EPS

MATERIALS RECYCLING FACILITY
ENVIRONMENTAL IMPACT STATEMENT

Prepared for Glenfield Waste Services
Prepared by Environmental Property Services

Cambridge Avenue, Glenfield NSW 2167

ENVIRONMENTAL PROPERTY SERVICES
Reference No. 11009
January 2016

Contact Information and Declaration		
Declaration:	This Environmental Impact Statement (EIS) has been prepared under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979*, and with regard to the form and content requirements in clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000, in respect of a proposed Materials Recycling Facility capable of processing up to 450,000 tonnes per year of non-putrescible waste on the existing Glenfield Waste Site. The opinions and declarations in this EIS are ascribed to Environmental Property Services (EPS) and are made in good faith that such statements are neither false nor misleading. In preparing this EIS, EPS has considered and relied upon information obtained from the public domain, supplemented by discussions between key EPS staff, representatives from governing agencies and independents, including LA Kennett Enterprises Pty Ltd and specialist consultants.	
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Application subject land address:	Cambridge Avenue, Glenfield NSW 2167 Project Application Area: Lot: 1 DP: 113201 Lot: 2 DP: 333578 Lot: 3 DP: 736881 Lot: 3 DP: 735524 Lot: 91 DP: 1155962 Subdivision: Lot: 5 DP: 833516 Lot: 103 DP: 1143827 Lot: 104 DP: 1143827	

Quality Assurance & Version Control Table				
Project: GWS Materials Recycling Facility SSD – Environmental Impact Statement				
Client:	Glenfield Waste Services			
Rev No.	**Date**	**Our Reference**	**Author**	**Reviewer**
Final	21/01/2016	20160121_11009_GWS SSD EIS_Final.docx	T.Kelly	S.McCall
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COMPLIANCE TABLE

Requirement/Comment	Section	Compliance (DP&E)
Secretary's Environmental Assessment Requirements		
The Environmental Impact Statement General Requirements		
Clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000.	Throughout EIS	
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Department of the Environment		
Location of works or actions that may impact on matter of national environmental significance.	Section 5.1.1 and 3.2.	

Requirement/Comment	Section	Compliance (DP&E)
Impacts on each EPBC listed species of ecological community.	Section 8.10.3 & Appendix 10	
Identification of listed species and communities in the project area.	Section 8.10.2 & Appendix 10	
Identification of listed species and communities likely to be significantly impacted, the relevant surveys and environment.	Section 8.10.2, 8.10.3 & Appendix 10.	
Identify residual impacts.	Section 8.10.3 & Appendix 10	
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Details of any relevant Commonwealth, State or Territory legal proceedings.	nil	
Details of the corporation's environmental policy and planning framework.	Appendix 16	

EXECUTIVE SUMMARY

Introduction

This Environmental Impact Statement (EIS) has been prepared on behalf of Glenfield Waste Services Group (GWS) to support a State Significant Development application under Division 4.1 of the *Environmental Planning and Assessment Act 1979*. Under this division, the proposal will require development approval from the Minister for Planning and Environment.

The Proposal is for the construction of a materials recycling facility capable of processing up to 450,000 tonnes per annum of general solid waste (non-putrescible), predominantly consisting of commercial and industrial, and construction and demolition waste.

As the owner-operator of a landfill on the adjacent site, GWS wishes to further reduce waste sent to landfill by increasing the proportion of recycling undertaken. Some of the waste expected to be received at the facility would be diverted from the existing non-putrescible waste facility**.**

Project Description

GWS proposes to develop a materials recycling facility, the 'Project', at Glenfield. The Project will be located across approximately 5 ha. The design avoids existing capped landfill cells and facilitates the recycling of different materials. The project is summarised as follows.

Aspect	Description
Waste Materials	The facility is proposed to receive and process approximately 450,000 tonnes of waste material per year, predominantly made up of the following waste streams: • Construction and demolition waste; • Commercial and industrial waste; • Green waste; and • Virgin excavated natural material/excavated natural material.
Product Output	Recycled products sold back into the construction markets are expected to include: • Recycled aggregates; • Recycled pipe bedding; • Virgin excavated natural material/excavated natural material; • Recycled general fill; • Road base; • Timber mulch; and • Landscaping mulch.
Staff	The proposed facility is anticipated to employ 20 staff during operations and 5 full time equivalents during construction.
Operating Hours	6.30 am to 4.30 pm Monday to Friday and 8.00 am to 4.00 pm Saturday.

Outcomes and Findings

Technical studies for the Project have been completed in accordance with the Secretary's Environmental Assessment Requirements (SEARs) and agency comments and conclude that there will be minimal impact to the surrounding environment. These specialist reports underpin the key findings and mitigation measures outlined in this EIS. The key issues are summarised below:

- **Waste Management** – A waste management strategy will be prepared to achieve best practice waste reduction, waste minimisation and waste management at the proposed materials recycling facility. The nature of the project is to reduce the amount of waste sent to landfill resulting in a positive waste management impact;
- **Air Quality** - The Project, when combined with existing landfilling operations has little effect on the predicted dust environment, either as deposited dust or suspended dust concentrations. The overwhelming contributor to predicted dust levels is measured background dust, with the Project predicted to provide a very small incremental increase;
- **Soils, Geology and Contamination** - The majority of the Project site is overlain with Quaternary alluvial deposits over Ashfield Shale. Topsoil removed from the site will be used on other parts of the GWS site for operation and rehabilitation. The Project is not expected to have any effect on salinity or acid sulphate soils. A desktop and field assessment indicated that there were no potential contaminants or contamination pathways, and consequently the Project site poses a low risk to human health;
- **Hydrology** - The proposed conceptual surface water management system will be designed in detail in a Stormwater and Erosion Management Plan and will capture, contain and manage the design storm runoff. The predicted impact on the nearest receiving waters, the Georges River, will be minimal. The soil and water impact assessment concluded that the Project is not expected to change the level or frequency of floods, nor is the site to be inundated during probable maximum flooding. The annual water balance predicts that on-site sedimentation dams will provide sufficient process water in most years without the need for town water;
- **Odour** - A conservative approach was taken in the odour impact assessment with modelling based on the highest reported emission rate for potentially odourous activities. The modelled predictions are considerably less than recommended criteria at all receptors. Considering the predictions of the modelling, no mitigation measures will be required to control odour;
- **Noise and Vibration –** Initial noise modelling predicted that the proposed morning shoulder operational scenario would exceed project criteria during temperature inversions. Accordingly, it is planned to not operate during the winter morning shoulders (May to August inclusive before 7.00 am) unless monitoring shows that operations can meet the criteria. A noise management plan will be prepared as part of a site operations plan to detail the various operational arrangements and monitoring procedures;
- **Hazard and Risk Management** - A qualitative Level 1 preliminary hazard assessment (PHA) prepared in accordance with SEPP 33 Hazardous and Offensive Development found that the Project will not store hazardous materials as defined in the Australian Dangerous Goods Code or NSW Planning-Storage and Handling of Dangerous Goods Code of Practice 2005. The PHA found that that the Project does not pose a significant risk;

- **Biodiversity** - Investigations identified 86 plant species on the GWS Site, 30 of which are exotic. No threatened plants have been identified, despite several target surveys over several years for those with predicted suitable habitat. Endangered Ecological Communities are found across the Project site, with the River-flat Eucalypt Forest on Coastal Floodplains EEC alongside the Georges River to remain untouched. The Project will impact approximately 9.5 ha of the Cumberland Plain Woodland CEEC and the federally listed Cumberland Plain Shale Woodlands and Shale Gravel Transition Forest CEEC. The removal of the 9.5 ha of Cumberland Plain Woodland is unlikely to affect the extent of the CEEC such that its local occurrence would be placed at risk of extinction. The threatened bats species recorded were Grey-headed Flying-fox, Yellow-bellied Sheathtail-bat, East-coast Freetail-bat, Little Bentwing bat and Eastern Bentwing bat. No other threatened fauna was recorded. A range of compensatory measures are proposed including a biodiversity offset in relation to impacts upon the Cumberland Plain Woodland and nest boxes to offset the loss of tree hollows (which comprise potential habitat for threatened microchiropteran bats) in the PAA. The project was referred to the Commonwealth Department of the Environment, which subsequently determined the project as a controlled action and provided project–specific guidelines. The species listed for assessment in these guidelines are not present on the site, although the Project will impact on 9.5 ha of critically endangered Cumberland Plain Shale Woodlands and Shale Gravel Transition Forest, for which a biodiversity offset strategy has been prepared. This strategy outlines the steps needed toward finalising a biodiversity offset package, which will most likely be based on the need to purchase or retire 284 ecosystem credits;
- **Traffic** - All inbound access for Project vehicles will be via the existing access. The Project will add 350 vehicles movements per day and analysis shows that acceleration and slip lanes will continue to operate effectively, and the western egress at Railway Parade will operate with a high level of service throughout the day. The Project will have no significant impact on the operation of intersections through the local road network, all of which are capable of operating at a good level of service through to 2024 with or without the Project;
- **Heritage** – An Aboriginal Heritage Impact Assessment was prepared for the Project including a field assessment in consultation with the local Aboriginal stakeholders. During the field assessment, two Aboriginal artefacts of low significance were identified within the Project Application Area. Past land uses caused significant land disturbance and so significantly reduced the likelihood of additional sites surviving intact;
- **Greenhouse Gas** - The total GHG savings due to the Project are estimated to be 22 times the GHG generated by the Project;
- **Visual Amenity** – A number of measures will be adopted to mitigate the visual effect of the Project, including a vegetation screen, earth bund and fence. The Project will not significantly change the physical landscape character and therefore there will be no significant adverse visual impact;
- **Socio-Economic** – The Project will provide positive social and economic outcomes for the region by the way of employment generation and the promotion of recycling as an alternative to landfilling. It will also provide significant economic stimulus to the region while the listed mitigation measures will effectively ameliorate actual or perceived negative social impacts; and

- **Cumulative** – The assessment of cumulative impacts has considered all relevant existing and proposed projects in the area. Key cumulative impacts are those associated with traffic, dust, noise, greenhouse gas and biodiversity. Implementation of the identified mitigation and management measures as outlined in the technical studies and addressed in the relevant environmental assessment chapters of this EIS, will result in manageable and acceptable cumulative impacts. With regard to cumulative traffic impacts, the Sydney Intermodal Terminal Alliance (SIMTA) traffic assessment reports that there will only be a minor trip generation on Cambridge Avenue and acceptable delays. Given that the SIMTA report considers a 1 million container capacity, and the final Intermodal will provide 1.7 million container capacity, a viable southern route option appears to be essential to the sustainability of the sub-regional road network. The Georges River Causeway on Cambridge Avenue is predicted to be used by 1800 vehicles per hour in the AM and PM peak in 2024. The Project is estimated to generate 24 trips in the AM peak (1.4% of the two way flow) and 8 trips in the PM peak (0.5% of the two way flow). It is predicted that Project vehicles will constitute less than 1% of two way flows in 2024. The minor additional trip generation added from the GWS Project will have no significant impact on the capacity or general operations of the causeway.

