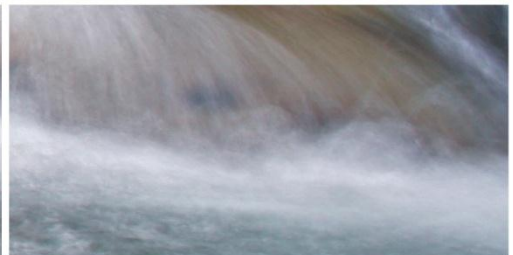


**PRELIMINARY CONTAMINATION ASSESSMENT
PROPOSED BEGA HOSPITAL,
1614 TATHRA ROAD,
BEGA, NSW**



**PRELIMINARY CONTAMINATION
ASSESSMENT
PROPOSED BEGA HOSPITAL,
1614 TATHRA ROAD,
BEGA, NSW**

Prepared for:

Health Infrastructure
c/o Johnstaff Projects Pty (NSW)
Level 8
16 O'Connell Street
SYDNEY NSW 2000

Report Date: 30 August 2012
Project Ref: ENAUBRAD01199AA

Written/Submitted by:



JAMES BOYLE
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Reviewed/Approved by:



GARY BAGWELL
Principal

30 August 2012

Health Infrastructure
c/o Johnstaff Projects Pty (NSW)
Level 8
16 O'Connell Street
SYDNEY NSW 2000

Attention: Mr Nic Johnson

Dear Nic

**RE: Preliminary Contamination Assessment, Proposed Bega Hospital, 1614 Tathra Road,
Bega, NSW, 2550**

Coffey is pleased to present this Preliminary Contamination Assessment report for the above site.

We draw your attention to the attached sheets titled "Important Information about your Coffey Environmental Report" which should be read in conjunction with this report.

Thank you for your commission for this work and we look forward to the opportunity of being of assistance again in the future. If you require further information or clarification regarding any aspect of this report, please do not hesitate to contact the undersigned.

For and on behalf of Coffey Environments Australia Pty Ltd



GARY BAGWELL
Principal

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Important Information about your Coffey Environmental Report

Tables (within text)

- Table 1: Summary of Site Identification
- Table 2: Summary of Potentially Contaminating Activities, Potential Areas of Environmental Concern, Likelihood of Contamination and Potential Contaminants of Concern
- Table 3: Generalised Soil Vapour Screening Criteria

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Figures

- Figure 1: Site Locality Plan
- Figure 2: Approximate Site Layout with Approximate Areas of Environment Concern
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Appendices

- Appendix A: Site History and Groundwater Bore Search Results
- Appendix B: Site Photographs
- Appendix C: Borehole Logs with explanation sheets
- Appendix D: Headspace Screening Results
- Appendix E: Laboratory Reports
- Appendix F: Data Validation Reports

ABBREVIATIONS

ACM	Asbestos Containing Materials
AEC	Areas of Environmental Concern
AHD	Australian Height Datum
C₆-C₃₆	Hydrocarbon chainlength fraction
CBH	Coffey Borehole
COPC	Contaminants of Potential Concern
Bgs	below ground surface
DA	Development Application
DECC	Department of Environment and Climate Change (NSW)
DQIs	Data Quality Indicators
DQOs	Data Quality Objectives
NEHF	National Environmental Health Forum
NEPM	National Environment Protection Measure
NSW EPA	Environment Protection Authority of New South Wales
OCP	Organochlorine Pesticide
NSW OEH	NSW Office of Environment and Heritage
OPP	Organophosphorous Pesticide
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PID	Photoionisation Detector
POEO	Protection of Environment Operations
RPD	Relative Percentage Difference
SCID	Stored Chemical Information Database

ABBREVIATIONS

SILs	Soil Investigation Levels
TPH	Total Petroleum Hydrocarbon

EXECUTIVE SUMMARY

Coffey Environments Australia Pty Ltd (Coffey) was commissioned by Johnstaff Projects Pty (Johnstaff), on behalf of NSW Health Infrastructure, to carry out a preliminary contamination assessment at the proposed Bega hospital site, located at 1614 Tathra Rd, Bega, NSW (the site). The work was completed in general accordance with our proposal Ref: ENAUBRAD01199AA-P01, dated 25 July 2012, and subsequent variation ENAUBRAD01199AA-E03, dated 21 August 2012. This report presents the results of the preliminary contamination assessment.

We understand that Johnstaff has been engaged by Health Infrastructure to coordinate the Part 3A development application process in relation to a proposed Hospital Facility. Johnstaff has indicated that a groundwater and contamination assessment was required as part of the Part 3A development application submission.

The objectives of the preliminary contamination assessment were to:

- Assess the likelihood for contamination to exist on the site from past or present activities; and
- Make recommendations on the need for further investigation or management (if required).

The scope included a site history study, site walkover, a limited intrusive investigation and reporting. Site history information indicated that the site to date has been predominantly used for agricultural purposes since the late 19th century, which included the construction of a dam and silage pits across the site. An area of dumped material was observed within a silage pit excavation in the western area of the site, which predominantly comprised of tyres, car parts, metal drums, wire and mesh.

The results of the assessment identified several potentially contaminating activities and associated Areas of Environmental Concern (AECs) and Contaminants of Potential Concern (COPCs), associated with the former and current agricultural use of the site. The main type of potentially contaminating activities included:

- Former silage pits in the northeastern and western portions of the site (AEC 1);
- Site wide application of pesticides and herbicides (AEC 2);
- Dumped material in the former silage pit in the western portion of the site (AEC 3);
- Potential fill/reworked natural material in the dam bund (AEC 4);
- Potential deposition (site wide) of asbestos containing materials from off-site sources (AEC 5); and
- Weathering of hazardous materials adjacent the water tank (AEC 6).

