



Preliminary Environmental Assessment

RESOURCE RECOVERY FACILITY AND TRUCK DEPOT

LOT 134 DP1124258, PART LOT 133 DP1124258
& PART LOT 137 DP1124258

TRIM STREET
SOUTH NOWRA 2541
FEBRUARY 2013
Reference: 103013

[This page has been left intentionally blank]

SET Consultants Pty Ltd

51 Graham Street Nowra 2541

Tel: (02) 4421 4500

Fax: (02) 4423 1496

PRELIMINARY ENVIRONMENTAL ASSESSMENT

RESOURCE RECOVERY FACILITY AND TRUCK DEPOT

LOT 134 DP1124258, PART LOT 133 DP1124258 &
PART LOT 137 DP1124258

No. 7 TRIM STREET SOUTH NOWRA 2541

Prepared By: 

David Cannon M.Env.Eng.Sc, Grad Dip (Bushfire Protection), B.Env.Sc.Adv (Hons 1)
Environmental Engineer
BPAD-A Certified Practitioner BPD-PA-23829
Corporate Member - PIA

Reviewed By: 

Bronwyn Seiden B.App.Sc. (Env. Planning),
Town Planner
Corporate Member - PIA (CPP)

Date: 28 February 2013

This report has been prepared for Mr Mark Nelson (landowner of Lot 134 DP1124258, Part Lot 133 DP1124258 & Part Lot 137 DP1124258 7 Trim Street South Nowra), in accordance with the scope of services provided by Mr Mark Nelson to comply with the EP & A Act 1979.

This report should only be used for the purpose for which it was expressly prepared and shall not be reproduced by any third party in part or full without the permission of SET Consultants Pty Ltd.

Liability limited by a scheme approved under Professional Standards Legislation.

[This page has been left intentionally blank]

Contents

1.	INTRODUCTION AND CONTEXT	1
1.1.	INTRODUCTION.....	1
1.2.	THE PROPONENT	1
1.3.	THE SITE	2
1.3.1.	LOCAL AND REGIONAL CONTEXT.....	2
1.3.2.	SITE DESCRIPTION	2
1.4.	BACKGROUND.....	4
1.5.	ASSESSMENT PROCESS	5
1.6.	APPROVALS REQUIRED	7
1.7.	CONTENTS OF THE PRELIMINARY ENVIRONMENTAL ASSESSMENT	7
2.	THE STATUTORY FRAMEWORK.....	8
2.1.	INTRODUCTION.....	8
2.2.	COMMONWEALTH LEGISLATION AND POLICIES	8
2.3.	NSW STATE LEGISLATION AND POLICIES	8
2.3.1.	ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979	8
2.3.2.	PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997	9
2.3.3.	STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011	10
2.3.4.	STATE ENVIRONMENTAL PLANNING POLICY 33 (HAZARDOUS AND OFFENSIVE DEVELOPMENT) 1992	10
2.3.5.	STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007	11
2.4.	LOCAL ENVIRONMENTAL PLANNING INSTRUMENT.....	12
2.5.	STRATEGIC PLANNING DOCUMENTS.....	13
2.5.1.	NOWRA BOMADERRY STRUCTURE PLAN	13
2.5.2.	NSW WASTE AVOIDANCE AND RESOURCE RECOVERY STRATEGY 2007	14
3.	PROPOSED DEVELOPMENT.....	15
3.1.	INTRODUCTION.....	15
3.2.	PROJECT DESCRIPTION	15
3.3.	RESOURCE RECOVERY FACILITY OPERATIONS.....	15
3.3.1.	INTRODUCTION.....	15
3.3.2.	PROPOSED SITE LAYOUT	16
3.3.3.	RECEIVAL, PROCESSING AND STORAGE AREAS	17
3.3.4.	ONSITE EQUIPMENT	18
3.3.5.	WASTE AND RESIDUAL MANAGEMENT.....	18
3.4.	TRUCK DEPOT	18

3.5.	TRANSPORTATION	19
3.6.	HOURS OF OPERATION	20
3.7.	WORKFORCE	20
3.8.	ENVIRONMENTAL MANAGEMENT	20
4.	ENVIRONMENTAL ISSUES AND PRELIMINARY ASSESSMENT	22
4.1.	INTRODUCTION.....	22
4.2.	TOPOGRAPHY AND DRAINAGE	22
4.3.	GEOLOGY AND SOILS	22
4.4.	CLIMATE AND METEOROLOGY	22
4.5.	TRAFFIC AND TRANSPORT	23
4.6.	WATER MANAGEMENT	23
4.7.	AIR AND QUALITY.....	24
4.8.	VISUAL IMPACTS	25
4.9.	HERITAGE	25
4.10.	POWER EASEMENT	25
4.11.	CAPITAL INVESTMENT VALUE.....	26
4.12.	SUMMARY OF ENVIRONMENTAL ISSUES AND RISKS	26
5.	PROJECT JUSTIFICATION AND CONCLUSION	27
5.1.	NEED FOR THE PROJECT	27
5.1.1.	STATE-WIDE PERSPECTIVE	27
5.1.2.	LOCAL PERSPECTIVE.....	28
5.1.3.	JUSTIFICATION OF THE PROPOSAL	28
5.2.	CONCLUSION.....	28

LIST OF FIGURES

Figure 1.1: Locality Plan	2
Figure 1.2: Subject Site. Refer to Attachment 1 for the site plan.	3
Figure 1.3: Aerial view of the site. Yellow squares represent the closetest residents.	4
Figure 1.4: SSD Flow Chart. Source: Department of Planning and Infrastructure.	6
Figure 2.1: Zoning Map.....	12
Figure 2.2: Proposed Industrial Area Nowra Bomaderry Structure Plan.	13
Figure 3.1: Anticipated material types and tonnages	16

LIST OF TABLES

Table 3.1: Processing Pathway	18
Table 3.2: Truck Movements based on size and yearly tonnages.	19
Table 5.1: Progress towards waste diversion targets. Source: (DECCW, 2011).	27

ATTACHMENTS

Attachment 1	Site Plan
Attachment 2	Concept Layout Plan

[This page has been left intentionally blank]

ABBREVIATIONS, ACRONYMS AND DEFINITIONS

AHD	Australian Height Datum.
ARI	Average Recurrence Interval
AWT	Alternative Waste Treatment
C&D	Waste Construction and Demolition Waste.
C&I	Waste Commercial and Industrial Waste
<i>CLM Act</i>	<i>Contaminated Land Management Act</i>
CMP	Contamination Management Plan
DA	Development Application
DGRs	Director General's Requirements
OEH	Office of Environment and Heritage
EA	Environmental Assessment
EPA	Environment Protection Authority
<i>EP&A Act</i>	<i>Environmental Planning & Assessment Act</i>
EP&A Regulation	Environmental Planning & Assessment Regulation
<i>EPBC Act</i>	<i>Environment Protection and Biodiversity Conservation Act</i>
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
Ha	Hectare
FPL	Flood Plain Level
FRP	Flood Risk Precinct
IMS	Integrated Management System
LEP	Local Environmental Plan
LGA	Local Government Area
m	Metres
MRF	Materials Recovery Facility.
MSW	Municipal Solid Waste.
PEA	Preliminary Environmental Assessment
POEO Act	Protection of the Environment Operations Act 1997 (NSW)
RL	Relative Level
s.	Section (i.e. of an Act)
SEPP	State Environmental Planning Policy
Tpa	Tonnes per Annum
VENM	Virgin Excavated New Material
WARR	Waste Avoidance and Resource Recovery

DEFINITIONS	
<i>Air shed</i>	An air shed is a part of the atmosphere that behaves in a coherent way with respect to the dispersion of emissions. It typically forms the three dimensional atmosphere above a defined geographical area requiring unified management for achieving air pollution control.
<i>Advanced (Alternative) Waste Technologies (AWT)</i>	A generic term used for waste and resource recovery operations that are deemed to be “alternative” to disposal of wastes at conventional (dry) landfills. Technologies included under this generic term cover processing of both mixed (un-sorted) wastes and source separated (streamed) wastes.
<i>Commercial & Industrial Waste (C&I)</i>	Waste streams generated by business activities involving commerce and industry, but excluding building construction.
<i>Construction & Demolition Waste (C&D)</i>	Waste streams generated by business activities involving demolition, building, construction and other civil engineering type activities such as road building.
<i>Dirty MRF</i>	A place where discrete materials are recovered from streams of mixed waste that may contain putrescible (organically active) material.
<i>Green (Garden) Waste</i>	Typically garden wastes that arise from gardening and lawn maintenance activities. More generally, green or garden wastes form a part of the organic wastes.
<i>Green House Gas (GHG)</i>	The gases present in the earth's atmosphere which reduce the loss of heat into space and therefore contribute to global temperature rise through the greenhouse effect.
<i>Inert Waste</i>	Waste that contains no biologically active material that will decompose once landfilled.
<i>Life Cycle Analysis (LCA)</i>	the investigation and valuation of the environmental impacts of a product or service caused by its use and existence, spanning the full life cycle of that item from creations to final disposal or destruction.
<i>Organic Waste</i>	Material that is organic in nature and is suitable for biological process treatment such as composting. Typical materials that might be included are garden organic wastes, food wastes, and food-soiled paper. These same materials can be recovered from the C&I waste stream.
<i>Materials Recovery Facility (MRF)</i>	A place where recyclable materials such as those collected from household recycling collections are sorted into separate streams of products.
<i>Putrescible</i>	Waste materials that are biologically active and putrefy when left untreated.
<i>Recyclables</i>	The traditional dry materials that are collected in domestic recycling schemes, including paper, cardboard, plastic containers and metal containers. These same materials can be recovered from the C&I waste stream. The term Dry Recyclables, when applied to the C&I waste stream, extends beyond the traditional recyclables into other plastics, metals and timber.

1. INTRODUCTION AND CONTEXT

1.1. INTRODUCTION

This Preliminary Environmental Assessment (PEA) provides an overview of the proposed Resource Recovery Facility and Truck Depot (the Project) proposed by Mr Mark Nelson on lots Lot 134 DP1124258, Part Lot 133 DP1124258 and Part Lot 137 DP1124258 Trim St South Nowra. The resource recovery facility will receive resources from a range of suppliers and separate them into constituent materials for recovery. The facility will be designed to maximise recovery of resources and minimise contamination of materials. The types of resources which will be received and processed at the site will include asphalt waste, concrete, aggregates, coalwash, ENM/VENM, glass, steel. The proposed resource recovery facility will principally be a crushing grinding and separating operation for hard waste/ construction and demolition materials including coalwash, concrete, bricks, gravel and crushed rock road base and asphalt. The operation will process up to 150,000 tonnes of material per annum once fully operational. The truck depot component of the proposal will allow unused sections of the site to be utilised for the parking of trucks, earthmoving machinery and the like.

This PEA has been prepared by SET Consultants and relates to the proposed resource recovery facility and Truck Depot to be located on a 1.8-hectare site off Trim Street, South Nowra, including lots Lot 134 DP1124258, Part Lot 133 DP1124258 and Part Lot 137 DP1124258.

The purpose of this document is to provide advice to accompany an application to the Minister for Planning to declare the proposed development to be a project of State Significance under division Division 4.1 in Part 4 Section 89C of the EP&A Act 1979 and to seek Director-General's Requirements for the preparation of an Environmental Assessment (EA) to accompany a development application. This PEA describes the project and assesses the potential geographical, social and environmental impacts and provides the basis of information to allow the Department of Planning and Infrastructure and other relevant agencies to prepare Director-General requirements (DGRs).

1.2. THE PROPONENT

SET Consultants Pty Ltd has prepared this Preliminary Environmental Assessment on behalf of the owner of Lot 134 DP1124258 and the Proponent Mr Mark Nelson.

Proponent's name: Mark Nelson
Postal address: 100 Pyree Lane, Pyree
State: NSW
Postcode: 2541
Telephone: 0438 229 251

1.3. THE SITE

1.3.1. LOCAL AND REGIONAL CONTEXT

The Shoalhaven region is located approximately 160 kilometres south of Sydney and stretches for a further 160 kilometres from Foxground in the north to Durras in the south. The Local Government Area (LGA) of Shoalhaven City Council consists of a number of towns and villages with the main commercial centres located in Nowra and Ulladulla. Nowra and Bomaderry are the major urban areas in the northern part of the region and are located approximately 15km from the coast situated on the southern and northern banks of the Shoalhaven River respectively.

