

Waste Management Sub Plan

Camden Gas Project
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1. Introduction

An Environmental Management Plan (EMP) has been prepared for the AGL Upstream Investments Pty Ltd (AGL) Camden Gas Project ('the project' or 'CGP'). This Waste Management Sub Plan (WMSP) has been prepared to supplement the EMP.

The WMSP has been developed to specifically address and manage waste management issues for the operations of the CGP, in line with the requirements of relevant licences and Development Consents. Types of wastes include solid, liquid and gaseous.

The construction phase has been completed, and the CGP is a mature operating field. Note: All historical references to construction activities have been retained in this plan for completeness and to document compliance with Licence and Development Consent requirements.

1.1 Objectives

To minimise waste generation and disposal by:

- Purchasing environmentally friendly materials.
- Implementation of reuse and recycling initiatives.
- Ensuring that environmental impacts relating to waste management are reported and acted upon immediately.

1.2 Target

Waste disposal and recycling records are accurately maintained for Environmental Footprint Report and reviewed annually for improvement opportunities and zero non-conformances concerning waste management practices.



1.3 Responsibilities

The roles and responsibilities for implementing this WMSP are summarised in **Table 1.1**. Further responsibilities are assigned in **Section 4.1**.

Table 1.1: Roles and responsibilities

Role	Responsibility
Operations Superintendent	Directly responsible for the implementation of this WMSP.
Environment Business Partner	Stewardship of waste management for the CGP. Meet the objectives of the WMSP. Implementation and monitoring performance of the waste management contract(s) and management of waste contractor personnel. Maintain an understanding of Statutory requirements for waste management (including applicable Licences). Notify the Environment Protection Authority (EPA) in the event of a waste related pollution event. Report waste data in the Annual Environmental Performance Report (AEPR). Inform contractors and employees of the requirements of the WMSP through the induction program. Monitor and report quantities and type of waste disposed. Reporting of waste generated for the annual AGL Energy Environmental Footprint Report
All leaders	Responsible for ensuring that all works under their control are undertaken in accordance with the WMSP. Responsible for ensuring that all employees and contractors under their control are familiar with and adhere to the requirements of the WMSP.
All employees/contractors	Manage wastes that arise from their work activities in accordance with the WMSP.

2. Requirements

2.1 Key licence/development consent requirements

Table 2.1: Summary of key licence/consent/approval requirements

Reference	Requirement	Section of this Management Plan
L4.1 of EPL 12003	<ul style="list-style-type: none"> • The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled “Waste” and meeting the definition, if any, in the column titled “Description” in the table shown L4.1 of EPL 12003. • Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled “Activity” in the table shown L4.1 of EPL 12003. • Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled “Other Limits” in the table shown L4.1 of EPL 12003. • This condition does not limit any other conditions in EPL 12003. 	Table 3.2
DA 15-1-2002i: 24 (Sch 3) Fields – Ray Beddoe Treatment Plant, Apap, Joe Stanley, Johndilo, Loganbrae, Lipscombe, Mahon	<p>The Applicant shall prepare and implement a Waste Management Plan for the whole site. This plan shall include, but not necessarily be limited to:</p> <ol style="list-style-type: none"> a) measures to minimise the production and impact of waste produced at the site during drilling and operation; b) implementation of waste reduction, reuse and recycling principles; c) details of the reuse and recycling of waste water produced/collected on the site, including collection and handling procedures; d) details of appropriate disposal methods in the event that reuse and recycling are not available or are not practicable; and e) programs for involving and encouraging employees and contractors to minimise domestic waste production on the site and reuse/recycle where appropriate. 	Table 3.2

Reference	Requirement	Section of this Management Plan
DA 15-1-2002i: 61 (Sch 3)	<p>The Applicant shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing or disposal or any waste generated at the site, to be disposed of at the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997 (POEO). This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the site, if it requires a licence under the POEO.</p>	Table 3.2
DA 282-6-2003i: 106 (Sch 4) Fields - RPGP, Rosalind Park, Wandinong, EMAI (EM01-20, 38-40) Glenlee (GL05, 07-10, 14-17)	<p>The Applicant shall prepare and implement a Waste Management Plan for the whole site. This plan shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> a) measures to minimise the production and impact of waste produced at the site during drilling and operation; b) implementation of waste reduction, reuse and recycling principles; c) details of the reuse and recycling of waste water produced/collected on the site, including collection and handling procedures; d) details of appropriate disposal methods in the event that reuse and recycling are not available or are not practicable; and e) programs for involving and encouraging employees and contractors to minimise domestic waste production on the site and reuse/recycle where appropriate. <p>Key concepts of the plan and management measures should be submitted and approved by the Director-General prior to substantial construction. The plan shall be fully completed and approved by the Director-General prior to commissioning.</p>	Table 3.2
DA 282-6-2003i: 98 (Sch 4) EPL12003, L4.1	<p>Note: These conditions only apply to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection licence under the <i>Protection of the Environment Operations Act 1997</i>.</p> <p>The Applicant must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997.</p>	Table 3.2

