Hume Highway Duplication

CONSTRUCTION WASTE MANAGEMENT & REUSE PLAN

- IN90304-000-PL-EW-0012-D
- November 2008

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HUME HIGHWAY
SOUTHERN ALLIANCE

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Contents

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Plan Approved By Jo Moss

Environment & Sustainability Manager

1. Introduction

1.1 Background

The Hume Highway Duplication Project is a federally funded upgrade of the existing Hume Highway between Tarcutta and Table Top. The project is being delivered through two alliances. This document relates to the section of highway between Woomargama and Table Top (the Project) to be delivered by the Southern Alliance. The Southern Alliance comprises the RTA (the Owner Participant), and Abigroup and Sinclair Knight Merz (the Non-Owner Participants). The scope of work includes design and construction, and excludes operation and maintenance. The Project measures approximately 32 km in length and principally involves construction of a second carriageway. Access will be provided with local roads and properties and an interchange will be constructed in the vicinity of Bells Road.

The Mullengandra to Table Top section is part of the National Highway project approved by the Minister for Planning on 23 January 1998. The Woomargama to Mullengandra section, assessed under Part 3A of the Environmental Planning and Assessment Act 1979, was approved by the Minister for Planning on 29 August 2007.

There are three Minister's Conditions of Approval (MCoA) that apply to the Hume Highway Duplication Project from Woomargama to Table Top:

- MCoA for new section of National Highway between Albury & Wodonga (1998)
- Concept Approval under Section 75O of the EP&A Act 1979 between Sturt Highway and Mullengandra (2007)
- Project Approval under Section 75J of the EP&A Act 1979 between Woomargama and Mullengandra (2007)

Where applicable, specific Ministers Conditions of Approval for the Mullengandra to Table Top section will be prefixed by M2TT (e.g. M2TT MCoA 62). Those for Woomargama to Mullengandra will be pre-fixed W2M (e.g. W2M MCoA 2.7). Conditions relating to the Concept Plan will be pre-fixed CP.

1.2 Purpose

The purpose of this Construction Waste Management Plan (CWMP) is to assess, and where possible reduce, the amount of waste produced during the Hume Highway Duplication Project. This plan will assess how the waste will be dealt with, in the most environmentally sustainable way. The Spoil Management Plan should be consulted in conjunction with this CWMP.

2. Legislative & Regulatory Compliance

2.1 Relevant Legislation & Other Requirements

- **Table 1** Environmental Legislation Specific to Waste

Legislation	Details	Approvals/Permits required
Waste Avoidance and Resource Recovery Act 2001	Repeals the Waste Minimisation and Management Act and replaces a target of 60% reduction in waste to landfill with a process for the preparation of waste strategies which identify more specific targets and objectives for waste reduction.	Compliance must be achieved in relation to waste management during construction. Permits may be required for offsite disposal of hazardous or contaminated material.
Contaminated Land Management Act 1997	Provides for the investigation and remediation of contaminated land.	Specific approvals are not required however, construction works must comply. There is potentially contaminated material at the Mullengandra landfill near Sages reserve. This will be the subject of a contaminated site investigation, and if contaminated material is identified , there may be a duty to report to the DEC.
Environmentally Hazardous Chemicals Act 1985	Provides for the control of the effect on the environment of chemicals and chemical wastes.	
Protection of the Environment Operations Act 1997	This Act is the primary NSW environment protection legislation that covers air, noise, water, land and waste management. It provides a framework to regulate and enforce pollution control in NSW. The Act identifies mechanisms for preventing environmental degradation including, pollution prevention, cleaner production, reduction in discharge levels likely to cause harm to the environment, recycling and progressive environmental improvement.	

2.2 Ministers Conditions of Approval

MCoA No.	Condition Requirements	Sub-Plan Reference
85	As part of the EMP referred to in Conditions 10 and 13, a detailed Waste Management and Reuse Procedure shall be prepared to address the management of wastes during both the construction and operation stages. The Procedure shall be prepared prior to construction and operation as appropriate and shall identify requirements for waste avoidance, reduction, reuse and recycling. It shall also detail requirements for handling, stockpiling and disposal of wastes, specifically spoil, concrete, contaminated soil or water, demolition material, cleared vegetation, oils, greases, lubricants, sanitary wastes, timber, glass, metal etc. It shall also identify any site for final disposal of any material and any remedial works required at the disposal site before accepting the material. Any waste material which is unable to be reused, repossessed or recycled shall be disposed at a landfill licensed by DEC to receive that type of waste. The Procedure shall be framed using the waste minimisation hierarchy principles of avoid-reuse-recycle-disposal.	This Construction Waste EMP **Note:** a separate Waste Management Procedure will be prepared for operation.
86	The demand for water for construction purposes shall be kept to a minimum. The project shall incorporate water use reduction initiatives including reuse of water & recycling to the maximum extent practically possible.	Soil & Water Management Plan Sustainability Framework
W2M	No specific condition relating to waste	

In addition the following obligations relating to waste minimisation and management from the revised statement of commitments have been incorporated in this plan.