The identified AECs were assessed as having a low to moderate likelihood of contamination being present. The findings of this initial phase of desk study were used to develop a scope and rationale for a limited intrusive investigation to assess ground contamination at the site. The scope of investigation works comprised:

- Drilling of 15 hand augured boreholes,
- Collection of 2 surface soil samples; and
- Chemical analysis of selected soil samples for total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), metals (arsenic, cadmium, chromium, copper, lead, nickel, mercury and zinc), organochlorine and organophosphorous pesticides (OC/OPs), asbestos and herbicides.

EXECUTIVE SUMMARY

Generally the likelihood of contamination associated with the above AEC was generally assessed to be low to moderate. A limited sampling program was adopted, targeting these AECs, with a focus on AECs 2 and 3. Possible fill material was observed within a borehole in AEC 3, and reworked residual soils were encountered in AEC 4, however observations at the remainder of the sampling locations did not indicate the presence of fill material. The laboratory results indicated concentrations of chemicals of concern (OCPs, OPPs, herbicides, TPH, PAH, heavy metals and asbestos) were below the adopted SILs in soil samples. This was also consistent with field observations. Based on the limited sampling undertaken, it is therefore concluded that there is a low likelihood of contamination at the site.

The dumped material in AEC 3 is in an area of the site that is not part of the initial earthworks stage, and is unlikely to present a contamination risk during this works, however it is understood that the dumped material is likely to be removed prior to commissioning of the hospital. This material should be appropriately disposed of to a licensed waste facility. Following removal of this material, sampling and analysis in this location should be considered to confirm the absence of contamination in residual fill or soils. The level of assessment is considered applicable with reference to relevant guidelines. However, if during the development phase, suspicious materials (i.e. oily or odorous material, drums, tanks, metal or plastic chemical containers, brightly coloured material, potentially asbestos containing material, etc) are encountered, work in that part of the site should cease and advice should be sought from an appropriate qualified environmental consultant.

We draw your attention to the attached sheets titled "Important Information about your Coffey Environmental Report" and to the statement of limitations in Section 14 of this report.

1 INTRODUCTION

1.1 Background

Coffey Environments Australia Pty Ltd (Coffey) was commissioned by Johnstaff Projects Pty (Johnstaff), on behalf of NSW Health Infrastructure, to carry out a preliminary contamination assessment at the proposed Bega hospital site, located at 1614 Tathra Rd, Bega, NSW (the site). The location of the site is included in Figure 1, and the site layout is shown in Figure 2. The area of the subject site is approximately 17.5 hectares.

This work was completed in general accordance with our proposal Ref: ENAUBRAD01199AA-P01, dated 25 July 2012, and subsequent variation ENAUBRAD01199AA-E03, dated 21 August 2012. This report presents the results of the preliminary contamination assessment.

We understand that Johnstaff has been engaged by Health Infrastructure to coordinate the Part 3A development application process in relation to a proposed Hospital Facility. Johnstaff has indicated that a groundwater and contamination assessment was required as part of the Part 3A development application submission.

1.2 Objectives

The objectives of the preliminary contamination assessment were to:

- Assess the likelihood for contamination to exist on the site from past or present activities; and
- Make recommendations on the need for further investigation or management (if required).

For the purposes of this report “Contamination” means the condition of land or water where any chemical substance or waste has been added at above background level and represents, or potentially represents, an adverse health or environmental impact¹.

1.3 Scope of Work

The following scope of work was carried out to meet the project objectives:

- A site history and desk study to identify potential Areas of Environmental Concern (AEC) and associated Contaminants of Potential Concern (COPC) including review of:
 - previous site ownership from available historical title records;
 - previous environmental reports (if available);
 - Council planning records (including current Section 149 certificate);
 - selected historical aerial photographs;

¹ NEPC 1999, *National Environment Protection (Assessment of Site Contamination) Measure 1999*, National Environment Protection Council, Canberra

- published geological and topographic maps, with regard to the site;
 - NSW Office of Environment and Heritage (OEH) public records for the site;
 - identification of nearby registered groundwater bores, with regard to local groundwater use and hydrogeology;
 - research and review of dangerous goods licences held for the site by WorkCover and collation of this information.
- Interviews (with persons familiar with the site), regarding previous activities on the site;
 - A site walkover to visually assess potential sources of contamination, observe surrounding land uses, topography, drainage, nearby sensitive environments, to add to potential AECs and COPCs.
 - A limited targeted intrusive soil sampling program, involving assessment and sampling at seventeen (17) investigation locations (comprising fifteen boreholes and two surface samples) across the site targeting the identified AECs;
 - Laboratory analysis of selected soil samples for a suite of COPCs including Total Petroleum Hydrocarbons (TPH), Polycyclic Aromatic Hydrocarbons (PAH), Organochlorine pesticides (OCP), Organophosphorus pesticides (OPP), herbicides, heavy metals (Arsenic, Cadmium, Copper, Chromium, Nickel, Lead, Zinc, Mercury) and asbestos.
 - Reporting the results of the assessment generally in accordance with the NSW Office of Environment and Heritage (OEH, 2000): 'Guidelines for Consultants Reporting on Contaminated Sites'.

This report presents the results of the site history, desktop study and the field and laboratory program, including interpretation of field and laboratory results with regard to applicable assessment guidelines made or approved by the NSW OEH.

