works to provide feedback to site managers as to the level of noise being emitted from the site.* ► *Noise complaints to be registered, investigated and responded to in a timely manner.*
External lighting	*Site security, excessive light from security lighting*	*In order to minimise the impact of external lighting arising from construction-related activities on local amenity, all external lighting is to be in compliance with AS4282:1997 Control of the obtrusive effects of outdoor lighting.*

Environmental Issue	***Source of potential environmental impact cont.***	***Mitigation measures/risk treatment during construction cont.***
Soil and water	*Need to control sedimentation and erosion from disturbed areas during construction phase.*	▸ *Minimal site excavation proposed eg. weigh-bridge, services, building foundations, and leachate and stormwater management devices.Stockpiles of topsoil, sand, aggregate, soil or other material will not be located on any drainage line or easement, natural watercourse, footpath or roadway and will be protected with adequate sediment controls.* ▸ *Minor additional fill material to be applied to the site, to enable proper site drainage. All imported fill to be free of any contamination. Prior to the importation and/or placement of any fill material on the project site, a validation report and sampling location plan for such material must be provided to and approved by the PCA, confirming that it is free from contaminants and provides no risk to human health and the environment.* ▸ *Areas of fill to be regularly watered, for dust suppression. Reliance on existing town water supply and existing hose connection points on site, as well as water trucks (if required) for dust suppression.* ▸ *A sediment and erosion control plan to be prepared as part of any overall site environmental management plan dealing with the construction stage of the project. Sediment and erosion controls are to be effectively maintained at all times during construction and are not to be removed until works are completed. All such works are to accord with the requirements of the relevant guidelines, including Managing Urban Stormwater Soils and Construction, Volume 1 Landcom (the so-called 'Blue Book') and Gunnedah Council requirements, as set down in the Martens & Associates plans and drawings.* ▸ *The site environmental management plan will include an unexpected finds protocol to ensure that any contamination encountered during excavation can be appropriately managed.* ▸ *All excavated material will be tested for petroleum hydrocarbons at a laboratory, and if results exceed the applicable guideline limits, the material will be disposed of at a licensed landfill facility.* ▸ *Use of sediment controls/traps/fences on site, and diverting clean runoff around the site. Sediment will be removed immediately following rainfall events when the operating capacity of the devices is impaired.* ▸ *The proposed fill area will be bunded so that any fuel spilled during plant refuelling will be captured and will drain to an interceptor trap. A diesel spill kit will be stored within the workshop and/or main storage shed.* ▸ *On-site erosion and sediment controls will be regularly monitored for their effectiveness. Sediment and erosion control must remain in place throughout the entire construction process.* ▸ *Refuelling activities will be undertaken in the existing refuelling area, removed from site works.* ▸ *Cleaning of drainage system before and during works.* ▸ *Truck shaker grids will be installed at the entry gates to ensure that there is minimal tracking of dirt onto the local road system roads. Any tracked dirt will be cleaned daily.* ▸ *Any complaint related to the water quality or erosion and sediment control measures is to be investigated and reported, with remedial action taken.*

Traffic and transport	*Heavy machinery on local roads, road and pedestrian safety.*	*A traffic management plan to be prepared as part of any overall site environmental management plan, aimed at ensuring the safety of employees, contractors, and the general public.* ▸ *The Torrens Road and Allgayer Drive roadway is to be kept free of obstruction by work materials and/or plant. All trucks and associated plant are to be kept wholly within the project site, with no queuing allowed on public roads.* ▸ *Internal roads, driveways and parking associated with the development are to be constructed and maintained in accordance with the latest version of AS 2890.1:2004 Parking facilities Off-street car parking (Standards Australia, 2004) and AS 2890.2:2002 Parking facilities Off-street commercial vehicle facilities (Standards Australia, 2002)* ▸ *All trucks entering or leaving the site with loads to have their loads covered to avoid tracking of dirt onto public roads.* ▸ *Adequate swept paths provided for all heavy trucks on site, to be kept clear of obstacles.* ▸ *All loading and unloading of excavation and construction machinery, excavation and building materials is to be confined to within the site boundaries. All loading and unloading operations are to comply with relevant WorkCover and other statutory regulations.* ▸ *Cleaning of drainage system before and during works. Council's road systems will be maintained during the construction works period. Any damage to Gunnedah Council's infrastructure within the road reserve by construction operations will be repaired and/or reinstated.*
Biodiversity	*Clearing of trees and impact on trees/ habitats.*	▸ *Limited impacts. No clearing of koala habitat. Clearing of all trees is proposed on Lot 2, with limited tree clearing on Lot 1 to make way for truck movement pathways to Lot 2.* ▸ *Communication with building contractors and basic tree protection measures to reduce potential for incidental/ accidental damage to the trunk, canopy and shallow roots of all retained trees throughout the construction process.* ▸ *Canopy pruning should be undertaken by an AQF Level 2 (minimum) Arborist in accordance with AS4373-2007-Pruning of Amenity Trees, Section 7.2.4 (Selective Pruning).*
Visual	*Clearing of trees, disturbance of site.*	▸ *Extensive site works involved over Lot 2, and to a lesser extent Lot 1, with minimal clearing of trees proposed. Extensive trees stands are already well established on the site.* ▸ *The site will have the appearance of a work site during construction phase.* ▸ *Further boundary plantings proposed on northern boundary will assist in reducing the visual impact of the project when viewed from the north (or until the industrial site to the north is developed)..*
Heritage	*Impact on archaeological sites potential.*	*Minimal excavation works proposed. Minimal potential for disturbing any archaeological site. If any Aboriginal objects are identified during construction or operation of the facility, the operator would cease work in the immediate area of the find and fence off the area. The find would be reported to Heritage NSW and management measures would be implemented based on the significance of the item. An unexpected finds protocol will be developed and included in the site management plan.*
Emergency and evacuation management		*An emergency and evacuation plan will be prepared as a part of the site EMP. To include notification of neighbours in the event of a potential emergency.*

4.2.2 Mitigation Measures: Operation of Waste Facility & Commitments

The following Table 4.5 summarises mitigation measures proposed to control the day to day management of the waste facility, including the handling of waste. A development specific site Environmental Management Plan (EMP) will be adopted prior to commencement.

Table 4.5: Summary of Mitigation Measures: Waste Facility Operation

Environmental Issue in SEARS	***Source of potential environmental impact***	***Mitigation measures during operation of waste facility***
Strategic and statutory context	*Identify any prohibitions that may apply to the site or variations to development standards that may result in additional impacts.*	*The Project has a Low risk in this regard as the site is zoned for industrial use, with expectations that that industry would be established on the project site, with resultant impacts. Moreover,* ▸ *The Construction Certificate and EPL, once issued, will contain various mitigation and management measures necessary to ensure that the proposed waste facility is constructed and operated in accordance with relevant statutory provisions.* ▸ *There will be no sterilisation of other adjacent land uses arising from the proposal.* ▸ *The Project complies with relevant local council and State Government guidelines/DCP.*
Waste management	*Management of different types of waste during operation of the waste facility, including treatment of residual waste.*	▸ *A Waste Management Plan (WMP) will be incorporated into the overall site environmental management plan (EMP), which will include procedures relating to identification of waste streams accepted at the facility, screening of incoming loads, weighing of incoming and outgoing vehicles, procedures for dealing with unexpected finds, and procedures for treatment and storage of sealed asbestos waste and lithium batteries.* ▸ *Each load presented at the facility is to be inspected and accepted/rejected. This is with the exception of asbestos-contaminated material, which will be transferred to the an enclosed storage facility, specifically set aside for this form of waste, for later disposal to a licensed landfill facility. Lithium batteries to be sorted and stored separately. Any other load containing other unwanted waste eg. Any other hazardous or restricted waste, will be rejected and diverted to the appropriate waste facility.* ▸ *All waste is to be sorted, treated and recycled with unwanted waste disposed of to a licensed landfill.* ▸ *Contaminated soil anticipated to be a major source of waste to this facility. Initial blending to occur in the processing shed, with final mixing in stockpile/storage bay. This waste type has a very low hazard or fire risk.* ▸ *The unloading, sorting and recycling of waste will occur within covered sheds to minimise dust and noise and reduce the potential for wastewater runoff.* ▸ *Covering of loads to minimise the potential for waste spreading to surrounding locations during transport. Unloading of vehicles and processing will occur in covered sheds, minimising the spread of waste.* ▸ *Tyres, a major source of waste in particular for a coal-mining area like Gunnedah, to be separately processed/shredded in a stand-alone covered building on the site.* ▸ *Regular litter removal on the site.* ▸ *The Project encourages the reduction in waste going direct to landfill, in accordance with NSW Government waste policy.*

Environmental Issue in SEARS cont.	***Source of potential environmental impact cont.***	***Mitigation measures during operation of waste facility cont.***
Hazards and risk, including fire	*Fires, fuel/chemical leaks and spills.*	▸ *Existing hazards and risks on site are managed through the existing Mackellar Group management system which includes workplace health and safety management, and pollution incident response and emergency management. To be incorporated into an overall site environmental management plan (EMP).* ▸ *Construction will be undertaken in accordance with the Work Health and Safety (WHS) Act 2011.* ▸ *Waste to be managed in accordance with Fire and Rescue NSW Fire safety in waste facilities guideline. [NOTE: The facility is not expected to be handling any significant volume of combustible waste- refer Section 3.1 for details].* ▸ *Mobile plant and vehicles will be fitted with fire extinguishers.* ▸ *Emergency Response Plan to be prepared as part of proposed management plan for the waste facility, to include fire response procedure in accordance with Appendix A, Fire and Smoke Emergencies, of the AS 3745: 2010 standard. Safe operational access and egress for emergency service personnel and workers will be provided at all times.* ▸ *Fire hose reels and portable fire extinguishers to be located throughout the site. An additional two (2) fire hydrant connection points are to be located on the Allgayer Drive street frontage, able to service the sheds and waste storage bays.* ▸ *A fire detection and alarm system is installed to Australian Standard AS 1670.1.* ▸ *Fire brigade vehicle access is capable of being provided between external storage bins/bays/stockpiles.* ▸ *The external areas of the site should be level, clear of all rubbish and combustible materials, and enclosed by fences or walls constructed of non-combustible construction.* ▸ *Site security measures to include fencing of site and securing of the site at the end of each day.* ▸ *Each internal stockpile is well below the minimum of 1,000 m2 specified in the 'acceptable solutions' set down in Appendix A of the Fire and Rescue NSW Fire safety in waste facilities guideline. Internal stockpiles will maintain a minimum of 6m unobstructed access on each accessible side.* ▸ *Individual storage bays that contain the different waste product (as identified above) shall be separated.* ▸ *Retention of contaminated water run-off from any fire event.* ▸ *Emergency lighting and exit signs throughout the sheds in accordance with the relevant provisions of BCA Part E4 and AS 2293.1-2005.* ▸ *Automatic smoke exhaust system to be provided.* ▸ *An operations plan is to be documented and implemented for stockpile management.* ▸ *Auditable procedures to be in place to handle and dispose of hazardous waste materials that have been received on site.* ▸ *Regular cleaning of litter on site.* ▸ *Plant and equipment to be well maintained, to reduce the risk of sparks.* ▸ *Fire fighting equipment to be well maintained.* ▸ *An Incident Response Plan (IRP) will be developed for operation of the Site. The plan will specify the procedure to be followed in the event of a spill, including the notification requirements and use of absorbent material to contain the spill. A spill kit will be provided onsite at all times.*

Environmental Issue in SEARS cont.	***Source of potential environmental impact cont.***	***Mitigation measures during operation of waste facility cont.***
Air quality	*Generation of dust during operation of the waste facility.*	▸ *Contractors staff to be trained to implement dust minimisation measures.* ▸ *Site speed limit of 20km/hour to be imposed.* ▸ *Covering of all truck loads, with public roads used by these trucks to be kept clean.* ▸ *Any dust complaints to be recorded, identifying cause(s) and remedial measures put into place in a timely manner.* ▸ *Surfaces within unloading, processing and stockpiles to be either concrete or asphalt surfaces.* ▸ *Waste storage and processing areas are to be regularly cleaned, watered and any residual waste removed.* ▸ *Wheel-wash to be used for outgoing haulage vehicles.* ▸ *Water sprays to be used in unloading and processing areas, or any other area with the potential to create dust.* ▸ *Stockpile heights to be restricted - refer EIS Section 3 for details.* ▸ *Stockpiles to be regularly wetted down to minimise the potential for wind erosion and dust impacts.* ▸ *Air quality levels are predicted to be below applicable amenity criteria at nearest sensitive receptors.* ▸ *Possible odour sources are to be monitored and control activities implemented as required.*
Noise and vibration	*Noise and vibration from construction vehicles and works.*	▸ *Operational hours to be strictly controlled ie. 7.00am to 5.00pm Monday to Saturday. No work to be carried out on Sundays or public holidays.* ▸ *Noise levels are predicted to be below applicable amenity criteria at nearest sensitive receptors.* ▸ *The waste facility is to be established in a zoned General Industrial area, surrounded by other industrial uses, and set back reasonably from residential uses and residential zoned areas.* ▸ *The noise generated by the waste facility similar to that generated by other industrial uses.* ▸ *Sheds and stockpiles to be used to shield/limit noise to neighbouring properties.* ▸ *Noise generating plant and equipment to be shielded by sheds.* ▸ *Plant and equipment will be regularly maintained and serviced, to minimise the potential for excessive noise impacts.* ▸ *Plant and equipment to be switched off when not in use.* ▸ *A register of (noise) complaints shall be maintained. If noise complaints occur, they will be registered, investigated and responded to in a timely manner to ensure issues are not repeated.*
Visual, landscaping	*Appearance of buildings and stockpiles, clearing of trees, disturbance of site.*	*Extensive works involved over Lot 2, and to a lesser extent Lot 1. Buildings will be to an industrial scale and type, with most existing landscaping retained on the site. Further boundary plantings proposed:* ▸ *Along the Allgayer Drive street frontage.* ▸ *Along the western boundary of Lot 2.* ▸ *A 6m wide landscaped area to be established on the northern boundary of lot 2.* ▸ *the visual appearance of the site entrance on Torrens Road, as well as Allgayer Drive, will be landscaped and kept tidy.* ▸ *Lighting design for the Site will be such that the criteria prescribed in Table 2.1 of Australian Standard - AS 4282-1997, "Control of Obtrusive Effects of Outdoor Lighting" for commercial areas will be achieved at the site boundary.*

Environmental Issue in SEARS cont.	***Source of potential environmental impact cont.***	***Mitigation measures during operation of waste facility cont.***
Soil and water	*Need to control sedimentation and erosion, stormwater and leachate.*	▸ *Surface water controls are to be used to prevent the uncontrolled release of waters from the project site. All waste transfer and sorting will occur in sheds.* ▸ *Waste water will be managed in the facility by ensuring that the wastewater management system is monitored and maintained.* ▸ *The leachate management system will be designed to maintain separation between rainfall run-off and leachate at all times. The design provides for collection of leachate in a stand-alone leachate storage facility All excess leachate from the Site will be disposed of in accordance with legislative requirements, through either a trade waste agreement or pumped out and disposed of at an appropriately licensed facility.* ▸ *No water will be used in the transfer or sorting of waste except for dust control or unexpected finds asbestos dust control.* ▸ *Bunding to be employed. (Existing diesel tanks are self-bunded.)* ▸ *On-site detention (OSD) to be employed in the north-east corner of the project site* ▸ *Use of surface water management, as well as sediment and erosion controls.* ▸ *Discharges of polluted water offsite are not predicted.* ▸ *The waste facility will not impact flood behaviour.* ▸ *The waste facility will not take or impact on any groundwater.* ▸ *Any spills are to be contained on site.*
Traffic and transport	*Heavy machinery on local roads, road and pedestrian safety.*	▸ *Traffic management plan to be prepared, aimed at ensuring the safety of employees, contractors, and the general public in and around the project site. A Construction Traffic Management Plan (CTMP) will be developed for the construction phase of the Project. The CTMP will form a sub-plan to the overall site environmental management plan and will prescribe locations for private worker vehicle parking during construction works, access routes to the Site and notification requirements during construction of the Project infrastructure.* ▸ *In the interests of traffic and pedestrian safety, a low (20km/hour) speed limit to be applied to waste haulage vehicles on site.* ▸ *Control, monitoring, management and recording of all incoming and outgoing waste.* ▸ *Vehicle inspection and clearance is undertaken at the weigh bridge complex on all waste transport vehicles entering the project site.* ▸ *Traffic movements into and out of the site are to be in a forward direction.* ▸ *Loading and unloading of waste transport vehicles to be wholly conducted within the boundaries of the site. No vehicle queuing on local roads.* ▸ *All waste vehicle movements within the project site will be restricted to designated routes marked out by appropriate signage on site.* ▸ *Staff and visitor parking to be located in the southern section of the project site, on Lot 1, in the vicinity of the existing staff car park.* ▸ *Appropriate directional signage will be provided at the site entrances to direct vehicles and pedestrians safely around the site.* ▸ *Signs will be erected at the facility regarding drivers' legal obligation to ensure that waste is covered during transport.* ▸ *Vehicles dispatching products or residue will be covered prior to leaving the site.*

Biodiversity	*Clearing of trees and impact on habitats.*	*Limited impacts. No impacts on koala habitat. The waste facility will not affect any groundwater dependent ecosystems. Extensive trees stands are already well established on the site. Minimal clearing, with extensive remedial landscaped plantings proposed.*
Heritage	*Impact on archaeological sites potential.*	*The procedure for the management of unexpected archaeological finds will be documented within the site environmental management plan. For example, if any Aboriginal objects are identified during construction or operation of the facility, the operator would cease work in the immediate area of the find and fence off the area. The find would be reported to Heritage NSW and management measures would be implemented based on the significance of the item. An unexpected finds protocol will be developed and included in the site management plan. In the event that suspected human skeletal remains are discovered, all works will cease and the NSW Police and the NSW Coroner's office will be contacted. If the burial is identified as being of Aboriginal origin a heritage professional and Heritage NSW will be contacted to determine the subsequent course of action.*
Emergency and evacuation management		*An emergency and evacuation plan will be prepared as a part of the site EMP. To include notification of neighbours in the event of a potential emergency.*

4.3 Environmental Assessment

4.3.1 Overview

The following section assesses the likely environmental and planning impacts arising from the waste facility proposed on the project site at Torrens Road, Gunnedah.

The identification and prioritisation of environmental issues associated with the proposed new waste facility has enabled the impact assessment contained in the EIS to focus on key impacts and environmental mitigation strategies.

Details of all mitigation measures to be employed on site are contained in section 2 of the EIS report and accompanying specialist reports, to be be read in conjunction with the following assessment.

The *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act) establishes the system of planning, environmental impact assessment and development approvals in NSW.

The Project complies with the objects of the EP&A Act, which governs planning and the assessment of development projects in New South Wales, including resource recovery and waste facilities- refer to Table 2.1 in Section 2.1.1 of this EIS for compliance table.

Section 4.15(1) (formerly 79C(1)) of the EP&A Act applies to the determination of the development application for State significant development (s 4.40 of the EPA Act). It requires an assessment of the impact of various planning and environmental issues engaged for consideration by s 4.15. In this regard Section 4.15(1) provides:

> *"(1) In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:*
>
> *(a) the provisions of:*
>
> *(i) any environmental planning instrument, and*
>
> *(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and*
>
> *(iii) any development control plan, and*
>
> *(iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and*
>
> *(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph),*
>
> *(v) Repealed*
>
> *that apply to the land to which the development application relates,*
>
> *(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,*
>
> *(c) the suitability of the site for the development,*
>
> *(d) any submissions made in accordance with this Act or the regulations,*
>
> *(e) the public interest."*

A summary of the overall compliance of the proposed waste facility development with the above matters for consideration is set out in the accompanying Table 4.6.

Table 4.6: Compliance with Section 4.15 of the EP&A Act (Summary)

Matters for Consideration s.4.15	***Compliance***
(a) The provisions of: ***Any environmental planning instrument***	*Under the provisions of Gunnedah Local Environmental Plan (LEP) 2012 a 'waste or resource management facility' is a permitted use in the IN1 General Industrial zone. Moreover, Clause 121(1) of State Environmental Planning Policy (Infrastructure) 2007 has the effect of rendering development for the purpose of a waste facility permissible in a 'prescribed zone', which includes land zoned IN1 General Industrial- the current zoning of the project site. Refer to EIS Sections 2.2 and 2.3.1.*
Any proposed planning instrument	*Complies. Refer to EIS Sections 2.3.8 and 2.4.6.*
Any development control plan	*Complies. Refer to EIS Sections 2.2.3 and 8.2. The applicable development control plan is the Gunnedah Development Control Plan 2012.* *[NOTE: DCPs do not apply to State Significant Development]*
Any planning agreement or draft planning agreement that has been entered into	*No planning agreements have been entered into under s.7.4 of the EP&A Act. Not applicable.*
The regulations (to the extent that they prescribe matters for the purposes of this paragraph)	*Complies. Refer to EIS Section 4.3.*
(b) The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality	*Complies. Refer EIS Section 4.3 in conjunction with Sections 3,4, 6 and 7 of this EIS, as well as specialists reports-all of which also contain details of mitigation measures proposed.* *The proposed waste facility is confined to land developed recently for the purposes of an industrial estate: Allgayer Drive. The project has been sited and designed to minimise the impacts to the environment.* *Mitigation and management measures have been proposed to encourage the protection of the environment.*
(c) The suitability of the site for the development	*Complies. Refer EIS Section 4.3. The project site forms part of land that has been specifically developed to accommodate industrial uses. It has no adverse impact on biodiversity values, or value to koalas.* *The project site is located within an existing industrial area surrounded by other compatible developments and land uses.* *Moreover, it is adequately separated from sensitive receivers to enable potentially adverse environmental impacts (ie air and noise) to be satisfactorily managed and/or mitigated Refer also to Sections 4.2.2 and 8.3 of the EIS.*
(d) Any submissions made in accordance with this Act or the regulations	*Refer EIS Section 4.3. Comments will also be received during the EIS exhibition process.*
(e) The public interest	*Complies. Refer EIS Section 4.3.*

Pursuant to clause 121(1) of *State Environmental Planning Policy (Infrastructure) 2007* the proposed waste facility is defined as a '*waste or resource management facilities*'. The characterisation of purpose has been dealt with in accordance with well-settled principles established by the Courts[7].

The Project is for a waste facility handling more than 100,000 tonnes of waste per annum, and is therefore State Significant Development (SSD) within the meaning of Section 4.36(1) of the *Environmental Planning and Assessment Act 1979*.

FOOTNOTE 7: As summarised by Preston CJ in Chamwell Pty Ltd v Strathfield Municipal Council [2007] NSWLEC 114, having regard for the overall end purpose of the proposed development rather than individual components or aspects.

4.3.2 Section 4.15(1)(a): Planning Instruments, DCPs, Regulations

Background and overview

In this case, the principal environmental planning instruments that are responsible for allowing the proposed development on the project site, and in facilitating approval of the proposed waste facility, are as follows:

- *Gunnedah Local Environmental Plan (LEP) 2012* which permits the establishment of a 'waste or resource management facility' in the IN1 General Industrial zone.
- *State Environmental Planning Policy (Infrastructure) 2007*. Planning provisions apply specifically to waste facilities. It allows waste facilities in any 'prescribed zone', which includes land zoned IN1 General Industrial.
- *State Environmental Planning Policy (State and Regional Development) 2011.* No planning guidelines *per se* apply to waste facilities.

It is also noteworthy that the provisions of the state environmental planning policies listed above prevail to the extent of any inconsistency with any other environmental planning instrument per Clause 8(1) of *State Environmental Planning Policy (Infrastructure) 2007* which states:

> *"(1) Except as provided by subclause (2), if there is an inconsistency between this Policy and any other environmental planning instrument, whether made before or after the commencement of this Policy, this Policy prevails to the extent of the inconsistency."*[8]

Clause 7 of *State Environmental Planning Policy (State and Regional Development) 2011* states:

> *"(1) Subject to section 74(1) of the Act, in the event of an inconsistency between this Policy and another environmental planning instrument, whether made before or after the commencement of this Policy, this Policy prevails to the extent of the inconsistency."*

The provisions of other state environmental planning policies also apply- refer to Section 2 of the EIS. These are further considered in Section 4.3 the EIS.

Moreover, pursuant to the provisions of clause 8(1) of *State Environmental Planning Policy (Infrastructure) 2007* any provision of a development control plan that specifies a requirement, standard or control in relation to a waste facility development "*is of no effect, regardless of when the development control plan was made*." The Project complies in this regard.

The proposal complies with the above relevant environmental planning controls and guidelines, including the provisions of Gunnedah LEP 2012, as well as with the EP&A Regulation 2000 and the *Gunnedah Development Control Plan 2012*. Refer also Section 2 of the EIS.

The Gunnedah LEP 2012 is the comprehensive local environmental planning instrument applying to the project site. The LEP is a conventional, modern one based on the Standard Instrument Template. The Department of Planning LEP Practice Note PN 09-005, dated 10 September 2009 explains the relationship between LEP, aims, objectives and zoning provisions. It states, inter alia:

> *"It is important not to confuse aims and objectives with each other, and with planning tools. As stated in clause 1.2 of the [Standard Instrument], an LEP is required to set out the particular overarching aims of the plan. Each zone then includes core objectives which describe in more detail the purpose of the land it refers to. Permitted land uses and principal development standards are the key tools to be used to achieve objectives of a zone. This means there are three levels of information (aims, zone objectives and land use controls) and they form a hierarchy of policy intention."*

In this regard the Project complies with the applicable aims, zone objectives and land use controls contained in the *Gunnedah Local Environmental Plan 2012* and relevant SEPPs[9,10]. Refer Sections 2.2 and 2.3 of the EIS, in particular.

FOOTNOTE 8. Sub clause (2) does not apply in this case. As confirmed by Sheahan J in Bella Ikea Ryde Pty Ltd v City of Ryde Council (No 2) [2018] NSWLEC 204 decision dated 17 December 2018.

FOOTNOTE 9. The above approach to assessing a project in terms of zoning was confirmed most recently in the NSW Land & Environment Court judgement of Robson J in Omid Mohebati-Arani v Ku-ring-gai Council [2017] NSWLEC 143.

The proposal complies with relevant planning controls and guidelines:

- The proposal accords with the relevant provisions of the *Gunnedah Local Environmental Plan 2012*. Refer to Section 2.2 of the EIS for details.
- Compliant with relevant State planning policies and policies- refer Sections 2.3 and 2.4 of the EIS.
- Does not trigger Commonwealth legislation- refer Section 2.12 of the EIS.
- Complies with the relevant local council DCP- refer Section 2.2 of the EIS.

Gunnedah LEP 2012 (s.4.15(1)(a)(i))

The Project complies with the relevant provisions of *Gunnedah Local Environmental Plan 2012* which seek to minimise adverse impacts and hazards, including impacts on agriculture, areas of ecological significance, or rural amenity and to promote economic well being. Refer to Section 2.2 of the EIS for details, and the accompanying Table 4.7.

Table 4.7: Summary compliance of the Project with Gunnedah LEP 2012

LEP Provision	Compliance
Aims of LEP	Complies. The development of this industrial site for the purposes of a waste facility accords with the zoning of the land and will assist in the promoting the orderly and economic use of a well-serviced industrial estate. It will also result in the generation of further employment opportunities and investment in the Gunnedah economy. Refer **Figure 0.2** and **Figure 4.7**. No significant adverse agricultural, visual, drainage, noise, air, amenity, groundwater, ecological or heritage impacts arise from the proposed waste facility. Refer Section 2.2 of the EIS for further details.
Objectives of the IN1 General Industrial zone	Complies. The development provides for an industrial use on industrial zoned land that will provide further employment opportunities for the Gunnedah economy. The project minimises impacts on other land uses, and supports and protects the use of industrial land for industrial purposes. Refer **Figure 0.4**.
Permissibility	Complies. The proposed waste facility is a permissible use in the IN1 zone.
Heritage	Complies. The project site forms has been used for industrial purposes and is currently substantially disturbed. No significant excavation of the land is proposed. As such, it is most unlikely to have any heritage values, nor is the project likely to result in the uncovering of any unexpected finds.
Flooding	Complies.The project site is not mapped as being flood prone land- refer **Figure 2.2**.
Scenic protection	Complies. The project site is not listed as a significant scenic resource.
Terrestrial biodiversity	Complies. The project site is currently substantially disturbed and has no ecological values or habitat value to koalas. Refer also to **Appendix H**.
Groundwater	The site works proposed will not interfere with or rely on groundwater.
Landslide risk	Complies. The project site is free of any land instability or landslide risk.
Other risks	The project site is not mapped as being bushfire prone land, nor does it not form a part of any drinking water catchment, riparian lands, karst lands, or wetlands.

FOOTNOTE 10. The above approach to assessing a project in terms of zone objectives was confirmed by the NSW Land & Environment Court in New Street No. 1 Pty Ltd v Waverley Council [2017] NSWLEC 1592 dated 24 October 2017 to follow the decision of Schaffer Corporation v Hawkesbury City Council [1992] 77 LGERA 21, at [21] in assessing the compatibility of a development with the zone objectives, as follows:

"…the guiding principle then is that development will be generally consistent with the objectives, if it is not antipathetic to them. It is not necessary to show that the development promotes or is ancillary to those objectives, nor even that is compatible."

Compliance with State Planning Policies (s.4.15(1)(a)(i))

In addition to satisfying the relevant jurisdictional prerequisites of the *Gunnedah Local Environmental Plan 2012* as discussed in the preceding Section 4.3, the Project also satisfies the relevant jurisdictional prerequisites of the following state and regional environmental planning instruments, as summarised in the accompanying Table 4.8.

Table 4.8: Compliance of the Project with State Environmental Planning Policies (SEPPs)

State Environmental Planning Policy	Summary of SEPP provisions	Applicability to proposed waste facility
SEPP (Infrastructure) 2007	*Provides a consistent planning regime for infrastructure and the provision of development, across NSW. It also provides for consultation with relevant public authorities during the assessment process.*	*Yes. The Project is consistent with Clause 123 of State Environmental Planning Policy (Infrastructure) 2007. Consultation is required with RMS pursuant to the provisions of clause 101 of the SEPP. Assessed in Section 2.3.1 of the EIS.*
SEPP No. 33- Hazardous & Offensive Development	*The policy also requires specified matters to be considered for proposals that are 'potentially hazardous' or 'potentially offensive' as defined in the policy.*	*Yes, but no SEPP triggers activated. Assessed in Section 2.3.3 of the EIS. The Project is considered to be not potentially hazardous or offensive and is generally consistent with the aims, objectives and requirements of SEPP No.33.*
SEPP (Vegetation in Non-Rural Areas) 2017	*Not applicable.*	*No. Any clearing of vegetation on the project site will be assessed as part of this DA, and not under this SEPP. Assessed in Section 2.3.2 of the EIS.*
SEPP Koala Habitat Protection 2019	*Encourages the conservation and management of natural vegetation areas that provide habitat for koalas*	*Yes, but no resultant impacts. The site is generally cleared land, with new plantings provided in accordance with the issued consent- principally over drainage reserves-with vegetation retained around the original homestead situated near the Torrens Road street frontage.* *Assessed in Section 2.3.4 of the EIS. Refer also to more recent, 2020 report which confirms that the site is not 'potential koala habitat' for the purposes of this SEPP. Refer* ***Appendix H****.*
SEPP No.55 - Remediation of Land	*Introduces state-wide planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated*	*Yes, but no SEPP triggers activated. The potential contamination potential of the site and surrounding lands would have been considered by Council prior to the grant of consent and subsequent construction of the Allgayer Drive industrial subdivision.* *Assessed in Section 2.3.5 of the EIS.*
SEPP (State and Regional Development) 2011	*Defines certain developments that are projects of state significance or involving State significant infrastructure.*	*Yes. The project is of a type that triggers the relevant criteria for State significant development. The Project is classified as State significant development per Schedule 1 of this SEPP, requiring consent from the Minister for Planning. Section 2.3.5 of the EIS. Assessed in Sections 1.1, 2.1 and 2.3.6 of the EIS.*
New England North West Regional Plan 2036	*Overarching regional planning aims, policies and guidelines.*	*Yes. The project complies with the relevant provisions of New England North West Regional Plan 2036. Refer Section 2.4.5 of the EIS.*

Any Proposed Instrument (s.4.15(1)(a)(ii))

No applicable proposed instrument applies to the Project or to the project site- refer Sections 2.3.8 and 2.4.6 of the EIS.