An environmental risk assessment includes a risk rating based on the likelihood and consequence of each potential risk and accounts for identified mitigation measures, so leaving a residual risk ranking. The assessment concludes that the Project will not result in any unacceptable environmental risks.

An independent Quantity Surveyor report has been prepared for the Project to estimate the construction cost and capital investment value in accordance with the SEARs. The estimated construction cost for the materials recycling facility is $2,330,000 excluding GST. It is also estimated that the materials recycling facility will employ 20 staff during the operational stage of the development and approximately 5 full-time equivalent jobs during construction over and above sub-contracted workers on site.

Conclusion

Overall, this EIS concludes that the proposed materials recycling facility is in the public interest, does not pose significant environmental impacts, and approval is recommended.

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ABBREVIATIONS

Abbreviation	Description
ABS	Australian Bureau of Statistics
AHD	Australian Height Datum
CBD	Central Business District
C&I waste	Commercial and industrial waste
C&D waste	Construction and demolition waste
DP&E	Department of Planning and Environment
DGRs	Director-General's Requirements
DEC	Department of Environment and Conservation
DECCW	Department of Environment, Climate Change and Water
EPS	Environmental Property Services
EIS	Environmental Impact Statement
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPA	Environment Protection Authority
EPL	Environment Protection Licence
GWS	Glenfield Waste Services
GHG	Greenhouse Gas
MIC	Moorebank Intermodal Company
NGA	National Greenhouse Account Factors
OEH	Office of Environment and Heritage
PAA	Project Application Area
POEO Act	*Protection of the Environment Operations Act 1997*
RTA	Roads and Traffic Authority
RMS	Roads and Maritime Services
RAV	Restricted Access Vehicle
RAPs	Registered Aboriginal Parties
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SIMTA	Sydney Intermodal Terminal Alliance
TfNSW	Transport for New South Wales
TLALC	Tharawal Local Aboriginal Land Council
vpd	Vehicles Per Day

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1 INTRODUCTION

This Environmental Impact Statement (EIS) has been prepared to demonstrate the environmental, social and economic matters associated with the proposed materials recycling facility at 2 Cambridge Avenue, Glenfield NSW. Environmental Property Services (EPS) is acting on behalf of the Glenfield Waste Services (GWS) Group in preparing this EIS. The EIS will be determined as State Significant Development (reference: SSD-6249) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

EPS has prepared this EIS in accordance with the requirements of the Secretary of the Department of Planning and Environment (DP&E). The Director-General's Requirements (DGRs) were issued on 19 December 2013, a copy of which is attached in Appendix 1. Due to determination by the Commonwealth Department of the Environment (DOE) on 11 September 2015, revised requirements were issued by DP&E on 26 November 2015 in the form of Secretary's Environmental Assessment Requirements (SEARs). A copy of the SEARs is provided in Appendix 1. Specialist consultant assessments have been undertaken in accordance with the SEARs.

The following sections of the EIS examine the site location, the relationship of the proposal to the location, the environment and the planning qualities of the development. The EIS provides the supportive documentation for the Development Application to seek consent for the proposal.

The GWS site has been operated by L.A Kennett Enterprises Pty Ltd as a quarry, a non-putrescible landfill and resource recovery centre for more than 30 years. Straddling two Local Government areas, consent for the site's use as a waste depot was obtained from Campbelltown Council in June 1979 and from Liverpool Council in January 1991 (copies of the existing consents are attached at Appendix 2).

GWS seeks to reduce waste sent to landfill by increasing the portion of recycling undertaken onsite. Commensurate with typical activities within the Sydney Metropolitan Area, the disposal of waste to landfill has historically been the primary approach to waste management at Glenfield. Recycling presents a more environmentally sustainable option compared to landfilling. In addition to assisting to ease the pressure on Sydney's well documented landfill supply constraints, recycling conserves raw materials, energy and water, reduces the production of greenhouse gases and other pollutants, and contributes to the achievement of the NSW State Government's recycling goals set in the NSW 2021 document and various waste strategies.

The objectives of the Project are to:

- Provide adequate, safe and efficient recycling opportunities for a variety of 'Commercial and Industrial' (C&I) and 'Construction and Demolition' (C&D) wastes;
- Ease the pressure on Sydney's landfill supply constraints;
- Provide an environmentally sustainable alternative to landfilling; and
- Contribute to the NSW State Government's recycling goals set in the NSW 2021 document and relevant waste strategies.

2 SITE DESCRIPTION

The following information provides an overview of the regional and local context of the proposal, surrounding development and the location of key infrastructure and environmental features.

2.1 Regional Context

The GWS Site is approximately 30 km south west of the Sydney Central Business District (CBD), and approximately 22 km west of Port Botany. The south west region of Sydney is one of Australia's fastest growing urban regions, characterised by a strong economy and unique natural environment. In 2005, the then NSW Department of Planning and Infrastructure (DPI), now Department of Planning and Environment (DP&E) released a 'South West Growth Centre' plan to provide housing, employment opportunities and regional infrastructure within the Liverpool, Camden and Campbelltown Local Government Areas, with an anticipated population growth of 300,000 people.

The key transport infrastructure servicing the region is:

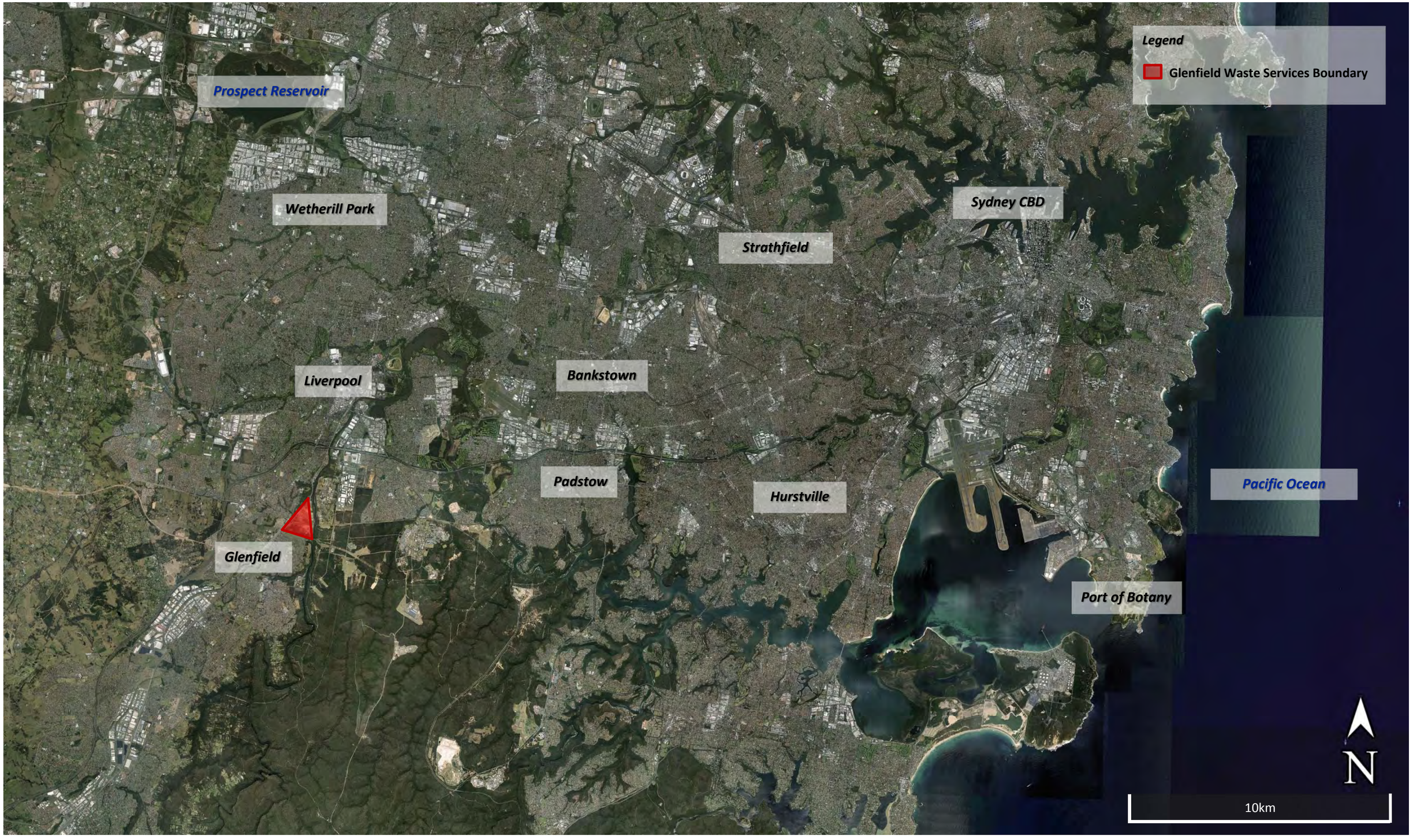
- Hume Highway;
- M5 – South Western Motorway;
- M7 Motorway;
- Cumberland and South Passenger Lines;
- Southern Sydney Freight Line; and
- East Hills Rail Line.

Figure 2-1 illustrates the regional context of the site and key transport infrastructure while Figure 2-2 provides an oblique aerial view of the site.

2.2 Local Context

The proposed materials recycling facility is to be located at the southern end of the GWS site, which consists of northern and southern portions divided by the East Hills Rail Line. The northern portion is predominantly within Liverpool City Council Local Government Area (LGA), while the southern portion is within Campbelltown City Council LGA.

The GWS Site is bounded to the east by the Georges River, the west by the Southern Sydney Freight Line and is traversed by the East Hills Rail Line which connects to the northern extension of the South West Rail Link. The new Glenfield Transport Interchange and Glenfield Station, which opened in September 2012, are approximately 500 m south west of the GWS Site. The proposed Cube intermodal site (SIMTA) and Moorebank Intermodal Company (MIC) freight intermodal facilities, which will rely on the GWS site for rail access, join the GWS site to the east. Figure 2-3 provides an oblique aerial view of the site in the context of the intermodal proposals.