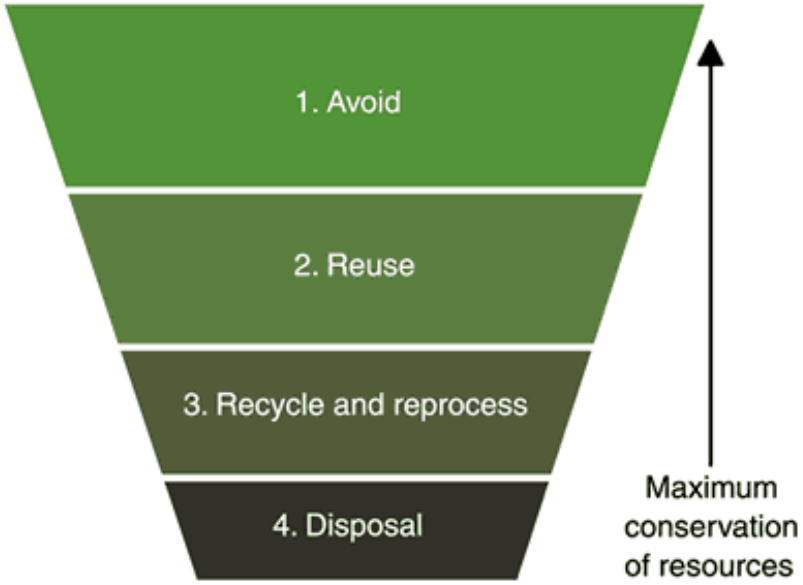
Objective.	Ref #	Commitment
Reduce creation of waste and maximise re-use and recycling	W1	Reuse and recycling and avoidance strategies in accordance with NSW Government's Waste Avoidance and resource Recovery Strategy 2006 will be adopted.
Ensure waste generated is managed properly	W2	Waste materials will be classified and managed in accordance with the DECC Environmental Guidelines: Assessment and Classification & Management of Liquid & Non-Liquid Wastes

2.3 Guidelines and Standards

Document Name	Summary
Waste Management Guidelines	Guidelines on current waste management legislation specifying classification of waste and management of waste

Document Name	Summary
NSW Government's Waste Reduction and Purchasing Policy	This policy is designed to promote ecologically sustainable development within all NSW State Government Agencies. The aim is to reduce the amount of waste to landfill by encouraging the more efficient use of scarce natural resources. It requires all State agencies to develop a Waste Reduction and Purchasing Plan to demonstrate procedures to minimise waste generation in four areas (paper products, office equipment and components, vegetation and construction and demolition material). The policy also requires priority to be given to purchasing items with recycled content and the recycling of certain wastes.
NSW EPA "Construction and Demolition Waste Action Plan"	Contains a comprehensive program of steps to divert construction and building waste from landfill through reduction, recycling and minimisation principles. The plan identifies 34 key action points and recognises that the construction and demolition sector has specific responsibilities for waste reduction.
NSW EPA "Green Waste Action Plan"	Presents a comprehensive program to help divert green waste from landfill by highlighting the need for uncontaminated supplies of green waste for reprocessing, and stable and sustainable markets for compost and other green waste products.
RTA Environmental Direction 19 – Offsite Disposal of Bulk RTA Project Wastes	To reduce regulatory and environmental risks associated with the offsite disposal of bulk RTA construction & maintenance wastes.

The *Waste Avoidance and Resource Recovery Act 2001* (WARR Act) and the *Protection of the Environment Operations Act 1997* (POE Act) govern the issues of waste generation, reuse, recycling, transport and disposal and establish a waste minimisation hierarchy (Figure 1) that prioritises waste solutions, according to how successfully they conserve natural resources. The first priority is given to reducing the overall amount of waste, followed by the reuse and then recycling of any wastes that are unavoidably created, with disposal as a last resort. The aim is to extract the maximum practical benefits from the products and to manage waste in the best possible way.