Any Development Control Plan (s.4.15(1)(a)(iii))

As the proposed waste facility development is SSD the provisions of any development control plan do not apply, by virtue of clause 11(a) of *State Environmental Planning Policy (State and Regional Development) 2011.* Notwithstanding the above, an assessment of the compliance of the Project with the relevant provisions of the *Gunnedah Development Control Plan 2012* was undertaken. It finds that the Project generally complies with the applicable provisions of the DCP. Refer to Section 2.2.3 of the EIS for a further discussion on this matter and compliance details.

Any Planning Agreement (s.4.15(1)(a)(iiia))

No planning agreement has ben entered into.

"The Regulations" (s.4.15(1)(a)(iv)): NSW Environmental Planning & Assessment Regulation 2000

The term "the Regulations" refers to the *Environmental Planning & Assessment Regulation 2000* (EP&A Regulation).

Clause 50(1)(a) of the EP&A Regulation requires that a development application: "*must contain the information, and be accompanied by the documents, specified in Part 1 of Schedule 1*"["Forms']. This information has been duly provided in the EIS and supporting documentation forming a part of this development application (DA). The preparation of this EIS also complies with the requirements of Schedule 2 of the EP&A Regulation- "*Environmental impact statements*". The Schedule 2 requirements, and where they are addressed in this EIS, are set out in the accompanying Table 4.9 and Table 4.10.

Table 4.9: Compliance with clause 6 of Schedule 2 of EP&A Regulation: Form of an EIS

An environmental impact statement must contain the following information	***Where contained in the EIS***
(a) the name, address and professional qualifications of the person by whom the statement is prepared	*Certification page.*
(b) the name and address of the responsible person	*Certification page.*
(c) the address of the land	*Cover page and Certification page, as well as Executive Summary.*
(d) a description of the development, activity or infrastructure to which the statement relates	*Executive Summary and Section 3.*
(e) an assessment by the person by whom the statement is prepared of the environmental impact of the development, activity or infrastructure to which the statement relates, dealing with the matters referred to in this Schedule	*Sections 6 and 7.*
(f) Declaration that the EIS has been prepared in accordance with this Schedule, contains all available information that is relevant to the environmental assessment of the development and that the information contained in the statement is neither false nor misleading	*Certification page.*

As required in Part 2 of Schedule 2 of the EP&A Regulation, the Planning Secretary has notified the applicant of the various SEARS requirements. These SEARS requirements have been satisfactorily addressed in this EIS. The form and content of this EIS satisfies the requirements of Part 3 of Schedule 2 of the EP&A Regulation. Part 4 of Schedule 2 contains special provisions relating to State Significant Development (SSD).

Table 4.10: Compliance with clause 7 of Schedule 2 of EP&A Regulation: Content of an EIS

An environmental impact statement must also include each of the following	***Where contained in the EIS***
(a) a summary of the environmental impact statement	*Executive Summary.*
(b) a statement of the objectives of the development, activity or infrastructure	*Section 3.1.*
(c) an analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure	*Section 3.10.6.*
(d) an analysis of the development, including- ***(i) Description of the development*** ***(ii) General description of the environment likely to be affected by the development*** ***(iii) Likely impact on the environment*** ***(iv) Full description of mitigation measures*** ***(v) A list of approvals that must be obtained***	 *Executive Summary and Section 3.* *Section 4.* *Section 4.3.* *Sections 3 and 4.2.* *Sections 1.2 and 2.5.*
(e) a compilation (in a single section of the environmental impact statement) of the measures referred to in item (d)(iv)	*Section 4.2.*
(f) Reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development	*Executive Summary, and Sections 2.13 and 3.9.*

The above tables show that the requirements of clauses 6 and 7 of Schedule 2 of the EP&A Regulation have been satisfied.

Clause 92 of the EP&A Regulation designates *AS 2601-1991: The Demolition of Structures* as a prescribed matter for consideration in the determination of a development application. Minor demolition works are proposed.

Division 1AA of the EPA Regulation relates to the fees for State Significant Development, based on the estimated value of the project. In accordance with the SEARS requirements, this EIS is accompanied by a report from a qualified quantity surveyor providing a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the *Environmental Planning and Assessment Regulation 2000)* of the Project. Refer **Appendix E**.

Section 4.39 of the EP&A Act provides for the regulations to make provision for or with respect to the procedures and other matters concerning State significant development. In this regard clause 82 of the EP&A Regulation provides as follows:

(1) The Planning Secretary is to provide to an applicant for State significant development the submissions, or a summary of the submissions, received in relation to the application during the submission period.
(2) The Planning Secretary may, by notice in writing, require the applicant to provide a written response to any issues raised in those submissions as the Planning Secretary considers necessary.
(3) For the purposes of section 4.39(d) of the Act, the Planning Secretary is to make the following documents that relate to a development application for State significant development available on the NSW planning portal—
(a) the Planning Secretary's environmental assessment requirements under Part 2 of Schedule 2,
(b) the development application, including any accompanying documents or information and any amendments made to the development application,
(c) any submissions received during the submission period and any response provided under subclause (2),
(d) any environmental assessment report prepared by the Planning Secretary,
(e) any development consent or modification to a development consent,
(f) any application made for a modification to a development consent, including any accompanying documents or information,
(g) any documents or information provided to the Planning Secretary by the applicant in response to submissions."

4.3.3 Section 4.15(1)(b): Likely Impacts

Background and overview

The likely impacts of the Project on the natural and built environments are considered in the context of the following known features of the project site:

- There is an existing, lawfully established industrial development on the project site. This includes a transport depot with administrative office, workshops, hardstand areas, weigh bridge, vehicular access and parking for cars and heavy vehicles. Moreover, the project site has existing stands of trees on the project site that will assist in screening views and/or softening the visual impact of the proposed waste facility when viewed from nearby public places. The existing establishment already has in place fire fighting appliances and an emergency plan. The proposed waste facility can be integrated into this existing infrastructure.

- The project site forms part of a recently (2016) established industrial subdivision at Allgayer Drive, on the western outskirts of Gunnedah township. It is zoned IN1 General Industrial, which permits further industrial development, including that of a waste facility. The industrial subdivision, including the project site, is fully serviced and has bitumen sealed road and and kerb and guttering, and is reasonably buffered from surrounding residential uses. Much of the surrounding industrial estate has been developed for warehouse and industrial uses. In terms of cumulative impact, namely, the impact of similar developments to the one proposed and the accumulation of such development and successive developments of a similar type on the community or locality[11], the surrounding industrial estate is likely to continue to be developed for similar uses, generating similar levels of noise as well as visual impacts associated with large, shed-like industrial structures. This includes the future development of industrial lots located immediately to the north of the Project Site which, once developed, should effectively shield most, if not all, views of the proposed development from rural residences to the north. In the meantime, the Project will ameliorate visual impacts to the north through provision of a 6m wide landscaped zone along the northern boundary, supplemented by further perimeter plantings along the north-western boundary of the Project Site.

- The project site is within close proximity and has ease of access to major transport routes. Moreover, the proposed waste facility will have good road access that does not pass through urban residential or other sensitive areas such as s and hospitals.

- The site is flat and well suited to use for ongoing industrial purposes, with more than sufficient space to accommodate the proposed waste facility, with minimal earthworks required.

- The project site is not subject to contamination, flooding, landslip, or subsidence or acid sulfate soils hazards, nor is it identified as comprising land with any known ecological or archaeological potential. The project site is already disturbed by industrial development uses.The project site does not adjoin any watercourses, nor will site works associated with the proposed waste facility affect or rely on any groundwater resources.

The use of enclosed sheds for the processing of waste accepted at the proposed waste facility will result in the reduced potential for acoustic, air quality and water quality impacts. [NOTE: with the exception of the occasional use of the crusher on site]

The key impacts addressed in the this sub-section of the EIS focus on the following:

- **Waste management**, addressing how waste will be treated and handled on the project site.

- **Hazards and risk**. Determine hazardous materials to be handled on the project site and mitigation strategies to be adopted.

- **Fire and incident management**. Addresses the compliance of the Project with NSW Fire and Rescue NSW (FRNSW) *Fire safety in waste facilities* guideline.

- **Air quality**. Air quality impacts on surrounding area and measures to mitigate potential impacts.

FOOTNOTE 11:Per *Gales Holdings Pty Limited v Tweed Shire Council* [2006] NSWLEC 85 at [43].

- **Noise and vibration**. Noise impacts of the proposal on residential and adjacent industrial receivers and mitigation strategies to be adopted.
- **Soil and water**. Control of stormwater leaving the project site and prevention of erosion.
- **Traffic and transport**. Consideration of existing and proposed traffic flows on the surrounding road network.
- **Biodiversity**. Consideration of impacts on biodiversity values, including koala habitats.
- **Visual, built form**. Consideration of the visual impacts on and compatibility with the surrounding industrial estate and other nearby properties.
- **Heritage**. Consideration of heritage impacts of the Project.
- **Contamination**. Consideration of the contamination potential of he existing project site and suitability for the Project.

Waste Management

Sections 3 and 6 of the EIS contains details of waste management measures proposed to minimise hazards to a satisfactory degree, including unintentional or accidental emissions.

The design of the proposed waste facility ensures that in the event of an accidental spillage of material within the site, such as a fuel spill, the impacts will be contained within the site.

No dangerous goods are proposed to be stored on site besides those already stored on site, associated with the existing approved transport depot and workshops. In the operation of any well-run waste facility, such as that proposed, the objective will be to appropriately manage to control the acceptance, unloading, processing, storage and ultimate disposal of waste.

Waste management measures proposed at the site, including mitigation strategies, have been outlined in detail in Section 3 and section 4.2 of the EIS, to be incorporated into an overall site environmental management plan (EMP), which would include the following provisions:

- Measures for acceptance, unloading, processing, storage and ultimate disposal of waste received at the waste facility. To include procedures for weigh bridge activities including screening of incoming loads, weighing of incoming and outgoing vehicles, weigh bridge data recording and archiving, and weigh bridge inspection schedule, as well as procedures for management of non-conforming loads and materials.
- Ongoing maintenance and operation of equipment and the keeping of all equipment in good working order.
- Waste recycling.
- Monitoring and reporting.
- Unexpected finds protocol for asbestos waste.
- Corrective action should there be an incident.

In addition to the above, there will be a reliable supply of water and electricity, as well as facilities for the disposal and management of sewage on the project site, and adequate arrangements have been made for stormwater drainage.

Refer also to Section 4.2 of the EIS for a detailed assessment of mitigation measures proposed, and Section 6 for a discussion of risks.

Hazards and Risk

The preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 - Hazardous and Offensive Development concludes that the Project is neither 'potentially hazardous' or 'potentially offensive'. Importantly, no thresholds are triggered. Nonetheless, appropriate management of dangerous goods on the site will be undertaken in accordance with relevant waste facility health and safety requirements.

Diesel fuel is currently stored on site, however, given the internal bunding provided and setbacks from existing residences, it can continue to be safely stored in accordance with industry best practice. As such, risks associated with the storage of diesel on site are considered to be acceptable.

Provided the proposed mitigation measures are implemented, no identified risks pose any significant off-site impacts.

The proponent will expand upon existing worker safety and training measures currently applying to the existing operations on site, with the inclusion of safety procedures in the handling of wastes generally, as well as the inspection and assessment of loads entering the site. The proponent will be required to continue to comply with the relevant occupational, health and safety provisions. The *Work Health and Safety Act 2011* require employers and all other workplace parties to consult and cooperate in the management of workplace risks, including waste facilities, in order to protect the health and safety of workers and others who might be at risk from the work. The legislation is supported by codes of practice that provide guidance in achieving the required standard of health and safety. WorkCover NSW must be notified of serious injuries and incidents. Breach of *Work Health and Safety Act 2011* can attract penalty notices, improvement or prohibition notices and prosecution. The Project will abide by these legal requirements.

It is noteworthy that a development approval was granted by Gunnedah Council for the 'Costalot' subdivision, creating Allgayer Drive, at which stage the requirements of clause 7 of SEPP 55, relating to contamination and remediation to be considered in determining development application, would have been met. Therefore, by virtue of the subdivision and subsequent construction of the of industrial subdivision in which the project site is contained, it is considered that if the land had been contaminated, sufficient remediation would have been undertaken to render it suitable for industrial purposes. In any case, there will be minimal soil disturbance and no groundwater interaction during the construction of the proposed waste facility-refer to EIS Section 3 for details. Therefore, there is very minimal potential for exacerbation of any potential soil contamination.

Based on the above, it is concluded that no further assessment under the provisions of SEPP 55 is warranted and the development is a permissible form of development, with consent, in accordance with clause 8(1) of SEPP 55.

In view of the low hazard risk of the development and the implementation of mitigation measures proposed, the risk of hazardous incidents will be adequately minimised. The proposed waste facility not likely to pose any significant risk to neighbouring land uses or the environment generally. Refer to Sections 2.3, 2.3.5, 2.4.4 and 3.6 of the EIS for details. Refer also to Section 4.2 of the EIS for a detailed assessment of mitigation measures proposed and Section 6 for a discussion of risks.

Fire and Incident Management

Fire and incident management can be managed to a satisfactory degree given the following:

- As the project site is not mapped as being bushfire prone land there is no need for the dedication of any asset protection zones (APZ) in accordance with NSW Rural Fire Service guidelines.
- The design and mitigation measures proposed will ensure that there is an adequate level of provision of environmental protection provided at the proposed waste facility in terms of air, water and noise controls, spill cleanup equipment, fire management (including the location of fire hydrants) and containment measures, the sizing and location of stockpiles to minimise fire spread and facilitate emergency vehicle access.

- Lithium batteries are to be stored in a separate shed, sufficiently separated from other uses on the Project Site.
- Various measures are to be be implemented to ensure that the proposed waste facility accords with the NSW Fire and Safety guidelines document entitled *Fire Safety in Waste Facilities,* dated October 2019. Refer to Sections 2.4.4, 3.6, 6.2 and 6.3 of the EIS for details, the latter containing a detailed assessment of risks and mitigation measures proposed.

Air Quality

Vipac Engineers and Scientists Ltd (Vipac) was commissioned to conduct an air quality impact assessment of the proposed waste facility. Refer also to **Appendix E**.

The conclusions and recommendations of the Vipac assessment are set out in the following.

The overall approach to the assessment follows the guidance from *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* and the *Optimum CALPUFF modelling guidance for NSW*, the former document also setting down the air quality goals that are relevant to this assessment. Particulate matter consists of dust particles of varying size and composition. The upper size range for Total Suspended Particulate matter (TSP) is nominally taken to be 30 micro-metres (μm) as in practice particles larger than 30 to 50μm will settle out of the atmosphere too quickly to be regarded as air pollutants. Two sub-classes of TSP are also included in the air quality criteria, namely PM_{10} (PM10) particulate matter with equivalent aerodynamic diameters of 10μm or less, and $PM_{2.5}$, particulate matter with equivalent aerodynamic diameters of 2.5μm or less (PM2.5). Particulate matter, typically in the upper size range, that settles from the atmosphere and deposits on surfaces is characterised as deposited dust. The deposition of dust on surfaces may be considered a nuisance and can adversely affect the amenity of an area by soiling property in the vicinity.

The impact assessment considers the proposed development in isolation, as well as in terms of cumulative impacts. Refer Table 4.11 and air quality contour plots illustrated in **Figures 4.12 to 4.16**. The methodology used to predict air quality impacts was based on the the following:

- An emissions inventory of TSP, PM10, PM2.5, and deposited dust for the proposed Project was compiled using National Pollutant Inventory (NPI) and United States Environmental Protection Agency (USEPA) AP-42 emissions estimation methodology for the Project.
- Estimated emissions data was used as input for air dispersion modelling. The modelling techniques were based on a combination of The Air Pollution Model (TAPM) prognostic meteorological model (developed by CSIRO), and the CALMET model suite used to generate a three dimensional meteorological dataset for use in the CALPUFF dispersion model.
- The atmospheric dispersion modelling results were assessed against the air quality assessment criteria as part of the impact assessment. Air quality controls are applied to reduce emission rates where applicable.

Vipac note that many of the potential dust generating activities including unloading, sorting, partial storage and mechanical processing of waste are proposed in an enclosed unloading and processing shed which will be fitted with dust suppression sprinklers thereby minimising dust emissions to the surrounding air environment. Furthermore, the proposed transportation routes will all be sealed which would also significantly decrease any dust generated by vehicle movements. In both cases, a conservative estimation of emissions is adopted ie. reflecting the potential for dust generation within the shed that may be released through open doors and potential dust lift off from the sealed roads.

As summarised in Table 8.6, the results of the modelling by Vipac show that the TSP, PM2.5 and dust deposition predictions comply with the relevant criteria and averaging periods at all sensitive receptors.

Vipac also note that the annual average PM10 predictions also comply with criteria and the 24 hour average PM10 predictions are slightly above (51.95 µg/m^3 compared with 50 µg/m^3). The exceedance is driven by the elevated background conservatively adopted for the assessment (51.7 µg/m^3, which is already above the criteria.

The air quality assessment found the following results:

- **Total Suspended Particulate matter (TSP):** The model predictions for TSP ranged between 40.37 µg/m^3 and 39.04 µg/m^3 , levels that are well below the criteria of 90 µg/m^3. Vipac conclude that TSP emissions from the proposed Project are not predicted to adversely impact upon the sensitive receptors.
- **PM10:** The assessment found a maximum measured background of 51.7 µg/m^3- already in excess of the air quality criteria, however, the model predictions for annual average PM10 generated by the proposed waste facility are below the criteria of 25 µg/m^3. (Between 15.66µg/m^3 and 16.31µg/m^3). Furthermore, Vipac found that the contribution of the proposed waste facility emissions to the cumulative PM10 is negligible (maximum - 0.25 µg/m^3) and does not contribute to any additional exceedances of the relevant criteria.
- **PM25:** Vipac found the maximum predicted 24 hour (including maximum measured background of 17.6 µg/m^3) and annual average (including measured annual background of 7.6 µg/m^3) PM2.5. The Vipac model predictions for 24 hour average and annual average PM2.5 are below the criteria of 25 µg/m^3 and 8µg/m^3. The 24 hour and annual average PM2.5 emissions from the proposed Project are not predicted to adversely impact upon the sensitive receptors.,
- **Dust deposition:** Vipac model predictions for incremental and cumulative monthly average dust deposition are well below the criteria of 2 g/m^2/month and 4 g/m^2/month. Dust deposition from the proposed Project is not predicted to adversely impact upon the sensitive receptors.

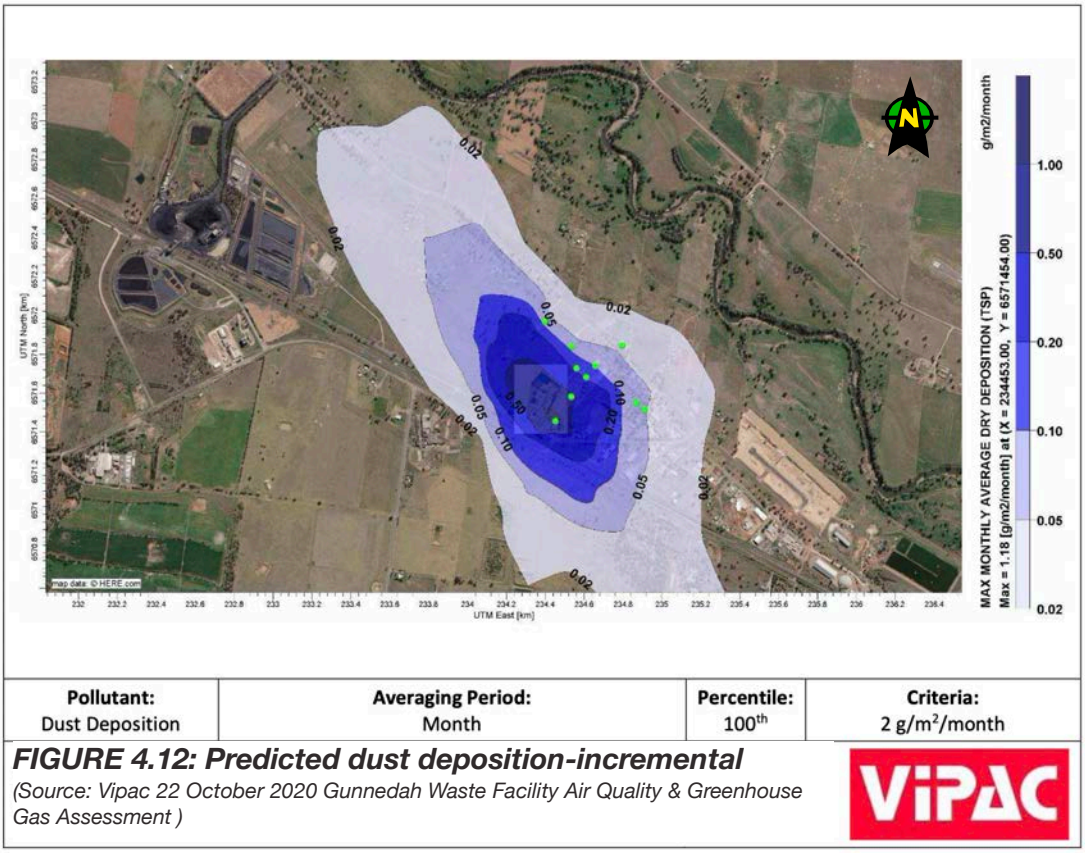
In respect to air quality impacts Vipac conclude that:

> "*No additional exceedances of the criteria are predicted to occur as a result of the proposed waste facility activities and that best management practices will be implemented to minimise emissions as far as is practical. As specified in the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales, under these circumstances no additional assessment is therefore required*."

Table 4.11: Summary of Air Quality Predicted Impacts

Air Pollutant	Averaging period	Criteria	Maximum Prediction at Any Receptor In isolation	Maximum Prediction at Any Receptor Cumulative	Compliance
TSP	Annual	90 µg/m^3	2.07 µg/m^3	40.37 µg/m^3	Yes
PM10	24 Hour	50 µg/m^3	12.90 µg/m^3	51.95 µg/m^3	Marginally above, however, the existing background level already exceeds the criteria
	Annual	25 µg/m^3	1.01 µg/m^3	16.31 µg/m^3	Yes
PM2.5	24 Hour	25 µg/m^3	2.79 µg/m^3	20.39 µg/m^3	Yes
	Annual	8 µg/m^3	0.22 µg/m^3	7.82µg/m^3	Yes
Dust Deposition	Monthly Total	4g/m^2/month	0.07g/m^2/month	2.18g/m^2/month	Yes
	Monthly Increase	2g/m^2/month	0.07g/m^2/month	0.07g/m^2/month	Yes

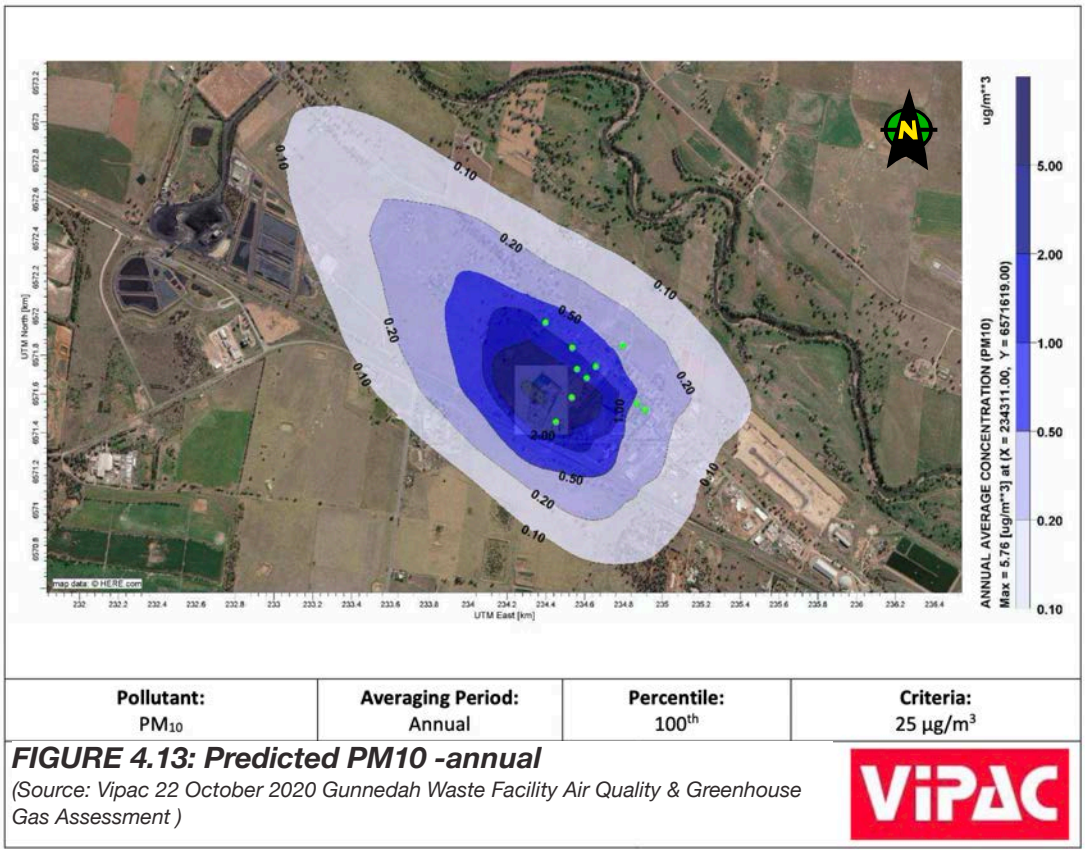
(Source: Vipac 22 October 2020 Gunnedah Waste Facility Air Quality & Greenhouse Gas Assessment Table ES-1)



Pollutant:	Averaging Period:	Percentile:	Criteria:
Dust Deposition	Month	100th	2 g/m²/month

FIGURE 4.12: Predicted dust deposition-incremental

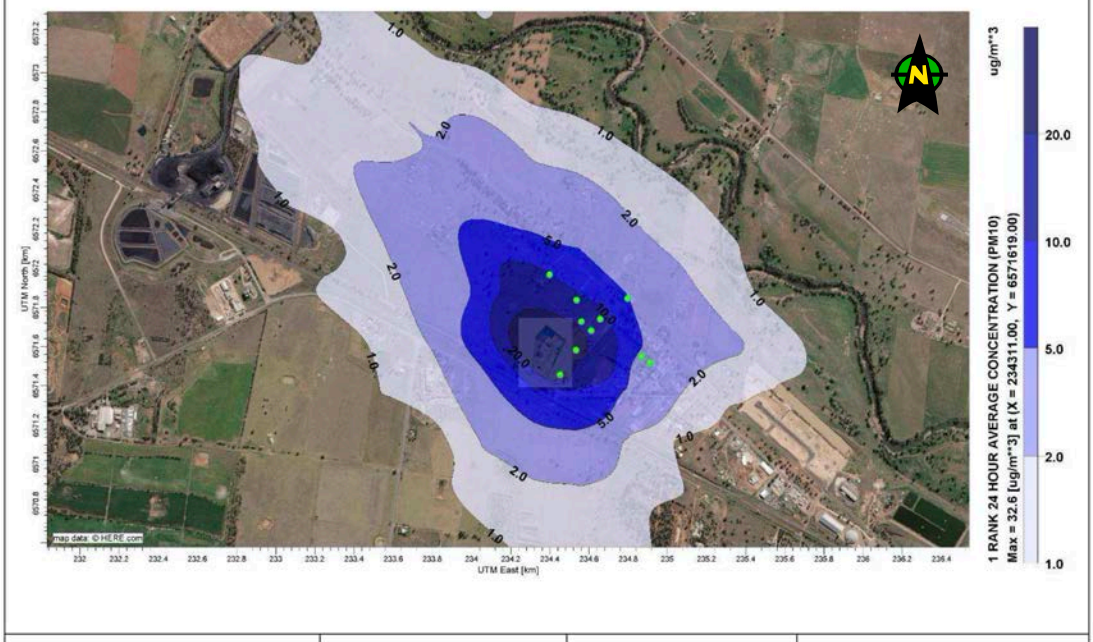
(Source: Vipac 22 October 2020 Gunnedah Waste Facility Air Quality & Greenhouse Gas Assessment)



Pollutant:	Averaging Period:	Percentile:	Criteria:
PM_{10}	Annual	100th	25 µg/m³

FIGURE 4.13: Predicted PM10 -annual

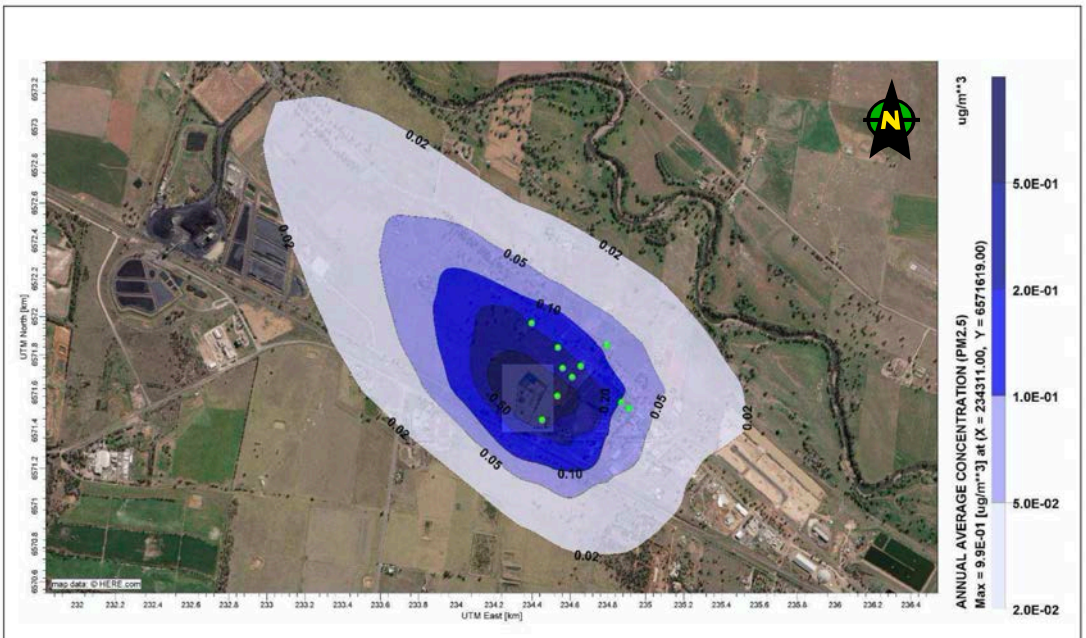
(Source: Vipac 22 October 2020 Gunnedah Waste Facility Air Quality & Greenhouse Gas Assessment)



Pollutant:	Averaging Period:	Percentile:	Criteria:
PM_{10}	24 Hour	100th	50 µg/m³

FIGURE 4.14: Predicted PM10 -24 hour

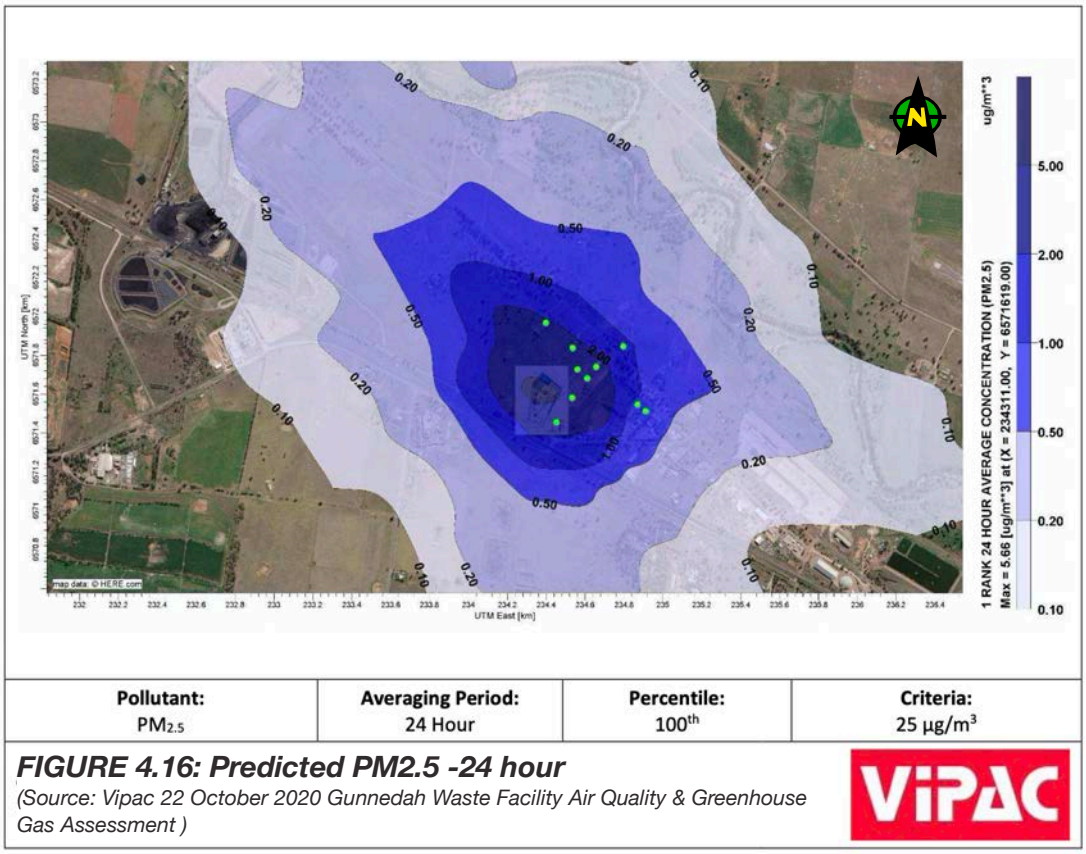
(Source: Vipac 22 October 2020 Gunnedah Waste Facility Air Quality & Greenhouse Gas Assessment)



Pollutant:	Averaging Period:	Percentile:	Criteria:
$PM_{2.5}$	Annual	100th	8 µg/m³

FIGURE 4.15: Predicted PM2.5 -annual

(Source: Vipac 22 October 2020 Gunnedah Waste Facility Air Quality & Greenhouse Gas Assessment)



Pollutant:	Averaging Period:	Percentile:	Criteria:
$PM_{2.5}$	24 Hour	100^{th}	25 $\mu g/m^3$

FIGURE 4.16: Predicted PM2.5 -24 hour
(Source: Vipac 22 October 2020 Gunnedah Waste Facility Air Quality & Greenhouse Gas Assessment)

Vipac also undertook a greenhouse gas assessment for the Project, that is, the carbon dioxide equivalent (CO2-e) emissions from the Project according to international and Federal guidelines. In this regard Vipac concluded that:

> "*The estimated maximum annual operational phase emissions (2,842 tonnes CO2-e) represent approximately 0.0005% of Australia's latest greenhouse inventory estimates of 532.5 MtCO2-E (2019). Annual greenhouse gas rates are expected to be below 25,000 t CO2-e and therefore this Project will not trigger NGER reporting requirements*."