2 PROPOSED DEVELOPMENT

Information provided by Johnstaff indicates that the site will be redeveloped for hospital use, featuring multi storey buildings, basements, car parking, access roads and landscaped areas. As of the date of this report, detailed information on the building layout or design has not yet been finalized. However, it is understood that the development will include basement excavations to 3 - 4 m below the current site surface levels and that balanced cut and fill bulk earthworks of up to 2m will be required to re-profile the remainder of the site.

3 SITE LOCATION AND LANDUSE

The site is located at 1614 Tathra Road, Bega, NSW. A site locality plan is shown in Figure 1. A site layout plan showing approximate locations of existing site features is presented in Figure 2. A summary of the site identification information is presented in Table 1 below.

Table 1: Summary of Site Identification

Street Address	1614 Tathra Road, Bega, NSW
Area	17.5Ha (approximate)
Title Identifiers	Lot 1 DP1176012
Zoning	Zone 2F Future Urban Zone and Zone 1A Rural General Zone under Bega Valley Local Environmental Plan 2002.
Local Government Area	Bega Valley Shire Council
Parish	Bega
County	Auckland
Grid Co-ordinates (Aust. Map Grid)	E149°51'26.00"; N36°41'31.03" (south western corner of site)
Current Owner(s)	Health Infrastructure
Current Site Use(s)	Grazing lands (dairy cattle)

The Site is a generally a grass covered irregular shaped parcel of land, currently used for grazing purposes. Tathra Road generally forms the western boundary of the site, and adjacent properties form the southwestern and southern boundaries of the site. The northern and eastern site boundaries are not clearly defined. The general surrounding land use is agricultural.

The site is bounded by:

- Vacant grassed land to the north;
- Boundary Road and rural properties to the south;
- Vacant grassed land and Bega River to the east; and
- Tathra Road to the west; and
- Residential property to the southwest.

3.1 Topography and Drainage

Reference to the Bega 1:25,000 Topographic Map indicates that the Site lies at an elevation between 10m and 30m above Australian Height Datum (AHD). Reference to a 2005 site survey plan, provided by Council (included in Appendix A), indicates that the highest elevation at the site is approximately 36m AHD, near the central western site boundary. The site generally slopes to the east, with localised sloping to the south and northeast, with an elevation of approximately 15m AHD in the northeastern corner of the site, and an elevation of approximately 10m in the southeastern corner of the site.

The site is generally grass covered, with some areas of granodiorite outcrops and boulders. It is expected that during periods of rainfall, surface water would either infiltrate the ground surface to recharge shallow groundwater or generally flow eastward towards the Bega River, located approximately 400m east of the site.

3.2 Local Geology, Hydrogeology and Groundwater Use

Reference to the Department of Mineral Resources (1995) Bega-Mallacoota 1: 250,000 Geological Sheet (SJ55-4) indicates that the eastern portion of the site is underlain by Brogo granodiorite, which is a component of the Brogo Suite. An area in the vicinity of the eastern site boundary is underlain by alluvial and colluvial material, likely to be associated with the adjacent Bega River.

A geotechnical investigation was undertaken at the site by Douglas Partners in 2012, and the draft report was supplied to Coffey by Johnstaff (report reference 78385, dated July 2012). The investigation involved the drilling of 8 boreholes and excavation of twenty nine (29) test pits across the site. The encountered geology generally comprised of unconsolidated sediments up to 2.5m in thickness overlaying granodiorite.

The NSW Office of Water maintains information which can be accessed via www.nratlas.nsw.gov.au/wmc, which provides summary reports on registered bores in NSW. Coffey carried out a search of registered bores on this website on the 13 August 2012. The results of this search indicated that there were fourteen registered bores within a 1 kilometre radius of the site. Of these, only five boreholes are listed with registration details. Three of these bores (GW039009 to GW039011) are located between 200m to 500m to the southeast of the site, and are used for monitoring purposes. Registration details of these bores indicate that they are owned by the NSW Department of Water, and were installed within a water bearing layer within grey sand. The depths of the wells ranged between 11.2m below ground surface (bgs) (GW039009) and 45.8m bgs (GW039010). Water bearing zones were encountered at 6.1m bgs, 9.1m bgs and 33.5m bgs in GW039009 to GW039011, and had recorded thicknesses of 13.4m, 3m and 4.6m, respectively.

One borehole (GW059274) is located approximately 200m to the east of the site. Registration details of the groundwater bore indicates that the depth of the bore is 39.5m bgs and is used for irrigation purposes. The water bearing zone was situated in consolidated material between 6m and 39.5m bgs. Well construction details were not provided.

One borehole (GW105859) is located approximately 800m to the northeast of the site. Registration details of the groundwater bore indicates that the depth of the bore is 39m bgs and is used for irrigation purposes. Water bearing zones were noted in between 9.1m to 10.6m bgs (logged as a 'red sand'), and 27.4m to 39m bgs (logged as 'medium grey sand and gravel'). The well was screened within the lower water bearing zone.

The groundwater bore search results are included at the end of Appendix A.

Based on the previous Douglas Partners report, groundwater levels in the Granodiorite range between approximately 5 and 8m bgs (report reference 78385.00, dated July 2012. Groundwater was noted in deeper sequences of these sediments at lower elevations within and adjacent to the proposed building footprint (inflows around 0.6 m bgs at BH14 and TP25).

Based on observations of the surrounding topography and available hydrogeological information, a shallow groundwater aquifer in the general area is expected to be located within 2-4m of the ground surface, and flow in an easterly direction towards Bega River, located approximately 4000m from the site. A separate baseline groundwater assessment is currently being prepared by Coffey Environments, and will include more detailed information on the hydrology of the site.