- **Figure 1 Waste Minimisation Hierarchy**

2.4 Classification of Waste Streams

2.4.1 Overview

Where waste cannot be avoided, reused or recycled it will be classified and appropriately disposed of. The classification of waste is based on the DECC Waste Classification Guidelines. The guideline outlines how to assess waste, waste classification and sets out management options for the disposal of classified waste.

Waste classification will involve one or more of the following steps;

1) Establish if the waste should be classified as special waste.
2) If not special waste, establish whether the waste should be classified as liquid waste.
3) If not special waste or liquid waste, establish whether the waste is of a type that has already been classified. To simplify the classification process, the Environment Protection Authority (EPA) has 'pre-classified' a number of commonly generated wastes.
4) If the waste is not special waste, liquid waste or pre-classified, establish if it has certain hazardous characteristics and can therefore be classified as hazardous waste.
5) If the waste does not possess hazardous characteristics, it needs to be chemically assessed to determine what class of waste it is. If the waste is not chemically assessed, you must manage the waste as if it were hazardous waste.
6) If the waste is chemically assessed as general solid waste, a further test is available to determine whether the waste is putrescible or non-putrescible. This test determines whether the waste is capable of significant biological transformation. If you do not wish to undertake this test, you must manage the waste as if it were general solid waste (putrescibles).

2.5 Receival Facilities

The classification of wastes would determine whether licensed transporters are required and also where disposal to licensed landfills is required.

There are also facilities located within NSW that will accept hazardous waste, dependent on the contaminant. An appropriately licensed facility will be sought for the known contaminant at the time of disposal if the need arises to dispose of hazardous waste. The Construction Environmental Manager will ensure that all receival facilities are appropriately licensed to take the type of waste transported offsite. A record of this will be kept in the Waste Management Register provided in Appendix B. When using landfills for the first time, a copy of the landfills' licence will be requested and reviewed.
This is to ensure that the landfill is legally able to accept the classification of waste being taken there. Landfill licences are valid for one year and so copies of new licences should be sought as appropriate.

When selecting an appropriate receival facility the proximity of the site to the project would be considered, to minimise energy consumption associated with transport. Interstate transport will be avoided where possible.

The following outlines the details to be provided to enable waste classified as inert or solid to be disposed of at the facility, subject to the provision of written analysis results and written certification containing the following information:

1) Classification of waste
2) Results of analysis for waste
3) Certification of analysis results
4) Certification that the testing methods, testing regime and analysis methods provide results that are representative of the nature of the waste.
5) Date of sampling and analysis.
6) Signature of the certifying person.
7) Information detailing the Quality Assurance accreditation of the organisation conducting the analysis.
8) Nature of waste (e.g. soil)
9) Source of the waste.
10) Volume of the waste.
11) Date on which disposal will commence.
12) Potential hazards associated with waste.

2.6 Waste Tracking Requirements Reporting

The following wastes are subject to special monitoring and reporting requirements by DECC under the waste tracking system:

a) hazardous non-liquid waste (eg batteries);

b) industrial non-liquid waste; and

c) liquid wastes including, oils, fuels, chemicals, paint.

The RTA has two options in order to comply with its waste tracking requirements, as follows:

- to deal directly with a licensed waste facility; or
- to enter into an agreement with an authorised contractor who can make the arrangements on behalf of the RTA.

3. Structure & Responsibilities

This section outlines specific responsibilities relating to waste management for the Southern Alliance Hume Highway project.

3.1 Responsibilities

An organisational structure for this project is provided in section 3 of the Framework CEMP document. The responsibilities of staff relevant to Waste Management are summarised below:

3.1.1 Superintendents

The Superintendents will be responsible for facilitating implementation of CWMP and ensuring, where possible, that waste is avoided and where waste is generated that waste materials are recycled or reused. This will include (but not be limited to):

- ensure that waste material compounds are maintained in sound condition;
- ensure that the Environmental Construction Manager is notified of the potential presence of hazardous materials;
- ensure that any spills or potentially contaminated soils identified are isolated and the Environmental Construction Manager informed;
- ensure that waste is stored safely and in an environmentally acceptable manner;
- ensure that waste is regularly collected and removed in accordance with this Plan;
- coordinate any required environmental mitigation or maintenance works;
- ensure local roads affected by construction activities remain intact where possible, to reduce the need for new paving materials;
- ensure all subcontractors working on the project comply with the requirements of the CWMP;
- organise the appropriate disposal of general, industrial and hazardous wastes that cannot be reused or recycled.