Vipac conclude that :"*It is therefore concluded that air quality should not be a constraint to proposed waste facility*."

Noise

Waste facilities like the one proposed are an industrial use, and will inevitably generate noise in both its construction and operational phases, which could impact on the amenity of the locality. The proposed waste facility is sited within a zoned industrial area, however, on the periphery of this industrial area are rural residences. The nearest residence is on land owned by Whitehaven Coal. The next nearest residence is situated some 229m away, separated from the project site by an existing industrial building (Expressway Spares) and three vacant industrial-zoned lots, yet to be developed for industrial purposes. It is not unreasonable to expect that these intervening allotments will be developed for industrial purposes in the near future. In all, there are six rural dwellings within 500m of the project site- refer **Figure 4.17** and **Figure 4.18**. The Whitehaven Coal dwelling is the closest sensitive 'rural dwelling' receiver, 59m to West of the waste facility site. Whitehaven have indicated their support for the project so this receptor will not be considered as a sensitive receptor in this assessment. The nearest noise sensitive receptors considered in the Vipac report are the following:

- R1 - Residential: 10193 Kamilaroi Highway, located 229m to the north-east of the proposed waste facility.
- R2 - Residential: 10221 Kamilaroi Highway, located 273m to the north of the proposed waste facility.
- R3 - Residential: 10176 Kamilaroi Highway, located 392m to the north-east of the proposed waste facility.
- R4 - Residential: 211 Mathias Road, located 426m to the east of the proposed waste facility.

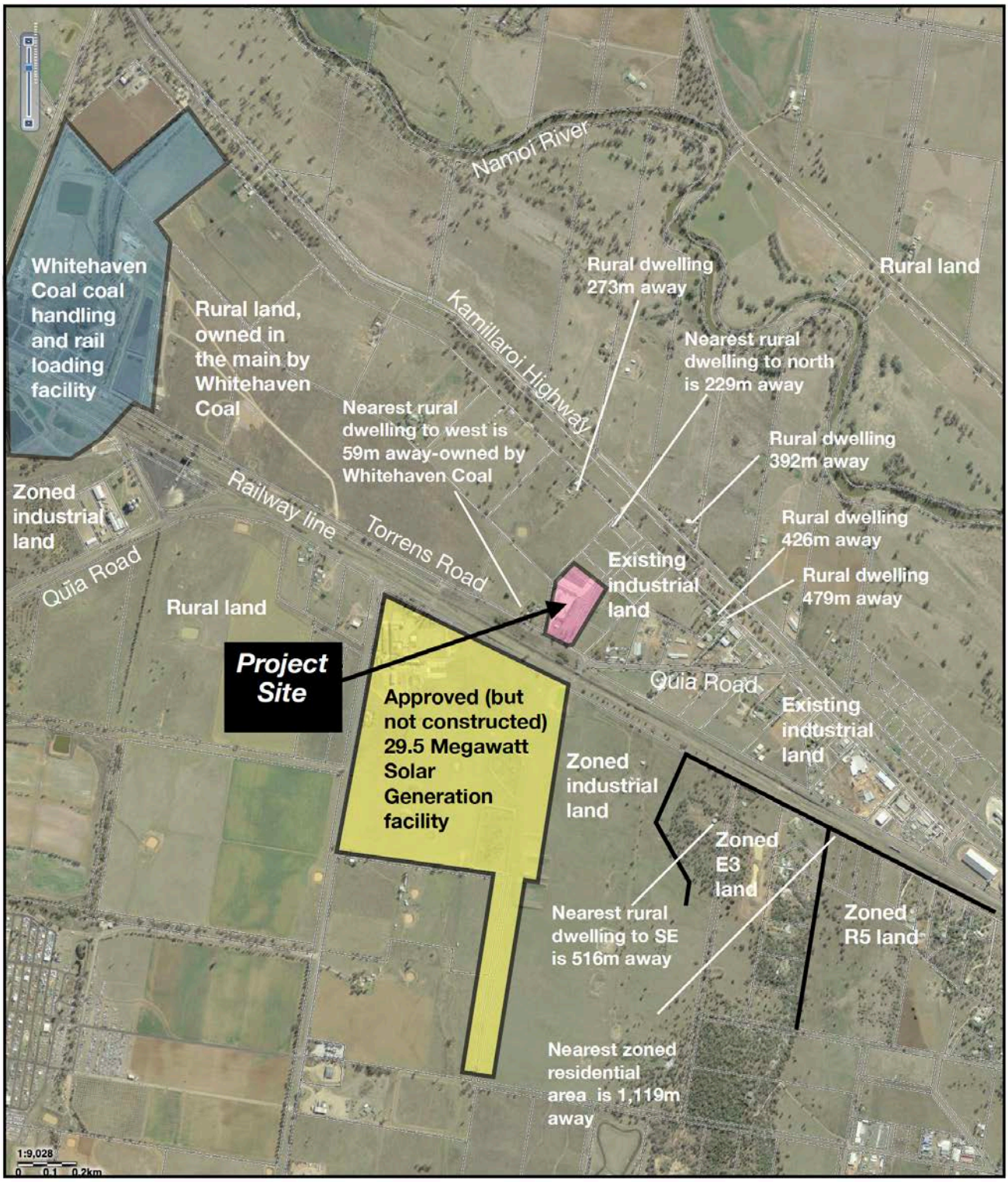


FIGURE 4.17: The Project Site and surrounding sensitive receivers
(Source: SIX Maps overlay)

Figure 4.18 shows the location of the proposed waste facility and the nearest noise sensitive receptors. The unloading and processing sheds are highlighted in red.

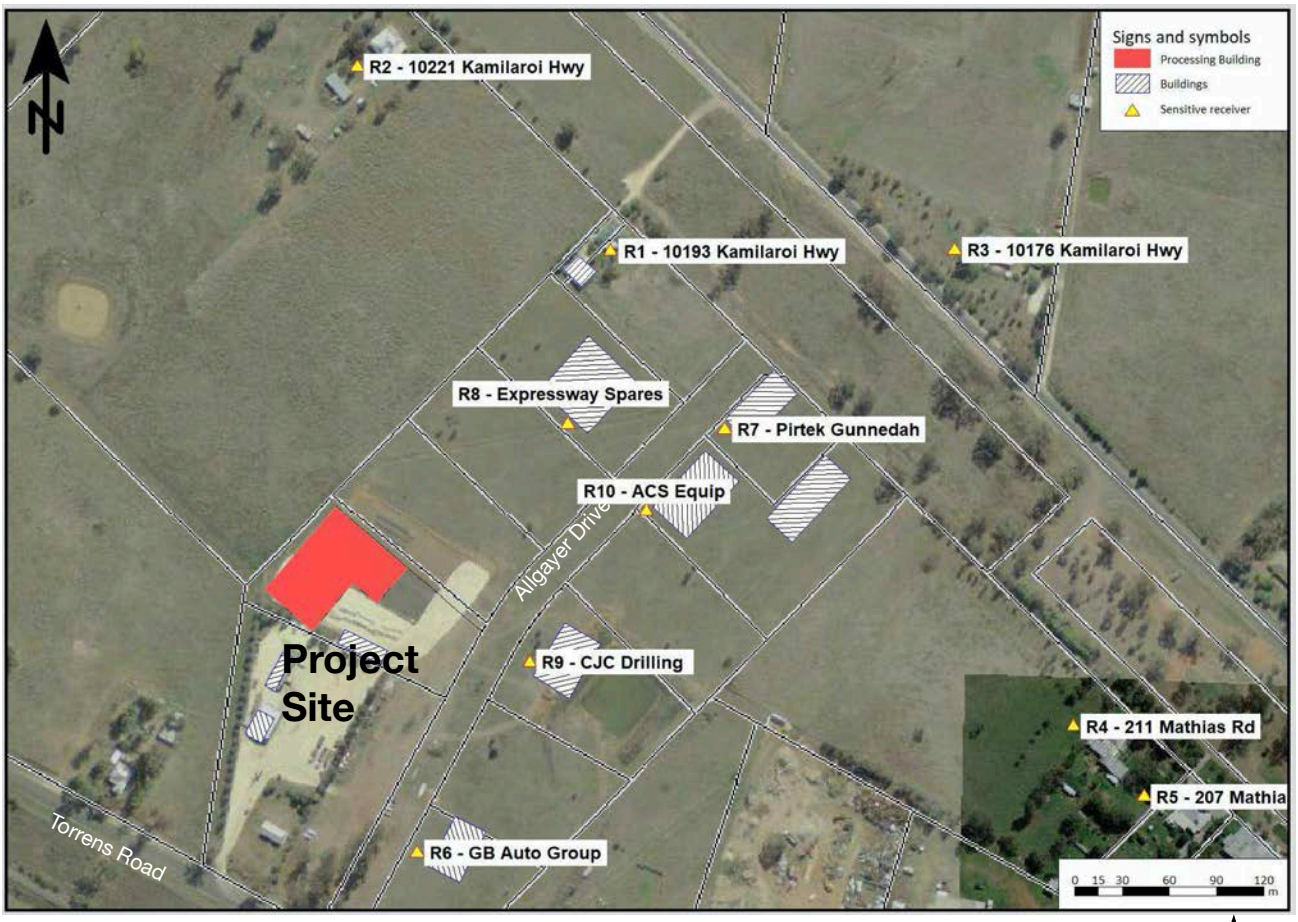


FIGURE 4.18: The Project Site and nearest sensitive receivers (R1,R2, R3 and R4)
(Source: Vipac 21 October 2020 Gunnedah Waste Facility Environmental Noise Assessment)

It is noteworthy that all processing activities within the waste facility are proposed to be undertaken within enclosed sheds in order to minimise noise impacts.

Further, and in order to minimise noise even further, a 4.5m high wall is proposed to run parallel with the northern boundary, this feature to be screened by a 6m wide landscaped buffer zone.

Waste truck traffic will only utilise Torrens Road, an established access road that already accommodates industrial traffic.

Vipac Engineers and Scientists Ltd (Vipac) was commissioned to conduct a noise impact assessment of the proposed waste facility and impact on nearby sensitive receivers. The results of this assessment are summarised in the following. Refer also to **Appendix F**.

The existing noise environment was defined by measured background noise levels at the nearest residential receiver location. This data enabled project specific noise criteria to be determined for this project. Future potential noise levels at the nearest noise sensitive receivers were predicted using a SoundPLAN computer noise model.

Noise Criteria:Overview

The noise criteria are determined in accordance with the NSW *Noise Policy for Industry* (NPI, 2017), the NSW *Road Noise Policy* (RNP, 2011) and the NSW *Interim Construction Noise Guideline* (ICNG, 2009).

Vibration criteria are determined in accordance with the NSW *Assessing Vibration: A Technical Guideline* (2006).

Operational Noise Impacts

Amenity Noise Criterion

The amenity criterion is specific to land use and associated activities. It aims to limit continuing increases in noise levels. To ensure that industrial noise levels (existing plus new) remain within the recommended amenity noise levels for an area, the project amenity noise level for a new industrial development is the recommended amenity noise level (from Table 2.2 of the *Noise Policy for Industry (2017)*) minus 5 dB.

The residences in the immediate surrounds of the proposed waste facility are located on the fringe of a large industrial zoned area, with the northerly sites fronting a highway and the southern sites closer to a railway line (coal trains). Given the residences likely exposure to existing industrial noise, it is considered appropriate to assign the amenity noise level of the surrounding environment as 'Suburban', defined by the NPI as 'an area that has local traffic with characteristically intermittent traffic flows or some limited commerce or industry'.

The maximum ambient noise level within an area should not normally exceed the acceptable amenity noise levels specified in Table 4.12.

Table 4.12: Amenity Noise Levels (dBA)

Receiver	Noise Amenity Area	Time of Day	L_{Aeq} dB(A)
Residential	*Suburban*	*Day*	*50*
		Evening	*40*
		Night	*35*
Industrial Premises	*All*	*When in use*	*65*

(Source: EPA NSW Noise Policy for Industry 2017)

Intrusiveness Noise Criterion

The intrusiveness criterion states that the equivalent continuous noise level of the source should not be more than 5 decibels above the rated background level when measured over a 15 minute period. It aims to control intrusive noise impacts in the short term for residences: LAeq, 15 minute ≤ rating background level + 5 dB.

Project Noise Criterion

The project specific (trigger) noise criteria are set from the NPI as the lower of the calculated intrusiveness or amenity noise level (with the intrusiveness level determined from the measured background noise data).

Table 4.13: Project Specific Noise Criteria (dBA)

Receiver	Time of Day	Rating Background level (RBL)	Intrusiveness Criterion	Amenity Criterion	Project Specific Noise Criterion
Residential	*Day*	*36*	*41*	*50*	*41*
Industrial Premises	*When in use*	*-*	*N/A*	*65*	*65*

(Source: Vipac 21 October 2020 Gunnedah Waste Facility Environmental Noise Assessment)

The predicted noise levels representative of each of the main operational scenarios for both neutral conditions and worst-case conditions during the day period are presented in Table 4.14. A sample of these scenarios has been reproduced graphically as Noise Contour Maps- refer to **Figure 4.19** and **Figure 4.20**.

Table 4.14: Noise Levels Operational Stage of Proposed Waste facility LAeq dB(A)

Receiver	Predicted Noise Levels L_{Aeq} dB(A)				Noise Criteria INP (2017)	Amenity Noise Criteria
	Typical Operation Scenario 1 (Trommel)		Worst Case Scenario 2 (Mobile Crusher- to be used once per month for 1-2 days operation only)			
	0m/sec Wind Neutral	3m/sec Wind (Temp inversion)	0m/sec Wind Neutral	3m/sec Wind (Temp inversion)		
R1 (Residential- occupied by GB Autos staff)	35	36	46	47	41	50
R2 (Residential)	34	36	45	47	41	50
R3 (Residential)	31	34	42	44	41	50
R4 ((Residential but in Industrial zone)	32	36	42	45	41	50
R5 ((Residential but in Industrial zone)	31	35	40	44	41	50
R6 (Industrial)	52	54	59	60	70	70
R7 (Industrial)	42	45	52	54	70	70
R8 (Industrial)	44	46	56	57	70	70
R9 (Industrial)	54	55	62	62	70	70
R10 (Industrial)	43	46	52	54	70	70

(Source: Vipac 21 October 2020 Gunnedah Waste Facility Environmental Noise Assessment)

Vipac predicts the operational noise generated by the proposed waste facility would be as follows:

- Compliance with the recommended noise levels in the Noise Policy for Industry (2017) INP for the daytime noise criteria at all receptors for the waste facility operational scenario (typical case).
- Noise levels from the worst case operational scenario (monthly use of the crusher) are predicted to exceed the criteria (by 1 to 8 dB) for a range of meteorological conditions. Given the presence of a private agreement between the operator of the proposed facility and the Whitehaven Coal residence, an exceedance is considered acceptable. Even though the Scenario 2 waste facility results show exceedances, this scenario (use of Crusher) is expected to occur approximately once per month, for 1 to 2 days operation only. The Crusher will be used inside the Processing Shed and additional noise management strategies are recommended during these times.

In short, the noise levels from the main waste facility operational scenario (typical case Scenario 1) will comply with the daytime noise criteria at all receptors. The worst case Scenario 2 exceedances are considered to be acceptable given the following factors:

- The operation of the waste facility occurs during the day time, with no night-time noise amenity impacts.
- The nearest residence (R1) is currently occupied by persons who work at GB Autos, opposite the project site, during the daytime period.
- Two of the residences modelled (R4 and R4) are situated within an existing industrial zone, proximate to and likely to be significantly affected by noise from road traffic on the Kamilaroi Highway. Similarly, Residences R1, R2 and R3 are also affected by road noise from traffic on the Kamilaroi Highway.
- Vipac note that the noise modelling presented for the worst case Scenario 2 is conservative and has assumed the worst case scenario of the simultaneous operation of all machinery items at maximum power/load. Vipac note that: "*As a result, **noise levels are expected to be lower than those predicted**, especially during periods of reduced machinery operation*."(p.28).
- The predicted noise levels would still be **well below the recommended amenity criteria** for such areas ie. below the Daytime Amenity Noise level of 50 L_{Aeq} dB(A)).

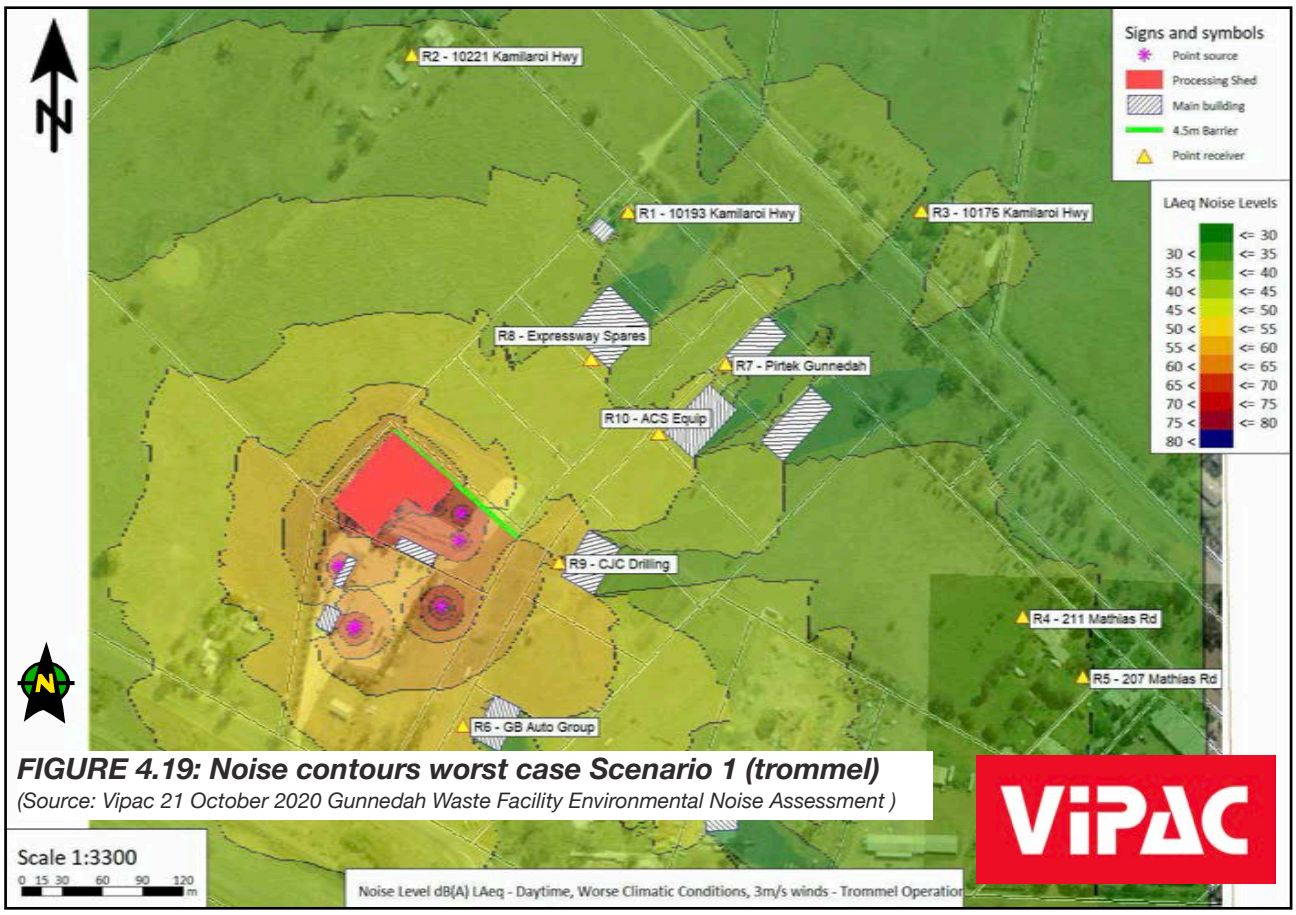


FIGURE 4.19: Noise contours worst case Scenario 1 (trommel)
(Source: Vipac 21 October 2020 Gunnedah Waste Facility Environmental Noise Assessment)

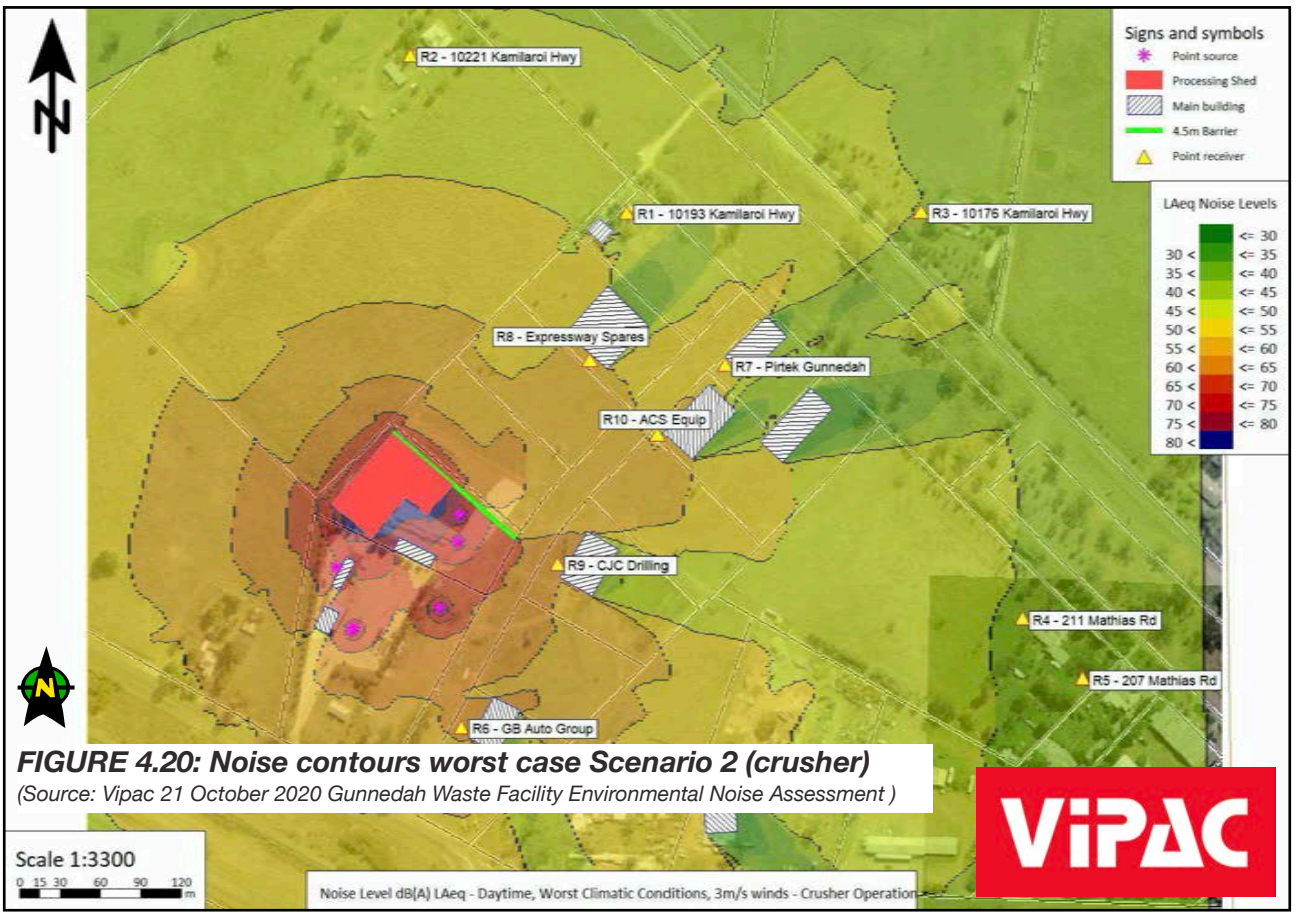


FIGURE 4.20: Noise contours worst case Scenario 2 (crusher)
(Source: Vipac 21 October 2020 Gunnedah Waste Facility Environmental Noise Assessment)

Potential operational noise impacts are appropriately addressed in the EIS. The proponent is prepared to implement various best practice noise measures on site to minimise the noise impacts of the project, including the preparation and implementation of a Operational Noise Management Plan (as part of an overall site EMP) that would outline the specific noise mitigation measures recommended for the project.

Construction Noise Impacts

During construction, noise levels are predicted to exceed the criteria at the receptors. However, the predicted impact is likely to be minor taking into account the temporary nature of the construction activities and respite periods throughout the construction program and the fact that the assessment was based on a 'worst case' scenario whereby all equipment was operating simultaneously. In any case, Vipac recommends that potentially noise affected neighbours would need to be informed about the nature of the construction stages and the duration of noisier activities, along with progress updates. Potential vibration levels from construction and machinery operations at the waste facility will be minimal and are likely to be less than 1 mm/s PPV (Peak Particle Velocity) for nearby receptors, which is well below all accepted criteria for structural damage and human comfort from ground borne vibration.

Traffic Noise Impacts

The proposed development has the potential to generate additional traffic on nearby public roads (ie. Allgayer Drive, Torrens Road, Quia Road and Kamilaroi Highway) that can potentially impact on the nearby noise sensitive receivers.

Torrens Road and Allgayer Drive are both industrial standard roads. Quia Road is a sealed rural road. The NSW *Road Noise Policy 2011* (RNP) would categorise these roads as 'sub-arterial' by virtue of them being 'collector' roads, a term used in the EPA's previous guideline *Environmental Criteria for Road Traffic Noise* (1999), as referenced in the RNP. Vipac conducted noise modelling for the future site operation based on the additional 162 vehicle movements per day as predicted in the Streetwise traffic report.

The Vipac noise assessment also determined traffic generated by the facility during the proposed hours of operation would not result in any noticeable increase (<0.5dB) in road traffic average noise levels at the nearest residential locations. Stated another way, the projected increase in traffic noise levels associated with the additional 162 vehicle movements per day, (based on a worst case assumption of the majority of movements undertaken by heavy articulated vehicles) on the surrounding network shows that based on the proposed waste facility operation, future traffic noise levels are predicted to comply with the criteria without the need for additional acoustic mitigation measures.

Cumulative Noise Impacts

The following conclusions are made by Vipac from the cumulative noise assessment:

- Cumulative noise impacts at the nearest non-residential receivers are predicted to comply with the daytime amenity noise level criteria, for both operational scenarios.
- Cumulative noise impacts at the nearest residential receivers are predicted to exceed the daytime amenity noise levels for operational scenario 2. This is due to the existing industrial noise levels already exceeding the daytime amenity noise levels.

As a result, to understand the impact the proposed development is predicted to have on the existing noise environment, it is prudent to observe the difference in noise level between the existing levels and the predicted cumulative noise levels. It can be seen that for Scenario 1, the increase in total cumulative noise compared to the existing noise levels is 0.1 dB(A). This is considered a negligible effect, and an increase that is not detectable by the human ear. Furthermore, the daytime amenity noise level applied is in accordance with Section 5.1, where it states:

> "*To ensure that industrial noise levels (existing plus new) remain within the recommended amenity noise levels for an area, the project amenity noise level for a new industrial development is the recommended amenity noise level (from Table 2.2 of the NPI) minus 5 dB*."

Therefore, the cumulative noise impact for Scenario 1 is considered acceptable.

Worst case cumulative noise at the nearest residential receivers during Scenario 2 is predicted to exceed the daytime amenity noise levels by 3 to 4 dB(A), and an increase to the existing industrial noise levels by up to 1.2 dB(A). Despite the Scenario 2 waste facility results indicating exceedances, this scenario (use of crusher) is expected to occur approximately once per month for 1 to 2 days only. The Crusher will be used inside the Processing Shed and noise management strategies are recommended during these times.

Vipac point out that the noise modelling is conservative and has assumed the worst case scenario of the simultaneous operation of all machinery items at maximum power/load. As a result, noise levels are expected to be lower than those predicted, especially during periods of reduced machinery operation.

Soil and Water

Site soil and water management has been designed to satisfactorily accommodate the potential soil and water impacts associated with the proposed waste facility. The assessment was carried out by Martens & Associates, consulting engineers.

Flooding

No part of the project site, proposed to accommodate the waste facility, is identified as “Flood planning area” on the Flood Planning Map (source: Gunnedah Local Environmental Plan 2012 Flood Planning Map - Sheet FLD_ 002). As such, there is no need for the proposed development to incorporate any measures in the design to manage risk to life from flood. Moreover, there is no evidence to suggest that the proposed development is likely to significantly affect the environment or cause erosion, siltation, destruction of riparian vegetation or reduction in the stability of river banks or watercourses.

Groundwater

Given that the operational area of the site is proposed to be fully enclosed, and proposed excavations are not expected to approach existing groundwater levels, no impacts are expected to groundwater.

Water and Leachate Management

The development has the potential to result in surface water impacts caused by erosion and sedimentation during construction, and leachate from waste and stormwater. Measures are proposed to ensure that these impacts are minimised. Sediment and erosion impacts can be adequately managed by the control measures proposed for the construction phase of the project, to be incorporated into an Erosion and Sediment Control Plan as part of the site EMP.

The site will be appropriately graded to drain surface water to onsite stormwater collection basis. Surface water that has not been in contact with waste is proposed to flow through the site to the proposed water quality treatment devices prior to discharge to the local council drainage system.

The proposed enclosure of the facility and roof water reuse would improve the runoff water quality and reduce the volume of runoff from the site.

The wheel-wash would be a closed system and all runoff would be captured and not discharged to the stormwater system.

The design of the waste facility satisfactorily manages stormwater and leachate runoff from the project site without having an adverse effect on the surrounding environment. Separate leachate and stormwater collection devices are proposed.

Traffic & Transport

Traffic consultants Streetwise were engaged to undertake a traffic and transport assessment for the proposed waste facility. Refer also to **Appendix D**. The conclusions and recommendations of the Streetwise assessment are set out in the following.

Existing Conditions

Suitable road access is provided to the proposed development. As can be seen from **Figure 4.21** below, the roads to be utilised to haul waste to and from the Torrens Road site all currently operate at a Level of Service of 'A', which implies more than sufficient capacity to absorb additional traffic flows.