Reference	Requirement	Section of this Management Plan
DA 282-6-2003i: 99 (Sch 4)	<p>Except as provided by any other condition of this consent, only the hazardous and/or industrial and/or Group A waste listed below may be generated and/or stored at the premises:</p> <p>Waste oil/water, hydrocarbons/water mixtures or emulsions.</p> <p>Note: This condition has been removed from the Environment Protection Licence as it is no longer applicable. DA 282-6-2003i to be amended accordingly.</p>	Table 3.2
DA 282-6-2003i: 105 (Sch 4)	Any movement of hazardous, industrial or Group A waste from the premises must be conducted in accordance with the EPA's waste tracking requirements.	Table 3.2
DA 75-4-2005: 26, 27 (Sch 2) Field – Sugarloaf	<p>The Applicant must not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing or disposal or any waste generated at the site to be disposed of at the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997.</p> <p>Note: this condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the site if it requires an environment protection licence under the POEO.</p> <p>The Applicant must ensure that any hazardous, industrial or Group A waste is assessed and classified in accordance with the DECC's Environmental Guidelines: "Assessment Classification and Management of Liquid and Non-Liquid Wastes".</p>	Table 3.2
PA 06_0137: 9 (Sch 3) Field – Razorback PA 06_0138: 10 (Sch 3) Field – EMAI (EM23-37)	The Proponent shall ensure that any waste or wastewater is assessed and classified in accordance with the DECC's Environmental Guidelines: "Assessment Classification and Management of Liquid and Non-Liquid Wastes", and disposed of at a licensed waste disposal facility or as otherwise agreed with the DECC.	Table 3.2
PA 06_0291: 13 (Sch 3) Fields – Spring Farm, Menangle Park	The Proponent shall ensure that any waste or wastewater (including drill pits and drill/formation waters) is assessed and classified in accordance with the DECC's Environmental Guidelines: "Assessment Classification and Management of Liquid and Non-Liquid Wastes", and disposed of at a licensed waste disposal facility or as otherwise agreed with the DECC.	Table 3.2

It is a requirement of all development consents that work be carried out generally in accordance with the relevant Environmental Impact Statement (EIS) or Environmental Assessment (EA), which incorporates any specific recommendations or commitments related to waste.

2.2 Key legislative and regulatory requirements

The key legislative and regulatory requirements relating to waste include:

Part 5.2, Clause 116, 1(a) and (b), Protection of the Environment Operations Act 1997

- To wilfully or negligently cause any substance to leak, spill or otherwise escape (whether or not from a container) in a manner that harms or is likely to harm the environment.

Division 3, Clause 143, 1(a) and (b), Protection of the Environment Operations Act 1997

- If a person transports waste to a place that cannot lawfully be used as a waste facility for that waste, or causes or permits waste to be transported.

Division 3, Clause 144, 1 and 2, Protection of the Environment Operations Act 1997

- If the owner/occupier of any land uses the land as a waste facility without lawful authority.

Division 3, Clause 144AA, 1(a) and (b), Protection of the Environment Operations Act 1997

- To supply information that is false or misleading in a material respect about waste relating to transport, storage, handling and disposal.

3. Management measures

3.1 Potential waste sources

This section identifies and characterises waste materials likely to be generated through construction and operational activities of the Project.

The waste inventory listed in **Table 3.1** classifies the wastes produced during construction, operations and rehabilitation in accordance with the NSW Waste Classification Guidelines (NSW DECC, 2009). The wastes have been classified into groups that pose similar risks to the environment to facilitate their management and disposal.

In accordance with the Guidelines, six waste classes have been used:

- Special waste.
- Liquid waste.
- Hazardous waste.
- Restricted solid waste.
- General solid waste (putrescible).
- General solid waste (non-putrescible).