3.1.2 Environmental Construction Manager

The Environmental Construction Manager will:

- review the use and maintenance of waste management facilities provided on site;
- complete required checklists on a weekly basis;
- co-ordinate laboratory analysis for classification purposes and maintain records,
- maintain the waste management register;
- ensure any contaminated soils or hazardous substances are managed and disposed of in accordance with DECC requirements;

- monitor subcontractors working on the project to ensure compliance with the requirements of the CWMP and report any non-conformances to the Environment & Sustainability Manager; and
- provide training and educational resources to staff and sub contractors.

3.1.3 Purchasing Officer

Those responsible for purchasing shall:

- ensure that all materials purchased are required, and that quantities are correct;
- encourage bulk orders, and source suppliers who are prepared to minimise packaging;
- ensure no rainforest timber is purchased; and
- encourage the use of recycled materials.

3.1.4 Subcontractors

The following responsibilities apply to all subcontractors:

- all subcontractors will be required to comply with the requirements of the CWMP;
- all subcontractors will be required to attend appropriate induction and training in regard to waste management issues; and
- where non-compliance is detected, subcontractors shall comply with the instructions in the requested timeframe to ensure compliance.

3.2 Resource Requirements

Waste disposal and recycling facilities will be provided on site by licensed, commercial operator/s. Appendix A provides details of local businesses and contractors providing these services. Appendix A lists the details of local waste facilities for the project.

4. Environmental Aspects and Impacts

4.1 Management of Key Waste Streams

Avoiding the generation of waste is of primary importance when considering waste management strategies and is recognised by the Southern Alliance as a key component in reducing waste.

Waste management and reuse strategies would be considered and implemented, where practical and cost-effective. Actions to minimise waste generation are detailed in **Table 6.**

The RTA is obliged to maximise on-site reuse opportunities and accordingly all effort should be made to implement reuse and/or recycling initiated listed in **Table 3**.

The following table lists the waste generating activities and identifies the range of solid, inert, industrial, hazardous and liquid wastes that are likely to be generated by the construction of the Project.

- **Table 2 Waste Streams**

Waste Stream	Types	Classification
Demolition	▪ vegetation (e.g. trees); ▪ concrete and asphalt from demolition work; ▪ reinforced steel.	▪ Inert ▪ Inert ▪ inert
Excavated Materials	▪ VENM (Virgin Excavated Natural Material); ▪ Potentially Contaminated Soils and Acid Sulphate Soils (Where encountered these will be managed in accordance with specific action plans e.g. RAP/ Spoil Management Plan)	Classification based on soil tests carried out pre-construction and on methods outlined in the Remediation Action Plan and the Acid Sulphate Soils Management Plan and in accordance with the EPA document *Environmental Guidelines: Assessment Classification and Management of Liquid and Non-liquid Waste*
Building Waste	▪ steel reinforcing; ▪ conduits and pipes; ▪ concrete; ▪ timber formwork; ▪ packaging materials including wood, plastic, paper, cardboard and metals; ; ▪ empty oil and other drums; ▪ pesticides;	▪ Inert ▪ Inert ▪ Inert ▪ Inert ▪ Inert ▪ Solid ▪ Hazardous waste

Waste Stream	Types	Classification
	▪ metal and bulk electrical cabling; ▪ paints	▪ Solid ▪ Hazardous waste
General Waste from Compounds	▪ tyres; ▪ waste generated by the maintenance of equipment including air and oil filters and rags; ▪ oil, grease, fuel, chemicals and other fluids; ▪ batteries; ▪ domestic waste generated by workers such as cans, glass, paper, plastic, food scraps; ▪ sewage	▪ Inert ▪ Solid ▪ Industrial ▪ Solid ▪ Inert ▪ Solid
Office Waste	▪ paper and cardboard; ▪ glass bottles; ▪ aluminium cans; ▪ ink cartridges; ▪ plastic	▪ Inert ▪ Inert ▪ Inert ▪ Solid ▪ Inert

4.1.1 Mullengandra Landfill

The remediation of Mullengandra Landfill is complete in accordance with the RAP. The validation report has been submitted to DECC.