The subject site is described as Lot 134 DP1124258 (0.5757ha), Part Lot 133 DP1124258 (0.0885ha) and Part Lot 137 DP1124258 (1.12ha) and is located on Trim Street in West Nowra (City of Shoalhaven) (Figure 1.1). The subject site is located approximately 5km to the west of the Nowra central business district in the Flinders Industrial Estate.

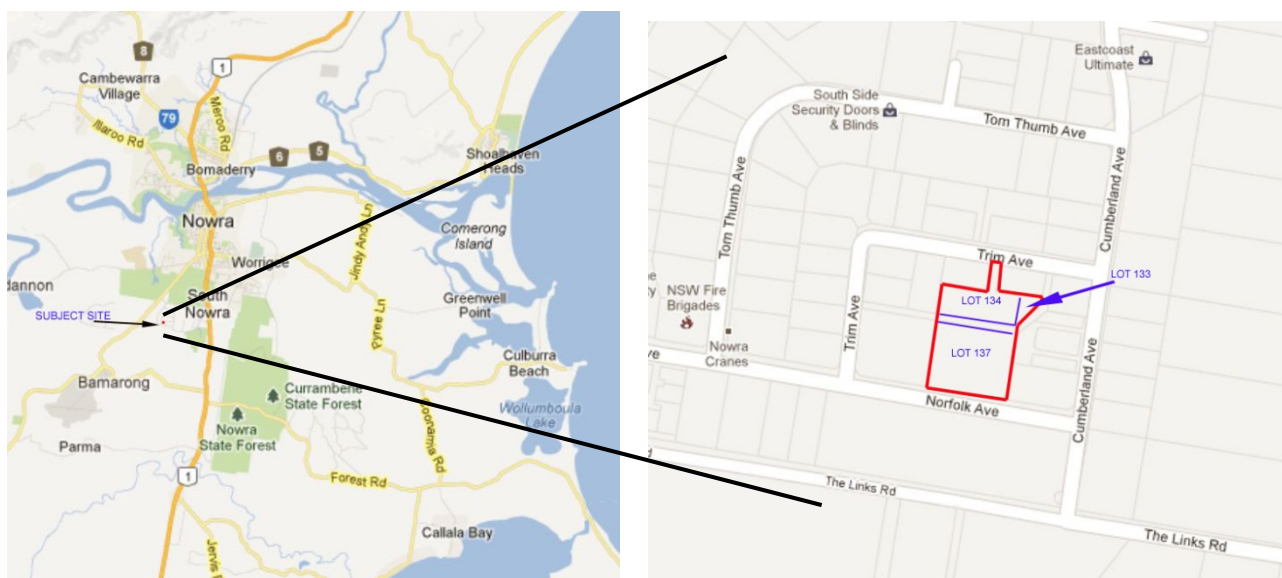


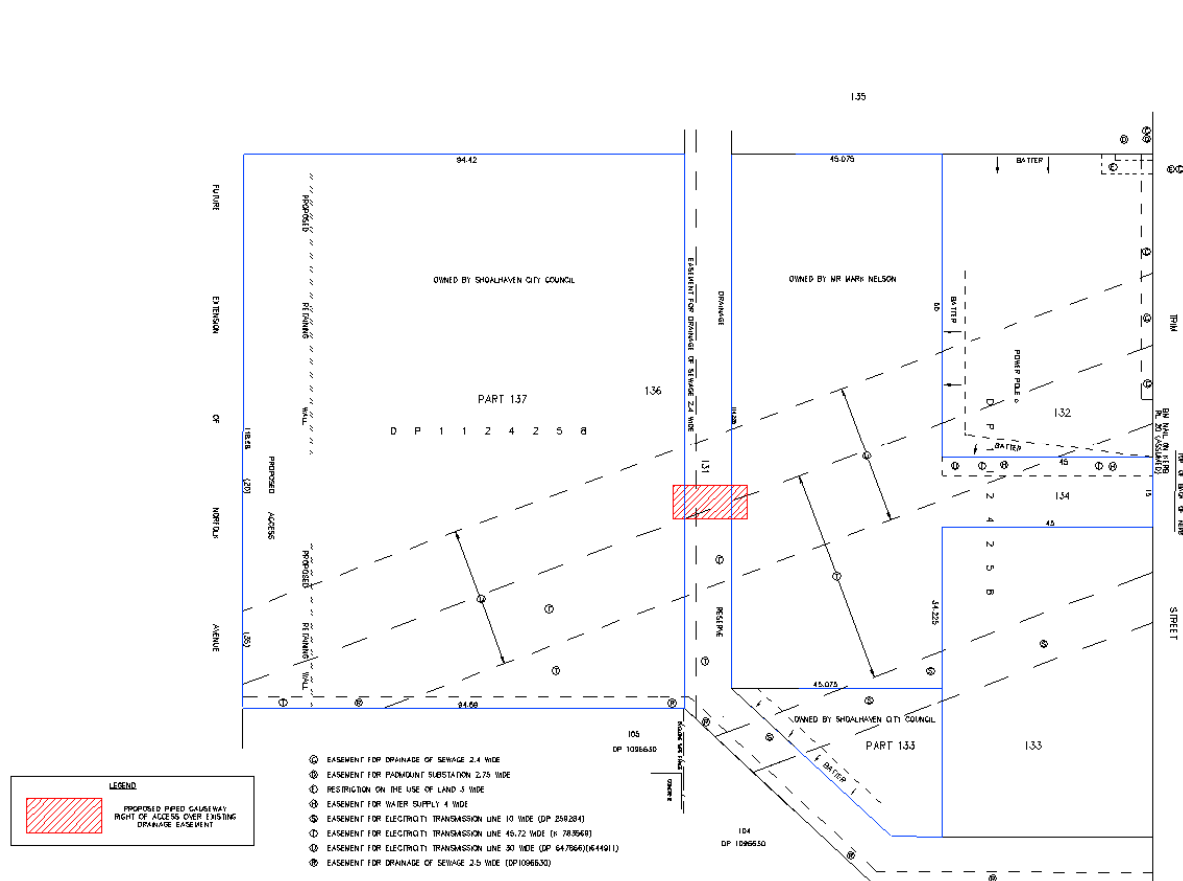
Figure 1.1: Locality Plan

The Shoalhaven region has an estimated resident population (ERP) of 92,195 (a population increase of 5.9% over the preceding five years), with over 48,517 private dwellings, of which 26.8% were unoccupied at the time. Of the 35,508 occupied dwellings, 31,887 were separate houses (89.8%), 2,730 were medium density (7.7%), 51 were high density (0.1%), 737 were caravans / cabins / houseboats (2.1%) (Reference: Census 2006). It is expected that the Shoalhaven's population will grow by 43.1% over the thirty years to 2036. At 1.4% per annum, that will see the region's population increase to 131,970. The bulk of that growth will occur in Council's Planning Area 1, which includes Nowra, Bomaderry and Berry. There the population will rise to 65,879 by 2036, up 52.3% (SCC, 2012).

1.3.2. SITE DESCRIPTION

Lot 134 DP1124258 is currently owned by Mr Mark Nelson, while Part Lot 133 DP1124258 (0.0885ha) and Part Lot 136 DP1124258 (1.12ha) are currently owned by Shoalhaven City Council (Figure 1.2). Mr Nelson is currently in the process of negotiating the purchase of the land from Shoalhaven City Council. Part Lot 133 DP1124258 (0.0885ha) will be consolidated with Lot 134, with Part Lot 136 to be created as a separate allotment. Part Lot 136 is separated from Lot 134 by

Lot 131 DP1124258 which comprises a 2.4 wide easement for drainage, which is in Shoalhaven City Council ownership. The two sections of the site are proposed to be connected by a Right of Access easement (piped causeway) over Lot 131 DP1124258. The Proponent has discussed the creation of the Right of Access easement and the inclusion of Part Lot 133 and 136 as part of the subject land with Shoalhaven City Council Economic Development Manager Mr Greg Pullen. Mr Pullen advised that Council is happy to support the application and would provide a letter of authorisation to support the development application.



Lot 134 and Part Lot 133 DP 1124258 is broadly a T shaped lot and is approximately 0.69 hectares in area. The site has been levelled out and has gentle downslope to the northeast. Part Lot 137 DP 112458 is a rectangular shape lot approximately 1.12ha in area. There has been no earthworks undertaken on Part Lot 137 and the site has downward slope of ranging from 3 to 5 degrees in a north to north easterly direction. The subject site is devoid of structures and predominately devoid of vegetation except for some scrubby regrowth vegetation on Part Lot 137; however, there are a number of stockpiles of recycled materials currently stored on Lot 134. The subject site is located within the Flinders Industrial Estate with nearest residence located 190m to the east of Part Lot 137 (Figure 1.3).

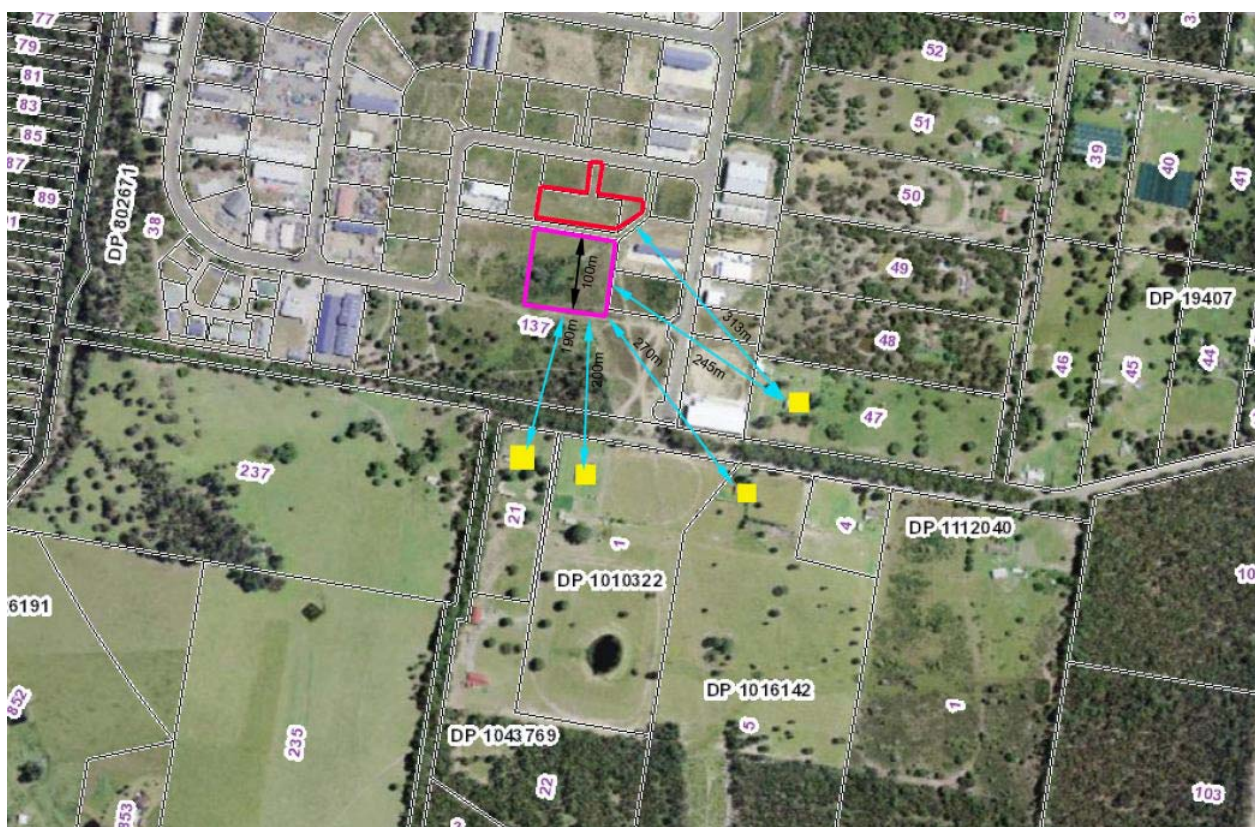


Figure 1.3: Aerial view of the site. Yellow squares represent the closest residents.

1.4. BACKGROUND

The subject site is located within the Flinders Industrial Estate. Flinders Industrial Estate was first established in 1978, this development at South Nowra now has some quite large factory premises. A wide variety of products are produced and sold/exported from the Shoalhaven to markets interstate and overseas. The estate is serviced by many local hauliers operating to Sydney, Ports Botany & Kembla, and other centres throughout NSW and Australia.