3.3 Hydrology

The site is situated within the Bega River Catchment which flows towards the Pacific Ocean approximately 13km east of the site. At its closest point, the main channel of the Bega River is approximately 400m to the east of the eastern site boundary.

The general area of the site is just upstream of the Bega River coastal estuary and Penooka Swamp. Use of water resources in the area is governed by the Water Sharing Plan for the Bega and Brogo Rivers Area Regulated, Unregulated and Alluvial Water Sources. The site is located within the Lower Bega / Lower Brogo Rivers Tributaries Water Source Area. The area is characterised by the presence of the Bega Sands Aquifer, which hosts the river channel and is regarded as an important water source for irrigation purposes.

Section 149 Planning Certificates were obtained from Bega Valley Shire Council (refer Appendix A). These certificates indicate that the Council considers the site is flood prone.

3.4 Acid Sulfate Soils

Reference to the Bega 1:25,000 Acid Sulfate Soil Risk Map 2nd Edition produced by the NSW Department Land & Water Conservation (December 1997) indicates that the site is located in an area where acid sulfate soils are not expected to occur.

4 SITE HISTORY REVIEW

Information on the site history was obtained from:

- A historical land title search to review previous landowners and possible past uses of the site;
- Interview with persons familiar with the history and operations of the site;
- Review of selected historical aerial photographs;
- A search of NSW OEH register for listings of the site and nearby sites;
- A review of Wollongong City Council records and planning certificates; and
- A search of dangerous goods licenses held for the site by WorkCover.

The site history information is presented in Appendix A and a summary is provided below.

4.1 Summary of Site History

A brief summary of the history of the site is provided below:

- Prior to 1896 the site ownership and use is not known, but likely to have been vacant or rural land;
- From 1896 to the 1970's, the site was owned by a variety of persons, and the predominantly land use was agricultural. Majority of the site was used for cattle grazing, likely associated with the local dairy farming industry. However, crop and pastoral growing may have occurred on the site prior to the late 20th century. Herbicides may have been used in this period to control blackberry growth;
- Granodiorite boulders to the immediate north of the site were mined for use as headstones in the local cemetery in the early to mid-20th century;
- Historical aerial photography indicated that a dam, located in the southern area of the site, was constructed between 1975 and 1985.;
- Historical aerial photography indicated that the silage pits, water tank and concrete troughs observed during the site walkover were constructed between 1985 and 1994; and
- Since the late 2000's, the site is owned Applegum Investments Pty Ltd (before being acquired by Health Infrastructure in 2010) and has been used for cattle grazing

The planning certificate for the site (under Section 149 of the Environmental Planning and Assessment Act, 1979) indicates Council has not assessed the likelihood of contamination of the land.

The contaminated land public record maintained by the NSW OEH is a searchable database of:

- Orders made under Part 3 of the *Contaminated Land Management Act 1997* (CLM Act);
- Approved voluntary management proposals under the CLM Act that have not been fully carried out and where the approval of the Environment Protection Authority (EPA) has not been revoked;
- Site audit statements provided to the NSW EPA under section 53B of the CLM Act that relate to significantly contaminated land;
- Where practicable, copies of anything formerly required to be part of the public record

- Actions taken by EPA under section 35 or 36 of the *Environmentally Hazardous Chemicals Act 1985* (EHC Act).

The search of the contaminated land public record indicated no listed sites within 1kmm from the site.

4.2 Gaps in the Site History

Based on the information retrieved as part of this assessment, site history details of the site prior to the mid-20th century are limited. However, Coffey considers that the likelihood of potentially contaminating activities being carried out on site during this period is low.

5 SITE WALKOVER

5.1 Site Observations and Site Features

Observations of the site were made by a Coffey environmental scientist on 22 August 2012. A summary of the relevant observations made is described below, with the site layout and relevant features shown in Figure 2. Relevant site photographs are also presented in Appendix B.

- The site was slightly undulating with a general slope towards the east (Photograph 1);
- The southern and western site boundaries are fenced. The eastern and northern site boundaries are not marked out. The site is accessible from the northwestern corner of the site. There were no obvious tracks, roads or paths across the site;
- The site is generally grass covered. Several trees were observed across the site, in addition to several piles of timber (from recently cut trees). Shrub sized vegetation was present in adjacent Tathra Road;
- No major evidence of erosion (such as gullies etc) was observed on-site; Several granodiorite boulders and outcrops were visible across the ground surface (Photograph 2 and 3). Several trees were observed across the site, in addition to several piles of timber (from recently cut trees);
- A silage pit was observed in the northeastern corner of the site (Photograph 4 and 5). The silage pit had a concrete base, and the sides were exposed residual soil. The pit has approximate dimensions of 40m x 5m x 1.4m depth, was covered with tyres at the time of the site visit.
- Two excavations were situated near the western site boundary. Anecdotal evidence suggested that these excavations were used for silage storage. The southern excavation was filled with car tyres, although a vehicle transmission case, two rusted metal cans (approximate 15L capacity), fencing wire, plastic sheeting and mesh were also observed within the excavation (Photographs 6 and 7). The approximate volume of this material was estimated to be 25m³. The northern excavation did not appear to be filled with any material, and ponded water was present in the excavation base (Photograph 8).
- A circular above ground water tank (approximate diameter of 8m) was observed in the western corner of the site. The tank appears to be constructed from concrete, with a metal roof (Photograph 9).
- Two circular concrete troughs were observed to the north (Photograph 9) and south of the water tank. It is likely that these troughs were used for watering cattle;
- Above ground irrigation sprinklers were situated in an approximate grid pattern across the site. Plastic ag pipe connected the sprinklers. The source of the water is unknown;
- Cattle were observed throughout the site during the fieldwork;
- No visually identifiable fragments of Asbestos Containing Materials (ACM), soil staining, odours or other indications of potential contamination were observed on-site during the site walkover;
- A circular dam (approximately 15m diameter, Photograph 10) was observed in the southern area of the site. The dam appeared to have been excavated into the natural topography. An earthen bund lined the southern part of the dam; and

- No evidence of waste dumping or tipping was observed on the site, apart from wastes as indicated above.