- **Table 3 - Plan of Action for Key Waste Streams**

Reduce	Reuse	Recycle	Dispose
Excavated Material			
Refer to Remediation Action Plan (RAP) and Spoil Management Plan.			
Demolition Wastes			
• where possible ensure local roads remain intact during demolition work to reduce the need for new paving materials	• where practicable vegetation would be mulched and composted for landscaping and soil erosion mitigation	• where practicable steel would be segregated and sent to a recycler • uncontaminated concrete and asphalt may be transported off-site and used as recycled aggregate	• waste that cannot be reused, recycled or reprocessed would be disposed of at an appropriate waste receival facility • Contaminated material (other than soils) would be sent to landfill or appropriate receival facility
Building Waste			
• pre-painted products would be used wherever practicable • delivered quantities would be matched to ordered quantities to ensure shortfall or over-supply is rectified at the supplier's expense • materials to be cut to the right size first time, minimising the generation of scraps • planning to avoid waste and to minimise the likelihood of over ordering building materials • preference would be given where possible to products that are more durable, more compact and able to be maintained or repaired if they fail • where possible minimal packaging or alternative packaging would be requested	• where possible wood to be chipped for use in landscaping • where practicable asphalt and gravel would be reused • excess paint would be sent back to the supplier for reuse • timber formwork would be reused until worn out	• where practical steel would be segregated and sent to a recycler • uncontaminated concrete and asphalt may be transported off-site and used as recycled aggregate • recycled products would be used where practicable	• waste that cannot be reused, recycled or reprocessed would be disposed of at a licensed disposal facility • contaminated material would be sent to landfill or appropriate receival facility

Reduce	Reuse	Recycle	Dispose
from product supplier • building materials delivered to the site would be properly stored and handled to prevent the loss or damage caused by exposure to moisture, dirt and temperature changes			
General Waste from Construction Compounds			
• signs would be displayed within site compound to encourage employees to avoid, minimise and reduce waste where possible • where possible staff would be involved in the design and implementation of specific waste reduction measures • where possible minimal packaging or alternative packaging would be requested from product supplier, Management should take responsibility for waste management measures • equipment that is more durable and repairable would be bought where practicable • cloth roll towels would be considered instead of paper rolls in restrooms	• excess oil to be sent back to the supplier for reuse • wherever practicable air and oil filters would be cleaned and reused • empty oil drums would be sent to a drum recycler/ reconditioner • signs would be erected within construction compounds encouraging site personnel to reuse	• tyres would be sent back to supplier for recycling • a segregated bin system that separates recyclables such as aluminium cans and glass from general waste would be provided and personnel would be trained in their use • paper and cardboard bins would be provided and personnel would be trained in their use to ensure recycling of these products • signs would be erected within construction compounds encouraging site personnel to recycle • recycled products would be ordered from suppliers and used where practicable	• waste that cannot be reused, recycled or reprocessed would be disposed of at an appropriate waste receival facility • small oil containers would be deposited in a segregated oily waste bin for disposal • sewage would be discharged into the local sewerage system or would be discharged into holding tanks for removal by tankers • rubbish skips would be provided for waste disposal and would be emptied on a regular basis from both construction compounds
Office Waste			
• double sided and reduced-sized photocopying and printing would be encouraged • double sided printing with smaller font sizes,	• refillable cartridges would be sent back to the supplier for reuse	• recycled products would be used where practicable • an office paper separation	• waste that cannot be reused, recycled or reprocessed would be disposed of at an appropriate waste receival facility

Reduce	Reuse	Recycle	Dispose
smaller margins and single spacing only would be encouraged • on-screen editing would be encouraged to avoid unnecessary printing • documents and memos may be submitted or distributed electronically via email of by way of notice board eliminating the need for multiple copies • where possible only basic details would be included on the top of each fax coversheet leaving more room for text, reducing paper use • if possible fax status reports would be minimised by using electronic storage • where practicable marketing, publication and purchasing practices would be examined to identify opportunities for waste reduction/avoidance • equipment that is more durable and repairable would be bought • where possible minimal packaging or alternative packaging would be requested from product supplier	• where possible paper that has only been written on one side would be used again • where practicable surplus or outdated letter head or leaflets would be bound to make note pads • delivery boxes would be reused for removal and storage	system would be implemented • each staff member to be supplied with a cardboard container that would hold waste paper, when this container is full, it would be emptied into a central recycling bin • where possible logos would be placed on ordinary waste bins to enforce recycling • where practicable staff would be involved in the design and implementation of specific waste recycling measures • rewards and incentives for good recycling practices may be implemented • where practicable cleaning staff and caretakers would be involved in the paper recycling scheme • where practicable bins for non-recyclable waste can be removed from immediate work areas and placed in more remote points around the office to encourage recycling above waste disposal	

4.2 Environmental Impacts and Risk

Table 4 and Table 5 below provide a risk assessment of the aspects and impacts associated with waste management:

- **Table 4 Predicted Level of Risk**

	Consequence		
Likelihood	**High**	**Medium**	**Low**
High	HH	HM	HL
Medium	MH	MM	ML
Low	LH	LM	LL

Legend: (Australian Standard (AS/NZS 4360)