Table 3.1: Waste inventory

Waste Type	Source	Classification	Management
General waste (including office related refuse)	RPGP	General solid waste (non-putrescible)	Disposal off-site Recycled off-site (comingled recycling)
Used oil, air and fuel filters	RPGP	General solid waste (non-putrescible)	Recycled off-site
Paper and cardboard	RPGP	General solid waste (non-putrescible)	Recycled off-site
Scrap metals	RPGP	General solid waste (non-putrescible)	Recycled off-site
Garden related green waste	RPGP	General solid waste (non-putrescible)	Recycled off-site Recycled on site
Compressor oils, coolant, solvents etc.	RPGP	Liquid waste	Recycled off-site
Coal fines and workover flowback water removed from workover	Field	General solid waste (non-putrescible) Liquid Waste	Recycled off-site
Grey and septic water	RPGP	Liquid waste	Disposal off-site
Poly pipe gathering line off cuts	Field	General solid waste (non-putrescible)	Recycled off-site
Batteries	Field	Hazardous Waste	Recycled off-site

Waste Type	Source	Classification	Management
Produced water from well sites	Field	Liquid waste	Recycled off-site
Drill cuttings	Field	General solid waste (non-putrescible)	Recycled or disposal off-site
General refuse material from field operations and rehabilitation	Field	General solid waste (non-putrescible)	Disposal off-site or recycled off-site

3.2 Waste management philosophy

The Waste Avoidance and Resource Recovery Act 2001 (WARR Act) Resource Management Principles hierarchy shall be implemented during construction and operational activities.

The WARR Act requires that resource management options are considered against a hierarchy of the following order:

- Avoidance of unnecessary resource consumption;
- Resource recovery (including reuse, reprocessing, recycling and energy recovery); and
- Safe disposal in accordance with the Waste Classification Guidelines (DECC, 2009).

3.3 Control measures – waste management

Table 3.2: Waste management control measures

Activity	Action	Area		Responsibility
		RPGP	Field	
General	The employee and contractor induction shall inform all site personnel about correct waste management procedures based on the principles of reduce, reuse and recycle and appropriate disposal.	✓	✓	Environment Business Partner
	Waste containers shall be provided at all work sites.	✓	✓	All (Employees & Contractors)
	All non-recyclable waste storage containers shall be labelled.	✓		All (Employees & Contractors)
	All work areas shall be maintained in a neat and tidy condition, litter bins will be used at all times and regular emptying shall minimise the accumulation of litter onsite.	✓	✓	All (Employees and Contractors)
	Activities will be carried out to minimise waste where possible, and any waste generated is disposed in a correct manner.		✓	All (Employees & Contractors)

Activity	Action	Area		Responsibility
		RPGP	Field	
	Movement of waste from the site must be conducted in accordance with the EPA waste tracking procedure.	✓	✓	Environment Business Partner
Storage	No waste generated outside the facility is to be received or processed on the premises.	✓		Environment Business Partner
	Wastes must be assessed and classified in accordance with EPA Guidelines	✓		Environment Business Partner
	Recycling must be stored separately from other waste and labelled accordingly.	✓		All (Employees & Contractors)
	All wastes should be stored in accordance with the DECC (now EPA) environmental guidelines "Assessment Classification and Management of Liquid and Non-Liquid Wastes",	✓		All (Employees & Contractors)
	All wastes should be stored in containers which are: <ul style="list-style-type: none"> • Safe to contain the waste type(s) (e.g. design and material compatibility). • Impervious to water. • Identifiable (i.e. colour/labelling). • Kept clean and in good condition. • Inaccessible to pests and other animals. • Placed at a designated location(s). 	✓		All (Employees & Contractors)
	All stored wastes to be identified and labelled during storage at the facility	✓		All (Employees & Contractors)
	Where practicable, only the quantity of material required for a specific task shall be brought into the field.		✓	All (Employees & Contractors)
	Where practicable, waste materials will be source-separated and stored temporarily either for reuse on-site or removal by a licensed contractor for reuse, recycling or safe disposal off-site.	✓	✓	All (Employees & Contractors)
	Storage of hazardous waste are not to be placed into underground storage tanks.	✓		All (Employees & Contractors)



Activity	Action	Area		Responsibility
		RPGP	Field	
Spills	Spills of waste materials shall be dealt with in a prompt and thorough manner, and reported to the Environment Business Partner.	✓	✓	All (Employees & Contractors)
Disposal	All waste shall be collected and transported to an appropriately licensed recycling or disposal sites.	✓	✓	Environment Business Partner
	Onsite waste disposal is prohibited.		✓	All (Employees & Contractors)

4. Monitoring and reporting

4.1 Monitoring requirements

Waste monitoring requirements include:

The **Environment Business Partner** is responsible for:

- Implementation and monitoring performance of the waste management.
- Completion and submission of AGL Environmental Footprint data.
- Implementation and monitoring performance of the waste management contract(s) and management of waste contractor personnel.
- Recording quantities and types of wastes leaving the RGP and Field
- Off-site waste disposal and recycling facility(ies) will be periodically audited to ensure that waste disposal and recycling is conducted appropriately.