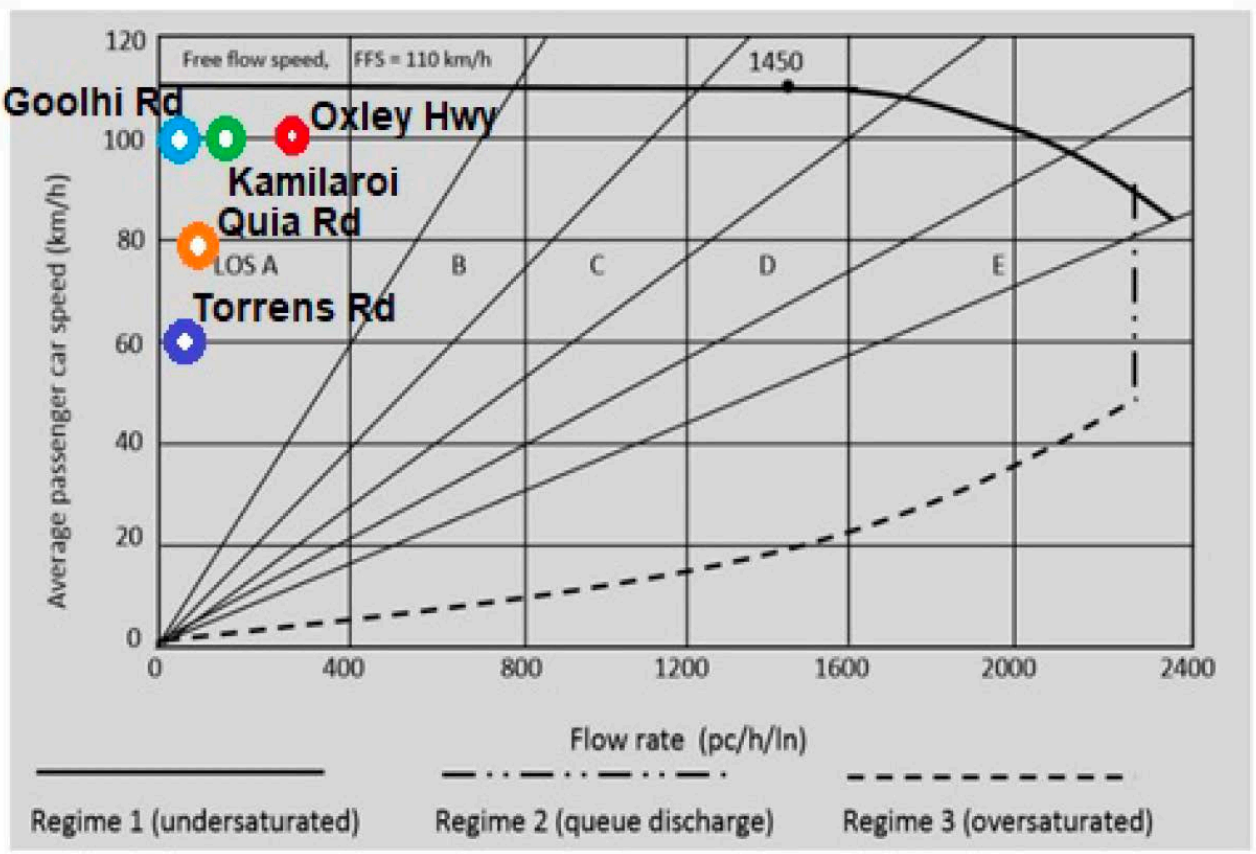


FIGURE 4.21: Existing level of service: roads in vicinity of project site
(Source: Streetwise September 2020 Traffic Impact Assessment Proposed Waste facility Torrens Road, Gunnedah)

Truck traffic associated with the proposed waste facility can enter and leave the site by the access road off Torrens Road. There is no issue that this access road is a suitable road access. No additional roadworks need to be undertaken to facilitate manoeuvring by waste trucks to and from Torrens Road. In short, Torrens Road still provides suitable access to the proposed development for truck traffic. The site currently has, and if redeveloped as proposed will have, suitable road access back to the Kamilaroi Highway via Quia Road, a road that already accommodates heavy truck traffic.

The functioning of Torrens Road, Quia Road and the intersection with he Kamilaroi Highway needs to be evaluated in light of the reasonable assumption that motorists will, as a whole, comply with the road rules and obey road markings and signage[12].

FOOTNOTE 12: Harris v Scenic Rim Regional Council (2014) 201 LGERA 12; [2014] QPEC 16 at [184] cited by Preston CJ in HP Subsidiary Pty Ltd v City of Parramatta Council [2020] NSWLEC 135 in a decision dated 8 October 2020 at [107].

The Project is located in an existing industrial estate on the western outskirts of Gunnedah. Surrounding uses are generally industrial in nature. The project site has access to the subregional and regional road network via Torrens Road and Quia Road, established access roads that already accommodate predominantly industrial traffic. The industrial nature of the this part of Gunnedah provides a road network suitable for heavy vehicles and even the Allgayer Drive are wider than standard.

The access for both inbound and outbound vehicles to the proposed waste facility will be from an existing, lawful access point from the site onto Torrens Road. The project site also enjoys a further two access points to Allgayer Drive, however, these will not be relied on by vehicles delivering or leaving with waste material. These access points will, however, be used by vehicular traffic associated with the existing Mackellar Group transport depot, including storage facilities, truck and car parking, as well as refuelling, offices and workshop operations. The Torrens Road access point to the site can be accessed by either eastbound or westbound inbound trucks. Outbound vehicles can either exit and turn left, travelling further along Torrens Road or they can turn right and join with Quia Road. It is expected that Quia Road will be the main route travelled by inbound or outbound vehicles.

The key intersections have relatively low peak traffic flows and good geometry and sight distances, with moderate turning demands, operating at a high level of service. The intersection of Kamilaroi Highway and Quia Road is a channelised T-intersection layout, with a dedicated right turn lane from Kamilaroi Hwy into Quia Road. There is no turn/ acceleration to assist vehicles turning right out of Quia Road. The intersection has large radii curves to cater for heavy vehicle turn movements. The existing intersection of Quia Road and Torrens Road is a T-intersection that provides entry to the Allgayer Drive industrial precinct. It is assumed the intersection of Torrens Road and Quia Road was designed to cater for the traffic to be generated by the ultimate industrial development. Similarly, it is assumed the road accessing the industrial development were constructed to a standard suitable for the completed and fully occupied development.

The proposed weigh bridge system will record both inbound and outbound movements associated with the waste facility. The waste facility will accept small trailer loads of waste from the public, as well as truck and dog configurations. It is anticipated that the majority of truck movements to and from the waste facility will be concentrated between later morning and mid-afternoon.

Traffic Generated by the Proposed Waste Facility

Given that the proposed haulage of waste material to the waste facility will be undertaken by a combination of heavy vehicles, mainly by truck and dog combinations (38 tonnes carrying capacity) or by B-doubles (52 tonnes carrying capacity) the estimated number of laden trips per week will therefore be between about 92 and 126 laden trips per week. For the purposes of this assessment, 110 laden trips a week will be adopted. This equates to 20 laden trips per day (using a 5.5 day working week) entering the site and another 20 laden vehicles exiting the site to deliver processed waste to others. As a sensitivity analysis, the following table summarises heavy vehicle trips ultimately generated depending on the percentage of utilisation of the same trucks to both cart waste in and the same amount out.

Table 4.15: Total truck movements: scenarios considered

% Utilisation of same truck to carry waste loads in and out of the proposed waste facility	*Resultant total truck movements*
0% ie. if the waste facility operators were to ignore the potential to re-use haulage vehicles, and every trip to import unprocessed waste and export processed waste were considered as separate trips, then the following would apply	*Total movements: 220 laden trips (440 return) per week or 40 (80 return) per day or 4 (8 return) per hour.*
40% ie. if the waste facility operators were able to utilise 40% of the vehicles hauling unprocessed waste to the waste facility to then re-load and deliver processed waste to customers, the total number of trips would be reduced	*Total movements: 176 laden trips (352 return) per week or 32 (64 return) per day or 3.2 (6.4 return) per hour.*
60% ie. if the waste facility operators were able to utilise 60% of the vehicles hauling unprocessed waste to the waste facility to then re-load and deliver processed waste to customers, the total number of trips would be reduced even further	*Total movements: 154 laden trips (308 return) per week or 28 (56 return) per day or 2.8 (6 return) per hour.*

For the purposes of this assessment, the worst case will be adopted (the 0% scenario), where all heavy vehicles trips to and from the proposed waste facility will be separate trips i.e. all heavy vehicle trips will be laden one way and empty the other. This will result in 20 laden trucks into the waste facility (to transport raw waste), and 20 laden trucks out (to transport processed waste) each day. This results in an average 40 laden trips or a total of 80 heavy vehicle movements per full working day, or a total of 8 trips per hour. For the purposes of this assessment, a peak hour volume 50% above the average hourly rate i.e. 12 trips (6 laden and 6 empty) is assumed.

The additional staff commuting to and from work will generate around 10 vehicle movements in the morning (around 7.00am) and again in the afternoon (5.00pm), in addition to a small number of trips during working hours. The majority of future staff movements will be outside the current AM & PM peak periods. The waste facility will be open to the general public and businesses to deposit recyclable waste materials such as glass, cardboard, metals, batteries and the like. For the purposes of this assessment, it is estimated that between 10 – 20 light vehicles a day will enter and exit the site to drop off waste materials during working hours (7am – 5pm). This equates to around 1– 2 vehicles an hour or (say) an average 3 movements (in and out) per hour.

Based on the above, the following table shows the additional vehicle movements estimated to be generated by the proposed waste facility. The volumes shown below are total movements i.e. in and out:

Table 4.16: Total vehicle movements generated by the proposed waste facility

Type of traffic generated	*Daily movements*	*Peak hour movements (Vehicles per hour)*
Heavy vehicle	*80(assumed worst case)*	*12 per hour.*
Staff	*20*	*4 per hour.*
Public	*30*	*6 per hour.*
Total	***130***	***22 per hour***

(Source: Streetwise September 2020 Traffic Impact Assessment Proposed Waste facility Torrens Road, Gunnedah)

The accompanying **Figure 4.22** shows the estimated distribution of traffic likely to be generated by the proposed waste facility during the AM and PM peak hours.

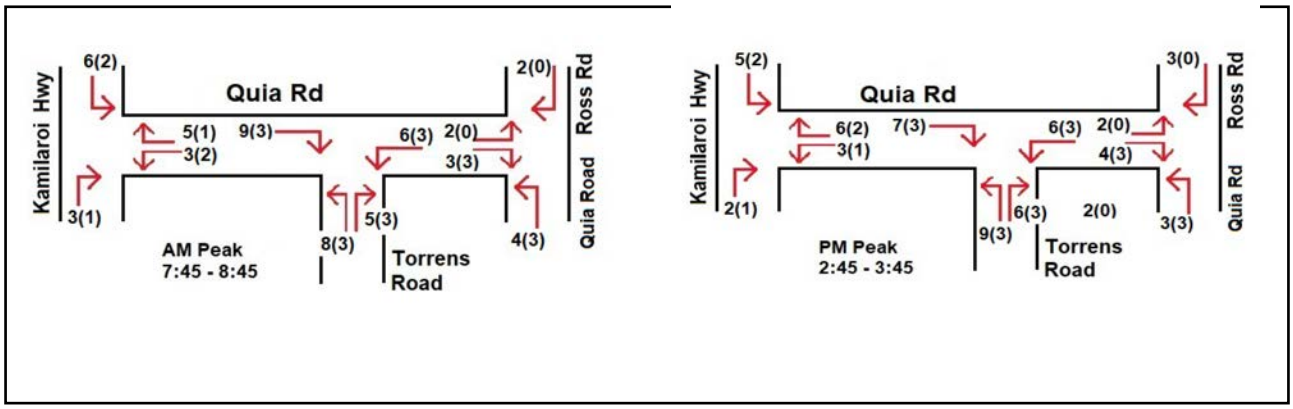


FIGURE 4.22: Estimated distribution of traffic to be generated by proposed Waste Facility during AM & PM peak hours (heavy vehicles in brackets)

(Source: Streetwise September 2020 Traffic Impact Assessment Proposed Waste facility Torrens Road, Gunnedah)

The existing road network can readily absorb these traffic volumes. The queuing area between the Torrens Road entry/ exit and the weigh bridge provides a sufficient distance such that there is no queuing back to Torrens Road. To minimise the potential for queuing, the waste facility will be closely managed to ensure that queuing is wholly contained within the project site. The on-site staff car parks will be appropriately repainted to provide dimensions compliant with the requirements of AS 2890.1 and AS 2890.6.

Summarising the traffic impacts of the proposed waste facility are considered by Streetwise to be acceptable, and in particular in terms of:

- **Traffic efficiency:** The relatively low number of additional heavy vehicle movements to be generated by the proposed waste facility will not significantly impact on the efficiency or operation of the local road network and no nexus would exist for any additional road upgrading works.

- **Amenity:** Amenity issues for adjoining residents in regard to the traffic generated by a development usually relate to traffic noise and dust generation. In this regard the haul route is fully sealed for its entire length, which results in minimal dust generation. Regarding noise, the proposed waste facility is located in an industrial area, with minimal residences close to the site or adjacent to the proposed haul roads. Also, traffic volumes on the local road network are low ie. less than 300 vehicles per day.

- **Road safety:** In terms of road safety, the main issues that need to be considered are type of traffic, road geometry and intersection safety. The waste facility will generate a high proportion of heavy vehicles particularly rigid truck and trailer combinations. The road geometry and construction standard is appropriate for this type of traffic, satisfying Austroads *Guide to Road Design* (2009). It should also be noted that all of the local routes associated with the approved haul routes currently operate at a Level of Service of 'A' – "*a condition of free flow in which individual drivers are virtually unaffected by the presence of others in the traffic stream*." By visual assessment the road alignment within the haulage route are all suitable for the speed zoning currently regulated.

- **Pavement condition:** The proposed haulage routes appear to be constructed of a suitable pavement for use by heavy vehicles given the existing condition of the road network and its current use by heavy vehicles.

Streetwise conclude, inter alia:

> "*In summary, StreetWise recommend that the proposed Waste Facility, and the associated minor increase in traffic generation, including haulage of waste material, as being a suitable proposal. The relatively low number of proposed daily heavy vehicle trips, staff commuting, and delivery vehicles will not have a significant impact on the efficiency or safety of the local road network.*"

Biodiversity

The project site is located within a recently developed industrial estate precinct and does not form a part of any critical habitat or is land mapped as being of biodiversity significance in the Gunnedah LEP 2012. The relevant clause of Gunnedah LEP 2012 provides:"*This clause applies to species or kinds of trees or other vegetation that are prescribed for the purposes of this clause by a development control plan made by the Council*." No such DCP controls or descriptions apply, the existing Gunnedah Council DCP 2012 being silent on this issue.

The project site has been disturbed by extensive site works and establishment of hardstand areas and construction of sheds, buildings and other structures over most of the project site. The Mackellar group has planted out much of the western boundary with tree plantings, as well as within the site itself including along the northern boundary of Lot 1.- Most boundary tree plantings located along the western boundary of Lot 1 are 6 metres high, with trees within the centre of the site ranging between 5-6 metres. The site trees near the corner of Torrens Road and Allgayer Drive are between 8 to 12 metres high. Refer accompanying Photograph 4.9. A few trees on Lot 1 will be removed to make way for vehicular movement corridors, however, most of the existing tree plantings will be retained. The seven (7) existing trees on Lot 2 will be removed, to make way for works associated with the proposed waste facility. None of this tree clearing affects any vegetation of significance.

Kathryn Yigman of Stewart Surveys was engaged by MacKellar Excavations to conduct a *State Environmental Planning Policy 44* (SEPP 44) assessment of the project site and the findings summarised below. A field survey was carried out over the site. The key findings of the preceding SEPP 44 assessment (**Appendix H**) are summarised in the following:

- The site investigations carried out on 23 May 2019 and 3 February 2020 did not encounter any Koalas on the site, or any evidence of past use of the vegetation on the site as Koala habitat.
- Historical observations of Koala activity on the site did not record any sightings on the subject site. There was one sightings east of the site between 2004 and 2014.
- The Gunnedah Koala Strategy does not map the vegetation on the subject site as being Koala habitat. Refer to **Figure 2.3**.
- The SEPP 44 Koala Feed tree species are estimated to make up 5% of the tree species on the site. Only two (2) Koala feed tree species listed under SEPP 44 was observed at the site, on Lot 1 near the Torrens Road/Allgayer Drive intersection. These were the *Eucalyptus populnea*, Bimble Box tree and *Eucalyptus albens*, White Box. There were no SEPP 44 feed trees species observed on Lot 2.

Based on the above, the site is not considered to be Potential or Core Koala habitat as defined by SEPP 44.

PHOTOGRAPH 4.9 (above): Oblique aerial view of project site with neighbouring industrial and rural land. The project site enjoys well established on-site landscaping.

(Source: Stewart Surveys drone photography October 2020)

Visual, Built Form

Overview

The proposed waste facility is located within the Allgayer Drive industrial area at 16 Torrens Drive, Gunnedah, NSW. The area is zoned IN1 General Industrial and is currently used as an industrial area.

It is noteworthy that the project site is the only well-landscaped industrial site site within the Allgayer Drive industrial estate. There is minimal tree planting located elsewhere in the Allgayer Drive industrial area, save for Lot 1 on the project site, which has well established trees plantings. Existing vegetation is located along the western and northern boundaries of Lot 1, as well as a strip of Ironbark trees running through the centre of Lot 1. Lot 2 has minimal tree cover and is dominated by a large hardstand area. Refer to accompanying Photographs 8.1-8.3. The proposed industrial buildings forming a part of the waste facility will sit in amongst an existing industrial zoned area with existing Industrial uses and buildings, with a maximum height of 10.5 metres. The Allgayer Drive and industrial area surrounding it is dominated by large industrial buildings of height ranging between 7.6 metres to 11.1 metres-refer to **Figure 4.23**.

REF	ROOF LEVEL	GROUND LEVEL	LOT PARTICULARS	ADDRESS	DESCRIPTION
1	269.3	266.3			CANE TAKEKI RESIDENCE
2	272.3	265.5	LOT 1 DP1226992	16 TORRENS ROAD, GUNNEDAH	MEX OFFICE AND WORKSHOP
3	270.3	265.5			MEX STORAGE DEPOT
4	274.74	266.0	LOT 11 DP1226992	2-10 ALLGAYER DR, GUNNEDAH	INDUSTRIAL WAREHOUSE
5	275.7	264.9	LOT 9 DP1226992	20-26 ALLGAYER DR, GUNNEDAH	GENERAL INDUSTRIAL PREMISE
6	273.2	263.8	LOT 5 DP1226992	35 ALLGAYER DR, GUNNEDAH	EXPRESSWAY SPARES WAREHOUSE
7	271.5	264.0	LOT 62 DP1232611	34 ALLGAYER DR, GUNNEDAH	ACE EQUIP WORKSHOP
8	271.6	264.0			KOMATSU WORKSHOP
9	271.6	264.0	LOT 61 DP1232611	40 ALLGAYER DR, GUNNEDAH	PINTECK WAREHOUSE
10	271.4	266.5	LOT 1 DP450237	28 TORRENS ROAD, GUNNEDAH	RESIDENCE
11	269.2	262.9	LOT 450 DP755503	10221 KAMILAROI HWY, GUNNEDAH	RESIDENCE
12	272.7	266.3	LOT 637 DP755503	68 QUIA ROAD, GUNNEDAH	KISPUA CAKETAKEN RESIDENCE
13	273.0	266.7	LOT 636 DP755503	59 QUIA ROAD, GUNNEDAH	MPC EARTHMOVING DEPOT
14	280.0	268.9	LOT 616 DP755503	47 QUIA ROAD, GUNNEDAH	GENERAL INDUSTRIAL PREMISES
15	267.2	263.2	LOT 638 DP755503	10193 KAMILAROI HWY, GUNNEDAH	RESIDENCE
16	266.6	262.3	LOT 382 DP755503	10176 KAMILAROI HWY, GUNNEDAH	RESIDENCE

FIGURE 4.23: Surveyed height of surrounding industrial buildings nearby.The proposed unloading/processing shed will be 10.5m high, the restricted waste shed 4.8m high.

(Source: Stewart Surveys October 2020)

Building Height, Bulk and Scale

The Project consists of a one new large industrial building to house unloading and processing activities associated with the waste facility with a floor area of 3,400m^2. An existing storage shed on the site, having a floor area of 200m^2, will be relocated and repurposed as the restricted waste storage shed. The existing administration building, workshop, storage shed, managers residence, and truck/car parking area will be retained as part of the proposed development.

Pursuant to the provisions of *Gunnedah Local Environmental Plan 2012* the project site has a maximum allowable floor space ratio (FSR) of 0.6:1 (source: *Gunnedah Local Environmental Plan 2012 Floor Space Ratio Map Sheet FSR_005A*). The existing development on the site has a combined floor space of approximately 715.5m^2. For a site with a total area of 27,790m^2 this equates to a FSR of only 0.025:1, far below the maximum allowable FSR of 0.6:1. The proposed development, including floor space to be retained on site, has a total floor area of 3,967.5m^2, which equates to a FSR of only 0.14:1, still well below the maximum allowable FSR of 0.6:1.

It is most relevant to note that the project site is not subject to any restrictions under *Gunnedah LEP 2012* in terms of maximum building height restrictions.

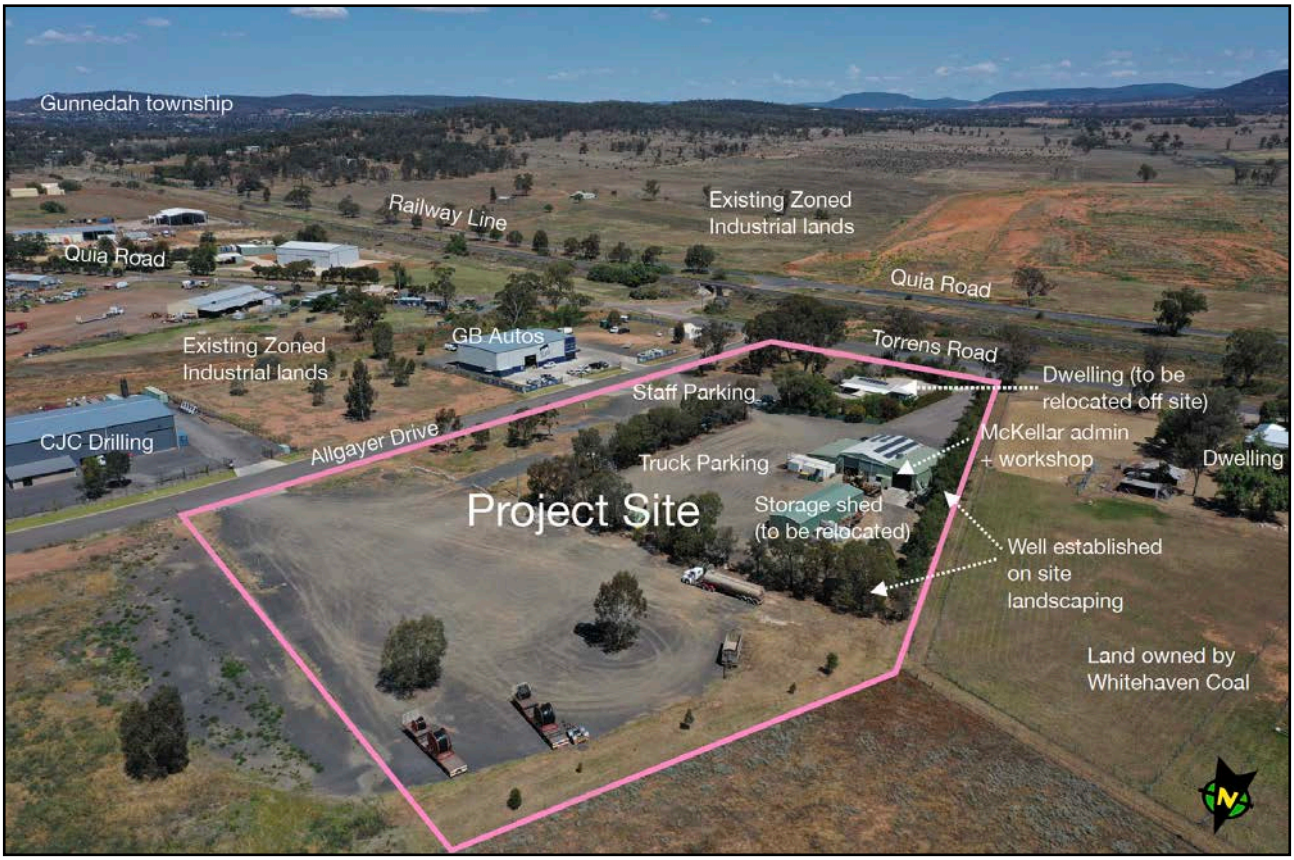
The NSW Land and Environment Court has established planning principles in the assessment of the height, bulk and scale of any proposed development. It is to be noted, however, that these planning principles are not legally binding and they do not prevail over environmental planning instruments or policies.

The proposed development is considered to satisfy these planning principles, as set down in accompanying Table 4.17.

Table 4.17: Consistency with L&E Court planning principles: height, bulk and scale

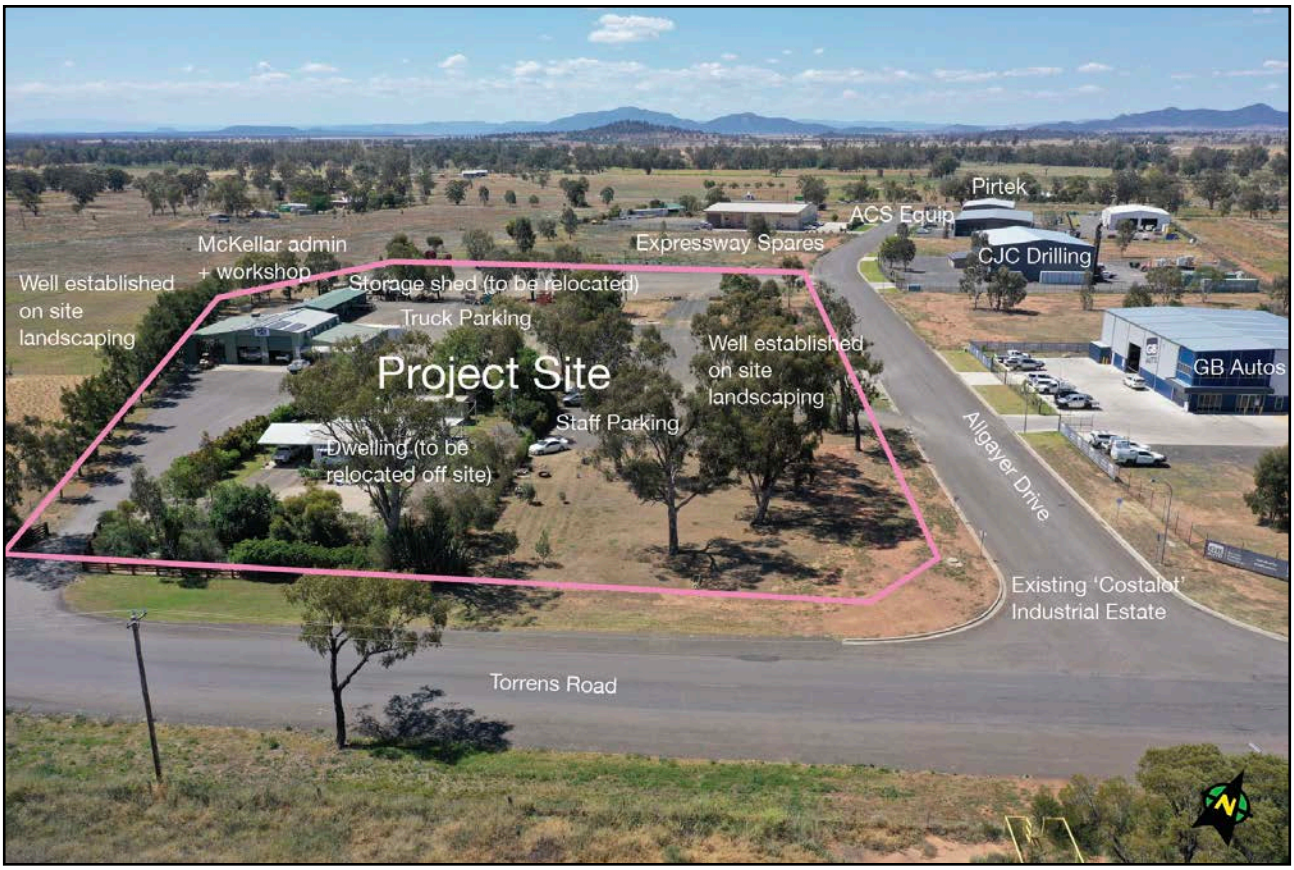
Height, bulk & scale Court checklist	***Applicability to proposed waste facility***
Are the impacts consistent with impacts that may be reasonably expected under the LEP controls?	*Yes. The project site is specifically zoned for the purposes of an industry, with visual impacts typical of that of other industrial buildings in the near vicinity.*
How does the proposal's height and bulk relate to the height and bulk desired under the relevant LEP controls?	*Yes. The Gunnedah LEP 2012 has allowed flexibility in terms of the ultimate height of any future industrial buildings to be erected on the site and in this area generally, with no building height control applying.*
Where the planning controls are aimed at creating a new character, the existing character is of less relevance. The question to be asked is: ***Is the proposal consistent with the bulk and character intended by the planning controls?***	*Yes. See point above.*
Where there is an absence of planning controls related to bulk and character, the question then is: Does the proposal look appropriate in its context?	*Yes. The project is appropriate in its local context given that it seeks a building height, bulk and scale similar to that of surrounding industrial development. For instance, the industrial building opposite the project site, housing CJC Drilling, has a height of 10.8 metres, marginally greater than the building height sought on the project site. The proposed sheds will have a bulk and scale similar to that of surrounding industrial buildings, employing similar building materials.* *Given the zoning of the site, there is a community expectation that the site will be developed for industrial purposes. Various design measures are employed, and in particular further perimeter landscaping, to lessen the visual impact of development proposed on the site.*

Refer to accompanying Photographs 4.10 and 4.11.



PHOTOGRAPH 4.10 (above): Oblique aerial view of the project site from the north.

(Source: Stewart Surveys photograph taken October 2020)



PHOTOGRAPH 4.11(above): Oblique aerial view of the project site and surrounds from the south.

(Source: Stewart Surveys photograph taken October 2020)

In terms of overall compatibility, the Land and Environment Court has established the planning principle of compatibility in urban environment in *Project Venture Developments Pty Ltd v Pittwater Council* (2005) [2005] NSWLEC 1919 (*Project Venture*). Senior Commissioner Roseth concluded that being compatible is different from being identical and the Court has accepted that developments can exist together in harmony without having the same density, scale or appearance.

In this regard the desired future character of the local area is guided and defined by the industrial zoning of the project site and surrounding land. The proposal is considered to be consistent with the desired character of the Allgayer Drive industrial estate and provide an intensity of development that is commensurate with the existing and planned form of the Allgayer Drive industrial estate and locality generally. The proposed buildings will be of a similar height to that of existing industrial buildings nearby. The proposal provides for an appropriate bulk, height and scale commensurate with the designation of the project site specifically for the purpose of industry.

Visual Impact and Views from Key Viewing Points

The identification visual impact of the proposed development is assessed in the following. The visual impact of the proposed waste facility relies on photographs taken from key viewing points, a review of the design of the proposed facility, supplemented by imagery generated following a drone survey of the Project Site by Stewart Surveys in October 2020. The assessment combines sensitivity with predicted magnitude of change to establish the significance of residual landscape & visual effects. Refer Table 4.18 below.

Table 4.18: Assessment Criteria- Visual Impact

Visual Impact	*Significance of visual and landscape impact*
Low	*The development would cause very minor changes to the existing view over a wide area or minor changes over a limited area, usually with no significant adverse impact on overall visual character. In terms of landscape, minor change, affecting some characteristics and the experience of the landscape to an extent; and introduction of elements that are characteristic. Development would either not be visible or barely visible. Small area only affected, with no significant adverse impact on overall visual character or, in the alternative, short term impacts only. Impacts capable of being mitigated or offset by beneficial impacts.*
Moderate	*The development would cause minor changes to the existing view over a wide area or noticeable change over a limited area. Noticeable change to a significant proportion of the landscape, affecting some key characteristics and the experience of the landscape, and introduction of some uncharacteristic elements. Moderate impact on visual character. Impacts typically capable of mitigation in part or whole.*
High	*The changes to the landscape would result in extensive, noticeable change, affecting many key characteristics and the experience of the landscape, and Introduction of many incongruous elements into the landscape. Development would cause a considerable change to the existing view over a wide area or an intensive change over a limited area- typically impacting a visual resource of high visual significance. Visual impacts not capable of being mitigated, with impacts more than likely being more permanent in nature.*

The Land and Environment Court has established planning principles relating to various components of visual impact assessment under the EP&A Act 1979. This includes planning principles relating to the assessment of view impacts, as per the judgements contained in *Tenacity Consulting v Warringah* [2004] NSWLEC 140; (2004) 134 LGERA 23 and *Rose Bay Marina Pty Limited v Woollahra Municipal Council and anor [2013]* NSWLEC 1046. These two key Court cases are considered in the following. The judgement in the Land and Environment Court case *Tenacity Consulting v Warringah* [2004] NSWLEC 140; (2004) 134 LGERA 23. It sets out the planning principle for considering the acceptability of the impact of a proposed development on the views enjoyed from private property in the vicinity of the development. The focus of this Court decision relates to view sharing and the interruption of views caused by a development. In this regard the proposed waste facility development does not block views, rather, it changes the view from certain viewing locations. These are considered further in the following.