Map Title:	Figure 2-1: Regional Context of the GWS site							**Date:**	30 July 2015
Location:	Glenfield, NSW Australia	**Author/ Reviewer:**	AT/MS	**Version No:**	V01	**Map/ DWG No:**	**1** of **1**	**Job Ref:**	11009

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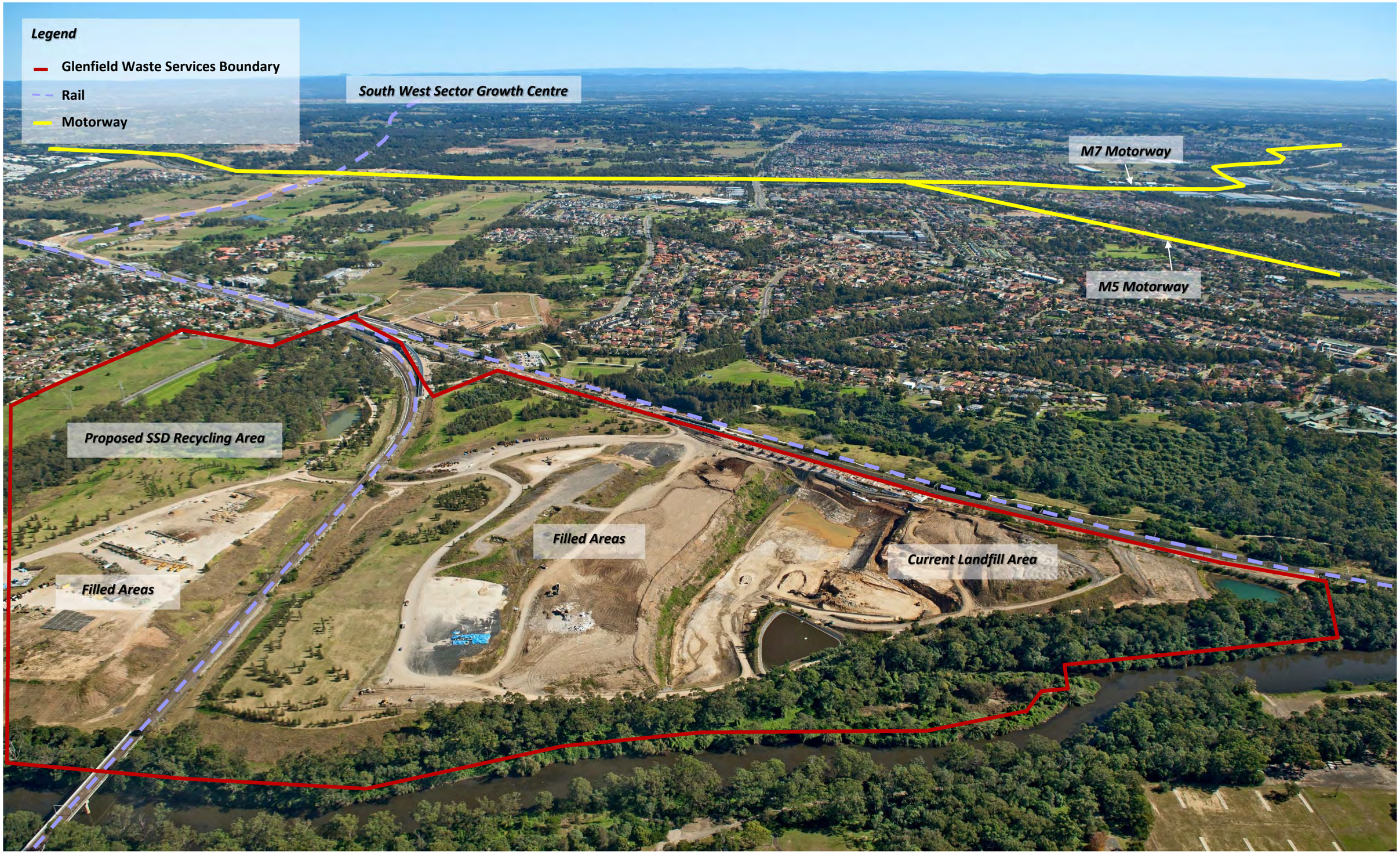

Map Title:	Figure 2-2: Aerial View of GWS Site							**Date:**	30 July 2015
Location:	Glenfield, NSW Australia	**Author/ Reviewer:**	AT/MS	**Version No:**	V01	**Map/ DWG No:**	**1** of **1**	**Job Ref:**	11009

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Map Title:	Figure 2-3: Aerial View of GWS Site and Proposed Intermodal Sites							**Date:**	30 July 2015
Location:	Glenfield, NSW Australia	**Author/ Reviewer:**	AT/MS	**Version No:**	V01	**Map/ DWG No:**	**1** of **1**	**Job Ref:**	11009

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2.3 Site Description

The portion of the GWS site north of the East Hills Rail Line is used for sand/sandstone extraction and for non-putrescible solid waste landfilling. The portion of the site south of the East Hills Rail Line contains completed landfill cells, the principal site access, administration and ancillary buildings, waste skip storage, and the current waste recycling operation. The Project refers only to the proposed materials recycling facility and the Project Application Area (PAA) as indicated in Figure 2-4.

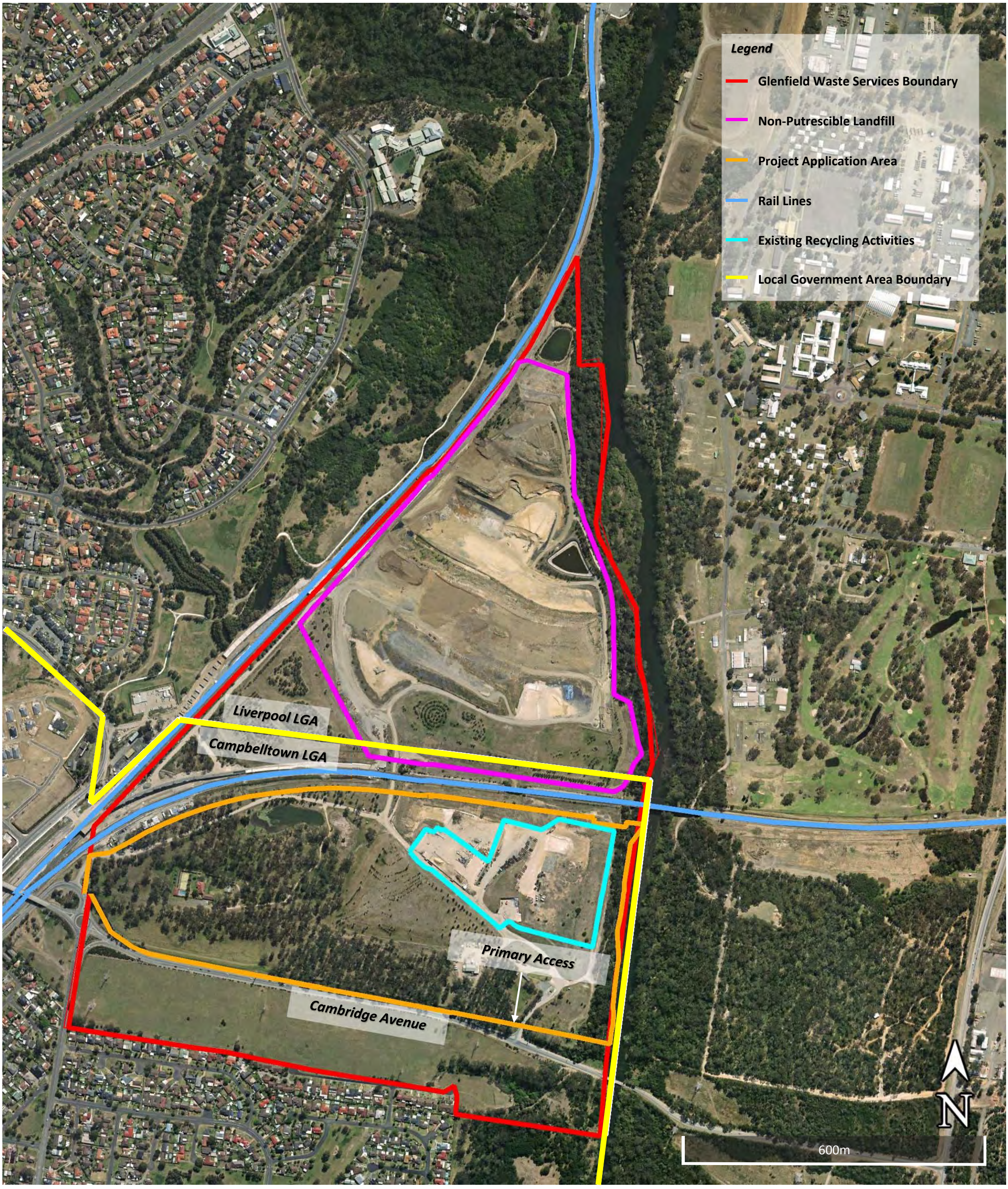
2.3.1 Zoning

The *Campbelltown (Urban Area) Local Environmental Plan 2002* (CLEP 2002) is the current local environmental planning instrument that applies to the southern portion of the GWS Site. The majority of the southern portion, including the PAA land, is currently zoned 1(a) – Rural A zone under the CLEP 2002. Campbelltown City Council is currently preparing a Standard Instrument Local Environmental Plan (SILEP) in response to the State Government's requirement for all NSW councils to adopt new planning controls based on state-wide standards. Council has proposed to rezone certain parcels of land within the southern portion of the GWS site under the SILEP. The proposed zonings are zone RE1 – Public Recreation, and zone SP2– Infrastructure.

Campbelltown Council considered that it was not appropriate to rezone the remaining land under the SILEP. The remaining land was classed as a 'deferred matter' along with a number of other deferred matters within the Campbelltown LGA. Accordingly, GWS Group prepared a Planning Proposal to amend the SILEP and rezone the remaining land as IN1 – General Industrial and SP2 - Infrastructure. A gateway determination has been received for the Planning Proposal with the amended LEP planned to have been finalised in 2015.

The PAA falls entirely within the portion of land proposed to be zoned IN1 – General Industrial. The proposed materials recycling facility is permissible within the prescribed zone IN1 – General Industrial in accordance with clause 121(1) of the *State Environmental Planning Policy (Infrastructure) 2007*. Further, the proposal is permissible within the existing 1(a) – Rural zone under the CLEP 2002 as it is equivalent to the prescribed zone RU2 – Rural Landscape. The permissibility of the proposal is discussed further in Section 5.3.5.

The proposed materials recycling facility is compatible with the proposed IN1 General Industrial zoning and the surrounding land.



