JRPP No:	2009STH015
DA No:	2009.0563
PROPOSED DEVELOPMENT:	Bega Central Waste Facility Lot 3 Wanatta Lane, Frogs Hollow
APPLICANT:	Bega Valley Shire Council
REPORT BY:	Geolyse

Assessment Report and Recommendation

DEVELOPMENT ASSESSMENT REPORT
BEGA VALLEY SHIRE CENTRAL WASTE FACILITY

PREPARED FOR
BEGA VALLEY SHIRE COUNCIL

JANUARY 2011

Report Title:	*Development Assessment Report*
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The preparation of this report has been in accordance with the project brief provided by the client and has relied upon the information, data and results provided or collected from the sources and under the conditions outlined in the report.

All maps, plans, cadastral information contained within this report are prepared for the exclusive use of Bega Valley Shire Council to accompany this report for the land described herein and are not to be used for any other purpose or by any other person or entity. No reliance should be placed on the information contained in this report for any purposes apart from those stated therein.

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Executive Summary

Bega Valley Shire Council (BVSC) is in receipt of a Development Application (DA) for the establishment and use of a Waste Management Facility, known as the Central Waste Facility (CWF) on Lot 3 DP 592206, Wanatta Lane, Wolumla. As Council is the applicant for this DA, assessment of the application has been outsourced to Geolyse to provide an independent assessment. The DA does not include the proposed upgrade of Wanatta Lane as the upgrade works do not require development consent and as such require separate assessment under Part 5 of the *Environmental Planning & Assessment Act 1979* (EP&A Act). Similarly, the DA does not include extension of electricity supply to the site. The required Part 5 assessment would be undertaken by Country Energy.

By virtue of accepting more than 200 tonnes of waste per year, the proposed facility is designated development. An Environmental Impact Statement (EIS) has been prepared to accompany the DA in accordance with section 78A of the EP&A Act for designated developments. Pursuant to clauses 13B and 13F of *State Environmental Planning Policy (Major Development) 2005*, the Southern Joint Regional Planning Panel (SJRPP) assumes certain functions of the consent authority for designated developments, including determination of development applications.

The development is also integrated development by virtue of requiring an Environmental Protection Licence (EPL) under the *Protection of the Environment Operations Act 1997* (POEO Act). The NSW Department of Environment, Climate Change and Water (DECCW) has issues its General Terms of Approval (GTAs) for the EPL.

The proposed development is permissible with consent in the 1(a) zone under *Bega Valley Local Environmental Plan 2002* (Bega LEP) and is not antipathetic to the zone objectives. The development is consistent with the provisions of Bega LEP, *Lower South Coast Regional Environmental Plan No. 2*, SEPP 33, SEPP 44, Infrastructure SEPP, and DCP No. 7. There are no proposed instruments relevant to this development. There are no planning agreements entered into, or any draft planning agreements offered by the developer. No provision of the Regulations (specified for the purpose of s.79C(1)(a)(iv) of the Act are applicable to this development.

The impacts of the development have been assessed. Subject to compliance with the recommended mitigation measures and conditions of the Environmental Protection Licence to be issued by the NSW Department of Environment, Climate Change and Water, the development would operate without significant adverse impact. Thus the subject site is considered to be suitable for the proposed development.

During the exhibition periods a total of 300 submissions were received from the public, including a petition containing 982 signatures. These submissions objected to the development. Submissions were also received from public authorities including the RTA, I&I, DECCW, and RFS. Subject to conditions, these authorities did not object to the development.

The proposed development is consistent with Council's strategic vision for the management of waste in the LGA. Whilst Council's management of waste in the shire does not currently achieve the targets for waste diversion required by the State government, it is clearly showing improvement. This facility provides opportunity for further improving its waste management, including impacts on the environment. Thus the proposed development is considered to be public interest.

With consideration of the above, it is recommended that the DA be approved. Importantly the operation of this development requires the upgrade of Wanatta Lane. These upgrading works are subject to separate assessment under Part 5 of the EP&A Act. Therefore to ensure an inoperable consent is not established, it is recommended that a deferred commencement consent be granted for the waste facility, with the deferred commencement condition requiring the securing of relevant approvals for the upgrade of Wanatta Lane prior to this consent being operative.

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Introduction

1.1 BACKGROUND

1.1.1 INTRODUCTION

Geolyse Pty Ltd has been commissioned by the Bega Valley Shire Council (BVSC) to undertake an assessment of the Development Application (DA) for the Bega Valley Shire Central Waste Facility (CWF). As Council is both the applicant and the consent authority for this DA, Council sought the services of an independent consultant to assess and make a recommendation for determination of the application.

The assessment has been prepared pursuant to Section 79C of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and provides recommendations for determination of the DA.

1.1.2 THE SUBJECT SITE

The site that is the subject of this DA is Lot 3 DP 592206, hereon referred to as the subject site. The site is located approximately 4km north of the village of Wolumla and approximately 12km south of Bega.

The subject site has an area of 198.83ha and is situated on the western side of Wanatta Lane to the north of its intersection with Greendale Lane. Access to the site is gained from Wanatta Lane.

The site slopes generally to the north west and is traversed by two un-named watercourses that flow into Wolumla Creek located immediately to the west of the subject site.

The south western part of the subject site is largely forested whilst the remainder of the site is comprised of largely cleared grazing land with few isolated stands of trees.

1.1.3 THE LOCALITY

The subject site is located in a rural environment. There are isolated rural dwellings located to the north, east and west of the site and a rural residential area to the south of the site.

1.2 THE DEVELOPMENT

1.2.1 OVERVIEW

The proposed CWF is comprised of three main components:

- Construction of the CWF including the required site infrastructure;
- Operation of the CWF; and
- Progressive rehabilitation of the CWF.

Further detail is provided below.

1.2.2 DEVELOPMENT DESCRIPTION

1.2.2.1 Construction of the CWF

- Erection of chainwire fencing, screen planting and all necessary signage;
- Installation of groundwater monitoring bores;
- Construction of site infrastructure including a sealed haul road, internal access road, site office/amenities building, a sewage collection tank, weighbridge, car parking area, machinery shed, wheelwash, and two (2) rainwater tanks;
- Construction of stormwater/sediment and leachate collection dams;
- Staged excavation and construction of landfill cells, landfill liner (barrier layer), leachate drainage, collection and treatment system;
- Progressive installation of an active landfill gas extraction and flaring system; and
- Staged construction of a stormwater drainage system;

1.2.2.2 Operation of the CWF

- Landfilling of up to approximately 17,500 tonnes of solid waste per annum (towards the end of the landfill life) within a series of cells to be constructed in six progressive stages over a period of approximately 30 years;
- Over the life of the landfill, approximately 602,000m³ of compacted waste would be able to be disposed of;
- The landfill would be operated as a General Solid Waste (Putrescible) Landfill, receiving both residential and commercial wastes and servicing the entire Bega Valley Shire LGA; and
- The landfill would accept waste only from commercial waste contractors and Council's waste collectors.

1.2.2.3 Progressive Rehabilitation of the CWF

Each of the landfill cells would be progressively capped and sealed once complete. The capping would be undertaken as outlined in the *Progressive Landfill Capping and Final Rehabilitation Program* which is provided in Appendix N of the EIS. The capping would be undertaken in accordance with the EPA's Benchmark Criteria provided in the *Environmental Guidelines: Solid Waste Landfills.*

As part of the capping, a network of gas drains would be constructed below the final landfill cap. This network would facilitate the drainage of landfill gas to the flaring system for the destruction of methane.

The final landform would provide for:

- A landform contoured to promote runoff of surface water and blend into the surrounding topography;
- Batter slopes not exceeding 1:3; and
- Surface gradients greater than 5%,

The landfill surface would initially be revegetated through colonisation of the final cap with ground cover such as grass. Long term rehabilitation would be undertaken in accordance with a rehabilitation plan to be prepared as part of the Landfill Environmental Management Plan (LEMP). This rehabilitation plan would be comprehensive and describe the selected vegetation species, sequential vegetation planting, irrigation, weed control, maintenance and monitoring of plant growth.

1.2.3 EXCLUDED COMPONENTS

1.2.3.1 Road Upgrade

Operation of the proposed CWF would necessitate upgrading of Wanatta Lane between the proposed CWF and the intersection with the Princes Highway. The road upgrade is being assessed under Part 5 of the EP&A Act and as such is not part of this DA. This is discussed further in **Section 3.22.1**.

1.2.3.2 Electricity Connection

Similarly, an electricity connection to the subject site is required. It is understood this is to be provided through the extension of a 11kV transmission line from the existing system located to the south in Annabelle Close to the site. Country Energy (or its contractor) would be required to undertake relevant environmental assessment under Part 5 of the EP&A Act and as such is not part of this DA. This is discussed further in **Section 3.22.2**.

1.2.4 NEED FOR THE PROJECT

As outlined in Section 3.3.1 of the EIS, the existing landfill facilities within the BVS are nearing the end of their life. These facilities do not meet current day standards and have limited land availability for extension. Therefore a new site is required to facilitate the BVS's waste disposal needs.

The need for a single such facility has been developed through Council's *2020 Vision on Waste*. The Plan envisages closing "all the current landfills and replace them with a single best practice environmentally appropriate facility"[1].

1.3 APPROVALS FRAMEWORK

1.3.1 PART 4 ASSESSMENT

The proposed waste management facility, being located in the 1(a) Rural General Zone under *Bega Valley Local Environmental Plan 2002*, requires development consent whereby Bega Valley Shire Council is the consent authority.

1.3.2 PART 5 ASSESSMENT

Clause 80 of *Bega Local Environmental Plan 2002* (Bega LEP) enables roadworks to be undertaken by Council without consent. Such works would however require assessment under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). A separate assessment and determination under Part 5 of the Act is required for the proposed road works. Further comments on this matter are provided in **Section 5.2.1**.

1.3.3 DESIGNATED DEVELOPMENT

The proposed development is 'Designated Development' by virtue of being a:

> *Waste management facilities or works that store, treat, purify or dispose of waste or sort, process, recycle, recover, use or reuse material from waste and:*
>
> *(a) that dispose (by landfilling, incinerating, storing, placing or other means) of solid or liquid waste:*
>
> *(iv) that comprises more than 200 tonnes per year of other waste material, or*

The CWF would accept 17,500 tonnes of waste annually and in this regard an Environmental Impact Statement (EIS) is required to support such a DA.

[1] BVSC. 2001, *2020 Vision on Waste*, BVSC, Bega, p28.

1.3.4 CONSENT AUTHORITY

By virtue of clause 13F of the *State Environmental Planning Policy (Major Development) 2005* (Major Development SEPP), the Southern Joint Regional Planning Panel (SJRPP) is to exercise the functions of the consent authority, *inter alia* determination of this DA.

1.3.5 INTEGRATED DEVELOPMENT

The proposed development has been identified as being 'Integrated Development' by virtue of requiring development consent and the following approval:

- Scheduled development work and Scheduled activity under Sections 43(a), 43(b), 47, 48, 51 and 55 of the *Protection of the Environment Operations Act 1997* from the NSW Department of Environment, Climate Change and Water (DECCW).

Consent to erect a structure or carry out a work in, on or over a public road, or dig up or disturb the surface of a public road, under Section 138 of the *Roads Act 1993* is not required for the intersection of the site with Wanatta Lane. Pursuant to section 91(3) Council is the roads authority for Wanatta Lane.

Council is exempt from obtaining a controlled activity approval, by virtue of clause 39A of the *Water Management (General) Regulation 2004*.

1.3.6 BUSHFIRE PRONE LAND

The subject site comprises land identified as bushfire prone land categories Vegetation 2 and Buffer Zone. Section 79BA of the EP&A Act states:

> *(1) Development consent cannot be granted for the carrying out of development for any purpose (other than a subdivision of land that could lawfully be used for residential or rural residential purposes or development for a special fire protection purpose) on bush fire prone land unless the consent authority:*
>
> *(a) is satisfied that the development conforms to the specifications and requirements of Planning for Bushfire Protection, ISBN 0 9585987 8 9, produced by the NSW Rural Fire Service (or, if another document is prescribed by the regulations for the purposes of this paragraph, that document), that are relevant to the development, or*
>
> *(b) has consulted with the Commissioner of the NSW Rural Fire Service concerning measures to be taken with respect to the development to protect persons, property and the environment from danger that may arise from a bush fire.*

There are no specific provisions in PBP relating to Waste Management Facility developments. The RFS has assessed the application and has raised no concerns, providing it is carried out in accordance with it's recommendations, as outlined in **Section 5.2.4**.

1.4 SCOPE OF THIS REPORT

This report provides an assessment of the proposed development in accordance with Section 79C of the EP&A Act.

> *In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:*
>
> *(a) the provisions of:*
>
> *(i) any environmental planning instrument, and*
>
> *(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Director-General has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and*
>
> *(iii) any development control plan, and*
>
> *(iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and*
>
> *(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph),*
>
> *that apply to the land to which the development application relates,*
>
> *(v) any coastal zone management plan (within the meaning of the Coastal Protection Act 1979)*
>
> *(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,*
>
> *(c) the suitability of the site for the development,*
>
> *(d) any submissions made in accordance with this Act or the regulations,*
>
> *(e) the public interest.*

A list of the documentation reviewed as part of this assessment is contained within the list of references attached to this report.

1.5 STRUCTURE OF REPORT

This Development Assessment Report is structured as follows to reflect the provisions of Section 79C of the EP&A Act:

- **Section 2** provides an assessment of the proposed development in relation to the provisions of Section 79C(1)(a);
- **Section 3** provides an assessment of the likely impacts of the proposed development (pursuant to Section 79C(1)(b));
- **Section 4** considers the suitability of the site for the proposed development (pursuant to Section 79C(1)(c));
- **Section 5** of this report provides a summary of the public and authority submissions received during the referral and notification periods (79C(1)(d)).
- **Section 6** provides an assessment of the matters of public interest in relation to the proposed development (79C(1)(e)).
- **Section 7** concludes the report with a recommendation for determination of the Development Application.

1.6 CRITICAL DATES/APPLICATION HISTORY

Table 1.1 – Chronological History of the Development Application

Date	Action
12 November 2009	DA lodged
13 November 2009	DA referred to: • DoP Wollongong • DoP Sydney • DECCW Queanbeyan • NSW I & I Goulburn • Department of Health • NSW Heritage Office • RTA Wollongong • Southern Rivers CMA • RFS Bega • Bega LALC
16 November 2009	DA referred to: • BVSC Engineer • BVSC Environmental Health & Building Inspector • BVSC Environmental Scientist
18 December 2009	• Response from RTA, with recommended consent conditions • Response from NSW I & I with recommended consent conditions
11 February 2010	Response from DECCW (EPA), including GTAs
22 February 2010	Response from Southern Rivers CMA.
23 February 2010	Preliminary Comments/conditions from BVSC EHO
24 February 2010	Comments/conditions from BVSC Water & Sewerage Services
30 March 2010	Amended response from Southern Rivers CMA.
17 May 2010	Comments/conditions from BVSC Engineer
21 May 2010	Response from RFS with recommended consent conditions
28 May 2010	Comments/conditions from BVSC Environmental Scientist
9 July 2010	Amended DA referred to: • DECCW • DoP (Sydney & Wollongong) • JRPP
13 August 2010	Response from DECCW (NPWS) in relation to the road upgrade works.
11 November 2010	JRPP Briefing Session
16 November 2010	Referral from BVSC EHO

EPIs, DCPs & the Regulations

2.1 OVERVIEW

The relevant Environmental Planning Instruments are:

- *Bega Valley Local Environmental Plan 2002*;
- *Lower South Coast Regional Environmental Plan No.* 1;
- *Lower South Coast Regional Environmental Plan No. 2*;
- *State Environmental Planning Policy No. 33 – "Hazardous and Offensive Development"*;
- *State Environmental Planning Policy No. 44 – "Koala Habitat Protection"* and
- *State Environmental Planning Policy (Infrastructure) 2007*.

There were no draft Environmental Planning Instruments (EPI) applicable to the subject site at the time of assessment.

The relevant Development Control Plans are:

- *Development Control Plan No. 5 – "On-Site Sewage Management"*; and
- *Development Control Plan No. 7 – Off Street Car Parking".*

There are no known Planning Agreements, provisions of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), or Coastal Zone Management Plans that apply to the proposed development.

2.2 BEGA VALLEY LOCAL ENVIRONMENTAL PLAN 2002

2.2.1 ZONE OBJECTIVES

The subject site is zoned 1(a) Rural General under *Bega Valley Local Environmental Plan 2002* (Bega LEP). The objectives of the 1(a) zone are outlined below.

(a) to encourage continued growth in the area's rural economic base,

(b) to encourage other forms of development, including tourism, that are compatible with agricultural activities and do not create undesirable environmental and cultural impacts,

(c) to protect and conserve the productive potential of prime crop and pasture land,

(d) to maintain the scenic amenity and landscape quality of the area,

(e) to promote the protection, and the preservation and enhancement, of natural ecological systems and processes,

(f) to provide proper and coordinated use and protection of rivers, riparian corridors and water catchment areas,

(g) to promote the economic provision of services compatible with the nature and intensity of development and the character of the area,

(h) to ensure that development and management of the land has minimal impact on water quality and environmental flows of receiving waters,

(i) to maintain significant features of natural and cultural heritage.

Clause 8(3) of the LEP states:

> *Consent must not be granted to development proposed within a zone unless the consent authority has taken into consideration such of the objectives of the zone as are relevant to the proposal and is satisfied that the development is consistent with those objectives.*

Each of the above objectives is considered below.

(a) Not relevant to the proposal as the development is not an industry/activity related to the area's rural economic base.

(b) As outlined throughout **Section 3** of this report, the development would be compatible with agricultural activities, and would not create undesirable environmental or cultural impacts, providing it is managed in accordance with the proposed mitigation measures and conditions of any consent granted.

(c) Council's mapping indicates the subject site is Class 3 Agricultural Land, which falls within the LEP definition of prime crop and pasture land. The development would therefore directly impact on some (9ha) of prime crop and pasture land. This equates to 4.7% of the site.

The development would not adversely impact on the productive potential of the remaining prime crop and pasture land within the subject site or adjacent sites. In fact, the proposed revegetation of the site has potential to improve the agricultural potential of the remaining land within the subject site.

Following closure and rehabilitation of the site, it is anticipated that the site is "likely to be a productive rural use such as grazing" (AECOM 2009:5-39).

Ultimately the development would protect and conserve the productive potential of the prime crop and pasture land within the site.

(d) As outlined in **Section 3.1.2** of this report, the development would be visible from limited locations throughout the landscape. Providing the proposed screen planting is established and maintained, and the facility is operated in accordance with the proposed litter management measures, the development would maintain the scenic amenity and landscape quality of the area.

(e) In terms of flora and fauna, the proposed development (being the CWF only) would result in the protection, preservation and enhancement of the natural ecological systems on site and surrounds through the rehabilitation of the Bega Dry Grass Forest on site. Post development, the rehabilitation of the landfill area would further complement this.

An important component of the project will be to ensure the face of the landfill is appropriately managed to prevent an increase in feral animals and vermin, to ensure achievement of this objective. Compliance with, and attention to management of pests and vermin is imperative.

By issuing its GTAs, the DECCW is confident the development can operate in a means not to cause pollution. Thus it can be construed that the development would not impact on downstream aquatic ecosystems.

Therefore it can be concluded that the development achieves this objective.

(f) By virtue of DECCW issuing its GTAs for the EPL, it is confident the development would not adversely impact upon the adjacent creeks or rivers. Council has advised the site is within the catchment area of Bega Town Waters. However Council has advised it is not considered to be a sensitive location within the drinking water catchment (refer **Table 4.1**). Council's Environmental Scientist has raised no objection to the proposed development (by virtue of providing recommended conditions of consent). With regard to the above, it is considered the development provides proper protection of rivers, riparian corridors and water catchment areas.

(g) The subject site was chosen through a site selection process for the proposed development. This selection process included factors such as 'distance from centre of gravity of waste generation' and 'loss of amenity to existing and future residents'. Thus the development promotes the economic provision of services compatible with the nature and intensity of development and the character of the area.

(h) By virtue of DECCW issuing its GTAs for the EPL, it is confident the development would not adversely impact upon the water quality and environmental flows of receiving waters.

(i) Providing the proposed mitigation measures outlined in **Section 3.4** are implemented, the development would not impact upon any significant features of natural and cultural heritage.

2.2.2 PERMISSIBILITY

The proposed development is a 'waste management facility'. It is permissible with consent in the 1(a) zone.

2.2.3 HERITAGE

The subject site adjoins Lot 36 DP 787823 (Ayrdale Dairy Village) which is listed as an Interim Heritage Item under Schedule 6 of Bega LEP. Clause 59 relates to Interim Heritage Items, however is not applicable to this development as it only relates to the demolition of such items.

2.2.4 GENERAL PRINCIPLES FOR DEVELOPMENT

Clause 65 of Bega LEP states:

> *Before granting consent for development within any zone, consideration shall be given by the consent authority to such of the following as are relevant to the proposed development:*

These matters are reproduced below (in italics) with comment on the consideration provided.

(a) the impact of that development on:

(i) the water quality of waterbodies, and

By virtue of issuing its GTAs for the EPL, DECCW is confident the development can operate without causing pollution to any receiving waters. Thus it can be construed that the development would not have an adverse impact on the water quality of any waterbodies.

(ii) the ability of rural land to be used for agricultural production or industry, or both, and

The proposed development would remove the area of the site impacted by the CWF from agricultural production for the life of the facility. Following closure and rehabilitation of the site, it is anticipated that the site is "likely to be a productive rural use such as grazing" (AECOM 2009:5-39).

The remainder of the site could concurrently be used for agricultural pursuits. It is proposed to provide rehabilitation of the Bega Dry Grass Forest on site. Future grazing of the rehabilitated area could occur with careful planning of density, type of stock and timing of grazing (AECOM 2009:12-4).

(iii) soil resources, and

This is addressed in **Section 3.8**.

(iv) existing vegetation, native flora and fauna and riparian corridors, and

This is addressed in **Section 3.10**.

(v) the topography and setting of the land, and

This is addressed in **Section 3.1**.

(vi) the streetscape character of the locality, and

As outlined in **Section 3.1**, the site is located in an area characterised by agricultural pursuits, with scattered rural dwellings and farm buildings. The development would be well set back from the road frontage. This combined with the proposed landscaping would ensure the development would not have an adverse impact on the streetscape character of the locality.

(vii) the scale and design of neighbouring development, and

The neighbouring development includes rural development and associated dwellings and farm buildings to the north, east and west of the site. To the south of the site is a rural residential estate. The proposed development is to be located toward the centre of the subject site and setback from the road frontage. The scale of buildings on site would be similar to the farm buildings in the locality. The development would not impact on the scale and design of neighbouring development.

(viii) significant views enjoyed from parks, reserves, roadways, footpaths and other public places, and

There are no public places in the vicinity of the site apart from the local roads. The visual impact of the development from the roads is discussed in **Section 3.1**.

(ix) the energy efficiency of the site and any buildings on the site, and

This is addressed in **Section 3.12**.

(x) the availability of a water supply to adequately provide for domestic, agricultural and fire fighting purposes and, where that proposed water supply is from a river, creek, dam or other waterway, the effect upon the other users of that water supply, and

This is addressed in **Section 3.6**.

(xi) waste generation, and

This is addressed in **Section 3.11**.

(xii) the cultural significance of the land, and

This is addressed in **Section 3.4**.

(xiii) the treatment of stormwater prior to discharge or the use of stormwater, and

This is addressed in **Section 3.7**.

(xiv) traffic generation and appropriate vehicular access into and around the site, and

This is addressed in **Section 3.2**.

(xv) any measures necessary to mitigate any of these impacts,

These measures are described throughout **Section 3** of this report.

(b) the cumulative impact on the environment of:

(i) the development, and

This is addressed in **Section 3.20**.

(ii) other development in the vicinity of the proposed development.

This is addressed in **Section 3.20**.

2.2.5 ON-SITE SEWAGE MANAGEMENT

Clause 74 of Bega LEP states:

> *Before granting consent to development that will result in the generation of sewage or other effluent, consideration shall be given by the consent authority to:*
>
> *(a) whether the site of the proposed development should be connected to public sewerage facilities, and, if so, whether the land is capable of being connected to public sewerage facilities either now or in the future, and*
>
> *(b) the suitability of the site for on-site disposal of effluent and the ability of the effluent disposal system to function effectively over the long term without causing adverse effects on adjoining land, where public sewerage facilities are not to be provided to the land, and*
>
> *(c) the likely effect of any on-site effluent disposal area on:*
>
> *(i) any waterbodies in the vicinity, or water supply catchments, and*
>
> *(ii) groundwater resources, and*
>
> *(iii) seasonally waterlogged soils, and*
>
> *(d) the cumulative environmental impacts of all on-site systems or works in the area with respect to water quality, soil degradation and odour.*

Effluent generated from the site amenities would be drained to and collected in an underground concrete storage tank, with a capacity of 3,000L. The tank would be pumped out on a monthly basis with the effluent being transported to either the Bega or Merimbula STP for disposal.

2.2.6 LAND SUBJECT TO BUSHFIRE

Clause 75 of Bega LEP states:

> *Consent must not be granted to the subdivision of land or the erection of a building on land which is, in the opinion of the consent authority, subject to bushfire hazards unless it is satisfied that:*
>
> *(a) adequate provision will be made for access for fire fighting vehicles,*
>
> *(b) adequate safeguards will be adopted in the form of fire breaks, reserves and fire radiation zones, and*
>
> *(c) adequate water supplies will be available for fire fighting purposes as recommended by the New South Wales Rural Fire Service.*

The subject site is identified as Bushfire Prone land categories Vegetation 2 and Buffer Zone. The DA was referred to the RFS's Bega Valley FCC Office. The advice received is provided in **Section 5.2.4**, which concludes the development adequately addresses the above.

2.2.7 CONTAMINATED LAND

Clause 76 of Bega LEP states:

> *(1) Consent must not be granted to the subdivision of land or the erection of a building on any land unless the consent authority has made an assessment of:*
>
> *(a) any contamination of the land resulting from previous use of the land, and*
>
> *(b) any measures to mitigate against any adverse impacts arising from the contamination of the land.*
>
> *(2) This clause does not affect any requirement made by the State Environmental Planning Policy No 55—Remediation of Land.*

The subject site is not known to contain contaminated land.

2.2.8 LANDFILLING AND EXCAVATION

Clause 78 of Bega LEP states:

(1) A person shall not, without development consent, excavate or fill any land or waterbody (other than a farm dam) to which this plan applies.

(2) Before granting an application for consent required by subclause (1), the consent authority must have regard to:

(a) the likely disruption of, or detrimental effect on, existing drainage patterns, vegetation, sedimentation and soil stability in the locality that would be caused by the proposed work, and

(b) the effect of the proposed work on the likely future use or redevelopment of the land, and

(c) the effect of the proposed work on the existing and likely amenity of adjoining properties.

Consideration of these matters is provided throughout this assessment report.

2.2.9 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

Clause 79 of Bega LEP states:

Before determining an application for consent to development,

The principles of ESD and the development are discussed in **Section 6.1.5**.

2.2.10 FLOOD LIABLE LAND

Clause 81 of Bega LEP relates to flood liable land. The subject site is not identified as flood liable land.

2.2.11 ACID SULFATE SOILS

The subject site is identified as containing class 5 Acid Sulfate Soils (ASS). However, the EIS notes that the DLWC Acid Sulfate Soils Risk Map No. 122 (Bega) illustrates the site as being within the Class C area, which is no known occurrence of ASS. The EIS states further that from examination of aerial photographs, the known geology, and waterway maps, combined with field observations, ASS are unlikely to occur within the project area.

2.2.12 BUILDING LINES

Clause 84 of Bega LEP states:

(1) Consent must not be granted to the erection of a building on land with frontage to a road unless the building is required to be set back from the nearest alignment of the road at a distance determined by the consent authority.

(2) In determining a distance for the purposes of this clause, the consent authority shall have regard to:

(a) the nature, scale and function of the building, and

(b) the maximisation of sight distances for drivers using the road, including visibility of points of access to the road, and

(c) the minimisation of distractions to drivers using the road, and

(d) any possible future need to alter the road alignment, and

(e) the desirability of maintaining existing roadside vegetation.

The proposed buildings are set back more than 200m from the road. This setback is considered to be suitable for the purposes of the above (2).

2.2.13 HEIGHT OF BUILDINGS

Clause 85 of Bega LEP states *inter alia*:

> *(1) A building shall not be erected on land to which this plan applies where:*
>
> *(b) in all other cases:*
>
> *(i) the building contains more than 3 storeys, or*
>
> *(ii) the vertical distance between any part of the building and the natural ground level exceeds 10 metres.*

The proposed buildings would be consistent with these requirements.

2.3 REGIONAL ENVIRONMENTAL PLANS

2.3.1 INTRODUCTION

As of the 1 July 2009, the EP&A Act has been amended, amongst other things, to abolish Regional Environmental Plans (REPs) from the EPI hierarchy. As a result, existing REPs have now become 'deemed' EPIs. Clause 123 of Schedule 6 of the EP&A Act provides that all deemed EPIs that were in force immediately before the relevant commencement day of the Amendment Act, continue to be in force and have effect according to their tenor. Therefore the following REPs and the provisions contained within remain relevant.

2.3.2 LOWER SOUTH COAST REP NO. 1

By virtue of being within the Bega Valley Local Government Area, the *Lower South Coast Regional Environmental Plan No. 1* (REP No. 1) applies to the subject site. The aims, objectives, policies and strategies of this plan are:

> *(a) to conserve the scenic and environmental character of the Region,*
>
> *(b) to maintain the scale and character of the built environment,*
>
> *(c) to preserve views to and from public places,*
>
> *(d) to protect public places from overshadowing,*
>
> *(e) to encourage development sympathetic to the natural landform, and*
>
> *(f) to enable flexibility in building design consistent with the general aims and objectives of this plan.*

The proposed development is generally consistent with these objectives.

2.3.3 LOWER SOUTH COAST REP NO. 2

By virtue of being within the Bega Valley Local Government Area, the Lower South Coast Regional Environmental Plan No. 2 (REP No. 2) applies to the subject site.

The clauses of REP No. 2 relevant to the proposed development are outlined below, with comments provided as to how the development satisfies the requirements.

2.3.3.1 Rural Land

Clause 21 of REP No. 2 states:

> *Councils, before granting consent to the development of rural land for purposes other than agriculture must, where the land is classified as Class 1, 2 or 3 on the maps marked "Agricultural Land Classification Map—Lower South Coast Region" copies of which are deposited in the office of the councils, be satisfied that the development will not significantly reduce the agricultural potential of the land or adjoining lands.*

The subject site is identified as Class 3 agricultural land by the Agricultural Land Classification Map.

Whilst reducing the area of the subject site that could be used for agricultural purposes, the development would not significantly reduce the agricultural potential of the land as the development would not result in any external impacts that would adversely impact on the land to cause degradation or the like that would consequently result in a reduction of the agricultural potential of the land.

2.3.3.2 Water Resources

Clause 24 of REP No. 2 states:

> *In considering a development application relating to land in the vicinity of surface or groundwater water supplies, the council shall:*
>
> *(a) consider the impact the proposed development is likely to have on water quality and availability, and*
>
> *(b) only consent to the application if satisfied that adequate water quality and availability will be maintained if the proposed development is carried out.*

In relation to water availability, the development would not be facilitating the capture of more water than allowable under the site's harvestable rights.

In relation to water quality, I&I NSW has determined that the development would not have a net impact on receiving waters providing all listed mitigation measures are implemented and adhered to. Further the DECCW has issued its GTAs for the required EPL, thus indicating the development can operate with an "acceptable" level of impact on surface or ground water.

Therefore the development can be carried out, subject to mitigation measures and in accordance with EPL conditions, whilst maintaining adequate water quality and availability.

2.3.3.3 Fishery Resources

Clause 29 of REP No. 2 states:

> *In considering an application to carry out development for any purpose within, adjoining or upstream of a fishery habitat area or within the drainage catchment of a fishery habitat area, the council shall consider:*
>
> *(a) the need to maintain or improve the quality or quantity of flows of water to the habitat,*
>
> *(b) the need to conserve the existing amateur and commercial fisheries,*
>
> *(c) any loss of habitat which will or is likely to be caused by carrying out the development,*
>
> *(d) whether the development would result in pollution of the waters and any measures to eliminate pollution,*
>
> *(e) the proximity of aquatic reserves dedicated under the* Fisheries and Oyster Farms Act 1935 *and the effect the development will have on those reserves, and*
>
> *(f) the need to ensure that native vegetation surrounding the fishery habitat area is conserved.*

The subject site drains into a potential fish habitat when the Wolumla Creek is running. The Fisheries division of the NSW Department of Industry & Investment (I&I) has assessed the DA and has concluded that the development would not have unacceptable adverse impacts on aquatic species or habitats downstream of the development providing the proposed mitigation and monitoring measures are implemented as outlined in **Section 5.2.2.1**.

2.4 STATE ENVIRONMENTAL PLANNING POLICIES

2.4.1 STATE ENVIRONMENTAL PLANNING POLICY NO. 33

State Environmental Planning Policy No. 33 – "Hazardous and Offensive Development" (SEPP 33) is an enabling instrument that aims to ensure the merits of a proposal are properly assessed prior to determination (NSW Government Department of Planning 1994).

Potentially Hazardous Industry is defined as:

> *…a development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality:*
>
> *(a) to human health, life or property, or*
>
> *(b) to the biophysical environment,*
>
> *and includes a hazardous industry and a hazardous storage establishment.*

The EIS identifies the proposed development as potentially hazardous due to "the potential risk (if no mitigation measures were to be employed) of hazardous or toxic waste material being dumped" (AECOM 2009:6-12). Waste would be screened to accept only general solid waste (putrescible and non putrescible), and special waste (including asbestos). By employing such mitigation measures the EIS concludes that the development is not considered to be a hazardous industry or a hazardous storage establishment.

The EIS identifies three (3) types of hazardous materials that may be stored on site: lubricating oils, herbicides and pesticides, and petrol. Subsequent correspondence from the applicant dated 23 February 2010 advises that the storage quantity of each of these materials is below the threshold limits of SEPP 33 (GHD 2010). In this regard, the proposed development is not defined as potentially hazardous and therefore a preliminary hazard analysis (PHA) is not required.

Potentially Offensive Industry is defined as:

> *…a development for the purposes of an industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would emit a polluting discharge (including for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment.*

The proposed development is identified by the EIS as being potentially offensive by virtue of requiring an EPL from DECCW. DECCW has issued its GTAs for the required EPL. In issuing its GTAs, DECCW is confident the proposed development can achieve the required licence conditions to ensure the development does not result in a significant level of offence. In this regard the development is not an offensive industry.

2.4.2 STATE ENVIRONMENTAL PLANNING POLICY NO. 44

State Environmental Planning Policy No. 44 – "Koala Habitat Protection" (SEPP 44) applies to the subject site by virtue of being located with the Bega Valley Local Government Area.

2.4.2.1 Development Control of Koala Habitats

Clause 7 of SEPP 44 states:

> *(1) Before a council may grant consent to an application for consent to carry out development on land to which this Part applies, it must satisfy itself whether or not the land is a potential koala habitat.*
>
> *(2) A council may satisfy itself as to whether or not land is a potential koala habitat only on information obtained by it, or by the applicant, from a person who is qualified and experienced in tree identification.*
>
> *(3) If the council is satisfied:*
>
> *(a) that the land is not a potential koala habitat, it is not prevented, because of this Policy, from granting consent to the development application, or*
>
> *(b) that the land is a potential koala habitat, it must comply with clause 8.*

Potential koala habitat is defined as:

> *potential koala habitat means areas of native vegetation where the trees of the types listed in Schedule 2 constitute at least 15% of the total number of trees in the upper or lower strata of the tree component.*

The Flora and Fauna Assessments states that both *Eucalyptus tereticornis* and *E. viminalis* occur on the subject site. These species are listed in Schedule 2 of SEPP 44 as a feed tree species. The assessment does not provide details as to what proportion of the total number of trees in the upper or lower strata of the tree component that these species account for. Therefore it cannot be determined whether or not the land is potential koala habitat.

Taking a precautionary approach due to the deficiency in information provided, the land could constitute potential koala habitat. In this regard, clause 8 of SEPP 44 states:

> *(1) Before a council may grant consent to an application for consent to carry out development on land to which this Part applies that it is satisfied is a potential koala habitat, it must satisfy itself whether or not the land is a core koala habitat.*
>
> *(2) A council may satisfy itself as to whether or not land is a core koala habitat only on information obtained by it, or by the applicant, from a person with appropriate qualifications and experience in biological science and fauna survey and management.*
>
> *(3) If the council is satisfied:*
>
> *(a) that the land is not a core koala habitat, it is not prevented, because of this Policy, from granting consent to the development application, or*
>
> *(b) that the land is a core koala habitat, it must comply with clause 9.*

Core Koala habitat is defined as:

> *core koala habitat means an area of land with a resident population of koalas, evidenced by attributes such as breeding females (that is, females with young) and recent sightings of and historical records of a population.*

No koalas were identified on site during either the surveys undertaken. Further there are no recordings (DECC Threatened Species Database records) of koalas within a radius of 5km of the site.

On this basis it is accepted that the subject site does not constitute core koala habitat.

2.4.3 STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007

2.4.3.1 Traffic-Generating Development

Clause 104 of *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) applies to landfill of any size, by virtue of being a development listed in Schedule 3 of the SEPP.

Before determining such a DA Council is required to:

(a) give written notice of the application to the RTA within 7 days after the application is made, and

(b) take into consideration:

(i) any submission that the RTA provides in response to that notice within 21 days after the notice was given (unless, before the 21 days have passed, the RTA advises that it will not be making a submission), and

(ii) the accessibility of the site concerned, including:

(A) the efficiency of movement of people and freight to and from the site and the extent of multi-purpose trips, and

(B) the potential to minimise the need for travel by car and to maximise movement of freight in containers or bulk freight by rail, and

(iii) any potential traffic safety, road congestion or parking implications of the development.

In relation to (a) and (b)(i) the DA has been referred to the RTA, their comments are provided in **Section 5.2**.

In relation to (b) (ii) and (iii), these are addressed in **Section 3.2**.

2.4.3.2 Waste or Resource Management Facilities

Development Permitted with Consent

Clause 121 the Infrastructure SEPP of states:

> *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.*

Whereby a 'prescribed zone' means:

> *any of the following land use zones or a land use zone that is equivalent to any of those zones:*
>
> *(a) RU1 Primary Production,*

The DoP has advised the RU1 zone is equivalent to the 1(a) zone.

Determination of Development Applications

Clause 123 of the Infrastructure SEPP outlines certain matters which a consent authority must consider in determining such DAs. This clause was amended on 9 July 2010 to require consideration of additional matters. It should be noted that this DA was lodged on 12 November 2009, and the project itself has been in existence for significant time prior to this, being the subject of a DA previously lodged (and subsequently withdrawn for procedural reasons) on 23 March 2007.

Clause 123 states:

> *(1) In determining a development application for development for the purpose of the construction, operation or maintenance of a landfill for the disposal of waste, including putrescible waste, the consent authority must take the following matters into consideration:*
>
> *(a) whether there is a suitable level of recovery of waste, such as by using alternative waste treatment or the composting of food and garden waste, so that the amount of waste is minimised before it is placed in the landfill, and*
>
> *(b) whether the development:*
>
> *(i) adopts best practice landfill design and operation, and*
>
> *(ii) reduces the long term impacts of the disposal of waste, such as greenhouse gas emissions or the offsite impact of odours, by maximising landfill gas capture and energy recovery, and*
>
> *(c) if the development relates to a new or expanded landfill:*
>
> *(i) whether the land on which the development is located is degraded land such as a disused mine site, and*
>
> *(ii) whether the development is located so as to avoid land use conflicts, including whether it is consistent with any regional planning strategies or locational principles included in the publication EIS Guideline: Landfilling (Department of Planning, 1996), as in force from time to time, and*
>
> *(d) whether transport links to the landfill are optimised to reduce the environmental and social impacts associated with transporting waste to the landfill.*

The following provides comments on the requirements of the above.

Suitable Level of Recovery of Waste

The Department of Environment and Climate Change (DECC) prepared the *Waste Avoidance and Resource Recovery Strategy 2007* (WARR Strategy). It provides a framework for the minimisation of environmental harm from waste disposal and the conservation and efficient use of our resources. It aims to achieve this by providing four main outcomes: Preventing and avoiding waste, increasing recovery and use of secondary materials, reducing toxicity in products and materials, and reducing litter and illegal dumping.

The WARR Strategy provides the following targets for the recovery and use of secondary materials in the three major waste streams by 2012:

- Municipal Waste – from a baseline of 26% to 66%
- Commercial and Industrial (C&I) Waste – from a baseline of 28% to 63%
- Construction and Demolition (C&D) Waste – from a baseline of 65% to 76%.

In the Department of Planning's assessment of the Orange Waste Facility's it was noted that:

> *The Department agrees with DECCW, and believes it is important to acknowledge that it will be more difficult for Councils in regional NSW to reach the WARR Strategy targets than it will be for Councils in large metropolitan or coastal NSW, due to factors such as the lack of economies of scale.*

Council has its *2020 Vision on Waste* which provides a strategic direction for waste management and minimisation in the LGA, having actions that aim:

> *… to reduce the potential for impact on the environment from:*
>
> - *Past waste generation – control of closed waste facilities*
> - *Current waste generation – improved management of waste activities/facilities*
> - *Future waste generation – continuous reduction of waste* (BVSC 2001:12).

The Vision is to be reviewed on a five year basis. The 2006 review notes that:

> *Bega Valley Shire Council has identified waste minimisation as an integral component to achieving waste avoidance and resource recovery targets as set by the DEC. Much work has been done in this area since the adoption of the 2020 Vision on Waste in 2001, and there are now several programs and processes in place to aid in reducing the amount of waste generated and disposed of in the Shire* (BVSC 2006:17).

As outlined in the EIS, BVSC is a member of the South East Resource Recovery Regional Organisation of Council's (SERRROC). Being a member of SERRROC ensures there is opportunity for BVSC to participate in programs and activities that would otherwise be unavailable due to cost.

Council currently provides the following services for residents in towns and within the shire:

- General Waste – weekly 140L
- Recycling – fortnightly 240L
- Garden Organics – monthly 240L

Rural residents have their waste collected on either a weekly or fortnightly basis, and can take materials to be recycled at any of Council's Recycling and Waste Depots or Community Recycling Centres.