HH = Extreme Risk	Serious, long term environmental impact/ significant prosecution fines
HM = High Risk	Long term impact/ major breach of legislation
MH, MM, HL = Moderate Risk	Short term impact/ investigation or report to regulatory authority
ML, LH, LM, LL = Low Risk	Minor environmental impact

- **Table 5 Risk Assessment**

Section A **Aspect**	**Section B** **Potential Impact**	**Section C** **Risk Analysis**			
		Extreme	**High**	**Medium**	**Low**
Office activities	General litter (food waste, packaging) reaching local waterways				✔
	Leakage of toner cartridges			✔	
	Leakage of effluent				✔
Lunch/crib hut activities	General litter (food waste, packaging)				✔
	Litter reaching local waterways			✔	
	Excessive use of water resources				✔
	Leakage of effluent			✔	

Section A Aspect	Section B Potential Impact	Section C Risk Analysis			
		Extreme	High	Medium	Low
Excavation and land Clearing	Loss of vegetation and spread of weeds			✔	
	Soil erosion			✔	
	Inappropriate disposal of waste items which may be hazardous			✔	
	Potential for fuel and oil spills			✔	
Plant and equipment maintenance	Pollution of local waterways		✔	✔	
	Emission of air pollutants			✔	✔
	Land contamination		✔	✔	
	Inappropriate disposal of hazardous waste		✔		
Demolition of buildings and roads	Lost resources with the potential for recycling			✔	
	Loss of undamaged windows, roofing and metal, tiles and facades.			✔	
	Reduced available landfill area			✔	
	Inappropriate disposal of hazardous waste (asbestos, PCBs, lead paint)		✔		
	Fuel and oil spills		✔		
Batch Plant operation	Pollution of local waterways.				✔
	Emission of air pollutants.				✔
Road construction	Pollution of local waterways.			✔	
	Emission of air pollutants.			✔	✔
	Inappropriate disposal of fill material			✔	✔
Paving/concreting activities	Pollution of local waterways.			✔	
	Run-off of curing compound		✔		
	Emission of air pollutants.				✔
Installation of infrastructure	Disposal of paint containers			✔	
	Disposal of waste paint			✔	

Section A Aspect	Section B Potential Impact	Section C Risk Analysis			
		Extreme	High	Medium	Low
Construction of structures	Pollution of local waterways during removal of controls			✔	
	Disposal of sediment				✔
Landscaping/revegetation	Weed infestation				✔
	Pollution of local waterways by fertiliser in run-off			✔	
	Inappropriate disposal of fertiliser containers etc				✔
Decommissioning of the site	Disposal of material collected in sediment fencing etc				✔
	Emission of air pollutants				✔
Sanitary Facilities	Pollution of local waterways			✔	

4.3 Mitigation Measures

General mitigation measures for waste management are detailed in **Table 6**– Waste and Reuse Management Action Plan.

5. Environmental Control Measures

5.1 Definitions

ESM	Environment & Sustainability Manager
CM	Construction Manager
ECM	Environmental Construction Manager
EO	Environmental Officer
EMR	Environmental Management Representative

- **Table 6 - Waste and Reuse Management Action Plan**

Objectives	Targets
To minimise waste resulting from the Project's construction.	100% of material which is recyclable or re-usable is sent for recycling or re-used onsite.

Legislation, Guidelines, References	Minister's Conditions of Approval (M2TT MCoA No. 85 and 86) Statement of Commitments RTA Specification DCM G36: Environmental Protection (Management System) September 2001 Construction and Demolition Waste Action Plan DEC 1998. Green Waste Action Plan DEC 1997. Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes, DECC 1999 Waste Reduction and Purchasing Policy, NSW Government *Waste Avoidance and Recovery Act 2001* (WARR Act) *Environmentally Hazardous Chemicals Act 1985* *Pesticide Act 1999* *Protection of the Operations Environment Act 1997* (POE Act) *Hazardous Wastes (Regulation of Exports and Imports) Act 1989* *Contaminated Land Management Act, 1998*
Relevant Procedures and Forms	Waste Management Register (Appendix B)
Monitoring	Waste Management Register.