Lot 134 and Part Lot 133 forms part of the last lot of land released within the Flinders Industrial Estate, while Part Lot 137 comprise part of the residual land yet to be subdivide and developed. Shoalhaven City Council Economic Development Manager Mr Greg Pullen has indicated that the development and release of Lot 137 would occur within the next 3 - 5 years which fits in with the proposed staging of the development as discussed in Section 3.2. It is acknowledged that the proponent may need to enter into a lease arrangement with Council until Part Lot 137 is legal created. This will be covered in detail in the Environmental Assessment.

Mr Nelson has gained approval from Shoalhaven City Council under DA10/2472 to undertake bulk earth works of Lot 134 to achieve design levels for future development and perimeter fencing. This work has commenced onsite however; the final capping of the site has not been completed at the time of writing this report.

1.5. ASSESSMENT PROCESS

For the purposes of the *Environmental Planning and Assessment Act 1979* (the Act), State Significant Development (SSD) is development that is:

- Declared to be SSD by the State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP), or
- Otherwise called-in by the Minister as SSD.

The SRD SEPP declares development to be SSD if it:

- Is, by operation of another environmental planning instrument, permissible with development consent; and
- Is also included in Schedule 1 or 2 of the SRD SEPP.

The Project is development specified in Schedule 1 to the SRD SEPP. Clause 5(23)(3) in Schedule 1 to the SRD SEPP specifies the following development:

*“23 Waste and resource management facilities
(3) Development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes per year of waste”.*

Given that the Project is proposed to operate at 150,000 tonnes per year once fully operational, the Project is development specified in Schedule 1 to the SRD SEPP.

A development application for State Significant Development (SSD) must be accompanied by an environmental impact statement (EIS), prepared in accordance with the *Environmental Planning and Assessment Regulation 2000* (the Regulation). Before preparing an EIS, an applicant must request Director-General’s environmental assessment requirements (DGRs) for the proposed development.

The proposed development will be assessed in accordance with the following flow chart (Figure 1.4)

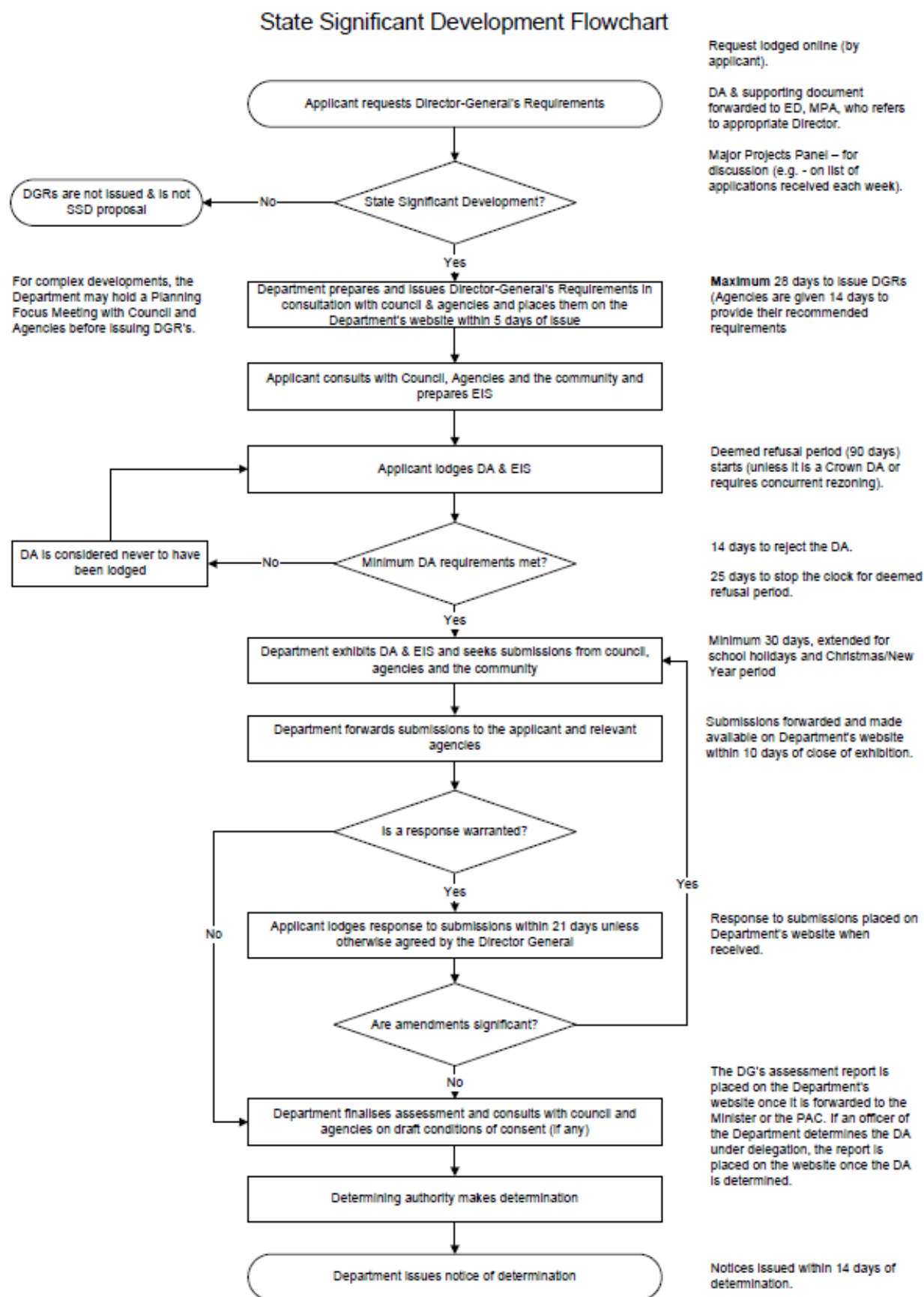


Figure 1.4: SSD Flow Chart. Source: Department of Planning and Infrastructure.

1.6. APPROVALS REQUIRED

The following approvals/licences/permits will be required for the Project to proceed.

- Project approval under section 80 of the *EP&A Act 1979*. The approval authority is the Minister for Planning. The Minister has delegated the function of determining certain DAs for SSD to the Commission and senior officers of the department. The Commission determines larger and more controversial applications lodged by private applicants. Senior officers of the department determine DAs where:
 - Less than 25 public objections are received;
 - The relevant local council has not objected to the proposed development; and
 - No reportable political donation is made.

The Minister generally determines other SSD applications made by public authorities.

- An environment protection licence. The licence is a requirement under the *POEO Act 1997* and the issuing Department is the Environment Protection Authority.

1.7. CONTENTS OF THE PRELIMINARY ENVIRONMENTAL ASSESSMENT

This PEA establishes a framework for the more comprehensive Environmental Assessment that will be prepared in response to the Director-General's requirements. This document:

- Describes the background to the proposed development;
- Outlines the relevant legislative and planning instruments;
- Provides a description of the site;
- Describes the proposed development;
- Outlines the need and justification for the proposal; and
- Provides a preliminary environmental assessment.

2. THE STATUTORY FRAMEWORK

2.1. INTRODUCTION

The approvals process and statutory administration of the ongoing operation of the Project would involve a number of Commonwealth, State and local statutory instruments. Each of the legislation, policies or planning instruments relevant to the Project are outlined in the following sections.

2.2. COMMONWEALTH LEGISLATION AND POLICIES

The principal Commonwealth legislation relevant to the Project is the EPBC Act. The objectives of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) are to protect the environment, promote sustainable development, recognise Indigenous heritage and conserve biodiversity through the provision of a rigorous assessment and approvals process. The EPBC Act focuses Commonwealth involvement on matters of national environmental significance, as follows:

- listed threatened species and communities,
- migratory species protected under international agreements,
- RAMSAR wetlands of international importance,
- the Commonwealth marine environment,
- World Heritage properties,
- National Heritage places, and
- nuclear actions.

Under the *EPBC Act 1999* an action will require approval from the (Federal Environment) Minister if the action has, will have, or is likely to have, a significant impact on a matter of national environmental significance.

Project Response:

The project is unlikely to have an impact on a significant impact on a matter of national environmental significance, as the site is located in an industrial estate and is predominately cleared of vegetation.

2.3. NSW STATE LEGISLATION AND POLICIES

2.3.1. ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The EP&A Act defines the approval process for development proposed in NSW. Upon the repeal of Part 3A of the EP&A Act on 1 October 2011, the *Environmental Planning and Assessment Amendment (Part 3A Repeal) Act 2011* inserted a new Division 4.1 in Part 4 of the EP&A Act. This Division provides for a new planning assessment and determination regime for State significant development (SSD).

Under section 89C of the EP&A Act, development will be SSD if it is declared to be such by the new *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP).

Clause 8(1) of the SRD SEPP provides:

"8 Declaration of State significant development: section 89C

(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.”

Project Response:

The Project is SSD as it meets each of the two criteria in clause 8(1) of the SRD SEPP – that is:

- The Project is permissible with Development Consent on the land on which the Project will be carried out; and
- The Project is development that is specified in Schedule 1 to the SRD SEPP.

2.3.2. PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) establishes the licensing framework and classification system for managing and regulating waste in NSW. POEO Act also sets out the requirements for an activity to be classified as a scheduled activity thus requiring a license from Environmental Protection Authority (EPA). Activities required to obtain a licence under the Act are detailed in Schedule 1 of the Act.

Project Response:

As the Resource Recovery Facility intends to process an estimated 150,000 tonnes per year it satisfies the definitions of Schedule 1 under the following subclauses and therefore would be classified as a Scheduled Activity requiring an Environmental Protection Licence:

- clause 34 Resource recovery - An operation which involves the *recovery of general waste* and process more 30,000 tonnes of waste per year.
- clause 41 Waste processing (non-thermal treatment) - meaning the receiving of waste (other than hazardous waste, restricted solid waste, liquid waste or special waste) from off site and its processing otherwise than by thermal treatment and process more 30,000 tonnes of waste per year.
- clause 42 Waste storage - meaning the receiving from off site and storing (including storage for transfer) of waste, and receives more 30,000 tonnes of waste per year.

The operation of the Resource Recovery Facility must also comply with the requirements of the following sections of the POEO Act in relation to environmental protection:

- Part 5.3 Water pollution;
- Part 5.4 Air pollution;
- Part 5.5 Noise pollution;
- Division 2 Land pollution;
- Division 3 Waste offences; and
- Part 5.7 Duty to notify pollution incidents.

The Protection of the Environment Operations (Waste) Regulation 2005 (Waste Regulation) provides a regulatory framework that covers:

- Waste classification and licensing – the grouping of waste into classes that pose similar risks to the environment and human health and the licensing of waste and resource recovery facilities where there is a potential risk to the environment;
- Establishment of a waste and environment levy for waste disposal;
- Resource Recovery Exemptions – to enable the reuse of waste or waste-derived materials as fill or fertiliser (land applications) or as a fuel or as an alternative raw material in thermal applications; and
- Environmental offence provisions – to enforce handling, transportation and disposal of waste in NSW.

2.3.3. STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011

This SEPP was introduced in conjunction with the repealing of Part 3A of the *EP&A Act*. Schedule 1 of the SEPP provided a list of the classes of development that are considered State Significant Development for the purposes of EP & A Act. Clause 8(1) of the Policy specifies development that, in the opinion of the Minister, is a development of the kind described in the Schedule 1 or 2 of the SEPP. Clause 23 (1a) of Schedule 1 provides that

“Development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes per year of waste”.

Project Response:

Given that the Project is proposed to operate at 150,000 tonnes per year once fully operational, the Project is development specified in Schedule 1 to the SRD SEPP.

Refer to Section 1.6 for the assessment process for SSD.

2.3.4. STATE ENVIRONMENTAL PLANNING POLICY 33 (HAZARDOUS AND OFFENSIVE DEVELOPMENT) 1992

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33) aims to ensure that appropriate measures are employed to minimise the impacts of developments that are deemed to be either ‘hazardous’ or ‘offensive’. SEPP 33 requires the consent authority to consider whether an industrial proposal is a “potentially hazardous industry” or a “potentially offensive industry”. A hazard assessment is completed for potentially hazardous developments to assist the consent authority determine acceptability.

A hazard is defined as a source of potential harm or a situation with a potential loss. Hazards can relate to situations with potential for human injury, damage to property, damage to the environment, or a combination of these factors. Hazards typically associated with waste management facilities include:

- Health (biological) hazards;
- Noise emission;

- Fugitive dust emission;
- Occupational Health and Safety (OH&S) hazards;
- Operational hazards; and
- Hazards during excavation and construction works.