Council's Waste Services Manager has advised that kerbside recycling has increased significantly from less than 10% in 2001 to approximately 90% in 2008/9 for households receiving kerbside recycling.

The current recovery rates for the BVSC are:

- Municipal Waste – 49.23%
- Commercial and Industrial (C&I) and Construction and Demolition (C&D) Waste – 97.43%

As can be see from the above, C&I and C&D diversion are well above the WARR targets. Whilst the Municipal Waste recovery is less than the 66% target, it is still substantial.

Despite not meeting the WARR target for municipal waste recovery, the level of recovery combined with the measures contained within the 2020 Vision on Waste to further consider and increase diversion, is considered to provide a suitable and improving level of waste diversion. It is recommended that further, Council:

- Implement all reasonable and feasible measures to recover resources from the waste stream before disposing any residual waste at the CWF;
- Prepare and implement a detailed Community Education Program for the project to promote better resource recovery;
- Monitor the effectiveness of the resource recovery measures; and if necessary
- Adjust the waste strategy to achieve better resource recovery rates.

Adoption of Best Practice Landfill Design and Management

The following outlines the development's compliance with that which is accepted as "best practice".

- The proposed landfill design and operation complies with the Environmental Guidelines: Solid Waste Landfills (EPA 1996). Compliance with the Benchmark Techniques is outlined in Section 5.16 of the EIS.
- In order to protect groundwater, the leachate barrier system has been designed to exceed the Guideline performance requirements
- A detailed Specification of the Landfill and Leachate Management system.
- A Stormwater Management Plan prepared in accordance with Landcom's "*Managing Urban Stormwater: Soils and Construction*" (2004) and DECC (2007) "*Draft Managing Urban Stormwater: Soils and Construction – Volume 2D – Waste Landfilling*".

- A Progressive Capping and Rehabilitation Program which minimises the amount of disturbed land and ensures progressive capping and revegetation occurs to minimise the generation of leachate, erosion and impacts on stormwater from sediment.
- A Leachate Disposal Options Report outlining the comparative advantages and disadvantages of each option and a multi-criteria assessment. The proposed leachate management strategy involving on-site treatment and irrigation is detailed and supported by an assessment of leachate generation, modelling of storage volumes, irrigation application rates and nutrient balance.
- A Construction Quality Assurance and Testing Program detailing the measures to be implemented which ensure that the facility is constructed to the full intent of the design specification.

Reduction of Long Terms Impact of Waste Disposal

In terms reducing the long term impacts of the disposal of waste, the development includes progressive installation of landfill gas collection pipe work and an enclosed flare for destruction of methane.

As outlined throughout the EIS, Council is giving consideration to the diversion of food and garden waste from the municipal, commercial and industrial waste streams. This has the potential to significantly reduce the generation of landfill gas.

As outlined in **Section 3.9.3**, the scale of the facility is not sufficient to make energy generation from landfill gas commercially viable. Thus flaring of the gas is considered the most efficient means of reducing the impact of the gas from this development.

Whether the Development is Located on Degraded Land

The development is located on Class 3 Agricultural Land. Clearly this is not considered to be degraded land. However, it should be noted that previous to July 2010, there was no requirement for such a consideration to be a factor in the site selection process. The site formed part of a site selection process that was carried out consistent with the guidelines applicable at the time.

Whether the Development is located to avoid Land Use Conflicts

As outlined in **Section 4.1.1**, the site is consistent with the locational principles included in the *EIS Guideline: Landfilling* (DoP 1996).

As outlined throughout this assessment, the DECCW has assessed the DA, and by virtue of issuing its GTAs, is confident that it can operate so as to not cause unacceptable impacts in terms of air quality, noise, etc for the nearest residential receptors. Thus the development is not expected to result in any land use conflicts.

Whether Transport Links are Optimised

In 2004, Wright Corporate Strategy Pty Ltd undertook a site selection process for a new waste facility. Specifically, the process aimed to identify a suitable landfill site for the development of a central waste disposal facility in the Bega Valley Shire.

The site is located close to the centre of waste generation of the LGA between the significant population centres of Bega and Merimbula. Thus reducing environmental costs in terms of pollution by being located centrally with the shire and close to centre of gravity of population.

In terms of social impact of the transportation of waste, the facility would primarily utilise the Princes Highway for transportation. This is a heavily trafficked road, thus minimising the increased in impact of additional traffic. The development would result in an upgrade to that part of Wanatta Lane utilised by the development. This would benefit local residents through provision of a safer road. It has also been determined through the impact assessments that the use of this road for the development would not result in unacceptable adverse impacts. Please note, this assessment does not cover impacts of the road upgrade.

2.5 DRAFT ENVIRONMENTAL PLANNING INSTRUMENTS

There were no relevant draft EPIs at the time of preparation of this report.

2.6 DEVELOPMENT CONTROL PLANS

2.6.1 DEVELOPMENT CONTROL PLAN NO. 7

Development Control Plan No. 7 – Off Street Car Parking (DCP No. 7) applies to all land within Bega Valley LGA. All new developments are required to provide parking spaces and loading spaces on the land as specified in the plan.

Parking spaces are required to be provided in accordance with Schedule 1.There are no requirements listed for waste facilities within Schedule 1. There are no parking requirements in the RTA's *Guide to Traffic Generating Developments* either. The parking demand for the development is therefore assessed on merit. It is proposed that approximately ten (10) parking spaces be provided as part of the development. The EIS states that the facility would employ a maximum of five (5) staff. Further, the Traffic Impact Assessment (Appendix F of EIS) states that the development would attract some irregular traffic movements associated with licensed contractors, and delivery and maintenance vehicles. Traffic modelling assumed these would equate to a maximum of ten (10) vehicles visiting the site per day. The provision of 10 onsite parking spaces is considered to adequately meet the anticipated parking demands of the proposal.

Consent conditions should reflect the following:

- In total provision should be made for ten (10) car parking spaces. All spaces shall be designed in accordance with AS2890.1 and 2890.2.
- Construction of the car park area shall be undertaken in accordance with Section 7.3 of DCP No. 7.

Impacts

3.1 CONTEXT AND SETTING

3.1.1 CHARACTER AND AMENITY OF THE LOCALITY

The site and its surrounds have largely been cleared to facilitate agricultural pursuits such as grazing. The locality also supports scattered rural dwellings and a rural residential area located to the south of the site. The Ayrdale property is located to the north of the site. It is identified as a heritage item and contains an old dairy, numerous houses, outhouses, sheds and slaughter yard.

3.1.2 LANDSCAPE, VIEWS, SCENIC QUALITY

An assessment of land and visual amenity was been undertaken by the applicant and is contained in Section 16 of the EIS.

The topography of the locality is noted to be gently undulating and has been largely cleared to support agricultural practices. The EIS states:

> *… the capability of the area to visually absorb the proposed development is considered to be low, as the proposed development would be the only development of its type in the local area. However, the visual impact of the CWF, once constructed would be limited to relatively few viewpoints…* (AECOM 2009a:16-4).

Construction impacts would be experienced for a period of approximately 6 months. The main points of impact during this time have been identified as the residence at viewpoint 4 ("Stablehurst"), the access road to viewpoint 12, and motorists travelling along Wanatta Lane. There is over 1.5km separation distance between the landfill site and viewpoint 4, thus impacts are not considered to be significant. Proposed planting and maintenance of such is considered to be an adequate mitigation measure to ameliorate impacts for viewpoint 12 and motorists on Wanatta Lane.

During operation, the main points of impact would be Viewpoint 4 ("Stablehurst"), Viewpoint 9 (202 Wyndham Lane) and Viewpoint 12 (access to Mueller residence). The first two viewpoints are approximately 1.5km and 3.5km away from the landfill site respectively. This distance combined with proposed landscape screening would provide for mitigation of impacts. Viewpoint 12 is located approximately 400m from the site. Proposed landscaping would assist with amelioration of visual impacts experienced at this location. Motorists on Wanatta Lane would experience intermittent visibility of the development site. The proposed landscaping would provide screening to assist with concealing the proposed development.

Providing the proposed mitigation measures (outlined in table 16.2 of the EIS) are adhered to, the development is not expected to result in significant adverse visual impacts for the locality.

Consent conditions should reflect the following:

- **Prior to issue of Construction Certificate**
  - Preparation of a landscape management plan as part of the LEMP detailing landscaping requirements.
  - Landscaping would incorporate the use of suitable endemic species.
- **Prior to works commencing**
  - Establishment of landscape and boundary plantings along the site boundaries
  - Establishment of chain link fencing surrounding the site with mesh screening.
- **During Construction**
  - Dust be suppressed during construction utilising water carts to wet the construction site.
  - Monitoring and maintenance of landscape and boundary plantings along the site

boundaries.
- Continuous observation of wind conditions to ensure that control methods are appropriate.
- Implementation of effective dust control measures and monitoring of dust emissions.
- Maintenance of a complaints register and promptly investigating and responding to complaints.
- Initiation of any corrective actions on the site.

- **During Operation**
  - Maintenance and improvement of existing vegetation along Wanatta Lane.
  - Monitoring and maintenance of landscape and boundary plantings along the site boundaries.
  - Minimising the size of the active tipping face of the CWF.
  - Installation of litter screens around the CWF as required.
  - Regular site inspections for litter.
  - Shaping the CWF profile to minimise the potential for waste to transported by wind.
  - Continuous observation of wind conditions to ensure that control methods are appropriate.
  - Ensuring that the vegetation on the existing bund wall, which provides effective screening of the facility from the road, is maintained.
  - Ensuring that as tipping areas are filled, they are closed, rehabilitated and revegetated as soon as possible to improve the amenity of the facility.
  - Ensuring cleanliness of roads.
  - Implementation of effective dust control measures and monitoring of dust emissions.
  - Implementation of effective vermin control measures as appropriate.
  - Maintenance of a complaints register and promptly investigating and responding to complaints.
  - Initiation of any corrective actions on the site.

3.1.3 COMPATIBILITY OF LAND USES

Compatibility of the proposed development with the existing surrounding land uses is outlined and demonstrated in **Section 4** of this report.

3.2 TRANSPORT, TRAFFIC AND ACCESS

3.2.1 TRAFFIC GENERATION

A Traffic Impact Assessment for the development was prepared by Hyder Consulting. Council is planning to upgrade Wanatta Lane as part of the CWF project, however the upgrade is being assessed concurrently under Part 5 of the Act (refer **Section 1.3.2**).

This assessment assumes the road has been upgraded and provides the following conclusions:

- The development would generate a maximum of 50 vehicle movements today, comprising 30 refuse truck movements, 8-10 staff movements and the balance being other movements associated with licensed contractors, delivery and maintenance vehicles.
- Post development (including future development of Ayrdale Village) Wanatta Lane (being a two-lane two-way road) would operate at LoS A (Austroads *Guide to Traffic Engineering Practice Part 2 – Roadway Capacity*). Note: due to current poor geometry of Wanatta Lane, it can't really currently be classified as a two-lane two-way road. However post upgrading of the road it should fall into this category and as such these finding as appropriate.
- Wanatta Lane is a school bus route. The TIA concludes that the small increase in traffic on the land resulting from the development would not reduce the safety for school children.

Nevertheless, the EIS proposes that all waste vehicles associated with the proposed CWF be prohibited (through a Transport Code of Conduct) from accessing the site during school bus operation times.

Being a traffic generating development, by virtue of Clause 104 of the Infrastructure SEPP, the consent authority is required to take into consideration:

(ii) the accessibility of the site concerned, including:

(A) the efficiency of movement of people and freight to and from the site and the extent of multi-purpose trips, and

(B) the potential to minimise the need for travel by car and to maximise movement of freight in containers or bulk freight by rail, and

(iii) any potential traffic safety, road congestion or parking implications of the development.

In relation to (ii), the site has been selected to centralise BVSC's waste facilities, including consideration of vehicle/traffic trip generation.

In relation to (iii), providing Wanatta Lane is upgraded, and the intersection with the subject site provides adequate sight lines, the accessibility of the site is considered to be suitable for the proposed development.

The following consent conditions should be imposed on any consent issued:

Prior to Issue of Occupation Certificate/Use of the Site

- A Transport Code of Conduct (TCOC) shall be prepared and approved by Council prior to issue of any Occupation Certificate for or use of the site for the purpose of a waste management facility. The TCOC shall require all waste vehicle movements associated with the waste facility to occur outside of school bus operation hours.
- An Occupation Certificate for the development shall not be issued nor shall the site be used for any waste management facility purposes until such time as the upgrade to Wanatta Lane has been completed to the satisfaction of Council's Engineers.

3.2.2 INTERSECTIONS

3.2.2.1 Site Intersection with Wanatta Lane

Council's Engineer has advised:

A new intersection with design requirements has been required as a condition of the consent. This design which requires a AUR/BAL type intersection treatment is possibly at the upper end for the projected traffic volumes, however Council has considered the life of the project with the possible population increase in the locality and concerns from the community. The proposed intersection will more than adequately address any traffic issues to the site and past the site along Wanatta Lane.

The applicant has provided engineering design plans which have included a design for a BAL/AUR type intersection at the junction of Wanatta Lane and the access to the proposed site. The applicant and council are both confident that this access can be constructed to these requirements. The intersection will provide for Safe Intersection Sight Distance of at least 225 metres in either direction and therefore will comply with the RTA's Road Design Guide.

3.2.2.2 Wanatta Lane with the Princes Highway

A Traffic Impact Assessment for the development was prepared by Hyder Consulting. This assessment provides the following conclusions:

- The Princes Highway/Wanatta Lane intersection is an AUR type.
- Based on the aaSIDRA analysis post development, the Princes Highway/Wanatta Lane intersection during peak hours would:
  - AM peak: continue to operate at LoS A, degree of saturation would slightly increase from 0.118 to 0.121, and average delay marginally increases from 14.0 seconds to 14.1 seconds per vehicle.
  - PM peak: continue to operate at LoS B, no change in degree of saturation of 0.136, and a slight increase in average delay from 14.5 seconds to 14.8 seconds per vehicle.
- Thus no modification to the intersection is required to support the proposed development.

The impacts of these works are to be assessed separately under the Part 5 Assessment (refer **Section 1.3.2**).

3.2.3 PARKING

The EIS proposes to provide a car parking area with provision for "approximately 10 vehicles and should have adequate capacity to cater for staff and visitors to the site".

The EIS states that the facility would employ a maximum of five (5) staff. Further, the Traffic Impact Assessment (Appendix F of EIS) states that the development would attract some irregular traffic movements associated with licensed contractors, and delivery and maintenance vehicles. Traffic modelling assumed these would equate to a maximum of ten (10) vehicles visiting the site per day.

Parking spaces are required to be provided in accordance with Schedule 1.There are no requirements listed for waste facilities within Schedule 1. There are no parking requirements in the RTA's *Guide to Traffic Generating Developments* either. The parking demand for the development is therefore assessed on merit. It is proposed that approximately ten (10) parking spaces be provided as part of the development. The EIS states that the facility would employ a maximum of five (5) staff. Further, the Traffic Impact Assessment (Appendix F of EIS) states that the development would attract some irregular traffic movements associated with licensed contractors, and delivery and maintenance vehicles. Traffic modelling assumed these would equate to a maximum of ten (10) vehicles visiting the site per day. The provision of 10 onsite parking spaces is considered to adequately meet the anticipated parking demands of the proposal.

3.3 UTILITIES

3.3.1 ELECTRICITY

The development (and site) would require connection to an electricity supply. The EIS proposes this connection would be from the overhead power located near the intersection of Wanatta Lane and Annabel Close. Consultation would be required with Country Energy to confirm the acceptability of this. Separate assessment under Part 5 of the Act would likely be required for any transmission line works. This would be the responsibility of Country Energy (or its contractor).

A diesel generator (located in a secure, soundproof box) would provide auxiliary power in the event of mains failure.

Power to the site office and amenities would be provided by solar panels, battery storage and inverter.

The following shall be incorporated into the conditions of any consent granted.

- Electricity services required to be augmented to service the proposed development would be the responsibility of and at the cost of the applicant. Prior to the issue of a construction certificate, evidence shall be provided to Council that consultation has been undertaken with Country Energy and the development can be supplied with adequate electricity supply.

3.3.2 TELECOMMUNICATIONS

The development (and site) would require connection to telecommunications network. Consultation would be required with Telstra to determine requirements and provision of such services.

The following shall be incorporated into the conditions of any consent granted.

- Telecommunications services, if required to be augmented to service the proposed development, would be the responsibility of and at the cost of the applicant.

3.4 HERITAGE

3.4.1 INDIGENOUS HERITAGE

A Heritage Assessment was undertaken by AECOM for the proposed development. It concluded that:

- No Aboriginal sites or potential archaeological deposits are present within the CWF and leachate ponds area within Lot 3.

The EIS provides the following mitigation measures, which are to be incorporated into the conditions on any consent granted.

Prior to Works Commencing

- All contractors are to be made aware of the General Recommendations prior to commencing site works.
- All contractors who work within the confines of the study area should be made aware of the NP&W Act 1974 (as amended) and the fact that it is an offence to move, disturb or destroy Aboriginal objects without the written permission of the Director-General of the DECCW.

During Construction

- Aboriginal objects are protected under the NP&W Act, regardless of location. Should any objects be identified during the course of site works, all works must cease and the DECCW (Southern Branch, Environment Protection and Regulation Division, Regional Archaeologist) contacted in regard to appropriate permit requirements before any further impact is undertaken.
- Should **suspected** skeletal material be uncovered during the course of site works, all works must cease and the DECCW, the NSW Police and the NSW Coroner's office contacted immediately, **regardless** of any existing DECCW permits for the proposed development

3.4.2 NON-INDIGENOUS HERITAGE

A Heritage Assessment was undertaken by AECOM for the proposed development. It concluded that:

- There are no items of heritage significance (listed on the LEP or State Heritage Register) on the subject site.
- 'Ayrdale Dairy Village' is listed as a heritage item on the Bega Valley LEP and is within the vicinity of the subject site, i.e. within 1km of the site.

- The locally listed 'Ayrdale Dairy Village' will not be impacted either directly or indirectly. There will be no impact to the visual setting of Ayrdale due to the distance and landform separation from the CWF.
- It was noted that the prior heritage assessment carried out in 2007 had suggested that a historic cattle yard structure was located within the CWF area; however, the yard located within the CWF is in fact a relatively modern structure. The older yard pictured in the original 2007 heritage report is located near the Lord family house and outside of the study area.

The EIS provides the following mitigation measures, which are to be incorporated into the conditions on any consent granted.

Prior to Works Commencing

- All contractors are to be made aware of the General Recommendations prior to commencing site works.
- All contractors who work within the confines of the study area should be made aware of the *NSW Heritage Act 1977* and the fact that it is an offence to move, disturb or destroy a relic or deposit as defined by the *Act*.

During Construction

- The *NSW Heritage Act 1977* affords protection to non-Indigenous "relics" and in situ archaeological deposits over 50 years old. If the program of work uncovers an object of European or other non-Indigenous manufacture or a deposit that is associated with European or other non-Indigenous occupation, and that object or deposit is more than 50 years old, then work must cease and contact made with the NSW Heritage Office to seek advice.

3.5 OTHER LAND RESOURCES

3.5.1 PRODUCTIVE AGRICULTURAL LAND

Council has advised that the subject site is identified as being Class 3 Agricultural land by the Agricultural Classification Map. Whilst the proposed development would reduce the area available on site for use for agricultural purposes, it would not reduce the agricultural potential of the land.

The EIS states:

> *The proposed development would remove the area of the site impacted by the CWF from agricultural production for the life of the facility. Following closure and rehabilitation of the site, it is anticipated that the site is "likely to be a productive rural use such as grazing"* (AECOM 2009:5-39).
>
> *The remainder of the site could concurrently be used for agricultural pursuits. It is proposed to provide rehabilitation of the Bega Dry Grass Forest on site. Future grazing of the rehabilitated area could occur with careful planning of density, type of stock and timing of grazing* (AECOM 2009:12-4).

The development would have a direct impact on 9ha of prime agricultural land. This forms 4.6% of the subject site and 0.009% of the prime agricultural land supply (98,726ha) in the LGA.

3.5.2 WATER SUPPLY CATCHMENTS

The subject site is located within the Bega Town Waters Catchment. Council's Manager of Water and Sewerage Services has advised that:

> *… the EIS has adequately addressed the risk of leachate contamination of drinking water. Based on the studies undertaken I have no concerns or comments regarding the development.*

3.6 WATER DEMAND & SUPPLY

3.6.1 WATER REQUIREMENTS

3.6.1.1 Amenities building

The water would be used for flushing the toilet, hand washing, washing dishes in the kitchenette, and for the shower stall. A bottled water supply would be provided for drinking. The site will be staffed by three to four people and the total usage per day is estimated below.

- Toilet flushing with3/6L dual flush = 48L/day
- Hand washing = 40L/day
- Dish washing = 10L/day
- Shower with low flow head = 30L/day
- Total (L/day) = 128L/day

The demand is therefore estimated at 128L per day. The CWF is proposed to operate 6/days per week, or approximately 26 days/month, therefore the monthly demand is:

- Monthly demand = 26days/month x 128L = 3328L

3.6.1.2 Landscape watering

Except during establishment, landscaping would not be routinely watered.

3.6.1.3 Fire fighting

It is not possible to predict or model actual requirements for fire fighting water supplies. The RFS has not raised any objection to the proposed water supply for fire fighting.

3.6.1.4 Wheel wash

The wheel wash would be filled with water to a depth of approximately 200mm to effectively wash dust and debris from the wheels as the vehicle passes through the wheel wash. The wash water is periodically replenished and the wheel wash cleaned (de-silted) to ensure effective functioning.

The total volume of water required for the wheel wash is approximately 4.8m³.

3.6.1.5 Dust suppression – water truck

Dust suppression would be undertaken on an as needs basis. Approximately 300m of haul road is unsealed, on the northern side of the landfill footprint.

The additional information provided with the DA[2] states that 15,000L of water is the equivalent of 5mm of rainfall over an area of 3,000m², which is sufficient to wet down approximately 750 linear meters of unsealed haul road.

3.6.2 WATER SOURCES

3.6.2.1 Rainwater Tanks

Two rainwater tanks would be installed. One (1) on the amenities building, recommended to have a volume of 2,000L, and one (1) on the maintenance shed to be in-ground and have a 60,000L capacity. Of this 20,000L would be a dedicated static supply for fire fighting, thus leaving 40,000L for water supply.

[2] AECOM letter dated 27 May 2010 to BVSC Manager Waste Services.

The yield from the building roof is estimated as follows (from http://www.nphp.gov.au/enhealth/council/pubs/documents/rainwater_tanks.pdf):

run-off (litres) = A x (rainfall – B) x roof area

'A' is the efficiency of collection and values of 0.8–0.85 (that is, 80–85% efficiency) have been used (Martin 1980).

'B' is the loss associated with absorption and wetting of surfaces and a value of 2 mm per month (24 mm per year) has been used (Martin 1980). 'Rainfall' should be expressed in mm and 'roof area' in square metres (m²).

The roof area is the combined area of the amenities and machinery shed and is approximately 100m².

The monthly run off generated in illustrated in **Table 3.1**. When compared with the anticipated demand, it can be seen that there would be sufficient supply for use in the amenities building.

Table 3.1 – Amenities water balance

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Ann
Mean Rainfall (mm)	81	90	97	71	74	80	54	51	53	69	68	77	**864**
Runoff amenities (L)	1336	1496	1607	1173	1229	1331	887	833	864	1137	1117	1277	**14287**
Runoff machinery shed (L)	5345	5984	6426	4692	4916	5324	3550	3332	3454	4549	4468	5107	**57147**
Demand (L)	3328	3328	3328	3328	3328	3328	3328	3328	3328	3328	3328	3328	**39936**
Monthly Surplus	3353	4152	4705	2537	2818	3328	1109	873	990	2359	2257	3056	**31498**

Source: AECOM 2010:B2

3.6.2.2 Stormwater Ponds

Wheel Wash

The wheel wash is located adjacent to Stormwater Pond B so that it can be drained to the pond when the water is too dirty for wheel cleaning, and then replenished with cleaner water from the surface of the pond. The total volume of water required for the wheel wash is approximately 4.8m³, which would be replenished at a frequency depending on the conditions at the site and the condition of the wash water, with inspection and maintenance documented as part of the site procedures.

The wash water would essentially be recycled, with treatment of the drainage consisting of a gross pollutant trap to intercept waste materials, prior to discharge to Stormwater Pond B. Settlement of soil particles would occur within the pond. Water losses attributable to the wheelwash are expected to be minimal.

Dust Suppression

The stormwater dams have been primarily designed to accord with the Department of the Environment, Climate Change and Water (DECCW) stipulation that the sediment control dam is sized to contain runoff from all disturbed areas from a 90th percentile 5-day rainfall event.

The stormwater modelling undertaken by Cardno using MUSIC software resulted in an increase in the volume required for the ponds beyond the DECCW stipulation in order to achieve a modelled

reduction in total suspended solids, total phosphorous and total nitrogen. The analysis assumed a stormwater reuse demand of 2.2ML/year from Pond A and 1.1ML/year from Pond B (ref Appendix D of the EIS).

The combined volume of stormwater ponds A and B is 3.13 ML, which is the equivalent of 209 water truck loads of 15,000L. Assuming no recharge of the dams and maximum usage due to dry conditions, the ponds would provide for around 200 days of dust suppression assuming (on average) one 15,000L load of water is discharged daily.

The main haul road for the site is to be bitumen sealed, and only a small length of approximately 300m of unsealed haul road will be constructed on the northern side of the landfill footprint. 15,000L of water is the equivalent of 5mm of rainfall over an area of 3000m², sufficient to wet down approximately 750 linear metres of unsealed haul road. Dust generation on unsealed roads is closely related to vehicle speed, and enforcement of a slow site speed limit will reduce dust generation.

Whilst dust suppression would be undertaken on an as needed basis, it is probable that requirements may be somewhat reduced on weekends as very little waste disposal traffic would occur at this time, with consequently lower dust generation. On this basis, the 200 day supply may last approximately 40 calendar weeks.

This consideration assumes that rainfall is insufficient to generate any runoff and recharge of the stormwater dams over a prolonged period. It is possible based on recent drought conditions that an additional clean water supply will be required, *on occasion*, for operational purposes. However, the need to construct an additional dam may be avoided if an alternative supply is available locally. If an additional dam is required, its capacity will be well within the overall harvestable right under the *Water Management Act 2000*. Any requirement for a dam would be subject to a separate approval process.

- A 2,000L rainwater tank shall be installed to capture roof water from the amenities building. It shall be plumbed for use within the amenities building.
- A 60,000L underground rainwater tank shall be installed to capture roof water from the maintenance shed building. 20,000L shall be provided as static supply for fire fighting, to the RFS's requirements. The remainder shall be available and shall be plumbed for use within the amenities building.

3.7 WATER QUALITY

3.7.1 TREATMENT, REUSE AND DISPOSAL OF WASTE WATER

3.7.1.1 Rainwater Tanks

In relation to the proposed rainwater tanks on site, comments from NSW Health in relation to the previous DA (note, none received for this DA) required that:

> *any roof water collection for potable use on-site (i.e. office amenities) should be monitored for bacteriological and chemical quality. The monitoring and maintenance program for the rainwater tank(s) should be included in the facilities Operational Environmental Management Plan (OEMP).*

This is recommended to be incorporated into the conditions imposed on any consent.

- any roof water collection for potable use on-site (i.e. office amenities) should be monitored for bacteriological and chemical quality. The monitoring and maintenance program for the rainwater tank(s) should be included in the facilities Operational Environmental Management Plan (OEMP).

3.7.1.2 Stormwater Ponds

Two stormwater ponds have been sized and located so as to treat the runoff from disturbed areas within the site at any given stage of the progressive landfill operations, having regard to the local topography. The ponds have been sized in accordance with Landcom's *Managing Urban Stormwater: Soils and Construction* and DECCW's *Managing Urban Stormwater: Soils and Construction – Volume 2B – Waste Landfills* (DECC, 2008). As such, the ponds were sized based on a 5-day, 90th percentile storm event.

The stormwater ponds would be constructed to capture runoff from each of the landfill cells during the construction stage to prevent sediments from reaching the downstream catchment areas.

Some captured stormwater would be used for the purpose of dust control and irrigating re-vegetated areas during the life of the landfill, including temporary grass stabilisation of stockpiled areas to avoid the need to constantly water such areas for dust control.

3.7.1.3 Overflow

Assessment of peak flows leaving the site determined only a small increase would occur post operation, which would be reduced to equivalent of the existing situation once rehabilitation and revegetation had occurred.

3.7.2 WATER QUALITY AND POLLUTION OF WATER BODIES

3.7.2.1 Construction

Potential for pollution during vegetation clearing and construction. Surface water management and erosion and sediment control measures would be employed, as outlined in Section 7 of Appendix M of the EIS.

3.7.2.2 Operation

During operation of the facility the following have been identified as potential impacts on water quality:

- Contaminants associated with leaching of landfill material;
- Hydrocarbons and chemicals from leaks and spills;
- Gross pollutants escaping from vehicles at the tip face; and
- Suspended soil particles in stormwater.

Leachate

> *The proposed system of managing leachate produced by the landfilling activities is to extract leachate from the landfill cells, store the leachate in a series of dams on the site, treat the leachate in a suitable leachate treatment plant, and irrigate the treated leachate over a dedicated and contained leachate irrigation area.*
>
> *There would be an ongoing need to manage and monitor the irrigation area. As it is proposed that the leachate is treated prior to irrigation, the risks of surface water, groundwater and soil contamination are reduced significantly, and consequently the need for operation and monitoring of the irrigation area is reduced.*
>
> *Best management practices would include diversion of all upstream surface water runoff around the irrigation area, monitoring of surface water runoff from the irrigation area, regular monitoring of the performance of the leachate treatment plant and the quality of the treated leachate and regular monitoring of groundwater quality and soil quality* (AECOM 2009).

By issuing it's GTAs for the EPL, DECCW concurs that the risk of leachate entering the surface water system from the landfill is low, subject to monitoring and adherence to proposed mitigation measures.

Spills and Leaks

The mitigation measures outlined in Section 24 of the EIS would ensure the potential for contamination caused by such spills and leaks would be minimised.

Gross Pollutants

The potential for contamination caused by gross pollutants is to be minimised through the implementation of mitigation measures outlined in Section 24 of the EIS.

Suspended Soil Particles

Above the general stormwater management controls, the progressive revegetation and rehabilitation of the site would ensure stormwater run of quality would not adversely affect the quality of the receiving waters.

- A Soil and Water Management Plan (SWMP) shall be prepared for the proposed development and submitted to council for approval prior to the issue of any CC for the development. The SWMP shall be consistent with the measures outlined in Section 7 of GHD's *Stormwater Management Plan for the Landfilling Operation* (Appendix M of EIS).
- The SWMP shall be implemented prior to and during construction, and throughout operation of the development.
- The mitigation measures outlined in Section 24 of the EIS shall be included into the Landfill Environmental Management Plan (LEMP), to be prepared and submitted to Council for approval prior to the issue of any CC for the development.
- The LEMP shall be implemented during construction and throughout operation of the development.

3.7.3 POLLUTION OF WATER SUPPLY

A risk assessment of leachate contamination of the drinking water supply was undertaken by AECOM. Table 8-4 in the EIS provides this assessment, and concludes that the risk of contaminants from the landfill leachate adversely affecting the drinking water supply is remote.

Council's Manager of Water and Sewerage Services has advised that:

> *… the EIS has adequately addressed the risk of leachate contamination of drinking water. Based on the studies undertaken I have no concerns of comments regarding the development.*

3.7.4 IMPACTS OF FLOODING

The EIS states:

> *The landfill cells of the proposed CWF are located approximately 30 - 40 m above the bed of Wolumla Creek and beyond the limits of the Wolumla Creek 100 year floodplain and 100 year ARI flood. Any flooding of the site would arise only from local flooding along the ephemeral gullies in the area. Analysis of the gullies in the vicinity of the proposed landfill was undertaken to estimate such an event for preliminary 100 year flood levels.*
>
> *The proposed landfill area drains to four gullies, which flow in a westerly direction to Wolumla Creek, located approximately 30 m below the site.*
>
> *The development of the landfill area would result in changes to the size of the catchment draining to the gullies; however, because the development is at the head of these catchments and the areas involved are small compared to the total catchments, the impact is expected to be limited in scale and localised Modelling found that the depth of flooding, even for the 100 year flood would be shallow, and, coupled with the relatively low flow velocities, is unlikely to threaten the downstream environment by flooding the landfill area.*

The proposed CWF is not expected to have an impact upon flooding downstream of the site for events up to and including the 100 year ARI flood. Additionally, during operation of the proposed Facility, less stormwater runoff would be generated due to the isolation of active waste landfill cells from the remainder of the CWF.

Similarly, due to the location of the site, flooding in Wolumla Creek is not expected to impact the site.

Thus it is considered the development would not adversely impact on flooding, nor would the development be adversely impacted by flooding.

3.7.5 GROUNDWATER

A Baseline Groundwater Monitoring Assessment was prepared by HLA and is provided in Appendix J of the EIS. The report states:

Overall, the groundwater conditions identified (including the anomalous TPH) are not indicative of significant groundwater contamination, and should not preclude the suitability of the site for potential future use as a waste facility.

The current TPH data from the existing monitor wells are considered anomalous and not suitable for assessing baseline groundwater conditions at the site. This is due to potential for localised contamination arising from the well installations or other unidentified source. Accordingly, the existing monitor wells are not considered suitable for future groundwater monitoring.

To confirm baseline conditions at the site, HLA recommends the following:

- *Clean out the existing wells (if possible), to enable re-sampling; or*
- *Installation of new wells for groundwater monitoring during landfill construction. These wells could form part of the well installation that will be required as part of future monitoring (leachate) of the operational landfill. Monitoring should include TPH analysis, to confirm groundwater conditions.*

A monitoring program should be developed which will address the standard DEC requirements for monitoring solid waste landfill sites, based on the nature and waste to be disposed at the proposed CWF.

Section 14 of the EIS further recommends:

Monitoring should include analysis for TPH, ammonia, total dissolved solids (TDS), nitrate, phosphorus, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), Manganese (Mn) and Iron (Fe), to confirm baseline groundwater conditions.

In order to negate the potential for impacts on groundwater resources, BVSC would install and maintain a leachate interception, collection and management system as detailed in Section 5 of this EIS. The following measures would also be implemented:

- *Development and implementation of a monitoring program that addresses the standard DECCW requirements for monitoring.*
- *Operation of the CWF in accordance with a DECCW approved LEMP, including adoption of best practice guidelines, policy and DECCW Benchmark Techniques.*

The GTAs issued by DECCW address these requirements and require the preparation of a ground water monitoring program, which is to be submitted with the Scheduled Development Works EPL Application. From this, groundwater monitoring requirements would be imposed on the EPL for the operation of a Scheduled Activity. By issuing its GTAs, DECCW must be confident that the development can operate with an “acceptable” level of impact on ground water.

3.8 SOILS

3.8.1 GEOLOGY

The EIS states:

> *The preliminary analysis of the soils contained within the proposed footprint of the CWF indicated that the mass permeability of the residual soil (decomposed granite) and granite bedrock is slightly greater than 10^{-8} m/s, which is considered to be 'a natural geological liner' (Amaral 2005).*
>
> *The unsaturated decomposed granite buffer between the base of the proposed CWF and groundwater is extensive and would greatly attenuate potential leachate contaminants.*
>
> *Overall, it is considered that the soil and geology conditions at the proposed site are acceptable for a CWF and, with the addition of an artificial liner (as described in Section 5.4.2) would assist in the minimisation of potential impacts to the surrounding groundwater regime.*

Thus it can be seen, that the site is suitable for the proposed development in terms of geology.

3.8.2 EROSION & SEDIMENT CONTROL

A soil and water management plan is required to be provided as part of the GTAs issued by DECCW for the EPL. This plan would address erosion and sediment control for the subject site. Further, conditions will be imposed on the required EPL to ensure avoidance of sedimentation and pollution of water bodies caused through soil erosion. Adequate measures would therefore be employed to ensure adverse impacts on soils or waterways, as a result of soil erosion, are minimised.

3.8.3 COVER MATERIAL

Table 2 in Appendix N of the EIS demonstrates sufficient cover material would be available on site to support the development.

3.9 AIR & MICROCLIMATE

The following reports have been prepared to assess air quality impacts associated with the proposed development:

- HLA Envirosciences Pty Limited. 2006, *Air Quality Impact Assessment Central Waste Facility Environmental Assessment Wanatta Lane, Wolumla NSW*, HLA, Warabrook.
- ENSR AECOM. 2008, *Addendum Report for Bega Shire Council Air Quality Impact Assessment Wanatta Lane Wolumla 2550*, ENSR, Warabrook.
- ENSR AECOM. 2008, *Air Quality Modelling Data Review*, ENSR Warabrook.

Section 9 of the EIS summarises air quality impacts.

3.9.1 ODOUR

Potential odour sources resulting from the development have been identified as:

- Active landfill face
- Final capped landfill cells
- Leachate ponds

Using the odour performance criteria derived from DECCW's *Approved Methods for the Modelling and Assessment of Air Pollutants*, dispersion modelling determined that there would be no exceedences of assessment criteria as a result of the operation of the development at any of the identified sensitive receptors or the approved rural residential subdivision location.

3.9.2 PARTICULATE MATTER

Potential sources of particulate matter generated from the proposed development have been identified as:

- Vehicle movements on unsealed roads (waste collection trucks)
- Tracked vehicles moving overburden
- Wind erosion

Using particulate ground level criteria referenced by DECCW, predicted particulate emissions (TSP and PM_{10}) generated by the development would not exceed the criteria for the sensitive receptors or the approved rural residential subdivision location. The assessment concludes:

> *It is therefore expected that potential impacts associated with dust from the proposed CWF would not result in any significant impact on the surrounding environment. Due to the low predicted concentrations and low dust generation rates, cumulative dust impacts on the environment would not be expected.*
>
> *There were no exceedences of the TSP or PM10 criteria, dust concentrations were predicted to be low and nearby residential receptors fall well outside of the outer TSP and PM10 contours. Consequently, it was not considered necessary to model dust deposition rates* (AECOM 2009a:9-10).

3.9.3 GREENHOUSE GAS EMISSIONS

3.9.3.1 Landfill Gas (Methane)

Pursuant to the Commonwealth DCC's *National Greenhouse and Energy Reporting (Measurement) Technical Guidelines*, a Tier 2 First Order Decay (FOD) model was used to evaluate the generation and emission of landfill gas by the proposed development. The model indicated that peak generation (at closure of the landfill) would be 108m³/hr, and emissions at the peak would be 97m³/hr.

Generation rates are considered to be low, compared to large metropolitan landfills, which typically generate 10 times the amount. The following landfill gas management measures are proposed:

- A composite landfill lining system, which would prevent lateral subsurface migration of landfill gas;
- Regular compaction and covering of the landfilled waste, which would help to minimise infiltration of rainfall and surface water into the landfilled waste and consequent landfill gas generation, and would also help minimise fugitive landfill gas emissions;
- Progressive capping and rehabilitation of the landfilled waste, which would help to minimise infiltration of rainfall and surface water into the landfilled waste and consequent landfill gas generation, and would also help minimise fugitive landfill gas emissions;
- Installation of an active landfill gas collection and flaring system, which would be progressively installed as the landfilled waste is capped; and
- Regular monitoring of landfill gas generation, migration, accumulation (in buildings/structures) and emissions.

The level of landfill gas generated is low. Thus it would not be commercially viable for recovery and energy generation from the landfill gas. The general rule of thumb to make such viable is waste receipt of around the 100,000t/year mark. The proposed development is significantly below this.

Figures 1 and 2 attached to Appendix B of AECOM letter dated 8 June 2010 illustrate the proposed flaring unit and the location of such. The additional information provided in Appendix B of the AECOM letter states:

> *The type of flare to be installed at the CWF is an enclosed ground flare. Under the Draft Environment Guidelines: Landfilling – 2007, which will eventually replace the 1996 guidelines, Any landfill gas flare must be located at ground level, shrouded, provided with automatic combustion air control, an automatic shut-off gas valve and an automatic restart system. It must also be designed so that as much biogas as is practicable will be collected and treated or beneficially reused.*

Enclosed flares have been proven over many years of operation within Australia and worldwide to produce minor emissions of harmful pollutants from the combustion of landfill gas. It is therefore anticipated that the proposed flare at the CWF would produce similarly low levels of emissions, and that the flare would not be visually prominent within the context of the overall facility.

Potential visual issues related to flares include their height and the perception that a flame would be visible at night. Due to the design of the flare at the CWF, no flare would be visible at night, as the combustion occurs within an enclosed combustion chamber. As such, the flare and its associated operation is anticipated to have no significant visual impacts at the CWF.

A plan showing the proposed location of the flare, and the structure within which the flare will be housed is attached. A photograph of a typical installation of a small enclosed flare for 40-1000m3/hr LFG flow rates is shown as Figure 1. Note that the flare is the silver structure in the foreground. The black tanks in the background are not part of the flare (AECOM 2010:B.3).

The GTAs note that the EPL will require monitoring of landfill gases.

The rate of emission estimated to be generated by the development (12,135 tonnes CO_2-e/year) is well below the reporting threshold (25,000 tonnes CO_2-e/year) specified in the *National Greenhouse and Energy Reporting Act 2007*. Thus the landfill is not required to participate in the proposed Carbon Pollution Reduction Scheme.

3.9.3.2 Other Gases

The relevant publication in relation to greenhouse gas emissions is the Australian Government *National Greenhouse and Energy Reporting System Measurement Technical Guidelines* (NGER). Part 5.2 of the NGER guidelines deals with greenhouse gas emissions from solid waste landfills. Under the guidelines, carbon dioxide emissions are considered to be from biomass sources and therefore do not need to be estimated. Carbon dioxide produced from the flaring of methane is likewise considered, and does not need to be reported.

Nitrous oxide comprises a very minor proportion of landfill gas and is not dealt with in terms of measurement or estimation by the NGER guidelines.

3.9.3.3 General

The DoP has advised that only guidelines available on GHG emissions are the DUAP (1996) *EIS Guideline: Solid Waste Landfills*. These guidelines deal only with the gas emissions generated by the landfill and are discussed in **Section 3.9.3.1** above.