PAGE 19

Control Measures and Safeguards	Responsibility	Timing/ Frequency	Source/ Reference
Waste management and minimisation will form part of the induction program.	ECM / CM	Pre-Construction	CEMP Waste Minimisation Hierarchy
CMS's for the early works package will include practices to minimise waste generation and to maximise recycling and reuse of materials including spoil, concrete, contaminated soil or water, oils, greases, lubricants, sanitary wastes, timber, glass, cleared vegetation and metal.	ESM / ECM	Pre-Construction	M2TT MCoA 85 / Waste Minimisation Hierarchy
Packaging minimisation and reuse initiatives will be implemented as part of the procurement.	ESM / CM	Pre-Construction	Waste Minimisation Hierarchy
Segregated waste disposal containers for the collection and recycling/disposal of all waste streams generated during the early works package will be provided onsite. Waste disposal containers will have clear signage and instructions for use to avoid cross-contamination. No rubbish shall be disposed of on site. (Waste material assessed and managed in Table 3).	ECM / CM	Pre-Construction	M2TT MCoA 85 / Waste Minimisation Hierarchy
A Waste Management Register of all waste collected for disposal and / recycling, including amounts, data and time and details and location of disposal will be maintained at all times.	ECM / CM	Construction - Ongoing	Waste Register
Prior to disposal of non-recyclable liquid and non-liquid waste, it will be classified based on the DEC document Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes.	ECM / CM	Construction - Ongoing	M2TT MCoA 85 W2M Statement of Commitments
All waste being transported off site **must** be covered.	CM / Superintendents / Foreman	Construction - Ongoing	POEO Act
Recycled materials will be considered for use in concrete, roadbase, asphalt and other construction materials in accordance with the NSW Government's (1997) Waste Reduction and Purchasing Policy.	CM / Superintendents / Foreman	Construction - Ongoing	W2M Statement of Commitments

Control Measures and Safeguards	Responsibility	Timing/ Frequency	Source/ Reference
Ensure that waste is not mixed with spoil. Spoil unsuitable for reuse in road embankments will be used in landscaping where practical.	ECM / CM	Construction - Ongoing	Waste Minimisation Hierarchy Spoil Management Plan
Where land clearing is required consultation will be undertaken with Department of Primary industries (NSW Fisheries) with respect to reuse of vegetation in Murray River snagging project. Unsuitable vegetation (i.e. shrubs) will be chipped and mulched for reuse on soil surface for revegetation and landscaping.	ESM / CM	Construction - Ongoing	Best Practice
Weeds and unhealthy plants will be contained and stored in separate labelled waste receptacles for off site disposal.	CM / Superintendents / Foreman	Construction - Ongoing	Best Practice
Toilets will be serviced regularly.	CM / Superintendents / Foreman	Construction - Ongoing	Waste Register
The site will be cleaned of any litter.	CM / Superintendents / Foreman	Construction - Daily	Best Practice
Topsoil will be stockpiled and reused for landscaping.	ECM / CM	Construction - Ongoing	M2TT MCoA 85. Spoil Management Plan
Storage of all hazardous substances and dangerous goods will be in accordance with MSDS requirements in a bunded area. Solid and hazardous wastes will be contained and separated from inert waste	CM / Superintendents / Foreman	Construction – Ongoing	Soil and Water Management Plan
Any material contaminated by spills i.e. fuel, oil, lubricants etc will be stored in a sealed secure container within a bunded area and will be transported to a waste disposal site approved by the DEC to accept such material.	CM / Superintendents / Foreman	Construction – Ongoing	Soil and Water Management Plan

Control Measures and Safeguards	Responsibility	Timing/ Frequency	Source/ Reference
Incompatible wastes will not be mixed	ECM / CM	Construction Ongoing	
Storage areas would be located away from waterways and the stormwater system	ECM / CM	Construction Ongoing	
Biodegradable products will be used wherever possible.	ECM / CM	Construction – Ongoing	Best Practice
A wastewater collection and treatment system will be provided for all vehicle, plant, equipment maintenance and cleaning areas to prevent the discharge of pollutants to stormwater. Wastewater arising from such activities will be collected and disposed of in accordance with DEC guidelines.	ECM / CM	Construction - Ongoing	POEO Act
The Concrete/asphalt batching plant will include a closed water recycling system.	ECM / CM	Construction - Ongoing	Best Practice
Truck wash-down facilities will be provided at batch plant site to contain wastewater.	ECM / CM	Construction - Ongoing	Best Practice
Paving equipment will be washed with a high-pressure spray in designated areas away from pits, culverts and creeks.	ECM / CM	Construction - Ongoing	Soil & Water Management Plan
Incorporate water reduction initiatives where practicable including aerated taps, trigger action hoses, reuse of water collected in sedimentation basins for dust suppression, low / dual flushing components in toilets, low flow showers and prompt repair of leaking taps and pipes.	ECM / CM	Construction - Ongoing	M2TT MCoA 86
Reuse treated wastewater sourced from the local Paper Mill (Norske Skog Albury Mill) for dust suppression and wheel wash facilities.	ECM / CM	Construction - Ongoing	M2TT MCoA 86
Regular collection of wastes will ensure air emissions are at a satisfactory level. Inappropriate waste and wastewater management systems will be regularly inspected and audited.	ECM / CM	Construction - Ongoing	Refer to Soil and Water Quality Management Plan
Concrete washout pits will be provided and used.			