The Department of Planning has prepared a draft guideline, entitled “Applying SEPP 33” and dated July 2008, which is intended to provide guidance on how SEPP 33 is to be applied. The draft guideline provides the guidance as to when a project should be considered to be a “potentially hazardous industry” or a “potentially offensive industry”. In particular, the draft guideline:

- Makes it clear that “potentially hazardous industries” are to be limited to industries which pose a physical risk, such as explosives or fire; and
- States that any project which requires a “licence under any pollution control legislation” should be considered potentially offensive within the meaning of SEPP 33.

The Project is not a “potentially hazardous industry” as it does not pose any physical risk such as explosion or fire. However, the Project could be a “potentially offensive industry” as it would require an EPL under the POEO Act. Therefore a Preliminary Hazard Analysis (PHA) will be undertaken as part of the Environmental Impact Statement support the development application. The methodology used to prepare the PHA will be consistent with that prescribed in the Multi-Level Risk Assessment approach outlined in the DoP document *Applying SEPP33* and should refer to the following documents:

- *HIPAP #4 – Risk Criteria for Land Use Safety Planning*
- *HIPAP #6 – Hazard Analysis.*
- Standards Australia HB 203-2004 (Standards Australia, 2004) and
- HB 203:2006 Environmental Risk Management - Principals and Process (Standards Australia, 2006).

2.3.5. STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007

This SEPP was introduced to facilitate the delivery of infrastructure across the State by improving regulatory certainty and efficiency. In determining the Project, the consent authority must take into account a number of matters including whether a justifiable demand exists for the development, the appropriateness of the location and the views of the relevant public authorities and councils.

Division 23 of the SEPP applies to “waste and resource management facilities”. Resource Recovery Facility is defined in Clause 120 as follows:

- 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 materials or goods or disposal of the material by landfill or incineration;

Clause 121 of the SEPP provides that development for the purpose of a waste or resource management facility may be carried out with consent. This section provides that 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.

Subclause (2) refers to waste and resource transfer stations. This sub-clause is not applicable to the proposed Resource Recovery Facility.

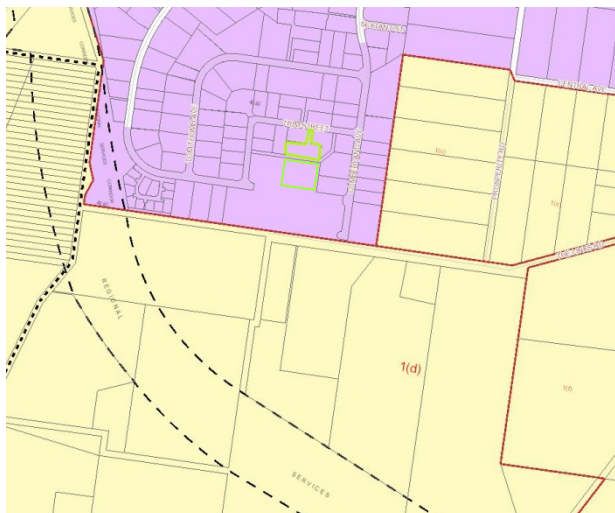
In determining a development application the consent authority must take matters listed in clause 123 of the SEPP into consideration. Clause 123 Matters of Consideration relate only to "the construction, operation or maintenance of a landfill for the disposal of waste". The proposal involves the construction and operation of a resource recovery facility or C & D Waste Processing Facility and no expansion or alteration of the currently licensed landfill operation is proposed. As a consequence cl.123 Matters of Consideration would not apply to this application.

According to Schedule 3 of the SEPP, any increase in size or capacity of "Landfill, recycling facilities, waste transfer station" is regarded as "Traffic generating development to be referred to the RTA" pursuant to cl. 104 of the SEPP. A traffic impact assessment would therefore be required to support any development application for the Resource Recovery Facility. The PEA should be forwarded to the Roads and Maritime Services (RMS) for its comments.

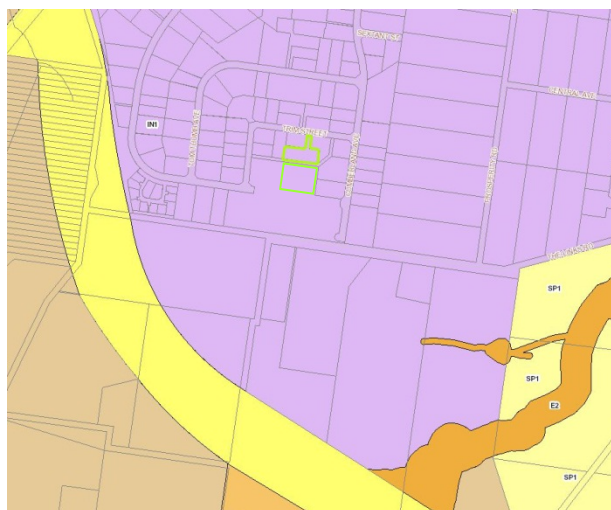
2.4. LOCAL ENVIRONMENTAL PLANNING INSTRUMENT

Shoalhaven Local Environmental Plan is the principal planning instrument for the City of Shoalhaven providing controls on land use within the city. The land proposed to be developed for the Resource Recovery Facility is zoned 4 (a) (Industrial "A" (General)) under the Shoalhaven Local Environmental Plan 1985 (2.1). The site is surrounded by 4(a) zoned land for a minimum of 250 metres.

Under the Draft Shoalhaven LEP 2009 the site is zoned IN1General Industrial. Draft Shoalhaven Local Environmental Plan 2009 has been exhibited with the new plan anticipated to be made some time in the middle to end of 2013. It should be noted that under the DSELP the rural land to the south of the site is proposed to be rezoned to industrial land increasing the buffer between the proposed site and residential development in the future.



Shoalhaven LEP 1985, Site outlined in Green.



Draft Shoalhaven LEP 2009, Site outlined in Green.

Figure 2.1: Zoning Map

2.5. STRATEGIC PLANNING DOCUMENTS

2.5.1. NOWRA BOMADERRY STRUCTURE PLAN

The Nowra Bomaderry Structure Plan (SCC 2006) sets out the development-conservation agenda for Nowra and Bomaderry for the next 20 to 30 years and promotes waste avoidance and resource recovery. The Structure Plan was endorsed by the DoP in 2008. The Structure Plan is not a legal statutory planning document however it provides strategic direction and guidance, identifying land that will be further investigated in detail for possible rezoning and development. The Structure Plan identifies South Nowra as the main industrial area of the Shoalhaven and identifies an additional 91.8 hectares of land at South Nowra for industrial use in the future. The proposed resource recovery facility is demonstrably consistent with the Nowra Bomaderry Structure Plan (Figure 2.2).

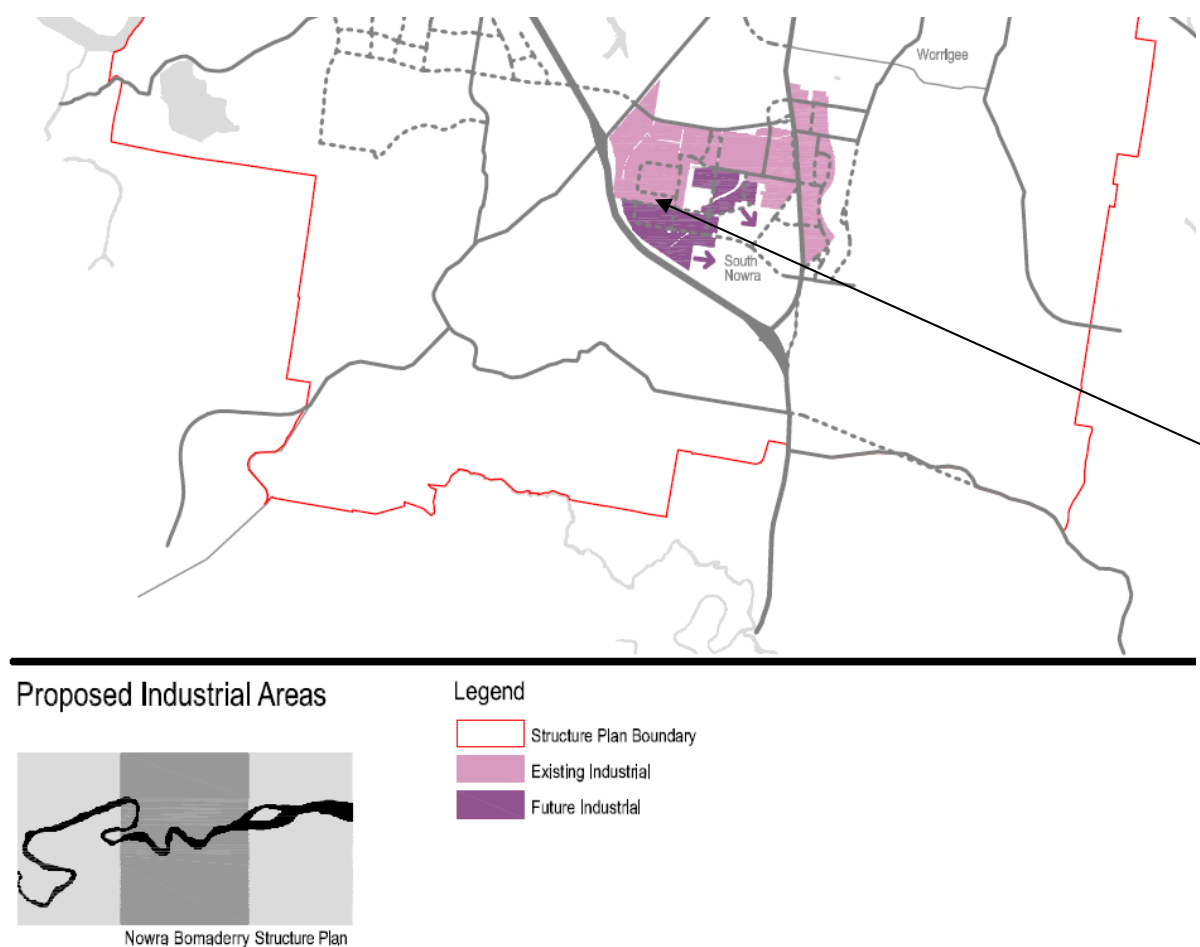


Figure 2.2: Proposed Industrial Area Nowra Bomaderry Structure Plan.

2.5.2. NSW WASTE AVOIDANCE AND RESOURCE RECOVERY STRATEGY 2007

The NSW Waste Avoidance and Resource Recovery Strategy 2007 (WARR Strategy) provides a framework for maximising conservation of our natural resources and minimising environmental harm from waste. It identifies goals in four key result areas:

- preventing and avoiding waste;
- increasing the recovery and use of secondary materials across municipal, commercial and industrial (C&I) and construction and demolition (C&D) sectors;
- reducing toxicity in products and materials; and
- reducing litter and illegal dumping.

The Strategy includes the 2014 recycling targets for the three waste streams relating to the first two key result areas above, which have been picked up as State Plan (2010) commitments. The Waste Strategy 2007 sets specific targets for waste reduction by 2014:

- Municipal waste – 66% to be recycled in 2014;
- Commercial and Industrial waste – 63% to be recycled in 2014; and
- Construction and demolition waste – 76% to be recycled in 2014.

The WARR Strategy recognises the importance of the waste hierarchy to guide effective resource management and includes a range of actions and programs across the whole life cycle of goods and materials, including extraction, manufacturing, distribution, consumption and recovery for reprocessing or disposal.

The WARR Strategy also contains a list of programs in key action areas which will contribute to the outcomes of the Strategy. These include:

- Providing a supportive policy and regulatory environment;
- Reducing municipal waste;
- Reducing litter and illegal dumping;
- Supporting waste reduction in rural and regional NSW;
- Improving other specific waste streams;
- Promoting product stewardship and extended producer responsibility programs;
- Promoting better knowledge and data; and
- Promoting education.

The most relevant program in relation to this feasibility study are:

- Reducing construction and demolition waste
 - support to develop systems to identify non-recyclable timbers;
 - more 'green specifications' for major materials to increase reuse; and
 - support for councils to implement Waste Not Development Control Plans (DCPs).

3. PROPOSED DEVELOPMENT

3.1. INTRODUCTION

The proposal is seeking approval for the construction and operation of a Resource Recovery Facility and Truck Depot to be located on a 1.8-hectare site off Trim Street, South Nowra, including lots Lot 134 DP1124258, Part Lot 133 DP1124258 and Part Lot 137 DP1124258.