In terms of other GHG generation by the development such as traffic, a) there are no real alternatives to road transport to service the site in this location, and b) the facility has been designed to be a central facility for the entire LGA, thus aiming to provide the most central facility as possible. Apart from the fact that the existing satellite waste facilities are nearing the end of their lives, they are old facilities with non-best practice means of capturing GHG and thus continuation of such facilities would result in an inferior outcome.

3.9.4 MITIGATION MEASURES

As the dispersion modelling indicates the potential impacts associated with the proposed development would not have a significant impact on the receiving environment, no mitigation measures are proposed in Section 9 of the EIS. However, mitigation measures to minimise dust are included in Section 24 of the EIS. These measures are to be included in the LEMP which is required to be prepared and adhered to by any consent issued for the development.

The EIS also provides mitigation measures to be imposed in the event that odour complaints are received once the facility has commenced operation:

- performing an odour audit of the facility to identify all potentially significant odour sources to ensure work practises match dispersion modelling

- implementation of an odour register program with local residents to allow feedback from the community relating to odour strength and intensity should excessive odours be detected
- modification of operational activities to minimise the potential for the generation of odours
- modification of the LEMP to include procedures which ensure leachate is only kept in the primary leachate pond for a short period of time
- contingencies in the LEMP to ensure the rapid management of overflow water should the primary pond overflow
- aeration of the primary leachate pond to reduce the potential for the generation of odours
- use of misting sprays would only occur in conditions where the predominate wind direction is not blowing towards the closest residential receiver (receptors 23 to 26, S-SE directions).

- It is recommended these mitigation measures (to be imposed in the event that odour complaints are received once the facility has commenced operation) be included in the LEMP for the development, which would be required to be prepared by a condition of any consent granted for the development.
- A Soil and Water Management Plan (SWMP) shall be prepared for the proposed development and submitted to council for approval prior to the issue of any CC for the development. The SWMP shall be consistent with the measures outlined in Section 7 of GHD's *Stormwater Management Plan for the Landfilling Operation* (Appendix M of EIS).
- The SWMP shall be implemented during construction and throughout operation of the development.
- The mitigation measures outlined in Section 24 of the EIS shall be included into the Landfill Environmental Management Plan (LEMP), to be prepared and submitted to Council for approval prior to the issue of any CC for the development.
- The LEMP shall be implemented during construction and throughout operation of the development.
- An active landfill gas collection and flaring system shall be progressively installed as the landfilled waste is capped as described in the EIS and illustrated in Figures 1 and 2 attached to Appendix B of AECOM letter dated 8 June 2010.

3.10 FLORA & FAUNA

3.10.1 EXISTING ENVIRONMENT

A Flora and Fauna Assessment for the proposed development has been undertaken by AECOM. The following provides a summary of the findings:

> *The vegetation of the subject site is predominantly exotic grassland that has been created by clearing and livestock grazing over many years. A small patch of Bega Dry Grass Forest occurs at the site of the proposed development. The proposed landfill footprint is situated within a highly degraded area of the community containing 20 individual Eucalyptus elata and no shrub or native understorey present. No threatened flora or fauna species were found to make substantial use of the proposed development site (AECOM, 2009 p. 39).*

3.10.2 IMPACTS OF THE DEVELOPMENT

3.10.2.1 Overall

The EIS outlines the following direct impacts of the proposed development:

> *Approximately 20 Eucalyptus elata individuals and less than 10 ha of generally degraded grassland considered to consist predominantly of exotic plant species would be removed during construction of the proposed CWF(AECOM, 2009 pp. 12-1).*

3.10.2.2 During Construction

The following impacts have been identified in the EIS as being resultant from the construction phase of the development.

> *During the construction phase, direct impacts to the site's flora and fauna may arise from construction of the CWF, road building, security fencing, laying of service infrastructure and construction of buildings. Potential off-site impacts include noise, dust, vibration and potential migration of weed species and disease (e.g. Phytophthora) due to soil disturbance and vehicular movement (AECOM, 2009 p. 12-2).*

Further, it states that:

> *The impact from the construction phase is deemed to be low; however, management and mitigation measures to manage and minimise the impacts of construction on the landscape are provided… (AECOM, 2009 pp. 12-2)*

3.10.2.3 Operational Phase

The following impacts have been identified in the EIS as being resultant from the construction phase of the development.

> *It is expected that the proposed CWF would generate relatively low volumes of traffic comprising heavy vehicles entering and exiting the site. These movements may give rise to dust emissions and noise, which may affect fauna species residing in nearby forest remnants. However, given the relatively low traffic volumes, the impact is considered minimal.*
>
> *If the face of the landfill is not appropriately managed, large populations of fauna such as seagulls, ibis, ravens, foxes, and rodents have potential to be attracted to the site, or to increase in numbers on the site. Some fauna species – particularly foxes, which are already present – could present an increased threat to native wildlife in the area. However, management measures would be implemented to prevent increased fox and feral animal activity at the site and in adjacent areas as a consequence of the proposed development.*
>
> *There is also the potential for impacts from controlled run-off into adjacent areas during the operational phase of the CWF. Stormwater and leachate ponds would be installed during the construction phase to prevent such impacts and would remain for the life of the landfill. The leachate ponds would remain in place and continue to be maintained following rehabilitation of the site(AECOM, 2009 p. 12-2).*

3.10.2.4 Mitigation Measures

The following mitigation measures have been included in the EIS to ameliorate the impacts outlined above. These shall be incorporated into conditions on any consent issued.

Prior to Works Commencing

- Include pest deterrent measures in the LEMP, including but not limited to:
  - dispersal tools such as horns, sirens, gas cannons, stock whips, distress calls, balloons
  - regularly covering waste and keeping the area of the face minimal
  - netting or suspending nylon line at 5 m intervals
  - removal of Ibis eggs from nests during the breeding season (June to December).
- Develop a monitoring program for vermin and pest species.
- Prepare a Grazing Plan for areas outside the CWF footprint to ensure desired conservation outcomes are achieved.

During Construction

- Management plan – be developed for the long-term management of the remnant existing to the south west of the property.

During Use

- Implementation of the LEMP, vermin/pest species monitoring plan, grazing plan, and remnant vegetation management plan.

3.10.3 SECTION 5A ASSESSMENT

Section 5A of the EP&A Act requires consideration of whether there is likely to be a significant effect on threatened species, populations or ecological communities, or their habitats as a result of the proposed development. The following provides a summary of the findings of the Flora and Fauna Assessment undertaken by AECOM for the proposed development.

3.10.3.1 Threatened Species

Fauna

A total of 32 threatened species were identified as having a likelihood of occurring within the study area from a search of the NPWS Atlas of Threatened Species and the EPBC Act's Protected Matters Search Tool, and from other known studies undertaken in the a locality.

An assessment for the preferred habitat of these species on site and in the locality was undertaken for each of these species. For all bar two species, it was determined that the species:

- do not occur in the study area, or
- would not use on-site habitats on occasion, or
- would not be influenced by off-site impacts of the proposal.

In this regard, assessments of significance (i.e. 7 part tests) were only undertaken for those two species, being the Barking Owl (*Ninox connivens connivens) a*nd Diamond Firetail (*Stagonopleura guttata)*.

The tests of significance determined that neither species is likely to be significantly affected by the proposed development.

Flora

Five threatened flora species were identified as having a likelihood of occurring within the study area from a search of the NPWS Atlas of Threatened Species and the EPBC Act's Protected Matters Search Tool, and from other known studies undertaken in the a locality.

For all species, it was determined that the species:

- do not occur in the study area, or
- would not be influenced by off-site impacts of the proposal.

Thus no assessments of significance were required to be undertaken.

3.10.3.2 Endangered Populations

The Flora and Fauna Assessment reported that none of the Endangered Populations identified in Schedule 1 of the TSC Act are expected to occur within the vicinity of the study area.

3.10.3.3 Endangered Ecological Communities

Two Endangered Ecological Communities (EEC) were identified on the broader site, being the Bega Dry Grass Forest and the Candelo Dry Grass Forest. Assessments of Significance were undertaken for both of these communities. The development site only contains woodland derived from the Bega Dry Grass Forest EEC. There would be no direct impacts on either community. Thus the assessments of significance have determined that no significant impacts would likely result on the EECs.

3.10.3.4 Critical Habitat

The Flora and Fauna Assessment reported that a search of the DECCW Critical Habitat Register (Sept 2009) revealed that no declared or recommended critical habitat areas occur within the vicinity of the study area.

3.10.3.5 Key Threatening Processes

Of the listed Key Threatening Processes (KTP) listed under the TSC Act, the following have been identified as being applicable to the development:

- Clearing of native vegetation
- Herbivory and environmental degradation caused by feral deer
- Invasion of native plant communities by exotic perennial grasses
- Predation by the European red fox (*Vulpes vulpes*)
- Predation by the feral cat (*Felis catus*)

The assessment of significance determined that providing the management plan for the site included control and eradication of exotic perennial grasses and feral animals, the development would not likely result in the increase of impact of a KTP.

3.10.4 SUMMARY

The past land uses of the subject site has resulted in vegetation being predominantly exotic grassland, with the exception of a small patches of the Bega Dry Grass Forest EEC in the southern portion of the site.

The Flora and Fauna Assessment concludes that the development is unlikely to have a significant adverse effect on any threatened species, population or ecological communities, or their habitats.

It is however recommended that Council:

- Commit to the long term management of the remnant EEC by supporting the rehabilitation program which has been developed as outlined in Section 12.1.5 of the EIS; and
- Carry out the development in accordance with the recommended mitigation measures.

3.11 WASTE

3.11.1 EFFLUENT

Wastewater generated from the site amenities is conservatively estimated to amount to about 100L per day. It is proposed to drain and collect this wastewater in a buried concrete storage tank of approximately 3,000 L volume. The tank would be pumped out on a scheduled monthly basis and the wastewater would be transported via tanker to either the Bega or Merimbula sewage treatment plant for disposal.

3.11.2 LITTER

Litter would be managed through:

- Daily covering of wastes
  - Purpose – to control litter and to restrict access to food for scavenging animals
- Mobile litter nets
  - Net would completely surround the tipping area at all times, except for the vehicle access point as required.
- Landfill perimeter fencing and site perimeter fencing
  - 3m high cyclone wire fence, completely encompassing landfill and associated infrastructure.
  - An agricultural fence would be maintained around the perimeter of the subject site.

- Litter patrols
  - Collect any litter accumulating on fences, on a daily or as needed basis.
  - Fences in and around the site to be cleaned on a weekly basis, or after a severe wind event.
  - Daily inspections would be carried out to collect windblown litter from around the site.
  - A shaker ramp and wheel wash used to prevent litter from tracking onto the public roads.
- Vegetation screening

- The above measures to manage litter shall be included into the Landfill Environmental Management Plan (LEMP), to be prepared and submitted to Council for approval prior to the issue of any CC for the development.
- The LEMP shall be implemented prior to and during construction, and throughout operation of the development.

3.11.3 PEST & VERMIN CONTROL

The attraction of vermin to waste facilities is a real impact through provision of a food source and breeding habitat. The impacts of such include transmission of disease, destruction of property, threat to native flora and fauna, and threat to livestock. To ameliorate the impacts of such the development would incorporate measures to minimise the attraction of vermin to the site. These measures would be incorporated into the LEMP.

- The mitigation measures relative to pest and vermin control outlined in Section 24 of the EIS shall be included into the Landfill Environmental Management Plan (LEMP), to be prepared and submitted to Council for approval prior to the issue of any CC for the development.
- The LEMP shall be implemented during construction and throughout operation of the development.

3.11.4 ASBESTOS

The EIS states:

> *The CWF is expected to be licensed to accept asbestos in the form of stabilised or bonded sheet or friable asbestos. Small loads of asbestos waste, appropriately packaged would be accepted at the transfer stations and transferred to the CWF in appropriate skip bins by a licensed transporter.*
>
> *Asbestos would only be accepted if appropriately packaged (bagged and wetted) and would be disposed of as follows (NSW EPA, 1999):*
>
> - *disposal of asbestos waste in any form would be by way of burial in a designated area*
> - *asbestos waste would be:*
>   - *covered initially to a depth of at least 0.5 m, finally to a depth of at least 1 m (in the case of stabilised asbestos waste in bonded matrix) or 3 m (in the case of asbestos fibre and dust waste) beneath the planned final land surface of the landfill site*
>   - *be buried to the initial depth on the same day it is received at the landfill site*
> - *in disposing of asbestos waste, the waste would:*
>   - *be unloaded in such a manner as to avoid the creation of dust (e.g. skips containing wrapped asbestos are to be carefully unloaded in such a way as to avoid breaking the asbestos wrapping)*
>   - *not be compacted before it is covered*
>   - *not come into contact with any earthmoving equipment at any time. (NSW EPA, May 1999).*

Waste accepted at the proposed CWF would comply with relevant legislation, and regulations for a site classed as General Solid Waste Landfill. Acceptance of asbestos waste will be subject to an EPL administered by the DECC which allows disposal of this type of waste. It is normal in NSW for the DECC to include provision for asbestos (classified industrial waste) disposal in licences for General Solid Waste facilities.

Asbestos disposal is regulated under the *POEO Act 1997*. The requirements for acceptance and burial are stringent: for example, asbestos waste can only be accepted if it is transported bagged or wrapped in accordance with requirements of POEO Waste Regulation 2005 and National Occupational Health and Safety Commission (NOHSC) code of practice.

During the operation of the CWF, the requirements of Section 42 of POEO Waste Regulation 2005 will apply, which include the disposal of asbestos in designated areas. These designated areas will be marked on plans and clearly signposted so that operators in future will have knowledge of asbestos designated disposal areas.

These controls are designed to ensure dust emissions are eliminated during disposal. There is consequently very little risk posed by lawful disposal of asbestos waste. The operator of the site will only accept asbestos waste for burial under the controlled conditions above. Strict procedures for inspection and screening of demolition waste will be followed at this site. (This is usually integrated in to the Development Application process for building demolition to ensure there is compliance at the waste source).

The quantity of asbestos waste disposed of at this site will be relatively small, but a facility for this purpose must be available to ensure that the community are able to dispose of the material lawfully and responsibly.

3.11.5 OTHER HAZARDOUS WASTES

The following wastes would not be accepted at the site:

- Hazardous wastes (except asbestos wastes);
- Liquid wastes;
- Restricted Solid Wastes;
- Clinical and related waste; and
- Waste tyres.

- The LEMP shall include screening and recording procedures in accordance with the EPA's *Solid Waste Landfills*.

3.12 ENERGY

3.12.1 ENERGY NEEDS

Power would be required for the office, machinery shed, and leachate treatment plant. It is proposed to connect the machinery shed and leachate treatment plant to mains power. A diesel generator (located in a secure, soundproof box) would provide auxiliary power in the event of mains failure. The office would be supplied by solar panels, battery storage and inverter.

3.12.2 MEASURES TO SAVE ENERGY

The proposed office building would comply with Section J of the Building Code of Australia (BCA).

As outlined above, the office building would have solar panels, battery storage and inverter for power supply.

3.12.3 METHANE GAS FLARING

The proposed development involves the installation of a methane gas flaring system.

The level of landfill gas generated is low. Thus it would not be commercially viable for recovery and energy generation from the landfill gas. The general rule of thumb to make such viable is waste receipt of around the 100,000t/year mark. The proposed development is significantly below this.

3.13 NOISE

3.13.1 OPERATIONAL NOISE

The Noise Impact Assessment prepared for the proposed development demonstrates the noise emissions from the development would comply with the relevant noise criteria at the nearest residential receptors. Further, the development would operate under an EPL, which specifies noise limits. By issuing its GTAs for the EPL, it can be construed that the DECCW is satisfied the development can achieve the licensed noise limits.

3.13.2 ROAD NOISE

Likewise, the road traffic noise levels predicted during the operation of the development would be lower than the DECCW recommended assessment criteria and the identified receptor locations, both for $LA_{eq\ (1hour)}$ and $LA_{eq(15hour)}$.

3.14 NATURAL HAZARDS

3.14.1 BUSHFIRE

The subject site is identified on Council's bushfire prone land map as Bushfire Prone Land Categories 'Vegetation 2' and 'Buffer Zone'. The DA has been referred to the NSW Rural Fire Service who has raised no objection to the development subject to the conditions outlined in **Section 5.2.4**.

In this regard, the development provides for the protection of human life and minimise impacts on property from the threat of bushfire while having due regard to on-site amenity and protection of the environment.

3.14.2 FLOODING

Council has advised the subject site is not identified as flood prone land. Any flooding of the site would occur as a result of local flooding of the ephemeral gullies in the area. Refer **Section 3.7.4**.

3.15 TECHNOLOGICAL HAZARDS

3.15.1 FIRE AND SPONTANEOUS COMBUSTION

The development has the potential to increase the incidence of fires on the site. The LEMP would outline fire management and emergency response procedures, equipment, practices and training requirements that would comply with the benchmark techniques for fire prevention as outlined in the EPA's *Environmental Guidelines: Solid Waste Landfills*.

- A Fire Management Plan shall be prepared and shall form part of the LEMP. The FMP shall be consistent with the mitigation measures outlined in Section 20.3.1 of the EIS.

3.15.2 ACCIDENTAL RELEASE OF TOXIC SUBSTANCES

No storage of large volumes of chemicals or other toxic substances is proposed. The mitigation measures proposed are to be included in the LEMP and/or consent conditions.

- The mitigation measures outlined in Section 20.3.2 of the EIS shall be included into the LEMP.

3.15.3 VEHICLE ACCIDENTS

Potential exists for accidents involving vehicles transporting waste to the facility. Mitigation measures are proposed to be included in LEMP and/or consent conditions.

- The mitigation measures outlined in Section 20.3.3 of the EIS shall be included into the LEMP.

3.15.4 EXPLOSION HAZARDS

The development has the potential to result in the build up of methane gas. The design of the landfill is intended to minimise the production of land fill gas (LFG). A network of gas drains would be installed beneath the final landfill cap, to provide a preferential pathway for the flow of the gas, which would discharge to a flare, for the destruction of the methane.

Further, the LFG would be monitored on the surface of the landfill to ensure it does not build up. The draft LEMP addresses monitoring of landfill gas.

- The mitigation measures outlined in Section 20.2.3 of the EIS shall be included into the LEMP.

3.16 CLIMATE CHANGE

3.16.1 BACKGROUND

Recent LEC proceedings[3] have held that, if relevant, consideration must be given to climate change: both how the development contributes to climate change and how the development would be impacted upon by climate change.

3.16.2 CONTRIBUTION TO CLIMATE CHANGE

The National Greenhouse Inventory (DEWR 2007b) identified that Greenhouse Gas (GHG) emissions from the waste sector in 2005 accounted for 3% of the national total. In the waste sector, emissions are predominantly methane and in relation to solid waste, the sources of emissions are

> *emissions resulting from anaerobic decomposition of organic matter in landfills; methane generated from this source accounted for 86.5% of total emissions from the waste sector in 2005 (DEWR 2007b:13).*

Methane emissions from solid waste landfills were identified to have declined between 1990 and 2005, largely as a result of an increase in methane recovery.

> *The waste degradation process occurs slowly and methane emissions continue long after waste is placed in landfill. Estimates in any year include a large component of emissions resulting from waste disposal*

[3] Walker v Minister for Planning [2007] NSWLEC 741.

over the preceding 50 years. This means that recent changes in waste management practices only impact reported methane emission levels over time (DEWR 2007b:14).

The NSW Greenhouse Plan (NSW Government 2005) identifies the following means for reducing GHG emissions from landfills:

- Consideration of non-energy GHG emissions during environmental impact assessment (EIA) of new projects. The NSW Greenhouse Plan identifies that the NSW Department of Planning (DoP) will develop guidelines for energy and greenhouse in EIA. It is understood that these are yet to be prepared.
- Reduce waste to landfill – facilitated through the *Waste Avoidance and Recovery Act 2001*.
- Encourage capture and use of methane from landfills. It is proposed that DECC will revise the existing landfill guidelines to require consideration of gas measurement, capture and/or oxidation at existing and new landfills. It is understood these are yet to be revised.

In relation to the proposed development,

- The development would be consistent with Bega Valley Shire Council's *2020 Vision on Waste*, which is generally consistent with the objects of the *Waste Avoidance and Recovery Act 2001*, being: avoidance, resource recovery, and then disposal.
- The landfill would incorporate a network of gas drains, constructed beneath the final landfill cap. This would provide preferential pathways for the flow of landfill gas, which would be discharged to a flare for the destruction of methane.
- Council is also investigating the option to divert selected organic waste from the landfill. Such diversion would reduce the production of methane in the landfill.

3.16.3 IMPACT OF CLIMATE CHANGE ON THE DEVELOPMENT

Climate Change in the Southern Rivers Catchment (CSIRO 2007) identifies that as a result of climate change the Southern Rivers area is likely to have a warmer and drier climate with increased evaporation, heat waves, extreme winds and bushfire risk. It is also anticipated that there would be increases in extreme rainfall events.

The *Climate Change Adaptation Actions for Local Government* (DEWR 2007a) does not identify waste management facilities as an asset likely to be impacted by climate change. From CSIRO 2007 the following are considered to be likely impacts of climate change on the development:

- Decreased water supply

Due to decreased rainfall and increased evaporation resulting from increased temperatures, runoff is expected to decrease, thus reducing surface water supplies. This is likely to have impacts on downstream users through reduced availability (coupled with greater demand as discussed above) and greater demand on groundwater supplies.

As outlined in **Section 3.6** certainty of water supply is a risk for the operator, especially in light of potential impacts of climate change. However, the water balance indicates sufficient water supply is available for the needs of the development at this stage.

- More intense storms

More intense storms would have the impact of associated flooding. The scale of these impacts is unknown. However, as the site is near to the top of the catchment, it is not expected that such flooding would adversely impact upon the development.

3.17 SAFETY, SECURITY & CRIME PREVENTION

Fencing and signage are proposed to discourage unauthorised entry. Adequate measures have been provided to restrict the public from entry to unauthorised areas of the facility.

3.18 SOCIAL IMPACT

As defined by the NSW Government Office on Social Policy, social impacts are significant events experienced by people as changes in one or more of the following are experienced:

- peoples' way of life (how they live, work or play and interact with one another on a day-to-day basis);
- their culture (shared beliefs, customs and values); or
- their community (its cohesion, stability, character, services and facilities).

The proposed development is unlikely to have an adverse impact on people's way of life. From the assessment of impacts of the development throughout this section of the report it can be seen that the development can be appropriately managed to ensure that the development would not generate significant adverse impacts that would impact on people's way of life.

The proposed development is unlikely to have an adverse impact on people's culture. Further, the development is unlikely to have an adverse impact on the community's cohesion, stability, character, services or facilities.

3.19 ECONOMIC IMPACT

3.19.1 GENERAL COMMENTS

3.19.1.1 Benefits

The proposed development would generate employment opportunities during construction. The EIS states that during operation five additional jobs would be created. It would seem likely though that with the closure of other facilities or those other facilities being changed to resource recovery and transfer stations there would be a transfer of staff from the other facilities to the new waste facility. Operational costs would be reduced through the closure of three landfills and subsequent operation of one central facility.

3.19.1.2 Costs

The economic costs of the development have been identified as:

- Capital cost
- Travel costs – potential increased travel to a central facility, although located centrally in the LGA.
- On-going monitoring costs.

3.19.2 PROPERTY VALUES

There is no conclusive evidence that indicates that a landfill does or does not adversely impact on property values. However, the proper management, operation, and maintenance of such a facility are important factors in maintaining local amenity.

The DECCW is satisfied that the impacts of the development can be appropriately managed on site to ensure it would not cause unacceptable impacts beyond its boundaries. Further, the development is required by the conditions of its EPL to be monitored to ensure compliance with the conditions in the licence. Therefore it can be concluded that the development is consistent with the land uses in the locality and as such would not result in a significant or unreasonable impact on the amenity of properties in the locality.

Interestingly in the assessment of the EA for the Orange Waste Project, it was noted in relation to comments regarding adverse impacts on property values from waste facilities:

Rezoning on Leeds Parade west of the [existing Orange City Council] *Ophir Road Facility demonstrates that the Ophir Road Site has not impacted on development and is at odds with claims that the* [proposed waste] *facility at Euchareena Road will in fact impact values, road improvements to Euchareena Road facility will benefit the residents on the road*[4].

3.20 CONSTRUCTION IMPACTS

3.20.1 TRAFFIC

Construction of the facility is expected to occur over a six month period. Construction traffic would involve:

- heavy vehicles delivering equipment and materials for construction. The machinery would remain on site for the duration of construction; and
- light vehicles driven by council staff and licensed contractors. It is anticipated that the daily construction workforce would equate to approximately eight people.

No comments have been provided in the EIS outlining the proposed timing of the Wanatta Lane road upgrade.

Due to the limited timeframe and nature of construction traffic it is considered that such would not result in any adverse impacts on Wanatta Lane in terms of traffic impact. It is however recommended that a traffic management plan be prepared for the construction phase of the development to ensure traffic safety and local amenity is maintain during this time, in particular during the delivery of the heavy construction vehicles to the site.

- A traffic management plan shall be prepared by a suitable qualified consultant and approved by Council prior to the issue of a construction certificate and prior to any works commencing on site. This includes prior to any delivery of construction equipment to the site. The TMP shall be implemented during the entire construction phase of the development.

3.20.2 NOISE

The predicted noise emissions from construction activities associated with the construction/site preparation works are lower than the relevant goals (determined in accordance with DECCW's *Environmental Noise Control Manual*) at all seven assessment locations. The scenario modelled assumes a worst case scenario where most items of plant and equipment are operating concurrently and this would generally not be the case. Consequently, if the concurrent use of noisy plant items is minimised, the resultant overall noise level from the works would be lower than those presented in Table 15.9 of the EIS.

The sound power levels given for each item of mobile equipment do not include noise emissions which emanate from reversing alarms. In the event that reversing alarm noise is considered to be a source of disturbance, the alarm noise level should be checked against the appropriate regulatory and health and safety requirements and the necessary mitigating action taken to achieve an acceptable noise reduction without compromising safety standards.

[4] Department of Planning. nd, *Responses to Other Stakeholders*.

3.20.3 DUST

During construction potential exists for the generation of dust. Mitigation measures are the means for controlling such impacts. Further, the design of the development i.e. staged construction of the cells, would minimise the area disturbed at one time, thus minimising the potential for impact.

- The following measures shall be implemented into the LEMP and adopted during construction works:
  - During times of high wind, all construction works to cease.
  - Water carts be employed during construction to minimise transfer of dust off site.
  - Establish fencing around the site with mesh screening.
  - Any stockpiles existing on site for a period longer than 3 months are to be revegetated, with vegetation being maintained.
  - Establish a complaints register and follow-up procedures including required corrective actions.

3.20.4 EROSION & SEDIMENT CONTROL

Potential exists for sediment to migrate off site during construction. A Stormwater Management Plan (SWMP) has been prepared for the development, including construction works. The measures contained within the plan are in accordance with the blue book (Landcom's 2004 *Managing Urban Stormwater: Soils and Construction Guidebook*.

- The following measures shall be incorporated into the SWMP (in addition to those outlined in Appendix M of the EIS):
  - The perimeter control measures are to be established prior to the first phase of earthworks
- The LEMP shall require adoption of the SWMP during construction works.

3.21 CUMULATIVE IMPACTS

Cumulative impacts can take effect over a number of different forms, including:

- Time crowded effects, where individual impacts occur so close in time that the effects of one are not dissipated before the next;
- Space crowded effects, where individual impacts occur so close in space that the effects overlap;
- Nibbling effects, where often minor impacts erode environmental conditions; and
- Synergistic, being different types of disturbances interacting to produce an effect which is greater or different than the sum of the separate effects.

The proposed development would not result in unacceptable adverse impact on amenity as outlined throughout this section. Nor are there any other developments in the locality that combined with this development would result in unacceptable adverse impacts on amenity in the locality. In this regard, it is unlikely that the proposed development would result in adverse cumulative impacts for the locality.

The EIS outlined the following as potential cumulative impacts, beyond the above, that have been raised by stakeholders. Comments addressing each are providing following.

- Litter impacts

Management of the facility is the key to ensuring the mitigation measures are adhered to in preventing litter escaping from the site and ensuring regular litter patrols to remove any litter that has migrated off site. There are no other developments in the locality, which combined with the development, would result in adverse impacts in this regard.

- Impacts on surrounding road network

The traffic impact assessment undertaken concludes the surrounding road network can more than adequately support the proposed development and its associated traffic generation. This traffic assessment also included the proposed rural residential subdivision.

- Impacts on water quality in the surrounding creeks and catchments

Both Council (water supply) and the DECCW are satisfied the development would not result in any adverse off-site impact on water quality. Further there are no other developments in the locality that would combine with the proposed development to result in any such cumulative adverse impacts.

- Potential for the development to further limit habitat and reduce ecological values.

The development would result in a net increase in habitat and thus improve ecological values in the locality. There are no other developments in the locality that would combine with the proposed development to result in any adverse cumulative impact on habitat or ecological values.

3.22 OTHER MATTERS

3.22.1 WANATTA LANE UPGRADE

3.22.1.1 Background

As discussed in **Section 1.2**, operation of the proposed CWF would necessitate upgrading of Wanatta Lane between the proposed CWF and the intersection with the Princes Highway. The road upgrade is being assessed under Part 5 of the EP&A Act and as such is not part of this DA.

The road upgrade is a fundamental precursor to enabling the proposed development to operate. Whilst the EIS did provide some information in relation to the proposed road upgrade, it is considered insufficient to enable a reasonable level of understanding of the environmental impacts of the upgrade works. Thus it is necessary, before determining this DA, to have further impact assessment details (draft REF at the minimum) that clearly identify the proposed realignment, impacts of such, and any proposed mitigation measures. This would enable a level of satisfaction that the impacts of the road works would be acceptable.

3.22.1.2 Issues Raised in Submissions

As outlined in **Section 5.2.3.2**, the DECCW (NPWS) has raised concerns regarding the sufficiency of the flora and fauna assessment undertaken for the proposed Wanatta Lane road works. Numerous public submissions have also raised concern regarding the environmental and social impacts of the road upgrade.

The REF prepared for the Wanatta Lane upgrade would need to address these issues.

3.22.1.3 Additional Information

At the finalisation of this report, the draft REF had not been received for review.

3.22.1.4 Consideration of Issues

As the upgrade of this portion of Wanatta Lane is the only feasible means of vehicular access to the site, it would be remiss to recommend approval of this DA without knowing whether it can be accessed. In effect such a consent would potentially provide for an inoperable consent.

The consent authority has the option to issue a deferred commencement consent, which could in this instance require the consent for the waste facility not to operate until such a time that relevant approvals have been obtained for the upgrade of Wanatta Lane, sufficient to support the proposed development. Whilst this still in effect provides an inoperative development, it means that the development cannot operate unless Wanatta Lane can be satisfactorily upgraded. Such a deferred commencement condition should be as follows:

Deferred Commencement

Consent to the construction and operation of the waste management facility shall not operate until all of the following Schedule "A" conditions have been complied with to Council's satisfaction.

This consent shall be void if evidence is not produced within six (6) months of the date of the Notice issued by Council confirming that the matters listed below have been satisfactorily attended to.

- In accordance with section 80(3) of the *Environmental Planning and Assessment Act 1979*, this development consent shall not operate until the Applicant has satisfied Council that it has obtained approvals for the upgrade of Wanatta Lane, its intersection with the Princes Highway and the subject site. For the purpose of this condition, approval means a consent or approval that has been obtained under the Act and/or any relevant determining authority has completed its assessment obligations under Part 5 of the Act for the Wanatta Lane Upgrade works.

3.22.2 ELECTRICITY UPGRADE

3.22.2.1 Background

A connection to reticulated electricity supply is required for the proposed development. To achieve this it is understood that extension of the existing electricity network would be undertaken from Annabelle Close to the subject site. No environmental assessment of this extension has been provided or undertaken as part of this DA.

3.22.2.2 Issues Raised in Submissions

Numerous submissions received in relation to the second notification of the DA raised concern regarding the route, environmental impact and lack of assessment for the electricity connection required for the proposed development.

3.22.2.3 Additional Information

Additional information was provided by the applicant in relation to peak electricity demand. This information also confirmed the proposal to extend mains supply to the site.

3.22.2.4 Consideration of Issues

Separate assessment under Part 5 of the Act would likely be required for any transmission line works. This would be the responsibility of Country Energy (or its contractor). Unlike the upgrade of Wanatta Lane, there appears to be feasible alternatives for the route for provision of electricity to the site. Thus whilst necessary for this development to operate, consideration of such is not considered to be a significant issue for this development.

Suitability of the Site

4.1 DOES THE PROPOSAL FIT IN THE LOCALITY?

There are a number of matters to consider in determining whether the proposal fits into the locality. These are discussed below.

4.1.1 PRINCIPLES OF SITE SELECTION

Section 4 of the NSW Department of Urban Affairs and Planning's (DUAP) *EIS Guideline: Landfilling* (the guideline) (1996) provides principles of site selection for landfilling. The guideline states that:

> *Consideration must be given to whether:*
>
> - *the location has been identified in any strategic waste management plan*
> - *the land use is permissible*
> - *environmentally sensitive areas are avoided*
> - *the use is compatible with nearby land uses*
> - *initial site investigations indicate the site is fundamentally suitable for landfill.*

Each of these principles is discussed below.

4.1.1.1 Strategic Waste Management Plan

In 2001 BVSC prepared *2020 Vision on Waste: Waste Management and Minimisation Plan: A Plan to reduce the impacts of Waste on our Environment by 2020* (hereon referred to as *2020 Vision on Waste*), being its waste management and minimisation plan. *2020 Vision on Waste* provides the framework for the next 20 years for Council and the community to work towards the reduction of waste and the eventual elimination of waste. The primary objective of the plan is:

> *To reduce the impact on the environment from waste generated by our community* (Bega Valley Shire Council 2001:8).

The plan proposes actions which are aimed to reduce the potential for impact on the environment from:

- *Past waste generation – control of closed waste facilities*
- *Current waste generation – improved management of waste activities/facilities*
- *Future waste generation – continuous reduction of waste* (Bega Valley Shire Council 2001:8).

In relation to the proposed development, the proposed actions included:

> *PA 13 - Develop and close major landfills with a view to their future operation as Resource Recovery and Transfer Stations.*
>
> *PA 16 - Recommence site selection, investigation and development process for a new environmentally acceptable landfill facility* (Bega Valley Shire Council 2001:9).

In relation to the proposed actions, the report states the following *inter alia*:

> *All current landfill facilities are expected to cease operation within five with the possibility of up to ten years for some subject to planning approvals (Bega Valley Shire Council 2001:28).*
>
> *For a number of years Council has identified the need to close all the current landfills and replace them with a single best practice environmentally appropriate facility* (Bega Valley Shire Council 2001:28).

> *In January 2000 Council called for expressions of interest from property owners whose sites may have been appropriate for such a development. The following extract from the January 2000 Council report provides the initial selection criteria:*
>
> *The initial key elements in the selection criteria for a future landfill are considered to be:*
>
> - *Environmentally Acceptable*
> - *Meets the Long Term Waste Management needs of the Community*
> - *Large property holding*
> - *Centrally Located*
> - *Council owned*
> - *Suitable Topography and Geology* (Bega Valley Shire Council 2001:29)

In particular it was identified that in relation to the long term waste management needs, any future site should have potential to serve the community for a minimum of thirty years.

In 2004 Council engaged Wright Corporate Strategy Pty Ltd to undertake a site selection process to identify a suitable landfill site for the development of a central waste disposal facility. In assessing the 46 identified potential sites, the following criteria were taken into account:

- *distance from waste generation*
- *potential loss of amenity*
- *flora and fauna habitat*
- *land titles*
- *inadequate buffers*
- *proximity to surface water bodies*
- *expansive road construction*
- *cover deficit*
- *difficult landfill development* (Bega Valley Shire Council 2006:15).

Bega Valley Shire Council (2006:16) continues:

> *The list was reduced to 5 key sites, from which confirmation of the soil and rock stratigraphy was undertaken, identifying two sites on the same property, along Wanatta Lane, Wolumla as potential central waste facility sites. From this, one site on the property was selected for further investigation.*
>
> *A Geotechnical study was conducted to ensure that soil and rock conditions found on the site were suitable for landfill operations. This study also produced a preliminary landfill footprint, closure form and filling design to highlight any area's that may cause concern. The findings were in favour of the site progressing to an Environmental Impact Statement (EIS) assessment.*
>
> *The Wolumla community were made aware of the findings of both reports and have been consulted in line with project milestones as to the where the site study is currently at and the next stage for consideration. As to be expected, not all community members are happy with the development of a central waste facility near Wolumla, and further consultation will be conducted as part of the EIS.*

In 2006 the plan was reviewed and reported in *2020 Vision on Waste – 2006 Review: Waste Management and Minimisation Plan: A Plan to Reduce the Impacts of Waste on our Environmental 2006-2011* (hereon referred to *2020 Vision on Waste – 2006 Review*). New actions were added to the review following completion of a number from the original plan. In relation to the proposed development the following revised actions were identified:

> *PA 17 - Develop and close major landfills with a view to their future operation as Recycling and Waste Transfer Stations.*
>
> *PA 18 - Finalise EIS study for proposed Central Waste Facility and select a site.*
>
> *PA 19 - Commence screen planting at proposed central waste facility site.*

From the above it can be seen that the proposed development is consistent with BVSC's strategic waste management plan.

4.1.1.2 Permissibility

As outlined in **Section 2.2**, the proposed development is permissible with consent.

4.1.1.3 Avoidance of Environmentally Sensitive Areas

The guideline states:

> *It is inappropriate to locate landfills in areas of high environmental value, or in areas subject to a significant environmental constraint with associated high environmental risks.*
>
> *On environmental grounds, areas in Table 1 should be excluded from further consideration from the outset. This table may not be exhaustive and there may be other areas of high environmental significance protected under other legislation. As part of the site selection process, early consultation with relevant councils and government authorities will help identify any areas of the type identified in Table 1.*
>
> *For most sites identified in Table 1, landfills are unlikely to be a permissible land use under existing planning controls. If they are permissible, it is possible that an application for a landfill in these types of areas would be refused on merit grounds. To ensure consistency in the environmental protection of these areas, government authorities responsible for management or regulation of landfill facilities should consider the recommendations of Table 1 in their own landfill policies* (DUAP 1996:15).

Table 1 from DUAP 1996 is reproduced below with comments regarding the subject site. From this it can be seen that the development is not located in an environmentally sensitive area.

Table 4.1 – Environmentally Sensitive Areas to be Avoided

Area	Objective	Comment
A site within 250 metres of an area of significant environmental or conservation value identified under relevant legislation or environmental planning instruments, including: • national parks, marine national parks • historic and heritage areas, building or sites protected under the Heritage Act or National Parks and Wildlife Act or areas on the register of the National Estate • any reserves for environmental protection, e.g. aquatic, marine, nature, karsts • areas covered by a conservation agreement or identified as a critical habitat under the Threatened Species Conservation Act • wilderness areas identified or declared under the Wilderness Act • world heritage areas • areas mapped under SEPP 14— Coastal Wetlands, SEPP 26— Littoral Rainforests • areas zoned under a LEP or REP for environmental protection purposes, e.g. high conservation, scenic, scientific, cultural or heritage • other areas protected under the National Parks and Wildlife (NP&W) Act, Crown Lands Act Fisheries Administration Act or any other legislation.	To avoid the risk of damaging areas of high environmental value	The subject site is **not** located within 250m of: • national parks or marine national parks; • historic or heritage areas etc protected under the Heritage Act, NPW Act or the Register of National Estate; • any reserves for environmental protection • areas covered by a conservation agreement or identified as Critical Habitat; • Wilderness areas; • World Heritage Areas; • SEPP 14, SEPP 26; • The site is not zoned under an LEP or REP for environmental protection purposes; or • Any other protected area protected under NPW Act, Crown Lands Act, Fisheries Administration Act.
Sites within an identified sensitive location within a drinking water catchment, including: • any lands nominated or mapped as 'special areas' under the Sydney Water Regulation • lands within 3 kilometres from the top water level of the following storages: Wingecarribee Reservoir, Fitzroy Falls Reservoir, and the Tallowa Dam. • any lands nominated as Special Areas (or similar wording) by local water supply • authorities or in the vicinity of a groundwater bore used as drinking water	To avoid the risk of polluting drinking water should failure of the landfill occur	• Council has advised the site is within the catchment area of Bega Town Waters. However Council has advised it is not considered to be a sensitive location within the drinking water catchment. • No bores in the vicinity of the site identified as being used for drinking water.

Table 4.1 – Environmentally Sensitive Areas to be Avoided

Area	Objective	Comment
Sites within 250 metres: • of a residential zone • of a dwelling, school or hospital not associated with the facility	To protect the amenity of residential areas	• The subject site abuts a Rural Small Holdings Zone, however actual site of the facility is approximately 800m from the zone boundary. • The boundary of the closest dwelling not associated with the development is located approximately 400m from the site of the facility.
Sites located: • in or within 40 metres of a permanent or intermittent waterbody (including rivers, lakes, bays or wetlands) • in an area overlying an aquifer which contains drinking water quality groundwater which is vulnerable to pollution (consult DLWC for criteria to determine the vulnerability of groundwater)	To protect groundwater and surface water resources	• NOW has confirmed there are no intermittent waterways located within 40m of the proposed development. • The site is not identified (on the NSW Natural Resource Atlas) as being in an area of groundwater vulnerability.
Sites located: • within a karst region (either protected under the NP&W Act or not) • with substrata which are prone to land slip or subsidence	To avoid sites with unsuitable substrata	The subject site is not known to be within a karst region or have substrata which is prone to land slip or subsidence.
Sites within a floodway which may be subject to washout during a major flood event. Councils should be consulted for information about local flooding characteristics. A major flood event is considered to be a 1 in 100 year event	To avoid landfill washout risk if a significant flood event was to occur	The subject site is not identified as flood prone land and is not known to be within a floodway.

Source: Adapted from DUAP 2006:16

4.1.1.4 Compatibility of Nearby Land Uses

The guidelines states:

> *The proximity of a site to nearby existing or proposed land uses should be considered as part of the site selection process. Sites which incorporate separation distances to preserve the amenity of land uses permitted in surrounding zonings are more likely to be acceptable. Where possible, this buffer area should be owned or controlled by the operator of the landfill.*
>
> *The need for and extent of buffer areas should be determined on a case specific basis.*
>
> *Table 2 suggests land uses which might require separation from nearby landfills and suggests performance objectives which could be used to determine an appropriate separation distance.*
>
> *As the establishment of buffer areas around landfill facilities can lead to unacceptable land sterilisation, the use of separation distances should not be the preferred option for containing emissions or reducing loss of amenity. Rather, they are a secondary feature, providing backup for the primary controls* (DUAP 1996:15).