6. Training

In addition to the training requirements detailed in the CEMP, all employees and sub-contractors would receive appropriate training and induction in the waste hierarchy and in their requirements. It is the responsibility of the Construction Environmental Manager to provide appropriate training and induction to all site personnel that will:

- link effective waste reduction actions to everyday work activities;
- build environmental awareness and capacity to accept waste responsibilities; and
- stress the importance of adopting environmentally sensitive work practices to minimise waste and to advance the values of ESD.

These topics will be inherent in the training delivered through induction and tool box talks.

7. Inspection, Auditing & Monitoring

The project would maintain a waste register of all waste removed from work sites, compounds and offices, and the extent of material reuse and recycling. The waste register is located in Appendix B and includes waste classification, description, amount, treatment method, mode of transport and the receival facility it is being transported to.

Waste management is included on the weekly inspection checklists.

Regular periodic audits of the waste management activities would be performed to ensure compliance with this Waste Management Sub-Plan. Responsibilities for audits and inspections are detailed in the Framework CEMP and Section 3 of this plan.

Appendix A Local Business & Contractors

Sources of Information	
Department of Environment and Climate Change	02 6022 0600
Albury City Council	02 6023 8111
Greater Hume Shire Council	02 6029 8609

Waste Contractors/Recyclers			
Contractor	Contact Details	Waste Accepted	Waste Recycled
Albury Waste Management Facility	Centaur Rd Lavington 2641 Tel: 02 6025 5777	Construction waste, vegetation, metal, oil, tyres	Metal
Wodonga Waste Management Recycling Centre	Beechworth Rd Wodonga Tel: 02 6024 7994	Cardboard, paper, vegetation, metal, glass	Cardboard, paper, vegetation, metal, glass
Cleanaway	23 Kane Rd Wodonga VIC 3690 Tel: 1800 134 870	Building waste, hazardous waste	Paper, cardboard
Greater Hume Shire Council Landfills	Culcairn 02 6029 8588 Holbrook 02 6036 0100	Refer to specific landfill on website	Refer to specific landfill on website
Twin City Waste Paper	106 Fallon St Albury NSW 2640 Tel: 02 6040 1304	Cardboard, paper	Cardboard, paper
Border Metal Recyclers	445 Panmure St Albury NSW 2640 Tel: 02 6021 5426	Metal	Metal
Murray Valley Recyclers	106 Fallon St Albury NSW 2640 Tel: 02 6040 1304	Metal	Metal
Urana Road Auctions	354 Urana Rd Lavington NSW 2641 Tel: 02 6040 1933	Office Furniture	Office Furniture

Recycled Product/Material Supply			
Contractor	Contact Details	Waste Accepted	Waste Recycled
Amcor Australia	679 Victoria Street Abbotsford VIC 3067 Tel: 03 9226 9000	Plastic, fibre, metal and glass products	Amcor Australia
Visy Recycling	Various locations in Sydney NSW Glass: 02 9316 4343 Paper: 02 9316 4379 Plastics: 02 9790 8915	Steel, aluminium, plastic, glass, paper and cardboard	Visy Recycling
Metropolitan Recycling (Aust)	396 Princes Highway St Peters NSW Tel: 02 9519 3099	Concrete, roadbase, drainage material and bedding sand	Metropolitan Recycling (Aust)
Delta Group	577 Plummer Street Port Melbourne VIC 3207 Tel: 03 9646 8277	Concrete, metal, timber	Delta Group

Oil/Oily Rags/Absorbent Materials/Radiator Fluid (Glycol)		
Contractor	Contact Details	Service
Nationwide Oil	Cnr Davis Road & Wenban Place, Wetherill Park 02 9604 2611 Albury Contact No. Hedley Gobey 0407 090 672	Waste oil and drum collection.
NOTE: Other contacts will be added as available		

Appendix B Waste Management Register

Waste I.D No.	Date/ Time	Waste Clarification (inert, solid or hazardous)	Description of Waste (e.g. concrete, asphalt, vegetation)	Amount/ Volume	Treatment Method (can it be recycled/ re-used)	Mode of transport	Receival Facility	Signature/ Receipt No.