Map Title:	Figure 2-4: Project Application Area							Date:	30 July 2015
Location:	Glenfield, NSW Australia	Author/ Reviewer:	AT/MS	Version No:	V01	Map/ DWG No:	1 of 1	Job Ref:	11009

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2.3.2 Allotments and Landowners

The proposed recycling facility will be located within the PAA (Figure 2-4), across the following parcels of land:

- Lot 1 DP 113201 Owner: JC & FW Kennett Pty Ltd
- Lot 2 DP 333578 Owner: JC & FW Kennett Pty Ltd
- Lot 3 DP 736881 Owner: Figela Pty Ltd
- Lot 3 DP 735524 Owner: Figela Pty Ltd
- Lot 91 DP 1155962 Owner: JC & FW Kennett Pty Ltd

A site identification plan illustrating the land titles and ownership is included at Appendix 3.

Separate to the PAA, this application includes a subdivision of land across the following parcels:

- Lot 5 DP 833516;
- Lot 103 DP 1143827; and
- Lot 104 DP 1143827.

Further information regarding the proposed subdivision is included in section 3.3.

2.4 Existing Operations

The following activities scheduled under the *Protection of the Environment Operation Act, 1997* (POEO Act) are undertaken within the GWS Site:

- Excavation of winnable material, including sand, clay, shale and sandstone;
- Management of non-putrescible solid waste, which includes sorting the material and recycling a portion of the waste;
- Crushing of excavated and imported sandstone material for use as aggregate or road base product; and
- Disposing of waste to landfill.

GWS carries out its activities in accordance with the provisions of the Environmental Protection Licence (EPL) (EPL 4614) as issued by the Environmental Protection Authority (EPA) under Schedule 1 of the *Protection of the Environment Operations Act 1997*.

3 PROJECT DESCRIPTION

This section outlines the specific details of the proposed materials recycling facility and addresses the waste management matters requested in the SEARs.

3.1 Definition

The materials recycling facility is defined in accordance with Division 23 of the *State Environmental Planning Policy (Infrastructure) 2007* as a waste or resource management facility. The following facilities are defined under Division 23 of the SEPP Infrastructure:

- Resource recovery facility;
- Waste disposal facility;
- Waste or resource management facility; and
- Waste or resource transfer station.

The proposed materials recycling facility is best defined as a '*resource recovery facility*' or a '*waste or resource transfer station*':

> *'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.*
>
> *'waste or resource transfer station' means a facility 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.*

3.2 Description

3.2.1 Overview

The materials recycling facility, the 'Project', will have the capacity to process up to 450,000 tonnes per annum of non-putrescible waste, primarily consisting of 'Commercial and Industrial' (C&I) and 'Construction and Demolition' (C&D) waste for reuse in secondary markets. The location has been selected to address the Office of Environment & Heritage (OEH), specifically the Environment Protection Agency's (EPA's), preference for licencing a waste recycling facility on unfilled land on account of potential land contamination delineation and management.

The Project will be located as illustrated in Figure 3-1, with separate operational hardstand areas based on the following waste streams:

- **Area 1:** Green waste, timber, cardboard, paper, plastics and metal, etc;
- **Area 2:** Recycling area for construction and demolition waste;
- **Area 3:** Virgin Excavated Natural Material (VENM)/Excavated Natural Material (ENM) processing; and
- **Area 4:** Expansion area for VENM/ENM processing.

The Project layout avoids existing landfill cells and facilitates access and operational areas for recycling of different materials within each designated area. The hardstand areas will be surfaced with crushed concrete or aggregates.

The Project will use the existing vehicular access points along Cambridge Avenue and Railway Parade to safely access and egress the site throughout both the construction and operational phases of the development. The proposed access is illustrated in Figure 3-1.

Map Title:	Figure 3-1: Project Application Area, recycling facility footprint and access road							**Date:**	30 July 2015
Location:	Glenfield, NSW Australia	**Author/ Reviewer:**	AT/MS	**Version No:**	V01	**Map/ DWG No:**	**1** of **1**	**Job Ref:**	11009

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3.2.2 Materials Received

The materials recycling facility will recycle and process waste produced by the construction and demolition, and commercial and industrial sectors, to produce goods for resale. Strict quality controls will ensure the quality of the incoming materials, and this in turn will underpin the quality of the final saleable product. Specifically, this quality control management will:

- Ensure the quality of incoming materials;
- Avoid raw material stockpile cross contamination; and
- Allow tracking of the materials through the facility.

Based on the experience of GWS's existing operations, the quantity of waste generated by the proposed facility that cannot be reused or recycled will be minimal. It is estimated that 10% of material received by the facility will not be suitable for re-use in secondary markets. This may be due to factors such as quality of the product or influence of market demand. Any residual material not suitable for re-use will be disposed of in the existing GWS landfill.

Waste classifications which are to be accepted and processed are:

- C&I waste (typically paper/cardboard, plasterboard, ceramics, natural and manufactured timbers, metal, green waste, plastics (hard and soft), and glass);
- C&D waste (asphalt, rock, concrete, brick, crushed concrete, concrete plant washout, and concrete waste from batching plants);
- Virgin Excavated Natural Material (VENM) – including sandstone;
- Excavated Natural Material (ENM); and
- Waste materials generally.

The proposed facility will not accept hazardous materials such as asbestos or chemical waste. GWS will implement appropriate management procedures in accordance with the '*Guide for Preventing Asbestos in Demolition and Construction Waste'* prepared and published by WorkCover NSW. This guide provides practical assistance and best practice guidelines for the construction and demolition waste industry to minimise any potential risk of contamination. Additionally all personnel will undertake asbestos awareness training as part of inductions and ongoing training.

3.2.3 Materials Produced

Recycled products will be sold back into construction and other markets. The produced materials are expected to include those listed in Table 3-1, although additional products are likely to be produced, depending on demand. Products will be segregated into interim material stockpiles, prior to any required blending to meet specifications. Most products will undergo a series of testing to ensure that they meet the consumer specification. These tests will vary by product, and construction materials in particular will be subjected to a range of chemical and physical parameter testing.

Table 3-1: Materials Produced

Material/Product Type	Applications
Recycled Aggregates	Landscaping, filter material, concrete products, pipes manufacture, asphalt products, road applications, backfill, concrete blocks and drainage materials.
Recycled Pipe Bedding	Bedding sand and fill under concrete slabs.
VENM/ENM	Engineered and non-engineered fill applications such as subgrade replacement, reinforced earth wall fill and pavement applications.
Recycled General Fill	Filter material, select fill, re-enforced earth wall select fill and fill for structural applications.
Road base	Engineered and non-engineered applications, which applies to and is not limited to local roads, highways, hardstand and car parks.
Timber Mulch	Landscaping, chicken bedding, agriculture purposes and council use.
Green Waste	Erosion control and composting.

3.2.4 Project Design and Layout

The materials recycling facility is to be operated in four separate areas, with each area receiving and processing different waste streams. An indicative site layout plan has been prepared as illustrated in Figure 3-2. The facility will be accessed via a one-way internal road, with access via the existing GWS facility entry. Once on the GWS site, signage will ensure recycling traffic for the facility avoids entering the landfill and will provide separate access arrangements for the areas covered by the separate EPA licenced areas. All material will be received through controlled access points with areas 1 to 4 used for stockpiling, storage, and processing of materials. Access to these areas will be via gated entries, with no unsupervised direct access for customers from the main one-way road.

Figure 3-3 shows operational flow paths at the proposed facility.

- **Area 1** – This area will receive and separate all green waste, and commercial and industrial waste. Material received in Area 1 will be visually inspected upon arrival and charged based on weight. This area will be operated by approximately 2-3 full-time employees;
- **Area 3** – This area will receive and process all construction and demolition waste streams, as well as VENM and ENM. There are two access points to Area 3, including a weighbridge and double width gates to allow materials received and purchased to be calculated and charged; and
- **Areas 2 and 4** – These areas will service Area 3 and will be used to process and stockpile C&D waste, VENM and ENM materials. Area 2 will contain additional equipment storage areas and additional car parking.

Stockpile heights and volumes will vary over time due to the balance of waste receival, production and dispatch. For the purpose of assessment, it was assumed that stockpiles would be 7 m high, although actual heights can be expected to range from 0 to 20 m.

NOTES
- Areas shown are indicative only and are not survey accurate
- Do not scale off this plan

N

Secondary Water Quality Control Pond (WQCP) to provide water for dust suppression and site operations

Secondary WQCP

Primary WQCP

Main access road 8m wide (gravel)

Turn drain to pipe under road to Primary WQCP

Raw product stockpile 75,000 t

*Site area to be surrounded by a 0.5m earth bound

Area 4

Processing zone

One way road

Dish drain

LOT 91
DP 1155962

Chain mesh fence

Processed product stockpile 75,000 t

20,000L Self-bunded above ground fuel tank

Self contained oil storage

Double gate (width 9m)

Pedestrian walkway

Single gates (width 4.5m)

Standard size skip bins

Water cart

Front end loader

Bin (rubbish)

Sheds

Carparks x 2

Concrete 15,000 t

Exit Entry

Exit Entry

175 t 175 t 175 t
Aggregate

Processed product stockpile 12,500 t

Processed product stockpile 12,500 t

Processing zone

30m Turning circle

Area 3

Area 2

Processing zone

Metal

Timber

Shed

Exit

Secondary WQCP

Glass & plastic

Carparks x 2

Entry shed

Primary WQCP

C/board

Paper

Area 1

Entry

Fence

One way road

Green waste 2

Green waste 1

Mixed construction and demolition waste 25,000 t

Processed product stockpile 25,000 t

Raw product stockpile 25,000 t

25m

Existing landscape, acoustic mound & screen (to be retained)

MAIN ENTRANCE

CAMBRIDGE AVENUE

Map Title:	Figure 3-2: Site Layout Plan							**Date:**	30 July 2015
Location:	Glenfield, NSW Australia	**Author/ Reviewer:**	AT/MS	**Version No:**	V01	**Map/ DWG No:**	**1** of **1**	**Job Ref:**	11009