Equally, the judgement in the Land and Environment Court case *Rose Bay Marina Pty Limited v Woollahra Municipal Council and anor [2013]* NSWLEC 1046 has applicability here. It sets out the planning principle for assessing the acceptability of the impact of private developments on views from the public domain in the vicinity of the development. This also has applicability to the proposed waste facility development in that views of the Project Site are possible from a number of viewing points nearby. The framework for this planning principle concerning impacts on views enjoyed from the public domain is broadly consistent with (but not identical to) the matters raised for consideration in *Tenacity*. The steps that the Court has set down for determining the acceptability of the impact of a development on views are in two stages - the first factual followed by a second, analytical process, summarised in the following Table 4.19.

Table 4.19: View Impact Assessment- Steps

Visual Assessment Steps/Considerations	Relevance to Proposed Waste facility
Step 1: identify the nature and scope of the existing views, including: ➢ Nature and extent of obstruction of view (by the development). ➢ Elements of the view, important elements within the view. ➢ Whether the change in view is temporary or permanent	Views are very localised, with most views of the project site possible from within the Allgayer Drive industrial estate. Views from the nearest residence to the west screened/obscured by stands of vegetation. Views from the nearest rural residence to the north, near Expressway Spares, is screened/obscured by intervening trees and sheds. Views from the rural residence to the NW partly screened only in part by intervening vegetation (around the residence). Views from near the Torrens Road/ Allgayer drive intersection obscured by on site tree plantings. Views possible from Allgayer Drive opposite the proposed unloading/processing shed framed in part of well established stands of trees on the project site.
Step 2: identify the locations from which the potentially interrupted view is enjoyed	Unlikely for views to be 'interrupted', except to a degree from nearest rural residence to the NW.
Step 3:identify extent of the obstruction at each relevant location	Refer to above. Impacts considered to be acceptable.
Step 4:identify the intensity of public use of those locations where that enjoyment will be obscured, in whole or in part, by the proposed private development	No obscuring of views by the proposed waste facility- refer to comments above.
Step 5: the importance of the view to be assessed	Assessed in more detail in this part of the EIS.

There are a number of factors which have been taken into account when preparing this visual assessment. Development is often viewed as permanent and/or perceived to have a negative impact, it is therefore important to emphasise that change created by development can often be beneficial in appearance, and may also be temporary , short-term or indeed reversible. This assessment addresses these aspects; identifying both the type and duration of the potential visual impacts. The following terminology has been used were appropriate and is defined as follows:

Type of Visual Impacts

- Beneficial: A positive impact will improve or enhance the landscape character or viewpoint.
- Neutral: A neutral impact will neither enhance nor detract from the landscape character or viewpoint.
- Adverse: A negative impact will have an adverse effect on the existing landscape character or viewpoint.

Duration of Impacts

- Temporary impacts lasting one year or less.
- Short–term impacts lasting one to seven years.
- Medium-term impacts lasting seven to twenty years.
- Long-term impacts lasting twenty to fifty years.
- Permanent impacts lasting over fifty years.

In summary, the factors considered in assessing potential visual and landscape impacts associated with this proposed waste facility are as follows:

- **Land already developed for industrial purposes, with well established stands of trees already in place:** Lot 1 on the project site is currently being used for industrial purposes, with Lot 2 used as a hardstand for storage. Well established stands of trees have been established on the project site- in the main on Lot 1- a beneficial, existing visual impact.
- **Visual exposure:** The potential for visual exposure of the Project Site from viewing points along public roads and from surrounding residences is limited, principally to within Allgayer Drive and immediate surrounds.
- **Magnitude of the visual impact:** Impacts confined to a small area are generally less intrusive in nature than larger areas of disturbance. The project site is located on relatively flat land with no elevation or visual prominence. Related to this, the scale of the change proposed is similar to that of surrounding industrial buildings.
- **Duration of impact:** The duration of the impact can be very important in determining the significance of impacts. An industrial use like the one proposed, confined to only a small area with limited visibility from nearby residences, has a Low visual impact only.
- **Sensitivity of the altered landscape and visual resources:** Refer Section 4.7 of the EIS. The development context and the character, importance, condition and tolerance of the existing landscape to any significant change. The site has a generally Low sensitivity to change.
- **Beneficial or adverse impacts:** Whether the visual impact is beneficial or adverse. The establishment of further perimeter tree plantings, supplementing the already well established tree plantings on the project site, will have a beneficial impact on the visual character of the industrial estate.

Views as perceived from nearby public spaces and nearby buildings is considered in the following. The key viewing points are illustrated in the accompanying **Figure 4.24**.

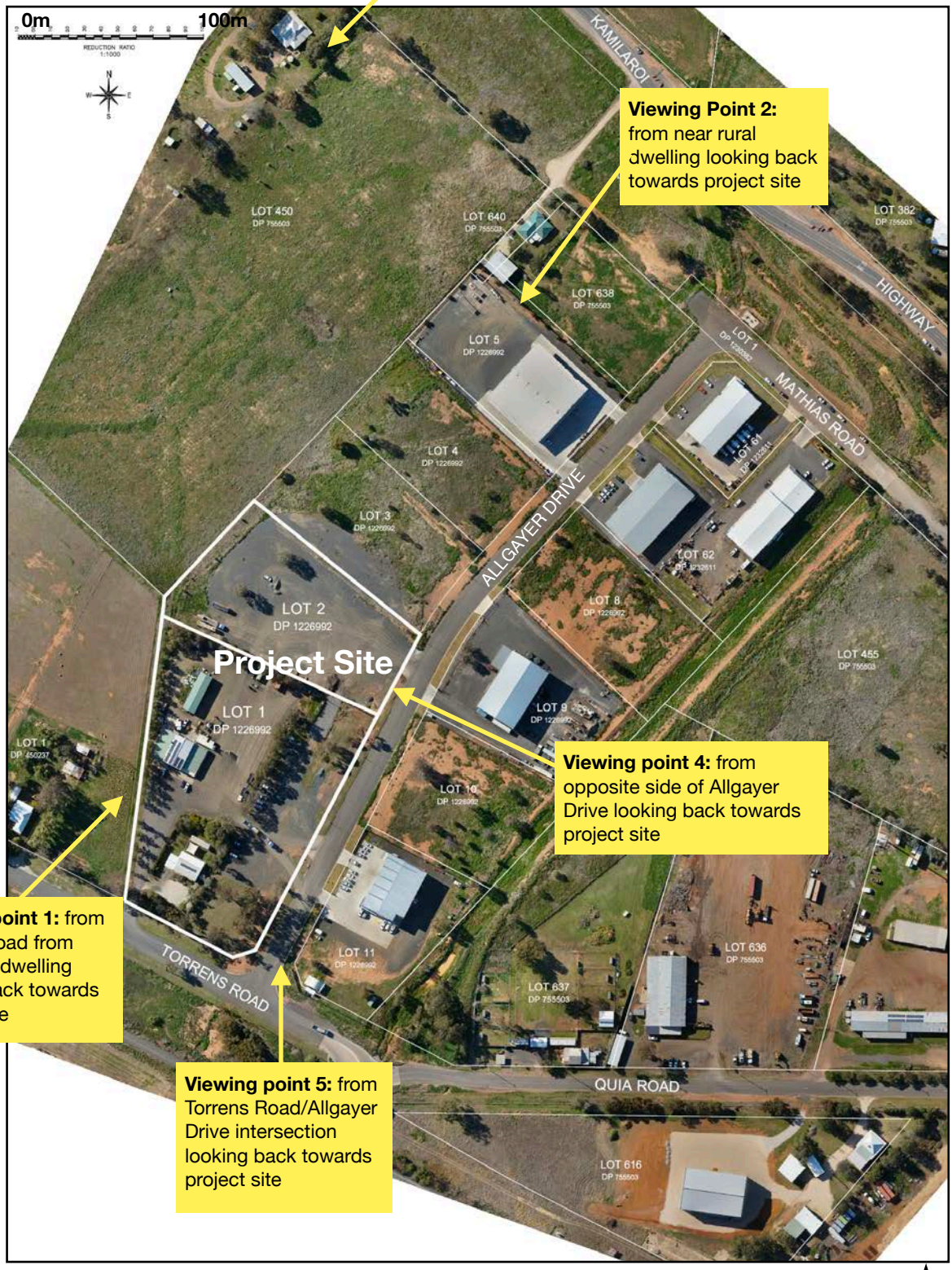
The proposed industrial buildings are set well back from the Allgayer Drive street frontage, with visual impacts reduced considerably through use of existing tree plantings, supplemented by further perimeter pantings and landscaping. In short, in no way will it dominate adjoining industrial buildings or the industrial streetscape.

Views from the surrounding residential areas would have negligible to Low impact due to the screening afforded by the existing industrial uses, existing established trees and distance to the proposed development. Views from the rural dwelling forming a part of the landholding owned by Whitehaven Coal, to the west of the existing administration and workshop building, would be, in the main, blocked or screened by existing tree plantings located along the western boundary of the project site and blocked by intervening existing industrial buildings on the site.

Views of the proposed waste facility from Torrens Road immediately south of the project site would be screened or obscured by the intervening extensive stands on trees situated on the southern flanks of the project site.

Views of the proposed waste facility from the southern section of Allgayer Drive would be screened in part by the extensive stands on trees situated on the project site. Views of the activities associated with the proposed waste facility from the northern section of Allgayer Drive would be obscured in part by buildings and storage bays situated on the northern side of the project site, with views possible of the proposed processing shed building and storage bays. Views into the weigh bridge and proposed waste unloading area on Lot 1 would be screened in part by intervening stands of trees that run through the centre of Lot 1.

In summary, the Project Site has extensive, well established stands of trees running along the western boundary, through the middle of the site, and including a stand of large trees near the corner of Allgayer Drive and Torrens Road. This gives the site a high amenity value and provides an opportunity to screen the proposed development from numerous viewing points at project inception. These well established tree plantings will be supplemented by further extensive tree plantings on site, and in particular along the northern boundary and in the north-west corner of the site. This assessment concludes that the proposed waste facility development will not provide significant visual impact to the area and local residents surrounding the existing industrial precinct: an overall Low visual impact.



Viewing point 3: from near rural dwelling Kamilaroi Highway looking back towards project site

Viewing Point 2: from near rural dwelling looking back towards project site

Viewing point 4: from opposite side of Allgayer Drive looking back towards project site

Viewing point 1: from Torrens Road from near rural dwelling looking back towards project site

Viewing point 5: from Torrens Road/Allgayer Drive intersection looking back towards project site

FIGURE 4.24: Viewing locations assessed.
(Base plan: Stewart Surveys October 2020 survey)

View from Torrens Road with rural dwelling, looking east

View from Torrens Road looking north-east towards established industrial uses and landscaping on the project site

Viewing Location 1:

This rural dwelling is located on land owned by Whitehaven Coal located to the west of and adjoining the project site.

The view is to the front section of an existing industrial development that contains existing established large trees.

Glimpses are possible of industrial uses on that part of the project site nearer the Torrens Road street frontage through vegetation surrounding the rural dwelling and through the western perimeter plantings on the project site. Existing established trees already provide a softening to this view.

Existing perimeter tree plantings will screen views of the northern section of the project site, once developed. It is considered that glimpses only of the unloading shed may be possible from this viewing location, screened by existing western perimeter tree plantings and/or obscured by the existing workshop/administration building.

Assessed as a Low visual impact.

LOW visual impact

View from entry to with rural dwelling, looking south over the Expressway Spares site towards the project site- the latter barely visible

View of rural dwelling, looking south with views towards the project site screened/obscured by existing vegetation and parked vehicles on the Expressway Spares site

Viewing Location 2:

This rural dwelling is located on land to the north of the project site, adjoining the Expressway Spares industrial development on Allgayer Drive.

Views are dominated by the large industrial building on the Expressway Spares site and screened by existing plantings along the southern boundary of the Expressway Spares site, existing plantings around the dwelling itself. The existing shed on this rural property shields views towards the project site. Glimpses only of the proposed waste facility will be possible from this location. These limited views will be further mitigated by the existing stands of trees on the project site, which will frame the new buildings proposed, and by the extensive stands of new plantings along the northern boundary of the project site.

These new northern perimeter tree plantings will screen views of the northern section of the project site, once developed, as will the perimeter plantings already established on the Expressway Spares site. Assessed as a Low visual impact.

LOW visual impact

View of from east of rural dwelling from Kamilaroi Highway frontage , looking south-east with views towards the project site and parked trailer and cable reels (coloured red) on Lot 2

View of rural dwelling from Kamilaroi Highway frontage , looking south-east with views towards the project site and parked trailer and cable reels (coloured red) on Lot 2

Viewing Location 3:

This rural dwelling is accessed from the Kamilaroi Highway and is located on land to the north-west of the project site, to the west of the Allgayer Drive industrial estate.

Views of Lot 2 are possible from this viewing location- this part of the project site currently housing unhitched trailers containing cable reels, coloured red in the photographs. Also clearly visible are the stand of trees running along the common boundary between Lots 1 and 2, as well as western perimeter tree plantings. Glimpses are possible of the workshop/administration building.

From this vantage point, views will be possible of the unloading and processing shed, once erected, and the 4.5m high wall that is interned to run parallel with the northern boundary. Between this wall and this viewing point it is intended to plant within a 6m wide corridor further tree plantings, which should, once established (medium term), screen all but the most elevated sections of the unloading and processing shed (likely tree height of up to 8m vs a proposed building height of 10.5m). Views will also be possible of the restricted waste shed, however, due to its lower height (less than 5m) will not be visually dominant, and in any case, will be framed by existing trees of height 5-6m. [NOTE: These trees have attained this height after approx. 15 years] The visual impact of the unloading and processing shed will be softened by the established plantings on site. In time, the new northern perimeter tree plantings will screen views of the northern section of the project site, once developed.

Assessed as a Medium visual impact in the short-medium term and Low visual impact in the medium term.

MODERATE visual impact in the short-medium term and LOW visual impact in the medium term

View of Lot 2 from Allgayer Drive, looking west. Views of hardstand area on Lot 2 and 5-6m high trees along common boundary between Lot 1 and lot 2. Parked trailer and cable reels (coloured red) located to the rear of Lot 2

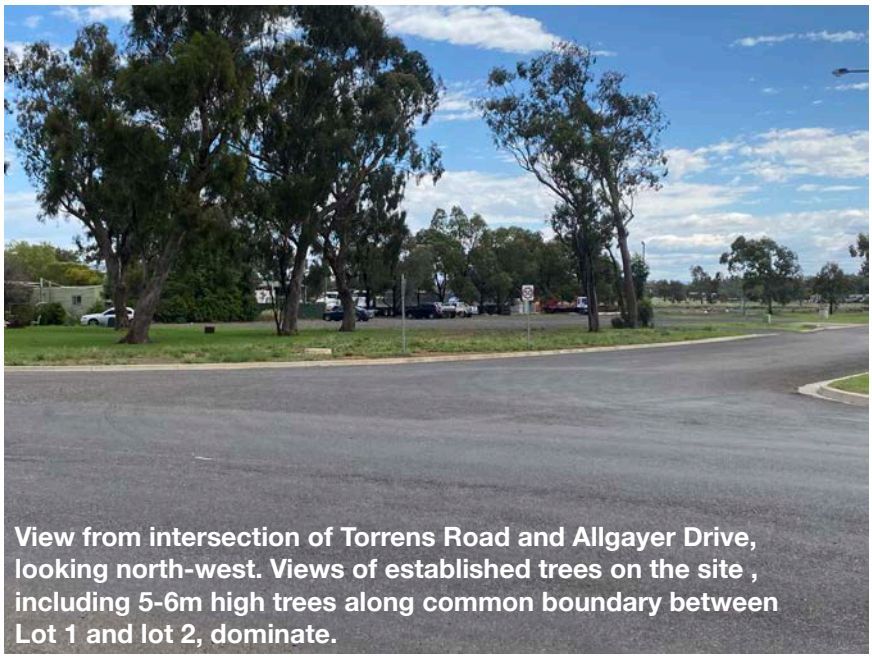
Viewing Location 4:

This is a view looking directly into Lot 2 from Allgayer Drive. Directly behind this viewing point is an industrial building 10.8m high ie. of a height greater than that proposed on the project site with minimal landscaping and hard surfaces predominating. Views are of 5-6m high trees running along the common boundary between Lot 1 and Lot 2, and hardstand on Lot 2.

The unloading and processing shed will be located to the rear of the site, framed by existing and future tree plantings in centre of the project site and along the northern boundary. Views will also be possible of the restricted waste shed, however, due to its lower height (less than 5m) will not dominate, to be framed by existing trees of height 5-6m.

Given the established industrial character of the locality, a Low visual impact has been assessed.

LOW visual impact



View from intersection of Torrens Road and Allgayer Drive, looking north-west. Views of established trees on the site , including 5-6m high trees along common boundary between Lot 1 and lot 2, dominate.

Viewing Location 5:

This is a view looking in a north-westerly direction towards the project site from the Torrens Road/Allgayer Drive intersection. Views dominated by trees near the intersection and the trees running along the common boundary between Lot 1 and Lot 2.

Views of the unloading and processing shed + restricted waste shed will be screened/ obscured by these existing tree plantings. Views will be still possible of storage bays, however.

Given the above, and the established industrial character of the locality, a Low visual impact has been assessed.

LOW visual impact

Heritage

The project site is not identified as an Aboriginal place of heritage significance. As such, the provisions of clause 5.10 of the Gunnedah LEP 2012, Heritage Conservation, do not apply. No lands, places, buildings or structures listed on the State Heritage Register under the *Heritage Act, 1977* occur within the land the subject of this development application.

A formal heritage assessment was not required by the SEARS request. The project site is already highly disturbed and is also predominantly covered in existing structures and hard surfaces. It is also relevant that prior to the grant of development consent to the 'Costalot' industrial estate, which includes the project site, Council would have been under an obligation to consider the heritage requirements of the Gunnedah LEP 2012. Therefore, by virtue of the subdivision and subsequent construction of the of industrial subdivision, involving extensive site disturbance, the likelihood of encountering heritage items is considered to be, at best, slight. In any case, there will be minimal soil disturbance during the construction or operation of the proposed waste facility-refer to EIS Section 3 for details. Therefore, there is very minimal potential for the discovery of Aboriginal sites.

Notwithstanding the above, an unexpected finds protocol for Aboriginal sites forms a part of the proposed development- refer Section 3.7.2 of the EIS.

Contamination

Clause of *State Environmental Planning Policy No 55 – Remediation of Land* imposes preconditions to the determination of a development application by the grant of consent to development on land that is contaminated.

The site of the proposed development has been used as an industrial site. Mackellar Equipment Hire Pty Ltd commissioned a site investigation to determine the extent of any contamination. The site investigation, undertaken by East West, was undertaken in order to identify any potential risks and sources of contamination from current uses and to determine whether Lot 2 is deemed free of contaminants of concern and whether it is fit for its proposed purpose or whether future investigation and sampling is required in accordance with NEPM guidelines (2013). Refer **Appendix L** for details.

The site investigation (refer photographs), backed by laboratory testing of soil samples, found no evidence of any contamination on either Lot 1 or Lot 2. The findings of the contamination assessment are summarised in the following:

> "*A site inspection was conducted on 13th May 2020, where photos were taken and the site was assessed for possible contamination risks and obvious signs of surface contamination. As a result of use as a mechanical service and repair garage and fuel refuelling and storage, the potential for contaminants of concern include total recoverable hydrocarbons (TRH), polyaromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene, xylene (BTEX), phenols, and heavy metals was identified as a moderate risk.*
>
> *Soil sampling of Lot 2 was conducted on June 5th 2020, where fourteen samples at depths of 0-150mm of natural topsoil were collected using targeted sampling. The fourteen sampling locations were also screened visually by using an auger to drill soil cores to ascertain any obvious signs of fill or contamination to a depth of 1.5m.*
>
> *There were no significant readings to indicate contaminants of potential concern observed in Lot 1 have migrated and contaminated the topsoil of Lot 2. Contaminants of concern were either below detection limits or well below the NEPM guidelines for the proposed commercial/industrial land use in all topsoil samples.*
>
> *Considering the assessment contained within this report, there exists low potential for contamination of Lot 2 from current use in Lot 1 as evidenced by the results of the testing across the targeted topsoil samples. Therefore, on the basis of the investigations undertaken, the site at 16 Torrens Road, Lots 1 and 2 DP 1226992, Gunnedah NSW meets the adopted criteria for commercial/industrial D and is therefore suitable for the proposed use*." (From Executive Summary of East West contamination report- refer **Appendix L**.

Sampling locations are illustrated in the accompanying Photograph 8.4 and **Figure 4.25**.

FIGURE 4.25: Extent of sampling locations as part of the contamination assessment
(Source: East West June 2020 Mackellar Excavations Pty Ltd Preliminary Contaminated Site Investigation Lots 1 and 2 DP 1226992)

In conclusion, the project site has been found to be not contaminated and can be used for the purpose for which development is proposed, in satisfaction of *State Environmental Planning Policy No 55 – Remediation of Land.* No site remediation works are required. Refer also to Photograph 4.12 showing samples of material investigated.

Social and economic impacts

Social impacts can be positive or negative; tangible or intangible; direct, indirect or cumulative; directly quantifiable, indirectly or partly quantifiable or only able to be described and assessed in qualitative terms; and experienced differentially per *Social Impact Assessment Guideline* (Department of Planning and Environment, 2017)[13].

Social impacts are considered in the following Table 4.20. Overall, net positive impacts arise from the proposed waste facility development.

FOOTNOTE 13: Cited by Preston CJ in respect of a proposed coal mine in Gloucester Resources Limited v Minister for Planning [2019] NSWLEC 7 decision dated 8 February 2019.

Figure 33. SP9 borehole displaying moist, natural soil beneath 50mm of road base

Figure 34. SP10 borehole displaying dry, natural soil beneath 100mm of road base

Figure 35. SP11 borehole displaying dry, natural soil

Figure 36. SP12 borehole displaying dry, natural soil beneath 100mm of road base

PHOTOGRAPH 4.12: Borehole displays as part of the contamination assessment

(Source: East West June 2020 Mackellar Excavations Pty Ltd Preliminary Contaminated Site Investigation Lots 1 and 2 DP 1226992)

Table 4.20: Assessment of Social Impacts the Proposed Waste Facility

Social impacts	***Compliance proposed waste facility***
Way of life, includes includes changes in how people live, work, play and interact with each other.	*Consistent. The proposed waste facility is to be located within a zoned industrial area. There is a community expectation that the project site will be developed for industrial purposes. The project will support a diversity of industry in the LGA through the establishment of a new waste facility on an existing approved industrial zone on the western fringe of Gunnedah township. Additional employment opportunities will also ensue. The project site is proximate to the township of Gunnedah and the facilities that it offers. The proposed waste is an economic opportunity which does not conflict with recreation or tourism or agriculture or rural amenity or environmental values.*
Community, including its composition, cohesion, character, how it functions and sense of place	*Consistent. The proposed waste facility will generate more jobs and prosperity for the Gunnedah area. It will be located in a part of Gunnedah specifically designated for industrial uses.*
Access to and use of infrastructure, services and facilities	*Consistent. The site has access to full urban services and is located in reasonable proximity to the community services infrastructure offered by the township of Gunnedah.*
Culture, including shared beliefs, customs, values and stories, and connections to land, places, and buildings (including Aboriginal culture and connection to country)	*Consistent. The project site contains no sites of heritage value, either in terms of European or Aboriginal heritage. Unexpected finds protocols to apply, in the event that Aboriginal relics and the like are uncovered during site works.*
Health and wellbeing, including physical and mental health	*Consistent. The Project seeks to achieve non-material well-being or "quality of life" by providing a resource recovery facility serving the broader community. Through good design, the general amenity of the local area will be maintained throughout and beyond the life of the proposed project through implementation of safeguard measures to mitigate any environmental impacts arising from the operation of the proposed waste facility. Noise from the waste facility complies with the relevant noise criteria during typical operations, with minor noise exceedances on the few times that a crusher is employed on site. However, even at these times the operative amenity noise criteria can be satisfied.*
Surroundings, including access to and use of ecosystem services, public safety and security, access to and use of the natural and built environment, and its aesthetic value and/or amenity	*Consistent. The site has access to urban services. No significant adverse ecological or heritage or environmental impacts arise from the Project, as it will not result in any significant increase in the extent of vegetation clearing in the locality or removal of habitats for flora and fauna species, including the threatened koala.*
Personal and property rights	*Consistent.The project site is not identified as being bushfire prone land. It will not impinge upon or adversely affect other industries in the locality.*
Decision-making systems, particularly the extent to which they can have a say in decisions that affect their lives, and have access to complaint, remedy and grievance mechanisms	*Consistent. The Project will be advertised for public comment. The proponent has involved in a public consultation exercise as a part of the preparation of this EIS. Complaints protocols have been proposed as a part of the day-to-day operation of the waste facility.*
Fears and aspirations related to one or a combination of the above, or about the future of their community."	*Consistent. The proposed waste facility will contain mitigation measures that will act to ensure the prevention of any contamination of land or water. As such, risks are anticipated to be controlled to a satisfactory degree. The site is not mapped as being flood-prone land. The noise to be generated is typical of that of an industrial environment. The Project includes various noise mitigation measures, to minimise impacts to an acceptable degree. Protocols are also proposed to deal with unexpected finds, including asbestos, as well as the storage of restricted waste on site.*

In addition to the matters considered in Table 4.20 above, the following social and economic impacts are likely to ensue:

- The promotion of the orderly and economic use of a site specifically zoned for industry. It is also relevant to note that waste disposal and recycling facilities form a key part of the infrastructure necessary to support the orderly economic development of land in New South Wales.

- A significant contribution to the NSW Government's Policy on Waste Reduction. The facility will be able to accept up to 250,000 tonnes of select waste materials from Sydney and other regional sources, sort and/or process it, and dispatch any unwanted waste to recipient companies for further processing and reuse. The Project is consistent with the NSW Government's direction in achieving the targets in the Waste and Avoidance and Resource Recovery Strategy 2014-2021 and in particular, avoiding and reducing the generation of waste, increasing recycling, and diverting more waste from landfill to alternative uses, such as recycling. If the Project were not to proceed future generations would be faced with one less recycling option available, as well as potentially higher costs for the processing and recycling of waste. As noted by the EPA in the *NSW Waste Avoidance and Resource Recovery Strategy 2014–21*:

  "*Waste management is a significant part of the economy. The Australian Bureau of Statistics estimated that the supply of waste management services nationwide in 2009–10 was worth over $9.5 billion, including income from recycling waste products valued at $4.5billion. As NSW generates 31% ofAustralia's gross domestic product, the value of waste management services to the NSW economy can be estimated at $2.9 billion – $1.3 billion of this coming from resource recovery*.

  The economy depends on the environment to provide raw materials and absorb the waste and emissions we produce. Reusing, recovering and recycling these valuable materials keep them in the productive economy for longer. This has the dual benefits of lowering demand for new resources and reducing the need to absorb waste. Waste going to landfill is not only a loss of valuable resources, it reduces landfill space.

  ……

  In 2009, Access Economics2 estimated that more than 22,000 full-time equivalent staff were engaged directly in recycling in Australia.."

  (source: EPA *NSW Waste Avoidance and Resource Recovery Strategy 2014–21*).

- A new waste-related industry to the Gunnedah region, providing further diversity in the range of industries offered. The facility would provide a range of environmental and economic benefits for the region by recycling waste.

- The design of the new waste facility will create satisfactory operational and amenity outcomes for the surrounding community.

- The project site is predominantly surrounded by other industrial developments. It has safe and adequate access to major transport routes and is suitable for the Project.

- The Project will support future industrial development in the Gunnedah region, without significant adverse environmental impacts.

- The Project will be privately funded and will generate a construction and operational jobs over the life of the project, as detailed elsewhere in this EIS. The economic impacts of the proposal will be positive. In this regard the operation of the proposed waste facility will provide for ongoing direct employment of up to 30 full time staff at any one time, as well as indirect employment for contractors, haulage operators and the like, and economic benefits in the form of capital expenditure and wages. During the construction phase it is estimated that 62 people will be employed to build the waste facility at a cost of more than $3.9 million. Additionally, the Project would also have economic benefits via the provision of ongoing direct and indirect employment opportunities in related industries.

The Project will not unduly or unreasonably interfere with neighbourhood amenity generally. It will be will be compatible with adjacent industrial land uses. Monitoring and mitigation measures are prescribed and implemented to ensure ongoing compatibility.

4.3.4 Section 4.15(1)(c): Suitability of the Site for Development

The suitability of any site for development is a key consideration in the assessment of any application under s.4.15(1)(c) of the EP&A Act per *Lippmann Partnership Pty Ltd v Canterbury – Bankstown Council* [2017] NSWLEC 1601 at [42].

The site is well suited to accomodate the proposed waste facility having regard for the following factors:

- The project site forms part of land that has been specifically developed to accommodate industrial uses such as the Project.
- Related to the above point, the project site is within an existing industrial area surrounded by other compatible developments and land uses. Moreover, it is adequately separated from sensitive receivers to enable potentially adverse environmental impacts (ie air and noise) to be adequately managed and/or mitigated.
- The project site has no significant constraints development generally, and can be developed for the purposes of the proposed waste facility.
- It is readily accessible to major transport links, including the Oxley Highway.
- It has sufficient area to allow external manoeuvring of vehicles and also the handling, storage and processing of waste materials within enclosed buildings.
- The proposed disturbance area has been previously disturbed and cleared by other industrial uses and/or work associated with construction of the Allgayer Drive industrial estate, which will ensure that the physical impacts of the proposed development (ie on biodiversity and heritage) would be minimal.

4.3.5 Section 4.15(1)(d): Any Submissions Made

This application will be subject to notification for submissions. Any issues raised in those submissions will be duly considered prior to any final determination of the application.

4.3.6 Section 4.15(1)(e): The Public interest

Overall, this EIS concludes that the proposed waste facility is in the public interest and is not predicted to cause significant environmental impacts or pose significant environmental risks.

The development of the project site for the purposes of a waste facility is consistent with the objects of the *Environmental Planning and Assessment Act 1979* in that it is for a use that can be undertaken in a manner which is economically and environmentally sustainable and which would promote the economic welfare of the local (Gunnedah) and broader community.

Furthermore, the proposed waste facility would facilitate the orderly and economic use and development of land specifically zoned for industrial purposes, being compliant with relevant planning and environmental legislation and meeting many key environmental and operational requirements. In regard to the latter, potential adverse environmental impacts associated with the proposed development are able to be appropriately addressed.

Moreover, it maximises opportunities for resource recovery, in line with NSW waste avoidance and resource recovery goals.

In conclusion, the public interest would best be served by the approval of the proposed waste facility having regard to the measures proposed to mitigate potential impacts and the benefits associated with the implementation of the proposal.

5.Consultation

5.1 Overview

The SEARS issued by the Department of Planning Industry and Environment requires that: "*During the preparation of the EIS, you must consult the relevant local, State and Commonwealth government authorities, service providers and community groups, and address any issues they may raise in the EIS.*" The SEARS then nominates those parties that need to be consulted.

The project site is located on the western outskirts of the Gunnedah township. Industrial uses predominate in the near vicinity of the project site, including but not limited to the following:

- Buildings used for industrial and allied uses in the Allgayer Drive industrial estate comprising GB Autos, CJC Drilling, ASC Equip, Pirtek and Expressway Spares.
- Other industrial buildings on Quia Road, to the east.
- The land owned by Whitehaven Coal, abutting the western boundary of the project site. Further up Torrens Road is a large coal handling facility, operated by Whitehaven Coal.
- The railway line running parallel with Torrens Road, the Werris Creek-Mungundi Railway. This rail line is used extensively by Whitehaven Coal to ship coal won from the Gunnedah basin back to port coal loading facilities at Newcastle.
- An extensive area of zoned industrial land lies to the south of Torrens Road and the rail line comprising the former abattoir. This land was approved for an extensive 27MW solar farm in 2016.