Table 2 is replicated below with comments provided as to the development addresses each of the factors.

Table 4.2 – Appropriate Separation Distances from Certain Land Uses

Land Use	Performance Objective	Factors for determining appropriate separation distances	Comment
Residential areas	• Protect residential amenity and health: odour, visual amenity, noise, dust, seepage	• What is the likelihood of the performance objectives being achieved by the mitigation measures alone? • What is the likelihood of the mitigation measures failing? • What is the likelihood of an 'incident' (e.g. accident, system failure, natural disaster (which will result in a failure to meet the performance objectives? • What backup mitigation measures are available? • What is the likely geographic extent of impacts, taking into consideration the proposed performance of mitigation measures and the local environment (topography, climate)? • What is the likely geographic extent of the impacts if mitigation measures fails or an 'incident' occurs, taking into consideration the local environment (e.g. topography, climate)? • What separation distances are required to achieve the performance objective: • under normal operational and mitigation performance conditions • if mitigation measures fail or an 'incident' occurs? • What is the extent of separation distances required by any legislation?	By virtue of DECCW issuing it's GTAs for the development, it can be reasonably assumed that DECCW has confidence the development can operate within the required licence conditions, thus providing acceptable levels of amenity to the nearest residential receptors. In terms of visual amenity, the site is reasonably well concealed, with the exception of a few viewpoints. Additional vegetative screening would be established to assist with screening. The health of such vegetation should be monitored closely following planting to ensure it is establishing.
Surface waters	• Ensure that surface waters are protected from pollutants in the waste • Ensure that no existing or likely future uses of surface waters are compromised • Ensure that no significant impacts occur to flora and fauna which use the waters • Ensure that the ecological value of the waters will be maintained		I&I NSW has determined that the development would not have a net impact on receiving waters providing all listed mitigation measures are implemented and adhered to. Further the DECCW has issued its GTAs for the required EPL, thus indicating the development can operate with an "acceptable" level of impact on surface or ground water. Modelling of worst case scenario shows the leachate system would cope (s.8.4.5 of EIS).
Groundwater recharge zones	• Ensure that there is no deterioration in the quality of the groundwater • Ensure that no existing or likely future uses of groundwater are compromised		Groundwater to be protected by a combination of site geology and a composite basal liner system. Groundwater monitoring to be conducted. In issuing its GTAs for the development, DECCW must be satisfied the proposed methods of protection for groundwater resources are adequate.
Environmentally sensitive areas	• Ensure that environmental qualities of the particular area are not compromised by the landfill		No environmentally sensitive areas (as identified in any EPIs or other planning documents) nearby to the subject site.

Source: Adapted from DUAP 1996:17

From the above table it can be seen that there is sufficient separation between the development and surrounding land uses.

4.1.1.5 Is the Site Fundamentally Suitable for Landfill?

The subject site was selected as being suitable through a process undertaken by Robert Amaral in 2004. Forty-two sites were considered as part of the selection program and assessed against a number of "fatal flaw" factors, being:

- Geology/soils/permeability
- Loss of amenity to existing or future residents
- Diverse or complex natural flora/fauna habitat
- Multiple titles to land
- Proximity to permanent water courses/water bodies
- Difficult/expensive access and/or development
- Landfill cover deficit.

The five sites that passed the fatal flaw test were ranked in order of merit with the subject site ranked first based on it having an adequate size and being able to be readily screened from Wanatta Lane. The report concluded:

> *The EPA (NSW) Environmental Guidelines: Solid Waste Landfills promulgated in 1996 include a table (Table 1) entitled "Environmentally Sensitive and Inappropriate Areas for Landfilling". Reference to this table (reproduced in Appendix 4) indicates that the recommended site (portion of Site 15) does not, in my opinion, contravene any of the listed Inappropriate areas listed therein* (Amaral R.H. 2004:10).

4.1.2 ARE THE CONSTRAINTS POSED BY ADJACENT DEVELOPMENTS PROHIBITIVE?

As outlined in **Section 3** of this report, there are no land use conflicts from existing adjacent land uses that would be prohibitive to the proposed development.

4.1.3 IS THE AIR QUALITY AND MICROCLIMATE APPROPRIATE FOR THE DEVELOPMENT?

By virtue of DECCW issuing its GTAs for the development, the air quality and microclimate is construed as being appropriate for the development.

4.1.4 ARE AMBIENT NOISE LEVELS SUITABLE FOR THE DEVELOPMENT?

By virtue of DECCW issuing its GTAs for the development, the ambient noise levels are construed as being appropriate for the development.

4.1.5 HOW CRITICAL IS THE SITE TO THE WATER CYCLE IN THE CATCHMENT?

Council's Manager of Water and Sewerage Services has raised no concern in this regard. Refer to **Section 3.7.3**.

4.2 ARE THE SITE ATTRIBUTES CONDUCIVE TO DEVELOPMENT?

4.2.1 IS THE SITE SUBJECT TO NATURAL HAZARDS INCLUDING FLOODING, TIDAL INUNDATION, SUBSIDENCE, SLIP, MASS MOVEMENT, AND BUSHFIRES?

The subject site is not known to be affected by flooding, tidal inundation, subsidence, slip, or mass movement. The subject site is identified as bushfire prone land. The NSW Rural Fire Service has assessed the DA and has no objection to approval of the development subject to the conditions outlined in **Section 5.2.4**.

4.2.2 ARE THE SOIL CHARACTERISTICS ON THE SITE APPROPRIATE FOR DEVELOPMENT?

A preliminary analysis of the soils contained within the proposed footprint of the CWF indicated that the mass permeability of the residual soil (decomposed granite) and granite bedrock is slightly greater than 10^{-8} m/s, which is considered to be 'a natural geological liner' (Amaral 2005).

The unsaturated decomposed granite buffer between the base of the proposed CWF and groundwater is extensive and would greatly attenuate potential leachate contaminants.

Overall, it is considered that the soil and geology conditions at the proposed site are acceptable for a CWF and, with the addition of an artificial liner (as described in Section 5.8 of the EIS) would assist in the minimisation of potential impacts to the surrounding groundwater regime.

4.2.3 IS DEVELOPMENT COMPATIBLE WITH PROTECTING ANY CRITICAL HABITATS OR THREATENED SPECIES, POPULATIONS, ECOLOGICAL COMMUNITIES AND HABITATS ON THE SITE?

The development would result in enhancement of the existing EECs on site as outlined in Section 12 of the EIS.

4.2.4 IS THE SITE PRIME AGRICULTURAL LAND AND WILL DEVELOPMENT PREJUDICE FUTURE AGRICULTURAL PRODUCTION?

Council has advised that the subject site is identified as being Class 3 Agricultural land by the Agricultural Classification Map and as such is Prime Agricultural Land.

The proposed development would remove the land affected by the development from agricultural production. The proposed development would also incorporate extensive revegetation of the subject site. Over time this would see improved quality of the land adjacent to those areas revegetated. The revegetation would also provide for connectivity between the existing forest remnants to the north of the site and within the southern portion of the site. Thus whilst removing prime agricultural land from use, the development would provide for other overall positive outcomes.

Further, consideration needs to be given generally to the siting of landfills. Prime agricultural land is a finite resource and is a relevant consideration in assessing the suitability of a site for a proposed development. However such a consideration is only one of those matters considered in assessing a DA and the site's suitability for such a development. Obviously a key driver of site selection is land use conflict and ensuring co-location of compatible land uses. In the case of landfills, this factor tends to result in landfills being located in rural areas. Further to this, sites chosen within rural areas tend to be within areas of higher quality agricultural land as they provide more suitable on-site soils for provision of natural liners and capping material. Rocky sites, which are consequently less productive agricultural land, are not considered to be the most suitable for landfills. Having suitable material available on site for liners and capping provides a less energy demanding facility through the non-need for

transportation of materials to the site and one that does not require the sourcing of material from and thus disturbance of another site.

In summary, whilst the development would result in a loss of prime agricultural land this loss is considered to be acceptable in this instance as the development as a whole would provide for overall positive outcomes. As a whole, this loss of prime agricultural land would not be significant in terms of the Bega Valley LGA.

4.2.5 WILL DEVELOPMENT PREJUDICE THE FUTURE USE OF THE SITE FOR MINERAL AND EXTRACTIVE RESOURCES?

The subject site is not known to contain any mineral or extractive resources and as such the proposed development is not expected to prejudice the extraction of any mineral or extractive resources.

Submissions Received

5.1 PUBLIC SUBMISSIONS

The DA was publicly exhibited and notified from 18 November 2009 to 18 December 2009. A total of 246 submissions, including a petition with 982 signatures, were received.

Due to additional information submitted by the applicant, the DA was re-exhibited from 14 July 2010 to 27 August 2010. A total of 54 submissions were received during this re-notification period.

Table 5.1 provides a summary of the issues raised during both notification periods.

Comments are provided in relation to the issues. A complete outline of the submissions is located in the tables in **Appendix A**.

Table 5.1 – Submission Issues

Issue	Comment
Site Selection/Alternative Sites	
Site selection process was flawed – land purchased before impacts assessed	The site selection process is explained in **Section 4.1.1**.
Re-open yellow pinch dam site tip instead	The aim of this assessment is to consider the merits of this DA. The role of the DA assessment is not to consider whether or not alternative sites are more suitable or not.
Should be put in a forest where no one can see it.	The aim of this assessment is to consider the merits of this DA. The role of the DA assessment is not to consider whether or not alternative sites are more suitable or not.
Retrospective justification of land purchase	The site selection process is explained in **Section 4.1.1**.
No comparison with any other site.	The aim of this assessment is to consider the merits of this DA. The role of the DA assessment is not to consider whether or not alternative sites are more suitable or not.
Why not use a number of small scattered sites as opposed to one central facility.	Refer **Section 1.2.4**.
How was the site selected being so close to the Bega River, when other sites were discounted because of the proximity to watercourses and windblown contaminants.	The site selection process is explained in **Section 4.1.1**.
Other sites in the north of the shire that are more suitable and were too quickly discounted. They would be more economic to develop, already having sealed roads, power, and affect less residents.	The site selection process is explained in **Section 4.1.1**.
Incorrect Information	
No calibration of weather station on site, so data flawed	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the base information used to conduct the various modelling.
Wind data from on site weather station never happened – very different to Bega and Merimbula stations.	
On site wind study doesn't meet 12 month period study criteria	
Proposal to monitor leachate is contrary to DECC advice.	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the proposed means for dealing with leachate.
Inconsistencies between documents	The information provided has been adequate to assess the application.
Basic errors, omissions, inaccuracies and outright fabrications in information provided.	

Table 5.1 – Submission Issues

Issue	Comment
Exclusion of property (131) from noise and odour studies	Wanatta was included as a receptor in these studies and is closer to the proposed development than the subject property.
Cattle yards outside of footprint, yet heritage report says in	See **Section 3.4.2**
GHD plans show the cattle yards are in the footprint.	See **Section 3.4.2**
Locally collected rainfall data shows periods of extended dry spells that the GHD data doesn't.	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the base information used to conduct the various modelling.
Revised test bores location on the site? Original ones deemed in the wrong spot	No issues have been raised by DECCW regarding the location of the bores.
The use of yearly rainfall figures is misleading	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the base information used to conduct the various modelling.
Validity of EIS: • Conflicting statements • Met data used • Consequences of assessments based on inaccurate met data • I have seen Bazas on a property adjacent to the site and have heard barking owls at night.	• DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the base information used to conduct the various modelling. • Barking Owls were considered as part of the flora and fauna assessment.
Met data not site specific, even though promise was made to erect an on-site recorder	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the base information used to conduct the various modelling.
Legislation/Permissibility	
Proposal doesn't meet requirements of changes to Infrastructure SEPP	Refer **Section 2.4.3**
Wright Corporation Review of Application of Landfill Standards: • No details/design of netting configuration for litter control • No provision for material recovery • No capture of landfill gases for energy use.	• • • Refer Figure 5.11 in EIS • Council is continuing to incorporate waste minimisation and diversion opportunities at Council Recycling and Waste Depots, as outlined in Vision 2020. • Refer Section 3.9.3.1.
Development is not consistent with any of the zone objectives. Council cannot grant consent by virtue of clause 8(3) of LEP	Refer **Section 2.2.1**

Table 5.1 – Submission Issues

Issue	Comment
No reference in any DA documentation to clause 123 of the Infrastructure SEPP • The development is not on degraded land and thus landfill should be approved. • Queries extent to which other matters of clause 123 have been addressed.	The onus is on the consent authority to consider the matters in section 123 of the SEPP. Refer **Section 2.4.3**
Facility doesn't meet the criteria set out by clause 12 of the LEP, as it goes against all requirements stated.	Refer **Section 2.2.1**
Need for the Project	
Refute the need for the CWF: • Other options available, including recycling technology • Smaller local facilities using industry best practice would have much less impact	• Refer Section 1.2.4.
A "super tip" to accommodate rubbish and waste from the shire is gross stupidity.	
Ground Water	
Lack of testing for aquifers	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the base information used to conduct the various modelling and assessments, and that the development can operate so as to not cause pollution.
Bore put down north of the proposed cells	
Potential of adjacent aquifer passing through waste cell locations	
Slumping of aquifer causing cell barriers to be compromised and thus leaking leachate into groundwater	
Leachate spraying contamination of groundwater	
Surface Water	
Contamination of Bega River Catchment	Refer **Section 3.7.2** and **3.7.3**. DECCW has assessed the application and by virtue of issuing its GTAs for the EPL, it can be construed that the development can operate so as to not cause pollution of any receiving waters.
Contamination from leachate and flow on effects for farmers, through cattle drinking contaminated water and impacts on export of meat.	
Leachate pollution of river during storm events	
Impact of leachate spraying on surface water supplies	
Increased dust and impact on drinking water	Refer **Section 3.9.2**.

Table 5.1 – Submission Issues

Issue	Comment
Heavy rainfall events are the concern, not annual average rainfall	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the base information used to conduct the various modelling and assessments.
If tank water is safe to drink, why will CWF workers be supplied with bottled water?	Due to the proximity to the source of the particulate generation.
Rain shadow effect on this site, which created heavy rain events. No contingency plans for this.	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the base information used to conduct the various modelling and assessments.
No studies or plans for when contaminated water ends up downstream. Should be an early warning system put in place to enable action to protect the water supply	Refer Section 8.4.5 of EIS.
No such thing as an acceptable level of risk when pollutants are entering residential drinking water supply.	By issuing it's GTAs for the development, it can be construed that DECCW is comfortable the development can operate without causing pollution to such.
Concerned the issue of preserving clean drinking water has not been given a higher importance by council	
Pollution of rainwater tanks from dust, odour and other windblown contaminants	DECCW has assessed the application and by virtue of issuing its GTAs for the EPL, it can be construed that the development can operate so as to not cause pollution, including air quality impacts.
Potential for pollution of water supply for everyone in the Bega Catchment	By issuing it's GTAs for the development, it can be construed that DECCW is comfortable the development can operate without causing pollution to such.
No water contamination remediation plan	DECCW is the ARA, and have not required such.
Can you assure that the water from roofs and dams will be safe for humans and cattle	DECCW has assessed the application and by virtue of issuing its GTAs for the EPL, it can be construed that the development can operate so as to not cause pollution, including air quality impacts.
Is council prepared to test our water and give us a written guarantee it will be safe to drink	
What is "unlikely to be significant" in terms of impact on tank drinking water supply?	DECCW has assessed the application and by virtue of issuing its GTAs for the EPL, it can be construed that the development can operate so as to not cause adverse particulate impacts.
What distance from the tip will airborne contaminants travel? How will this be monitored?	DECCW has assessed the application and by virtue of issuing its GTAs for the EPL, it can be construed that the development can operate so as to not cause pollution, including air quality impacts.
Demand completely independent study on this.	
Affected residents should be provided with alternative clean water supply	By issuing it's GTAs for the development, it can be construed that DECCW is comfortable the development can operate without causing pollution to such.

Table 5.1 – Submission Issues

Issue	Comment
Leachate Management	
Concern with proximity to gully system and contamination of	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the proposed means for dealing with leachate and that the development can operate without causing pollution.
A rush that is typical to where groundwater breaks through is located on the edge of the leachate irrigation area.	DECCW's GTAs note that leachate is only to be disposed of by either: • Evaporation; • Irrigation within the leachate dam or within the active cell of landfill; or • Disposal at a facility licensed to accept such waste.
Spray irrigation of leachate is impractical due to prevailing wind patterns and open terrain. Is hazardous and will carry the spray to adjoining properties.	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the proposed means for dealing with leachate and that the development can operate without causing pollution.
Build up of residue washing into creek during rain events.	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the proposed means for dealing with leachate and that the development can operate without causing pollution.
No improvement in storage design – actually closer to wetlands and watercourses.	
Storage on site is a source of environmental danger and odour – should be removed off site.	
Leachate system should be included in the initial construction phase of the development. Residents will have to endure odour impacts during the period before the system is constructed.	
Unclear which leachate option is being proposed.	
Containment of leachate during extreme rain events	
No set provisions for the removal and treatment of leachate	
Will leachate be sprayed on strong wind days?	
How often does leachate have to be sprayed?	
Which part of the land will be used for spray irrigation of leachate?	
How much leachate and methane per hour will be discharged from the site?	

Table 5.1 – Submission Issues

Issue	Comment
At the last public presentation, it was indicated that a 1% leakage of leachate was acceptable. What authority sets this standard? What would this actual volume be, and over what time period?	
How will council convince local residents and visitors that this leakage will not affect the Bega Water Supply, the tourist trade, and Bega Cheese?	
Cost estimate to restore clean water to these areas	
Leaking of leachate	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the proposed means for dealing with leachate and that the development can operate without causing pollution.
Leachate spraying onto cells will be an environmental disaster waiting to happen	
Spraying of leachate has potential to contaminate groundwater, surface water and soil	
Design/Project Details	
No safety factor (i.e. distance) between base of cells and the watercourse → pollution of waterways	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied that the development can operate without causing pollution.
No design of wheel and truck wash	Provided by applicant
Cover deficit – conflicting figures for volumes	Applicant has advised sufficient cover would be available from on site supplies.
Stockpiling of excess overburden and impacts of this (i.e. erosion)	This would be addressed in the LEMP.
Validity of EIS with incorrect met data.	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the base information used to conduct the various modelling and assessments.
Details of operational lighting?	Any lighting on site would be required to comply with *AS4282 – Control of the Obtrusive Effects of Outdoor Lighting*.
Use of excess overburden	There is no proposal to remove any overburden from the site.
Would excess have to be trucked off site, and impacts of such	
No plans showing route of proposed electricity upgrade	This would be the subject of a separate Part 5 assessment carried out by Country Energy.
No impact assessment done for electricity upgrade	

Table 5.1 – Submission Issues

Issue	Comment
No environmental assessments have been done for the electricity upgrade. No decision should be made on the CWF DA until this has been undertaken.	
Where is the complete plan of the tip, including electricity connection?	
How and when does council plan to supply power (solar or mains) to the CWF?	Power would be provided during the construction phase to enable the development to operate.
Design of the facility is outdated	DECCW, who license the facility, are satisfied that the development can meet relevant standards.
Details of the cage for windblown litter?	Figure 5.11 of EIS
Lack of planning and final design specifics are left out and as such the proposal is entirely inadequate.	Sufficient information has been provided by the applicant to assess the application.
New and unforseen and undisclosed problems have emerged including the problem of removing large amounts of soil from cell excavation --> cost and increased heavy machinery	This has not been identified as an issue.
Litter Management	
Impact of windblown litter	See **Section 3.11.2**. The proposed measures to avoid windblown litter would need to be correctly managed to ensure adequate functioning. This should be enforced by operational management plans.
Entire waste cell should be enclosed	
Impact on livestock	
Illegal dumping of waste – how will council guarantee this won't occur?	Council cannot guarantee this won't happen. Council can only advise residents that it is not a facility with public access, and regularly check and removal any dumped rubbish.
Traffic & Access	
Garbage trucks should be halted when a funeral is being conducted at the crematorium	This could be considered as part of the Traffic Code of Conduct if deemed necessary.
Traffic study is insufficient in length to accurately understand traffic movements	The RTA and Council's engineers have assessed the application and traffic study and have not raised any issues regarding the length of base line information surveys.
Traffic safety during fog	Drivers are responsible for driving to the road conditions.
Site access is at a dangerous location – should be relocated to give better vision.	Adequate sight distance will be provided in accordance with the RTA's *Road Design Guide*.
Impact of increased traffic	Refer **Section 3.2**.

Table 5.1 – Submission Issues

Issue	Comment
Traffic impact, especially being a school bus route	A Traffic Code of Conduct would be prepared for the operation of the garbage trucks during school bus times as outlined in **Section 3.1**.
Traffic study was undertaken before crematorium was established.	An interim occupation certificate for the crematorium was issued in September 2005. Traffic counts for the development were undertaken in 2006 and 2009.
Safety of transition from sealed road back to unsealed road.	The road design would be undertaken in accordance with relevant criteria, thus providing a safe transition between the road standards.
Impact on safety of trucks entering from site	Sufficient sight distance will be provided in accordance with the RTA's *Road Design Guide*.
Garbage trucks speeding	This is a management issue.
Cost of road works – not accurate with cost estimates provided	Not a matter for consideration in the assessment of this DA.
Consideration of construction traffic (of later cells) while facility is operating	Negligible. Excavated material would be stored on site for reuse, thus no traffic movements associated with removal of cell material.
Definition of licensed contractors being able to access the site.	Commercial waste contractors.
Truck movements associated with the removal of any excess overburden/fill	Not proposed as part of this development.
Conflict of school bus with peak traffic generation of facility – how is this possible with the garbage trucks supposedly being stopped during bus operation times?	A Traffic Code of Conduct would be prepared for the operation of the garbage trucks during school bus times as outlined in **Section 3.1**.
Short sighted to leave 400m of Wanatta Lane unsealed	The development does not require the sealing of this section of road. Consideration of such is a separate matter for Council to consider.
Increased traffic on dangerous intersection of Wanatta Lane and Princes Highway and nearby bus stops.	Both Council and the RTA have assessed the operation of this intersection and have no concerns.
Road needs a speed and load limit to prevent semi trailers from using it	Council and/or the RTA will limit the speed of Wanatta Lane in accordance with the relevant guidelines, based on it's road classification, alignment, geometry, crash history, etc. If deemed necessary, Council may chose to limit loads on Wanatta Lane.
Continue the road upgrade from the site to Greendale Lane.	The development does not require the upgrade of this section of road. Consideration of such is a separate matter for Council to consider.
Safety of waiting lane for trucks on the left hand side of the Princes Highway	Both Council and the RTA have assessed the operation of this intersection and have no concerns.
Will the trucks for water carting use the same route as the garbage trucks? Any deviation is not acceptable.	All traffic servicing the development would utilise the same route along Wanatta Lane.
How is council going to enforce garbage trucks only using the northern end of Wanatta Lane for access?	This is a management issue.
So we will just have to put up with all the traffic?	Traffic impacts have been assessed as not being significant as outlined in **Section 3.2**.

Table 5.1 – Submission Issues

Issue	Comment
Also the wealth of decomposed granite road base left over from site operations will be useful for Council and will need to be transported.	There is no plan for such as part of this development.
Pedestrian safety on Wanatta Lane.	The proposed road upgrade would provide for improved road safety through the improved geometry of the road. All traffic would be required to adhere to the posted speed limits. Sufficient and a more defined shoulder would be provided compared to the existing road design. Unless all traffic was banned from Wanatta Lane, the safety of children would still be an issue.
Safety of children walking, and riding bikes and horses along Wanatta Lane	
A school bus stop at the intersection of Wanatta Lane and Princes Highway	Council and the RTA have assessed the operation of this intersection and have no concerns.
Methane Gas	
Detailed design of methane drainage is not provided. Retrofitting a system is not an efficient way of removing methane gas.	DECCW have assessed the application and issued their GTAs for the development. Thus the proposed methane drainage system and proposed monitoring is construed as being acceptable.
How is methane gas going to be monitored?	
Odour	
Leachate storage will create leachate plumes extending off site.	DECCW have raised no issue with odour impacts or leachate management.
Odour impacts	
Odour combined with high wind area	
Smell of garbage trucks	
No plan for leachate pond aeration to manage odour problems	
Health	
Health issues from odour and dust	By issuing its GTAs, it can be construed that the DECCW are satisfied the development can meet required criteria for odour and particulates.
Increased incidence of cancer from living near a landfill	The DA was referred to the NSW Health. No response has been received. It should however be noted that the response received from NSW Health during exhibition of the previous DA for this project raised no such concerns. By issuing its GTAs, it can be construed that the DECCW are satisfied the development can meet required criteria for odour, noise, and particulates.
Overseas studies have linked waste facilities to higher than normal health issues in humans and cattle	
Correlation between contaminated sites and severe health problems in adults and children	

Table 5.1 – Submission Issues

Issue	Comment
Guarantee that any health problems resulting from living near the tip will be paid for by council	Appropriate management of vermin and pest is paramount in avoiding the spread of germs and diseases.
Health issues for asthmatics from odour and dust	By issuing its GTAs, it can be construed that the DECCW are satisfied the development can meet required criteria for odour and particulates.
Noise impacts on health and welfare of neighbours	By issuing its GTAs, it can be construed that the DECCW are satisfied the development can meet required criteria for noise.
Safe disposal of asbestos	The disposal of asbestos is required to be in accordance with the *Protection of the Environment Operations (Waste) Regulation 2005*
Water Supply for Development	
Adequacy of water supply dam now that it's been reduced compared to the previous proposal	The water balance provided considers all water uses for the development and demonstrates sufficient supply can be provided. If during the operation of the development it turns out that additional supply is required, separate assessment (where required) for additional water supplies would be undertaken.
Water supply dam for wetting down dust and fire fighting?	
Cost of trucking water into the site	
Inaccurate rainfall data --> overestimation of water supply.	
Where will additional water supply come from?	
Assessment hasn't considered prolonged drought and climate change	
Additional truck movements generated to supply water?	
No allowance for dust suppression (each morning) of spoil piles for cover	
No allowance for irrigation of tree screens	
What is going to be used for water when there is none?	
Property Values	
Compensation scheme for affected land owners	The DA assessment process is not the forum for discussing compensation schemes.
Decreased property values	Refer **Section 3.19.2**.
Property value studies are not relevant	
Compensation for road widening	Any land required to be acquired for road widening would be done so separate to this assessment.
Effluent Disposal	

Table 5.1 – Submission Issues

Issue	Comment
Details on where the waste from the wheel and truck wash goes.	Into Stormwater Pond B.
Fires	
Fire hazard	The development would be carried out in accordance with the requirements of the RFS as outlined in **Section 5.2.4**.
What measures is council undertaking to protect adjoining properties	
Airborne toxic contamination	By issuing its GTAs, it can be construed that the DECCW are satisfied the development can meet required criteria for air quality.
Evacuation plan for residents	A LEMP for the development would include fire protection measures, in accordance with the EPA's *Environmental Guidelines: Solid Waste Landfills*.
Procedure for fires on site and if it escapes the bounds of the facility.	
Fire hazard, including spontaneous combustion	
Northerly winds are damaging and have not been identified in the EIS. These will exacerbate increased incidence of fires identified in EIS as a result of the development.	
Chemical fires have not been mentioned? How would these be controlled and managed?	
Increased fire risk to adjoining properties.	
Further risk of fire, through planting of trees for buffer along road boundary	The development would be carried out in accordance with the requirements of the RFS as outlined in **Section 5.2.4**.
Concern with the windrow of trees pointing in the direction of my property as a result of the bulldozing of the fence line. This is a dangerous situation as far as fire is concerned. I would like to know what Council have in mind for cleaning up and removing or burning the trees and debris caused by this work?	This is a matter separate to this DA assessment.
Air Quality	
Flawed impact assessments due to incorrect meteorological data	DECCW has assessed the application and by virtue of issuing the GTAs for the EPL it can be construed that they are satisfied with the base information used to conduct the various modelling and assessments.
Airborne contaminants and pollution of roof drinking water	By issuing its GTAs, it can be construed that the DECCW are satisfied the development can meet required criteria for particulates.
Microscopic airborne pollutants	

Table 5.1 – Submission Issues

Issue	Comment
Safety of roof water for drinking at the CWF site	
Dust impacts from internal roads	
How can the GM make the assumption that the distance between the CWF and receptors will reduce the impact of dust and other pollutants on roof water supply when the tip is on an elevated site with no tree barrier and subject to high velocity winds	Due to the proximity to the source of the particulate generation.
Vermin Control	
Vermin controls are designed for daylight hours, however most vermin are active after dark	Vermin would be managed in accordance with Section 21.3 of the EIS, as outlined in **Section 3.11.3**.
Impact of bird vermin on nearby Frogs Hollow airport	
Increased vermin	
Impacts of vermin on dung beetle, which is a vital part of pasture management	
Pollution of dams from ibis	
Vermin and weed controls?	
Management of excrement from increased vermin	
Aesthetics/Amenity	
How is council going to visually screen it from the outside?	Landscape screening as outlined in **Section 3.1.2**
Loss of treescaped Wanatta Lane	This is a separate consideration for the Part 5 assessment of the road upgrade.
Council guarantee that the project will have no adverse impact on people's lifestyle in this residential area	As outlined in **Section 3.1**, the site can be effectively screened and accepted amenity levels will be maintained through compliance with the EPL criteria.
Loss of aesthetics	
Loss of a rural lifestyle	
Impact on a quiet rural area	
Impact on quiet area with houses and properties close by	
Adversely impact the serenity of the area.	
CWF will spoil the wonderful natural environment	

Table 5.1 – Submission Issues

Issue	Comment
Amenity for walkers, joggers and horse riders along Wanatta Lane	The proposed road upgrade would provide for improved road safety through the improved geometry of the road. All traffic would be required to adhere to the posted speed limits. Sufficient and a more defined shoulder would be provided compared to the existing road design.
Impact on Amenity: • The CWF has been re-classified as a Class 1 Waste Facility and as such brings a new dimension to the full extent or intention of Council's overall operational proposal and endeavours; • Facility will now have a major increase in the operational area	There is no change to the scope of materials able to be accepted at the facility.
Contamination & Hazards	
What guarantee will Council give that the site won't become a contaminated site?	DECCW, by virtue of issuing their GTAs for the EPL, must be satisfied that the project can be carried out without causing pollution.
Impacts of pesticides, heavy metals, poisons, mercury and toxins in the landfill	The landfill liner will provide the barrier to contain wastes within the cells.
How does council plan to sort and remove materials containing mercury and other hazardous substances?	Section 5.4 of the EIS outlines the waste management measures on site.
Council's poor record in management of such facilities	The facility will be licensed by DECCW. Council will be required to comply with licence conditions and report regularly to the department.
Consequences of a leachate spill	DECCW, by virtue of issuing their GTAs for the EPL, must be satisfied that the project can be carried out without causing pollution.
How does council plan to contain all asbestos fibres in its waste cells?	Asbestos will only be accepted at the facility if it is appropriately packaged. It would be disposed of in accordance with EPA guidelines (Section 5.4.4 of EIS).
Strong likelihood that exposed asbestos fibres could become airborne and blow to adjoining properties.	
Not considered state of the art, when asbestos, hospital waste and tyres can be disposed there	Clinical waste and tyres would not be accepted at the facility. Asbestos would be accepted in accordance with the above.
A very real possibility of contaminants, poisons, asbestos, heavy metals and a host of other environmental disasters going to be tipped into the general rubbish for compaction. Without sorting there is no possibility of monitoring what is going on.	Asbestos will only be accepted at the facility if it is appropriately packaged. It would be disposed of in accordance with EPA guidelines (Section 5.4.4 of EIS). Further education of residents to ensure poisons, etc are not placed in kerbside collection, should be incorporated into the 2020Vision on Waste.
Toxic in means toxic out	The landfill liner will provide the barrier to contain wastes within the cells.

Table 5.1 – Submission Issues

Issue	Comment
Flora & Fauna	
Impact on from toxins and feral animals	Providing the development is managed in accordance with the mitigation measures, there is expected to be no adverse impact on such.
Can the balance of the site become a nature reserve	Rehabilitation of the balance of the site would be undertaken in accordance with the existing rehabilitation plan (refer **Section 3.10.4**)
Concerns for stock in surrounding properties	I&I NSW has not raised objection to the development (in terms of agriculture) providing it is carried out in accordance with the proposed mitigation measures.
Loss of trees along Wanatta Lane	Not applicable to this DA.
Impact on wildlife corridor	The development will result in an net improvement in habitat and resultant wildlife corridor
Removal of trees will result in a loss of a windbreak	Not applicable to this DA.
Destruction of trees and habitat for road upgrade	Not applicable to this DA.
Injury to stock through windblown litter ingestion.	Windblown litter will be managed as outlined in **Section 3.11.2**
Impact on native fauna through tree removal	The development footprint of the CWF has been assessed as not providing significant habitat, due to its degraded state.
How to ensure the survival of proposed tree plantings	These will require monitoring and maintenance as part of the development, which should be included in the vegetation management plan.
Heritage	
No tourist venture for Ayrdale now that the tip is going ahead	Sufficient separation (both distance and topography) exists between the development footprint and Ayrdale Village to avoid adverse impacts on such.
No transparency for the local Aboriginal community in the consultation undertaken for the project.	Consultation was undertaken in accordance with the then relevant *Interim Community Consultation Requirements* (DEC 2004).
No fees were paid to Bega LALC for the project	This is not a matter for consideration of this assessment.
Consultation process was no within the spirit of the MOU between the BVSC and the Aboriginal Community.	Consultation was undertaken in accordance with the then relevant *Interim Community Consultation Requirements* (DEC 2004).
Council needs to work with Yukembruk Ngarigo Consultancy Pty Ltd who are the preferred consultants managing all Aboriginal heritage within the Bega LALC legislated boundary	
Inappropriate development in such close proximity to an historic complex (Ayrdale Dairy Village) an important relic of the state's history that cannot be replicated or relocated to another site.	Sufficient separation (both distance and topography) exists between the development footprint and Ayrdale Village to avoid adverse impacts on such.

Table 5.1 – Submission Issues

Issue	Comment
Appendix I does not address the impact of the development on Ayrdale's curtilage or access.	
Ayrdale Dairy Village – development would have intense visual, physical, aesthetic and value detrimental impact	
No indigenous study has been commissioned or sought on this project	Refer Appendix G of the EIS.
Noise	
Noise pollution	
Vehicle noise pollution from increased heavy vehicles decelerating	By virtue of DECCW issuing its GTAs, it can be construed that the development can meet the relevant noise criteria goals required by the EPL.
Increased trucks → increased noise	
Agriculture	
Long term impact on sustained agricultural production	
The development would be detrimental to the farming enterprises and the well being of associated families	
Loss of prime agricultural land	
What does "not significant" mean in relation to impact on stock on neighbouring properties?	
"Minimal biosecurity risk to the receiving environment" surely any risk would be unacceptable.	I&I NSW (agriculture) has assessed the application, and raises no objections provided it is carried out in accordance with the proposed mitigation measures.
What impact will contamination from the development have on operation of local primary producers?	
Future of the farmers and industries that rely on a quality of water supply, as there is no guarantee that leachate will not enter the water catchment.	
Will be detrimental to my farming enterprise	
Visual/Landscape	
Visual impacts	Visual impacts are discussed in **Section 3.1**. The assessment concludes the development can be carried out without significant visual impacts.
Destroy beautiful land with pollution	

Table 5.1 – Submission Issues

Issue	Comment
Dust generation	
Visibility of litter caught in the nets.	
Lack of suitable tree barriers or vegetative concealment	
Destroy the landscape of the lane	
Destruction of the treescape lane	
Sight of garbage trucks	
Visual impact – windblown litter and illegally dumped rubbish	
Eyesore for motorists on Candello-Wolumla Road.	
Social Impacts	
Impact on lifestyle	As outlined in **Section 3.18** the development would not result in any significant adverse social impacts.
Provision of walking tracks or safe footpaths to enable walkers/joggers to continue using the road.	The proposed road upgrade would provide for improved road safety through the improved geometry of the road. All traffic would be required to adhere to the posted speed limits. Sufficient and a more defined shoulder would be provided compared to the existing road design.
Wolumla will never develop further as a community with the tip there.	It is understood that Council has no plans for expansion of the existing 1(c) zone land to the south of the subject site. The distance from the development to Wolumla would ensure no adverse impacts on residents.
Social impact - anguish and depression from living in limbo over past 8 years, and worrying about impact it will have on health and lifestyle	As outlined in **Section 3.18** the development would not result in any significant adverse social impacts. Unfortunately the DA process has been long winded. However this is not a consideration for assessment of the DA.
Stress of not knowing what the outcome will be	
Site Suitability	
The site is not suitable	Refer **Section 4.0**.
In a high wind zone	DECCW has not raised any issues in this regard.
Near to a residential subdivision	Odour, noise and particulate assessments show that the development can meet relevant criteria at the nearest residences.
Site is too close to a watercourse	DECCW is comfortable, by virtue of issuing its GTAS for the EPL, that the development can be operated without causing pollution.
Site is too risky	As outlined throughout this report, the development can be appropriately managed to not cause adverse impacts.
Environmental hazard with a growing community	Odour, noise and particulate assessments show that the development can meet relevant criteria at the nearest residences.

Table 5.1 – Submission Issues

Issue	Comment
Poor site selection – not in a protected area and very open to wind	Refer **Section 4.1.1**
More trees need to come down, which further removes any wind barrier	Further landscape screening would be provided along with rehabilitation of the EEC, resulting in a net increase in vegetation on site.
Irresponsible to put a tip on top of a natural water course which drains to the Bega River	DECCW is comfortable, by virtue of issuing its GTAS for the EPL, that the development can be operated without causing pollution.
Until council can offer the people of Bega Valley a well thought through, technologically advantageous, economically viable and environmentally acceptable solution to the disposal of waste, this process should cease and desist.	Council considers the development the development to meet these criteria.
Is on open farmland and in a town water catchment area	DECCW is comfortable, by virtue of issuing its GTAS for the EPL, that the development can be operated without causing pollution.
Need to find a more suitable location that does not have any impacts on the environment	As outlined throughout this report, the development can be appropriately managed to not cause adverse impacts.
Erosive soils. Exposed subsoil turns to “sugar” and washes away during heavy downpours	No issues raised in regard to soils and geology as provided through geotechnical investigations.
Economic	
Is the cost estimate of the upgrade realistic?	Not a matter for consideration in the DA assessment
Cost of electricity connection to site	Not a matter for consideration in the DA assessment
Do roadworks cost include intersection upgrades?	Not a matter for consideration in the DA assessment
LPMA advice that no adjustment to land values, however no one is able to sell because of the tip	Refer **Section 3.19.2**.
Valuer general’s report says decrease 20% as a result of the CWF	
Out of area experts being used and paid to deliver answers	Not a matter for consideration in the DA assessment
Shire has a reputation for clean environment. Would have an impact on economic prosperity through tourism and cheese production.	As outlined throughout this report, the impacts of the development can be appropriately managed to not adversely impact off site.
Cumulative Impact	
Impact on so many residents	As outlined throughout this report, the impacts of the development can be appropriately managed to not adversely impact off site.

Table 5.1 – Submission Issues

Issue	Comment
Long term effects on the environment	
Concerned that if approved, landfilling would not stop at one gully. Once council has the infrastructure on site there will be justification for extension of the facility.	Any expansion would be subject to further assessment.
Residents will have to deal with the tip long after the council staff have gone	The design of the facility meets the requirements of DECCW. Their assessment would consider impacts during use as well as post closure of the facility. The site would continue to be monitored following closure and remediation of the site.
Other	
How does council plan to manage the balance of the site? It is the source of weed problems for neighbours	Outlined in Section 5.15.2 of the EIS.
What are the plans for rehabilitation	Outlined in sections 5.12 and 5.15 of the EIS.
Council's 'suck it and see' attitude	Sufficient information has been provided with the DA to assess the application.
Why weren't previous objectors informed of the meeting with consultants?	This is not a matter for consideration of the assessment report.
Inconsistent rules for council and the public	This is not a matter for consideration in the DA.
Details of electricity connection to the site and associated impacts of.	See **Section 3.22.2**.
General public use of the facility providing they have a 3m³ load?	No public use of the facility
All people involved in the DA should personally guarantee against lost, damage, etc for dwellings within 4km of the site.	This is not appropriate.
Were matters raised in submission to previous DA on SWMP and Leachate Disposal System addressed in the new DA?	These submissions were not lodged in relation to this DA. Nevertheless by virtue of the DECCW issuing its GTAs for the EPL can be construed that it is satisfied that the proposed leachate system and stormwater system can operate without causing pollution
Previous issues considered compelling reasons why DA should be refused	
Object to the community being used an experiment – for a design that has not been tested anywhere in the world before.	DECCW is the licensing authority for this development. If they are confident with the development as proposed, then it is considered satisfactory in terms of achieving environmental standards.
The study will be slanted in the direction of the purchaser.	Not a matter for consideration in this assessment
Overall consequences beyond comprehension and far too risky.	As outlined throughout this report, the development can be appropriately managed to not cause adverse impacts.