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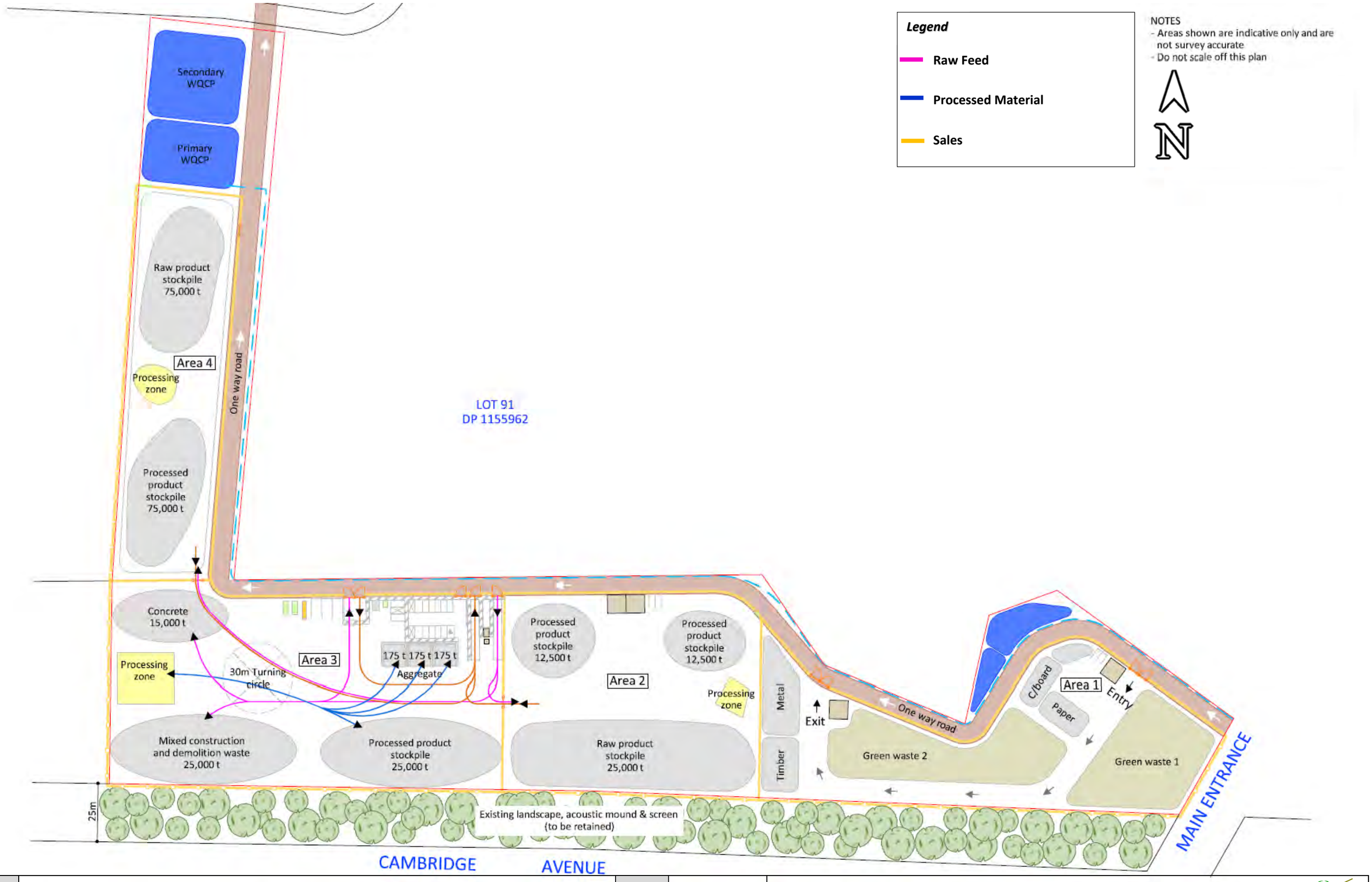

Map Title:	Figure 3-3: Operational Flows							**Date:**	30 July 2015
Location:	Glenfield, NSW Australia	**Author/ Reviewer:**	AT/MS	**Version No:**	V01	**Map/ DWG No:**	**1** of **1**	**Job Ref:**	11009

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3.2.5 Site Development

A number of upgrades and additional facilities will be required, including:

- Clearing and grading to provide a level working area for the storage of materials and operation of machinery;
- Spreading and compaction of hardstands;
- Mulching and recycling of trees;
- Installation of stormwater management systems;
- Provision of other utility services (electricity, communications, etc.) as required;
- Installation of operational fixtures including office and weighbridge;
- Construction of internal one-way road and parking area;
- Construction of material storage bays; and
- Landscaping, fencing and signage.

During construction, access to and egress from the facility will be via existing entry points located along Cambridge Avenue and Railway Parade. The internal road network used by the current landfill operations will provide sufficient trafficable width for heavy vehicles to safely enter and exit.

It is anticipated that all construction will occur at one time and that there will be no development staging.

3.2.6 Operations

Operations will primarily comprise of:

- Receipt of waste materials:
    - It is anticipated that majority of the material received will be source separated, however there will be capacity to sort mixed loads;
    - All material entering the facility will be visually inspected upon arrival; and
    - Material received will be charged based on weight and/or volume.
- Separation of C&I materials into different waste streams and stockpiled in relevant areas. Mechanical or manual sorting and processing will then be undertaken:
    - Green waste and timber is to be stockpiled for mulching and sale;
    - Paper/cardboard and plastics are to be separated for baling and recycling; and
    - Timber, metals and glass are to be separated for recycling.
- Processing of C&D materials using the following methods depending on the type of treatment required:
    - Breakdown/pre-processing — material that is delivered in large sections (over 600 mm) is first to be broken down into manageable sizes using a pulveriser attached to an excavator;
    - Initial processing (pulverising) to remove reinforced steel that will be separated and stored until taken off-site for recycling;

- The pulverised material will then be crushed using mobile plant;
- The crushed material will then be blended into finished product and stockpiled in separate signposted stockpiles; and
- The finished product will tested as relevant prior to sale.

Resource recovery exemptions under Part 9, Clauses 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014 that will apply, include, but are not restricted to, the following:

- Excavated natural materials;
- Excavated public road material;
- Plasterboard;
- Raw mulch;
- Reclaimed asphalt pavement;
- Recovered aggregate;
- Recovered fines (batch and continuous); and
- Recovered glass sand.

Clause 37 of the Environment Operations (Waste) Regulation, 2014 notes that an occupier of a facility, not required to pay contributions under Section 88 of the POEO Act, must record wastes in accordance with the Waste Levy Guidelines. Chapter 2 of these guidelines layout the specifics of recording format and data handling. GWS will apply these procedures.

3.2.7 Plant and Equipment

The following mobile machinery is proposed to be used, although with the passage of time, these items may be replaced with similar items:

- 4 x front end loaders (Cat 972 or similar);
- 1 x wheel loader (Cat 950 or similar);
- 3 x excavators with buckets;
- 1 x excavator with pulveriser;
- 1 x water cart ;
- 1 x jaw crusher;
- 1 x cone crusher;
- 1 x screen; and
- 1 x shredder.

3.2.8 Project Particulars

Access

Trucks will enter via Cambridge Avenue to an inspection point and then proceed to a receival area. A one-way internal road will be constructed, which will guide traffic along the perimeter of the facility before re-joining the existing GWS internal road network for egress at Railway Parade (Figure 3-1).

Hours of Operation

Consistent with current hours, the recycling facility is proposed to generally operate between the hours of 6.30 am to 4.30 pm Monday to Friday and 8 am to 4 pm on Saturdays. Access until 6 pm Monday to Friday will be required for maintenance. Occasional out-of-hours deliveries and dispatch will be required to cater for night road works and similar operations. It is expected that any such out-of-hours work will be infrequent and unobtrusive. There is no intention to process materials out of hours.

Staff

The proposed recycling facility is anticipated to employ 20 staff during the operational stage of the development. In addition, during the construction period, approximately 5 full time equivalent jobs will be created.

3.3 Subdivision

The proposal includes subdivision of land along the eastern boundary of the GWS Site. An Indicative Subdivision Plan has been prepared by Burton & Field Pty Ltd illustrating the proposed land to be subdivided. A copy of the Indicative Subdivision Plan is attached at Appendix 3.

The purpose of the subdivision is to distinguish the parcel of land to be included as part of the Biodiversity Offset Strategy and which is proposed to be dedicated to DP&E's Office of Strategic Lands (OSL) to be used as Regional Open Space.

A final plan of subdivision will be completed in consultation with the OSL and the DP&E. Consultation is being undertaken with Stephen Dewick, Senior Manager Divestments of OSL, and Chris Ritchie, Director Industry Assessments at DP&E.

4 PROJECT JUSTIFICATION

4.1 Policy Context

The proposed development is consistent with and would contribute to the delivery of NSW's recycling strategies and objectives for both commercial and industrial waste and construction and demolition waste streams.

The *NSW 2021: A plan to make NSW number one* document sets a target for recycling to increase to levels of 63% of commercial and industrial waste and 76% of construction and demolition waste by the year 2014. The Draft *NSW Waste Avoidance and Resource Recovery Strategy 2013-21* sets higher targets again.

In February 2013 the State Government released an additional waste and resource recovery initiative titled *Waste Less, Recycle More for NSW.* Amongst other measures, the initiative aims to 'enhance recycling and alternative waste treatment infrastructure across NSW'. The document states that overall an additional 1,000,000 tonnes of waste needs to be recycled annually (based on 2010/2011 data) to achieve the nominated *NSW 2012* targets. The proposed facility could process almost half of this.

The creation of the proposed development would substantially contribute to these reported target progress figures and divert a large amount of waste which is currently going to landfill. This recycling has the added benefit of reducing the burden on extractive resources.

The development is also consistent with other NSW recycling frameworks and studies including:

- *NSW Waste Avoidance and Resource Recovery Strategy 2007 (Department of Environment and Climate Change (now Office of Environment and Heritage), 2007)*, which 'provides a framework for contributing to the minimisation of environmental harm from waste disposal and through the conservation and efficient use of our resources';
- Draft *NSW Waste Avoidance and Resource Recovery Strategy 2013-21 (*Office of Environment and Heritage), which sets a vision to enable the whole NSW community to improve environment and community well-being by:
    - Reducing the environmental impact of waste;
    - Using resources more efficiently; and
    - Keeping materials circulating in the productive economy which can also help to create jobs and grow the NSW economy.

  The Strategy objective and targets include that by 2021–22 recycling rates increase for commercial and industrial waste from 57% (in 2010–11) to 70%, construction and demolition waste from 75% (in 2010–11) to 80%, and increase the waste diverted from landfill from 63% (in 2010–11) to 75%. The proposed facility would directly address these targets;

- *Reducing Waste: Implementation Plan 2011-2015 (Department of Environment and Climate Change (now Office of Environment and Heritage), 2011).* Amongst other initiatives, this plan refers to 'actively promoting and assisting waste and resource recovery infrastructure operators … to understand and negotiate government regulations and planning processes and promote innovative infrastructure solutions.'; and
- *Report into the Construction and Demolition Waste Stream Audit 2000-2005 (Department of Environment and Climate Change (now Office of Environment and Heritage), 2007).* The primary purpose of this study was to accurately determine the composition of C&D waste disposed of in the Sydney Metropolitan Area. The results of the study indicated that there are opportunities for recovery of up to 40% of the C&D waste that is currently lost to landfill. The proposed facility would directly address this opportunity.

GWS support these initiatives and is pleased to be able to contribute to improved environmental outcomes for the State.