4.2 Reporting requirements

The **Environment Business Partner** is responsible for the following waste reporting requirements:

- EPL 12003, Section 6, Reporting Condition R1: Annual Return including statement of compliance and monitoring, load based licence calculations and complaints summary for the Camden Gas Project to be submitted to the EPA.
- EPL 12003, Section 6, Reporting Conditions R2 (Notification of incidents causing or threatening to cause environmental harm at the CGP to the EPA) and R3 (Written Report): Notification of incidents causing or threatening to cause environmental harm at the Camden Gas Project to the EPA.
- Reporting waste disposal figures and trends in the CGP AEPR.
- Completion of the Environmental Management Sub Plan Compliance Audit - Waste.
- Recording volumes of wastes leaving the RGP and Field.
- Reporting of waste generated for the annual AGL Energy Environmental Footprint Report.

4.3 Records

The following monitoring and reporting records will be maintained:

- Pre Mobilisation Hazard Identification Form (AEL 8611201).
- Environmental Management Sub Plan Compliance Audit - Waste.
- Laboratory analysis results
- Waste dockets.
- Waste transport records.
- Annual AGL Energy Environmental Footprint data
- AEPR in accordance with PPLs 1, 2, 4, 5, 6, Development Consents and Project Approvals.
- Environmental incidents (including pollution incident reports).
- Non-conformance and corrective actions.
- Complaints concerning waste issues.

Monitoring records for hazardous or special waste (as classified under the NSW Waste Classification Guidelines (NSW DECC, 2009) collected, stored, or transported will include:

- Name and identification number of the material or materials composing the waste;
- Physical state (i.e., solid, liquid, gaseous or a combination of two or more of these);



- Quantity (e.g., by weight or volume and number of containers);
- Waste tracking documentation, including quantity and type; date dispatched; date transported; date received; and the name of the originator, the receiver and the transporter;
- Method and date of storing, repacking, treating, or disposing at the facility, cross referenced to specific manifest document numbers applicable to the restricted waste; and
- Location of each restricted waste within the facility and the quantity at each location.

All records required to be kept by the EPL will be in a legible form, kept for at least 4 years and produced to any authorised officer of the EPA upon request.

4.4 Waste tracking

Tracking of wastes during transportation to sorting, processing and disposal locations is necessary to identify the source of the waste material if contamination issues arise, and to account for quantities and types of waste materials sent off-site.

Volumes of waste materials leaving the site are to be recorded, to facilitate data analysis and cross-check with waste transport vehicles. Licensed waste transport contractors are to provide receipts, including registration, weights and volumes, confirming waste was delivered to licensed waste treatment (recycling or disposal) facility.

Tracking records of transported wastes enables the Contractor to demonstrate adherence to regulatory and contract requirements for waste disposal.

A waste tracking register (refer to Appendix A) will be maintained by the Environment Business Partner to track the movement of wastes from the site.

5. Administrative

5.1 Site specific plans

Not applicable

5.2 Definitions

5.2.1 Waste

- a) Any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment, or
- b) Any discarded, rejected, unwanted, surplus or abandoned substance, or
- c) Any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, processing, recovery or purification by a separate operation from that which produced the substance, or
- d) Any processed, recycled, re-used or recovered substance produced wholly or partly from waste that is applied to land, or used as fuel, but only in the circumstances prescribed by the regulations, or
- e) Any substance prescribed by the regulations to be waste.

Source: Dictionary, Protection of the Environment Operations Act 1997.

5.3 References

AGL-HSE-STD-009.7 Waste Standard

AGL-HSE-SDM-009.7 Waste Standard Methodology

New South Wales Environment Protection Authority (EPA (2014), Waste Classification Guidelines Part 1: Classifying Waste

New South Wales Environment Protection Authority (EPA (2014), Waste Classification Guidelines Part 2: Immobilisation of Waste.

Appendix A

Waste Tracking Register



Table B.1: Waste Tracking Register

	Volume (m ³)	Has the waste been "preclassified" under the waste classification guideline?	Waste classification (if testing and confirmation required – non preclassified waste and no exemption)	Waste transporter EPL#	Location recycled?	Disposed to landfill (y/n)	Landfill disposed to (EPL #)?	Reference
<i>Example - concrete</i>	20	N			<i>Concrush - Teralba NSW</i>	N	NA	<i>Docket No. 12345</i>