Table 5.1 – Submission Issues

Issue	Comment
No guarantee can be given that the development would not cause pollution	DECCW is comfortable, by virtue of issuing its GTAS for the EPL, that the development can be operated without causing pollution.
Will follow EPA guidelines, which don't guarantee no pollution, but set out tests to discover pollution when it occurs	

5.2 SUBMISSIONS FROM AUTHORITIES

5.2.1 NSW ROADS AND TRAFFIC AUTHORITY

The DA was referred to the NSW Roads and Traffic Authority (RTA) being a traffic generating development pursuant to the *Infrastructure SEPP*. The RTA provided the following comments in its letter dated 16 December 2009:

> *The RTA has reviewed the information provided and will not object to the development application subject to the following comments regarding the design of the junction upgrade of the intersection of Princes Highway and Wanatta Lane:*
>
> - *Turning paths need to be applied to the left turns both into and out of Wanatta Lane. It appears a 19.0m semi trailer or even a 12.5m truck cannot negotiate the first curve in Wanatta Lane without crossing the centreline which is likely to create safety and efficiency issues at the intersection. The design of the junction shall cater for the largest vehicle expected to service the site. Detailed design plans are to be submitted to the RTA for review and comment showing that the largest vehicle can navigate these turns without crossing the centreline of Wanatta Lane.*
> - *The observation angle shall be checked for a car following the lip of the gutter on the left turn out of Wanatta Lane. The drawing provided does not extend enough to the south to enable a check however a 31m radius curve would normally be too large for the kerb return. Junctions should be designed to enable all vehicles to have observation angles of between 70° and 110° from the minor road to the major road. This issue should also be addressed in the detailed design plans to be submitted to the RTA for review and comment.*
> - *Landscaping and fencing shall not restrict vehicular sight lines at the intersection of the Princes Highway and Wanatta Lane.*
> - *Geometric road design shall be in accordance with RTA Road Design Guide. Pavement design shall be in accordance with the AUSTROADS Pavement Design Guide.*
> - *All roadworks, traffic control facilities and other works associated with this development, including any modifications required to meet RTA standards, will be at no cost to the RTA. All works shall be completed prior to occupation.*
> - *Prior to the issuing of the construction certificate, Council shall enter into a Works Authorisation Deed (WAD) for the above road works/traffic control facilities on the Princes Highway.*
> - *Section 138 consent under the Roads Act, 1993 shall be obtained from the RTA prior to construction. Note: Since a WAD is required for the subject roadworks the RTA will be exercising its powers under Section 64 of the Roads Act, I 993 to become the roads authority.*
> - *Council shall apply for a Road Occupancy Licence (ROL) from the RTA Traffic Operations Unit (TOU) prior to commencing work within the classified road reserve or within 100m of traffic signals. The application will require a Traffic management plan (TMP) to be prepared by a person who is certified to prepare Traffic Control Plans. Should the TMP require reduction of the speed, a Direction to Restrict will also be required from the TOU. The developer shall submit the ROL application 10 business days prior to commencing work. It should be noted that receiving an approval for the ROL within the 10 business day period is dependent upon the RTA receiving an accurate and compliant TMP. Note: An approved ROL does not constitute an approval to commence works until an authorisation letter for the works has been issued by the RTA Project Manager.*

As outlined in **Section 1.3.2** the road works to upgrade Wanatta Lane and its intersection with the Princes Highway do not form part of this DA as they do not require consent (however do require assessment under Part 5). In terms of satisfying the requirements of the RTA, providing the above matters are attended to as part of the separate Part 5 assessment, the RTA is satisfied with the DA.

Nevertheless, until the Part 5 Assessment has determined the road works can be undertaken with a reasonable level of certainty of acceptable levels of impact, it would be remiss to recommend granting

of consent for this DA (i.e. the facility cannot operate without road access). Thus if at the time of determination of this DA the Part 5 Assessment for the road works has not been determined to enable the road works to proceed, a deferred commencement condition shall be imposed on any consent granted for this DA. Further comments are provided on this matter in **Section 3.22.1**.

5.2.2 INDUSTRY & INVESTMENT NSW

The DA was referred to Industry & Investment NSW (I&I), who provided the following comments:

> *The newly formed I&I NSW incorporates a number of former agencies and authorities. In this instance however, there are matters related only to fisheries and agricultural interests.*

5.2.2.1 Fisheries

I&I provided the following comments in its letter dated 18 December 2009 in relation to fisheries:

> *I&I NSW concurs with the proposed safeguards and mitigation measures to minimise environment impacts, in particular those related to surface water, stormwater and leachate management and disposal detailed in section 8 of Volume 1 of the EIS (dated November 2009), Appendix D of Volume 2 of the EIS and Appendices L, M and O of Volume 3 of the EIS. All the proposed safeguards and mitigation actions listed in the EIS and Appendices should be included in any project approval, and listed in the Construction and Landfill Environmental Management Plans (CEMP and LEMP) and fully implemented by Council and its contractors.*
>
> *I&I NSW also concurs with the proposed monitoring of groundwater, surface water and leachate outlined in section 24 and Table 24.1 of Volume 1 of the EIS, to ensure that no downstream pollution of receiving waters (including Wolumla Creek) results from the construction and operation of the Central Waste Facility.*

5.2.2.2 Agriculture

I&I provided the following comments in its letter dated 18 December 2009 in relation to agriculture:

> *I&I NSW concurs with the proposed mitigation measures to manage potential impacts of the Central Waste Facility on agriculture in the vicinity of the facility, in particular those related to biosecurity, pest management, stock and plastic bag management and dust impacts detailed in sections 5.6.5, 5.6.6, 5.14.2, 5.14.3, 20.1.4, 20.2.2, 20.3.4, 22 of Volume 1 of the EIS (dated November 2009).*
>
> *All the proposed safeguards and mitigation actions listed in the EIS (in particular: pest management, grazing, dust, natural events and biosecurity aspects in table 24.1 Summary of Mitigation Measures should be included in any project approval, and listed in the Construction and Landfill Environmental Management Plans (CEMP and LEMP) and fully implemented by Council and its contractors.*

5.2.3 DEPARTMENT OF ENVIRONMENT, CLIMATE CHANGE & WATER

5.2.3.1 EPA Component

Council referred the DA to DECCW (EPA) on 17 November 2009 for assessment as the Integrated Authority for the required Environmental Protection Licence (EPL).

DECCW in its capacity of the EPA issued the General Terms of Approval (GTA) for the development on 11 February 2010. These are attached at **Appendix C**.

The department also raised a number of issues it thought the JRPP may wish to consider in it's assessment of the DA, being:

- Threatened species;
- Aboriginal Cultural Heritage;
- Leachate Use;
- Traffic Noise;
- Other general issues; and

- Consideration of the *Environmental Guidelines: Solid Waste Landfills* (EPA 1996) for meeting environmental goals

These matter have been considered throughout this assessment report.

5.2.3.2 NPWS Component

No comments were received from DECCW (NPWS) as a result of the original DA referral on 17 November 2009.

Following the notification of the amendments to the DA on 9 July 2010, NPWS responded with a number of comments relating to the review of the *Proposed Upgrade of Wanatta Lane, Flora and Fauna Assessment* that was prepared by Hayes Environmental (Appendix I of the EIS) and do not relate directly to this DA. Therefore the comments have not been included in this report.

5.2.4 RURAL FIRE SERVICE

The RFS has assessed the DA and provided the following conditions should the application be approved.

- Trails for bush fire management should be maintained across the site including boundary trails for the protection of fences and to help prevent the spread of bush fire to or from the site.
- An internal trail network developed in consultation with the RFS should allow for hazard reduction burning in segments.
- The prescribed burning of the land management area should be planned in a mosaic pattern i.e. which areas will be burnt and at what interval needs to be documented in the management plan.
- Grazing could be considered to reduce surface fuels where appropriate around the site.
- Fire management should comply with section 5.5.12 of Environmental Impact Statement, Volume 1 Main Report.

- The RFS's requirements shall be incorporated into the LEMP.

5.3 INTERNAL COUNCIL REFERRALS

5.3.1 ENGINEERING

Council's Engineers have assessed the DA and have provided conditions of consent, should the application be approved. These are provided in **Appendix D**.

5.3.2 ENVIRONMENTAL HEALTH & BUILDING OFFICER

Council's Environmental Health & Building Officer has assessed the application and recommends approval subject to conditions as outlined in **Appendix D**.

5.3.3 ENVIRONMENTAL SCIENTIST

Council's Environmental Scientist has assessed the application and recommends approval subject to conditions as outlined in **Appendix D**.

The Public Interest

6.1 OBJECTS OF THE ACT

6.1.1 INTRODUCTION

It has been held in various NSW Land and Environment Court (LEC) proceedings that the objects of the EP&A Act are a relevant consideration, under the heading of public interest in Section 79C, where they have relevance to an issue. The objects of the Act are:

(a) to encourage:

(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,

(ii) the promotion and co-ordination of the orderly and economic use and development of land,

(iii) the protection, provision and co-ordination of communication and utility services,

(iv) the provision of land for public purposes,

(v) the provision and co-ordination of community services and facilities, and

(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and

(vii) ecologically sustainable development, and

(viii) the provision and maintenance of affordable housing, and

(b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and

(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

Those matters of relevance are discussed below:

6.1.2 PROPER MANAGEMENT, DEVELOPMENT & CONSERVATION OF RESOURCES

The area of prime agricultural land affected by the development is a small proportion of the total supply in the LGA. It will be able to be continued to be used as such post development.

The development will result in improvements to the EEC on site, which will result in improved connectivity for habitat in the locality.

6.1.3 PROMOTION & CO-ORDINATION OF THE ORDERLY & ECONOMIC USE & DEVELOPMENT OF LAND

Through its strategic plan, Council has determined that the proposed development provide for the most orderly and economic provision of a waste facility for the shire.

6.1.4 PROTECTION OF THE ENVIRONMENT

By virtue of issuing it's GTA's for the EPL, it can be construed that the DECCW is satisfied the environment is adequately protected as part of the proposed development.

6.1.5 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

Ecologically Sustainable Development (ESD):

> *requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:*
>
> *(a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.*
>
> *In the application of the precautionary principle, public and private decisions should be guided by:*
>
> *(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
>
> *(ii) an assessment of the risk-weighted consequences of various options,*
>
> *(b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,*
>
> *(c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,*
>
> *(d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:*
>
> *(i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
>
> *(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
>
> *(iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.*

These matters, where relevant, are discussed below.

6.1.5.1 Precautionary Principle

The EIS provided the following comments on the precautionary principle:

> *It is considered that the greatest threat of serious or irreversible environmental damage associated with the proposed development is the threat of pollution of waters – both surface waters and ground waters.*
>
> *Mitigation strategies have been developed as part of the proposed development to prevent the contamination of waters from the proposed development and thereby prevent downstream environmental degradation. These mitigation measures have been developed in accordance with current best management practice for solid waste landfills and recognising the requirement to achieve a neutral or beneficial effect on the environment.*

6.1.5.2 Intergenerational Equity

The EIS provided the following comments on intergenerational equity:

> *The greatest risk of the proposed development to inter-generational equity is the potential for long-term degradation of waters, and the potential for degradation of drinking water supplies. Mitigation measures which form a fundamental part of this proposed development would ensure there would be no degradation of drinking water supplies. A water balance approach has been adopted for the Project Site as discussed in Section 8.*

It is envisaged that, after the landfill has been filled, the site would be rehabilitated and revegetated and in the long term the land use would be more compatible with surrounding rural land uses. This rehabilitation would benefit future generations of the area.

Further, the proposed rehabilitation of the EEC as a result of the development would benefit future generations.

Recent LEC proceedings[5] have held that, if relevant, consideration must be given to climate change: both how the development contributes to climate change and how the development would be impacted upon by climate change. These are relevant considerations in relation to intergenerational equity and are discussed in **Section 3.16**.

Providing the measures outlined in **Section 3.16** are initiated as part of the development, and all conditions on the required EPL issued by DECC are adhered to, it is considered that the development would address the principle of intergenerational equity as satisfactorily as possible given the unknowns of climate change.

6.1.5.3 Conservation of Biological Diversity and Ecological Integrity

The EIS provided the following comments on conservation of biological diversity and ecological integrity:

The proposed development is able to be conducted without any significant impact on the biological diversity and ecological integrity of the locality. Flora and Fauna Assessments were undertaken as part of the preparation of this EIS and these assessments found that the proposed development would have no significant impact upon threatened species, populations or ecological communities or their habitats.

Provided best practice landfilling planning and mitigation measures are implemented, the proposed CWF would not be expected to have any risks to the biodiversity of the receiving environment.

6.1.5.4 Improved Valuation, Pricing and Incentive Mechanisms

The EIS provided the following comments on improved valuation, pricing and incentive mechanisms:

Waste is a resource. Council actively promotes waste avoidance, re-use, and recycling through the implementation of its Waste Management Strategy.

However, there are still opportunities for Council and the community to improve waste management within the LGA. These opportunities would be realised through the on-going implementation of the Waste Management Strategy.

Notwithstanding this, waste that is not able, or is uneconomical, to be utilised as a resource, would continue to be required to be disposed at approved facilities. The proposed CWF has been planned in accordance with Council's Waste Management Strategy and the principles of best practice waste management.

Components of the strategy that have been developed to improve the valuation of waste resources include the planned conversion of existing landfills at Merimbula, Eden and Pambula to Waste Transfer Stations.

It is difficult to assign a monetary value to the environment of the locality given the lack of precedent in the valuation of environmental resources not considered for commercial use. As a monetary value could not be placed against the greatest number of environmental attributes, the approach taken was to manage environmental impact by identifying site specific safeguard measures to mitigate against adverse environmental effects, and to include the cost of these measures in the overall project cost. This enabled the value and price of the environmental resource to be more accurately reflected.

The proposed development would be licensed as a scheduled premise under the POEO Act and as such prohibit or stipulate enforceable limits to the pollution able to be generated. This act further manages pollution through the imposition of financial penalties or requirement for rehabilitation for those polluting the environment.

[5] Walker v Minister for Planning [2007] NSWLEC 741.

6.1.5.5 Further Matters

In addition, Bega LEP requires:

> *consideration shall be given by the consent authority to the following in so far as they are relevant to the proposed development and may promote the principles of ecologically sustainable development:*
>
> *(a) building and allotment orientation,*
>
> *(b) conservation, protection and enhancement of natural resources (including riparian areas and remnant native vegetation),*
>
> *(c) optimisation of the use of natural features of the site,*
>
> *(d) reduction of car dependence,*
>
> *(e) use of landscaping to improve air, soil and water quality,*
>
> *(f) optimisation of energy efficiency,*
>
> *(g) waste minimisation.*

These matters, where relevant, are discussed below:

- Buildings will be oriented to enable PV cells to be mounted on the roof(s) for electricity supply. The office building will be required to comply with Section J of the BCA.
- This is addressed above.
- The development has been designed to consider this.
- The site was selected as a central facility for the shire. Thus reducing travel distances for a central facility.
- This will be achieved.
- This is addressed in **Section 3.12**.
- This is addressed in **Section 3.4.3.2**.

6.2 OTHER MATTERS OF PUBLIC INTEREST

6.2.1 OVERALL COMMUNITY WELFARE

The PAC review of the Orange Waste Facility Project took a broad view of the term "public interest" in noting it related to the overall community welfare. Specifically, the PAC stated

> *that the public interest is best served by the Orange region achieving a sustainable solution to waste management with minimal impact on people in the region, businesses and the environment*[6].

6.2.1.1 Waste Diversion

As outlined in **Section 3.4.3.2**, the current recovery rates for the BVSC are:

- Municipal Waste – 49.23%
- Commercial and Industrial (C&I) and Construction and Demolition (C&D) Waste – 97.43%

As can be see from the above, C&I and C&D diversion are well above the WARR targets. Whilst the Municipal Waste recovery is less than the 66% target, it is still substantial.

Despite not meeting the WARR target for municipal waste recovery, the level of recovery combined with the measures contained within the 2020 Vision on Waste to further consider and increase diversion, is considered to provide a suitable and improving level of waste diversion. It is recommended that further, Council:

[6] Planning Assessment Commission (PAC) 2010, *Review of Orange Resource Recovery and Waste Management Project* .p. 27.

- Implement all reasonable and feasible measures to recover resources from the waste stream before disposing any residual waste at the CWF;
- Prepare and implement a detailed Community Education Program for the project to promote better resource recovery;
- Monitor the effectiveness of the resource recovery measures; and if necessary
- Adjust the waste strategy to achieve better resource recovery rates.

6.2.1.2 Essential Community Infrastructure

The security of long term landfill disposal, being a critical element of community infrastructure, was considered to be a public interest concern by the PAC in consideration of the Orange Waste Facility.

The existing landfill facilities within the BVS are nearing the end of their lives. These facilities do not meet current day standards and have limited land availability for extension. Therefore a new site is required to facilitate the BVS's waste disposal needs. Therefore there is urgency in finding a long term landfill solution. The proposed development, with a 30 year life expectancy, would provide such a solution.

6.2.1.3 Loss of Agricultural Land

Whilst the development would result in the loss of some Class 3 agricultural land, it is only a small proportion (0.009%) of that available in the LGA. Providing the development is appropriately managed, it is not expected to adversely impact upon the agricultural pursuits of others in the locality.

6.2.1.4 Environmental Benefits

The development would result in the closure of the other existing waste facilities in the LGA that don't meet current day standards, and reduce risk through not adding further waste to these existing facilities.

Due to the need for the project, the proposed development is considered to be in the public interest. If the project was not to proceed, locating a site suitable for such a development that is consistent with the new Infrastructure SEPP guidelines would take several years. It would seem unlikely that the site selection and approvals processes could be undertaken before the existing landfill facilities would be at capacity.

Considering the above, as a whole the proposed development is considered to be in the public interest.

Conclusion

7.1 CONCLUSION

The proposed development is for the establishment and use of a Waste Management Facility, known as the Central Waste Facility (CWF) on Lot 3 DP 592206, Wanatta Lane, Wolumla. The DA does not include the proposed upgrade of Wanatta Lane as the upgrade works do not require development consent and as such require separate assessment under Part 5 of the *Environmental Planning & Assessment Act 1979* (EP&A Act). Similarly, the DA does not include extension of electricity supply to the site. The required Part 5 assessment would be undertaken by Country Energy.

The proposed development is permissible with consent in the 1(a) zone under *Bega Valley Local Environmental Plan 2002* (Bega LEP) and is not antipathetic to the zone objectives. The development is consistent with the provisions of Bega LEP, *Lower South Coast Regional Environmental Plan No. 2*, SEPP 33, SEPP 44, Infrastructure SEPP, and DCP No. 7. There are no proposed instruments relevant to this development. There are no planning agreements entered into, or any draft planning agreements offered by the developer. No provision of the Regulations (specified for the purpose of s.79C(1)(a)(iv) of the Act are applicable to this development.

As outlined throughout this report, the development (operating with the recommended mitigation measures) is not expected to result in any significant adverse impacts. Providing that Wanatta Lane can be upgraded without significant adverse impact, the site is considered to be suitable for the proposed development.

The submissions made to the DA have been considered and clarification and/or alterations made to the development to address these concerns where relevant.

The development is consistent with Council's 2020 Vision for Waste and is thus considered to be in the interest of the public as a whole.

7.2 RECOMMENDATION

It is recommended that the DA be approved, subject to:

- A deferred commencement condition, as outlined in **Section 3.22.14**; and
- Council's standard consent conditions and referral conditions in **Appendices C** and **D**; and
- Incorporation of the recommendations (as outlined throughout this report and as summarised in **Appendix E**) into conditions of consent.

References

AECOM. 2009a, *Bega Valley Shire Central Waste Facility Environmental Impact Statement: Volume 1 Main Report*, AECOM, Gordon, NSW.

AECOM. 2009b, *Bega Valley Shire Central Waste Facility Environmental Impact Statement: Volume 2 Appendices A-J*, AECOM, Gordon, NSW.

AECOM. 2009c, *Bega Valley Shire Central Waste Facility Environmental Impact Statement: Volume 3 Appendices K-T*, AECOM, Gordon, NSW.

AECOM. 2010, *Response to request for additional information for Bega Central Waste Facility*, AECOM, Sydney.

Bega Valley Shire Council Waste Management Services Department (BVSC). 2001, *2020 Vision on Waste: Waste Management and Minimisation Plan*, Bega Valley Shire Council, Bega.

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Department of Urban Affairs and Planning (DUAP). 2001, *Crime Prevention and the Assessment of Development Applications: Guidelines under section 79C of the Environmental Planning and Assessment Act 1979*, DUAP, Sydney.

GHD. 2010, Central Waste Facility Development Application Assessor Comments, GHD, Sydney.

Appendix A

PUBLIC SUBMISSIONS

Table A.1 – Summary of Submissions (First Exhibition)

Author	Issues
1	• Ground water – Lack of testing for aquifers – Bores put down are to the north of the proposed cells – No plan in place to divert groundwater should one be encountered during works, and the effect of such diversion. – Potential of adjacent aquifer passing through waste cell locations – Concern about slumping of aquifer causing the cell barriers to be compromised, leaking leachate into the river system. • Leachate Irrigation & Irrigation Area – Concern with proximity to the gully system → contamination – A rush typical to where groundwater breaks through located on edge of leachate irrigation area – Management of leachate is contrary to DECC's previous advice. – Spray irrigation of leachate is impractical due to prevailing wind patterns and open terrain. Is hazardous and will carry the spray over the site boundaries onto adjacent lands. – Build up of irrigation residue washing into creek after rain events. • Leachate storage areas – No improvement in design. Actually closer to wetlands and watercourse – Any storage of leachate on site is a source of environmental danger and odour. – Consideration should be given to removal of all leachate off site. • Cell design – No safety factor (i.e. distance) provided between base of the cells and the watercourse → pollution of waterways • Odour – Leachate storage will create leachate plumes that will extend off site. • Air Quality – No recalibration of weather station on site – thus data used for modelling is flawed. • Litter – Impact on livestock – Proposed management system inadequate – entire waste cell should be enclosed. • Traffic – Extend halt to waste vehicle movements when a funeral is being conducted at the crematorium – Traffic study insufficient in length to accurately understand traffic movements – Traffic safety during fog – Site access location is at a dangerous location. Should be relocated to give better vision. • Methane Gas – Detailed design for methane drainage not provided. Retrofitting a system is not an efficient way of removing methane gas. • Health – Overseas studies have linked facilities such as the CWF to higher than normal health issues in humans and animals. • Water – Adequacy of water supply dam, now that it's been reduced compared to the previous proposal. • Compensation – Compensation scheme for affected land owners – property values • Wheel & Truck Wash – No design provided. – Where do wastes from this go? Means of containment of such?

Table A.1 – Summary of Submissions (First Exhibition)

Author	Issues

	• Fire Fighting
	  – What measures is Council undertaking to protect adjoining properties?
	  – Airborne toxic contamination
	  – Evacuation plan for residents?
	• Dust & Contaminants
	  – Impact on water supply of neighbours – roof water
	  – Impact assessments to be redone as based on flawed meteorological data.
	• Vermin Control
	  – Vermin controls designed for daylight hours, however most are active after dark.
	  – Impact of bird vermin on nearby Frogs Hollow airport
	• Amenity
	  – Council guarantee that project will have no adverse impact on people's lifestyle in this residential area? And how?
	  – How is council going to visually screen all operation from the outside?
	• Illegal Dumping of Rubbish
	  – How will council guarantee this won't occur?
	• Contaminated Site
	  – What guarantee will council give that the site won't be classified as a contaminated site?
	• Management of Balance of Site
	  – How does council plan to manage? Is the source of weed problems for neighbours.
	• Hazardous Materials
	  – How does council plan to sort and remove materials containing mercury and other hazardous substances?
	  – Flora & Fauna
	  – Impact on, from toxins and feral animals.
	  – Can the balance of the site be made a nature reserve?
	  – Rehabilitation
	  – What are the plans for rehabilitation?
	  – Council's 'suck it and see' attitude

2-10, 16-32, 34-39, 41-42, 53-54, 57-78, 81-82, 112, 116, 118, 120-121, 132-135, 137-144, 146, 148-193, 195-201, 203-204, 207-220, 222-227, 230-233, 236-244	• Possible contamination of the Bega River Catchment • Wind blown litter • Decreased property values • Health issues from dust and odour • Loss of aesthetics • Noise pollution • Destruction of Wanatta Lane Treescape and Wildlife Corridor • Increased traffic • Concerns for stock in surrounding properties • Impact on lifestyle • Increased vermin • Contamination of roof/tank water

Table A.1 – Summary of Submissions (First Exhibition)

Author	Issues
11-12, 33, 40, 43-52, 79-80, 83-99, 102, 194, 221	• Contamination risk of fresh water catchment area • Failure to monitor prevailing weather conditions. • Windblown litter • Vermin • Odour • Traffic impact, especially being a school bus route • Dust generation and pollution of roof water supply • Noise impact • Loss of a rural lifestyle • Long term impact on sustained agricultural production
13	• Odour – combined with high wind area • Noise • Wind carrying leachate over large area • Loss of trees along road (indirect impact) • Loss of property value
14	• Contamination of water supply water from leachate - Flow on effects for farmers, through cattle drinking contaminated water, and impacts on export of meat.
15	• Impact on water supply through leachate contamination • Windblown litter • Inappropriate site - windy
55	• Traffic - Study was undertaken before the crematorium was established. - Study was only for 2 weeks - Concern with conflict of crematorium traffic
56	• Leachate - Leachate system should be included in the initial construction phase of the development. Residents will have to endure odour impacts during the period before the system is constructed.
100	• Impact on property values • Visual impacts • Attraction of vermin • Litter • Odour • Toxic waste • Increased incidence of cancer from living near a landfill

Table A.1 – Summary of Submissions (First Exhibition)

Author	Issues
101	• Leachate pollution of river during storm events • Windblown rubbish and potential for killing cows • Wind data from on site weather station – never happened • Noise impacts from machinery • Loss of trees from road widening. • Traffic safety – transition of new sealed road back to gravel lane • Cost estimate of road upgrade – is it realistic? • No tourist venture at Ayrdale possible now that tip is going ahead. • Devaluation of properties.
103	• Too close to a major watercourse • Site subject to high winds • Environmental hazard to a growing community • Trucks entering from the side.
104	• Find an alternate site
105	• Destroy beautiful land with pollution.
106	• Proposal to monitor leachate is contrary to DECC's advice
107	• On-site wind study doesn't meet 12 month period study criteria.
108	• Proposed leachate management recommendation in EIS doesn't meet DECC's approved leachate disposal requirements.
109	• Poor record of management of existing facilities • Risk of pollution of river and Bega's water supply.
110	• Contamination of Bega River Catchment • Windblown litter • Odour • Contamination of roof water • Decreased property values • Loss of aesthetics • Noise pollution • Increased traffic flows • Impact on stock on surrounding properties • Increased vermin

Table A.1 – Summary of Submissions (First Exhibition)

Author	Issues
111	• Wind blown litter • Leachate contamination of river • Health issues • Garbage trucks speeding • Removal of trees for road upgrade • Contamination of tank water • Increased vermin • Noise pollution • Decreased property values • Impacts on stock • Dust and odour and associated health issues • Impact on lifestyle
113, 114	• Unclear which leachate disposal option is being proposed • Impact of spraying leachate – contamination of ground and surface water and the soil • Leachate pollution of the river • Safety of roof water supply for residents and cattle drinking water from dams • Microscopic airborne pollutants • Water supply for the dam for wetting down dust and fire fighting? • Impact on property values – studies cited not relevant.
115	• Unclear which leachate disposal option is being proposed • Impact of spraying leachate – contamination of ground and surface water and the soil • Leachate pollution of the river • Impacts on lifestyle • Safety of roof water supply for residents and cattle drinking water from dams • Microscopic airborne pollutants • Water supply for the dam for wetting down dust and fire fighting? • Safety of roof water for drinking at the CWF site? • Impact on property values – studies cited not relevant.
117	• Impact on a quiet rural area • Smell and sight of garbage trucks • Loss of trees for road widening • Windblown rubbish • Leachate contamination of river • Impact on the wildlife corridor • How is the methane gas going to be monitored? • Land devaluation

Table A.1 – Summary of Submissions (First Exhibition)

Author	Issues
119	• No transparency for the local Aboriginal community in the consultation undertaken for the project. • No fees were paid to Bega LALC for the project. • Consultation process was not within the spirit of the MOU between the BVSC and the Aboriginal community.
122	• Visual impacts for walkers and joggers along Wanatta Lane. • Provision of walking tracks or safe footpaths to enable joggers/walkers to continue using the road. • Continue the upgrade of the road from the site to Greendale Lane.
123	• Devalue property • Odours • Windblown rubbish • Guarantee that any health problems resulting from living near the tip will be paid for by council • Re-open yellow pinch dam site tip instead • Wolumla will never develop further as a community with the tip there.
124	• Advising council needs to work with Yukembruk Ngarigo Consultancy Pty Ltd who are the preferred consultants managing all Aboriginal heritage within the Bega LALC legislated boundary.
125	• Disadvantages of Increased heavy traffic, noise, visual pollution, smell, possible contamination of waterways • Inappropriate development in such close proximity to an historic complex – Ayrdale Dairy Village – an important relic of the state's history that cannot be replicated or relocated to another site • Appendix I does not address the impact of the development on Ayrdale's curtilage or access
126	• Compensation for road widening • Cost of road works – not accurate with cost estimates provided • Cost of electricity connection • Cost of trucking in water to the site • Why weren't previous objectors informed of the meeting with the consultants • The site is not suitable • Site highly susceptible to erosion • Site is above a wetland floodplain • Heavy rainfall events are the concern (for erosion) not annual average rainfall • Council bought the site in 2001 and is determined to put the waste facil ity there.

Table A.1 – Summary of Submissions (First Exhibition)

Author	Issues
127 & 128	• Development would be detrimental to the farming enterprise and well being of my family • Wind borne noise, dust, odour and toxins on water supplies (roof and dams). • EIS based wind data is not applicable to the site – from 15kms away • Introduction of feral animals - impacts on the dung beetles which is a vital part of pasture management - pollution of dams from Ibis' • Fire hazard • Removal of trees for road widening would result in a loss of a wind break for their property • Soils are very susceptible to erosion • Would endanger the town water supply • Devalue property • Impact on so many residents.
129	• Destroy the landscape of the lane • Why can't it be put in a state forest where no one can see it? • Contamination of the Bega River Catchment • Health issues from dust and odour – for asthmatics • Destruction of Wanatta Lane Treescape and wildlife corridor • Increased traffic flows • Devalue properties • Inconsistent rules for council and the public.
130	• Leachate escaping and contaminating ground water • Windblown rubbish • Large number of trees required to be removed to facilitate road upgrade • Pollution of roof water supplies • Pollution of air

Table A.1 – Summary of Submissions (First Exhibition)

Author	Issues
131	• Visual impacts: - Dust generation - Visibility of litter caught in the nets • Property values - Impact on - Inappropriate studies used • Windblown litter – inappropriateness of design of mobile litter nets • Pollution - Council's poor record in management - Consequences of leachate spill • Cover deficit - Conflicting figures for volumes - Stockpiling of excess fill • Traffic - Definition of licensed contractors able to access the site for disposal of demolition material - Consideration of construction traffic (of later waste cells etc) whilst facility is operating. • Exclusions – our property has been excluded from noise and odour studies
136	• Threat of contamination of water to the Bega Valley community • Destruction of trees and habitat for Wanatta Lane upgrade • Unpleasant living environment: - Impact on walkers, cyclists, and horse riders. - smell • Injury to stock - Not convinced the mobile litter nets will work, and impact on animals • Validity of EIS - BOM data used is not suitable for the site - How can impacts predicted be correct?
145	• Amount of excavation required • Vermin and weed controls • Water quality • Operational lighting – details of required
147	• Flaws with site selection process • Inconsistencies between documents • Truck movements associated with removal of any excess overburden • Details of connection of electricity to site and associated impacts • Accuracy of weather station on site • Accuracy of property values impact

Table A.1 – Summary of Submissions (First Exhibition)

Author	Issues
202	• Extreme effects of rainfall and wind on the property • Long term impacts on the environment • Trying to justify the shady purchase of the land • Basic errors, omissions, inaccuracies and outright fabrications in the information provided • Noise impacts on health and welfare of neighbours. • Impacts on water – groundwater and leachate • Use of excess overburden? • Conflict of school bus with peak traffic generation of facility – how is this possible with the garbage trucks being stopped during operation of the school bus times? • Loss of prime agricultural land • Generation of windblown litter • Increased vermin and smell • Increased dust and impact on drinking water
205	• Unsuitable site – high wind zone and near residential subdivision • Diminished property values • No comparison with any other site. • Short sighted to leave 400m of Wanatta lane unsealed beyond the site • Dust impacts from internal roads • Impact of fog at the intersection of the Princes Highway and Wanatta Lane • Impact and quantity of overburden leaving the site. • Impacts of storage of overburden on site i.e. erosion • Water quality impacts
206	• Water quality impacts • Dust and impact on roof drinking water • Loss of significant number of trees • Increased traffic on dangerous intersection of Princes Highway and Wanatta Lane and nearby school bus stops • Devaluation of properties • Vehicle noise pollution from increased heavy vehicles decelerating.

Table A.1 – Summary of Submissions (First Exhibition)

Author	Issues
228 & 229	• Loss of aesthetics and impact on lifestyle • Windblown litter and illegally dumped rubbish • Visual impacts • Odour • Dust and other contaminants polluting water supplies • Wind data is inaccurate • Increased incidence of fires • Increased trucks →dust and noise • Road needs a speed and load limit to prevent semi trailers using it. • Devaluation of properties • Noise impacts • Why not use a number of smaller scattered waste facilities as opposed to a CWF?
234	• Purchasing of land initially is questionable • Site is unsuitable • Windblown litter • Proposed cage will not work • Noise pollution • No accurate weather study, means findings are flawed • Lack of suitable tree barriers or vegetative concealment • Water contamination • How is leachate going to be contained in extreme events • What happens to the toxins building up on leachate fields during rain periods • Dust and odour pollutants and impacts of • Water supply for tip face watering? • Excrement from increased vermin • Correlation between contaminated sites and severe health problems in adults and children? • Safe disposal of asbestos • Impacts of pesticides, heavy metals, poisons, mercury, and toxins in the landfill? • Waiting lane for trucks on left hand side of Princes Highway – not safe • Increased traffic on Wanatta lane is a hazard, especially with fog and rain. • What's happening with the excess spoil? • General public use of the facility, providing they have 3m³ load? • Cost for extending the power to the site? • Do the roadworks cost include intersection upgrades? • Impact of extensive tree removal for lane upgrade • Impact on native fauna from tree removal • Consultation with indigenous population? • How to ensure the survival of proposed plantings of trees and shrubs • Procedure for fires on site, and if it escapes the bounds of the facility • No set provisions for the removal and treatment of leachate.

Table A.1 – Summary of Submissions (First Exhibition)

Author	Issues
235	• Site too risky • Removal of significant number of trees
245	• Impact on resident's health • Impact on drinking water • Management of disposal of asbestos

Table A.2 – Summary of Submission (Second Exhibition)

Author	Issues
1	N/A – part of submission 2
2	• Water Supply/Balance – Inaccurate rainfall data --> overestimation of water supply. – Where will additional water supply come from? – Assessment hasn't considered prolonged drought and climate change – Additional truck movements generated to supply water? What route? Extra cost? Where would the $$ come from to fund this? – What is "unlikely to be significant" in terms of impact on tank drinking water supply? – What distance from the tip will airborne contaminants travel? How will this be monitored? – Demand completely independent study on this. – Affected residents should be provided with alternative clean water supply – No allowance for dust suppression (each morning) of spoil piles for cover – No allowance for irrigation of tree screens • Electricity – No plans showing route of proposed upgrade – No impact assessment done for such – How and when does council plan to supply power (solar or mains) to the CWF? • Legislation – Proposal doesn't meet requirements of changes to Infrastructure SEPP – Wright Corporation Review of Application of Landfill Standards: ▪ No details/design of netting configuration for litter control ▪ No provision for material recovery ▪ No capture of landfill gases for energy use. • Incorrect information: – Cattle yards outside of footprint, yet heritage report says in – GHD plans show the cattle yards are in the footprint. • Heritage – Ayrdale Dairy Village – development would have intense visual, physical, aesthetic and value detrimental impact • Property Values – LPMA advice that no adjustment to land values, however no one is able to sell because of the tip – Valuer general's report says decrease 20% as a result of the CWF – Council compensation for decreased property values • Agriculture – What does "not significant" mean in relation to impact on stock on neighbouring properties? – "Minimal biosecurity risk to the receiving environment" surely any risk would be unacceptable. – What impact will contamination from the development have on operation of local primary producers? • Asbestos – How does council plan to contain all asbestos fibres in its waste cells? – Strong likelihood that exposed asbestos fibres could become airborne and blow to adjoining properties. • Personal Guarantee – All people involved in the DA should personally guarantee against lost, damage, etc for dwellings within 4km of the site.

Table A.2 – Summary of Submission (Second Exhibition)

Author	Issues
3	• Legislation – Development is not consistent with any of the zone objectives. Council cannot grant consent by virtue of clause 8(3) of LEP – No reference in any DA documentation to clause 123 of the Infrastructure SEPP ▪ The development is not on degraded land and thus landfill should be approved. ▪ Queries extent to which other matters of clause 123 have been addressed. • Stormwater – Were matters raised in submission to previous DA on SWMP and Leachate Disposal System addressed in the new DA? – Previous issues considered compelling reasons why DA should be refused.
4, 5b, 7e, 7f, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 43	• Possible contamination of the Bega River Catchment • Wind blown litter • Decreased property values • Health issues from dust and odour • Loss of aesthetics • Noise pollution • Destruction of Wanatta Lane Treescape and Wildlife Corridor • Increased traffic • Concerns for stock in surrounding properties • Impact on lifestyle • Increased vermin • Contamination of roof/tank water
5a	• Real effect on saleable value of properties • Social impact - anguish and depression from living in limbo over past 8 years, and worrying about impact it will have on health and lifestyle • What is the final cost of the CWF for ratepayers • If tank water is safe to drink , why will CWF worker be supplied with bottled water?
6	• Pollution of tank water supply • Wind blown rubbish • Will leachate be sprayed on strong wind days? • How often does leachate have to be sprayed? • Poor site selection – not in a protected area and very open to wind • More trees need to come down, which further removes any wind barrier • How can we trust council to maintain the standard when it has not even controlled the noxious weeds on the site? • CWF will spoil the wonderful natural environment • Irresponsible to put a tip on top of a natural water course which drains to the Bega River • Enormous risk to the health and environment • Concern about asbestos and chemical waste being accepted at the CWF • Purchase of the land was done prematurely and now justifying action • Decrease of land values • Should investigate alternate site, including State Forests, and locate in a more environmentally sound location.

Table A.2 – Summary of Submission (Second Exhibition)

Author	Issues
7a	• No environmental assessments have been done for the electricity upgrade. No decision should be made on the CWF DA until this has been undertaken.
7b	• Not considered state of the art, when asbestos, hospital waste and tyres can be disposed there • How can council guarantee that asbestos and toxic waste won't be disposed of there – how can council screen this waste? • Council's poor track record of managing waste facilities, i.e. Merimbula • Cant afford to gamble on people's health and the environment • No confidence in Council's management of waste facilities.
7c	• Recorded rainfall figures are considerably less than those used by GHD • They show periods of extended dry spells • Will additional water required be trucked in? • Where will the additional water come from? • Will the trucks use the same route as the garbage trucks? Any deviation is not acceptable.
7d	• How can the GM make the assumption that the distance between the CWF and receptors will reduce the impact of dust and other pollutants on roof water supply when the tip is on an elevated site with no tree barrier and subject to high velocity winds? • Design of the facility is outdated • Extensive health problems being experienced in similar examples overseas • Long term health disaster.
7e	• In heavy rain there is no way that leachate wont flow into the Bega River • How is council going to enforce garbage trucks only using the northern end of Wanatta Lane for access • So we will just have to put up with all the traffic
7f	• No study provided for mains power to waste facility • No plan for leachate pond aeration to manage odour problems • Revised test bores location on the site? Original ones deemed in the wrong spot • No leachate treatment system planned until a later date. This should be part of the infrastructure
8	• Why is roof water not safe for worker at CWF, but ok for nearby residents? • Property devaluation by 20%. Compensation will be sought. • Details on extension of electricity to the site. No environmental assessment undertaken. • Why is only two thirds of Wanatta Lane being sealed?
9	• Now in print that the water from the roof of the CWF is not suitable for drinking, what about the surrounding residents? • Devalued land prices. What compensation is being put forward • Where is the complete plan of the tip, including electricity connection? • Which part of the land will be used for spray irrigation of leachate? • Details of the cage for windblown litter? • How much leachate and methane per hour will be discharged from the site?

Table A.2 – Summary of Submission (Second Exhibition)

Author	Issues
10	• The use of yearly rainfall figures is misleading • What is going to be used for water when there is none? • Rain shadow effect on this site, which created heavy rain events. No contingency plans for this. • No studies or plans for when contaminated water ends up downstream. Should be an early warning system put in place to enable action to protect the water supply • No such thing as an acceptable level of risk when pollutants are entering residential drinking water supply. • Property devaluation is a perceived issue – this is not correct. Valuer general has devalued properties by 20% • Until council can offer the people of Bega Valley a well thought through, technologically advantageous, economically viable and environmentally acceptable solution to the disposal of waste, this process should cease and desist. • Facility doesn't meet the criteria set out by clause 12 of the LEP, as it goes against all requirements stated. • A very real possibility of contaminants, poisons, asbestos, heavy metals and a host of other environmental disasters going to be tipped into the general rubbish for compaction. Without sorting there is no possibility of monitoring what is going on. • Lack of planning and final design specifics are left out and as such the proposal is entirely inadequate. • Out of area experts being used and paid to deliver answers • No indigenous study has been commissioned or sought on this project • There is going to bio hazardous medical waste, asbestos and other toxic material allowed into the landfill • No trust that council will endeavour to do the best job possible on this issue. • How was the site selected being so close to the Bega River, when other sites were discounted because of the proximity to watercourses and windblown contaminants.