The *Draft NSW Waste Avoidance and Resource Recovery Strategy 2013-21* also clearly outlines the benefits of recycling and waste avoidance which are considered relevant and supported by this proposal. A summary from the draft Strategy about importance of waste includes:

> ***Waste drains resources from the environment and the economy***
> *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 keeps them in the productive economy for longer. This has two benefits for the environment: it lowers the demand for new resources and reduces the need to absorb waste. Disposing of waste to landfill means that valuable resources are lost and landfill space is reduced.*
>
> ***The amount of material entering the waste management system is large and growing***
> *Just over 17 million tonnes of material entered the NSW waste management system in 2010–11, up from 16.3 million tonnes two years earlier. While a large percentage of this material was ultimately recycled, this still represents a significant amount of material moving through our economy as well as physically through our neighbourhoods by road and rail. Waste collection, transport, processing and recovery/ disposal have a major impact on existing infrastructure and increase demand for new infrastructure. Waste management is an essential service that every community expects to benefit from.*
>
> ***Waste impacts on the environment***
> *Managing and disposing of waste presents risks to the environment. These include the creation of odour, noise, dust, litter, dumping and greenhouse gas emissions and the potential contamination of land and groundwater and harm to flora and fauna. The risks to the environment rise as more waste is generated and environmental damage has repercussions for our economy. Protecting the environment will also help protect the state's long-term economic growth.*

Waste has social and health impacts

The community feels the impact of improperly managed waste in many different ways. It can be detrimental to public health as odour, noise, dust, vermin, toxic substances and wastes of particular concern, like asbestos, can cause significant health problems. The same issues can impact on the amenity of local communities to the detriment of public well-being. Waste can also pollute our environment and leach toxins or nutrients into groundwater and land. Litter and illegal dumping can reduce the amenity of public spaces and are anti-social behaviours.

Waste management is a key part of the economy

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 worth $4.5 billion. As NSW generates 31% of Australia'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.

Recycling generates jobs

In 2009, Access Economics estimated that over 22,000 full-time equivalent staff were engaged directly in recycling in Australia. Nearly 7000 staff were involved in landfill operations and more than 24,000 indirect jobs flowed from this. This means there are 9.2 full-time equivalent employees directly involved in recycling for every 10,000 tonnes of material processed, compared with only 2.8 jobs for an equivalent amount of waste sent to landfill.

Reducing waste can save businesses money

In 2012 it cost Australian businesses (excluding mining and agriculture) an estimated $2.2 billion to manage the waste they generated through the costs of waste services. In addition, businesses spent an estimated $24.3 billion on the cost of materials that were discarded as part of the creation of a product, before it left the business. For NSW businesses, this equates to about $825 million for disposal and recycling services and $7.8 billion in wasted materials every year. This inefficient use of resources highlights waste that could be avoided and money saved.

People in NSW have high expectations about waste and recycling

Waste-related issues have consistently been identified by the NSW community as environmental issues of concern in the Who Cares About the Environment? survey. The survey – which has been running since 1994 and is the only one of its kind in Australia – tracks the attitudes, knowledge and behaviour of people in relation to the environment. In 2012, the NSW community again identified waste among the leading issues they expect the Government to address. Litter was identified as a specific issue.

4.2 Need for the Proposal

The dynamics of the NSW waste industry have changed considerably over the last decade, with the drive to set up facilities for recycling making both economic and environmental sense. GWS has the opportunity to provide these recycling services to greater South Western Sydney.

The location presents a viable opportunity for transport across multiple LGAs with diverse needs. Located within five kilometres of the South West Sector Growth Centre, the Project is well located to facilitate demand for recycled construction materials in this planned growth area of Sydney. Major road infrastructure is accessible and earmarked for upgrades under the State's transport policy. Additionally, the potential for rail to be used into the future for origin and destination of a range of materials is also a valuable characteristic of the PAA.

The demand for such a facility will enhance the recycled product approach to waste management by providing competitive rates to the broader community.

4.3 Site Suitability

The PAA is ideal for a recycling facility for the following reasons:

- The adjoining GWS Facility has been operating for decades as a resource recovery and landfill and the upgrade of additional recycling facilities is complementary to this;
- It is ideally located near transport corridors, with close access to the intersection of the M5 and M7 Motorways. It is also adjacent to the Southern Sydney Freight Line with the potential for future rail delivery and dispatch;
- It is close to the South-West Growth Centre, which will be a considerable source of construction waste materials and a consumer of recycled construction products over the coming decades;
- The large site enables operations to be buffered from surrounding land uses; and
- There is a track record of operations (including associated environmental management) within the local community without complaint.

The desire to improve recycling outcomes is clearly identified in the various waste related policies of NSW. As the South West Growth Centre grows to accommodate 110,000 dwellings over the next 30 years, the demand for access to resource recovery facilities will increase in parallel.

The proposed recycling operations are adjunct to the GWS Site, which has operated as a landfill for in excess of 30 years, represents a logical solution to the well documented waste management and landfill supply constraints facing the Sydney Metropolitan area.

4.4 Alternatives

During early discussions, two project alternatives were suggested by GWS. The first alternative was to expand the existing recycling operations on the landfill and the second, the 'do nothing' option.

4.4.1 Existing Recycling Facility Expansion

The expansion alternative would entail the current recycling facility to be expanded and developed over existing capped landfill cells. Alternative locations within the GWS site were considered for the proposed facilities. Originally GWS's preference was to situate the recycling infrastructure on a previously filled portion of the site, away from biodiversity constraints. However discussion with the Environmental Protection Authority indicated that their strong preference was for the development to occur on non-filled land to enable management of potential land contamination delineation and EPL issues.

4.4.2 'Do nothing' option

Over the last decade the NSW waste industry has changed significantly with the drive to set up additional recycling facilities, which makes both environmental and economic sense. The NSW State Government released an additional Waste and Resource Recovery Initiative, which aims to 'enhance recycling and alternative waste treatment infrastructure across NSW'. The 'Do Nothing' option would not be consistent with the initiatives and strategies of the NSW State Government and would not be a positive viable outcome for the community of greater South Western Sydney.

4.5 Benefits of the Proposal

GWS plans to further reduce waste sent to landfill by increasing the volume of recycling undertaken onsite. In part, the Project would receive waste that would have normally been sent to the existing non-putrescible landfill. The site is well established as a waste and recycling facility and has sufficient land area to accommodate the proposal. Existing site infrastructure also make it suitable for colocation of the proposal with the existing landfill, including access roads, stormwater dams and screening.

The Project is consistent with and would contribute to the delivery of the NSW's recycling strategies and initiatives for waste. Based on the socio-economic analysis, the Project would provide benefits to the local community through direct and indirect employment opportunities during the construction and operational phases.

The Project will facilitate the needs of the local community and wider Sydney region through the use of sustainable resource recovery.

5 STATUTORY CONTEXT

The following section outlines the key legislation, planning instruments and existing approvals relevant to the proposed development. The following legislative instruments applying to the site are listed below:

- *Environment Protection and Biodiversity Conservation Act 1999 (Cth);*
- *Environmental Planning and Assessment Act 1979;*
- *Protection of the Environment Operations Act 1997;*
- *State Environmental Planning Policy (State and Regional Development) 2011;*
- *State Environmental Planning Policy (Infrastructure) 2007;*
- *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development;*
- *Greater Metropolitan Regional Environmental Plan 1999 No.2 – Georges River Catchment;* and
- *Campbelltown (Urban Area) Local Environmental Plan 2002.*

The key provisions relevant to the proposal are identified and briefly discussed in the following sections.

5.1 Commonwealth Legislation

5.1.1 Environment Protection and Biodiversity Conservation Act 1999

The primary objective of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is to '*provide for the protection of the environment, especially those aspects of the environment that are Matters of National Environmental Significance'* (Matters of NES). Environmental approvals under the EPBC Act may be required for an 'action' that is likely to have a significant impact on Matters of NES.

Where there is potential for a proposal to have a significant impact on any Matter of NES, a Referral under the EPBC Act can be submitted to the Department of the Environment for consideration, concurrent with this State Significant Development application process. An EPBC Referral was submitted to the Department of the Environment to enable impacts to Matter of NES (particularly Cumberland Plain Shale Woodlands and Shale Gravel Transition Forest) to be considered at a Federal level. The Department determined the project is a controlled action in relation to the Cumberland Plain Woodland and that the action is to be assessed under the bilateral assessment pathway with consideration of the Guidelines issued for the project in November 2015. This EIS has responded to the project-specific Guidelines and a biodiversity offset is to be provided in accordance with the biodiversity offset strategy contained in Appendix 10.

5.2 State Legislation and Regulations

5.2.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) forms the statutory framework for planning approval and environmental assessment in NSW.

The objects of the EP&A Act are set out in Section 5 of the Act and are:

a) *To encourage:*
   (i) The proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment;
   (ii) The promotion and co-ordination of the orderly and economic use and development of land;
   (iii) The protection, provision and co-ordination of communication and utility services;
   (iv) The provision of land for public purpose;
   (v) The provision and co-ordination of community services and facilities;
   (vi) The protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats;
   (vii) Ecologically sustainable development; and
   (viii) The provision and maintenance of affordable housing.
b) *To promote the sharing of the responsibility for environmental planning between the different levels of government in the State.*
c) *To provide increased opportunity for public involvement and participation in environmental planning and assessment.*

The project meets these objectives as it promotes the orderly economic use and development of the land, whilst effectively managing impacts on the environment and community. A community consultation program has provided the community with an opportunity to be involved in the planning and assessment process.

Approval Pathway

Part 4 of the EP&A Act provides an approval process for State Significant Development which is either declared to be a State Significant Development by a State Environmental Planning Policy (SEPP) or by order of the Minister published in the Gazette. The project is considered 'State Significant Development' (SSD) in accordance with Division 4.1 of Part 4 of the EP&A Act, as it is a type listed in Schedule 1 of the *State Environmental Planning Policy (State and Regional Development*) 2011.

Specifically, Clause 23 of Schedule 1 lists "*Waste and Resource Management Facilities*" as State Significant Development if the development triggers one of the six sub-clauses. The following provisions trigger this proposal as State Significant Development:

2) *Development for the purpose of waste or resource transfer stations in metropolitan areas of the Sydney region that handle more than 100,000 tonnes per year of waste.*
3) *Development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes per year of waste.*

The proposed recycling facility is classified as SSD in accordance with this definition as it is located within the Sydney metropolitan area and is expected to recycle up to 450,000 tonnes of material per year, exceeding the SSD trigger of 100,000 tonnes set out above.