The above uses define the existing and likely future character of the neighbourhood. Moreover, the project site is well-removed from residential zoned areas, with a limited number of rural residences only in the general vicinity.Refer **Figure 5.1**.

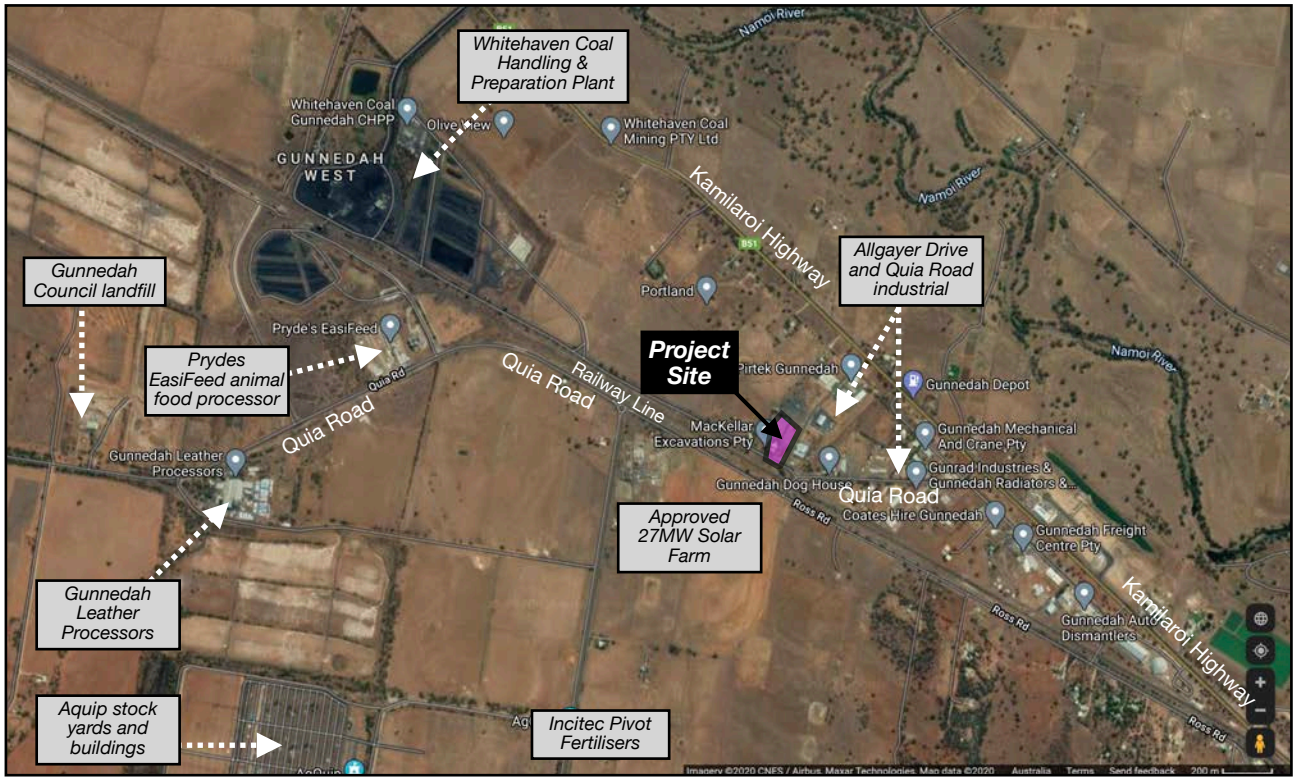


FIGURE 5.1: The Project Site is located on the western outskirts of Gunnedah in a locality dominated by industrial uses
(Source: Google Maps)

The above land use pattern has informed the nature and extent of the consultation program undertaken for this project, which has limited itself to the general locality only, approximating a 500m radius of the project site- refer to accompanying **Figure 5.2**- as well as the Aboriginal community, Gunnedah Shire Council and government agencies.

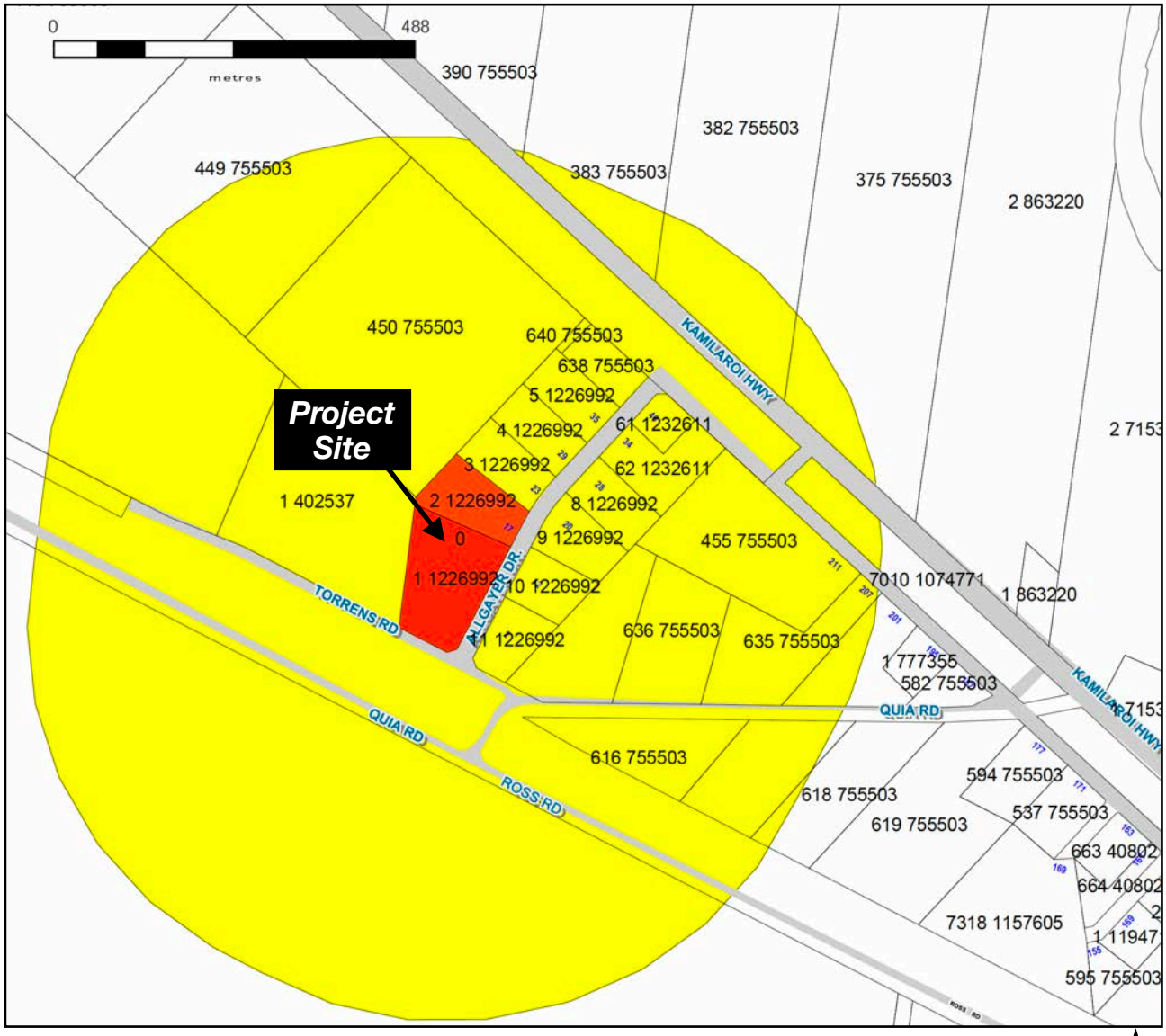


FIGURE 5.2: Extent of hand-delivered mail-out of project Fact Sheet to the local area- coloured yellow

(Source: Base mapping provided by Gunnedah Shire Council)

The project team, including Mackellar Equipment Hire Pty Ltd, has carried out consultation with the following stakeholders:

- Environment Protection Authority.
- NSW Roads and Maritime Services (RMS).
- NSW Fire and Rescue was consulted. [NOTE: The project site is located within a zoned urban area. Moreover, the site is not mapped as being bushfire prone land on the NSW Rural Fire Service (RFS) website. Fire and Rescue NSW, an agency of the Government of New South Wales, Australia, is responsible for firefighting, rescue and hazmat services in the major cities, metropolitan areas and towns across New South Wales. This agency was consulted rather than the NSW Rural Fire Service, which administers fires in rural areas of NSW only.]

- Red Chief Local Aboriginal Land Council.
- Gunnedah ShireCouncil.
- Neighbouring landowners and occupiers likely to be impacted by the proposal were sent a Facts Sheet with contact details, with Whitehaven Coal and other nearest neighbours contacted directly by telephone.

Refer also to **Appendix I** for further details.

Details of the consultation carried out by the project team are set out in the following sub section. It describes the consultation process and the issues raised, and identifies where the design of the proposed waste facility has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation is provided.

5.2 Agency, Landowner Consultation

The following table outlines the parties that are to be consulted and whose responsibility it will be to consult with each party. The consultation exercise has not only extended to those agencies and groups as set out in the SEARs.

Table 5.1: Consultation process and outcomes

Government agency or party consulted	***Consultation and outcomes***
Gunnedah Shire Council	*A summary of the proposal was sent to Gunnedah Shire Council and meeting held on 13 August 2019 with Council officers and the proponent where the project was discussed and issues raised. Council subsequently provided input into the preparation of the EIS through a late SEARS submission, in advice dated 30 September 2019. Subsequent meetings were held with Council officers and the proponent on 7 November 2019 and 26 June 2020 to discuss the project further. There has been further email and telephone communications between the parties since the meetings indicated above.This EIS addresses all issues raised by Council in their SEARS submission dated 5 August 2020.*
Roads & Maritime Services (RMS)	*This EIS has been prepared in accordance with RMS comments included with the SEARs. Traffic consultants Traffix have consulted with RMS- refer* ***Appendix I****. This EIS addresses all issues raised by the RMS in their submission dated 18 September 2019 accompanying the issued SEARS.*
NSW Fire and Rescue	*This EIS has been prepared in accordance with NSW Fire and Rescue comments included with the SEARs. The SEARS referred to the need for consistency with the Fire Safety in Waste Facilities guideline, however, the SERS incorrectly attributed the guideline to the NSW Rural Fire Service rather than to NSW Fire and Rescue. Telephone contact was subsequently made with the author of the guideline, Mr Damon Chamberlain NSW Fire and Rescue, on 17 February 2020 to clarify a number of design issues relating to the proposed waste facility in terms of compliance with the guideline.*
Red Chief Local Aboriginal Land Council	*The Red Chief Local Aboriginal land Council was involved with the ACHARs assessment undertaken of the site in July 2020.*
Neighbouring owners and occupiers of land	*No responses to the Fact Sheet, hand delivered to properties within the near vicinity of the project site (refer* ***Figure 5.2****) on 13 August 2020.* Whitehaven Coal and other nearest neighbours have been contacted directly by telephone. Whitehaven Coal have previously indicated their non-objection to the project, however, they have since referred the proponent to the Department of Education, who run a school farm on the Whitehaven Coal site. A response is yet to be obtained from the Department. Letters of non-objection have been received from the occupiers of the two nearest rural dwellings.
EPA	*This EIS has been prepared in accordance with EPA comments included with the SEARs. The client has liaised with the Armidale office of the EPA.*
Other government agencies	*This EIS has been prepared in accordance with SEARS comments received from EPA.*

5.3 Commentary

The SEARS seeks details of the following, summarised in Table 5.2.

Table 5.2: Engagement

Consultation item	***Commentary, follow up***
A report on the results of the implementation of the strategy including issues raised by the community and surrounding occupiers and landowners that may be impacted by the proposal	*No objections received to date. A response is yet to be obtained from the Department of Education regarding the running of a school-based farm on the land adjoining the project site, owned by Whitehaven Coal. It is considered most unlikely that the project will adversely impact on this school-related farm use.*
Details of how issues raised during community and stakeholder consultation have been addressed and whether they have resulted in changes to the proposal	*No issues identified to date.*
Details of the proposed approach to future community and stakeholder engagement based on the results of the consultation	*The consultation process is ongoing.* *This EIS for the proposed waste facility will be placed on public exhibition. The proponent, Mackellar Equipment Hire Pty Ltd, will respond to any submissions made during this public exhibition process regarding the proposal. This may also highlight the need to consult with any individuals or groups with a particular interest in the proposal. Ongoing consultation is planned with the following:* ▸ *Gunnedah Shire Council: regarding this EIS, development approval and subsequent consents or modifications of the consent.* ▸ *EPA regarding any General Terms of Approval and the EPL to apply to any approved waste facility.* ▸ *Government agencies who may have commented on the EIS.* ▸ *One-on-one consultation with adjoining landowners or neighbours.*

6.Risk Assessment

6.1 SEARS Requirements & Risk Assessment Overview

In terms of risk assessment, the Secretary's Environmental Assessment Requirements (SEARS) requires a preliminary risk screening- refer to Section 2.3.3 of this EIS. This assessment finds that the proposed waste facility will not result in unacceptable levels of pollution that will impact the amenity of the area, and is not a potentially offensive or hazardous industry.

The likely air, noise and vibration impacts associated with the project are assessed by Vipac- refer **Appendices E** and **F**. The treatment of the various types of wastes to be handled on the project site is considered in detail in Section 3 of the EIS. Stormwater and leachate controls are also considered in section 3 of the EIS and **Appendix C**. The potential for site contamination has been addressed in the on site contamination investigations by East West- refer Section 2.3.5 of this EIS and **Appendix L**. The potential for the project to impact on Koalas is addressed in Section 2.3.4 of this EIS and in **Appendix H**. The potential for any impacts on groundwater are addressed in detail in **Appendix C** of the EIS.

A summary of mitigation measures and commitments is contained in Section 4.2 of the EIS, with likely impacts considered in Section 4.3 of the EIS.

The risks associated with the issues raised in the SEARS is considered having regard for the nature of the proposed waste facility, the mitigation strategies that form a part of the Project, and certainty regarding likely impacts arising[14].

The mitigation measures proposed for the Project are considered to be practical, feasible and reasonable from a planning, environmental, cost and design perspective. The mitigation strategies form an important part of this proposed waste facility[15]. The mitigation measures proposed are in response to the risks identified and significance. It is important to note that the precautionary principle need not be applied to try to avoid all risks. As such, a zero risk precautionary standard is inappropriate. Instead, precautionary measures should be taken to avert the anticipated threat of environmental damage, but they should be proportionate[16].

Taken together, the management and mitigation features of the proposed waste facility are anticipated reduce the risk of unacceptable environmental impacts arising. The following Table 6.1 summarises the various mitigation measures proposed. These measures have been derived for the previous sections of this EIS- in particular from Section 3- as well as those detailed in the appended consultant reports accompanying this EIS.

6.2 Risk Identification

Risk identification involves the identification of risk sources, events, their causes and their potential consequences. Risk is the chance of something happening that would have an impact on the environment or operation of the Project. It is measured in terms of consequence (C) and likelihood (L), as set out in the following Tables 6.1 and 6.2..

FOOTNOTE 14: per Weal v Bathurst City Council & Anor [2000] NSWCA 88.

FOOTNOTE 15:Per Pepper J in Friends of Tumblebee Incorporated v ATB Morton Pty Limited (No 2) [2016] NSWLEC 66 (11 March 2016) at [78] referring to the established case law on this issue in Newcastle & Hunter Valley Speleological Society Inc v Upper Hunter Shire Council and Stoneco Pty Limited [2010] NSWLEC 48:

> *"78. Fourth, the description of the development the subject of a development application is not restricted to the nature, extent and other features of the development, but can also include measures that ameliorate or mitigate, prevent, remedy or offset the impacts of the development (Newcastle & Hunter Valley Speleological Society at [82]).…"*

FOOTNOTE 16: Per Preston J in the NSW Land & Environment Court case Telstra Corporation Ltd v Hornsby Shire Council [2006] NSWLEC 33.

Table 6.1: Qualitative Consequence Rating (C)

Level	Consequence Descriptor	Description
1	*Insignificant*	*Negligible and temporary detrimental impact on the environment* *Affects an isolated area* *No remediation costs* *Reportable to internal management only* *No operational constraints posed* *No injuries or health impacts*
2	*Minor*	*Minor detrimental impact on the environment* *Affects a small area* *Minimal remediation costs* *Reportable to internal management only* *No operational constraints posed* *Minor injuries which would require basic first aid treatment*
3	*Moderate*	*Substantial temporary or minor long-term detrimental impact on the environment* *Moderately large area of impact* *Moderate remediation cost* *Reportable to government agencies* *Further action may be requested by government agency* *Injuries requiring medical treatment*
4	Major	*Extensive and/or permanent detrimental impacts on the environment* *Large area of impact* *Very large remediation costs* *Reportable to government agencies* *Possible prosecution and fine* *Serious injuries requiring medical treatment*
5	*Catastrophic*	*Massive and permanent detrimental impacts on the environment* *Very large area of impact* *Massive remediation costs* *Reportable to government agencies* *Large fines and prosecution resulting in potential closure of operation* *Severe injuries or death*

(Source: modified after Standards Australia HB 203-2006 and HB 89-2013)

The likelihood of an environmental impact occurring was then rated according to the following. In risk management terminology, the word 'likelihood' is used to refer to the chance of something happening.

Table 6.2: Qualitative Risk Likelihood Rating (L)

Level	Likelihood Descriptor	Description
A	*Almost certain*	*Is expected to occur in most circumstances*
B	*Likely*	*Will probably occur in most circumstances*
C	*Possible*	*Could occur*
D	Unlikely	*Could occur but not expected*
E	*Rare*	*Would occur but only in exceptional circumstances*

(Source: modified after Standards Australia HB 203-2006 Table 4(A) and HB 89-2013)

Based on the above, a risk rating matrix is developed, as set out in the accompanying Table 6.3.

Table 6.3: Risk Rating Matrix

Risk Matrix Evaluation Table								
Risk Ratings A – Very High B – High C – Medium D – Low			**Consequence**					
			Insignificant	Minor	Moderate	Major	Severe	Catastrophic
			C6	C5	C4	C3	C2	C1
Likelihood	Almost Certain	L1	C	B	B	A	A	A
	Very Likely	L2	C	C	B	B	A	A
	Likely	L3	D	C	C	B	B	A
	Unlikely	L4	D	D	C	C	B	B
	Very Unlikely	L5	D	D	D	C	C	B
	Almost Unprecedented	L6	D	D	D	D	C	C

For ease of reference, risks arising from the construction stages of the proposed waste facility have been dealt with separately to risks associated with the operation of the proposed waste facility. These risks are assessed in the following sub sections. The principal mitigation measures, proposed to be employed to mitigate those potential risks, are also identified.

▪ 6.3 Risk Assessment

Environmental risks and impacts of the proposed development for the project are summarised in the accompanying Table 6.4. It generally follows the numbering system employed in the Planning Secretary's SEARS advice.

The risks have been assessed having regard for the mitigation measures proposed.

A development specific Environmental Management Plan (EMP) will be prepared prior to any construction works commencing on the project site. Through the implementation of the various proposed construction management and mitigation measures a residual (ie. mitigated) risk rating for the project has been derived. In most cases the potential environmental impacts have been reduced significantly, and in all cases to an acceptable level.

The Risk Level for each activity, relevant to construction activities, listed in the Planning Secretary's SEARS advice is then rated as Low (D), Medium (C), High (B) or Very High (A), measured against Likelihood (L) and Consequence (C) in accordance with Table 6.3 above.

Table 6.4: Project Risk Analysis (with mitigation measures in place)

Environmental Issue in SEARS	Predicted impacts of the proposed waste facility with mitigation measures in place	C	L	Risk Level
Strategic and statutory context	*The Project has a Low risk in this regard as the site is zoned for industrial use, with expectations that that industry would be established on the project site, with resultant impacts. Moreover,* ▸ *The Construction Certificate and EPL, once issued, will contain various mitigation and management measures necessary to ensure that the proposed waste facility is constructed and operated in accordance with relevant statutory provisions.* ▸ *There will be no sterilisation of other adjacent land uses arising from the proposal.* ▸ *The Project complies with relevant local council and State Government guidelines/DCP.*	*C6*	*L3*	*LOW (D)*
Waste management	*The Project has a Low/Medium risk in this regard as the site will be accepting limited quantities of hazardous waste. Protocols and management/design measures are outlined in this EIS to mitigate any potential impacts, including:* ▸ *Measures will be implemented to prevent the site accepting materials that could contaminate the site. Inspection of waste loads and protocols for acceptance/rejection of waste loads. Any other hazardous or restricted waste, will be rejected and diverted to the appropriate waste facility.* ▸ *Storage of any restricted waste in a separate facility.* ▸ *All waste is to be sorted, treated and recycled with unwanted waste disposed of to a licensed landfill.* ▸ *Processing of waste to occur in the enclosed processing shed, to minimise dust and noise and reduce the potential for wastewater runoff.* ▸ *Most waste to be accepted has a very low hazard or fire risk.* ▸ *The unloading, sorting and recycling of waste will occur within covered sheds.* ▸ *Covering of loads.*	*C4*	*L3*	*LOW/ MEDIUM (C-D)*
Hazards and risks, including fire management	*The Project has a Low/Medium risk having regard for the following:* ▸ *Acceptable storage of any hazardous materials on site.* ▸ *Storage of any asbestos waste and lithium batteries in a separate facility.* ▸ *Waste to be managed in accordance with Fire and Rescue NSW Fire safety in waste facilities guideline. [NOTE: The facility is not expected to be handling any significant volume of combustible waste- refer Section 3.1 for details].* ▸ *Existing hazards and risks on site are managed through the existing Mackellar Group management system which includes workplace health and safety management, and pollution incident response and emergency management.* ▸ *The project site is not classified as being bushfire prone land.*	*C4-C5*	*L3-L4*	*LOW/ MEDIUM (C-D)*

Air quality	*The Project has a Low/Medium risk having regard for the following:* ► *Almost all of the site is sealed/hardstand area.* ► *Minor dust generated during construction.* ► *Operational dust impacts are predicted to be low given that all screening and sorting activities will occur in enclosed sheds in concert with other dust suppression measures.*	*C5-C4*	*L3-L4*	*LOW/ MEDIUM (C-D)*
Environmental Issue in SEARS	***Predicted impacts of the proposed waste facility with mitigation measures in place cont.***	***C***	***L***	***Risk Level cont.***
Noise	*The Project has a Medium risk having regard for the following:* ► *Acceptable traffic noise impacts.* ► *Acceptable noise generated during construction.* ► *Operational noise impacts are predicted to be acceptable with the exception when the crusher is to be used -on a campaign basis only.* ► *All screening, sorting and processing activities will occur in enclosed sheds to minimise noise generated.* ► *Operational hours to be strictly controlled ie. 7.00am to 5.00pm Monday to Saturday. No work to be carried out on Sundays or public holidays.* ► *Noise levels are predicted to be below applicable amenity criteria at nearest sensitive receptors.* ► *The waste facility is to be established in a zoned General Industrial area, surrounded by other industrial uses, and set back reasonably from residential uses and residential zoned areas.* ► *The noise generated by the waste facility similar to that generated by other industrial uses.*	*C3-C4*	*L2*	*MEDIUM (C)*
Soil and water	*The Project has a Low/Medium risk having regard for the following:* ► *Almost all of the site is sealed/hardstand area.* ► *Surface water controls are to be used to prevent the uncontrolled release of waters from the project site.* ► *Use of surface water management, as well as sediment and erosion controls.* ► *Discharges of polluted water offsite are not predicted.* ► *The waste facility will not impact flood behaviour.* ► *The waste facility will not take any groundwater.* ► *Any spills are to be contained on site.*	*C6-C5*	*L3-L4*	*LOW/ MEDIUM (C-D)*
Traffic and transport	*The Project has a Low/Medium risk having regard for the following:* ► *Vehicles associated with the facility will not significantly increase traffic volumes and level of service on the local or regional road network.* ► *Low truck speeds employed on site.* ► *Loading and unloading of waste transport vehicles to be wholly conducted within the boundaries of the site. No vehicle queuing on local roads.* ► *Adequate car parking provided on site.*	*C5*	*L3-L4*	*LOW/ MEDIUM (C-D)*
Biodiversity	*Limited impacts. No impacts on koala habitat. The waste facility will not affect any groundwater dependent ecosystems. Extensive trees stands are already well established on the site. Minimal clearing.*	*C6-C5*	*L5*	*LOW (D)*

Visual	*Extensive works involved over Lot 2, and to a lesser extent Lot 1. Buildings will be to an industrial scale and type, with most existing landscaping retained on the site. Further boundary plantings proposed.*	*C6-C5*	*L3*	*LOW/ MEDIUM (C-D)*
Heritage	*Minimal excavation works proposed. Minimal potential for disturbing any archaeological site not already disturbed by past land use.*	*C6-C5*	*L5*	*LOW (D)*

7.Conclusions

MacKellar Equipment Hire Pty Ltd, the proponent, is proposing to develop an existing industrial site in Gunnedah, within the LGA of Gunnedah, as a waste facility ("the Project") on land comprising part Lots 1 and 2 in Deposited Plan 1226992 on industrial zoned land at No.16 Torrens Road and No.17-21 Allgayer Drive, Gunnedah, in the Gunnedah LGA (the Project Site).

The Project involves the construction of a resource recovery and waste transfer facility that would handle up to 250,000 tonnes per annum of waste for separating and sorting, processing or treating, temporary storage, or transfer or sale of recovered resources. The layout and design of the development would enable it to meet the EPA's *Minimum Standards for Managing Construction and Demolition Waste in NSW.*

As outlined in Section 1 of the EIS, the proposed development is integrated development as it requires approval from the NSW EPA in accordance with s 4.46 of the *Environmental Planning and Assessment Act 1979*.

Once development consent is obtained, MacKellar Equipment Hire Pty Ltd will be required to hold an Environment Protection Licence (EPL) pursuant to Schedule 1 of the *Protection of the Environment Operations Act, 1997*. Monitoring requirements and criteria would be established by the EPA through the EPL process for both the construction and operational phases of the proposed waste facility.

The Project Site is located within an industrially zoned precinct of Gunnedah, with access to roads that can accommodate the truck traffic likely to be generated by the proposed development. The proposed development is consistent with the existing land use, the adjacent industrial land uses and potential future land uses.

The Project is not only consistent with land use zoning within the area but also enables the future facilitation of further industrial growth, investment and employment opportunities in Gunnedah. In this regard the Project has a Capital Investment Value of $3.9 million and will employ up to 62 people during construction and up to 30 full-time staff.

The potential environmental impacts of the proposed waste facility have been identified and various mitigation measures have been devised to minimise these impacts.Section 3 and 4.2 of the EIS provide details of the various mitigation measures that would be employed during construction and operation of the Project to minimise hazards, impacts and risks generally. Impacts on sensitive receptors have been assessed as part of the EIS, including noise, air and visual amenity. Potential impacts relating to noise, air and visual amenity have been identified and assessed in Section 4.3 of the EIS. Noise levels from the main waste facility operational scenario (typical case) are predicted to comply with the daytime noise criteria at all receptors. Acceptable traffic noise impacts are predicted. However, the periodic use of a crusher on the site, expected to occur approximately once per month, for 1 to 2 days operation only, will result in some noise exceedances to nearest residences only whilst the crusher is working. The crusher will be used inside the processing shed and additional noise management strategies are recommended during these times. With the implementation of the mitigation measures committed to in Section 6 of the EIS, impacts on residents, taken as a whole, should be acceptable. Relating to the latter, it is noteworthy that the predicted noise from the crusher will be compliant with the amenity noise criteria.

The EIS has fully considered all relevant matters under section 4.15 of the EP&A Act, the objects of the EP&A Act and the principles of ecologically sustainable development.

Moreover, it has satisfied all relevant jurisdictional prerequisites that must be satisfied before a consent can be issued.

It is concluded that the impacts of the proposed waste facility development can be mitigated and/or managed to ensure an acceptable level of environmental performance, subject to the recommended mitigation measures as contained in this EIS and the various experts report. Consequently, it is considered that the proposed waste facility development is in the public interest and is recommended for approval, subject to suitable conditions of consent.