3.2. PROJECT DESCRIPTION

The Project involves two key operation the resource recovery operation and truck depot.

The resource recovery facility will receive resources from a range of suppliers and separate them into constituent materials for recovery; any residual waste which is not recoverable is aggregated for appropriate disposal. The resource recovery facility is proposed to operate at 150,000 tonnes per year once fully operational. In the first year it is expected that approximately 35,000 – 40,000 tonnes of combined coalwash, recycled and new quarry products will be processed on site. It is anticipated that the volume and types of products being received and processed will steady increase over the next 10-15 years.

The development is proposed to be undertaken in two stages, as follows:

- Stage 1 – will be undertaken on Lot 134 and Part Lot 133 DP1124258 and will handle up to 50,000 Tonnes a year.
- Stage 2 – will expand the operation onto part Lot 137 DP1124258, once the land has been subdivided. Once the additional land has been established the operational capacity of the facility will increase to a maximum of 150,000 tonnes per year over 10 – 12 year period.

The truck depot component of the proposal will allow unused sections of the site to be utilised for parking of trucks, earthmoving machinery and the like.

3.3. RESOURCE RECOVERY FACILITY OPERATIONS

3.3.1. INTRODUCTION

The resource recovery facility will principally be a crushing grinding and separating operation for hard waste/ construction and demolition materials including coalwash, concrete, bricks, gravel and crushed rock, road base, and asphalt. The material will be recovered and processed on a daily basis. The recovered materials will be processed to generate products suitable for both direct sales to markets and as intermediate products for feed stocks to other operations on and off the site. The types of resources which will be received and processed at the site include: asphalt waste, concrete, aggregates, coalwash, ENM/VENM, glass and steel.

Incoming wastes would be unloaded from collection vehicles in designated areas, within one of the two enclosed processing shed. Each waste stream would be visually screened and obvious contaminants, bulky and hazardous wastes would be extracted for suitable disposal. Rigorous asbestos and other hazardous waste inspection and rejection, processes will be undertaken.

Figure 3.1 shows the anticipated material types and tonnages of over the first 15 years of operation.

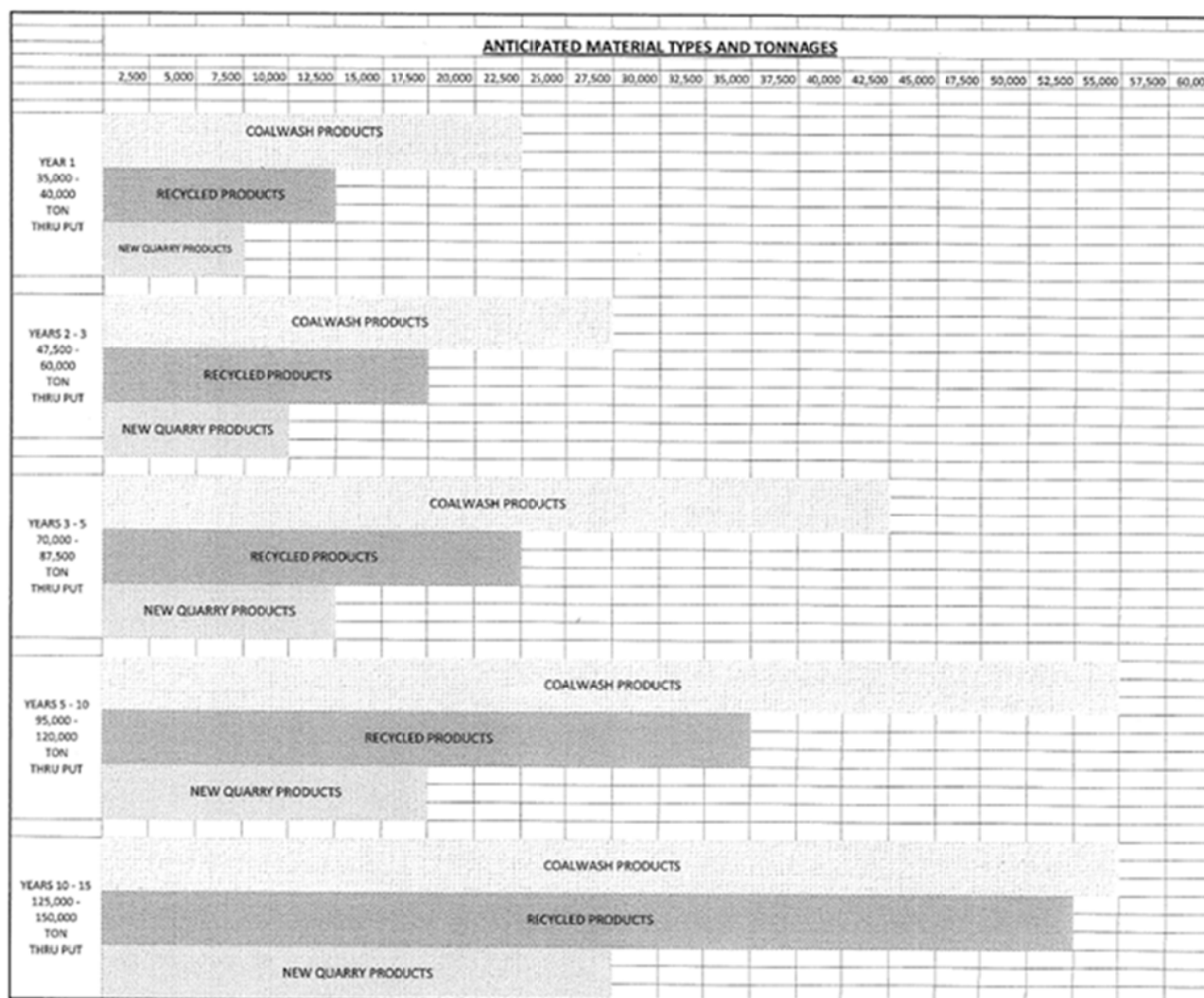


Figure 3.1: Anticipated material types and tonnages

3.3.2. PROPOSED SITE LAYOUT

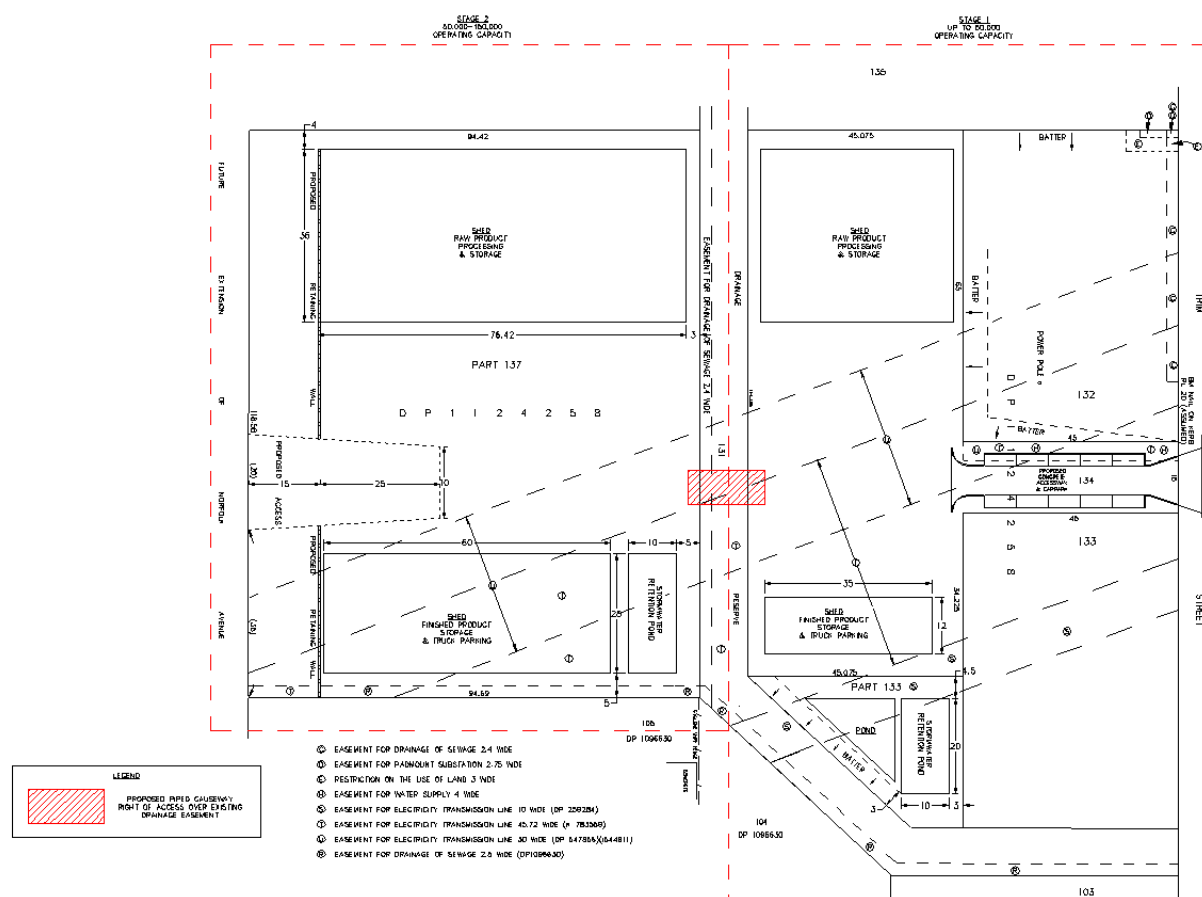
The operational footprint proposed for the Resource Recovery Facility, is shown on drawing 103013 (Figure 3.2). Refer to Attachment 2. The site has been split in two sections comprising:

- Stage 1 – Lot 134 and Part Lot 133. Stage 1 will have a production capacity of up to 50,000 Tonnes a year. Stage 1 has a storage capacity of approximately 5,740 Tonnes comprising 2,970 Tonnes of enclosed storage within the processing shed for waste material and 2,720 tonnes of outside storage for processed material. A production capacity of 50,000 Tonnes a year equates to approximately 1,000 Tonnes a week. Therefore the onsite storage capacity would allow for 5.5 weeks of storage. It should be noted that the material are proposed to be processed on daily basis.
- Stage 2 – Lot 136. Stage 2 will have a will have a production capacity of up to 100,000 Tonnes a year, bring the operation capacity 150,000 Tonnes a year. Stage 2 has a storage capacity of approximately 11,440 Tonnes comprising 5,940 Tonnes of enclosed storage within the processing shed for waste material and 5,500 tonnes of outside storage for processed material. A production capacity of 100,000 Tonnes a year equates to

approximately 2,000 Tonnes a week. Therefore the onsite storage capacity would allow for 5.5 weeks of storage.

Design features of the site include:

- The site will have dual access from Trim Street and Norfolk Avenue.
- Parking will be provided along the access handle from Trim Street. Both lots will be sealed hardstand areas.
- The two sites will be connected via a piped causeway (Right of Access) over the drainage easement (Lot 131). The causeway will be designed to accommodate heavy vehicle movement.
- Both lots will have an enclosed raw product processing and storage shed. The Shed on Lot 134 will have an area of approximately 1450m² and the Shed on Lot 136 will have an area of approximately 2770m².
- Both lots will have designated areas for the storage of processed product. The storage areas will be utilised for the parking of trucks earthmoving machinery and the like when not in use for the storage of processed product.
- Both sites will have separate stormwater detention basins.



3.3.3. RECEIVAL, PROCESSING AND STORAGE AREAS

The receiving and processing areas will be housed in one of the fully enclosed building. The key to the volume capacity of the facility is that the material will be processed on daily basis and the minimal amount of material will be stored on site. Example of the process pathways in provided in

Table 3.1. More detail of the processing pathways will be provided in the Environmental Assessment.

Table 3.1: Processing Pathway

Feedstock	Processing	Product
Concrete, Brick, tiles	Crushing/screening	Various aggregates
		Crusher Dust
Asphalt/Road base/ Coal Wash	Blending	D.G.B 20 & D.G.S 20
	Crushing/screening	Recycled road base
		Gravel Products
Soil	Screening/Blending	Soil Blends
Steel	Sorting	Steel
Glass	Crushing/screening	Aggregate

The processed material will be stored in open stock piles in designated outside hardstand storage areas.