5.2 Surrounding Site Features

Generally, surrounding site use is from agricultural purposes.

A summary of relevant surrounding site features is included below:

- An outcrop of granodiorite, located approximately 20m to the north of the site, was observed. The outcrop appeared to be quarried based on the smooth rock face and several small circular drill lines visible on the rock face (Photograph 11). The quarried outcrop area was approximately 20m²;
- Several buildings were located approximately 300m to the north of the site. These buildings appeared to be used for dairy farming purposes, and may have serviced the site when the site was more intensively used for agricultural purposes.
- A disturbed area of soil was observed approximately 150m to the east of the site. Two fibro fragments (potentially asbestos containing material) were observed in this area, in addition to several bricks and pieces of concrete (Photograph 12).
- Several farm buildings are present to the immediate south of the site in a topographically downgradient direction; and
- A residential dwelling is located in the triangular shaped property to the southwest of the site. This property is separated from the site by a wooden fence.

6 POTENTIAL AREAS OF ENVIRONMENTAL CONCERN (AEC) AND CONTAMINANTS OF POTENTIAL CONCERN (COC)

Based on the site history information, review of desktop information and site observations potential AECs and COPCs were identified based on potentially contaminating activities/sources. These are summarised in the following Table.

TABLE 2: SUMMARY OF POTENTIAL AECS AND COPCS

Potentially Contaminating Activity/Source	Sub Component / Description	Potential Areas of Environmental Concern (See also Figure 2)	Likelihood of Contamination*	Potential Contaminants of Concern
Former Agricultural Land Use	Agricultural activities, including potential historical use of pesticides and herbicides across the site during grazing and crop/pastoral growing activities	AEC 1: Former silage pits in the northeastern and western portions of the site.	Low to Moderate likelihood. Anecdotal information indicates that herbicides may have been used for blackberry control. Pesticides may have been used based on the relatively lengthy history of agricultural activities on-site. This may have been transferred to the silage pits during collection and storage of pastures. An object was observed in the vicinity of the existing northeastern silage pit in the 1967 aerial photograph, however based on anecdotal evidence, it is likely that this may have been the silage storage. Furthermore, it is unlikely that this object was a building based on the sloping topography making the area unsuitable for a building footprint. Buildings in this area may have contained asbestos materials, or have been used for storage of fuels or chemicals.	OCP, OPP, Herbicides, TPH, PAH, heavy metals, asbestos
		AEC 2: Site Wide application of pesticides and herbicides.	Moderate likelihood. Anecdotal information indicates that herbicides may have been used for blackberry control prior to the 1980's. Pesticides may have been used based on the relatively lengthy history of agricultural activities.	OCP, OPP, Herbicides
Fill Of Unknown Origin	Fill materials possibly imported to the site as part of land filling and/or improper disposal practices	AEC 3: Dumped fill material/ wastes in former silage pit in the western portion of the site	Moderate likelihood. Site observations indicated the presence of various fill materials (e.g. tyres, car parts, steel drums) within a silage pit excavation in the western portion of the site.	OCP, OPP, Herbicides, TPH, PAH, heavy metals, asbestos
		AEC 4: Southern dam bund in southern area of the site.	Low likelihood. Material was used to construct the southern dam wall is of unknown origin, however it is likely to be reworked residual material.	
Potential weathering of hazardous materials	Asbestos fibres may have been transported onto the site from demolished structures located to the east of the site.	AEC 5: Site Wide due to secondary deposition of potential asbestos contaminating materials	Low likelihood. Potential ACM fragments were observed in a disturbed area located approximately 150m to the east of the site. Asbestos fibres may have been transported onto the site from vehicle movements across the site or from airborne processes. There were two potential ACM fragments observed off-site, and no buildings were known to be present on site.	Asbestos
	Hazardous materials (i.e., lead and zinc) due to weathering from the water tank	AEC 6: Adjacent the water tank in the western side of the site	Low likelihood. Hazardous materials (i.e. lead and zinc) may have weathered from the water tank onto surrounding site soils, however given the relatively small size and age of the tank, any potential contamination due to weathering would be relatively localised to around the tank.	Heavy metals (lead, zinc)

Notes:

* It is important to note that this is not an assessment of financial risk associated with the AEC in the event contamination is detected, but a qualitative assessment of the probability of contamination being detected at the potential AEC, based on the site history study and field observations.

TPH Total Petroleum Hydrocarbons
BTEX Benzene, Toluene, Ethylbenzene, Xylene
PAH Polycyclic Aromatic Hydrocarbons

Heavy Metals arsenic, cadmium, chromium, copper, lead, nickel, mercury, zinc
OCP Organochlorine Pesticides
OPP Organophosphorus Pesticides

7 SAMPLING AND ANALYSIS PLAN

The purpose of the field sampling and laboratory program was to provide a limited targeted assessment of the identified AECs, in order to provide greater confidence of the likelihood of contamination associated with these areas meeting the assessment objective.