8. Glossary of Terms

Term	Meaning
AADT	*Annual Average Daily Traffic.*
ABS	*Australian Bureau of Statistics.*
Aboriginal object, place	*Has the same meaning as the definition of the term in section 5 of the National Parks and Wildlife Act 1974.*
ACM	*Asbestos containing material.*
Acoustic	*Relating to hearing, noise and sound.*
AHD	*Australian Height Datum. The standard reference level used to express the relative elevation of various features. A height given in metres, AHD is essentially the height above sea level.*
Ambient noise	*This is the total encompassing sound in a given situation at a given time where no particular sound is dominant. It is composed of sound from all sources near and far, normally experienced in the area. Ambient noise is measured as dB ('A' weighted) over a set period of time.*
Amenity	*The quality of a local environment.*
Asbestos waste	*Means any waste containing asbestos.*
AS	*Australian Standard.*
ASS	*Acid sulfate soils.*
Attenuation	*Reduction in sound level between a noise source and another location.*
A-Weighted Sound Level dB(A)	*A level of sound pressure in which the sound pressure levels of the various frequency bands have been weighted to accord roughly with human aural system frequency sensitivity.*
BCA	*Building Code of Australia.*
Blue Book	*Means Managing Urban Stormwater: Soils & Construction (4th edition, Landcom, 2004), commonly referred to as the "Blue Book".*
Biodiversity	*Biological variety at genetic, species and ecosystem scales. The maintenance of biodiversity, at all levels, is acknowledged internationally as a high conservation priority.*
BoM	*Bureau of Meteorology (Commonwealth).*
Building Code of Australia	*Means means the document, published by or on behalf of the Australian Building Codes Board, that is prescribed for purposes of this definition by the regulations, together with—* *(a) such amendments made by the Board, and* *(b) such variations approved by the Board in relation to New South Wales,* *as are prescribed by the regulations*
CC	*Construction certificate.A Construction Certificate (CC) is a certificate that is issued by an accredited private certifier or a consent authority under the provisions of Environmental Planning and Assessment Act 1979. The Certificate allows for building work to commence on a project.*
C & I Waste	*Commercial and industrial waste.*

C & D Waste	*Construction and demolition waste, but does not include excavated soil.*
Catchment	*Drainage area of a river, creek. Can also refer to a visual catchment, which is the area within view of a particular viewing location, or road catchment, which is the area reliant on a particular road in order to gain access to another centre or locality.*
CIV	*Capital investment value as defined by the Environmental Planning & Assessment Regulation 2000 and the Planning and Infrastructure Planning Circular PS 10-008. Includes all costs necessary to establish and operate the project, with some exclusions.*
CMP	*Construction Management Plan.*
Consent	*Means development consent issued under the Environmental Planning and Assessment Act 1979.*
Contributions Plan	*Section 7.11 of the Environmental Planning and Assessment Act 1979 allows councils to levy contributions towards the cost of providing local infrastructure. Contributions plans set out the local infrastructure required to meet the demand from new development, and the contributions a council can levy on developers to fund the necessary land and works.*
Construction	*All physical works to enable operation, including but not limited to the demolition and removal of buildings, the carrying out of works for the purposes of the development, including bulk earthworks, and erection of buildings and other infrastructure permitted by this consent, but excluding the following:* *•building and road dilapidation surveys;* *•investigative drilling, investigative excavation or Archaeological Salvage;* *•establishing temporary site offices (in locations identified by the conditions of this consent);* *•installation of environmental impact mitigation measures, fencing, enabling works; and minor adjustments to services or utilities.*
Contamination	*Materials and within a recycling process that are not readily recycled by that process.*
Contour Drain	*Drainage channel constructed approximately along the contour, and which is designed to slow down and direct the flow of water across a disturbed area to a sediment trap for sediment removal.*
Council	*Gunnedah Council.*
CT1 Threshold	*The EPA guideline's CT1 thresholds identify the requirements for 'general solid waste' and measure contaminants in the order of milligram per kilogram of material and are commonly referred to in EPLs to aid in the definition of the waste type. Given the need to be able to accept excavated materials at the facility, CT1 thresholds are a reasonable standard for defining the waste type.*
DA	*Development Application.A Development Application (DA) is required for various types of development projects under the provisions of NSW Environmental Planning and Assessment Act 1979. It means an application for consent under Part 4 to carry out development but does not include an application for a complying development certificate.Sometimes also referred to as Development Approval.*
dB(A)	*To approximate the human response to sound, noise level meters have weighting networks which correspond approximately with subjective loudness. The 'A- Weighting' is used to simulate human hearing.*
DBYD	*Dial Before You Dig.*
DCP	*Development Control Plan. A development control plan provides detailed planning and design guidelines to support the planning controls in an environmental planning instrument.*

Demolition	*The demolition of a building or work includes enclosing a public place in connection with the demolition of a building or work.*
Department	*NSW Department of Planning Industry and Environment.*
Designated development	*Means development that is declared to be designated development by an environmental planning instrument or the regulations. All applications for designated development in NSW need to be accompanied by an EIS. SSD applications are not designated development.*
Development	*The development described in the development application. For the purposes of the NSW Environmental Planning and Assessment Act 1979, "development" is any of the following: "(a) the use of land,(b) the subdivision of land, (c) the erection of a building, (d) the carrying out of a work,(e) the demolition of a building or work,(f) any other act, matter or thing that may be controlled by an environmental planning instrument." (2) However, development does not include any act, matter or thing excluded by the regulations (either generally for the purposes of this Act or only for the purposes of specified provisions of this Act). (3) For the purposes of this Act, the carrying out of development is the doing of the acts, matters or things referred to in subsection (1). (sub clauses 1.5(1)(2) and (3) of the NSW Environmental Planning and Assessment Act 1979).*
Development Consent	*Means consent under the provisions of NSW Environmental Planning and Assessment Act 1979 to carry out development and includes, unless expressly excluded, a complying development certificate.*
Demolition	*Demolition is the tearing down of buildings and other man-made structures. The demolition of a building or work may be carried out only with development consent. It includes enclosing a public place in connection with the demolition of a building or work. NOTE: Demolition work must comply with Australian Standard AS 2601-2001 The demolition of structures (Standards Australia, 2001).*
Deposited Plan (DP)	*Deposited Plans (DP) define legal boundaries of land and often record subdivisions, easements and the like.*
Drainage Line	*A natural depression with no stream bed channel, which may only carry surface water during rainfall events.*
Earthworks	*Bulk earthworks, site levelling, import and compaction of fill material, excavation for installation of drainage and services, to prepare the site for construction.*
EEC	*Endangered Ecological Community.*
Ecologically Sustainable Development (ESD)	*Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It has the same meaning it has in s.6(2) of the Protection of the Environment Administration Act 1991 - as also defined in clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000. Ecologically sustainable development can be achieved through the implementation of the following principles and programs including: the precautionary principle; inter-generational equity; conservation of biological diversity and ecological integrity; improved valuation, and pricing and incentive mechanisms.*
EIS	*Environmental Impact Statement submitted with the application for consent for the development.*
Emission	*The release of material into the environment (eg dust).*
ENM	*Excavated Natural Material.*
Environment	*Includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings.*

Environmental planning instrument (EPI)	*An environmental planning instrument is the collective name for local environmental plans (LEPs) and state environmental planning policies (SEPPs) but does not include development control plans (DCPs). The provisions of EPIs are legally binding on both government and developers.*
Environment Protection License (EPL)	*Has the same meaning as the definition of the term in the Dictionary to the POEO Act, namely:* *"a licence authorising the carrying out of scheduled development work or scheduled activities or controlling the pollution of water arising from non-scheduled activities, being a licence issued under Chapter 3 and in force."*
EP&A Act	*NSW Environmental Planning and Assessment Act 1979.*
EP&A Regulation ("regulation")	*NSW Environmental Planning and Assessment Regulation 2000.*
EPA	*NSW Environment Protection Authority constituted by the Protection of the Environment Administration Act 1991.*
EPL	*Environment Protection Licence.*
Erosion	*The process of wearing away of the land surface (whether natural or artificial) by the action of water, wind.*
ESCP	*Erosion and sediment control plan.*
Equivalent Standard Axles ("ESA")	*Equivalent Standard Axle (ESA) is a method of standardising various axle configurations and loads and their effects on road pavements. ESAs are assessed by calculating the ratio of a load on an axle or axle group divided by a reference load and then raising the ratio to the fourth power.*
Flora and fauna	*Plants and animals.*
General solid waste (non-putrescible)	*Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997. Includes but not limited to ceramics, bricks, concrete or metal, virgin excavated natural material, cured concrete waste from a batch plant, asphalt waste, and building and demolition waste.*
ha	*hectare.*
Integrated Development	*Development which requires development consent and one or more of the approvals listed in Section 4.46 of the Environmental Planning and Assessment Act 1979.*
Habitat	*The place where an organism normally lives; habitats can be described by their floristic and physical characteristics.*
Heritage item	*An item as defined under the Heritage Act 1977, and assessed as being of local, State and/ or National heritage significance, and/or an Aboriginal Object or Aboriginal Place as defined.*
ie.	*Namely.*
Integrated development	*Development (not being State significant development or complying development) that, in order for it to be carried out, requires development consent and one or more approvals from the government agencies listed in s.4.46 of the NSW Environmental Planning and Assessment Act 1979.*
Incident	*An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance with an issued consent.*
km	*Kilometre.*

Land	*Has the same meaning as the definition of the term in section 1.4 of the EP&A Act.*
Landfill	*A facility used for disposal of waste to land.*
Land Use Table	*A table in an EPI listing the objectives of a zone, along with uses permitted and prohibited under any zoning.*
Landscaped area	*Means a part of a site used for growing plants, grasses and trees, but does not include any building, structure or hard paved area.*
L_{Aeq}(time)	*Equivalent sound pressure level: the steady sound level that, over a specified period of time, would produce the same energy equivalence as the fluctuating sound level actually occurring.*
L_{A90}(time)	*The A-weighted sound pressure level that is exceeded for 90 per cent of the time over which a given sound is measured. This is considered to represent the background noise e.g. LA90 (15 min).*
Leachate	*Liquid released by waste, or contaminated water that has percolated through or drained from waste, and containing dissolved or suspended material from the waste.*
LALC	*Local Aboriginal Land Council.*
Local Environmental Plan (LEP)	*Local Environmental Plans are planning documents prepared by a Council which detail the zoning of land and the type of development which is permitted with consent in a particular zone. Controls on development are also provided.*
Management Plan	*A plan which demonstrates how the management objectives for an environmental matter will be achieved. Also referred to as Environmental Management Plan.*
M	*Metres.*
m^2	*Square metres.*
Minister	*NSW Minister for Planning (or delegate).*
Mitigation	*Activities associated with reducing the impacts of the development prior to or during those impacts occurring.*
ML	*Megalitre: 1,000,000 litres.*
Modification	*A change to a project that is implemented by modifying an existing development consent. An application must be made under the EP&A Act before the modification can be approved.*
Monitoring	*The regular measurement of components of the environment to ensure that environmental guidelines standards are being met.*
NSW planning portal	*Means the website with the URL of www.planningportal.nsw.gov.au, or any other website, used by the Planning Secretary to provide public access to documents or other information in the NSW planning database.*
OEH	*(former) NSW Office of Environment & Heritage*
OSD	*On-site detention of runoff- typically stormwater.*
PIRMP	*Pollution Incident Response Management Plan.*
Planning Secretary/ Secretary	*Planning Secretary under the EP&A Act, or nominee.*

POEO Act	*Protection of the Environment Operations Act 1997.*
Prescribed zone	*For the purposes of clause 120 of State Environmental Planning Policy (Infrastructure) 2007 means any of the following land use zones or a land use zone that is equivalent to any of those zones:* *(a) RU1 Primary Production,* *(b) RU2 Rural Landscape,* *(c) IN1 General Industrial,* *(d) IN3 Heavy Industrial,* *(e) SP1 Special Activities,* *(f) SP2 Infrastructure.*
Project	*The development the subject of an application for consent or approval.*
Proponent	*The person or entity seeking consent or approval for a project, including any associated entities that have been engaged to assist with project delivery.*
Putrescible Waste	*Means means general solid waste (putrescible) within the meaning of clause 49 of Schedule 1 to the Protection of the Environment Operations Act 1997. Typically, this waste contains a significant proportion of material able to be decomposed by bacterial action.*
RL	*Reduced Level means height above the Australian Height Datum, being the datum surface approximating mean sea level that was adopted by the National Mapping Council of Australia in May 1971.*
Rehabilitation	*The preparation of a final landform after a project is completed and its stabilisation with grasses, trees and/or shrubs.*
River	*River has the meaning given under the Water Management Act 2002. In summary, this is "any watercourse, whether perennial or intermittent and whether comprising a natural channel or a natural channel artificially improved".*
RMS	*NSW Roads & Maritime Services.*
Road	*Means a public road or a private road within the meaning of the Roads Act 1993, and includes a classified road.*
RRF	*Resource recovery facility.*
Scenic quality/visual	*The values of visible components of landscape which contribute to its scenic characteristics.*
Scoping	*Scoping identifies the matters and impacts that are likely to be relevant and establishes terms of reference for the Environmental Impact Statement (EIS).*
Scoping Meeting	*A meeting held between the proponent and the Department to discuss the project concept and agree on the approach to engaging with the community and other stakeholders prior to finalising the Scoping Report, taking into account potential project impact and likely community and stakeholder interest.*
Sediment pond/ basin	*Collects waterborne sediment from disturbed areas within a development site and stores that water while suspended sediments fall out of solution (settle).*
SEE	*Statement of Environmental Effects, required for a development application (DA) lodged pursuant to the provisions of the (NSW) EP&A Act 1979.*
SEARS	*The Secretary's Environmental Assessment Requirements set out clear expectations on the level of assessment required for each relevant matter which must be addressed by the proponent in the EIS.*
Secretary/Planning Secretary	*The Secretary of the NSW Department of Planning Industry and Environment.*

State Significant Development (SSD)	*Development projects which have State significance due to their size, economic value or potential impacts assessed and approved under the EP&A Act.*
State Significant Project	*A State significant development or State significant infrastructure project as defined under the EP&A Act. Defined in State Environmental Planning Policy (State and Regional Development) 2011 requiring the consent of the Minister for Planning or delegate.*
Soil Landscape	*An area of land that has recognisable and describable topography and soils that are capable of being represented on maps and of being described by concise statements. The Soil Conservation Service of NSW has published a Soil Landscapes Series, describing the soils of NSW.*
Stakeholder	*Persons, groups, government and semi-government agencies, and non-government organisations with a legitimate interest in the process of assessment, its inputs and outcomes, as described in the Director General's Requirements.*
State Environmental Planning Policy (SEPP)	*A planning instrument made by the State. These Plans deal with planning issues of State significance.*
Scheduled Activity	*Has the same meaning as the definition of the term in the Dictionary to the POEO Act, namely: "means an activity listed in Schedule 1 [of the PIEO Act]." An Envioronment Protection License (EPL) is required for the operation of any schedule premises.*
The Site, or Project Site	*Refers to the land upon which the proposed development is to take place.*
Subdivision (of land)	*Means the division of land into two or more parts that, after the division, would be obviously adapted for separate occupation. Subdivision of land includes the procuring of the registration in the office of the NSW Registrar-General of a plan of subdivision.*
TfNSW	*Transport for New South Wales.*
Threatened species	*Species of flora and fauna that are listed as endangered species or vulnerable species.*
Use of land	*Includes a change of use of building use.*
Virgin Excavated Natural Material (VENM)	*Means means natural material (such as clay, gravel, sand, soil or rock fines): that has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial, mining or agricultural activities; or that does not contain sulfidic ores or soils, or any other waste, and includes excavated natural material that meets such criteria for virgin excavated natural material as may be approved from time to time by a notice published in the NSW Government Gazette.*
Visual Analysis	*Landscape analysis based on visual qualities only, excluding consideration of heritage, cultural or social values*
Visual Catchment	*Land within view-sheds. View-sheds are edges or limits to views from a single place or combination of viewpoints.*
vpd, vph	*Abbreviations of vehicles per day (vpd), vehicles per hour (vph).*
WARR Act/Strategy	*Waste Avoidance and Resource Recovery Act 2001. WARR Strategy refers to NSW Waste and Resource Recovery Strategy operative at the time.*

Waste	*Has the same meaning in Schedule 3 of the Environmental Planning and Assessment Regulation 2000 and the definition of the term in the Dictionary to the POEO Act, namely:* *"(a) any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment, or* *(b) any discarded, rejected, unwanted, surplus or abandoned substance, or* *(c) any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, processing, recovery or purification by a separate operation from that which produced the substance, or* *(d) any processed, recycled, re-used or recovered substance produced wholly or partly from waste that is applied to land, or used as fuel, but only in the circumstances prescribed by the regulations, or (e) any substance prescribed by the regulations to be waste.* *A substance is not precluded from being waste for the purposes of this Act merely because it is or may be processed, recycled, re-used or recovered."*
Waste type	*Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non -putrescible), special waste or hazardous waste.*
Waste tyres	*Means used, rejected or unwanted tyres, including casings, seconds, shredded tyres or tyre pieces.*
Waste or resource management facility	*Have the same meanings as in the Standard Instrument, namely:* *" waste or resource management facility means any of the following—* *(a) a resource recovery facility,* *(b) a waste disposal facility,* *(c) a waste or resource transfer station,* *(d) a building or place that is a combination of any of the things referred to in paragraphs (a)–(c)."*
Water Sensitive Urban Design (WSUD)	*Water-sensitive urban design (WSUD) is a and planning and engineering design approach which integrates the urban water cycle, including stormwater, groundwater and wastewater management and water supply, into urban design to minimise environmental degradation and improve aesthetic and recreational appeal.*
Watercourse	*Means any river, creek, stream or chain of ponds, whether artificially modified or not, in which water usually flows, either continuously or intermittently, in a defined bed or channel, but does not include a waterbody (artificial).*
Zoning, Zoning Map	*A planning tool used to apply planning policy and provisions of an environmental planning instrument to specific areas of land within a local or state government area.*

APPENDICES

Environmental Impact Statement

Proposed Waste Facility, Torrens Road & Allgayer Drive, Gunnedah, NSW

APPENDIX A

SEARS

APPENDIX B

Existing approved industrial estate Allgayer Drive + Development Consents and Deposited Plan

APPENDIX C

Engineering drawings and reports by Martens & Associates

APPENDIX D

Roads and traffic assessment by Streetwise

APPENDIX E

Air quality impact assessment by Vipac

APPENDIX F

Noise impact assessment report by Vipac

APPENDIX G

Site survey by Stewart Surveys

APPENDIX H

SEPP 44 report by Stewart Surveys + BDAR Exemption

APPENDIX I

Consultation documents

APPENDIX J

Soil Profile Information

APPENDIX K

Technical Specifications

APPENDIX L

Contamination Assessment by East West

APPENDIX M

ACHARS Assessment by Patrick Gaynor

APPENDIX N

CIV Report

Planning Secretary's Environmental Assessment Requirements

Section 4.12(8) of the *Environmental Planning and Assessment Act 1979* Schedule 2 of the Environmental Planning and Assessment Regulation 2000

Application Number	SSD-8530563
Project Name	Gunnedah Waste Facility
Development	Establish and operate a resource recovery facility and waste transfer station with capacity to receive up to 250,000 tonnes per annum (tpa) of waste, including excavated natural materials' contaminated soils, construction and demolition waste, commercial and industrial waste, asbestos and lithium batteries. Additionally, ancillary works include construction of internal roads, a weighbridge, storage bays and associated infrastructure.
Location	16 Torrens Road, Gunnedah (Lots 1 & 2 DP 1226992) within the Gunnedah Shire local government area.
Applicant	Mackellar Equipment Hire Pty Ltd
Date of Issue	07/08/2020
General Requirements	The Environmental Impact Statement (EIS) for the development must meet the form and content requirements in clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the Regulation). In addition, the EIS must include: · a detailed description of the development including: - existing operations carried out on the site and how the site operates lawfully under the Environmental Planning and Assessment Act 1979 (EP&A Act) including any reliance on existing use rights and/or planning approvals and how these will be consolidated - accurate history of the site, including development consents - need for the proposed development - justification for the proposed development - likely interactions between the development and existing, approved and proposed operations in the vicinity of the site - plans of proposed building works · demonstration that the site is suitable for the proposed use in accordance with State Environmental Planning Policy No 55 - Remediation of Land · consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments · consideration of issues discussed in Attachment 2 (public authority responses to key issues) · risk assessment of the potential environmental impacts of the development,

	identifying the key issues for further assessment · detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: - a description of the existing environment, using sufficient baseline data - an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes - a description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment · a consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS. The EIS must also be accompanied by a report from a qualified quantity surveyor providing: · a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Regulation) of the proposal, including details of all assumptions and components from which the CIV calculation is derived. The report shall be prepared on company letterhead and indicate applicable GST component of the CIV; · an estimate of jobs that will be created during the construction and operational phases of the proposed development; and · certification that the information provided is accurate at the date of preparation.
Key issues	· **Statutory and strategic context** - detailed justification for the proposal and the suitability of the site - detailed justification that the proposed land use (including the associated office space and residence) is permissible with consent - details of any proposed consolidation or subdivision of land - a detailed description of the history of the site - demonstration the proposal is consistent with the development standards applicable to the site, and justification for any contravention of these standards in accordance with clause 4.6 of the relevant local environment plan - demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, adopted precinct plans, draft district plan(s) and adopted management plans and justification for any

inconsistencies. This includes, but is not limited to:

- State Environmental Planning Policy No. 33 – Hazardous and Offensive
- Development
- State Environmental Planning Policy No. 55 – Remediation of Land
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy (State and Regional Development) 2011
- Gunnedah Shire Commercial and Industrial Land Use Strategy August 2008

· **Suitability of the site**

- details of all development consents and approved plans for the existing facility, including for all structures, plant and equipment
- a detailed justification that the site can accommodate the proposed resource recovery facility, having regard to the scope of the operations of the existing facility and its environmental impacts and relevant mitigation measures.

· **Community and Stakeholder Engagement**

- a detailed community and stakeholder participation strategy which identifies who in the community has been consulted and a justification for their selection, other stakeholders consulted and the form(s) of the consultation, including a justification for this approach
- a report on the results of the implementation of the strategy including issues raised by the community and surrounding occupiers and landowners that may be impacted by the proposal
- details of how issues raised during community and stakeholder consultation have been addressed and whether they have resulted in changes to the proposal
- details of the proposed approach to future community and stakeholder engagement based on the results of the consultation.

· **Waste Management**

- a description of the waste streams that would be accepted at the site including the maximum daily, weekly and annual throughputs and the maximum size and heights of individual stockpiles
- details of the source of the waste streams to justify the need for the proposed processing capacity
- a description of waste processing operations (including flow diagrams for each waste stream), including a description of the technology to be installed,

resource outputs, and the quality control measures that would be implemented
- details of how waste, including hazardous waste, would be stored (including the maximum storage capacity of each type of waste) and handled on site, and transported to and from the site, including details of how the receipt of non-conforming waste would be dealt with
- details of consistency with the Standards for Managing Construction Waste NSW (2019)
- details of the development's waste tracking system for incoming and outgoing waste
- details of the quality of waste produced and final dispatch locations
- details of the waste management strategy for development construction and ongoing operational waste generated
- the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021.

· **Air Quality and Odour**
- a quantitative assessment of the potential air quality, dust and odour impacts of the development in accordance with relevant Environment Protection Authority guidelines. This is to include the identification of existing and potential future sensitive receivers and consideration of approved and/or proposed developments in the vicinity
- the details of buildings and air handling systems and strong justification for any material handling, processing or stockpiling external to a building
- details of proposed mitigation, management and monitoring measures.

· **Noise and Vibration**
- a quantitative assessment of potential construction, operational and transport noise and vibration impacts in accordance with relevant Environment Protection Authority guidelines
- details of the specific times of operation for all phases of the development and for all noise producing activities
- cumulative impacts of other developments
- details and justification of the proposed noise mitigation and monitoring measures.

· **Traffic and Transport:**
- details of all traffic types and volumes likely to be generated during construction and operation, including a description of haul routes
- an assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model
- detailed plans of the proposed layout of the internal road network, pedestrian

network and parking on site in accordance with the relevant Australian Standards

- plans of any proposed road upgrades, infrastructure works or new roads required for the development
- plans demonstrating how all vehicles associated with construction and operation awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network
- details of the largest vehicle anticipated to access and move within the site, including swept path analysis
- swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site.

· **Hazards**
- a preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 - Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development, hazard identification covering all plant and processes including dust explosion hazards and a description of the proposed safeguards to be implemented.
- should preliminary screening indicate that the project is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011).

· **Fire and Incident Management:**
- identification of the aggregate quantities of combustible waste products to be stockpiled at any one time
- technical information on the environmental protection equipment to be installed on the premises such as air, water and noise controls, spill clean-up equipment and fire (including location of fire hydrants and water flow rates at the hydrant) management and containment measures
- details regarding the fire hydrant system and its minimum water supply capabilities appropriate to the site's largest stockpile fire load
- details of size and volume of stockpiles and their management and separation to minimise fire spread and facilitate emergency vehicle access
- consideration of consistency with NSW Fire & Rescue draft Fire Safety Guideline – Fire Safety in Waste Facilities (February 2020)
- detailed information relating to the proposed structures addressing relevant levels of compliance with Volume One of the National Construction Code (NCC).

· **Soil and Water**
- an assessment of potential impacts to soil and water resources, topography,

	hydrology, drainage lines, watercourses and riparian lands on or nearby to the site - a detailed site water balance, including identification of water requirements for the life of the project, measures that would be implemented to ensure an adequate and secure water supply is available for the proposal and a detailed description of the measures to minimise the water use at the site - characterisation of water quality at the point of discharge to surface and/or groundwater against the relevant water quality criteria (including details of the contaminants of concern that may leach from the waste into the wastewater and proposed mitigation measures to manage any impacts to receiving waters) - details of stormwater/wastewater/leachate management systems including the capacity of onsite detention systems, and measures to treat, reuse or dispose of water - a description of erosion and sediment controls - characterisation of the nature and extent of any contamination on the site and a description of proposed management measures. · **Biodiversity** - including an assessment of the proposal's biodiversity impacts in accordance with the Biodiversity Conservation Act 2016, including the preparation of a Biodiversity Development Assessment Report (BDAR) where required under the Act, except where a waiver for preparation of a BDAR has been granted. · **Cultural Heritage and Aboriginal Cultural Heritage** - identification and description of the Aboriginal cultural heritage values that exist across the development and document in an Aboriginal Cultural Heritage Assessment Report (ACHAR). Consultation with Aboriginal people must be undertaken and documented in the ACHAR - a description of the impacts on Aboriginal cultural heritage values. · **Visual** - an assessment of the potential visual impacts of the project on the amenity of the surrounding area.
Consultation	During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with: · Gunnedah Shire Council · Environment Protection Authority · Transport for NSW

	· Fire + Rescue NSW · Department of Planning, Industry and Environment, including: o Environment, Energy and Science Group o Crown Lands Division The EIS must describe the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.
Further consultation after 2 years	If you do not lodge a Development Application and EIS for the development within 2 years of the issue date of these SEARs, you must consult further with the Planning Secretary in relation to the preparation of the EIS.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, the following attachment contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this proposal.

ATTACHMENT 1
Technical and Policy Guidelines

The following guidelines may assist in the preparation of the environmental impact statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

Many of these documents can be found on the following websites:
http://www.planning.nsw.gov.au
http://www.australia.gov.au/publications
http://www.epa.nsw.gov.au/
http://www.environment.nsw.gov.au/
http://www.dpi.nsw.gov.au/

Plans and Documents

The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Environmental Planning and Assessment Regulation 2000. Provide these as part of the EIS rather than as separate documents.

In addition, the EIS must include the following:

1. An existing site survey plan drawn at an appropriate scale illustrating:
   - × the location of the land, boundary measurements, area (sqm) and north point · the existing levels of the land in relation to buildings and roads
   - × location and height of existing structures on the site
   - × location and height of adjacent buildings and private open space
   - × all levels to be to Australian Height Datum (AHD).

2. Locality/context plan drawn at an appropriate scale should be submitted indicating:
   - × significant local features such as heritage items
   - × the location and uses of existing buildings, shopping and employment areas
   - × traffic and road patterns, pedestrian routes and public transport nodes.

3. Drawings at an appropriate scale illustrating:
   - × detailed plans, section and elevations of all proposed buildings
   - × detailed plans of proposed access driveways, internal roadways,

carparking and services infrastructure.

	Documents to submit include: × one (1) electronic copy of all the documents and plans for review prior to exhibition × other copies as determined by the Department once the development application is lodged.

Policies, Guidelines & Plans

Aspect	Policy/Methodology
Waste	
	Waste Avoidance and Resource Recovery Strategy 2014-2021 (EPA)
	The National Waste Policy: Less Waste More Resources 2009
	Waste Classification Guidelines (EPA 2014)
	Environmental guidelines: Composting and Related Organics Processing Facilities (DEC 2004)
	Environmental guidelines: Use and Disposal of Biosolid Products (EPA 1997)
	Composts, soil conditioners and mulches (Standards Australia, AS 4454)
	NSW Energy from Waste Policy Statement (EPA 2015)
Air Quality and Odour	
Air Quality	Protection of the Environment Operations (Clean Air) Regulation 2010
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA 2016)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
Odour	Assessment and Management of Odour from Stationary Sources in NSW (DEC 2006)
Greenhouse Gas	The National Greenhouse and Energy Reporting (Measurement) Technical Guidelines (NGER Technical Guidelines)
	Guidelines for Energy Savings Action Plans (DEUS 2005)
Traffic and Transport	
	Guide to Traffic Generating Development (RTA)

	Guide to Traffic Management Part 12: Traffic Impacts of Developments (Austroads 2016)
	NSW Long Term Transport Master Plan (TfNSW 2012)
	Road Design Guide (RTA)
Soil and Water	
Soil	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC & NHMRC)
	National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC)
	Draft Guidelines for the Assessment & Management of Groundwater Contamination (DECC)
	State Environmental Planning Policy No. 55 – Remediation of Land
	Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land (DOP)
	Acid Sulfate Soils Manual (Stone et al. 1998)
Surface Water	National Water Quality Management Strategy: Water quality management - an outline of the policies (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Policies and principles - a reference document (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Implementation guidelines (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)
	NSW State Rivers and Estuaries Policy (1993)
	State Water Management Outcomes Plan
	NSW Government Water Quality and River Flow Environmental Objectives (DECC)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)
	Managing Urban Stormwater: Soils & Construction (Landcom 2004)
	Managing Urban Stormwater: Treatment Techniques (DECC 1997)
	Managing Urban Stormwater: Source Control (DECC)
	Technical Guidelines: Bunding & Spill Management (DECC)

	NSW Floodplain Development Manual 2005
	NSW Guidelines for Controlled Activities on Waterfront Land (NOW 2012)
Groundwater	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC 1995)
	NSW State Groundwater Policy Framework Document (DLWC 1997)
	NSW State Groundwater Quality Protection Policy (DLWC 1998)
	NSW State Groundwater Dependent Ecosystems Policy (DLWC 2002)
	NSW State Groundwater Quantity Management Policy (DLWC 2002)
	Guidelines for the Assessment and Management of Groundwater Contamination (DEC 2007)
	NSW Aquifer Interference Policy (NOW 2012)
	MDBC Guidelines on Groundwater Flow Modelling 2000
	Australian Groundwater Modelling Guidelines (NWC 2012)
Wastewater	Environmental Guidelines: Use of Effluent by Irrigation (DECC 2004)
	Environmental Guidelines: Storage and Handling of Liquids (DECC 2007)
	National Water Quality Management Strategy - Guidelines For Water Recycling: Managing Health And Environmental Risks (Phase 1) 2006 (EPHC, NRMMC & AHMC)
	National Water Quality Management Strategy – Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2): Augmentation of Drinking Water Supplies 2008 (EPHC, NRMMC & AHMC)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems - Effluent Management (ARMCANZ/ANZECC)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems - Use of Reclaimed Water (ARMCANZ/ANZECC)
	Recycled Water Guidance Document: Recycled Water Management Systems (DPI 2015)
Noise and Vibration	
Noise	Noise Policy for Industry (EPA 2017)
	NSW Road Noise Policy (EPA 2011)
	Environmental Criteria for Road Traffic Noise (EPA 1999)
	Interim Construction Noise Guideline (DECC 2009)
Vibration	Assessing Vibration: A Technical Guideline (DEC 2006)
	Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration (ANZECC 1990)
Fire and Incident Management	

	Fire Safety Guideline: Fire Safety in Waste Facilities (FRNSW 2019)
	Fire Safety Guideline: Access for fire brigade vehicles and firefighters (FRNSW 2019)
Hazards and Risk	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines (DUAP)
	AS/NZS 4360:2004 Risk Management
	HB 203:2006 Environmental Risk Management – Principles and Process
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis
	Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning (DUAP)
	Contaminated Sites – Guidelines on Significant Risk of Harm from Contaminated Land and the Duty to Report (EPA 2003)
Heritage	
	Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)
	Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010)
	Draft Guidelines for Aboriginal Cultural Impact Assessment and Community Consultation (Department of Planning 2005)
	Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010)
Biodiversity	
	Biodiversity Assessment Method (2017)
Visual	
	Control of Obtrusive Effects of Outdoor Lighting (Standards Australia, AS 4282)
	State Environmental Planning Policy No 64 - Advertising and Signage

ATTACHMENT 2
Government Authority Responses to Request for Key Issues

Mr Brendon MacKellar
Director
Mackellar Equipment Hire Pty Ltd
16 Torrens Road
GUNNEDAH New South Wales 2380

07/08/2020

Dear Mr MacKellar

Planning Secretary's Environmental Assessment Requirements
Gunnedah Waste Facility (SSD-8530563)

Please find attached a copy of the Planning Secretary's environmental assessment requirements (SEARs) for the preparation of an environmental impact statement (EIS) for the above-mentioned development. These requirements have been prepared in consultation with relevant public authorities based on the information you have provided to date. I have also attached a copy of the public authorities' comments for your information. Please note that the Planning Secretary may modify these requirements at any time.

The Department is yet to receive comments from the Natural Resources Access Regulator (NRAR) and SafeWork NSW. The Department of Planning, Industry and Environment, Biodiversity Conservation Division is currently reviewing your request to waiver the requirements to prepare a Biodiversity Assessment Report. The Department will forward you the above agency comments, once received.

If you do not submit a Development Application (DA) and EIS within 2 years, you must consult further with the Planning Secretary in relation to the preparation of the EIS.

Prior to exhibiting the EIS, the Department will review the document in consultation with relevant authorities to determine if it addresses the requirements in Schedule 2 of the Environmental Planning and Assessment Regulation 2000. You will be required to submit an amended EIS if it does not adequately address the requirements.

The Department wishes to emphasise the importance of effective and genuine community consultation where a comprehensive open and transparent community consultation engagement process must be undertaken during the preparation of the EIS. This process must ensure that the community is provided with a good understanding of what is proposed, description of any potential impacts and they are actively engaged in issues of concern to them.

Please contact the Department at least two weeks before you propose to submit your DA and EIS. This will enable the Department to:

- confirm the applicable fee (see Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- determine the number of copies (hard-copy and CD/DVD) of the DA and EIS that will be required for reviewing purposes.

If your development is likely to have a significant impact on matters of National Environmental Significance, it will require an approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This approval would be in addition to any approvals required under NSW legislation and it is your responsibility to contact the Commonwealth

Department of the Environment and Energy to determine if an approval under the EPBC Act is required (http://www.environment.gov.au or 6274 1111).

If you have any questions, please contact Mary Ellen Trimble on (02) 9274 6213 at maryellen.trimble@planning.nsw.gov.au.

Yours sincerely,

Chris Ritchie
Director
Industry Assessments

as delegate for the Planning Secretary

Enclosed/Attached:

Our reference: : EF13/5576 DOC20/589217
Contact: : Rebecca Scrivener – 02 6773 7000 – armidale@epa.nsw.gov.au
Date : 23 July 2020

Department of Planning
Industry Assessments
Level 29, 320 Pitt Street
SYDNEY NSW 2000

Email: maryellen.trimble@planning.nsw.gov.au **BY PLANNING PORTAL**

Attention: Ms Mary Ellen Trimble

Dear Ms Trimble

RE: Request for EARs (SSD-8530563) - Proposed Resource Recovery and Waste Transfer Facility – 16 Torrens Road, Gunnedah

I refer to your email dated 17 July 2020 seeking Environmental Assessment Requirements (EARs) for the proposed Resource Recovery and Waste Transfer Facility at 16 Torrens Road, Gunnedah, NSW.