3.3.4. ONSITE EQUIPMENT

The following equipment will be utilised onsite to the processing and handling of the material:

- Bobcat loaders, wheel loaders (up to 20 ton),
- excavators (5 ton/30 ton with various attachments),
- impact crushers (up to 45 ton),
- jaw crushers (6 – 45 ton),
- 1-2-3 horizontal deck screens/trammel screens, and
- conveyor systems (up to 18m long).

3.3.5. WASTE AND RESIDUAL MANAGEMENT

Materials received will be inspected by the operator to ensure materials are consistent with that to be recovered in the processing area and to ensure asbestos is not received at the Resource Recovery facility. Once inspection has occurred, materials are delivered to the sorting area where the operator will undertake further inspection.

Rigorous asbestos inspection and rejection, processes will be undertaken. Materials that are unsuitable or uneconomical for recovery and recycling (eg. contaminated soil and loads that cannot be physically sorted), would be directed at the weighbridge directly to an appropriate licenced waste facility for disposal.

Materials that are unsuitable or uneconomical for recovery and recycling (e.g. contaminated soil and loads that cannot be physically sorted), would be directed an approved waste facility for treatment or disposal.

3.4. TRUCK DEPOT

The truck depot component of the proposal will allow unused sections of the site to be utilised for parking of trucks, earthmoving machinery and the like. Both lots will have designated areas for the storage of processed product. The storage areas will be utilised for the parking of trucks earthmoving machinery and the like when not in use for the storage of processed product.

3.5. TRANSPORTATION

The construction and operation of the Resource Recovery Facility would result in changes in traffic levels in the vicinity of the site. The principal changes would relate to the increased numbers of inbound heavy vehicles for deliveries of waste and outbound heavy vehicles with recycled/processed products and increased numbers of light vehicles due to the increased employment on the site. The types of heavy vehicles which are intended to utilise the site include rigid trucks, truck & dog trailer combinations, semi-trailer combinations, B-double combinations. Following tables (Table 3.2 and 3.3) provides a breakdown of the anticipate truck movements as the production capacity increases.

Table 3.2: Truck Movements based on size and yearly tonnages.

TRUCK MOVEMENTS BASED ON SIZE & YEARLY TONNAGES			
	TRUCK TYPE	50 WEEKS/ YEAR	5 DAY WEEK
YEAR 1 35,000 - 40,000 TON THRU PUT	T & D	46.90 / WEEK	9.4 / DAY
	2/3 T & D 1/3 Rigid	71.24 / WEEK	14.24 / DAY
	1/2 T & D 1/2 Rigid	83.4 / WEEK	16.68 / DAY
YEARS 2 - 3 47,500 - 60,000 TON THRU PUT	T & D	67.2 / WEEK	13.44 / DAY
	2/3 T & D 1/3 Rigid	102 / WEEK	20.4 / DAY
	1/2 T & D 1/2 Rigid	116.8 / WEEK	23.36 / DAY
YEARS 3 - 5 70,000 - 87,500 TON THRU PUT	T & D	98.42 / WEEK	19.68 / DAY
	2/3 T & D 1/3 Rigid	149.6 / WEEK	29.92 / DAY
	1/2 T & D 1/2 Rigid	175.2 / WEEK	35.04 / DAY
YEARS 5 - 10 95,000 - 120,000 TON THRU PUT	T & D	134.36 / WEEK	26.87 / DAY
	2/3 T & D 1/3 Rigid	204.14 / WEEK	40.8 / DAY
	1/2 T & D 1/2 Rigid	239.18 / WEEK	47.8 / DAY
YEARS 10 - 15 125,000 - 150,000 TON THRU PUT	T & D	171.8 / WEEK	34.36 / DAY
	2/3 T & D 1/3 Rigid	261.14 / WEEK	52.22 / DAY
	1/2 T & D 1/2 Rigid	305.94 / WEEK	61.18 / DAY

Table 3.3: Anticipated truck movements over a 24 hour period.

PROPOSED TRUCK MOVEMENTS AT No7 TRIM STREET, SOUTH NOWRA, NSW																													
	12pm	1am	2am	3am	4am	5am	6am	7am	8am	9am	10am	11am	12am	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm					
YEAR 1 PROJECTED TRUCK MOVEMENTS 35/45K TONNES	2 to 3 T & D IN or OUT					8 T & D / RIGID OUTWARD					4 RIGID + 1 to 2 T & D inward					12 RIGID + 1 to 2 T & D outward					2 to 3 T & D IN or OUT (15 Rigid RTA)					4 to 6 (19 to 21)			
																										16			
																										16 to 20			
YEAR 2 - 3 PROJECTED TRUCK MOVEMENTS 47.5/60K	4 to 6 T & D IN or OUT					8 T & D / RIGID OUTWARD					5 to 7 RIGID + 1 to 3 T & D inward					15 to 22 RIGID + 2 to 3 T & D outward					8 T & D / RIGID INWARD					4 to 6 T & D IN or OUT (15 Rigid RTA)		8 to 12 (23 to 27)	
																										16			
																										23 to 35			
YEAR 5 PROJECTED TRUCK MOVEMENTS 70/87.5K TONNES	5 to 6 T & D IN or OUT					16 T & D / RIGID OUTWARD					8 to 10 RIGID + 2 to 3 T & D inward					20 to 28 RIGID + 5 to 8 T & D outward					16 T & D / RIGID INWARD					5 to 6 T & D IN or OUT (15Rigid RTA)		10 to 12 (25 to 27)	
																										32			
																										35 to 49			
YEAR 10 PROJECTED TRUCK MOVEMENTS 95/120K TONNES	6 to 7 T & D IN or OUT					20 T & D / RIGID OUTWARD					10 to 12 RIGID + 4 to 7 T & D inward					23 to 29 RIGID + 5 to 8 T & D outward					20 T & D / RIGID INWARD					6 to 7 T & D IN or OUT (15Rigid RTA)		12 to 14 (27 to 29)	
																										40			
																										42 to 56			
YEAR 15 PROJECTED TRUCK MOVEMENTS 125/150K TONNES	6 to 7 T & D IN or OUT					25 T & D / RIGID OUTWARD					10 to 12 RIGID + 4 to 8 T & D inward					28 to 34 RIGID + 6 to 11 T & D outward					25 T & D / RIGID INWARD					6 to 7 T & D IN or OUT (15Rigid RTA)		12 to 14 (27 to 29)	
																										50			
																										48 to 65			

3.6. HOURS OF OPERATION

The use of the site for screening/crushing/blending of the resources is proposed to operate from 7am – 5pm on weekdays and 8am – 1pm on Saturdays.

The use of trucks on the site for receipt and dispatch is proposed to operate 24 hours a day 7 days a week.

3.7. WORKFORCE

The construction workforce would vary throughout the construction period depending on the activities underway. Typically, the workforce would vary between 10 and 15 persons.

Once fully operational, it is expected that there will be 3-4 employees on site at any given time.

3.8. ENVIRONMENTAL MANAGEMENT

An Environmental Management Plan would be developed that nominates responsibilities, control systems and lines of communication. The following aspects would be considered in the EMP:

- Site supervision and control;
- Control, monitoring and recording of incoming wastes;
- Waste handling/management;
- Surface Water and Soil Management;
- Odour control;
- Dust control;
- Noise control;
- Fire management;
- Complaints handling;
- Incident reporting;
- Staff training requirements; and

- Document control.

The key areas of environmental management are provided below.

Dust

Dust management will be addressed by the following controls:

- Facility roadways are sealed;
- Delivered materials are stored in an undercover building;
- Processing of materials is undertaken in an undercover building;
- The receival area floor is sealed;
- The storage and processing area is hardstand; and
- Crushing equipment will be fitted with water sprays (if required).

Noise

A full noise assessment will be required for inclusion in the Environmental Assessment document. It is anticipated that noise will not provide any issues due to the following:

- Processing of materials is undertaken in an undercover building; and
- The nearest resident is located approximately 200m away.

Storm Water / Leachate

The fundamental approach to stormwater management will include the following:

- Divert all clean stormwater runoff from upstream undisturbed areas and revegetated areas around disturbed areas;
- Collect the rainwater from the proposed new buildings and reuse the water within the process.
- Maintain undisturbed and rehabilitated / revegetated area as filters for sediment from disturbed areas;
- Capture and store all stormwater runoff from disturbed areas to minimise release of sediments and maximise the opportunities for the vegetation to strip sediment from the runoff. Any concentration of flow would be avoided, wherever possible;
- Implement and maintain appropriate erosion control measures e.g. re-vegetation, silt fencing etc, on all disturbed areas as soon as practicable; and
- Capture all potentially contaminated runoff from disturbed areas or final processed product areas and treat such water in the proposed stormwater ponds.

Leachate generated by the operation shall be minimised, collected and managed on the site. All practicable measures should be undertaken to minimise the volume of leachate generated at the site, including:

- Diverting upstream, clean stormwater runoff around the site, where practical;
- Storing and sorting the waste material in an enclosed building;
- Grading filled areas to direct surface water runoff away from the storage areas.
- Testing of leachate to determine final end use or disposal options.

Design of stormwater systems will be undertaken to ensure separation of stormwater from potential leachate. Leachate once collected can be disposed of by either

- Collection and disposal by a local contractor to an appropriate facility; or
- Collection and disposal to sewer through a trade waste agreement once treated.

4. ENVIRONMENTAL ISSUES AND PRELIMINARY ASSESSMENT

4.1. INTRODUCTION

This section provides a brief description of the existing environmental characteristics of the site. The potential impacts and avoidance measures proposed to minimise impacts are discussed and summarised in *italics* at the end of each subsection.

As part of the Environmental Impact Statement prepared to accompany the Project Application a risk assessment analysis will be undertaken and site specific investigations and reports will be prepared in accordance with DGR's. The aim of this analysis is to identify all key environmental risk factors relevant to the proposal, so they can be appropriately managed and taken into consideration during the detailed design.

4.2. TOPOGRAPHY AND DRAINAGE

Lot 134 and Part Lot 133 DP 1124258 have been levelled out and have gentle downslope to the northeast towards the drainage easement. Part Lot 137 DP 112458 is has s downward slope of ranging from 3 to 5 degrees in a north to north easterly direction towards the drainage easement.

The topography and drainage patterns within the site are suited to the proposed facility. The modified topography required for the site would create negligible drainage impacts. The location of the site within a single catchment with little upslope catchment would assist in the management of surface water.

4.3. GEOLOGY AND SOILS

Geologically the site is underlain by Nowra Sandstone and Wandrawandian Siltstone of the Permian aged Shoalhaven Group. The Nowra Sandstone consists typically of quartz sandstone and the Wandrawandian Siltstone consists typically of siltstone and sandy siltstone. Soils derived from this geology are typically poorly drained with low nutrient levels. Low hills, ridges and valleys are typically associated with these soils.

The geology of the site offers an excellent base for building foundations constructed largely on solid rock. Earthworks would be required to level out Part Lot 137. Retaining wall would be required along the southern boundary.

4.4. CLIMATE AND METEOROLOGY

The maximum average annual temperature in Nowra is 22.6°C, while the average annual minimum is 11.8°C. In December the mean maximum increases to 27.5°C. On average it rains about 80 days per year, with 974.7mm of rain.

A long term summary of relevant monthly weather data will be included in the EA, together with appropriate wind roses.

4.5. TRAFFIC AND TRANSPORT

The subject site is located in an area of the Flinders Industrial Estate that has only been recently subdivided. As such, Trim Street experiences little traffic at the present time. It has however, been constructed with the expectation that it will be servicing significant levels of traffic associated with the development of several industrial businesses in this area.

Transportation issues that require assessment and will be reported in the EIS include the following:

- *Site Access Requirements – the site will require appropriate vehicular access for transport of materials;*
- *Adequacy of Existing Road Network – a detailed assessment of the existing road network and traffic usage levels to assess its suitability to accommodate additional traffic generated by the Development;*
- *Construction Stage Traffic Impacts – Assessment of the potential traffic impacts during the construction stage of the Development; and*
- *Operational Stage Traffic Impacts - Assessment of the potential traffic impacts which would occur during the ongoing operational stage of the Project and the interaction with the existing traffic utilising them key transport routes.*

4.6. WATER MANAGEMENT

While there are no natural water course located within the vicinity of the subject site there is a drain easement located between Lot 134 and Lot 137. The main management issues in relation to surface and ground water are:

- Leachates (leachate is deemed to include all water that has come into contact with waste). Leachates have the potential to pollute groundwater and surface water bodies and can be high in nutrients and other chemicals depending on the type of waste the water comes into contact with. Furthermore, from a disposal point of view leachate is classified as liquid waste.
- Stormwater/surface runoff. Surface runoff can transfer sediment, suspended solids, nutrients and other chemicals to receiving waters. Surface water run-on can also lead to excessive generation of leachate. Three main types of stormwater could be generated by the operation:
 - o Clean stormwater runoff from undisturbed and rehabilitated / revegetated areas of the site;
 - o Potentially sediment-laden stormwater runoff from disturbed areas of the site and stockpiles of product waiting to be sold; and
 - o Potentially leachate contaminated stormwater runoff from the stored waste material.