As the proposal requires approval under Part 4.1 of the EP&A Act, the Minister for Planning is the prescribed consent authority. Further, in accordance with the requirements for State Significant Development, an initial application for Director-General Requirement's was submitted prior to preparation of the EIS. Due to determination by the Commonwealth Department of the Environment on 11 September 2015, revised requirements were issued by DP&E on 26 November 2015 in the form of Secretary's Environmental Assessment Requirements (SEARs). Both the DGRs and SEARs have informed the preparation of the EIS in conjunction with the relevant provisions of the *Environmental Planning and Assessment Regulation 2000* (NSW) (EP&A Reg).

Assessment Requirements

The proposal is subject to the general assessment requirements under Part 4 of the EP&A Act. These requirements are addressed below:

Matters for Consideration (Section 79C EP&A Act)

Section 79C of the EP&A Act identifies matters for the consent authority to take into account when determining a development application. A checklist of these matters and where they have been addressed in the EIS is provided in Table 5-1.

Permissibility

The relevant Local Environmental Plan for the proposal is the *Campbelltown (Urban Area) Local Environmental Plan 2002* (Campbelltown LEP). The Campbelltown LEP zoning plan outlines the land proposed for the waste recycling facility as Zone 1(a) – Rural A Zone.

Concurrent to this state significant development application, a Gateway Determination was made on the 6th August 2013 in respect of a Planning Proposal to zone the Glenfield Waste Site to IN1 General Industrial, SP2 Infrastructure (Car Parks) and SP2 Infrastructure (Railway). The equivalent zone of Zone 1(a) – Rural A Zone under the draft Campbelltown Standard Instrument Local Environmental Plan is RU2, as outlined in the NSW Housing Code Equivalent Zones (established for the application of the *SEPP (Exempt and Complying Development Codes) 2008*). Therefore the current and proposed zoning meets the definition of a prescribed zone pursuant to Clause 121 of the *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP) and hence the proposal is permissible with consent.

Voluntary Planning Agreement

A draft Voluntary Planning Agreement (VPA) has been offered by the developer for consideration. The Draft VPA was issued electronically to DP&E and OSL on 16 December 2015 and subsequently presented to Chris Ritchie and David Mooney of DP&E at a meeting dated 17 December 2015.

Table 5-1: Section 79C Matters for Consideration

Section 79C Matters for Consideration	Relevant Section within EIS
The provisions of:	
(i) any environmental planning instrument	Refer to Section 5.3.
(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	No proposed instrument has been identified as relevant to this proposal.
(iii) any development control plan	Development Control Plans do not apply to State Significant Developments.
(iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F	Yes a draft Voluntary Planning Agreement has been offered by the developer for consideration. The Draft VPA was emailed to OSL and DP&E on 16 December 2015, and subsequently presented to Chris Ritchie and David Mooney of DP&E at a meeting dated 17 December 2015.
(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph)	Refer to Section 5.
(v) any coastal zone management plan (within the meaning of the *Coastal Protection Act 1979*) that apply to the land to which the development application relates	No coastal zone management plans exist for the site.
(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	Refer to Section 5.
(c) the suitability of the site for the development	Refer to Section 5 and Section 9.3.
(d) any submissions made in accordance with this Act or the regulations	Comments will be addressed as received during the EIS exhibition period.
(e) the public interest	Refer to Section 6 and 9.

5.2.2 Protection of the Environment Operations Act 1997

The proposed material recycling facility will require an Environment Protection Licence (EPL) from the EPA pursuant to the requirements of the *Protection of the Environment Operations Act 1997.* The required EPL will be separate from the existing EPL for landfilling on the site. The EPL triggers are based on the following scheduled activities contained in Schedule 1 of the Act:

Resource recovery – Clause 34 defines the recovery of general waste as:

> *"the receiving of waste (other than hazardous waste, restricted solid waste, liquid waste or special waste) from off site and processing, otherwise than for the recovery of energy"; and*

Waste storage – Clause 42 defines waste storage as:

> *"the receiving from off site and storing (including storage for transfer) of waste".*

The relevant criteria for a resource recovery facility to be declared a schedule activity under Clause 34 is:

> *"involves processing more than 120 tonnes of waste per day or 30,000 tonnes of waste per year less than 50% by weight of the waste received in any year requires disposal after processing".*

The relevant criteria for waste storage to be a declared a schedule activity under Clause 42 is:

> *"receiving more than 30,000 tonnes of waste per year from off-site".*

Discussions with the EPA regarding the proposal have guided the location of the proposal within the GWS site. An application for an EPL will be made to the EPA following receipt of development consent. Following discussion with the EPA, the new EPL area will be delineated by a plan of survey and the existing EPL (4614) will be modified to accommodate the new EPL.

It is noted that Clause 89K of the EP&A Act states:

> *(1) An authorisation of the following kind cannot be refused if it is necessary for carrying out State significant development that is authorised by a development consent under this Division and is to be substantially consistent with the consent:*
>
> *e. 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)*

5.2.3 NSW Threatened Species Conservation Act 1995 (TSC Act)

Schedules 1 and 2 of the TSC Act contain lists of flora and fauna species and communities, which have been determined by the NSW Scientific Committee as being under threat of serious decline that could ultimately lead to extinction. Schedule 3 of the TSC Act contains a list of 'Key Threatening Processes' which threatens, or could potentially threaten, the survival or evolutionary development of a species, population or ecological community. Threats to threatened species and other plants and animals in NSW include: pest animals, weeds, diseases and habitat loss or change.

The proposed clearing of vegetation triggers assessment requirements pursuant to the TSC Act. Assessment under the TSC Act is discussed further in Section 8.10.

5.2.4 Water Management Act 2000

The SEARs require consideration of the 2012 NSW Guidelines for Controlled Activities on Waterfront Land Policy, which discuss controlled activities as regulated by the *Water Management Act, 2000*. The guidelines note that the policy refers only to waterfront lands, which are defined as "the bed and bank of any river, lake or estuary and all land within 40 metres of the highest bank of the river, lake or estuary".

The Act defines a river as "any watercourse, whether perennial or intermittent and whether comprising a natural channel or a natural channel artificially improved". The Guideline refers to current 1:25,000 topographic maps for watercourse locations and reference to these maps show that only Georges River (to the east of the site) and Glenfield Creek (to the west) can be defined as rivers. No works are proposed within 40 metres of the high banks of the Georges River or Glenfield Creek. Accordingly the controlled activity provisions do not apply to the Project.

The SEARs require that the NSW State Rivers & Estuaries Policy (1993) be considered. The Department of Primary Industries webpage notes the following with regards the NSW State Rivers & Estuaries Policy "*A number of institutional and legislation changes have occurred since the publication of this policy, however the overarching objectives and principles of the policy remain the same today*"

The policy's objectives are as follows:

> *To manage the rivers and estuaries of NSW in ways which: slow, halt or reverse the overall rate of degradation in the systems; ensure the long-term sustainability of their essential biophysical functions; and maintain the beneficial use of these resources.*

The Project does not propose any works in or adjacent defined rivers, and so meets the State Rivers & Estuaries Policy objective.

5.3 Relevant Environmental Planning Instruments

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

The project is 'State Significant Development' in accordance with Division 4.1 of Part 4 of the EP&A Act, as it is triggered as a 'Waste and Resource Management Facility' under Clause 23, Schedule 1 of the *State Environmental Planning Policy* (*State and Regional Development) 2011*. Specifically, the following provisions trigger the proposal as State Significant Development:

(2) Development for the purpose of waste or resource transfer stations in metropolitan areas of the Sydney region that handle more than 100,000 tonnes per year of waste.
(3) Development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes per year of waste.

The proposed recycling facility is located within the Sydney metropolitan area and is expected to recycle up to 450,000 tonnes of material per year, exceeding the SSD trigger of 100,000 tonnes. Accordingly, the appropriate government approval process for the proposal is State Significant Development under Part 4 of the EP&A Act.

5.3.2 State Environmental Planning Policy (Infrastructure) 2007

The aim of the State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) is to facilitate the effective delivery of infrastructure across NSW. The ISEPP allows for certain types of infrastructure to be permissible with or without consent, or as exempt or complying development. The proposed activity does not fall within the provisions of exempt or complying development under the ISEPP. Clause 120 identifies land for prescribed zones relevant to Clause 121 as follows:

> *Prescribed zone 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*

The equivalent zone of Zone 1(a) – Rural A Zone under the draft Campbelltown Standard Instrument Local Environmental Plan is RU2, as outlined in the NSW Housing Code Equivalent Zones (established for the application of the *SEPP (Exempt and Complying Development Codes) 2008*). Further, a wider site rezoning is being undertaken concurrently with this proposal to zone the GWS land within Campbelltown LGA to IN1 General Industrial, SP2 Infrastructure (Car Parks) and SP2 Infrastructure (Railway).

Both the current and proposed zonings meet the definition of a prescribed zone pursuant to Clause 121 of the ISEPP. Clause 121 of the ISEPP outlines the following development as permitted with consent:

> *(1)* ***Development for the purpose of waste or resource management facilities, other than development referred to in subclause (2), may be carried out by any person with consent on land in a prescribed zone.***
> *(2) Development for the purposes of a waste or resource transfer station may be carried out by any person with consent on:*
> *(a) land in a prescribed zone, or*
> *(b) land in any of the following land use zones or equivalent land use zones:*
> *(i) B5 Business Development,*
> *(ii) B6 Enterprise Corridor,*
> *(iii) IN2 Light Industrial,*
> *(iv) IN4 Working Waterfront, or*
> *(c) land on which development for any of the following purposes is permitted with consent under any environmental planning instrument:*
> *(i) industry,*
> *(ii) business premises or retail premises,*
> *(iii) freight transport facilities.*
> *(3) Development for the purpose of the recycling of construction and demolition material, or the disposal of virgin excavated natural material (as defined by the Protection of the Environment Operations Act 1997) or clean fill, may be carried out by any person with consent on land on which development for the purpose of industries, extractive industries or mining may be carried out with consent under any environmental planning instrument.*

The proposal is a development as referred to in subclause (1), therefore pursuant to Clause 121 of the ISEPP the operation of a waste management and recycling facility is permissible with development consent.

5.3.3 State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

State Environmental Planning Policy 33 – Hazardous and Offensive Development (SEPP 33), clause 12 outlines that a Preliminary Hazard Analysis (PHA) must be prepared to determine the risk of the proposal:

> *A person who proposes to make a development application to carry out development for the purposes of a potentially hazardous industry must prepare (or cause to be prepared) a preliminary hazard analysis in accordance with the current circulars or guidelines published by the Department of Planning and submit the analysis with the development application.*

A potentially hazardous industry is defined within SEPP 33 as a development for the purpose 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.

Due to the nature of the proposal, which encompasses 'cement works, crushing, grinding, and separating works generally' as listed in Appendix 3 of the document *Hazardous and Offensive Development – Applying SEPP 33*, a PHA has been prepared as part of this EIS attached at Appendix 4. The PHA concluded that the Project does not pose a significant hazard risk.