Based on the information provided, the Environment Protection Authority (EPA) expects the proposed activity to be a Scheduled Activity and will require an Environment Protection Licence (EPL) under the *Protection of the Environment Operations Act 1997*, should consent be granted. Please find attached EARs as requested for your consideration

If you wish to discuss this matter further, please contact me on (02) 6773 7000 or by email to armidale@epa.nsw.gov.au to discuss this matter further.

Yours sincerely,

REBECCA SCRIVENER
Head Regional Operations Unit – Regulatory Operations
Environment Protection Authority

Encl: Attachment A – Environmental Assessment Requirements for Proposed Resource Recovery and Waste Transfer Facility – 16 Torrens Road, Gunnedah (SSD-8530563)

Email: armidale@epa.nsw.gov.au
PO Box 494 Armidale NSW 2350
85 Faulkner Street, Armidale NSW 2350
Tel: (02) 6773 7000 Fax: (02) 6772 2336
ABN 43 692 285 758
www.epa.nsw.gov.au

ATTACHMENT A: Environmental Assessment Requirements for Proposed Resource Recovery and Waste Transfer Facility – 16 Torrens Road, Gunnedah (SSD-8530563)

1 Environmental impacts of the project

1.1. The Environmental Assessment (EA) must address the requirements of Section 45 of the *Protection of the Environment Operations Act 1997* (POEO Act) by determining the extent of each impact and providing sufficient information to enable the EPA to determine appropriate conditions, limits and monitoring requirements for an Environment Protection Licence (EPL).

1.2. Impacts related to the following environmental issues need to be assessed, quantified and reported on:

- **Air Issues**: air quality including dust generation from the operation on the surrounding landscape and/or community;
- **Noise and vibration impacts** associated with crushing and screening, as well as operational noise particularly machinery and plant movements;
- **Waste** including hazardous materials, special wastes and liquid wastes. Consideration needs to be given to disposal options for waste materials unable to be accepted at the premises.
- **Water and Soils** including leachate and surface water management as well as sediment and erosion controls during construction and operation phases.

The EA should address the specific requirements outlined under each heading below and assess impacts in accordance with the relevant guidelines mentioned. A full list of guidelines is at **Attachment B**.

2 Licensing requirements

2.1. The development is a scheduled activity under the *Protection of the Environment Operations Act 1997* (POEO Act) and will therefore require an Environment Protection Licence (EPL) if approval is granted.

2.2. Should project approval be granted, the proponent will need to make an application to the EPA for its EPL for the proposed facility prior to undertaking any on site works. Additional information is available through the *EPA Guide to Licensing* document (www.epa.nsw.gov.au/licensing/licenceguide.htm).

SPECIFIC ISSUES

3 Air issues

3.1. The EA must demonstrate the proposal's ability to comply with the relevant regulatory framework, specifically the *Protection of the Environment Operations (POEO) Act (1997)* and the *POEO (Clean Air) Regulation (2002)*. Particular consideration should be given to section 129 of the POEO Act concerning control of "offensive odour".

3.2. The EA must include an air quality impact assessment (AQIA).

3.3. The AQIA must be carried out in accordance with the document, *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (2005), which is available on our website at: https://www.epa.nsw.gov.au/your-environment/air/industrial-emissions/modelling-assessing-air-emissions

3.4. The EA must detail emission control techniques/practices that will be employed at the site and identify how the proposed control techniques/practices will meet the requirements of the POEO Act, POEO (Clean Air) Regulation and associated air quality limits or guideline criteria.

4. Noise and Vibration

The EA must assess the following noise and vibration aspects of the proposed development

4.1. Construction noise associated with the proposed development should be assessed using the *Interim Construction Noise Guideline (*DECC, 2009). These are available at:https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/interim-construction-noise-guideline

4.2. Vibration from all activities (including construction and operation) to be undertaken on the premises should be assessed using the guidelines contained in the *Assessing Vibration: a technical guideline* (DEC, 2006). These are available at: https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/assessing-vibration

4.3. If blasting is required for any reasons during the construction or operational stage of the proposed development, blast impacts should be demonstrated to be capable of complying with the guidelines contained in *Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration* (ANZEC, 1990).These are available at: https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/interim-construction-noise-guideline

4.4. Operational noise from all industrial activities (including private haul roads and private railway lines) to be undertaken on the premises should be assessed using the guidelines contained in the *NSW Noise Policy for Industry* (EPA, 2017). https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/noise-policy-for-industry-(2017)

4.5. Noise on public roads from increased road traffic generated by land use developments should be assessed using the guidelines contained in the *NSW Road Noise Policy* and associated application notes (EPA, 2011).https://www.epa.nsw.gov.au/your-environment/noise/transport-noise

5 Waste, chemicals and hazardous materials and radiation

5.1. The EA must assess all aspects of waste generation, management and disposal associated with the proposed development.

5.2. The EA must demonstrate compliance with all regulatory requirements outlined in the POEO Act and associated waste regulations.

5.3. The EA must demonstrate how the development will comply with any existing Resource Recovery Orders and Exemptions that are relevant. If there are no current orders or exemptions for the intended re-use of a waste resource produced by the proposed development, a specific order and exemption will need to be applied for with the EPA.

5.4. The EA must identify management measures to be implemented for all waste types received at the premises including asbestos waste, batteries, chemicals and unknowns. If disposal offsite is proposed, justification for the ultimate disposal site must be provided.

5.5. The EA must identify, characterise and classify the following in accordance with the EPA's *Waste Classification Guidelines (2014)* and associated addendums, including:

(i) all waste that will be generated onsite through excavation, demolition or construction activities, including proposed quantities of the waste;

(ii) all waste that is proposed to be disposed of to an offsite location, including proposed quantities of the waste and the disposal locations for the waste. This includes waste that is intended for re-use or recycling.

Note: The EPA's W*aste Classification Guidelines (2014)* and associated addendums are available at: https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste

5.6. The EA must consider the goals, design and performance criteria identified in the EPA's guidelines, *Environmental Guidelines: Solid Waste Landfills* (EPA, 2016), available at: https://www.epa.nsw.gov.au/publications/waste/solid-waste-landfill-guidelines-160259

5.7 Outline contingency plans for any event that affects operations at the site that may result in environmental harm, including scenarios where excessive stockpiling of waste occurs, volume of leachate generated exceeds the storage capacity available on-site and similar.

5.8 The Proponent should also provide details of:

- how leachate from stockpiled waste material will be kept separate from stormwater runoff;
- treatment of leachate through a wastewater treatment plant (if applicable); and
- any proposed transport and disposal of leachate off-site

6 Water

6.1 The EA must demonstrate how the proposed development will meet the requirements of section 120 of the POEO Act.

6.2 The EA must include a water balance for the development including water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.

6.3 If the proposed development intends to discharge waters to the environment, the EA must demonstrate how the discharge(s) will be managed in terms of water quantity, quality and frequency of discharge and include an impact assessment of the discharge on the receiving environment. This should include:

- Description of the proposal including position of any intakes and discharges, volumes, water quality and frequency of all water discharges.

- Description of the receiving waters including upstream and downstream water quality as well as any other water users.

- Demonstration that all practical options to avoid discharge have been implemented and environmental impact minimised where discharge is necessary.

6.4 The EA must refer to Water Quality Objectives for the receiving waters and indicators and associated trigger values or criteria for the identified environmental values of the receiving environment. This information should be sourced from the ANZECC (2000) Guidelines for Fresh and Marine Water Quality (http://www.environment.gov.au/water/policy-programs/nwqms/).

6.5 The EA must describe how stormwater will be managed in all phases of the project, including details of how stormwater and runoff will be managed to minimise pollution. Information should include measures to be implemented to minimise erosion, leachate and sediment mobilisation at the site. The EA should consider the guidelines *Managing urban stormwater: soils and construction,* vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC, 2008).

6.6 The EA must describe any water quality monitoring programs to be carried out at the project site, Water quality monitoring should be undertaken in accordance with the *Approved Methods for the Sampling and Analysis of Water Pollutant in NSW* (2004), available on our website at: https://www.epa.nsw.gov.au/your-environment/water/polices-guidelines-and-programs.

30 July 2020

File No: NTH19/00212/02
Your Ref: SSD 8530563

The Director
Department of Planning Industry and Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Attention: Mary Ellen Trimble

Dear Sir / Madam,

RE: Secretary's Environmental Assessment Requirements (SSD 8530563) Waste Facility Lots 1 & 2 DP 1226992 16 Torrens Road, Gunnedah.

I refer to your email of 17 July 2020 requesting input from Transport for NSW to the Secretary's Environmental Assessment Requirements (SEARs) for the abovementioned development proposal.

Roles and Responsibilities

From 1 December 2019, all functions and responsibilities of Roads and Maritime Services will now be vested in an integrated Transport for NSW (TfNSW). Our key interests are for the safety and efficiency of the transport network, the integrity of State infrastructure and the integration of land use and transport in accordance with *Future Transport Strategy 2056.*

Oxley Highway (HW11) and Kamilaroi Highways (HW29) are classified (State) and Gunnedah Shire Council is the Roads Authority for all public roads (other than freeways or Crown roads) in the local government area pursuant to Section 7 of the *Roads Act 1993*. TfNSW is the Roads Authority for freeways and can exercise roads authority functions for classified roads in accordance with the Roads Act. Any proposed works on a classified (State) road will require the consent of TfNSW and consent is provided under the terms of a Works Authorisation Deed (WAD).

In accordance with Clause 104 of *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP), TfNSW is given the opportunity to review and provide comment on the subject development application as it meets the requirements under Schedule 3.

It is emphasised that the following comments are based on the information provided to TfNSW at this time, they are not to be interpreted as binding upon TfNSW and further comment will be provided following formal review of a development application referred by the appropriate Consent Authority.

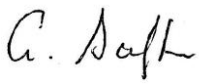
Transport for NSW Response

TfNSW request that a Traffic Impact Assessment (TIA) be prepared by suitably qualified person/s in accordance with the Austroads Guide to Traffic Management Part 12, the complementary TfNSW Supplement and RTA Guide to Traffic Generating Developments. The TIA should include, but not necessarily be limited to, an assessment of the considerations outlined in **Attachment A**.

TfNSW highlights that in determining the application under the *Environmental Planning and Assessment Act 1979*, it is the Consent Authority's responsibility to consider the environmental impacts of any roadworks which are ancillary to the development. This includes any works which form part of the proposal and/or any works which are deemed necessary to include as requirements in the conditions of project approval.

If you have any further enquiries regarding the above comments please do not hesitate to contact Greg Sciffer, Development Assessment Officer or the undersigned on (02) 6640 1362 or via email at: development.northern@rms.nsw.gov.au

Yours faithfully,



for Matt Adams
Manager Land Use Assessment Northern
Regional NSW and Outer Metropolitan
Transport for NSW

Enc. ATTACHMENT A - Requested TIA considerations for SEAR

ATTACHMENT A – Requested Traffic Impact Assessment considerations for SEAR

For context, this attachment must be read with TfNSW letter of 30 July 2020

Traffic Impact Assessment (TIA) be prepared by suitably qualified person/s in accordance with the Austroads Guide to Traffic Management Part 12, the complementary TfNSW Supplement and RTA Guide to Traffic Generating Developments.

The TIA is to identify the impacts of the development and the proposed on-site and off-site measures proposed to mitigate the impacts of the development on any road or rail related infrastructure. The TIA must explain and justify all inputs informing the proposed measures.

The TIA should be tailored to the proposed development and include, but not necessarily be limited to, consideration of the following;

- A map of the road network surrounding the site, identifying the site access arrangements, nearby accesses, intersections and any transport related facilities.
- A map of the proposed haulage route/s identifying all public roads proposed to obtain access from the classified (State) road/s to the development site. This should take into consideration other existing approved haulage routes and any constraints for turning traffic.
- The total impact of existing and proposed development on the road network with consideration for a 10 year horizon. This should include;
    - Identify Annual Average Daily Traffic (AADT) volumes with percentage heavy vehicles along the haulage route/s and diagrammatically demonstrate AM and PM peak hour movements at key intersections.
    - Background traffic data from published sources and/or recent survey data. The source of data and any assumptions are to be clearly explained and justified, including the growth rate applied to the future horizon.
    - The volume and distribution of existing and proposed trips to be generated by the construction and operational phases of the development at key intersections and the accesses. This should identify the maximum daily and hourly demands generated by the development, particularly where they coincide with the network peak hour.
    - The type and frequency of design vehicles accessing the development site.
- Details of the road geometry and alignment along the identified haulage route/s, including existing formations, crossings, intersection treatments and any identified hazards. This should include;
    - Available sight distances at intersections along the proposed haulage routes, including intersections and accesses, and any constraint to achieving the required sight distance for the posted speed limit.
    - An assessment of turn treatment warrants in accordance with the Austroads Guide to Traffic Management Part 6 and Austroads Guide to Road Design Part 4A for the identified intersections and accesses to identify the existence or need for the minimum basic turn treatments and addressing the need for any warranted higher order treatments.

Transport for NSW
76 Victoria Street, Grafton, NSW 2460 | PO Box 576, Grafton NSW 2460
W transport.nsw.gov.au

    - Swept path analysis demonstrating the largest design vehicle entering, manoeuvring and leaving the development, and moving in each direction through intersections along the proposed haulage route/s.

- Capacity analysis (using SIDRA or other relevant application), to identify an acceptable Level of Service (LOS) at intersections with the classified (State) road/s, and where relevant, analysis of any other intersections along the proposed transport route/s.
- A review of crash data along the identified transport route/s for the most recent 5 year reporting period and an assessment of road safety along the proposed transport route/s considering the safe systems principles adopted under Future Transport 2056.
- Strategic (2D) design drawings of all proposed road works and the site access demonstrating scope, estimated cost and constructability of works required to mitigate the impacts of the development on road safety, traffic efficiency and the integrity of transport infrastructure. Works must be appropriately designed for the existing posted speed limit.
- A site plan demonstrating site access, internal manoeuvring, servicing and parking areas consistent with the relevant parts of AS2890 and Council requirements. The site plan should accommodate the swept paths of relevant design vehicles servicing the existing and proposed operation of the site.
- Details of measures to address impact on public transport services and active transport modes, such as, public and school bus services, walking and cycling.
- Details of any measures proposed to ameliorate the impacts of road traffic noise and dust generated along the proposed haulage route/s.
- Details of any Traffic Management Plan (TMP) proposed to address the construction and operation of the proposed development. The TMP may include temporary measures such a Traffic Control Plan (TCP) prepared and implemented by suitably qualified persons in accordance with the current *Traffic Control at Work Sites Manual*. It is recommended that any TMP adopt a Driver Code of Conduct, including but not necessarily limited to, the following;
    - A map of the primary haulage route/s highlighting critical locations.
    - An induction process for vehicle operators and regular toolbox meetings.
    - Procedures for travel through residential areas, school zones and/or bus route/s.
    - A complaint resolution and disciplinary procedure.
    - Community consultation measures proposed for peak periods.

Where road safety concerns are identified at a specific location along the proposed haulage routes, TfNSW suggests that the TIA be supported by a targeted Road Safety Audit undertaken by suitably qualified persons in accordance with the Austroads Guidelines.

Any roadwork on classified (State) road/s is to be designed and constructed in accordance with the current Austroads Guidelines, Australian Standards and TfNSW Supplements.

The developer will be required to enter into a Works Authorisation Deed (WAD) with TfNSW for any roadwork deemed necessary on the classified (State) road. The developer will be responsible for all costs associated with the roadwork and administration for the WAD. It is recommended that developers familiarise themselves with the requirements of the WAD process. Further information can be obtained from the TfNSW website.

Our ref: DOC20/585748
Senders ref: SSD-8530563

Ms Mary Ellen Trimble
Student Para Planner
Planning and Assessment Group
maryellen.Trimble@planning.nsw.gov.au

Dear Mary Ellen

Request for SEARs - Gunnedah Waste Facility (SSD-8530563)

I refer to your email dated 17 July 2020 seeking input into the Department of Planning, Industry and Environment Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Assessment (EIS) for the Gunnedah Waste Facility (SSD-8530563).

The Biodiversity and Conservation Division (BCD) has considered your request and provides SEARs for the proposed development in **Attachments A** and **B**.

BCD recommends the EIS needs to appropriately address the following:

1. Biodiversity and offsetting
2. Water and soils
3. Flooding

BCD note the proponent's intent to submit a BDAR waiver for the project. BCD will review this application upon submission. In the absence of the BDAR waiver application BCD provides our standard set of assessment requirements.

Please note that as of 1 July 2020 Aboriginal cultural heritage responsibilities previously performed by BCD Planning teams have been transferred to the Heritage Division of the Department of Premier and Cabinet. Any questions or requests for formal Aboriginal cultural heritage assessment requirements should be directed to heritagemailbox@environment.nsw.gov.au, phone 02 9873 8500 or mail Heritage NSW, Department of Premier and Cabinet, Locked Bag 5020 Parramatta NSW 2124.

If you have any questions about this advice, please do not hesitate to contact David Geering, Senior Conservation Planning Officer, via david.geering@environment.nsw.gov.au or (02) 6883 5335.

Yours sincerely,

Samantha Wynn
Senior Team Leader Planning North West
Biodiversity and Conservation Division

21 July 2020

Attachment A - Environmental Assessment Requirements

Attachment B - Guidance Material

Standard Environmental Assessment Requirements

OEH	Office of Environment and Heritage (now Biodiversity and Conservation Division)
BCD	Biodiversity and Conservation Division of the NSW Department of Planning, Industry and Environment, formerly OEH
The Department	NSW Department of Planning, Industry and Environment
NPWS	National Parks and Wildlife Service

Biodiversity

1. Biodiversity impacts related to the proposed development are to be assessed in accordance with Section 7.9 of the Biodiversity Conservation Act 2017 the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the *Biodiversity Conservation Act 2016* (s6.12), *Biodiversity Conservation Regulation 2017* (s6.8) and Biodiversity Assessment Method, unless the Department determine that the proposed development is not likely to have any significant impacts on biodiversity values.
2. The BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method.
3. The BDAR must include details of the measures proposed to address the offset obligation as follows;
   - The total number and classes of biodiversity credits required to be retired for the development/project;
   - The number and classes of like-for-like biodiversity credits proposed to be retired;
   - The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules;
   - Any proposal to fund a biodiversity conservation action;
   - Any proposal to conduct ecological rehabilitation (if a mining project);
   - Any proposal to make a payment to the Biodiversity Conservation Fund.

   If seeking approval to use the variation rules, the BDAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits.
4. The BDAR must be submitted with all spatial data associated with the survey and assessment as per Appendix 11 of the BAM.

5. The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the *Biodiversity Conservation Act 2016*.

Water and soils

6. The EIS must map the following features relevant to water and soils including:
   a. Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map).
   b. Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method).
   c. Wetlands as described in s4.2 of the Biodiversity Assessment Method.
   d. Groundwater.
   e. Groundwater dependent ecosystems.
   f. Proposed intake and discharge locations.

7. The EIS must describe background conditions for any water resource likely to be affected by the development, including:
   a. Existing surface and groundwater.
   b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations.
   c. Water Quality Objectives (as endorsed by the NSW Government http://www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters.
   d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government.
   e. *Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions*

8. The EIS must assess the impacts of the development on water quality, including:
   a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction.
   b. Identification of proposed monitoring of water quality.

9. The EIS must assess the impact of the development on hydrology, including:
   a. Water balance including quantity, quality and source.
   b. Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas.

c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems.
d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches).
e. Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water.
f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options.
g. Identification of proposed monitoring of hydrological attributes.

Flooding

10. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including:
    a. Flood prone land.
    b. Flood planning area, the area below the flood planning level.
    c. Hydraulic categorisation (floodways and flood storage areas).
    d. Flood hazard

11. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 5% Annual Exceedance Probability (AEP), 1% AEP, flood levels and the probable maximum flood, or an equivalent extreme event.

12. The EIS must model the effect of the proposed development (including fill) on the flood behaviour under the following scenarios:
    a. Current flood behaviour for a range of design events as identified in 14 above. This includes the 0.5% and 0.2% AEP year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.

13. Modelling in the EIS must consider and document:
    a. Existing council flood studies in the area and examine consistency to the flood behaviour documented in these studies.
    b. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood, or an equivalent extreme flood.
    c. Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazard categories and hydraulic categories.

d. Relevant provisions of the NSW Floodplain Development Manual 2005.

14. The EIS must assess the impacts on the proposed development on flood behaviour, including:

a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.
b. Consistency with Council floodplain risk management plans.
c. Consistency with any Rural Floodplain Management Plans.
d. Compatibility with the flood hazard of the land.
e. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.
f. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.
g. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
h. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the NSW SES and Council.
i. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the NSW SES and Council.
j. Emergency management, evacuation and access, and contingency measures for the development considering the full range or flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the NSW SES.
k. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

Guidance Material

Title	Web address
Relevant Legislation	
Biodiversity Conservation Act 2016	https://www.legislation.nsw.gov.au/#/view/act/2016/63/full
Commonwealth Environment Protection and Biodiversity Conservation Act 1999	http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
Environmental Planning and Assessment Act 1979	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
Fisheries Management Act 1994	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N
Marine Parks Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N
National Parks and Wildlife Act 1974	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
Protection of the Environment Operations Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
Water Management Act 2000	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
Wilderness Act 1987	http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N
Biodiversity	
Biodiversity Assessment Method (OEH, 2017)	https://biodiversity-ss.s3.amazonaws.com/Uploads/1494298079/Biodiversity-Assessment-Method-May-2017.pdf
Biodiversity Development Assessment Report	https://www.legislation.nsw.gov.au/#/view/act/2016/63/part6/div3/sec6.12
Guidance and Criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017)	https://biodiversity-ss.s3.amazonaws.com/Uploads/1494298198/Serious-and-Irreversible-Impact-Guidance.PDF
Accreditation Scheme for Application of the Biodiversity Assessment Metho Order 2017	https://www.legislation.nsw.gov.au/regulations/2017-471.pdf
Biodiversity conservation actions	www.environment.nsw.gov.au/resources/bcact/ancillary-rules-biodiversity-actions-170496.pdf
Reasonable steps to seek like-for-like biodiversity credits for the purpose of applying the variation rules	www.environment.nsw.gov.au/resources/bcact/ancillary-rules-reasonable-steps-170498.pdf
The Department's Threatened Species Website	www.environment.nsw.gov.au/threatenedspecies/
NSW BioNet (Atlas of NSW Wildlife)	www.bionet.nsw.gov.au/

Title	Web address
NSW guide to surveying threatened plants (OEH 2016)	www.environment.nsw.gov.au/resources/threatenedspecies/160129-threatened-plants-survey-guide.pdf
The Department's threatened species survey and assessment guideline information	www.environment.nsw.gov.au/threatenedspecies/surveyassessmentgdlns.htm
BioNet Vegetation Classification - NSW Plant Community Type (PCT) database	www.environment.nsw.gov.au/research/Vegetationinformationsystem.htm
The Departments Data Portal (access to online spatial data)	http://data.environment.nsw.gov.au/
Fisheries NSW policies and guidelines	http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation
List of national parks	http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx
Revocation, recategorisation and road adjustment policy (OEH, 2012)	http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm
Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010)	http://www.environment.nsw.gov.au/protectedareas/developmntadjoiningdecc.htm
Water and Soils	
Acid sulphate soils	
Acid Sulfate Soils Planning Maps via Data.NSW	http://data.nsw.gov.au/data/
Acid Sulfate Soils Manual (Stone et al. 1998)	http://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	http://www.environment.nsw.gov.au/resources/soils/acid-sulfate-soils-laboratory-methods-guidelines.pdf This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
Flooding	
Floodplain development manual	http://www.environment.nsw.gov.au/floodplains/manual.htm
NSW Climate Impact Profile	http://climatechange.environment.nsw.gov.au/
Climate Change Impacts and Risk Management	Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1

Title	Web address
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf

Gunnedah Shire Council

Department of Planning, Industry and Environment
maryellen.trimble@planning.nsw.gov.au

05 August 2020

Dear Sir/Madam,

Re: Request for the Secretary's Environmental Assessment Requirements, 16 Torrens Road, Gunnedah

I refer to your correspondence requesting Secretary's Environmental Assessment Requirements (SEARs).

With regards to this development Council would like to make the following comments. It is recommended that the Environmental Impact Statement address the potential impacts of the proposal and include the following information:

- Detailed Traffic Impact Assessment
- Detailed Noise and Air Impact Assessments
- Biodiversity Impact Assessment, including an assessment under State Environmental Planning Policy (Koala Habitat Protection) 2019
- Heritage Impact Assessment, including an assessment of the Aboriginal cultural heritage and Archaeology
- Assessment of the application under the provisions of the relevant State Environmental Planning Policies
- Site Servicing Strategy, including investigation into the availability and suitability of Council's infrastructure to accommodate the service demands of the proposed development
- Details of vehicle haulage routes and location of source of wastes, including method for tracking of waste from source to the site
- Detailed Soil Management Plan, including sediment and erosion controls

If you have any questions regarding this matter, please contact Council's Acting Manager Development & Planning, Wade Hudson on 6740 2100.

Yours faithfully

Wade Hudson
SENIOR DEVELOPMENT OFFICER

Contact: 02 6740 2148
Reference: wh.bg

OUT20/8667

Mary Ellen Trimble
Planning and Assessment Group
NSW Department of Planning, Industry and Environment

maryellen.trimble@planning.nsw.gov.au

Dear Ms Trimble

Gunnedah Waste Facility- SSD 8530563
Comment on the Secretary's Environmental Assessment Requirements (SEARs)

I refer to your email of 17 July 2020 to the Department of Planning, Industry and Environment (DPIE) Water and the Natural Resources Access Regulator (NRAR) about the above matter.

The following recommendations are provided by DPIE Water and NRAR. Please note Crown Lands, the Department of Primary Industries (DPI) – Fisheries and DPI - Agriculture all now provide a separate response directly to you.

The SEARS should include:

- The identification of an adequate and secure water supply for the life of the project. This includes confirmation that water can be sourced from an appropriately authorised and reliable supply. This is also to include an assessment of the current market depth where water entitlement is required to be purchased.
- A detailed and consolidated site water balance.
- Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts.
- Proposed surface and groundwater monitoring activities and methodologies.
- Consideration of relevant legislation, policies and guidelines, including the NSW Aquifer Interference Policy (2012), the Guidelines for Controlled Activities on Waterfront Land (2018) and the relevant Water Sharing Plans (available at https://www.industry.nsw.gov.au/water).

Any further referrals to DPIE – NRAR & Water can be sent by email to: landuse.enquiries@dpi.nsw.gov.au.

Any further referrals to (a) Crown Lands; (b) DPI – Fisheries; and (c) DPI – Agriculture can be sent by email to: (a) lands.ministerials@industry.nsw.gov.au; (b) ahp.central@dpi.nsw.gov.au; and (c) landuse.ag@dpi.nsw.gov.au respectively.

Yours sincerely

Alistair Drew
Project Officer, Assessments
Water – Strategic Relations
22 July 2020

Mary Ellen Trimble

From: Alan Bawden <Alan.Bawden@rfs.nsw.gov.au>
Sent: Friday, 31 July 2020 12:14 PM
To: Mary Ellen Trimble
Subject: FW: New Request for Advice - Gunnedah Waste Facility (SSD-8530563) (Gunnedah Shire)
Attachments: Request SEARS SSD TorrensRd REV C.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Good afternoon Mary Ellen

The NSW RFS has received and reviewed your correspondence below and attached document

The land is not mapped BFPL and not adjoining any un-managed bush fire hazard

The facility is located in Fire +Rescue response area for all structural and hazardous fires.

The NSW RFS has no objection and no requirements for the EIS. No further consultation is required as the EIS and RTS phase of the SSD assessment.

Regards

Alan Bawden
Team Leader - Development Assessment and Planning
Planning and Environment Services (North)
NSW RURAL FIRE SERVICE
1/129 West High Street Coffs Harbour
Locked Bag 17 GRANVILLE NSW 2142
p 02 66910400 e pes@rfs.nsw.gov.au
www.rfs.nsw.gov.au **www.facebook.com/nswrfs** **www.twitter.com/nswrfs**
PREPARE.ACT.SURVIVE

From: Mary Ellen Trimble <Maryellen.Trimble@planning.nsw.gov.au>
Sent: Monday, 20 July 2020 4:50 PM
To: Records <Records@rfs.nsw.gov.au>
Subject: New Request for Advice - Gunnedah Waste Facility (SSD-8530563) (Gunnedah Shire)

Good Afternoon,
The Department of Planning, Industry and Environment has received a request for Secretary's Environmental Assessment Requirements (SEARs) for the Gunnedah Waste Facility. The proposed development is a State Significant Development under the Environmental Planning and Assessment Act 1979.

Please provide input into the SEARs for the proposal including details of any key issues and assessment requirements by **3 August 2020**.
The SEARs request can be viewed on the Department's website at https://www.planningportal.nsw.gov.au/major-projects/project/38166. You are encouraged to create a login and submit your response via the Major Projects website.
If you have any enquiries, please contact Mary Ellen Trimble on (02) 9274 6213 at maryellen.trimble@planning.nsw.gov.au.
Regards

Mary Ellen Trimble

From: Brendan.M Hurley <Brendan.M.Hurley@fire.nsw.gov.au>
Sent: Tuesday, 28 July 2020 9:38 AM
To: Mary Ellen Trimble
Cc: Fire Safety
Subject: New Request for Advice - Gunnedah Waste Facility (SSD-8530563) (Gunnedah Shire). BFS20/2263

New Request for Advice - Gunnedah Waste Facility (SSD-8530563) (Gunnedah Shire)

Dear Mary-Ellen,

Fire & Rescue NSW (FRNSW) acknowledge the receipt of your email on the 20th July 2020, requesting input into the preparation of the Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) for the Gunnedah Waste Management Facility.

It has been the experience of FRNSW that waste recycling facilities pose unique challenges to firefighters when responding to and managing an incident. Factors such as high and potentially hazardous fuel loads, facility layout, and design of fire safety systems have a significant impact on the ability to conduct firefighting operations safely and effectively. Consultation with organisations such as FRNSW throughout the development process enables the design and implementation of more effective fire safety solutions that help to mitigate the impact of incidents when they occur.

FRNSW have reviewed the documentation that was provided in support of the development and are conditionally satisfied with the proponents draft fire safety mitigation strategies. FRNSW request that further information be provided regarding the fire water hydraulic calculations (pressure and flow) for the hydrants and sprinklers for the site and the proposed storage arrangements for the lithium-ion batteries.

We request that we be given the opportunity to review and provide comment once approvals have been granted and the project has progressed such that there is more relevant detailed information available.

As additional details become available Fire & Rescue NSW requests to be consulted with respect to the proposed fire and life safety systems and their configuration at the project's preliminary and final design phases.

While there is currently no requirement for a fire safety study, FRNSW may request one be undertaken at a later stage should information be provided such it is deemed that the development poses unique challenges to the response to and management of an incident.

If you have any queries regarding the above please contact the Fire Safety Infrastructure Liaison Unit, referencing FRNSW file number BFS20/2263. Please ensure that all correspondence in relation to this matter is submitted electronically to firesafety@fire.nsw.gov.au.

Regards
Brendan

A/INSPECTOR BRENDAN HURLEY
TEAM LEADER INFRASTRUCTURE LIAISON
FIRE SAFETY | Fire and Rescue NSW
E: brendan.m.hurley@fire.nsw.gov.au
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This message has been scanned for viruses.

Heritage NSW Response to SSD-8530563 Response to SEARs Request to Input for SEARs

Notes:

We have reviewed the documentation provided to inform the SEARS and note the previous levels of disturbance at the site. We also note that an Aboriginal Cultural Heritage Assessment (ACHA) is currently being undertaken for this project. Heritage NSW recommends that any ACHA incorporate the following

1. The [EIS/EA] must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the [development/project] and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be conducted in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH 2010), and be guided by the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011) and consultation with Heritage NSW regional branch officers.

2. Consultation with Aboriginal people must be undertaken and documented in accordance with the Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.

3. Impacts on Aboriginal cultural heritage values are to be assessed and documented in an ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to Heritage NSW.

4. The ACHAR must outline procedures to be followed if Aboriginal objects are found at any stage of the life of the [development/project] to formulate appropriate measures to manage unforeseen impacts.

For further information please contact Roger Mehr, Archaeologist, on 0459075354 or at Roger.Mehr@environment.nsw.gov.au

Crown Lands Division Response to SSD-8530563 Request for Input to SEARs

The proponent has indicated in the request that the proposed development will be accessed via Torrens Road and Quia Road. Records indicate that these roads are currently Crown roads. They will need to be transferred to Gunnedah Shire Council prior to project approval or commencement of works.

See attached diagram for reference.