A range of appropriate measures would be implemented to minimise, contain, collect and dispose of leachate and stormwater generated during resource recovery operation at the site. The facility will be designed to manage stormwater through a combination of mitigation measures. The fundamental approach to stormwater management would be as follows:

- *Divert all clean stormwater runoff from upstream undisturbed areas and revegetated areas around disturbed areas;*

- *Collected the rainwater from the proposed new buildings and reuse the water with the process.*
- *Maintain undisturbed and rehabilitated / revegetated area as filters for sediment from disturbed areas;*
- *Maintain all stormwater runoff from disturbed areas as diffuse as possible to minimise sediment loads and maximise the opportunities for the vegetation to strip sediment from the runoff. Any concentration of flow would be avoided, wherever possible;*
- *Implement and maintain appropriate erosion control measures e.g. re-vegetation, silt fencing etc, on all disturbed areas as soon as practicable; and*
- *Capture all potentially contaminated runoff from disturbed areas or processing areas and treat such water in the proposed stormwater ponds.*

Leachate generated by the operation shall be minimised, collected and managed on the site. All practicable measures should be undertaken to minimise the volume of leachate generated at the site, including:

- *Diverting upstream, clean stormwater runoff around the site, where practical;*
- *Storing and sorting the waste material in an enclosed building;*
- *Grading filled areas to direct surface water runoff away from the storage areas.*
- *Testing of leachate to determine final end use or disposal options.*

Design of stormwater systems will be undertaken to ensure separation of stormwater from potential leachate. Leachate once collected can be disposed of by either

- *Collection and disposal by a local contractor to an appropriate facility; or*
- *Collection and disposal to sewer through a trade waste agreement once treated.*

The facility will also include procedures for dealing with spills, and appropriate equipment and materials (e.g. dry mulch, sand or other absorbents) will be located onsite to deal with any spills.

During construction erosion and sediment control will be undertaken in accordance with the “Blue Book” Landcom (2004) Managing Urban Stormwater: Soils and Construction, 4th edition, with the objective of zero sediment from the construction site reaching the receiving water course.

4.7. AIR AND QUALITY

The operation of crushing, grinding and separating machinery and truck movements will generate noise and dust on and around the site. Plant will only operate during normal business hours and as per conditions stipulated through the development consent and licensing process.

The main sources of air and noise pollution from the proposal would be via:

- Earth works associated with construction of the facility;
- Vehicular movement;
- Loading and unloading of vehicles;
- The handling/processing of Waste Material; and
- Windborne dust from passive areas.

As part of the preparation of the Environmental Impact Statement the following assessment will be undertaken:

- *An air quality, and greenhouse gas impact assessment will be conducted in accordance with OEH 'Approved Methods for the Modelling and Assessment of Air Pollutants in NSW' (Approved Method) (DEC 2005b) and the Australian Greenhouse Office's (AGO) Factors and Methods Workbook (AGO 2005);*
- *An noise impact assessment will be conducted in accordance with Industrial Noise Policy (INP) and Environmental Criteria for Road Traffic Noise 1999 (ECRTN).*

The potential impact on the local air and noise quality will be managed through a combination of mitigation measures including onsite dust suppression, sealing of access roads, undertaking the sorting and processing of the material in an enclosed shed and implementation of standard noise control measures.

4.8. VISUAL IMPACTS

The potential visual impact of a proposed development within a precinct may be assessed by considering a combination of two factors:

- Visibility of the development; and
- Visual absorption capacity of the landscape to absorb the development.

An assessment of the visual impact of a proposed development must take into consideration the following element: Key viewpoints; Period of view; Context of view; and Extent of view.

The potential for the proposal to impact on visual amenity is considered to be low, as the Resource Recovery Facility will be located within the Finder Industrial estate. Therefore, given the location and position of the development within the landscape we believe the development will constitute a minor component of the wider view, barely observed by the casual passerby. Furthermore the capacity of the landscape to absorb the development is medium to high.

4.9. HERITAGE

It is unlikely that there would be any non indigenous heritage or Indigenous Heritage issues associated with the development of the subject land.

4.10. POWER EASEMENT

A power easement for power lines transects the site from northeast to southwest. The Energy Australia publication "What a" residents should know about living with Electricity Easements", summarises the limitations placed on activities and development within a 45 metre easement under the power lines. These guidelines indicate that key aspects of the recycling facility can occur within the easement, including; transport, mobile plant operation, sma" stockpiles, and water storage.

The Draft site layout plan has taken into considered Energy Australia's requirements and position the proposed shed outside of the easement.

Energy Australia will be consulted during the preparation of the Environmental Assessment in developing risk assessments for the construction and operational phases of the facility.

4.11. CAPITAL INVESTMENT VALUE

The capital investment is estimate to be 2.5 – 3 Million dollars.

4.12. SUMMARY OF ENVIRONMENTAL ISSUES AND RISKS

Information collected during the PEA process has determined that the Project would have negligible impacts on surrounding topography, geotechnical, surface water, ground water, visual and Aboriginal heritage.

The key environmental considerations likely to influence the design and operation of the Resource Recovery Facility are as follows:

- Air Quality;
- Noise Amenity;
- Water Management;
- Waste Management (e.g management of contaminated loads); and
- Traffic Management.

In each case, design and operational mitigation and control measures should be sufficient to ensure acceptable impacts are achieved.

5. PROJECT JUSTIFICATION AND CONCLUSION

5.1. NEED FOR THE PROJECT

5.1.1. STATE-WIDE PERSPECTIVE

In 2007 there was increasing concern across NSW about the management of waste, limited re-use and recycling and heavy reliance on landfills (DECC 2007). Since that time the Waste Avoidance and Resource Recovery Strategy (WARR Strategy), which is required by the Waste Avoidance and Resource Recovery Act 2001 (WARR Act), has been effective in significantly increasing resource recovery across NSW, while protecting the environment. The WARR strategy provides the framework that is to guide the Government's policy objectives of minimising environmental harm from waste generation through to disposal, conserving and maximising resource use with the Broad Targets specified as:

"By 2014, to: Increase recovery and use of materials from the municipal waste stream, from 26% (in 2000) to 66% Increase recovery and use of materials from the commercial and industrial waste stream, from 28% (in 2000) to 63% and Increase recovery and use of materials from the construction and demolition sector, from 65% (in 2000) to 76%."

The NSW State Plan 2010 (State Plan) adopted the targets for municipal, commercial and industrial (C&I) and construction and demolition (C&D) waste in the WARR Strategy, which has given extra emphasis to driving improvement. In 2010, the NSW Government commissioned a review of the Waste Strategy to ensure that the policies and programs applied to waste management and resource recovery were optimised and sufficient to achieve the 2014 resource recovery targets. The review found that state and local government, the community and industry all accept the need for greater resource recovery and waste minimisation (DECCW, 2011).

While steady progress is being made to achieve the targets (Table 6.1), in particular, with the C&D waste (73% in 2008-09) we need to refocus our efforts to guarantee that the 2014 resource recovery targets will be achieved. To achieve the targets, NSW needs a viable and mature recycling industry. This requires enhanced resource recovery, alternative waste treatment (AWT) infrastructure and strong community engagement (DECCW, 2011).

Table 5.1: Progress towards waste diversion targets. Source: (DECCW, 2011).

Waste sector	2000 baseline	2002-03	2004-05	2006-07	2008-09	2014 target
Municipal	26%	30%	33%	38%	44%	66%
C&I	28%	34%	38%	44%	52%	63%
C&D	65%	64%	62%	67%	73%	76%
Overall	–	45%	46%	52%	59%	n/a
Total number of tonnes recycled (millions)	–	5.3	6.0	8.0	9.5	n/a

While WARR strategy provides the framework that guides Government's policy and sets targets for waste reduction, the POEO Act establishes the waste and environment levy (the levy) which is

payable by scheduled waste facilities (those requiring a licence) in the regulated area. The levy applies to waste disposed to landfill or intractable liquid waste facilities. The levy works by increasing the cost of waste disposal, thereby providing a strong economic incentive to reduce waste generation and promote resource recovery. The levy is designed to discourage landfill disposal and drive resource recovery investment in NSW to meet the WARR Strategy and targets. As the levy increases, it encourages waste generators to review their practices and makes recycling options more financially viable in comparison to landfill (OEHL, 2011c). C&D waste is particularly sensitive to the levy, due to the weight of the material. It would be anticipated that future levy increases will further drive up the recovery rate of C&D waste.

5.1.2. LOCAL PERSPECTIVE

Regardless of the NSW Waste Avoidance and Resource Recovery Strategy 2007, and NSW targets for reduction of waste to landfill the need for the Resource Recovery Facility is underpinned by the limited life of the current landfill at West Nowra. Wright (2008) concluded that *“In twenty years time, it is expected that Council will be disposing an additional 20,000 tonnes each year to landfill – up nearly 30% on the current disposal rate...over the 20 years this will amount to some 1.6 million tonnes disposed to landfill; which, when compared with the estimated remaining capacity for the West Nowra Recycling and Waste Facility of 1 million tonnes presents Council with a major challenge.”* Without the creation of Resource Recovery Facilities (and other waste reduction initiatives) within the Shoalhaven Region the West Nowra Recycling and Waste Facility is anticipated to be exhausted within 12 years and a new site will need to be made ready prior to this period.

5.1.3. JUSTIFICATION OF THE PROPOSAL

The development of the Resource Recovery Facility would deliver outcomes consistent with state legislation and strategies for sustainable waste management. These include the *Waste Avoidance and Resource Recovery Act 2001* and the Waste Avoidance and Resource Recovery Strategy 2007. The construction and operation of the Resource Recovery Facility aligns with the philosophy of viewing waste as a resource and recovering resources in their highest net resource value state. The recovery of resources in this manner creates value from the waste stream.

5.2. CONCLUSION

The subject site is relative flat and cleared of vegetation and is well suited to the establishment and operation of a Resource Recovery Facility and a truck depot given its position within the Flinders Industrial Estate and its proximity to Nowra CBD and the West Nowra Recycling and Waste Facility. The sites proximity to Nowra CBD provides easy access to both commercial operators and local.