Based on the results of the initial desk study phase which suggested the majority of the site had not been the subject of potentially high likelihood of contaminating activities, it was considered that a reduced sampling frequency to that which may be required for systematic sampling under the NSW EPA (1995) 'Sampling Design Guidelines', was acceptable. As a result, a total of 15 targeted boreholes and two surface samples were collected at the site.

The site sampling and analysis plan was designed to assess potential soil contamination in the AECs as listed below:

- AEC 1. Boreholes were situated in the three excavations (former silage pits) located at the site. Two boreholes (CBH1 and CBH2) were situated up gradient and downgradient, respectively of the concrete based silage pit in the northeastern corner of the site. An additional two surface samples (W1 and W2) were collected within the walls of this silage pit. One borehole (CBH7) was undertaken in the silage pit in the western area of the site, and three boreholes (CBH8 to CBH10, also part of AEC 1) were undertaken adjacent the silage pit (containing dumped material) in the western area of the site.
- AEC 2 and AEC 5. In addition to boreholes undertaken to target other AECs, an additional 6 boreholes (CBH3 and CBH11 to CBH15) were spaced across the site to target potential diffuse application of pesticides and herbicides and potential deposition of asbestos fibres from off-site sources.
- AEC 3. Three boreholes (CBH8 to CBH10) were situated within the fill materials observed within the former silage pit (located in the western side of the property).
- AEC 4. Two boreholes (CBH4 and CBH5) were situated within the dam wall in the southern portion of the site to assess potential fill / reworked residual soils in this area.
- AEC 6. One borehole (CBH6) was situated adjacent the water tank to target potential weathering of hazardous materials from this source.

Selected soil samples were analysed for a suite of potential chemicals of concern as listed in Table 2. As contamination is likely to originate from above ground sources, the soil samples selected for analysis

were from the upper 0.3m of the boreholes. Two soil samples, located within possible fill or reworked residual material at CBH8 0.8-0.9m and CBH4 0.5-0.6m, respectively, were also analysed.

7.1 Quality Assurance/Quality Control

A quality assurance/quality control plan was designed to achieve a predetermined data quality objectives (DQOs) to demonstrate accuracy, precision, comparability, representativeness and completeness of the data generated and the procedures for assessing the DQOs are met. The results of the laboratory quality control are discussed in Section 10.3.

8 ASSESSMENT CRITERIA

8.1 Volatile Compounds Screening Criteria

The volatile compounds screening criteria presented in Table 3 were used as a guide to the potential for volatile hydrocarbon contamination, which may be associated with petrol or solvents. These criteria have been developed by Coffey based on our experience (where monitoring for volatile compounds has occurred) to assist in the screening of hydrocarbon contamination levels in soil. It is important to note that these screening criteria are only an indicator of the presence of volatile and that the PID has a different response to different chemicals.

Table 3: Generalised Soil Vapour Screening Criteria

PID reading as ppm isobutylene	Screening descriptor relating to volatile hydrocarbon contamination
<20 ppm	NEGLIGIBLE
20 to 60 ppm	LOW
60 - 300 ppm	MODERATE
>300 ppm	SIGNIFICANT

8.2 Soil Investigation Levels (SILs)

The laboratory results have been compared to SILs selected for the proposed hospital at the site from the following references:

- NSW DEC (2006) Guidelines for the NSW Site Auditor Scheme 2nd Edition; and
- NSW EPA (1994), Guidelines for Assessing Service Station Sites.

Appendix II of the NSW DEC (2006) Guidelines for the NSW Site Auditor Scheme summarises the National Environmental Health Forum (NEHF) investigation levels for protection of human health for different landuses and also provides guidelines for provisional phytotoxicity investigation levels (referred to as environmental investigation levels in the NEPM) for a range of contaminants in soils. As the proposed land use will be a hospital, which will not include residential dwellings, the results are compared to NEHF-F investigation criteria for Commercial/Industrial land use and provisional phytotoxicity levels.

NSW DEC (2006) Guidelines do not provide threshold levels for volatile petroleum hydrocarbon compounds. NSW EPA (1994) Guidelines for Assessing Service Station Sites provide an indication of acceptable cleanup levels for petroleum hydrocarbons compounds at service station sites to be reused for sensitive land-uses. The DECC has advised that these guidelines should also be used for less sensitive land-uses. For semi-volatile petroleum hydrocarbons (TPH C₁₆ – C₃₅ and >C₃₅) investigation levels are provided in the NSW DEC (2006) Guidelines, however, these are based on the NEPM health-based criteria, which require the laboratory analysis to unequivocally differentiate between aromatic and aliphatic compounds. If this cannot be done, the TPH C₁₀ – C₄₀ criteria in the service station guidelines should be applied. For this investigation, we have adopted the service station guidelines for all petroleum hydrocarbon fractions.

There are currently no national or DECC endorsed guidelines relating to human health of environmental investigation of material containing asbestos on sites. NSW DEC (2006) advice that until such guidelines become available, auditors must exercise their professional judgement when assessing if a site is suitable for a specific use in the light of evidence that asbestos may be a contaminant of concern. NSW DEC (2006) states that NSW Health will provide advice to auditors on a case-by-case basis where appropriate. The NSW DEC previously provided interim advice that “no asbestos in the soil at the surface is permitted”. Enhealth (2005) ‘Guidelines for Asbestos in the Non-Occupational Environment’, provides some guidance on assessing and managing asbestos in soil although does not provide a threshold concentration or investigation level for asbestos. For this site we have adopted non-detect as an investigation level for asbestos.