11	• Threat of contamination to water supply (Bega River)
	• Destruction of trees along Wanatta Lane, and subsequent loss of habitat
	• Social impact
	• Injury to stock
	• Validity of EIS:
	  – Conflicting statements
	  – Met data used
	  – Consequences of assessments based on inaccurate met data
	  – I have seen Bazas on a property adjacent to the site and have heard barking owls at night.
	• Concerned the issue of preserving clean drinking water has not been given a higher importance by council

Table A.2 – Summary of Submission (Second Exhibition)

Author	Issues
12	• Concerned that if approved, landfilling would not stop at one gully. Once council has the infrastructure on site there will be justification for extension of the facility. • Visual impact – windblown litter and illegally dumped rubbish • Pollution of rainwater tanks from dust, odour and other windblown contaminants • Northerly winds are damaging and have not been identified in the EIS. These will exacerbate increased incidence of fires identified in EIS as a result of the development. • The study will be slanted in the direction of the purchaser. • Further risk of fire, through planting of trees for buffer along road boundary • Wind data used in the EIS is compromised. • Increased traffic on Wanatta Lane. • Also the wealth of decomposed granite road base left over from site operations will be useful for Council and will need to be transported. • Pedestrian safety on Wanatta Lane. Need to have a speed limit. And a load limit to prevent semi trailers using the road. • Property devaluation • Quiet lifestyle free from pollution and noise will be ruined. • Potential for pollution of water supply for everyone in the Bega Catchment • Failure of the liners • Object to the community being used an experiment – for a design that has not been tested anywhere in the world before. • Increased health risks – studies from the UK and USA. • Refute the need for the CWF: – Other options available, including recycling technology – Smaller local facilities using industry best practice would have much less impact
13	• Wind blown litter • Health issues from dust and odour • Destruction of Wanatta Lane Treescape and Wildlife Corridor • Impact on Lifestyle • Increased Vermin • Contamination of Roof/Tank Water • Water pollution • Concern for residents of Wolumla and particularly Wanatta Lane. • Look for suitable land in State Forests
21	• Impact on Amenity: – The CWF has been re-classified as a Class 1 Waste Facility and as such brings a new dimension to the full extent or intention of Council's overall operational proposal and endeavours; – Facility will now have a major increase in the operational area • Leachate Leakage: – At the last public presentation, it was indicated that a 19% leakage of leachate was acceptable. What authority sets this standard? What would this actual volume be, and over what time period? – How will council convince local residents and visitors that this leakage will not affect the Bega Water Supply, the tourist trade, and Bega Cheese. – Cost estimate to restore clean water to these areas • Overall consequences beyond comprehension and far too risky.

Table A.2 – Summary of Submission (Second Exhibition)

Author	Issues
27	• Future of the farmers and industries that rely on a quality of water supply, as there is no guarantee that leachate will not enter the water catchment.
29	• Safety of children catching school buses • Safety of children walking, and riding bikes and horses along Wanatta Lane • Impact of rainwater tank water quality and on immediate environment.
33	• Evidence of birth defects in children born living near a landfill • Wind blown rubbish, dust, etc into neighbouring properties.
34	• Contamination of the Bega River Catchment • Health issues from dust and odour • Concern for stock in surrounding properties • Contamination of roof/tank water
35	• Impact on quiet area with houses and properties close by • Pollution of roof drinking water • Loss of trees along Wanatta Lane, through road widening • Windblown litter into our properties • Leaking of leachate • Leachate spraying on high wind days? • Intense rainfall events and flooding of cells and leachate ponds • Asbestos and chemical waste should not be dumped so close to houses • This is a wildlife corridor. What will happen to all the native species that use this land as habitat • Compensation for property devaluation?
36	• Impact on quiet rural area with houses and properties so close by • Impact of sight and smell of trucks • Loss of trees along Wanatta Lane, through road widening • Windblown litter into our properties • Certainty that there will be no leak of leachate into Bega River? • This is a wildlife corridor. What will happen to all the native species that use this land as habitat • Compensation for property devaluation?
37	• Leachate problems into waterway • Traffic • Air • Noise • Water pollution • Land devaluation • A “super tip” to accommodate rubbish and waste from the shire is gross stupidity.

Table A.2 – Summary of Submission (Second Exhibition)

Author	Issues
38, 39	• Is on open farmland and in a town water catchment area • Heavy truck use would be would be danger to school children, as Wanatta Lane is a school bus route • Proposed tree removal would be detrimental to the unique wildlife • A school bus stop at the intersection of Wanatta Lane and Princes Highway • Air pollutants would pollute rainwater tanks • Eyesore for motorists on Candello-Wolumla Road.
40	• Devaluation of property • Residents will have to deal with the tip long after the council staff have gone • Water contamination • The mess a tip brings to an area • Why haven't you taken up the offer to have the tip in a State Forest and not on farmland and residential land?
41	• Property devaluation • Impact on lifestyle, health, noise, dust, airborne pollutants. • Stress of not knowing what the outcome will be • Leachate spraying onto cells will be an environmental disaster waiting to happen • No water contamination remediation plan • How can they guarantee the Bega drinking water will be completely safe? • Seven options in the EIS for Leachate Disposal – doesn't state which one will be implemented. • Disturbing to read that leachate would be irrigated and sprayed via a sprinkler system onto an active cell or surrounding area. • Spraying of leachate has potential to contaminate groundwater, surface water and soil • Need to find a more suitable location that does not have any impacts on the environment • Can you assure that the water from roofs and dams will be safe for humans and cattle • Is council prepared to test our water and give us a written guarantee it will be safe to drink • Why would employees of the CWF not drink roof water, but it's ok for residents to? • No studies done on dust and airborne pollutants.
42	• Leachate spraying onto cells will be an environmental disaster waiting to happen • No water contamination remediation plan • How can they guarantee the Bega drinking water will be completely safe? • Seven options in the EIS for Leachate Disposal – doesn't state which one will be implemented. • Disturbing to read that leachate would be irrigated and sprayed via a sprinkler system onto an active cell or surrounding area. • Spraying of leachate has potential to contaminate groundwater, surface water and soil • Need to find a more suitable location that does not have any impacts on the environment • Can you assure that the water from roofs and dams will be safe for humans and cattle • Is council prepared to test our water and give us a written guarantee it will be safe to drink • Dust and airborne pollutants have not been properly addressed. They cause asthma and health problems • The report does not address how the dust and airborne pollutants would affect tank and dam water • Doesn't consider if a fire breaks out on the balance of the site outside of the CWF. How would it be contained? • Chemical fires have not been mentioned? How would these be controlled and managed?

Table A.2 – Summary of Submission (Second Exhibition)

Author	Issues
43	• There is no such thing as clean waste • Toxic in means toxic out • No clean water means no more clean Bega Cheese.
44a	• Pollution of Wolumla Creek and Bega River – Shire has a reputation for clean environment. Would have an impact on economic prosperity through tourism and cheese production. • Increased noise, from the tip and traffic • Land values drop • Reduced quality of living in quiet and beautiful area • Unfair that the worst of the shire's waste will be buried on the block of land adjoining our property. • Increased fire risk to adjoining properties.
44b	• Concern with the windrow of trees pointing in the direction of my property as a result of the bulldozing of the fence line. This is a dangerous situation as far as fire is concerned. I would like to know what Council have in mind for cleaning up and removing or burning the trees and debris caused by this work?
44c	• Pollution of Wolumla Creek and Bega River – Shire has a reputation for clean environment. Would have an impact on economic prosperity through tourism and cheese production. • Increased noise, from the tip and traffic • Land values drop • Reduced quality of living in quiet and beautiful area • Unfair that the worst of the shire's waste will be buried on the block of land adjoining our property. • Large number of trees to be removed for the road upgrade. Affecting wildlife and the charm of the lane • New and unforseen and undisclosed problems have emerged including the problem of removing large amounts of soil from cell excavation --> cost and increased heavy machinery. • Other sites in the north of the shire that are more suitable and were too quickly discounted. They would be more economic to develop, already having sealed roads, power, and affect less residents.
45	• No guarantee can be given that the development would not cause pollution • Will follow EPA guidelines, which don't guarantee no pollution, but set out tests to discover pollution when it occurs • No action plan to remove pollution if detected.

Table A.2 – Summary of Submission (Second Exhibition)

Author	Issues

46	• Will be detrimental to my farming enterprise
	• Will suffer from wind borne noise, dust, odour and toxins on our rain water collection sites (dams and roofs)
	• Flawed met data. Prevailing wind is from the west.
	• Not site specific, even though promise was made to erect an on-site recorder
	• Feral animal attraction:
	  – Ibis would destroy the dung beetles vitally used for pasture management
	  – Ibis would pollute the dams
	• Fire hazard, including spontaneous combustion
	• Established trees would be removed for the road upgrade. Provide a natural wind break.
	• Topography and geology:
	  – Erosive soils. Exposed subsoil turns to “sugar” and washes away during heavy downpours
	  – History of building dams in the area – I know that the topography and geology of the site makes it highly unsuitable.
	• Water – heavy rain causes very large runoff, will endanger the town water supply
	• Reduced property values
	• Adversely impact the serenity of the area.
	• More appropriate location, away from farmland and homes.

Appendix B

DG REQUIREMENTS

NSW GOVERNMENT
Department of Planning

Manufacturing & Rural Industries
Major Development Assessment
Phone: (02) 9228 6467
Fax: (02) 9228 6466
Email: **nigel.parsons@planning.nsw.gov.au**
Level 3, Room 304
23-33 Bridge Street
GPO Box 39
SYDNEY NSW 2001

Mr David Gamble
GHD Pty Ltd
10 Bond Street
SYDNEY NSW 2000

Our ref: 9039951

Dear Mr Gamble

Director-General's Requirements
Waste Management Facility
DGR ID No: 434

I refer to your request for the Director-General's requirements for the preparation of an Environmental Impact Statement (EIS) for the proposed Waste Management Facility at Wanatta Lane, Wolumla (Lot 3 DP 592206) in the Bega Valley local government area.

Statutory Issues

Attachment No. 1 outlines the statutory matters that must be included in any EIS under clauses 71 and 72 of the *Environmental Planning and Assessment Regulation 2000* (the EP&A Regulation).

Specific Issues

Under clause 73(1) of the EP&A Regulation, the Director-General requires the EIS to address the following specific issues:

1. **Description of the Proposal:** The EIS must include a full description of the proposal, clearly identifying the site, the proposed works (including infrastructure, landfill design as well as any rehabilitation works) and the duration and intensity of construction and operation.
2. **Justification for the Proposal:** The EIS must include a detailed justification of the proposal.
3. **Environmental Planning Instruments:** The EIS must assess the proposal against the relevant provisions of *State Environmental Planning Policy (Infrastructure) 2007, State Environmental Planning Policy No. 33 – Hazardous and Offensive Development, South Coast Regional Strategy, Lower South Coast Regional Plan No.2, Bega Valley Local Environmental Plan 2002* and relevant development control plans and section 94 plans.
4. **Key Issues:** The EIS must assess the following potential impacts of the proposal during construction and operation, and describe what measures would be implemented to avoid, minimise, mitigate, offset, manage and/or offset these potential impacts:
    - waste management including:
        - identification of the quantity and type of waste (including any dangerous goods) that would be handled/stored/disposed of at the facility; and
        - a description of how this waste would be stored and handled on site, and transported to and from the site;
    - visual, including landscaping, lighting and signage;
    - noise (during construction, operation and traffic);
    - air quality (including odour, dust and greenhouse gas emissions) in accordance with relevant Department of Environment and Climate Change guidelines. This assessment must consider any potential impacts on nearby private receptors;
    - hazards and risks in accordance with *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development*;
    - soils and water, including impacts on surface water, stormwater management, ground water, and details on water requirements, water supply, wastewater management, soil contamination and subsidence;
    - traffic and transport;
    - fire and incident management:
        - including technical information on the environmental protection equipment to be installed on the premises such as dust and noise controls, spill cleanup equipment and fire management and containment measures;

- flora and fauna (including impacts on native vegetation);
- heritage (including Aboriginal Heritage); and
- rehabilitation and final land use including:
  - justify the final land use in relation to the strategic land use objectives for the area;
  - describe in detail how the site would be progressively rehabilitated; and
  - describe what measures would be put in place for the ongoing management of the site following cessation of landfilling activities.

5. **Environmental Monitoring and Management:** The EIS must describe in detail how the environmental performance of the proposal would be monitored and managed over time.

Guidelines

During the preparation of the EIS, you must consult the Department's EIS Guideline *Landfilling.* This guideline is available for purchase from the Department's Information Centre, 23-33 Bridge Street, Sydney or by calling 1300 305 695.

It is also recommended that you consult the Department of Environment and Climate Change's (DECC) *Environmental Guideline: Solid Waste Landfills* which is available on the DECC's website.

Integrated Development

Under section 91 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) the development is "integrated development" if it requires certain approvals in addition to development consent before it may be carried out.

In your Form A, you indicated that your proposal will require an approval under the *Protection of the Environment Operations Act 1997.* The Department has consulted with the DECC and a copy of their requirements is attached.

It is also understood that an approval may be required under the *Water Management Act 2000.* Therefore you are advised to consult with DWE directly for its requirements for your EIS.

If further integrated approvals are identified before the Development Application (DA) is lodged, you must conduct your own consultation with the relevant agencies, and address their requirements in the EIS.

Consultation

During the preparation of the EIS, you should consult the relevant local, State and Commonwealth government authorities, service providers and community groups, and address any issues they may raise in the EIS. In particular, you should consult surrounding landowners and occupiers that are likely to be impacted by the proposal. Details of the consultations carried out and issues raised must be included in the EIS.

The Commonwealth Environment Protection and Biodiversity Conservation Act

If your proposal contains any actions that could have a significant impact on matters of National Environmental Significance, then it will require an additional approval under the Commonwealth *Environment Protection Biodiversity Conservation Act 1999 (EPBC Act).* These approvals are in addition to any approvals required under NSW legislation. If you have any questions about the application of the EPBC Act to your proposal, you should contact the Department of the Environment, Water, Heritage and the Arts in Canberra ((02) 6274 1111 or www.environment.gov.au).

Administration

You should note that if the development application to which these requirements relate is not made within two years of the date of this letter, you must re-consult with the Director-General prior to lodging the application.

Enquiries

If you have any enquiries about the above, please contact Nigel Parsons on (02) 9228 6467.

Yours sincerely

C. Ritchie 7/4/09

Chris Ritchie
Manager – Industry
Major Development Assessment
As delegate of the Director-General

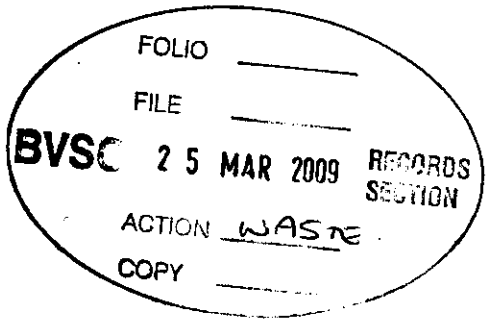
ATTACHMENT No. 1 – MANDATORY ISSUES FOR ALL ENVIRONMENTAL IMPACT STATEMENTS

1. a statement containing the following information:
   a) the name, address and professional qualifications of the person by whom the Environmental Impact Statement is prepared;
   b) the name and address of the person by whom the development application was made;
   c) the address of the land in respect of which the development application was made;
   d) a description of the development to which the Environmental Impact Statement relates;
   e) an assessment by the person by whom the Environmental Impact Statement is prepared of the environmental impact of the development to which the Statement relates, dealing with the matters referred to in clause 72 of the *Environmental Planning and Assessment Regulation 2000*;
   f) a declaration by the person by whom the Environmental Impact Statement is prepared to the effect that:
      i) the Environmental Impact Statement has been prepared in accordance with clauses 72 and 73 of the *Environmental Planning and Assessment Regulation 2000*;
      ii) the Environmental Impact Statement contains all available information that is relevant to the environmental assessment of the development to which the Statement relates;
      iii) that the information contained in the statement is neither false nor misleading;
2. a summary of the environmental impact statement;
3. a statement of the objectives of the development;
4. an analysis of any feasible alternatives to the carrying out of the development, having regard to its objectives, including the consequences of not carrying out the development;
5. an analysis of the development, including:
   a) a full description of the development;
   b) a general description of the environment likely to be affected by the development, together with a detailed description of those aspects of the environment that are likely to be significantly affected;
   c) the likely impact on the environment of the development;
   d) a full description of the measures proposed to mitigate any adverse effects of the development on the environment;
   e) a list of any approvals that must be obtained under any other Act or law before the development may lawfully be carried out.
6. a compilation (in a single section of the Environmental Impact Statement) of the measures referred to in point 5d) above;
7. the reasons justifying the carrying out of the development in the manner proposed, having regard to biophysical, economic and social considerations, including the following principles of ecologically sustainable development:
   a) the ***precautionary principle***, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, decisions should be guided by:
      i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment;
      ii) an assessment of the risk-weighted consequences of various options;
   b) ***inter-generational equity***, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations;
   c) ***conservation of biological diversity and ecological integrity***, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration;
   d) ***improved valuation, pricing and incentive mechanisms***, namely, that environmental factors should be included in the valuation of assets and services, such as:
      i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement;
      ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste;
      iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

Department of Environment & Climate Change NSW

Notice No: 1098685

Mr David Kitto
Manager – Major Assessments
Department of Planning
GPO Box 39
SYDNEY NSW 2001



Dear Mr Kitto

RE: Director General Requirements for a Proposed Central Waste Management Facility DGR ID No. 434.

I refer to your request for the Department of Environment and Climate Change's (DECC) 'Director General's Requirements' (DGR) for the environmental impact statement (EIS) in regard to the above proposal received by the DECC on 11 March 2009.

DECC has considered the details of the proposal as provided by the Department of Planning (DoP) and has identified the information it requires to assess the project in Attachments A, B and C. In summary, DECC's key information requirements for the proposal are:

- waste management;
- infrastructure and landfill design;
- air quality, particularly odour and dust;
- noise during construction and operation phases;
- surface and groundwater impacts, particularly how leachate will be prevented from entering surface waters and groundwater;
- stormwater and wastewater management and treatment;
- environmental monitoring and site rehabilitation;
- demonstration that the proposal meets the requirements of the *Environmental Guidelines: Solid Waste Landfills* (NSW, 1996);
- the impacts of the proposal on Aboriginal cultural heritage values;
- the impacts on flora and fauna values; and
- the actions that will taken to avoid or mitigate impacts or compensate to prevent unavoidable impacts identified above.

Protection of the Environment Operations Act 1997

Based upon the information provided to DECC, the proposal will require an Environment Protection Licence (EPL) for scheduled development works and the carrying out of scheduled activities under the provisions of the Protections of the Environment Operations Act 1997. All aspects of the proposal need to be addressed in relation to sensitive receptors. Should consent be granted for the proposal, the proponent will need to make a separate application to the Environment Protection Authority (EPA) to obtain an EPL.

Aboriginal Cultural Heritage

An Aboriginal Cultural Heritage survey will be required as part of the EIS preparation on all areas that may be impacted by all phases of the proposal. This work should be undertaken by a qualified archaeologist in accordance with the document "Aboriginal Cultural Heritage: Standards and Guidelines kit" (National Parks and Wildlife Service). Should any Aboriginal objects be found and likely to be impacted upon by the proposal, then the proponent must apply for a Section 90 permit issued under the National Parks and Wildlife Act 1974. DECC has provided its requirements for the assessment of Aboriginal Cultural Heritage issues at Attachment B.

Flora and Fauna

DECC is not an approval body in relation to the flora and fauna aspects of the proposal, because no approval (as set out in Section 91 of the Environmental Planning & Assessment Act 1979) (EP&A Act) is required in relation to these matters. Notwithstanding, DECC's concurrence is required for all development that is likely to significantly affect a threatened species, population, or ecological community, or its habitat before development consent can be granted.

If a threatened species, population, endangered ecological community or its habitat are found or likely to occur in the proposal area, an assessment under Part 5A of the EP&A Act is required. The Threatened Species Conservation Act 1995 (Schedules 1 & 2) provides for the classification and identification of the threatened species, populations, and endangered ecological community's (with the exception of fish and marine plants) to which the EP&A Act is concerned. DECC recommends that any environmental impact assessment of flora and fauna issues associated with the proposal are consistent with the guidelines provided at Attachment C.

To assist DECC in assessing the EIS it is requested that the EIS follow the format of the DoP's EIS guidelines and the specific EIS requirements as outlined in Attachment A.

DECC requests that the applicant provide 4 copies of the Development Application/EIS when lodging its application. These documents should be lodged at PO Box 622, Queanbeyan NSW, 2620. If you have any queries regarding this matter please contact Janine Goodwin or myself on 6229 7002

Yours sincerely

MR NIGEL SARGENT

Manager – South East Region

Environment Protection and Regulation Group

for Director-General

20/3/09

cc Mr David Basil
Bega Valley Shire Council
PO Box 492
Bega NSW 2550

cc Mr David Gamble
Business Group Manager – Pollution and Waste Management
GHD Pty Ltd
10 Bond Street
Sydney NSW 2000

ATTACHMENT A: EIS REQUIREMENTS FOR

CENTRAL WASTE FACILITY – WANATTA LANE

How to use these requirements

DECC requirements have been structured in accordance with the Department of Planning EIS Guidelines, as follows. It is suggested that the EIS follow the same structure:

A. Executive summary

B. The proposal

C. The location

D. Identification and prioritisation of issues

E. The environmental issues

F. List of approvals and licences

G. Compilation of mitigation measures

H. Justification for the proposal

I. Specific matters to address for the landfill facility

A EXECUTIVE SUMMARY

The executive summary should include a brief discussion of the extent to which the proposal achieves identified environmental outcomes.

B THE PROPOSAL

1. Objectives of the proposal

- The objectives of the proposal should be clearly stated and refer to:
  a) the size and type of the operation, the nature of the processes and the products, by-products and wastes produced;
  b) a life cycle approach to the production, use or disposal of products;
  c) the anticipated level of performance in meeting required environmental standards and cleaner production principles;
  d) the staging and timing of the proposal and any plans for future expansion;
  e) the proposal's relationship to any other industry or facility.

2. Description of the proposal

General

- Detail the quantities and classification of waste to be received, processed, recycled, stockpiled and landfilled.
- Provide information on the location and size of all stockpiles of unprocessed and processed/recycled waste at the premises.
- Provide information on the location of all activities at the premises.
- Provide details on all activities to be carried out on the premises.
- Outline the production process including:
  a) the environmental "mass balance" for the process – quantify in-flow and out-flow of materials, any points of discharge to the environment and their respective destinations (sewer, stormwater, atmosphere, recycling, landfill etc);
  b) any life-cycle strategies for the products.
- Outline cleaner production actions, including:
  a) measures to minimise waste (typically through addressing source reduction);
  b) proposals for use or recycling of by-products;
  c) proposed disposal methods for solid and liquid waste;
  d) air management systems including all potential sources of air emissions, proposals to re-use or treat emissions, emission levels relative to relevant standards in regulations, discharge points;
  e) water management system including all potential sources of water pollution, proposals for re-use, treatment etc, emission levels of any wastewater discharged, discharge points, summary of options explored to avoid a discharge, reduce its frequency or reduce its impacts, and rationale for selection of option to discharge;
  f) soil contamination treatment and prevention systems.

- Outline construction works including:
  a) actions to address any existing soil contamination;
  b) any earthworks or site clearing; re-use and disposal of cleared material (including use of spoil on-site);
  c) construction timetable and staging; hours of construction; proposed construction methods;
  d) environment protection measures, including noise mitigation measures, dust control measures and erosion and sediment control measures.

Air

- Identify all sources of air emissions from the development.
- Provide details of the project that are essential for predicting and assessing air impacts including:
  a) the quantities and physio-chemical parameters (eg concentration, moisture content, bulk density, particle sizes etc) of materials to be used, transported, produced or stored;
  b) an outline of procedures for handling, transport, production and storage;
  c) the management of solid, liquid and gaseous waste streams with potential for significant air impacts.

Noise and vibration

- Identify all noise sources from the development (including both construction and operation phases). Detail all potentially noisy activities including ancillary activities such as transport of goods and raw materials.
- Specify the times of operation for all phases of the development and for all noise producing activities.
- For projects with a significant potential traffic noise impact provide details of road alignment (include gradients, road surface, topography, bridges, culverts etc), and land use along the proposed road and measurement locations – diagrams should be to a scale sufficient to delineate individual residential blocks.

Water

- Provide details of the project that are essential for predicting and assessing impacts to waters:
  a) including the quantity and physio-chemical properties of all potential water pollutants and the risks they pose to the environment and human health, including the risks they pose to Water Quality Objectives in the ambient waters (as defined on www.environment.nsw.gov.au/ieo, using technical criteria derived from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, ANZECC 2000);
  b) the management of discharges with potential for water impacts;
  c) drainage works and associated infrastructure; land-forming and excavations; working capacity of structures; and water resource requirements of the proposal.
- Outline site layout, demonstrating efforts to avoid proximity to water resources (especially for activities with significant potential impacts eg effluent ponds) and showing potential areas of modification of contours, drainage etc.

- Outline how total water cycle considerations are to be addressed showing total water balances for the development (with the objective of minimising demands and impacts on water resources). Include water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.

Waste and chemicals

- Provide details of the quantity and type of both liquid waste and non-liquid waste generated, handled, processed or disposed of at the premises. Waste must be classified according to the publication *Waste Classification Guidelines* (NSW, 2008).
- Provide details of liquid waste and non-liquid waste management at the facility, including:
  a) the transportation, assessment and handling of waste arriving at or generated at the site;
  b) any stockpiling of wastes or recovered materials at the site;
  c) any waste processing related to the facility, including reuse, recycling, reprocessing (including composting) or treatment both on- and off-site;
  d) the method for disposing of all wastes or recovered materials at the facility;
  e) the emissions arising from the handling, storage, processing and reprocessing of waste at the facility;
  f) the proposed controls for managing the environmental impacts of these activities.
- Provide details of spoil disposal with particular attention to:
  a) the quantity of spoil material likely to be generated;
  b) proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil;
  c) the need to maximise reuse of spoil material in the construction industry;
  d) identification of the history of spoil material and whether there is any likelihood of contaminated material, and if so, measures for the management of any contaminated material;
  e) designation of transportation routes for transport of spoil.
- Provide details of procedures for the assessment, handling, storage, transport and disposal of all hazardous and dangerous materials used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes.
- Provide details of the type and quantity of any chemical substances to be used or stored and describe arrangements for their safe use and storage.
- Reference should be made to the guidelines: *'Environmental Guidelines: Solid Waste Landfills'* (NSW, 1996); *Waste Classification Guidelines* (DECC, 2008); *Composting and Related Organics Processing Facilities* (DEC, 2004).

ESD

- Demonstrate that the planning process and any subsequent development incorporates objectives and mechanisms for achieving ESD, including:
  a) an assessment of a range of options available for use of the resource, including the benefits of each option to future generations
  b) proper valuation and pricing of environmental resources
  c) identification of who will bear the environmental costs of the proposal.

3. Rehabilitation

- Outline considerations of site maintenance, and proposed plans for the final condition of the site (ensuring its suitability for future uses).

4. Consideration of alternatives and justification for the proposal

- Consider the environmental consequences of adopting alternatives, including alternative:
  a) sites and site layouts;
  b) access modes and routes;
  c) materials handling and production processes;
  d) waste and water management;
  e) impact mitigation measures;
  f) energy sources.
- Selection of the preferred option should be justified in terms of:
  a) ability to satisfy the objectives of the proposal;
  b) relative environmental and other costs of each alternative;
  c) acceptability of environmental impacts and contribution to identified environmental objectives;
  d) acceptability of any environmental risks or uncertainties;
  e) reliability of proposed environmental impact mitigation measures;
  f) efficient use (including maximising re-use) of land, raw materials, energy and other resources.

C THE LOCATION

1. General

- Provide an overview of the affected environment to place the proposal in its local and regional environmental context including:
  a) meteorological data (eg rainfall, temperature and evaporation, wind speed and direction);
  b) topography (landform element, slope type, gradient and length);
  c) surrounding land uses (potential synergies and conflicts);
  d) geomorphology (rates of landform change and current erosion and deposition processes);
  e) soil types and properties (including erodibility; engineering and structural properties; dispersibility; permeability; presence of acid sulfate soils and potential acid sulfate soils);
  f) ecological information (water system habitat, vegetation, fauna);
  g) availability of services and the accessibility of the site for passenger and freight transport.

2. Air

- Describe the topography and surrounding land uses. Provide details of the exact locations of dwellings, schools and hospitals. Where appropriate provide a perspective view of the study area such as the terrain file used in dispersion models.
- Describe surrounding buildings that may effect plume dispersion.
- Provide and analyse site representative data on following meteorological parameters:
  a) temperature and humidity;
  b) rainfall, evaporation and cloud cover;
  c) wind speed and direction;
  d) atmospheric stability class;
  e) mixing height (the height that emissions will be ultimately mixed in the atmosphere);
  f) katabatic air drainage;
  g) air re-circulation.

3. Noise and vibration

- Identify any noise sensitive locations likely to be affected by activities at the site, such as residential properties, schools, churches, and hospitals. Typically the location of any noise sensitive locations in relation to the site should be included on a map of the locality.
- Identify the land use zoning of the site and the immediate vicinity and the potentially affected areas.

4. Water

- Describe the catchment including proximity of the development to any waterways and provide an assessment of their sensitivity/significance from a public health, ecological and/or economic perspective. The Water Quality and River Flow Objectives on the website: www.environment.nsw.gov.au/ieo should be used to identify the agreed environmental values and human uses for any affected waterways. This will help with the description of the local and regional area.

5. Soil Contamination Issues

- Provide details of site history – if earthworks are proposed, this needs to be considered with regard to possible soil contamination, for example if the site was previously a landfill site or if irrigation of effluent has occurred.

D IDENTIFICATION AND PRIORITISATION OF ISSUES / SCOPING OF IMPACT ASSESSMENT

- Provide an overview of the methodology used to identify and prioritise issues. The methodology should take into account:
  a) relevant NSW government guidelines;
  b) industry guidelines;
  c) EISs for similar projects;
  d) relevant research and reference material;
  e) relevant preliminary studies or reports for the proposal;
  f) consultation with stakeholders.
- Provide a summary of the outcomes of the process including:
  a) all issues identified including local, regional and global impacts (eg increased/ decreased greenhouse emissions);
  b) key issues which will require a full analysis (including comprehensive baseline assessment);
  c) issues not needing full analysis though they may be addressed in the mitigation strategy;
  d) justification for the level of analysis proposed (the capacity of the proposal to give rise to high concentrations of pollution compared with the ambient environment or environmental outcomes is an important factor in setting the level of assessment).

E THE ENVIRONMENTAL ISSUES

1. General

- The potential impacts identified in the scoping study need to be assessed to determine their significance, particularly in terms of achieving environmental outcomes, and minimising environmental pollution.
- Identify gaps in information and data relevant to significant impacts of the proposal and any actions proposed to fill those information gaps so as to enable development of appropriate management and mitigation measures. This is in accordance with ESD requirements.

Describe baseline conditions

- Provide a description of existing environmental conditions for any potential impacts.

Assess impacts

- For any potential impacts relevant for the assessment of the proposal provide a detailed analysis of the impacts of the proposal on the environment including the cumulative impact of the proposal on the receiving environment especially where there are sensitive receivers.
- Describe the methodology used and assumptions made in undertaking this analysis (including any modelling or monitoring undertaken) and indicate the level of confidence in the predicted outcomes and the resilience of the environment to cope with the predicted impacts.
- The analysis should also make linkages between different areas of assessment where necessary to enable a full assessment of environmental impacts eg assessment of impacts on air quality will often need to draw on the analysis of traffic, health, social, soil and/or ecological systems impacts; etc.
- The assessment needs to consider impacts at all phases of the project cycle including: exploration (if relevant or significant), construction, routine operation, start-up operations, upset operations and decommissioning if relevant.
- The level of assessment should be commensurate with the risk to the environment.

Describe management and mitigation measures

- Describe any mitigation measures and management options proposed to prevent, control, abate or mitigate identified environmental impacts associated with the proposal and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.
- Proponents are expected to implement a 'reasonable level of performance' to minimise environmental impacts. The proponent must indicate how the proposal meets reasonable levels of performance. For example, reference technology based criteria if available, or identify good practice for this type of activity or development. A 'reasonable level of performance' involves adopting and implementing technology and management practices to achieve certain pollutant emissions levels in economically viable operations. Technology-based criteria evolve gradually over time as technologies and practices change.

- Use environmental impacts as key criteria in selecting between alternative sites, designs and technologies, and to avoid options having the highest environmental impacts.
- Outline any proposed approach (such as an Environmental Management Plan) that will demonstrate how commitments made in the EIS will be implemented. Areas that should be described include:

  a) operational procedures to manage environmental impacts;

  b) monitoring procedures;

  c) training programs;

  d) community consultation;

  e) complaint mechanisms including site contacts;

  f) strategies to use monitoring information to improve performance;

  g) strategies to achieve acceptable environmental impacts and to respond in event of exceedences.

2. Air

Describe baseline conditions

- Provide a description of existing air quality and meteorology, using existing information and site representative ambient monitoring data.

Assess impacts

- Identify all pollutants of concern and estimate emissions by quantity (and size for particles), source and discharge point.
- Estimate the resulting ground level concentrations of all pollutants. Where necessary (e.g. potentially significant impacts and complex terrain effects), use an appropriate dispersion model to estimate ambient pollutant concentrations. Discuss choice of model and parameters with DECC.
- Describe the effects and significance of pollutant concentration on the environment, human health, amenity and regional ambient air quality standards or goals.
- Describe the contribution that the development will make to regional and global pollution, particularly in sensitive locations.
- For potentially odorous emissions provide the emission rates in terms of odour units (determined by techniques compatible with EPA / DECC procedures). Use sampling and analysis techniques for individual or complex odours and for point or diffuse sources, as appropriate.
- Reference should be made to the following guidelines: Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW (EPA, August 2005); Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA, January 2007); Technical Framework – Assessment and Management of Odour from Stationary Sources in NSW (EPA, November 2006); Technical Notes: Assessment and Management of Odour from Stationary Sources in NSW (EPA, November 2006).

Describe management and mitigation measures

- Outline specifications of pollution control equipment (including manufacturer's performance guarantees where available) and management protocols for both point and fugitive emissions. Where possible, this should include cleaner production processes.

3. Noise and vibration

Describe baseline conditions

- Determine the existing background (L_{A90}) and ambient (L_{Aeq}) noise levels in accordance with the *NSW Industrial Noise Policy*.
- Determine the existing road traffic noise levels in accordance with the *NSW Environmental Criteria for Road Traffic Noise*, where road traffic noise impacts may occur.
- The noise impact assessment report should provide details of all monitoring of existing ambient noise levels including:
  a) details of equipment used for the measurements;
  b) a brief description of where the equipment was positioned;
  c) a statement justifying the choice of monitoring site, including the procedure used to choose the site, having regards to the definition of 'noise sensitive locations(s)' and 'most affected locations(s)' described in Section 3.1.2 of the *NSW Industrial Noise Policy;*
  d) details of the exact location of the monitoring site and a description of land uses in surrounding areas;
  e) a description of the dominant and background noise sources at the site;
  f) day, evening and night assessment background levels for each day of the monitoring period;
  g) the final Rating Background Level (RBL) value;
  h) graphs of the measured noise levels for each day should be provided;
  i) a record of periods of affected data (due to adverse weather and extraneous noise), methods used to exclude invalid data and a statement indicating the need for any re-monitoring under Step 1 in Section B1.3 of the *NSW Industrial Noise Policy*;
  j) determination of L_{Aeq} noise levels from existing industry.

Assess impacts

- Determine the project specific noise levels for the site. For each identified potentially affected receiver, this should include:
  a) determination of the intrusive criterion for each identified potentially affected receiver;
  b) selection and justification of the appropriate amenity category for each identified potentially affected receiver;
  c) determination of the amenity criterion for each receiver;
  d) determination of the appropriate sleep disturbance limit.

- Maximum noise levels during night-time period (10pm-7am) should be assessed to analyse possible affects on sleep. Where $L_{A1(1min)}$ noise levels from the site are less than 15 dB above the background L_{A90} noise level, sleep disturbance impacts are unlikely. Where this is not the case, further analysis is required. Additional guidance is provided in Appendix B of the *NSW Environmental Criteria for Road Traffic Noise*.
- Determine expected noise level and noise character (eg tonality, impulsiveness, vibration, etc) likely to be generated from noise sources during:
  a) site establishment;
  b) construction;
  c) operational phases;
  d) transport including traffic noise generated by the proposal;
  e) other services.
- Determine the noise levels likely to be received at the most sensitive locations (these may vary for different activities at each phase of the development). Potential impacts should be determined for any identified significant adverse meteorological conditions. Predicted noise levels under calm conditions may also aid in quantifying the extent of impact where this is not the most adverse condition.
- The noise impact assessment report should include:
  a) a plan showing the assumed location of each noise source for each prediction scenario;
  b) a list of the number and type of noise sources used in each prediction scenario to simulate all potential significant operating conditions on the site;
  c) any assumptions made in the predictions in terms of source heights, directivity effects, shielding from topography, buildings or barriers, etc;
  d) methods used to predict noise impacts including identification of any noise models used. Where modelling approaches other than the use of the ENM or SoundPlan computer models are adopted, the approach should be appropriately justified and validated;
  e) an assessment of appropriate weather conditions for the noise predictions including reference to any weather data used to justify the assumed conditions;
  f) the predicted noise impacts from each noise source as well as the combined noise level for each prediction scenario under any identified significant adverse weather conditions as well as calm conditions where appropriate;
  g) for developments where a significant level of noise impact is likely to occur, noise contours for the key prediction scenarios should be derived;
  h) an assessment of the need to include modification factors as detailed in Section 4 of the *NSW Industrial Noise Policy*.
- Discuss the findings from the predictive modelling and, where relevant noise criteria have not been met, recommend additional mitigation measures.
- The noise impact assessment report should include details of any mitigation proposed including the attenuation that will be achieved and the revised noise impact predictions following mitigation.
- Where relevant noise/vibration criteria cannot be met after application of all feasible and cost effective mitigation measures the residual level of noise impact needs to be quantified by identifying:
  a) locations where the noise level exceeds the criteria and extent of exceedence;
  b) numbers of people (or areas) affected;

c) times when criteria will be exceeded;

d) likely impact on activities (speech, sleep, relaxation, listening, etc);

e) change on ambient conditions;

f) the result of any community consultation or negotiated agreement.

- For the assessment of existing and future traffic noise, details of data for the road should be included such as assumed traffic volume; percentage heavy vehicles by time of day; and details of the calculation process. These details should be consistent with any traffic study carried out in the EIS.
- Where blasting is intended an assessment in accordance with the *Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration* (ANZECC, 1990) should be undertaken. The following details of the blast design should be included in the noise assessment:

  a) bench height, burden spacing, spacing burden ratio;

  b) blast hole diameter, inclination and spacing;

  c) type of explosive, maximum instantaneous charge, initiation, blast block size, blast frequency.

Describe management and mitigation measures

- Determine the most appropriate noise mitigation measures and expected noise reduction including both noise controls and management of impacts for both construction and operational noise. This will include selecting quiet equipment and construction methods, noise barriers or acoustic screens, location of stockpiles, temporary offices, compounds and vehicle routes, scheduling of activities, etc.
- For traffic noise impacts, provide a description of the ameliorative measures considered (if required), reasons for inclusion or exclusion, and procedures for calculation of noise levels including ameliorative measures. Also include, where necessary, a discussion of any potential problems associated with the proposed ameliorative measures, such as overshadowing effects from barriers. Appropriate ameliorative measures may include:

  a) use of alternative transportation modes, alternative routes, or other methods of avoiding the new road usage;

  b) control of traffic (eg: limiting times of access or speed limitations);

  c) resurfacing of the road using a quiet surface;

  d) use of (additional) noise barriers or bunds;

  e) treatment of the façade to reduce internal noise levels buildings where the night-time criteria is a major concern;

  f) more stringent limits for noise emission from vehicles (i.e. using specially designed 'quite' trucks and/or trucks to use air bag suspension;

  g) driver education;

  h) appropriate truck routes;

  i) limit usage of exhaust breaks;

  j) use of premium muffles on trucks;

  k) reducing speed limits for trucks;

  l) ongoing community liaison and monitoring of complaints;

  m) phasing in the increased road use.

4. Water

Describe baseline conditions

- Describe existing surface and groundwater quality – an assessment needs to be undertaken for any water resource likely to be affected by the proposal and for all conditions (e.g. a wet weather sampling program is needed if runoff events may cause impacts).
- Provide site drainage details and surface runoff yield.
- State the ambient Water Quality and River Flow Objectives for the receiving waters. These refer to the community's agreed environmental values and human uses endorsed by the Government as goals for the ambient waters. These environmental values are published on the website: www.environment.nsw.gov.au/ieo. The EIS should state the environmental values listed for the catchment and waterway type relevant to your proposal. NB: A consolidated and approved list of environmental values are not available for groundwater resources. Where groundwater may be affected the EIS should identify appropriate groundwater environmental values and justify the choice.
- State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC 2000 *Guidelines for Fresh and Marine Water Quality* (http://www.deh.gov.au/water/quality/nwqms/volume1.html) (Note that, as at 2004, the NSW Water Quality Objectives booklets and website contain technical criteria derived from the 1992 version of the ANZECC Guidelines. The Water Quality Objectives remain as Government Policy, reflecting the community's environmental values and long-term goals, but the technical criteria are replaced by the more recent ANZECC 2000 Guidelines). NB: While specific guidelines for groundwater are not available, the ANCECC 2000 Guidelines endorse the application of the trigger values and decision trees as a tool to assess risk to environmental values in groundwater.
- State any locally specific objectives, criteria or targets, which have been endorsed by the government e.g. the Healthy Rivers Commission Inquiries (www.hrc.nsw.gov.au) or the NSW Salinity Strategy (DLWC, 2000) (www.dlwc.nsw.gov.au/care/salinity/#Strategy).
- Where site specific studies are proposed to revise the trigger values supporting the ambient Water Quality and River Flow Objectives, and the results are to be used for regulatory purposes (e.g. to assess whether a licensed discharge impacts on water quality objectives), then prior agreement from the DECC on the approach and study design must be obtained.
- Describe the state of the receiving waters and relate this to the relevant Water Quality and River Flow Objectives (i.e. are Water Quality and River Flow Objectives being achieved?). Proponents are generally only expected to source available data and information. However, proponents of large or high risk developments may be required to collect some ambient water quality / river flow / groundwater data to enable a suitable level of impact assessment. Issues to include in the description of the receiving waters could include:
  a) lake or estuary flushing characteristics;
  b) specific human uses (e.g. exact location of drinking water offtake);
  c) sensitive ecosystems or species conservation values;
  d) a description of the condition of the local catchment e.g. erosion levels, soils, vegetation cover, etc;
  e) an outline of baseline groundwater information, including, but not restricted to, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment;

f) historic river flow data where available for the catchment.