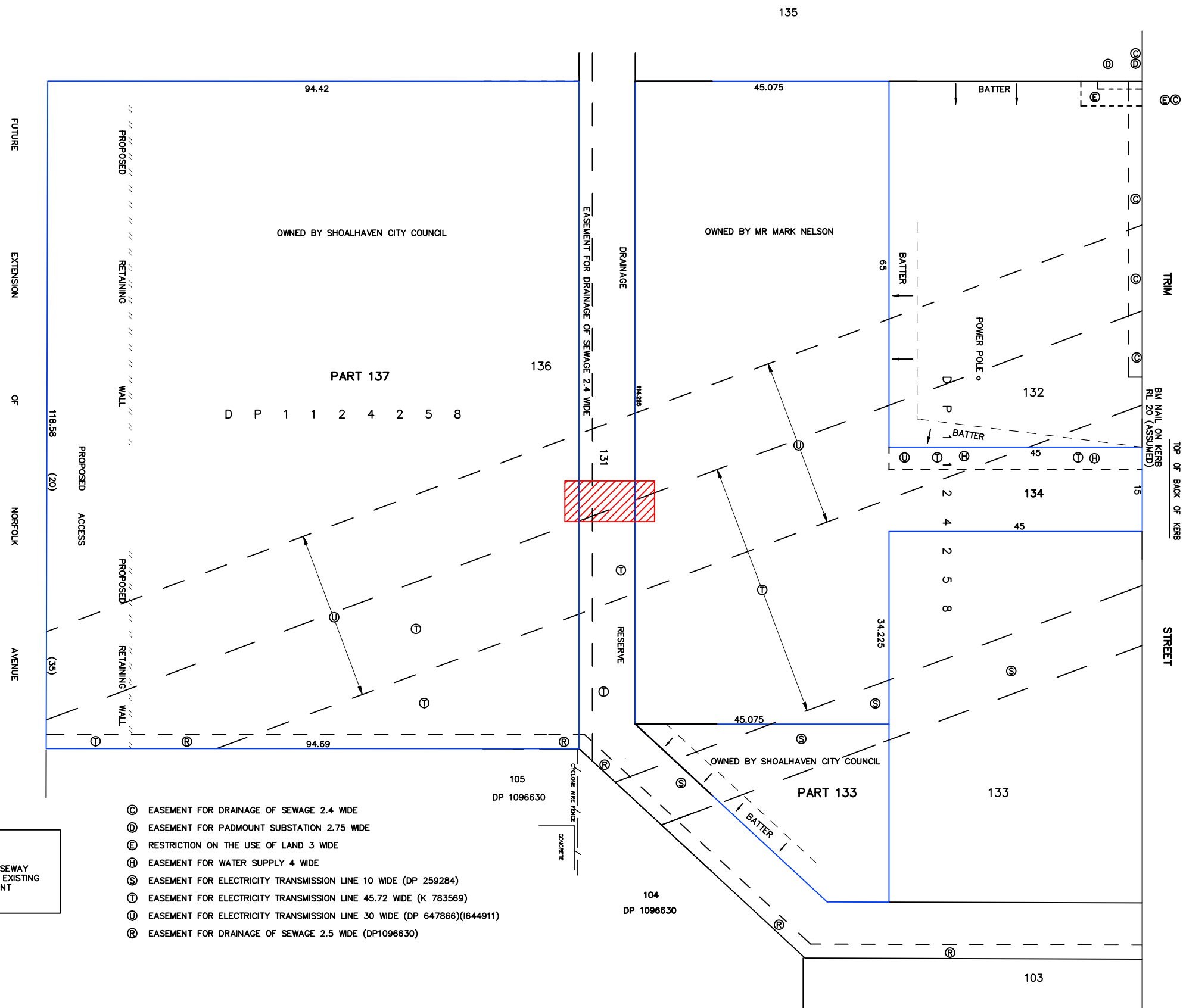
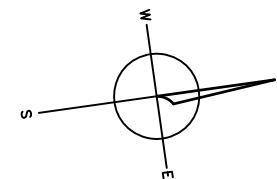
A number of potential environmental constraints have been identified (above) which will require further investigation or mitigation measures incorporated into the final design and operational procedures to manage the impact to an acceptable level. However, the initial environmental investigation did not find any constraints that are likely to prevent the proposed development of the site.

In summary, the site chosen is most suited for the development due to financial, social, and environmental considerations.



ATTACHMENT 1

SITE PLAN



LEGEND



PROPOSED PIPED CAUSEWAY
RIGHT OF ACCESS OVER EXISTING
DRAINAGE EASEMENT

- Ⓒ EASEMENT FOR DRAINAGE OF SEWAGE 2.4 WIDE
- Ⓓ EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE
- Ⓔ RESTRICTION ON THE USE OF LAND 3 WIDE
- Ⓕ EASEMENT FOR WATER SUPPLY 4 WIDE
- Ⓖ EASEMENT FOR ELECTRICITY TRANSMISSION LINE 10 WIDE (DP 259284)
- Ⓣ EASEMENT FOR ELECTRICITY TRANSMISSION LINE 45.72 WIDE (K 783569)
- Ⓤ EASEMENT FOR ELECTRICITY TRANSMISSION LINE 30 WIDE (DP 647866)(1644911)
- Ⓡ EASEMENT FOR DRAINAGE OF SEWAGE 2.5 WIDE (DP1096630)



Liability limited by a scheme approved under Professional Standards Legislation

REDUCTION RATIO
1:400 ● A1 SIZE
1:800 ● A3 SIZE

DATUM
ASSUMED

WARNING NOTE:
THE INFORMATION SHOWN ON THIS PLAN (OR THE DATA TRANSMITTED
HEREWITH) IS CORRECT AS AT 11 September 2012 AND HAS BEEN PREPARED
IN ACCORDANCE WITH THE REQUIREMENTS OF MR M. NELSON.

THESE WARNING NOTES MUST NOT BE REMOVED FROM THIS ELECTRONIC FILE.
IF THESE NOTES ARE REMOVED SET CONSULTANTS PTY LTD IS RELIEVED OF
ALL RESPONSIBILITY AND LIABILITY RELATING TO ANY SUBSEQUENT USE OF
THE INFORMATION CONTAINED WITHIN THIS FILE.

THIS ELECTRONIC FILE SHALL NOT BE TRANSMITTED TO ANY THIRD PARTY
WITHOUT THE EXPRESS PERMISSION OF SET CONSULTANTS PTY LTD.

SURVEY	DH
DESIGN	DH
DRAWN	WN
CHECKED	
APPROVED	

AMENDMENTS
0 - ORIGINAL ISSUE

BY
DC

DATE
14/12/13



1100 - Dial 1100
to the number
are free.

SET
consultants

SURVEYING | ENGINEERING | TOWN PLANNING

SET CONSULTANTS PTY LTD
51 Graham Street Nowra
PO Box 495 Nowra NSW 2541
p 02 4421 4500
Kiana 02 4333 2006
mail@setconsultants.com.au
www.setconsultants.com.au
ABN 15 617 504 208

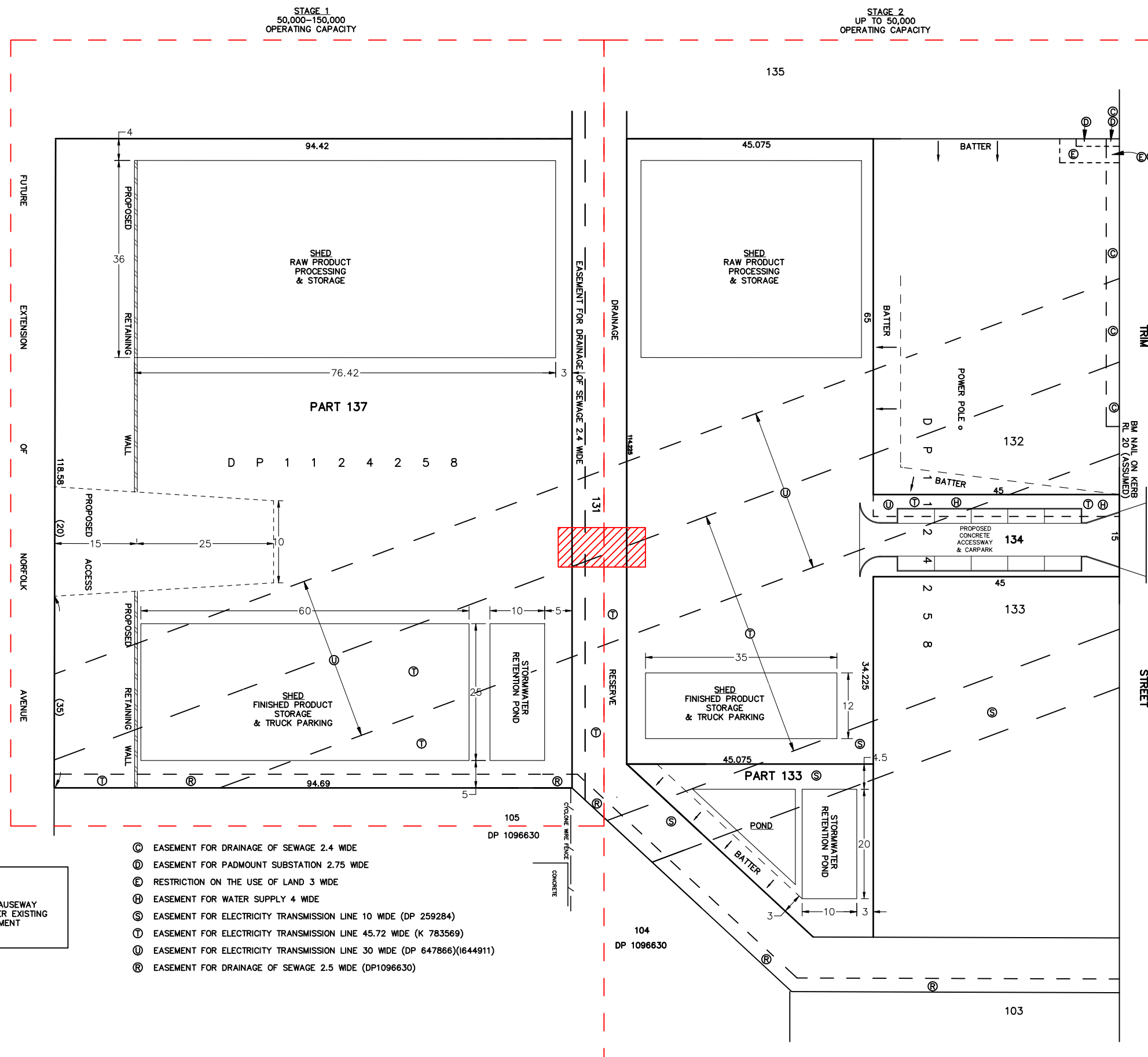
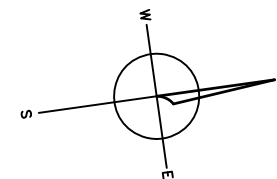
SKETCH PLAN SHOWING SUBJECT SITE
AT LOT 134 , PT LOT 133 & PT LOT 137 DP1124258
TRIM STREET, SOUTH NOWRA
FOR MR M. NELSON

SHEET	1	OF	1	SHEETS
REF. No.	103013			PLAN No.



ATTACHMENT 2

CONCEPT LAYOUT PLAN



LEGEND



PROPOSED PIPED CAUSEWAY
RIGHT OF ACCESS OVER EXISTING
DRAINAGE EASEMENT

- Ⓒ EASEMENT FOR DRAINAGE OF SEWAGE 2.4 WIDE
- Ⓓ EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE
- Ⓔ RESTRICTION ON THE USE OF LAND 3 WIDE
- Ⓕ EASEMENT FOR WATER SUPPLY 4 WIDE
- Ⓖ EASEMENT FOR ELECTRICITY TRANSMISSION LINE 10 WIDE (DP 259284)
- Ⓗ EASEMENT FOR ELECTRICITY TRANSMISSION LINE 45.72 WIDE (K 783569)
- Ⓘ EASEMENT FOR ELECTRICITY TRANSMISSION LINE 30 WIDE (DP 647866)(1644911)
- Ⓡ EASEMENT FOR DRAINAGE OF SEWAGE 2.5 WIDE (DP1096630)



Liability limited by a scheme approved under Professional Standards Legislation

REDUCTION RATIO
1:400 ● A1 SIZE
1:800 ● A3 SIZE

DATUM
ASSUMED

WARNING NOTE:
THE INFORMATION SHOWN ON THIS PLAN (OR THE DATA TRANSMITTED
HEREWITH) IS CORRECT AS AT 11 September 2012 AND HAS BEEN PREPARED
IN ACCORDANCE WITH THE REQUIREMENTS OF MR M. NELSON.
THESE WARNING NOTES MUST NOT BE REMOVED FROM THIS ELECTRONIC FILE.
IF THESE NOTES ARE REMOVED SET CONSULTANTS PTY LTD IS RELIEVED OF
ALL RESPONSIBILITY AND LIABILITY RELATING TO ANY SUBSEQUENT USE OF
THE INFORMATION CONTAINED WITHIN THIS FILE.
THIS ELECTRONIC FILE SHALL NOT BE TRANSMITTED TO ANY THIRD PARTY
WITHOUT THE EXPRESS PERMISSION OF SET CONSULTANTS PTY LTD.

SURVEY	DH
DESIGN	DH
DRAWN	WN
CHECKED	
APPROVED	

AMENDMENTS
0 - ORIGINAL ISSUE

BY
DC

DATE
14/12/13



Call to this number
are free.

SET
consultants

SURVEYING | ENGINEERING | TOWN PLANNING

SET CONSULTANTS PTY LTD
51 Graham Street Nowra
PO Box 495 Nowra NSW 2541
p 02 4421 4500
Kiana 02 4333 2006
mail@setconsultants.com.au
www.setconsultants.com.au
ABN 15 617 504 208

SKETCH PLAN SHOWING CONCEPT LAYOUT PLAN
AT LOT 134, PT LOT 133 & PT LOT 136 DP1124258
TRIM STREET, SOUTH NOWRA
FOR MR M. NELSON

SHEET 1 OF 1 SHEETS
REF. No. 103013
PLAN No.