There are currently no national or DECC endorsed guidelines relating to human health or phytotoxicity guideline values for herbicides. For this site we have adopted non-detect as an investigation level for herbicides.

The adopted criteria are summarised in the results Table LR1.

9 FIELD INVESTIGATIONS

The field investigations were carried out on the 22 and 23 August 2012 by an environmental scientist from the Coffey Wollongong office. The approximate borehole locations were measured using a hand-held GPS unit. The approximate borehole locations are shown in Figure 3. Borehole logs are included in Appendix C.

Fifteen (15) boreholes, designated CBH1 to CBH16 were excavated using a hand auger to depths ranging between 0.3m bgs at CBH3 and 1.3m bgs at CBH8. In addition, two surface soil samples (W1 and W2) were collected from eastern and western walls (respectively) of the silage pit in the north-western corner of the site.

9.1 Soil Sampling

During drilling, soil samples were collected with a hand auger. Surface soil samples were collected by hand using disposable nitrile gloves. Sampling tools were decontaminated between locations in accordance with Coffey Standard Operating Procedures.

Soil samples were generally collected at regular depth intervals down the borehole, at major changes in stratigraphy or if evidence of odours or staining were noted (where observed). Clean 250mL glass jars were filled with soil to the brim (where possible) and immediately sealed with Teflon lined caps to lower the potential for loss of volatile contaminants. Samples were then labelled and placed directly into ice filled cooler boxes.

Soil samples were collected in duplicate into tightly sealed plastic bags. The headspace air above each sample was measured using a Mini Rae PID fitted with a 10.6eV lamp and calibrated with isobutylene gas at a concentration of 100ppm. This instrument allows rapid, semi quantitative analysis of ionisable volatile organic compounds in the soil. The results of the soil vapour testing are presented in Appendix D.

9.2 Field Quality Control Procedures

The field quality control consisted of the following:

- Sampling was performed generally in accordance with the procedures outlined in Coffey relevant standard operating procedures, which are based on industry accepted protocols for environmental sampling. This was carried out by an experienced environmental scientist.
- Calibration of the PID in accordance with manufacturer's instructions.
- Collection and analysis of two blind coded duplicate soil samples. The sample duplication techniques involved splitting the soil by taking small representative sub pieces and placing one piece in each jar until the jars had been filled to the appropriate capacity.
- Carrying into the field a laboratory prepared trip spike and trip blank samples including dispatch to the laboratory for analysis of volatile contaminants to check the potential for cross contamination or loss of volatile contaminants during transport and sample preparation at the laboratory.
- A wash blank (WB1) was collected from the hand auger and analysed for TPH, PAH, Metals, OC/OPs;
- Samples were transported in ice-cooled chests to the primary laboratory MGT Laboratory in Melbourne, Victoria who are NATA accredited for the analysis performed, under chain of custody conditions which are included in Appendix E.

10 LABORATORY ANALYTICAL PROGRAMME

Soil samples were selected for analysis mainly based on results of the PID screening and visual and olfactory evidence of potential contamination. The following analysis was undertaken on soil samples:

- 16 primary soil samples for OC/OPs, herbicides and asbestos;
- 11 primary soil samples for TPH, PAH and heavy metals (Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury and Zinc);
- Quality control samples including two duplicate soil samples, one wash blank sample, one trip blank sample and a trip spike sample.

Due to the limited nature of the laboratory program, no secondary laboratory was employed in the assessment or considered necessary.

The laboratory used for this assessment was MGT-Labmark at Lane Cove NSW.

11 RESULTS OF FIELD AND LABORATORY INVESTIGATIONS

11.1 Subsurface Conditions

The generalised subsurface conditions encountered across the site from the boreholes were:

TOPSOIL	Sandy SILT / SILT / Silty SAND: variable plasticity, fine grained, brown, dark brown, with a trace to some rootlets. Encountered to depths ranging from the ground surface to 0.3m at sampling locations CBH2, CBH3, CBH6 and CBH11 to CBH15.
ORGANIC SILT	Organic SILT: medium plasticity, brown, trace of fine sand, encountered within CBH10 from the ground surface to 0.15m. CBH10 was situated within the base of a silage pit excavation.
POSSIBLE FILL	Sandy SILT / Silty SAND / Silty CLAY: medium to high plasticity, brown/pale brown, dark brown/grey, brown with some sand and a trace of white and red speckles. Decomposed timber fragments were also noted. Encountered throughout CBH8 (i.e. 0m to >1.3m bgs). No anthropogenic material was observed within this material, however is generally darker than soil encountered within other adjacent boreholes, and is situated adjacent dumped material in a silage pit
REWORKED RESIDUAL	Silty SAND, fine to medium grained, brown, with a trace of coarse grained sand. Encountered in CBH4 and CBH5 from the ground surface to a depth of 0.8m bgs (CBH4) or beyond 1m bgs (CBH5) 0.5m (CBH3) and 0.8m (CBH4). Likely to be sourced from the dam excavation, and is similar to residual soils encountered throughout the site.
RESIDUAL	Clayey SAND / Sandy GRAVEL / Gravelly SILT / Gravelly SAND / Sandy CLAY / Gravelly CLAY / silty SAND / SAND: fine to coarse grained sand, medium plasticity clay, fine to medium grained sub rounded to sub angular gravel, brown/orange/grey/white. Encountered beneath topsoil and above weathered granodiorite in all borehole locations (with the possible exception of CBH8). This composition of this unit was highly variable across the site, but was generally comprised of gravelly sand. The base of this unit was encountered in CBH1, CBH2, CBH3, CBH7, CBH9 and CBH15 and was situated above weathered granodiorite.