5.3.4 Greater Metropolitan REP 1999 No.2 – Georges River Catchment

Located within the Georges River Catchment area, the *Greater Metropolitan Regional Environmental Plan 1999 No. 2 – Georges River Catchment* (GMREP) must be considered.

Clause 7 of the Planning Control and Consultation Table within the GMREP outlines the following development as permissible within the catchment area with development consent:

> *Hazardous or offensive industry (as defined in State Environmental Planning Policy No 33—Hazardous and Offensive Development) of a type that has the potential to pollute and to lower water quality in the Georges River or its tributaries.*

Having been identified as a potentially hazardous or offensive development under SEPP 33, the consent authority must have regard to the specific matters for consideration outlined in the GMREP.

Further, Clause 7 states that:

> *Development consent is required unless located on either flood liable land or land within 40 metres of any water course within the Catchment, in which case it is prohibited.*

The proposal is not located within 40 m of a watercourse, nor is it located within flood liable land, which in accordance with the Floodplain Development Manual 2005, is land subject to a probable maximum flood event. The proposal is permissible pursuant to the GMREP with development consent.

5.3.5 Campbelltown (Urban Area) Local Environmental Plan 2002

As outlined above, the Campbelltown LEP zoning plan identifies the subject site as Zone 1(a) – Rural A Zone. Considering the application of the ISEPP and the concurrent site wide rezoning application, the current and proposed zoning meets the definition of a prescribed zone and therefore the proposal is permissible with consent. Further, development of the proposed recycling facility is consistent with the objectives of the Campbelltown LEP.

6 CONSULTATION

GWS prepared a Community Consultation Report that outlines the steps and tools used to provide consultation between GWS and the key stakeholders. The full report is provided at Appendix 5 and is summarised in the following sections.

6.1 Key Stakeholders

The relevant local stakeholders were:

- Adjacent landowners and residents;
- Tharawal Local Aboriginal Land Council (LALC); and
- Cubbitch Barta Native Title Claimants Aboriginal Corporation.

The relevant government departments and authorities who have been consulted regarding the proposal include:

- NSW Department of Trade and Investment, Regional Infrastructure and Services, including NSW Department of Primary Industries (NSW Office of Water);
- NSW Department of Planning and Environment;
- NSW Office of Environment and Heritage (Environment Protection Authority);
- NSW Roads and Maritime Services; and
- Campbelltown City Council.

6.2 Community Consultation

GWS has a strong history of consultation with the surrounding community of Glenfield, which has benefited the relationship between the operations and community for many years. Notably, GWS reports that it has not received a community complaint in the past ten years.

6.2.1 Consultation Program

GWS developed a Community Consultation Program at the Project inception stage. The consultation program has three key objectives and four distinct phases to ensure consultation obligations were met during the preparation of the EIS.

The consultation program objectives were as follows:

- To raise awareness of the proposal with adjacent landowners, Council, Government Agencies, key stakeholders and community groups;
- To provide the opportunity for all community, key stakeholders and interested parties to comment and provide feedback on the proposal; and
- To provide the opportunity for the proponent to interact with the local community, key stakeholders and interested parties to establish and maintain open and good working relationships.

6.2.2 Consultation Program Phases

The Consultation Program has four phases which provide effective consultation from Project inception through to construction and operational stages. This program aimed to ensure that all relevant environmental, social and economic issues raised by stakeholders and the community were considered and addressed within the EIS.

These consultation phases are as follows:

Phase 1: Key Stakeholders

GWS consulted with key stakeholders and the Department of Planning and Environment prior to and after the lodgement for the request of the DGRs and SEARs.

GWS undertook the following consultation in Phase 1:

- Communicated with adjacent residents, key community groups, Local Aboriginal Councils/Corporations and Government Agencies;
- Face to face meetings with key stakeholders, Local Aboriginal Councils/Corporations and Government Agencies;
- Introductory briefing with Campbelltown City Council and key Government Agencies; and
- Follow up meetings with local Council Local Aboriginal Land Councils/Corporations and other Government Agencies.

Phase 2: Community and Stakeholder Consultation

GWS undertook Phase 2 of the consultation concurrently with Phase 1, providing a variety of consultation tools that assist in reaching key stakeholders. Phase 2 included the development of project factsheets and a project website.

GWS undertook the following consultation in Phase 2:

- Newspaper advertisement in the Campbelltown Macarthur Advertiser and Liverpool City Champion to advise of the proposal and invite residents to an open information session;
- Preparation and activation of the project website where information is provided for public access;
- Allocation of two community information sessions;
- Project flyer and invitation to Community Information Sessions hand-delivered to the nearest residences to the west and south of the proposed facility; and
- Community information session held at GWS.

Phase 3: EIS Preparation

During the preparation of the EIS, GWS undertook the following:

- Responded to the DGRs and SEARs; and
- Where relevant, incorporated community comments into the EIS, prior to finalisation and lodgement.

Phase 4: Construction and Operation of the Facility

GWS commits to maintaining open communications with adjacent landholders, interested community parties, local Council, Government Agencies and Local Aboriginal Land Councils/Corporations during construction and operations.

6.2.3 Summary of community issues and enquiries

Nine individuals attended the two community information sessions. Notably, no serious concerns were raised with respect to the Project. Enquiries about dust and noise formed the most common request for information.

6.2.4 Contact for public enquiries

Project contact details are provided via the GWS Project website. All enquiries from members of the general public with regard to the Project will be recorded on an electronic database. Details of the person are logged including their address and contact details, nature of the concern and response from GWS. This system allows reports to be generated and assists GWS track work performance. At the time of writing this EIS, no public enquiries have been made regarding the Project.

7 ENVIRONMENTAL RISK ASSESSMENT

This section provides a risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment. The purpose of the environmental risk assessment is to assign a qualitative environmental risk category to each of the identified environmental issues. Accordingly, this section considers:

- The potential environmental impacts associated with the Project including, where relevant, the environmental performance criteria and development standards; and
- The nature and extent of environmental impacts likely to remain after the implementation of mitigation and control measures.

The following key environmental issues are identified in the SEARs:

- Waste management;
- Air quality and odour;
- Noise;
- Soil and water;
- Traffic and transport;
- Hazards;
- Biodiversity;
- Heritage;
- Greenhouse gas; and
- Visual amenity.

Table 7-1 provides the risk categories used to guide the identification and application of an appropriate risk rating. The risk category is determined on the basis of likelihood of an impact occurring and the consequences if it did occur.

Each of the environmental issues were initially rated based on potential impacts if the issue was unmitigated or uncontrolled. A residual risk rating was assigned based on consideration and implementation of the proposed mitigation and control measures. A summary of the environmental risk analysis is provided in Table 7-2.

Table 7-1: Environmental Risk Assessment Categories

Rating	Consequence - single impact and cumulative							Likelihood				
								Certain	Probable	Possible	Remote	Negative risk or probable positive risk
								Common	Has happened within GWS	Could happen and has happened in non-GWS projects	Not likely	Practically impossible or positively probable
								Frequent Incidents	Regular incidents	Infrequent incidents	Unlikely to occur, very few recorded or known incidents	May occur in exceptional circumstances - almost no recorded incidents
	Economic		Social				Environmental	Within 3 months	Within 2 years	Within 5 years	Within 10 years	Negatively improbable or positively probable
	Impact to Annual Business	Business Disruption	Personal Injury	Occupational Health & Safety	Legal	Reputation	Environment	Every project	Every 2nd project	One project in five	One project in ten	Negatively or positively with frequency
1 - Catastrophic	> $5m	> 1 month	Multiple Fatalities	Exposure to a severe, adverse long-term health impact or life-threatening hazard	Litigation, heavy fines, criminal charge	Prolonged international media attention	Long term impairment habitats / ecosystem	**1**	**2**	**5**	**7**	**11**
2 - Major	$3m - $5m	1 week to 1 month	Single Fatality	Exposure to a hazard that results in surgery or permanent disablement	Major breach / major litigation	International media attention	Long term effects on ecosystem	**3**	**4**	**8**	**12**	**16**
3 - Moderate	$0.5m - $3m	1 day to 1 week	Serious / Disabling Injury	Exposure to a hazard that could cause injuries or health effects requiring treatment by a physician or hospitalisation	Serious breach of regulation - prosecution/ fine	National media attention	Serious medium term environmental effects	**6**	**9**	**13**	**17**	**20**
4 - Minor	$100k - $0.5m	12 hrs to 1 day	Lost Time Injury	Exposure to a hazard that could cause injuries or adverse health effects requiring treatment by a qualified person	Non-compliance breaches in regulation	Adverse local public attention	Minor effects to biophysical environment	**10**	**14**	**18**	**21**	**23**
5 - Insignificant/ Positive	<$100k or positive	< 12 hours or positive	First Aid	An injury or ailment that does not require medical treatment by a qualified professional.	Low level compliance issues	Minimal opposition or positive influence	Limited or no physical damage	**15**	**19**	**22**	**24**	**25**

Table 7-2: Environmental Risk Assessment

Issue	Potential Impacts	Initial Risk Rating (no mitigation)	Control Measures	Residual Impacts	Final Risk Rating
Waste management	Receipt of contaminated wastes	14	Waste screening procedure on arrival.	Waste not recyclable sent to landfill.	22
Air Quality	Exceedance of criteria	18	Road sealing, water cart, road sweeping, sprays.	Marginal exceedances in isolated locations.	24
Odour	Exceedance of criteria	18	Green waste to be quickly cycled through facility.	No exceedances predicted.	24
Noise	Exceedance of criteria	14	Bunding, fencing, daily equipment scheduling, stockpiles and equipment locations.	No exceedances predicted.	21
Soil and water	Offsite pollution	14	Erosion and sediment control plan measures, permanent sediment dams and drains.	Remote possibility.	21
Traffic and transport	Reduced levels of service	18	Western access.	Level of service remains acceptable.	22
Fire hazards	Burning stockpiles and mobile plant	13	Emergency Response Plan, Stockpile Management Plan, Facility close down procedure, water cart, firefighting systems, secure fencing, fire extinguishers in mobile plant.	Remote possibility.	21
Biodiversity	9.5 ha of EEC to be removed	14	Biobanking Offsets, fauna spotters/catchers.	9.5 ha of EEC to be removed.	19
Heritage	GWD 3 and GWD 4 to be destroyed	21	No further archaeological work needed due to low scientific significance.	Sites will be destroyed. Accepted by RAPs.	21
GHG	Minor	15	Consider GHG emissions when selecting plant and lighting.	No residual impacts.	15
Visual	Minor	10	Vegetative screening, bund and extension of fence.	Very limited visibility.	22