Assess impacts

- No proposal should breach clause 120 of the *Protection of the Environment Operations Act* 1997 (i.e. pollution of waters is prohibited unless undertaken in accordance with relevant regulations).
- Identify and estimate the quantity of all pollutants that may be introduced into the water cycle by source and discharge point including residual discharges after mitigation measures are implemented.
- Include a rationale, along with relevant calculations, supporting the prediction of the discharges.
- Describe the effects and significance of any pollutant loads on the receiving environment. This should include impacts of residual discharges through modelling, monitoring or both, depending on the scale of the proposal. Determine changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, wetland hydrologic regimes and groundwater).
- Describe water quality impacts resulting from changes to hydrologic flow regimes (such as nutrient enrichment or turbidity resulting from changes in frequency and magnitude of stream flow).
- Identify any potential impacts on quality or quantity of groundwater describing their source.
- Identify potential impacts associated with geomorphological activities with potential to increase surface water and sediment runoff or to reduce surface runoff and sediment transport. Also consider possible impacts such as bed lowering, bank lowering, instream siltation, floodplain erosion and floodplain siltation.
- Identify impacts associated with the disturbance of acid sulfate soils and potential acid sulfate soils.
- Containment of spills and leaks shall be in accordance with the technical guidelines section 'Bunding and Spill Management' of the *Authorised Officers Manual* (EPA, 1995) (http://www.environment.nsw.gov.au/mao/bundingspill.htm) and the most recent versions of the Australian Standards referred to in the Guidelines. Containment should be designed for no-discharge.
- The significance of the impacts listed above should be predicted. When doing this it is important to predict the ambient water quality and river flow outcomes associated with the proposal and to demonstrate whether these are acceptable in terms of achieving protection of the Water Quality and River Flow Objectives. In particular the following questions should be answered:
  a) will the proposal protect Water Quality and River Flow Objectives where they are currently achieved in the ambient waters; and
  b) will the proposal contribute towards the achievement of Water Quality and River Flow Objectives over time, where they are not currently achieved in the ambient waters.
- Consult with DECC as soon as possible if a mixing zone is proposed (a mixing zone could exist where effluent is discharged into a receiving water body, where the quality of the water being discharged does not immediately meet water quality objectives. The mixing zone could result in dilution, assimilation and decay of the effluent to allow water quality objectives to be met further downstream, at the edge of the mixing zone). DECC will advise the proponent under what conditions a mixing zone will and will not be acceptable, as well as the information and modelling requirements for assessment.
- Where a licensed discharge is proposed, provide the rationale as to why it cannot be avoided through application of a reasonable level of performance, using available technology, management practice and industry guidelines.
- Where a licensed discharge is proposed, provide the rationale as to why it represents the best environmental outcome and what measures can be taken to reduce its environmental impact.

- Reference should be made to relevant guidelines including *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004), *Draft Managing Urban Stormwater: Soils and Construction – Volume 2B – Waste Landfils* (DECC, 2007), *Guidelines for Fresh and Marine Water Quality* ANZECC 2000, *Environmental Guidelines: Use of Effluent by Irrigation* (DEC, 2004), *Environmental Guidelines: Solid Waste Landfills* (EPA, 1996).

Describe management and mitigation measures

- Outline stormwater management to control pollutants at the source and contain them within the site. Also describe measures for maintaining and monitoring any stormwater controls.
- Outline erosion and sediment control measures directed at minimising disturbance of land, minimising water flow through the site and filtering, trapping or detaining sediment. Also include measures to maintain and monitor controls as well as rehabilitation strategies.
- Describe waste water treatment measures that are appropriate to the type and volume of waste water and are based on a hierarchy of avoiding generation of waste water; capturing all contaminated water (including stormwater) on the site; reusing/recycling waste water; and treating any unavoidable discharge from the site to meet specified water quality requirements.
- Outline pollution control measures relating to storage of materials, possibility of accidental spills (eg preparation of contingency plans), appropriate disposal methods, and generation of leachate.
- Describe hydrological impact mitigation measures including:
  a) site selection (avoiding sites prone to flooding and waterlogging, actively eroding or affected by deposition);
  b) minimising runoff;
  c) minimising reductions or modifications to flow regimes;
  d) avoiding modifications to groundwater.
- Describe groundwater impact mitigation measures including:
  a) site selection;
  b) retention of native vegetation and revegetation;
  c) artificial recharge;
  d) providing surface storages with impervious linings;
  e) monitoring program.
- Describe geomorphological impact mitigation measures including:
  a) site selection;
  b) erosion and sediment controls;
  c) minimising instream works;
  d) treating existing accelerated erosion and deposition;
  e) monitoring program.
- Any proposed monitoring should be undertaken in accordance with the *Approved Methods for the Sampling and Analysis of Water Pollutants in NSW* (DEC 2004).

5. Soils and contamination

Describe baseline conditions

- Provide any details (in addition to those provided in the location description - Section C) that are needed to describe the existing situation in terms of soil types and properties and soil contamination.

Assess impacts

- Identify any likely impacts resulting from the construction or operation of the proposal, including the likelihood of:
  a) disturbing any existing contaminated soil;
  b) contamination of soil by operation of the activity;
  c) subsidence or instability;
  d) soil erosion;
  e) disturbing acid sulfate or potential acid sulfate soils.

Describe management and mitigation measures

- Describe and assess the effectiveness or adequacy of any soil management and mitigation measures during construction and operation of the proposal including:
  a) erosion and sediment control measures;
  b) proposals for site remediation – see *Managing Land Contamination, Planning Guidelines SEPP 55 – Remediation of Land* (Department of Urban Affairs and Planning and Environment Protection Authority, 1998);
  c) proposals for the management of these soils – see *Assessing and Managing Acid Sulfate Soils,* Environment Protection Authority, 1995 (note that this is the only methodology accepted by the DECC).

6. Waste and chemicals

Describe baseline conditions

- Describe any existing waste or chemicals operations related to the proposal.

Assess impacts

- Assess the adequacy of proposed measures to minimise natural resource consumption and minimise impacts from the handling, transporting, storage, processing and reprocessing of waste and/or chemicals.
- Reference should be made to the *Waste Classification Guidelines* (DECC, 2008) and the *Environmental Guidelines: Solid Waste Landfills* (EPA, 1996).

Describe management and mitigation measures

- Outline measures to minimise the consumption of natural resources.
- Outline measures to avoid the generation of waste and promote the re-use and recycling and reprocessing of any waste.
- Outline measures to support any approved regional or industry waste plans.

7. Cumulative impacts

- Identify the extent that the receiving environment is already stressed by existing development and background levels of emissions to which this proposal will contribute.
- Assess the impact of the proposal against the long term air, noise and water quality objectives for the area or region.
- Identify infrastructure requirements flowing from the proposal (eg water and sewerage services, transport infrastructure upgrades).
- Assess likely impacts from such additional infrastructure and measures reasonably available to the proponent to contain such requirements or mitigate their impacts (eg travel demand management strategies).

F. LIST OF APPROVALS AND LICENCES

- Identify all approvals and licences required under environment protection legislation including details of all scheduled activities, types of ancillary activities and types of discharges (to air, land, water).

G. COMPILATION OF MITIGATION MEASURES

- Outline how the proposal and its environmental protection measures would be implemented and managed in an integrated manner so as to demonstrate that the proposal is capable of complying with statutory obligations under DECC licences or approvals (eg outline of an environmental management plan).
- The mitigation strategy should include the environmental management and cleaner production principles which would be followed when planning, designing, establishing and operating the proposal. It should include two sections, one setting out the program for managing the proposal and the other outlining the monitoring program with a feedback loop to the management program.

H. JUSTIFICATION FOR THE PROPOSAL

- Reasons should be included which justify undertaking the proposal in the manner proposed, having regard to the potential environmental impacts.

I. SPECIFIC MATTERS TO ADDRESS FOR THE LANDFILL FACILITY

The EIS should demonstrate how environmental benchmark techniques in the *Environmental Guidelines: Solid Waste Landfills* (EPA 1996) will be addressed, including, but not limited to, the following matters:

1. Describe the proposed leachate disposal system which will dispose of leachate generated at the premises.

   a) Examine and prioritise the following leachate disposal systems:
      (i) evaporation from the leachate storage dam
      (ii) injection into the landfilled waste.
      (iii) irrigation on the active tipping face.
      (iv) irrigation to a dedicated and contained irrigation area.

   b) provide specific information on the design, construction, operation and monitoring of each disposal system listed in paragraph (a).

   c) provide information on whether automated functions are practical or feasible for each disposal system listed in paragraph (a).

   d) provide information on whether the leachate dam and disposal capacity are suitably sized for each disposal system listed in paragraph (a) (including water and leachate balances).

2. Provide information demonstrating that the hydraulic and nutrient requirements for any nominated irrigation area/s have been determined in accordance with *Environmental Guidelines: Use of Effluent by Irrigation* (DEC, 2004).

3. Provide information demonstrating how run off from any leachate irrigation area will be prevented from entering stormwater catchments.

4. Provide construction drawings, specifications, design details and installation and commissioning schedules for the:
   (a) Landfill liner system;
   (b) Leachate collection, conveyance, storage and disposal system;
   (c) Progressive capping program; and
   (d) Rehabilitation program

5. Provide a Construction Quality Assurance Plan which demonstrates that leachate management and stormwater management measures will be installed in a manner which achieves their design specification.

6. Provide information demonstrating that a sufficient quantity of cover material is available on site should a shallow aquifer exist above the bedrock/soil interface.

7. Provide a comprehensive construction and operation stormwater management plan which identifies and designs both temporary and permanent stormwater management works for the premises. The stormwater management plan must be prepared in accordance with Landcom's "Managing Urban Stormwater: Soils and Construction (2004) and the draft "Managing Urban Stormwater: Soils and Construction – Volume 2D – Waste Landfilling (DECC 2007)". This includes demonstrating that the sediment control dam is sized to contain runoff from all disturbed areas from a 90th percentile 5 day duration rainfall event.

ATTACHMENT B: EIS REQUIREMENTS FOR

PROPOSED CENTRAL WASTE FACILITY

The DECC has a statutory role in the protection and preservation of Aboriginal sites. This includes reviewing and assessing the Aboriginal cultural and archaeological aspects of environmental studies, as well as a regulatory role in their impact or destruction.

The EIS should consider Aboriginal cultural heritage, even if the area is already disturbed in some way. The EIS should consider:

1. Legislative framework and implications for timing

A Section 90 Consent is required in order to destroy, deface or damage or to cause or permit the destruction or defacement of or damage to an Aboriginal object or an Aboriginal place (Section 90 (1) of the National Parks and Wildlife Act 1974) (NPW Act). While the NPW Act provides for the destruction of sites this should always be considered as a last option and must therefore be well supported.

A Permit, pursuant to Section 87 (1) of the NPW Act (commonly referred to as Section 87 Permits), is required to:

- Disturb or excavate any land, or cause any land to be disturbed or excavated, for the purpose of discovering an Aboriginal object; and/or

- Disturb or move an Aboriginal object. (cf: Section 86 and 87 of the NPW Act)

Section 87 Permits are often required in order to fully investigate the nature and extent of Aboriginal objects for which a Section 90 Consent may be sought. Accordingly a Section 87 Permit will often be required well in advance of the submission of a Development Application.

A Section 87 Permit or a Section 90 Consent is usually subject to special conditions that require impact minimisation and salvage. Salvage is a form of mitigation by documenting in detail what is to be lost by the impact and may involve archaeological excavation and analysis, or other types of recovery and study.

Section 87 applications should be accompanied by a care and control application pursuant to Section 85A of the NPW Act.

2. EIS Requirements

The EIS should comprehensively assess Aboriginal Heritage issues where any ground disturbance is anticipated. This assessment must be consistent with the document "Aboriginal Cultural Heritage and the Integrated Development Assessment Process – Information for Applicants" ("Information for Applicants") dated 20 February 2001 and should include (but is not limited to):

- Document that the DECC's Aboriginal Heritage Information Management System (AHIMS) has been accessed in the initial planning stage to determine if there are any already known sites which will require protection. It should be noted that the AHIMS database is not a conclusive indicator that sites exist in the development area. Information from the AHIMS database may be sourced through the AHIMS Registrar by contacting the Cultural Heritage Branch of DECC on 02 95856471.

- Demonstrate that the Aboriginal community (which may include Local Aboriginal Land Councils, Native Title Groups and Elders Groups) have been consulted and have been advised about anticipated impact to sites relevant to their heritage. There also may be knowledge in the community about sites within the development area, particularly those related to oral traditions. The process of Aboriginal consultation

must be maintained throughout the entire assessment procedure. Attachment E outlines the requirements for consultation in greater detail.

- An archaeological survey and assessment must be undertaken by an archaeologist in accordance with NPWS guidelines contained in the "*Aboriginal Cultural Heritage: Standards and Guidelines*" that has been made widely available to archaeologists undertaking this work. This archaeological assessment must be included in the EIS in final form.

  When undertaking this assessment the significance of the sites must also be assessed. The archaeological survey must determine the sites where disturbance can be avoided. Note that damage or destruction of some sites may be unacceptable or that special safeguards may be required.

  Test excavations are often needed to verify the location of aboriginal sites. Such excavations need to be undertaken prior to the lodgement of Development Application and in accordance with a Section 87 Permit.

- Before lodging the Development Application, Section 91 cards must be referred directly to the DECC and must **not** be submitted with the EIS.

Effect of not fully documenting Aboriginal objects and Aboriginal places in the EIS

Aboriginal sites are widespread throughout New South Wales with considerable regional variation in the types of sites, their age, their contents and how they are situated on the landscape. Under the NPW Act it is an offence to knowingly destroy, deface or damage an Aboriginal place or object without a statutory consent.

Any Section 90 Consent that may be granted based on the EIS will be limited to the matters documented in the EIS. Accordingly, Section 90 Consents are specific.

Therefore, in the event that additional Aboriginal objects are identified during construction, that construction must cease immediately and the nature and extent of the objects assessed, as described above. Accordingly, to avoid delays during construction and the possibility that the development may need to be amended if a (additional) Section 90 Consent is not granted a comprehensive assessment should be undertaken.

ATTACHMENT C: EIS REQUIREMENTS FOR

PROPOSED CENTRAL WASTE FACILITY

Introduction

The *Environmental Planning and Assessment Act (1979)* (*EP&A Act*) requires that proponents of a development/activity and the Consent/Determining Authorities adequately assess the impact on flora and fauna by a development or activity.

Australian flora and fauna comprise many endemic taxa and are therefore unique in the world. Although a proposed development site may be disturbed by various land-uses, any native vegetation, including remnants, riparian and wetland areas, is of significant natural heritage value. The area of vegetation and habitat at the proposed site may provide an area of high biological diversity, high conservation value or may not be well represented or protected elsewhere. It may also act as a corridor or migratory route for wildlife, drought refuge habitat or have other important values. Native vegetation including wetland, riparian and remnant environments provide significant areas of habitat for fauna. Therefore, any development in such areas should fully consider the impact on fauna and its habitat, including modification, fragmentation, reduction in size, loss of connectivity and edge effects.

Because of the reasons outlined above, the NSW community places a high value on those areas of native vegetation that remain. Careful planning should precede any development that involves further vegetation clearance or other significant impact within areas of native vegetation.

Threatened Species and the 'Test of Significance'

The concurrence of the Director-General of the Department of Environment and Climate Change (DECC) is required for all development on land that is, or is a part of, critical habitat, or development that is likely to significantly affect a threatened species, population, or ecological community, or its habitat. Accordingly, the requirements of DECC regarding flora and fauna relate to sections 5A and 78A(8)(b) of the *EP&A Act*.

A comprehensive EIS must include a detailed flora and fauna survey, some typical requirements of which are provided in the section "General Flora and Fauna Considerations". If, during a flora or fauna assessment or survey, threatened species, populations or ecological communities, or their habitats are found or are likely to occur in the area, the proponents must undertake a 'Test of Significance' as outlined in section 5A of the *EP&A Act*. This test is a statutory mechanism undertaken to determine whether any development is likely to have a significant impact upon threatened species, populations or ecological communities, or their habitats. The *Threatened Species Conservation Act (1995) (TSC Act)* contains lists of threatened species, which are divided into 5 categories – those presumed extinct, endangered species, endangered populations, endangered ecological communities and vulnerable species. The *TSC Act* also allows for the declaration of critical habitat, key threatening processes and the preparation of both Recovery Plans and Threat Abatement Plans. These listings and plans must be considered as part of the EIS process.

Species Impact Statements

Following a threatened species assessment via the 'Test of Significance', it may be necessary to prepare a Species Impact Statement (SIS) in accordance with the *TSC Act*.

If a SIS is required, the applicant for the development consent or the proponent of the activity must request from the Director-General of DECC, the requirements concerning the form and content of the SIS. The

SIS must then be prepared in accordance with these requirements and provided to DECC's Director-General. General SIS requirements are described in the *TSC Act*, however, requirements specific for each development consent must be sought.

General Flora and Fauna Considerations

If the concurrence of the Director-General of DECC is not required, DECC has no formal role in the assessment of flora and fauna issues and the determination of these issues lies solely with the Consent Authority(s). Notwithstanding the above, DECC recommends that the Consent Authority(s) requests that the following details be included in the EIS to be prepared by the proponent:

- detailed location map and identification of the area surveyed (including the location of photographs, transects, areas of significance etc),
- at least one of the following: a land satellite image, vegetation communities map, aerial photograph, or a remnant vegetation map,
- a complete plant list (including scientific names of those plants) of all tree, shrub, ground cover and aquatic species, categorised according to whether they are native or exotic,
- a complete list of all known and likely terrestrial and aquatic fauna species that may utilise the area for habitat, breeding and migration (eg birds, mammals, reptiles and amphibians including scientific names). It is suggested that invertebrates also be considered as they form part of the food chain for many fauna species,
- a detailed description of vegetation structure (in terms of a scientifically accepted classification system) and spatial distribution (ie. plant densities and patterning) on the site, including a vegetation map,
- describe the condition and integrity of the vegetation including any past disturbance,
- an account of the likely original vegetation communities (pre-, or at early settlement), and an assessment of the likely regional distribution of the original communities,
- an assessment of whether the plant communities are adequately represented in conservation reserves or otherwise protected,
- an account of the hydrology of the area and how this relates to the dynamics of the vegetation communities,
- assessment of the importance or otherwise of the location as a corridor, migratory route or drought refuge, in relation to other remnant vegetation, riparian and wetland areas or habitat in the region,
- a list of known and likely threatened species as listed by the *TSC Act* which might occur at the site. DECC database needs to be accessed and the likelihood of occurrence of threatened flora species determined,
- an assessment of the impacts of the proposal on flora and fauna, on-site and at the regional scale (eg siltation, water availability or drainage changes) and measures to mitigate these impacts,
- a detailed rehabilitation/management plan including a list of the plant species to be used during rehabilitation (if required),
- detail methodologies used and a list of the reference literature cited,
- a conclusion specifically addressing the components of the 'Test of Significance', and
- any other issues that may be considered relevant.

It is the responsibility of the proponent (and subsequently the consent and/or determining authorities) to determine the detail and comprehensiveness of assessment required to form legally defensible conclusions regarding the impact of the proposal. The scale and intensity of the proposed development should dictate the detail of investigation. It is important that all conclusions are supported by adequate data and that these data are clearly presented in the EIS.

Appendix C

EPA GTAs

Department of
Environment, Climate Change and Water NSW

Notice No: 1110782

Ms Cecily Hancock
Planning Coordinator
Bega Valley Shire Council
PO Box 492
BEGA NSW 2550

Dear Ms Hancock

RE: Integrated Development Assessment for Central Waste Facility, Wanatta Lane (DA Number 2009.0563)

I refer to the development application and accompanying information provided for the proposed waste management facility located in the Bega Valley Shire Council area, which was received by the Environment Protection Authority (EPA) on 17 November 2009.

The EPA has reviewed the information provided and has determined that it is able to issue General Terms of Approval (GTAs) for the proposal, relating to issuing an Environment Protection Licence (EPL) under the *Protection of the Environment Operations Act 1997*, subject to a number of conditions. The applicant will need to make a separate application to the EPA to obtain an EPL.

The GTAs for this proposal are provided at **Attachment A.** They apply to all waste disposal (application to land) activities carried on at the premises, including waste storage, disposal and processing; and leachate treatment systems. If the Southern Region Joint Planning Panel grants development consent for this proposal these conditions should be incorporated into the consent. Please note that Attachment A contains conditions specific to this development and any EPL issued by the EPA may also contain mandatory conditions and other standard conditions additional to those appearing in the GTAs.

These GTAs relate to the development as proposed in the documents and information currently provided to the EPA. In the event that the development is modified either by the applicant prior to the granting of consent or as a result of the conditions proposed to be attached to the consent, it will be necessary to consult with the EPA about the changes before the consent is issued. This will enable the EPA to determine whether its GTAs need to be modified in light of the changes.

In assessing the proposal the Department of Environment, Climate Change and Water has also identified a number of environmental issues that the Southern Region Joint Planning Panel may wish to consider in its overall assessment of the application. These issues are discussed in **Attachment B** and include the following issues:

1. Threatened Species;
2. Aboriginal Cultural Heritage;
3. Leachate use;
4. Traffic Noise; and
5. other general issues.

The EPA also draws attention to its *Environmental Guidelines: Solid Waste Landfills (1996)* and the need for the proponent to consider the benchmark techniques for meeting environmental goals at the Central Waste Facility.

If you have any questions, or wish to discuss this matter further please contact Simone Horn on 6229 7002.

Yours sincerely

Nigel Sargent
Manager, South East Region
for Director-General

11/2/10

Environment Protection Authority - NSW

General Terms of Approval

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Licence Application Requirements

Prior to commencing any activity associated with the proposal, including construction activities, the applicant must apply for, and be granted, an **Environment Protection Licence (Scheduled Development Works)** from the EPA, which permits scheduled development works to be carried out on the premises.

Waste must not be received and/or disposed of at the premises until the applicant applies for, and is granted, an **Environment Protection Licence (Scheduled Activity)**, which approves the receipt and disposal of waste at the premises.

Environment Protection Licence (Scheduled Development Works)

The applicant must provided the following information (as outlined in AR1. to AR3.) with the Environment Protection Licence (Scheduled Development Works) application:

AR1. Groundwater

AR1.1 A groundwater monitoring program developed specifically for the premises. The report must:

a) provide details of the proposed groundwater monitoring network and program for the facility. The monitoring network should include a minimum of two bores up-gradient of the landfill and 4-6 bores down-gradient. There must be no hydrocarbons used in the drilling of the bores;

b) demonstate that the monitoring network proposed above will be suitable to enable detection of leachate impact on groundwater, if any;

c) include a proposed installation and implementation schedule for the above monitoring network; and

d) provide details of the sample and analysis methodology and quality controls to ensure the analysis results are representative of the composition of the groundwater.

Note: The EPA's intention is to review the report with a view to attaching conditions to the applicant's Environment Protection Licence requiring installation of groundwater monitoring requirements.

AR2. Surface water and Leachate

AR2.1 A monitoring program developed specifically for the premises. The report must provide:

a) details of a surface water and leachate monitoring program developed specifically for the premises;

b) details of potential ambient water quality sampling points upstream and downstream of where any run-off from the premises would enter Wolumla Creek; and

c) surface water and leachate monitoring methodology and quality controls to ensure that the analysis results are representative of the composition of the surface waters and leachate.

Note: The EPA's intention is to review the report with a view to attaching conditions to the applicant's Environment Protection Licence requiring installation of surface water and leachate monitoring requirements.

AR3. Dust monitoring

A3.1 A dust monitoring program developed specifically for the premises. The report must provide:

a) details of the proposed dust monitoring network and program for the facility. The monitoring network should include a minimum of four (4) dust deposition gauges;

b) a proposed installation and implementation schedule for the above measures in accordance with the Approved Methods and AS/NZ Standard 3580.1.1:2007 "Methods for sampling and analysis of ambient air –Guide to siting air monitoring equipment"; and

c) details of the sample and analysis methodology and quality controls to ensure the analysis results are representative of the site.

Note: The EPA's intention is to review the report with a view to attaching conditions to the applicant's Environment Protection Licence requiring installation of dust monitoring requirements.

Environment Protection Licence (Scheduled Activity)

Prior to issuing the Environment Protection Licence (Scheduled Activity), the applicant must provide the following information (as outlined in AR4.) to the EPA's Manager, South East Region, PO Box 622, Queanbeyan, NSW 2620:

AR4. Validation reporting

a) "as constructed" drawings prepared from field surveys of the installed liner system, the leachate collection, conveyance and storage system and stormwater and erosion control channels and dam/s; and

b) a report prepared by a suitably qualified person that validates (and includes test methodology and data) that all leachate and stormwater measures have been installed in accordance with their design specifications.

Administrative Conditions

A1. Information supplied to the EPA

A1.1 Except as expressly provided by these General Terms of Approval (GTAs), works and activities must be carried out in accordance with the proposal contained in:

c) the development application 2009.0563 submitted to Bega Valley Shire Council and received by the Environment Protection Authority (EPA), within the Department of Environment, Climate Change and Water, on 17 November 2009;

d) the document relating to the development, titled "Bega Valley Shire Central Waste Facility Environmental Impact Statement, November 2009" including Volume 1: Main Report, Volume 2: Appendices A-J and Volume 3: Appendices K-T, which was prepared by AECOM.

Where there is a contradiction between the information provided above and these GTAs, the GTAs shall have precedence.

A2. Fit and Proper Person

A2.1 The applicant must, in the opinion of the EPA, be a fit and proper person to hold a licence under the Protection of the Environment Operations Act 1997, having regard to the matters in s.83 of that Act.

Discharges to Air and Water and Applications to Land

D1. Location of monitoring/discharge points and areas

D1.1 The following points referred to in the table below are identified in these general terms of approval for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

Air

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EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
To be determined	Air emissions monitoring		Surface gas monitoring in progressively capped areas of landfill conducted in accordance with Benchmark Technique 17 of the NSW EPA: Environmental Guidelines, Solid Waste Landfills
To be determined	Air emissions monitoring		Gas accumulation monitoring in buildings on landfill premises conducted in accordance with Benchmark Technique 18 of the NSW EPA: Environmental Guidelines, Solid Waste Landfills
To be determined	Dust monitoring		At locations to be determined in accordance with standard methods and AS/NZS 3580.1.1:2007

D1.2 The following points referred to in the table below are identified in this general terms of approval for the purposes of monitoring and/or the setting of limits for the emission of pollutants to water from the point.

Water and land

EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
To be determined	Leachate quality monitoring		Grab sample from leachate pond/s (exact location/s to be determined)
To be determined	Surface water quality monitoring		Grab sample from sediment pond/s (exact location/s to be determined)
To be determined	Ambient water quality monitoring		Locations to be determined
To be determined	Groundwater quality monitoring		Locations to be determined

D1.3 The following points in the table are identified in these general terms of approval for the purposes of the monitoring of weather parameters at the point.

Weather

EPA identification number	Type of Monitoring Point	Description of Location
W1	Rainfall	Location to be determined in accordance with standard methods.
W2	Wind direction	Location to be determined in accordance with

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		standard methods.
W3	Wind speed	Location to be determined in accordance with standard methods.
W4	Temperature	Location to be determined in accordance with standard methods.
W5	Sigma theta	Location to be determined in accordance with standard methods.
W6	Relative humidity	Location to be determined in accordance with standard methods.

Limit Conditions

L1. Pollution of waters

L.1.1 Except as may be expressly provided by a licence under the Protection of the Environment Operations Act 1997 in relation of the development, section 120 of the Protection of the Environment Operations Act 1997 must be complied with in and in connection with the carrying out of the development.

L2. Waste

L2.1 The licensee 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 the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for activities referred to in relation to that waste in the column titled "Activity" in the table below.

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 below.

This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
N/A	General Solid Waste (non-putrescible)	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste Disposal (application to land) Waste Storage	N/A
N/A	General Solid Waste (putrescible)	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste Disposal (application to land)	N/A

Code	Waste	Description	Activity	Other Limits
N/A	Asbestos Waste	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste Disposal (application to land)	Asbestos Waste must also be disposed of in accordance with C. 42 of the POEO (Waste) Reg. 2005
N/A	Waste Tyres	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste Disposal (application to land) Waste Storage	
N/A		Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time		N/A

L2.2 The total tonnage of waste disposed of at the premises must not exceed 20,000 tonnes per year.

L2.3 Tyres stockpiled on the premises must:

(a) not exceed fifty (50) tonnes of tyres at any one time; and

(b) be located in a clearly defined area away from the tipping face; and

(c) be managed to control vermin; and

(d) be managed to prevent any tyres from catching fire.

L3. Hours of operation

Scheduled development works

L3.1 All construction activities at the premises that are audible within a habitable room of the nearest affected receiver(s) must:

a) only be conducted between 7:00am to 6:00pm Monday to Friday, and Saturdays from 8:00am to 1:00pm; and

b) not occur on Sundays or Public Holidays.

Audible means heard by the human ear.

Scheduled activity

L3.2 Activities at the premises, other than construction work, must only be carried on between 8:00am to 5:00pm on Monday to Saturday, with no operation on Sundays or Public Holidays.

Environment Protect Licence - Protection of the Environment Operations Act 1997

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L4. Noise limits

Scheduled activity

L4.1 Noise from the premises must not exceed the noise limits presented in the Table below. Note the limits represent the sound pressure level (noise) contribution, at the nominated receiver locations in the table.

Location	Daytime - $L_{Aeq,\ 15\ minute}$
R1 Ayr-Park	35 dB(A)
R2 Ayrdale	35 dB(A)
R3 Stablehurst	35 dB(A)
R4 Marden Farm	35 dB(A)
R5 Greendale	35 dB(A)
R6 19 Greendale Lane	35 dB(A)
R7 Wanatta	35 dB(A)
R8 nearest affected residential buildings erected on the rural residential subdivision to the north east of the property. The rural residential lots are bounded by the Princes Hwy to the east and Wanatta Lane to the south, and adjoin the site at the north eastern boundary of the central waste facility.	35 dB(A)

Note: Lot and DP numbers for each location in the above table are to be advised.

Definition

L_{Aeq} is the equivalent continuous noise level – the level of noise equivalent to the energy – average of noise levels emitted by the premises over the stated measurement period.

L4.2 For the purposes of the above condition:

- Daytime is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays.
- The noise emission limits identified apply under all meteorological conditions except for wind speeds greater than 3 metres/second at 10 metres above ground level.
- The meteorological data to be used for determining meteorological conditions is the data recorded by the weather station established at the site for the purposes of the Environment Protection Licence.

L4.3 For the purposes of determining the noise generated at the premises, Class 1 or 2 noise monitoring equipment as defined by AS IEC61672.1-2004 and AS IEC61672.2-2004, or other noise monitoring equipment accepted by DECCW in writing, must be used.

To determine compliance with the $L_{eq(15\ minute)}$ noise limits in condition L4.1:

a) the noise monitoring equipment must be located:

1. within 30 metres of a dwelling façade where any dwelling on the property is situated more than 30 metres from the property boundary that is closest to the premises;
2. approximately on the boundary where any dwelling is situated 30 metres or less from the property boundary that is closest to the premises;
3. within approximately 50 metres of the boundary of a National Park or a Nature Reserve.

b) the noise monitoring equipment must be located in a position that is:

4. at the most affected point at a location where there is no dwelling at the location; or

5. at the most affected point within an area at a location prescribed by conditions L4.3(a).

A breach of this Environment Protection Licence will still occur where noise generated from the premises in excess of the appropriate limit specified in the condition L4.1 is detected:

6. in an area at a location other than an area prescribed by condition L4.3; and/or

7. at a point other than the most affected point at a location.

For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

L5. Potentially offensive odour

L5.1 No condition of these GTAs identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997 provides that the applicant must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant Environment Protection Licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of these GTAs directed at minimising odour.

Operating Conditions

O1. Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner. This includes:

a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and

b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2. Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:

a) must be maintained in a proper and efficient condition; and

b) must be operated in a proper and efficient manner

O3. Dust

O3.1 All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.

O4. Stormwater/sediment control - Construction Phase

O4.1 An Soil and Water Management Plan (SWMP) must be prepared and implemented. The plan must describe the measures that will be employed to minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters during construction activities. The SWMP should be prepared in accordance with the requirements for

such plans outlined in *Managing Urban Stormwater: Soils and Construction* (available from the Department of Housing).

O5. Leachate management

O5.1 Water that contacts waste, other than virgin excavated natural material, must be managed as leachate.

O5.2 Unless otherwise approved in writing by the EPA, leachate must only be disposed of by:

a) evaporation;

b) irrigation within the leachate dam or within the active cell of the landfill; or

c) disposal at a facility licensed to accept such waste.

O5.3 Irrigation of leachate within the active cell must only be undertaken such that ponding or run off does not occur.

O6. Surface water management

O6.1 Surface drainage must be diverted away from any area where waste is being or has been landfilled.

O7. Fire management

O7.1 The applicant must have in place and implement procedures to minimise the risk of fire at the premises.

O7.2 The applicant must have in place and implement fire fighting measures at the premises, should fire occur.

O7.3 The applicant must extinguish any fires at the premises as soon as possible.

O8. Burning or exhumation of waste

O8.1 There must be no incineration or burning of any waste at the premises.

O8.2 The applicant must not exhume any landfilled waste at the premises unless approved in writing by the EPA.

O9. Screening of waste

O9.1 The applicant must have in place and implement procedures to identify and prevent the disposal of any waste not permitted by these GTAs to be disposed of at the premises.

O10. Filling plan

O10.1 The applicant must dispose of waste sequentially in landfill cells as depicted in Drawings 21-17339-C003 and 21-17339-C021 to 21-17339-C027 in the Bega Valley Shire Council Central Waste Management Facility Environmental Impact Statement (November 2009), Appendix N - "Progressive Landfill Capping and Final Rehabilitation Program, GHD, October 2009".

O11. Disposal of waste in landfill cells

O11.1 The applicant must only dispose of waste in a landfill cell on the premises, which has been validated by a suitably qualified person and validation report submitted to the EPA (which includes test methodology and data, and validates that all leachate and stormwater measures have been installed in accordance with their design specifications), unless the EPA approves the disposal of waste elsewhere at the premises, in writing.

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O12. Final landfill contours

O12.1 The final contours of the landfill must be in accordance with Drawing 21-17339-C027 depicted in the Bega Valley Shire Council Central Waste Management Facility Environmental Impact Statement (November 2009), Appendix N - "Progressive Landfill Capping and Final Rehabilitation Program, GHD, October 2009".

O13. Completion of landfill cells

O13.1 The applicant must ensure that the landfill cells are capped progressively when waste reaches final heights.

O13.2 Final capping must be installed in accordance with the Bega Valley Shire Council Central Waste Management Facility Environmental Impact Statement (November 2009), Appendix L – Specification for Central Waste Management Facility: Landfill and Leachate Management System, GHD, November 2009 (Revision 3)".

O14. Unauthorised entry

O14.1 The applicant must:

a) take all practicable steps to control entry to the premises;

b) install and maintain a stockproof perimeter fence around the premises;

c) install and maintain lockable security gates at all access and departure locations; and

d) ensure that all gates are locked whenever the landfill is unattended.

O15. Degradation of local amenity

O15.1 The applicant must have in place and implement a litter management program.

O16. Tracking of mud and waste

O16.1 The applicant must minimise the tracking of waste and mud by vehicles leaving the premises.

O17. Covering of waste

O17.1 Cover material must be Cover material must be "virgin excavated natural material" as defined in Schedule 1 of the *Protection of the Environment Operations Act 1997* and must be applied in accordance with the following requirements:

a) Daily cover

Cover material must be applied to a minimum depth of 15 centimetres over all exposed landfilled waste prior to ceasing operations at the end of each day.

b) Intermediate cover

Cover material must be applied to a depth of 30 centimetres over surfaces of the landfilled waste at the premises which are to be exposed for more than 90 days.

c) Cover material stockpile

At least two weeks cover material must be available at the premises under all weather conditions. This material may be won on site, or alternatively a cover stockpile must be maintained adjacent to the tip face.

Alternative cover options may be considered and approved by the EPA if the applicant can demonstrate that the alternative technology meets the performance goals of the "*Environmental Guidelines: Solid Waste Landfill*" (NSW EPA, 1996).

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O18. Control of pests and vermin

O18.1 The applicant must control pests and vermin at the premises.

O19. Staff training

O19.1 The applicant must ensure that adequately trained staff are available at the premises in order to administer the requirements of these GTAs.

O20. Closure plan

O20.1 The applicant must submit to the EPA, twelve months prior to the last load of waste being landfilled, a closure plan in accordance with section 76 of the Protection of the Environment Operations Act 1997.

Monitoring and Recording Conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by the EPA's general terms of approval, or a licence under the Protection of the Environment Operations Act 1997, in relation to the development or in order to comply with the load calculation protocol must be recorded and retained as set out in conditions M1.2 and M1.3.

M1.2 All records required to be kept by the licence must be:

a) In a legible form, or in a form that can readily be reduced to a legible form;

b) kept for at least 4 years after the monitoring or event to which they relate took place; and

c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected:

a) the date(s) on which the sample was taken;

b) the time(s) at which the sample was collected;

c) the point at which the sample was taken; and

d) the name of the person who collected the sample.

M2. Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/ discharge point or utilisation area specified below (by a point number), the applicant must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The applicant must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Point number/s TBA **Air**

Methane and dust

Pollutant	Units of measure	Frequency	**Sampling Method**
(Data provided as example only)			
Methane	% by volume	Quarterly	Special Method 1

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Particulates – deposited matter	g/m^2/month	Continuous	AM-19

For the purposes of the table above:

a) Special Method 1 means sampling is to be undertaken in accordance with Benchmark technique No. 17 (Surface Gas Emission Monitoring) and Benchmark technique No. 18 (Gas Accumulation monitoring) defined in the document *Environmental Guidelines: Solid Waste Landfills* (NSW EPA 1996); and

b) AM-19 means sampling is to be undertaken in accordance with the relevant test method/s contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW", as required by The *Clean Air (Plant and Equipment) Regulation 1997*.

Point number/s TBA **Water and Land**

Leachate

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as HCO3- and CO32-)	mg/L	Quarterly	Grab sample
Aluminium	mg/L	Bi-annually	Grab sample
Arsenic	mg/L	Bi-annually	Grab sample
Barium	mg/L	Bi-annually	Grab sample
Benzene	mg/L	Bi-annually	Grab sample
Cadmium	mg/L	Bi-annually	Grab sample
Calcium	mg/L	Quarterly	Grab sample
Chloride	mg/L	Quarterly	Grab sample
Chromium (total)	mg/L	Bi-annually	Grab sample
Cobalt	mg/L	Bi-annually	Grab sample
Conductivity	uS/cm	Quarterly	Grab sample
Copper	mg/L	Bi-annually	Grab sample
Ethylbenzene	mg/L	Bi-annually	Grab sample
Fluoride	mg/L	Quarterly	Grab sample
Lead	mg/L	Bi-annually	Grab sample
Magnesium	mg/L	Quarterly	Grab sample
Manganese	mg/L	Quarterly	Grab sample
Mercury	mg/L	Bi-annually	Grab sample
Nitrate + Nitrite (oxidised nitrogen)	mg/L	Quarterly	Grab sample
Nitrogen - ammonia	mg/L	Quarterly	Grab sample
Organochlorine pesticides	mg/L	Bi-annually	Grab sample
Organophosphate pesticides	mg/L	Bi-annually	Grab sample
pH	pH	Quarterly	Grab sample

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Polycyclic aromatic hydrocarbons	mg/L	Bi-annually	Grab sample
Potassium	mg/L	Quarterly	Grab sample
Sodium	mg/L	Quarterly	Grab sample
Sulfate	mg/L	Quarterly	Grab sample
Toluene	mg/L	Bi-annually	Grab sample
Total dissolved solids	mg/L	Bi-annually	Grab sample
Total organic carbon	mg/L	Quarterly	Grab sample
Total Petroleum Hydrocarbons	mg/L	Bi-annually	Grab sample
Total phenolics	mg/L	Quarterly	Grab sample
Xylene	mg/L	Bi-annually	Grab sample
Zinc	mg/L	Bi-annually	Grab sample

Note: DECCW may consider amending leachate monitoring requirements, subject to an application being received from the proponent based on the completion of Pollution Studies and Reduction Programs in these GTAs.

Sediment ponds (surface water)

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	uS/cm	Special Frequency 1	Grab sample
Nitrogen – ammonia	mg/L	Special Frequency 1	Grab sample
pH	pH	Special Frequency 1	Grab sample
Total Suspended Solids	mg/L	Special Frequency 1	Grab sample

For the purposes of the table above, Special Frequency 1 means the collection of samples quarterly when water is present in the structure.

Ambient monitoring

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	uS/cm	Quarterly	Grab sample
Nitrogen – ammonia	mg/L	Quarterly	Grab sample
pH	pH	Quarterly	Grab sample
Total Suspended Solids	mg/L	Quarterly	Grab sample

Groundwater monitoring

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as HCO_3^- and CO_3^{2-})	mg/L	Quarterly	Groundwater sample – grab

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Aluminium	mg/L	Annually	Groundwater sample – grab
Arsenic	mg/L	Annually	Groundwater sample – grab
Barium	mg/L	Annually	Groundwater sample – grab
Benzene	mg/L	Annually	Groundwater sample – grab
Cadmium	mg/L	Annually	Groundwater sample – grab
Calcium	mg/L	Quarterly	Groundwater sample – grab
Chloride	mg/L	Quarterly	Groundwater sample – grab
Chromium (total)	mg/L	Annually	Groundwater sample – grab
Cobalt	mg/L	Annually	Groundwater sample – grab
Conductivity	uS/cm	Quarterly	In situ
Copper	mg/L	Annually	Groundwater sample – grab
Ethylbenzene	mg/L	Annually	Groundwater sample – grab
Fluoride	mg/L	Quarterly	Groundwater sample – grab
Lead	mg/L	Annually	Groundwater sample – grab
Magnesium	mg/L	Quarterly	Groundwater sample – grab
Manganese	mg/L	Quarterly	Groundwater sample – grab
Mercury	mg/L	Annually	Groundwater sample – grab
Nitrate + Nitrite (oxidised nitrogen)	mg/L	Quarterly	Groundwater sample – grab
Nitrogen - ammonia	mg/L	Quarterly	Groundwater sample - grab
Organochlorine pesticides	mg/L	Annually	Groundwater sample – grab
Organophosphate pesticides	mg/L	Annually	Groundwater sample – grab
pH	pH	Quarterly	In situ
Polycyclic aromatic hydrocarbons	mg/L	Annually	Groundwater sample - grab

Potassium	mg/L	Quarterly	Groundwater sample – grab
Sodium	mg/L	Quarterly	Groundwater sample – grab
Standing water level	mg/L	Quarterly	In situ
Sulfate	mg/L	Quarterly	Groundwater sample – grab
Toluene	mg/L	Annually	Groundwater sample – grab
Total dissolved solids	mg/L	Quarterly	Groundwater sample – grab
Total organic carbon	mg/L	Quarterly	Groundwater sample – grab
Total Petroleum Hydrocarbons	mg/L	Annually	Groundwater sample – grab
Total phenolics	mg/L	Annually	Groundwater sample – grab
Xylene	mg/L	Annually	Groundwater sample – grab
Zinc	mg/L	Annually	Groundwater sample – grab

Note: Monitoring requirements may be varied by DECCW subject to ongoing review and assessment of monitoring results.

M 2.2 If the results of surface water quality monitoring in the sediment pond(s), ambient monitoring or groundwater monitoring required by the above conditions indicate Nitrogen - ammonia concentrations greater than 1 mg/L the applicant must contact DECCW within 24 hours and advise it of the results of that monitoring.

M3. Testing methods - concentration limits

M3.1 Monitoring for the concentration of a pollutant emitted to the air required by condition **M2**, in relation to the development or in order to comply with a relevant local calculation protocol must be done in accordance with:

a) any methodology which is required by or under the POEO Act 1997 to be used for the testing of the concentration of the pollutant; or

b) if no such requirement is imposed by or under the POEO Act 1997, any methodology which the GTAs or a condition of the licence or the protocol (as the case may be) requires to be used for that testing; or

c) if no such requirement is imposed by or under the POEO Act 1997 or by the GTAs or a condition of the licence or the protocol (as the case may be), any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

M3.2 Monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area required by condition **M2** must be done in accordance with:

a) the Approved Methods Publication; or

b) if there is no methodology required by the Approved Methods Publication or by the GTAs or in the licence under the Protection of the Environment Operations Act 1997 in relation to the development or the relevant

load calculation protocol, a method approved by the EPA in writing before any tests are conducted, unless otherwise expressly provided in the licence.

M4. Requirement to monitor rainfall

M4.1 For each monitoring point specified in the table below the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns.

Point W1-W6

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Rainfall	mm	Continuous	15 minute	AM-4
Wind direction	°	Continuous	15 minute	AM-2 & AM-4
Wind speed	m/s	Continuous	15 minute	AM-2 & AM-4
Air temperature	°C	Continuous	1 hour	AM-4
Sigma theta	°	Continuous	15 minute	AM-2 & AM-4
Relative humidity	%	Continuous	1 hour	AM-4

M5. Monitor remaining landfill capacity

M5.1 The applicant must monitor the remaining disposal capacity (in cubic metres) of the landfill annually.

Reporting Conditions

R1. Reporting of Fires

R1.1 In the event of a fire at the facility the applicant must record:

a) the time and date when the fire was deliberately started or reported;

b) whether the fire was authorised by the applicant, and, if not, the circumstances which ignited the fire;

c) the time and date that the fire ceased and whether it burnt out or was extinguished;

d) the location of fire (eg. clean timber stockpile, putrescible garbage cell, etc);

e) the prevailing weather conditions;

f) any observations made in regard to smoke direction and dispersion;

g) the amount of waste that was combusted by the fire; and

h) the action taken to extinguish the fire.

R1.2 The applicant or its employees or agents must notify the EPA of all fires at the premises as soon as practical after becoming aware of the incident.

R2. Discharge Reporting

R2.1 If leachate is discharged from the premises the applicant must notify the EPA as soon as practicable after the applicant becomes aware of the discharge.

The applicant must provide written details of any leachate discharge(s) which exit the premises to the EPA within 7 days of the date on which the incident occurred.

The written details referred to in the above condition must be provided as a report. The report must include the following information:

a) the volume of the leachate discharged and over what time period the discharge occurred;

b) the date and time of the commencement of the overflow;

c) the weather conditions at the time of the discharge, specifying the amount of rainfall on a daily basis that had fallen:

   i. on the day(s) of the discharge; and

   ii. for the one week period prior to the discharge;

d) the most recent monitoring results of the chemical composition of the leachate;

e) an explanation as to why the discharge occurred;

f) the location(s) of the discharge; and

g) a plan of action to prevent a similar discharge in the future.

R3. Landfill Gas Hazard Reporting

R3.1 If the results of Gas Accumulation Monitoring conducted at the premises required by a condition of these GTAs indicate Methane concentrations in any building at the premises greater than 1.25% v/v, the applicant must contact the EPA within 24 hours and advise it of the results of that monitoring and the applicant must increase the frequency of such Gas Accumulation monitoring to "daily" until advised otherwise by the EPA.

Pollution Studies and Reduction Programs

PRP1. Leachate report

PRP1.1 Within 18 months of commencement of disposal of waste at the premises the applicant must provide the EPA with their review and confirmation of the preferred leachate management strategy in accordance the Bega Valley Shire Council Central Waste Management Facility Environmental Impact Statement (November 2009), Appendix O – "Central Waste Facility: Leachate Disposal Options Report, GHD, October 2009".

The report must:

a) describe the performance of the leachate management system, including the verification of the quantity and characteristics/quality of the leachate at the premises over the first 12 months of operation, and.

b) recommend a suitable leachate treatment plant designed to cater for leachate generation during a 10% Annual Exceedance Probability (AEP) rainfall year, and

c) include timeframes for the installation and commissioning of the treatment plant and disposal system.

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Department of Environment, Climate Change and Water NSW

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ADDITIONAL CONDITIONS - MANDATORY FOR ALL EPA LICENCES

Monitoring and Recording Conditions

M6. Recording of pollution complaints

M6.1 The applicant must keep a legible record of all complaints made to the applicant or any employee or agent of the applicant in relation to pollution arising from any activity to which these GTAs apply. The record must include details of the following:

a) the date and time of the complaint;

b) the method by which the complaint was made;

c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;

d) the nature of the complaint;

e) the action taken by the applicant in relation to the complaint, including any follow-up contact with the complainant; and

f) if no action was taken by the applicant, the reasons why no action was taken.

M6.2 The record of a complaint must be kept for at least 4 years after the complaint was made;

M6.3 The record must be produced to any authorised officer tho asks to see them.

M7. Telephone complaints line

M7.1 The applicant must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M7.2 The applicant must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint .

Reporting conditions

R4. Annual Return documents

R4.1 The applicant must provide an Annual Return to the EPA in relation to the development, as required by any licence under the Protection of the Environment Operations Act 1997. In the return the applicant must report on the annual monitoring undertaken (where the activity results in pollutant discharges), provide a summary of complaints relating to the development, report on compliance with licence conditions and provide a calculation of licence fees (administrative fees and, where relevant, load based fees) that are payable. If load based fees apply to the activity the applicant will be required to submit load-based fee calculation worksheets with the return.

R4.2 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

a) a Statement of Compliance; and

b) a Monitoring and Complaints Summary.

A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

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R5. Period covered by Annual Return

R5.1 An Annual Return must be prepared in respect of each reporting, except as provided below:

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

a) Where this licence is transferred from the licensee to a new licensee,

   a. the transferring licensee must prepare an annual return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and

   b. the new licensee must prepare an annual return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

b) Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an annual return in respect of the period commencing on the first day of the reporting period and ending on

   a. in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or

   b. in relation to the revocation of the licence – the date from which notice revoking the licence operates.

R6. Deadline for Annual Return

R6.1 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R7. Licensee must retain copy of Annual Return

R7.1 The licensee must retain a copy of the annual return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R8. Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

R8.1 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

a) the licence holder; or

b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R9. Notification of environmental harm

R9.1 The applicant or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Protection of the Environment Operations Act 1997.

R9.2 Notifications must be made by telephoning the EPA's Environment Line service 131 555.

R9.3 The applicant must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R10. Written report

R10.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

a) where an environment protection licence applies to premises, an event has occurred at the premises; or

b) where an environment protection licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,

and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R10.2 A request made by an authorized officer under condition R7.1 may require a report which includes any or all of the following information:

a) the cause, time and duration of the event;

b) the type, volume and concentration of every pollutant discharged as a result of the event;

c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; and

d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;

e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;

f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and

g) any other relevant matters.

R10.3 The applicant must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R10.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

General conditions

G1. Copy of licence kept at the premises or on the vehicle or mobile plant

G1.1 A copy of the environment protection licence must be kept at the premises or on the vehicle or mobile plant to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises or operating the vehicle or mobile plant.

ATTACHMENT B (to Notice No. 1110782)

Threatened Species

1. The areas of Bega Dry Grass Woodland on the site proposed to be managed to offset the loss of trees from within the landfill footprint should be managed for conservation purposes including the control of feral plants and animals. This should include the development of a management plan for the area, which documents the long term actions required to maintain or improve the values of the site. The site should also be protected in perpetuity on title, which can be done in a variety of ways including Voluntary Conservation Agreements, Conservation Property Vegetation Plans or BioBanking.
2. DECCW understands that a Review of Environmental Factors (REF) will be conducted in relation to the upgrade of Wanatta Lane and the connection of power to the site. These REFs will need to consider the provisions of the *Threatened Species Conservation Act 1995* (TSC Act), which protects all threatened flora and fauna native to NSW (excluding fish and marine plants). The TSC Act contains lists of threatened species, which are divided into 5 categories – those presumed extinct; endangered species; endangered populations; endangered ecological communities; and vulnerable species. This Act also allows for the declaration of critical habitat, key threatening processes and the preparation of both Recovery Plans and Threat Abatement Plans. These listings and plans must be considered as part of the planning process.

   If there is likely to be a significant impact, the determining authority must seek the concurrence of DECCW, and a detailed Species Impact Statement (SIS) must be prepared. DECCW recommends that any environmental impact assessment of flora and fauna issues associated with the proposal is consistent with DECCW guidance, which is available on request.

Aboriginal Cultural Heritage

3. Aboriginal heritage is protected under the *National Parks and Wildlife Act 1974* (the NP&W Act). The destruction, defacement or damage of Aboriginal objects and Aboriginal places (as defined in the NP&W Act) are offences under the Act. As part of the REFs to be conducted in relation to the upgrade of Wanatta Lane and the connection of power to the site, the proponent must state whether or not the proposed activity is likely to have an impact on Aboriginal cultural heritage and must include information about how this assessment was made. See DECCW's *Proponent's Guidelines for the Review of Environmental Factors* (www.environment.nsw.gov.au/resources/protectedareas/08370ProponentsREFGuide.pdf) for more information. If an activity is likely to impact on Aboriginal objects or Aboriginal places the proponent needs to apply for an Aboriginal Heritage Impact Permit (AHIP) under section 87 or section 90 of the NP&W Act. Further advice and guidance on Aboriginal Cultural Heritage assessment is available from:
   a. DECCW's publication *Working with local Aboriginal communities on environmental projects* (see www.environment.nsw.gov.au/education/aboriginalcommunities.htm) which can assist proponents and Councils in facilitating culturally appropriate involvement of local Aboriginal people in project planning.
   b. DECCW's *Interim Community Consultation Requirements for Applicants* (www.nationalparks.nsw.gov.au/npws.nsf/Content/aboriginal consultation interim guidelines), which provide guidance on consultation with Aboriginal people and communities.
   c. DECCW's *Aboriginal Cultural Heritage: Standards and Guidelines Kit* (www.nationalparks.nsw.gov.au/pdfs/aboriginal heritage guidelines kit final.pdf) provides advice on how to undertake a cultural heritage assessment. The consultation sections of the above document have been superseded by the *Interim Requirements for Community Consultation* (currently under review). Other parts of the document will be replaced by a Guide to Aboriginal Heritage Impact Assessment. Please contact the relevant Parks and Wildlife Regional Office before using this kit.

Leachate use

4. The EIS (section 8.3.1) states that stormwater would be used for dust suppression and irrigation of revegetation areas, and this would be supplemented by treated leachate should additional water be necessary. The proponent is advised that the use of leachate for this purpose is strictly prohibited until such time as the Pollution Studies and Reduction Programs required by the GTAs are complete. The proponent should then seek approval from DECCW for any variations to the use of treated leachate. The use of treated leachate will be controlled by conditions attached to the Environment Protection Licence.
5. The EIS (section 8.4.5) states that as the landfill progresses, irrigation of effluent "would be moved onto... other suitable areas on the site (up to 4.0 ha outside the landfill footprint would be required during extended wet weather)". The proponent is advised that the irrigation of leachate other than in accordance with the GTAs is strictly prohibited until such time as the Pollution Studies and Reduction Programs required by the GTAs are complete. The proponent should then seek approval from DECCW for any variations to treated leachate irrigation. The use of treated leachate will be controlled by conditions attached to the Environment Protection Licence.

Traffic Noise Management Strategy (TNMS)

6. Prior to commencement of construction and operation activities, a Traffic Noise Management Strategy (TNMS) should be developed by the proponent, for the purposes of managing construction and operational noise impacts, to ensure that feasible and reasonable noise management strategies for vehicle movements associated with the facility are identified and applied. These may include, but are not necessarily limited to, the following;
    a. driver training to ensure that noisy practices such as the use of compression engine brakes are not unnecessarily used near sensitive receivers;
    b. best noise practice in the selection and maintenance of vehicle fleets;
    c. movement scheduling where practicable to reduce impacts during sensitive times of the day;
    d. communication and management strategies for non licensee/proponent owned and operated vehicles to ensure the provision of the TNMS are implemented;
    e. a system of audited management practices that identifies non conformances, initiates and monitors corrective and preventative action (including disciplinary action for breaches of noise minimization procedures) and assesses the implementation and improvement of the TNMS;
    f. specific procedures to minimize impacts at identified sensitive areas; and
    g. clauses in conditions of employment, or in contracts, of drivers that require adherence to the noise minimization procedures and facilitate effective implementation of the disciplinary actions for breaches of the procedures.

Other

7. The proponent is advised that revised regulatory requirements for managing asbestos waste commenced on 28 April 2008. These amendments were made under the *Protection of the Environment Operations Amendment (Scheduled Activities and Waste) Regulation 2008* and all handling and disposal of asbestos waste must be consistent with these requirements.
8. Clause 49(c) of the Protection of the Environment Operations (Waste) Regulation 2005 requires waste transported by a vehicle to be covered during its transportation
9. In relation to the storage of fuels and flammable materials, all bunds must be constructed and maintained in accordance with the Australian Standard (*AS 1940-2004: The storage and handling of flammable and combustible liquids*).
10. Refuelling of plant and machinery should occur within designated areas in order to manage any spills quickly and effectively. E.g. refuelling of machinery working on landfill cells could be limited to the workshop area or on top of the active landfill cell.

Appendix D

REFERRAL CONDITIONS

RURAL FIRE SERVICE

- Trails for bush fire management should be maintained across the site including boundary trails for the protection of fences and to help prevent the spread of bush fire to or from the site.
- An internal trail network developed in consultation with the RFS should allow for hazard reduction burning in segments.
- The prescribed burning of the land management area should be planned in a mosaic pattern i.e. which areas will be burnt and at what interval needs to be documented in the management plan.
- Grazing could be considered to reduce surface fuels where appropriate around the site.
- Fire management should comply with section 5.5.12 of Environmental Impact Statement, Volume 1 Main Report.

DEVELOPMENT ENGINEER

Procedures - Requirements before commencement of civil construction work:

1. Civil construction work in accordance with this development consent must not be commenced until:
   - Construction Certificate for this civil construction work has been issued by:
     - the council, or
     - an accredited certifier, and
   - the person having the benefit of this development consent:
     - has appointed the Council as Principal Certifying Authority for this development, and
     - has notified the Council of this appointment (see below), and
   - the person having the benefit of this development consent has given at least 2 days notice to the Council of the person's intention to commence the civil construction work.

   The notification to Council of appointment of the Principal Certifying Authority and intention to commence work must be submitted on the form prepared by the Council for that purpose.
2. The notification to Council of appointment of the Principal Certifying Authority must contain the following information:
   - the name and address of the person by whom the notice is being given, and
   - a description of the work to be carried out, and
   - the address of the land on which the work is to be carried out, and
   - the registered number and date of issue of this development consent, and
   - the name and address of the Principal Certifying Authority (Council).
3. The notice to Council of intention to commence the civil construction work must contain the following information:
   - the name and address of the person by whom the notice is being given, and
   - a description of the work to be carried out, and
   - the address of the land on which the work is to be carried out, and
   - the registered number and date of issue of this development consent, and
   - the registered number and date of issue of the relevant Construction Certificate, and
   - a statement signed by or on behalf of the Principal Certifying Authority (Council) to the effect that all conditions of the consent that are required to be satisfied prior to the work being commenced have been satisfied, and

- the date on which the work is intended to commence.

4. The plans and specifications to which the Construction Certificate relates must conform to the conditions of this development consent, the standards set out in Council's Development Control Plans, Subdivision Guidelines and construction and design specifications and sound engineering practice.

5. Any levy payable under section 34 of the *Building and Construction Industry Long Service Payments Act 1986* must be paid before the Construction Certificate is issued.

6. Payment to Council of a security deposit for the making good of any damage caused to any Council property as a consequence of the doing of anything to which this consent relates. This security shall be provided in an amount of 5 per cent of the value of the construction works, either as a cash deposit or unconditional bank guarantee. A bond administration fee may also be payable to Council.

   (Reason: Statutory requirements. See *Environmental Planning and Assessment Act 1979*, Sections 804, 81A and 109F and Environmental Planning and .Assessment Regulation 2000, Clauses 103 and 104.)

Traffic Control Plan

7. No work shall be carried out within three metres of the carriageway of a public road subject to motor vehicle traffic until Council has approved a satisfactory Traffic Control Plan relating to that work, and the Roads and Traffic Authority has approved any associated Roadworks Speed Limit.

   The Traffic Control Plan shall be prepared by a person who is authorised by the Roads and Traffic Authority to prepare these plans. The Traffic Control Plan must bear the name, signature and Traffic Control at Worksites Certificate Number of the person who prepared it.

   All measures described in the Traffic Control Plan shall be implemented and maintained for the duration of any work within or adjacent to the road carriageway.

   (Reason: so that work on public roads is performed safely.)

Certification and inspection of civil construction work

8. The civil construction works must be inspected and tested either by Council's inspector, or by an Accredited Certifier (PCA) at each of the following stages of construction listed below to confirm compliance with the standards set out in Council's Technical Specification for Civil Engineering Works.

   Before the endorsement of the Occupation Certificate for this development, a Completion of Engineering Works Certificate must be obtained from Council (where Council is the PCA), to demonstrate that all civil construction works have been completed.

   Where Council is not the PCA, documentary evidence shall be provided by the PCA to Council demonstrating compliance with the following.

   - After placement of all signs and control measures in accordance with the approved Traffic Control Plan.
   - After stripping of topsoil from roads and fill areas, all Soil & Water Management Plan controls shall be in place at this stage.
   - After completion of road subgrade.
   - After placement and compaction of each layer of gravel pavement material.
   - During application of bitumen seal or asphaltic concrete wearing surface,

- After laying and jointing of all stormwater pipelines prior to backfilling.
- After completion of works.
- As otherwise required to confirm that the works are satisfactorily executed and in conformity with environmental controls.

It should be noted that Council charges fees for inspections and certificates. These fees must be paid prior to the endorsement of an Occupation Certificate.

(Reason: to demonstrate that civil construction works are completed in conformity with development consent conditions and to appropriate technical standards)

Defects liability period for civil construction works:

9. The developer shall remedy any defects in the civil construction works arising within six months after the completion of the works and shall make good any damage caused to any Council property as a consequence of doing anything to which this consent relates.

10. If the Occupation Certificate is issued prior to the expiry of this period, the Council must first be provided with a security deposit or unconditional bank guarantee in a form acceptable to Council, in an amount of five percent (5%) of the value of the civil construction works. This amount is security for remedying any defects in the civil construction works that arise within six months after the works are completed, and for making good any damage caused to Council property as a consequence of the doing of anything to which the consent relates. The funds realised from this security may be paid out by Council to meet any costs referred to in paragraph (a) above. A Bond Administration Fee may be payable to Council.

11. This condition is authorised by Section 804(6)-(10) of the *Environmental Planning and Assessment Act 1979*.

(Reason: to ensure that civil construction works are in satisfactory condition when transferred to Council and that any damage to Council property is remedied.)

Civil Construction works

12. The following civil construction work shall be designed (Engineering Design plans submitted to Council for approval) and constructed in conformity with Council's Subdivision Guidelines and Technical Specifications (or other documents formally adopted by Council for the purpose of specifying standards for civil construction works, DCP No.2) as current at the date of the relevant Construction Certificate, and sound engineering practice:

Roadworks

13. Design (full engineering design plans) and construction of the following in Wanatta Lane from its intersection with the Princes Highway to the crest of the existing formation of Wanatta Lane approximately 450 metres from its intersection with Greendale Lane:
    - 6.0 metre wide bitumen sealed road pavement with 1.0 metre wide sealed road shoulders on both sides,
    - 200mm thick compacted gravel pavement,
    - 1.5 metre wide table drains as necessary,
    - all associated stormwater and subsoil drainage works,
    - installation of guideposts, protection fencing, pavement markings and signposting to the standards specified in the Road Design Guide published by the NSW Roads and Traffic Authority,
    - all other works necessary to achieve the above,

The design speed for this road shall be not less than 60 km/h.

(Reason: To provide an appropriate standard of access to the land and to accommodate the traffic likely to be generated by this development),

14. Design (full engineering design plans) and construction of a AUR/BAL intersection treatment at the junction of the proposed entry with Wanatta Lane in conformity with the standards specified in the Road Design Guide published by the NSW Roads and Traffic Authority. The design shall include the requirement for Safe Intersection Sight Distance for a speed environment 100km/h along Wanatta Lane.

    The right turn treatment is to be in accordance with an AUR treatment, figure 4.8.24. The AUR is to be sealed. A verge in accordance with Section 3.6 of the Road Design Guide shall be constructed outside the AUR.

    The left turn treatment is to be in accordance with a BAL treatment, figure 4.8.35. The BAL is to be sealed to a minimum of 10 metres from the edge of the traffic lane. The gate or grid at the entrance to the property shall be indented a minimum of 20 metres from the edge of the through carriageway.

    The design shall ensure that no water is directed onto the formation of the through roadway Wanatta Lane. The applicant will be required to provide suitable drainage, including structures if necessary, underneath the driveway. Drainage headwalls shall be located outside the Clear Zone of the roadway. The width of the Clear Zone must be in accordance with Section 3.7 of the RTA's Road Design Guide.

    The applicant shall submit detailed engineering plans, including drainage, at a scale of 1:200 to Council to be assessed for approval.

    (Reason: To provide an appropriate standard of access to the land and to accommodate the traffic likely to be generated by this development).

15. Design (full engineering design plans) and construction of the following for the internal access road and parking areas:

    - 6.4 metre wide gravel road with a 6.0 metre wide bitumen seal,
    - 200mm thick compacted gravel pavement,
    - suitable vehicle turning facility at the western end of this road,
    - 1.5 metre wide table drains as necessary,
    - all associated stormwater and subsoil drainage works,
    - all other works necessary to achieve the above,

    (Reason: To provide an appropriate standard of access to the land and to accommodate the traffic likely to be generated by this development).

Stormwater Drainage Works

16. Design and construction of stormwater drainage works as necessary to convey stormwater flows within the development and downstream. Any design shall be in accordance with Council's Stormwater Drainage Design D5.

    Note: Appropriate easements shall be created to contain all drainage works that are located outside of roads and drainage reserves.

    (Reason: to provide for the drainage of the development, to protect public and private assets from potential damage and to minimize the environmental impacts of this development,)

17. Design and construction of stormwater drainage works as necessary to limit the peak stormwater discharge from the development to not exceed calculated flow rates for this site in an undeveloped state for rainfall events of up to a 1 in 20 year average recurrence interval. Any design shall be in accordance with Council's Development Design Specification D5, Stormwater Drainage Design, clause D5.15 - Retarding Basins.

    Note: Appropriate easements shall be created in favour of the lots benefited to contain all drainage works that are located outside of roads and drainage reserves.

    (Reason: to provide for the drainage of the development, to protect public and private assets from potential damage and to minimize the environmental impacts of this development.)

18. Design, construction and maintenance of all erosion and sediment control works necessary to ensure that the quality of stormwater discharged from this development site, both during and after the construction period, is similar to the quality of stormwater runoff from the site in an undeveloped state. These works shall be documented in a site specific Soil and Water Management Plan. These plans shall be in accordance with Council's Development Design Specification D7, Erosion Control and Stormwater Management.

    Note: Technical advice on the design, construction and maintenance of stormwater quality control measures is contained in *Managing Urban Stormwater: Soils and Construction* published by the NSW Department of Housing.

    Note: The responsibility for the maintenance of all works constructed for controlling stormwater quality shall remain with the developer until the Council authorizes the removal of temporary works or takes over the maintenance responsibility for permanent works.

    (Reason: to minimize the environmental impacts of this development.)

Qualifications and insurance of engineering designers

19. All civil construction work shall be designed by persons holding suitable qualifications for the design of works of this type and current professional indemnity insurance.

    (Reason: to ensure appropriate professional standards.)

Contractor's insurance

20. Each contractor engaged in the construction of civil work must hold current public liability insurance for an amount of not less than $20,000,000 suitably endorsed to note the contractor and Council for their respective rights and interests.

    Prior to the commencement of the construction of civil works Council must be provided with evidence of the currency of this insurance.

    (Reason: to ensure that contractors hold suitable public liability insurance.)

Engineer's certification - specific works

21. Prior to the endorsement of the Occupation Certificate for this development, Council shall be provided with certification from a suitably qualified and experienced Chartered Professional Engineer (NPER 3 registered) confirming that the works identified in condition(s) relating to stormwater detention along with erosion and sediment control satisfy the specified performance and acceptance criteria.

    (Reason: to demonstrate compliance with consent conditions).

Dedication of road widening

22. A road opening plan shall be prepared and shall include the dedication as Public Road of such land as is necessary to contain the constructed road in use, and known as Wanatta Lane over the frontages of all surveyed lots. The registered surveyor who prepares the plan shall certify to the Principal Certifying Authority that the existing constructed road is wholly contained within the road reserve boundaries shown on the plan of survey.

    (Reason: To rectify encroachments as part of the development).

Encroachments onto Council's Road Reserve

23. Prior to the issue of an Occupation Certificate, the boundary fencing currently encroaching onto Councils road reserve shall be relocated onto the correct boundary alignment. The registered surveyor who prepares the plan of survey shall certify to the Principal Certifying Authority that the fence(s) are constructed wholly upon the property boundaries and shown on the plan of survey.

    (Reason: To rectify encroachments as part of the development).

Extended maintenance responsibility

24. The developer shall perform all works necessary to maintain all erosion and sediment control measures for this development to effectively control potential soil erosion, sedimentation and other environmental impacts until all civil construction work has been completed, stabilised, revegetated and directed by council for removal.

    Particular attention is required to the regular removal of accumulated material in sediment traps and water quality control ponds.

    Prior to the endorsement of the Occupation Certificate, the developer shall lodge with the Council a security deposit or unconditional bank guarantee in a form acceptable to Council, in an amount of $50,000 as security for satisfactory performance of the developer's responsibilities under this condition. The funds realised from this security may be paid out by Council to meet any costs incurred by Council in performing works referred to in this condition. A Bond Administration Fee may be payable to Council.

(Reason: to minimise the environmental impacts of this development)

ENVIRONMENTAL HEALTH & BUILDING OFFICER

1. Noise and vibration emissions during the construction of the building and associated site works must not result in damage to nearby premises or result in an unreasonable loss of amenity to nearby residents and the relevant provisions of the Protection of the Environment Operations Act 1997 and the Interim Construction Noise Guideline (DECCW 2009) must be satisfied at all times.

2. The proposed use of the premises and the operation of all plant and equipment shall not give rise to 'offensive noise' as defined in the Protection of the Environment Operations Act 1997 and Regulations. In this regard, the operation of the premises and plant and equipment shall not give rise to a sound pressure level at any affected premises that exceeds the background (L_{A90}), $_{15\ min}$ noise level, measured in the absence of the noise source/s under consideration by more than 5dB(A). The source noise level shall be assessed as an $L_{Aeq,\ 15\ min}$ and adjusted in accordance with the NSW Environmental Protection Authority's Industrial Noise Policy 2000.

3. Access and sanitary facilities for persons with disabilities are to be provided and maintained in accordance with the requirements of the Building Code of Australia and AS 1428 "Design for Access and Mobility". Details of compliance are to be provided in the relevant plans and specifications accompanying the Construction Certificate application.

4. i) CLOSET ACCOMMODATION for workmen to be provided BEFORE building work commences pursuant to Section 79C of the Environmental Planning and Assessment Act.

ii) The Builder must at all times maintain on the job, a legible copy of the plans and specifications bearing the stamp and Development Consent of Council.

iii) Construction work shall be confined to normal working hours, mainly 7am to 5pm Mondays to Fridays and 8am to 1pm Saturdays (no work on Sundays or Public Holidays)

iv) Where Council is the PCA a minimum of TWO WORKING DAYS NOTICE shall be given by the Builder to PCA to enable inspections to be carried out at each of the following steps where applicable: -

- Pier holes before concrete is poured
- Steel reinforcement for footings, slabs or other structural concrete components prior to placement of concrete
- Bearers and joists, and damp courses before the floor is laid
- When wall and roof framing is erected, bracing and tie downs is in place.
- Flashing of wet areas prior to lining or tiling of these areas (viz: bathrooms, en-suites, laundries and water closets).
- When the building is completed and ready for approval to occupy
- Storm water drainage under hydrostatic test and prior to backfill inspections
- At any other stage during construction deemed as being required by the Principal Certifying Authority.

NOTE:

- It should be noted that if work that needed a mandatory critical stage inspection was covered without the inspection taking place, then the **only way to enable the issuing of an occupation certificate maybe for the builder to uncover the work** so that the required inspection can take place.
- Approval shall be obtained from the PCA at each inspection stage prior to further works proceeding.

v) A minimum of TWO WORKING DAYS NOTICE shall be given by the Builder to Council to enable inspections to be carried out at each of the following steps where applicable: -

a) When sanitary drainage is laid ready for test.
b) Prior to backfilling of land application areas.
c) Prior to commissioning of systems of on-site sewage management before occupation of the premises.

NOTE:
Approval shall be obtained from Council at each inspection stage prior to further works proceeding.

vi) It is the owner's responsibility to ensure that the building is located on the correct block of land is located free of any easements/services and satisfies the necessary setbacks as specified by Council's Codes for Local Government Legislation.

vii) Signs to be provided at the front of the property or in a prominent location **PRIOR** to the first inspection: -

- Owner's name, lot number and street number
- A rural address number is to be provided at the entrance of a property (eg. affixed to an entrance gate)
- Signage to clearly identify the Principal Certifying Authority (PCA) and contact number

- That unauthorised entry to the work site is prohibited; and
- The Principal Contractor (the coordinator of the building work).

5. All building work must be carried out in accordance with the provisions of the Building Code of Australia.

6. Roof storm water is to be disposed of to the satisfaction of the PCA.

7. The floors of wet areas shall be of an approved impervious material, properly graded and drained. The junctions of the floors with the walls shall be so treated as to prevent the penetration of moisture into the walls.

8. A separate application install and construct a system of on-site sewage management under Section 68 of the Local Government Act 1993 must be submitted to Council for approval. A plumbing and drainage design plan is to be submitted with the application to Council.

9. A **Construction Certificate** must be obtained from Council or an Accredited Certifier prior to work commencing. A construction certificate certifies that the provisions of Clauses 79A-79H of the Environmental Planning and Assessment Amendment Regulations, 1998 have been satisfied, including compliance with the Building Code of Australia and conditions of Development Consent.

10. A Final Fire Safety Certificate must be issued for the building prior to the issue of an Occupation Certificate. As soon as practicable after a Final Fire Safety Certificate is issued, the owner of the building to which it relates:

    a) must cause a copy of the certificate (together with a copy of the current fire safety schedule) to be given to the Commissioner of New South Wales Fire Brigades, and

    b) must cause a further copy of the certificate (together with a copy of the current fire safety schedule) to be prominently displayed in the building.

11. A final **Occupation Certificate** must be issued by the Principal Certifying Authority prior to occupation or use of the development. In issuing an occupation certificate, the Principal Certifying Authority must be satisfied that the requirements of Section 109H of the *Environmental Planning and Assessment Act 1979* have been satisfied.

12. The owner of a building, to which an essential fire safety measure is applicable, shall provide Council with an annual fire safety statement for the building. The annual fire safety statement for a building must: -

    a) deal with each essential fire safety measure in the building premises, and

    b) be given: -

    - within 12 months after the last such statement was given, or
    - if no such statement has previously been given, within 12 months after a final fire safety certificate was first issued for the building.

ENVIRONMENTAL SCIENTIST

- Application being made to DECCW for an EPL under the POEO Act 1997.
- That works not commence until a Long Term Management Plan for the entire site is completed to the satisfaction of PEG including vegetation rehabilitation, pest animal control, weed management and general activities to protect biodiversity and the EEC's on the site.
- Details of the site for the additional stormwater storage dam (to provide water for dust suppression and fire control in the event stormwater dams A and B have insufficient water

during extended dry periods) being provided before works commence on site. These details should also be supported with information regarding the proposed dust suppression and fire control techniques / contingencies to be used in the event of extended drought.

- Details of the leachate treatment system being provided to Council within 60 days of the PRP required by DECCW being submitted.
- That a Landfill Environmental Management Plan be completed and submitted to Group Manager P&E for approval prior to the issue of the Construction Certificate. The LEMP should include as a minimum those details as outlined in the EIS as well as the following:
  - Procedures to ensure that leachate is only retained in the primary leachate pond for minimal times and that leachate misting sprays not be used when windy.
  - A requirement for specific environmental auditing by Council Environmental Services Section to ensure compliance with operational and licence requirements.
  - Requirements for annual upgrading of the LEMP to ensure that the waste facility is operated to current best practice standards throughout the life of the facility.
  - Details of the stabilisation proposed for excavated spoil stockpiles.

Appendix E

DEVELOPMENT RECOMMENDATIONS

General

- In total provision should be made for ten (10) car parking spaces. All spaces shall be designed in accordance with AS2890.1 and 2890.2.
- Construction of the car park area shall be undertaken in accordance with Section 7.3 of DCP No. 7.
- Telecommunications services, if required to be augmented to service the proposed development, would be the responsibility of and at the cost of the applicant.
- A 2,000L rainwater tank shall be installed to capture roof water from the amenities building. It shall be plumbed for use within the amenities building.
- A 60,000L underground rainwater tank shall be installed to capture roof water from the maintenance shed building. 20,000L shall be provided as static supply for fire fighting, to the RFS's requirements. The remainder shall be available and shall be plumbed for use within the amenities building.
- Any roof water collection for potable use on-site (i.e. office amenities) should be monitored for bacteriological and chemical quality. The monitoring and maintenance program for the rainwater tank(s) should be included in the facilities Operational Environmental Management Plan (OEMP).
- The SWMP shall be implemented prior to and during construction, and throughout operation of the development.
- The LEMP shall be implemented during construction and throughout operation of the development.
- An active landfill gas collection and flaring system shall be progressively installed as the landfilled waste is capped as described in the EIS and illustrated in Figures 1 and 2 attached to Appendix B of AECOM letter dated 8 June 2010.
- Implement all reasonable and feasible measures to recover resources from the waste stream before disposing any residual waste at the CWF;
- Prepare and implement a detailed Community Education Program for the project to promote better resource recovery;
- Monitor the effectiveness of the resource recovery measures; and if necessary
- Adjust the waste strategy to achieve better resource recovery rates.

Prior to Issue of Construction Certificate

- Preparation of a landscape management plan as part of the LEMP detailing landscaping requirements.
- Landscaping would incorporate the use of suitable endemic species.
- Electricity services required to be augmented to service the proposed development would be the responsibility of and at the cost of the applicant. Prior to the issue of a construction certificate, evidence shall be provided to Council that consultation has been undertaken with Country Energy and the development can be supplied with adequate electricity supply.
- A Soil and Water Management Plan (SWMP) shall be prepared for the proposed development and submitted to council for approval prior to the issue of any CC for the development. The SWMP shall be consistent with the measures outlined in Section 7 of GHD's *Stormwater Management Plan for the Landfilling Operation* (Appendix M of EIS).

- The mitigation measures outlined in Section 24 of the EIS shall be included into the Landfill Environmental Management Plan (LEMP), to be prepared and submitted to Council for approval prior to the issue of any CC for the development.
- A traffic management plan shall be prepared by a suitable qualified consultant and approved by Council prior to the issue of a construction certificate and prior to any works commencing on site. This includes prior to any delivery of construction equipment to the site. The TMP shall be implemented during the entire construction phase of the development.
- A LEMP shall be prepared prior to the issue of a construction certificate, consistent with the mitigation measures in the EIS and as follows:
  - It is recommended the recommended mitigation measures (to be imposed in the event that odour complaints are received once the facility has commenced operation) be included in the LEMP for the development, which would be required to be prepared by a condition of any consent granted for the development.
  - Include pest deterrent measures in the LEMP, including but not limited to:
    - dispersal tools such as horns, sirens, gas cannons, stock whips, distress calls, balloons
    - regularly covering waste and keeping the area of the face minimal
    - netting or suspending nylon line at 5 m intervals
    - removal of Ibis eggs from nests during the breeding season (June to December).
  - Develop a monitoring program for vermin and pest species.
  - The above measures to manage litter shall be included into the Landfill Environmental Management Plan (LEMP), to be prepared and submitted to Council for approval prior to the issue of any CC for the development.
  - The mitigation measures relative to pest and vermin control outlined in Section 24 of the EIS shall be included into the Landfill Environmental Management Plan (LEMP), to be prepared and submitted to Council for approval prior to the issue of any CC for the development.
  - The LEMP shall include screening and recording procedures in accordance with the EPA's *Solid Waste Landfills*.
  - A Fire Management Plan shall be prepared and shall form part of the LEMP. The FMP shall be consistent with the mitigation measures outlined in Section 20.3.1 of the EIS.
  - The mitigation measures outlined in Section 20.3.2 of the EIS shall be included into the LEMP.
  - The mitigation measures outlined in Section 20.3.3 of the EIS shall be included into the LEMP.
  - The mitigation measures outlined in Section 20.2.3 of the EIS shall be included into the LEMP.
  - The following measures shall be implemented into the LEMP and adopted during construction works:
    - During times of high wind, all construction works to cease.
    - Water carts be employed during construction to minimise transfer of dust off site.
    - Establish fencing around the site with mesh screening.
    - Any stockpiles existing on site for a period longer than 3 months are to be revegetated, with vegetation being maintained.
    - Establish a complaints register and follow-up procedures including required corrective actions.
  - The LEMP shall require adoption of the SWMP during construction works.
  - The RFS's requirements shall be incorporated into the LEMP.

- The following measures shall be incorporated into the SWMP (in addition to those outlined in Appendix M of the EIS):
  - The perimeter control measures are to be established prior to the first phase of earthworks

Prior to works commencing

- Establishment of landscape and boundary plantings along the site boundaries
- Establishment of chain link fencing surrounding the site with mesh screening.
- All contractors are to be made aware of the General Recommendations prior to commencing site works.
- All contractors who work within the confines of the study area should be made aware of the NP&W Act 1974 (as amended) and the fact that it is an offence to move, disturb or destroy Aboriginal objects without the written permission of the Director-General of the DECCW.
- All contractors are to be made aware of the General Recommendations prior to commencing site works.
- All contractors who work within the confines of the study area should be made aware of the *NSW Heritage Act 1977* and the fact that it is an offence to move, disturb or destroy a relic or deposit as defined by the *Act*.
- Prepare a Grazing Plan for areas outside the CWF footprint to ensure desired conservation outcomes are achieved.
- Management plan – be developed for the long-term management of the remnant existing to the south west of the property.

During Construction

- Dust be suppressed during construction utilising water carts to wet the construction site.
- Monitoring and maintenance of landscape and boundary plantings along the site boundaries.
- Continuous observation of wind conditions to ensure that control methods are appropriate.
- Implementation of effective dust control measures and monitoring of dust emissions.
- Maintenance of a complaints register and promptly investigating and responding to complaints.
- Initiation of any corrective actions on the site.
- Aboriginal objects are protected under the NP&W Act, regardless of location. Should any objects be identified during the course of site works, all works must cease and the DECCW (Southern Branch, Environment Protection and Regulation Division, Regional Archaeologist) contacted in regard to appropriate permit requirements before any further impact is undertaken.
- Should **suspected** skeletal material be uncovered during the course of site works, all works must cease and the DECCW, the NSW Police and the NSW Coroner's office contacted immediately, **regardless** of any existing DECCW permits for the proposed development
- The *NSW Heritage Act 1977* affords protection to non-Indigenous "relics" and in situ archaeological deposits over 50 years old. If the program of work uncovers an object of European or other non-Indigenous manufacture or a deposit that is associated with European or other non-Indigenous occupation, and that object or deposit is more than 50 years old, then work must cease and contact made with the NSW Heritage Office to seek advice.

During Operation

- Maintenance and improvement of existing vegetation along Wanatta Lane.
- Monitoring and maintenance of landscape and boundary plantings along the site boundaries.
- Minimising the size of the active tipping face of the CWF.
- Installation of litter screens around the CWF as required.
- Regular site inspections for litter.
- Shaping the CWF profile to minimise the potential for waste to transported by wind.
- Continuous observation of wind conditions to ensure that control methods are appropriate.
- Ensuring that the vegetation on the existing bund wall, which provides effective screening of the facility from the road, is maintained.
- Ensuring that as tipping areas are filled, they are closed, rehabilitated and revegetated as soon as possible to improve the amenity of the facility.
- Ensuring cleanliness of roads.
- Implementation of effective dust control measures and monitoring of dust emissions.
- Implementation of effective vermin control measures as appropriate.
- Maintenance of a complaints register and promptly investigating and responding to complaints.
- Initiation of any corrective actions on the site.
- Implementation of the LEMP, vermin/pest species monitoring plan, grazing plan, and remnant vegetation management plan.

Prior to Issue of Occupation Certificate/Use of the Site

- A Transport Code of Conduct (TCOC) shall be prepared and approved by Council prior to issue of any Occupation Certificate for or use of the site for the purpose of a waste management facility. The TCOC shall require all waste vehicle movements associated with the waste facility to occur outside of school bus operation hours.
- An Occupation Certificate for the development shall not be issued nor shall the site be used for any waste management facility purposes until such time as the upgrade to Wanatta Lane has been completed to the satisfaction of Council's Engineers.