No odours or oily staining were observed within the boreholes and surface soil samples.

A slight groundwater seepage was noted in CBH14 at 1m bgs. Ponded water was observed on the ground surface in the base of the silage pit excavations (in the west of the site). Groundwater was not encountered in the remaining borehole locations.

Boreholes CBH1, CBH2, CBH3, CBH7, CBH9 and CBH15 were terminated due to practical refusal on weather granodiorite. Borehole CBH6 was terminated at 0.9m due to slumping sands preventing borehole advancement. Borehole CBH8 was terminated at CBH13 due to practical refusal in relatively dense clays.

Apart from the possible fill, the subsurface conditions encountered were consistent with the published geological information.

11.2 Headspace Screening Results

Results of the soil vapour headspace measurements are presented in Appendix D.

Soil samples screened recorded negligible readings of 0ppm. This is generally consistent with field observations and the laboratory-tested soil samples. This indicates that significant volatile ionisable contamination was not apparent in the soil samples screened.

11.3 Laboratory Analysis Results

11.3.1 Quality Assurance/Quality Control

Coffey assessed the laboratory data against predetermined DQOs and DQIs (completeness, comparability, representativeness, precision, and accuracy) for both field and laboratory procedures and results. A data validation report was prepared by Coffey as part of the quality assurance programme and is included in Appendix F.

Based on our assessment, the following comments can be made regarding soil samples:

- Detectable concentrations of zinc were recorded in the wash blank sample collected off a hand auger which was used to facilitate sampling. The source of the detectable concentrations could not be determined. It is not considered to be the result of inappropriate decontamination procedures, as decontamination of sampling equipment was carried out in accordance with Coffey Environments standard operating procedures. It is therefore considered that cross contamination is unlikely.

- The soil sampling procedures used were based on Coffey standard operating procedures, based on industry standards. The laboratory results were generally consistent with field observations and site history information.
- RPDs for duplicates were within acceptable limits.

The QA/QC results indicate that the laboratory data is useable and adequately represents concentrations of contaminants at the sampling locations.

11.3.2 Comparison of Results to Soil Investigation Levels

The laboratory test results for soil are summarised in Table LR1. Laboratory reports are included in Appendix E. There were no exceedences above the adopted soil investigation criteria (SILs) in the samples analysed. A TPH C₁₀-C₃₆ concentration of 110mg/kg was detected in CBH8 0-0.1m, however this is less than the adopted SIL. Concentrations of herbicides, OC/OPs and PAHs were less than the laboratory limit of detection.

12 DISCUSSION

Targeted soil sampling was carried out at the site to verify the presence of contamination that may be associated with past or present activities in the identified AECs. A summary of the findings for each AEC is provided below:

AEC 1	Former Silage pits	Seven soil samples collected adjacent silage pits (at sampling locations CBH1, CBH2, CBH7 to CBH10 and W1) were submitted for laboratory analysis. Laboratory analytical results indicated no exceedences above the adopted SILs.
AEC 2	Site wide application of herbicides and pesticides	Fourteen soil samples collected near the ground surface (at locations CBH1 to CBH3, CBH6 to CBH15 and W1) were submitted for laboratory analysis. Laboratory analytical results were all below the laboratory Limit of Reporting (LOR) and well below the adopted SILs.
AEC3	Dumped material in former silage pit	Dumped material generally comprised of tyres, which anecdotal evidence suggests were used to cover the silage. Several other items (two metal cans, car transmission, plastic, mesh and wire) were also observed. Laboratory analysis of soil samples collected from three boreholes (CBH8 to CBH10) indicated no exceedences above adopted SILs. Possible fill material of a depth greater than 1.3m, was encountered in CBH8, however given the variable nature of residual soils in the area, this material is likely to be derived from natural materials.
AEC 4	Dam bund	Two boreholes undertaken within the bund (CBH4 and CBH5) indicated that the bund is likely to be made from reworked residual soils from the adjacent dam excavation rather than imported fill. Laboratory analysis of soil samples from these boreholes indicated no exceedences above adopted SILs.
AEC 5	Deposition of asbestos from off-site sources	Samples collected from the ground surface across the site did not indicate evidence of asbestos contamination, and samples analysed for asbestos were all below detection limits. There was a relatively minor quantity of potential ACM fragments (i.e. 2 fragments) observed approximately 150m to the east of the site. No visually identifiable ACM fragments were observed on surface soils over the site.

AEC 6	Weathering of hazardous materials from water tank	Analysis of a surface sample collected from borehole CBH6 collected near the water tank indicated no exceedences above adopted SILs.

Based on the results of the limited testing carried out, it is also considered that there is a low likelihood of soil contamination to be present at the site, and should there be contamination it is unlikely that this would be widespread. As any potential contamination would have been likely to be encountered at or near surface, it is considered unlikely that groundwater would be contaminated from on-site sources.

13 CONCLUSIONS AND RECOMMENDATIONS

Site history information indicated that the site to date has been predominantly used for agricultural purposes since the late 19th century, which included the construction of a dam and silage pits across the site. An area of dumped material was observed within a silage pit excavation in the western area of the site, which predominantly comprised of tyres, car parts, metal drums, wire and mesh.

Based on available site historical information and site observations, six AECs were identified and included:

- AEC1 – Former silage pits in the northeastern and western portions of the site;
- AEC 2 – Site wide application of pesticides and herbicides;
- AEC 3 – Dumped material in the former silage pit in the western portion of the site;
- AEC 4 – Potential fill/reworked natural material in the dam bund;
- AEC 5 – Site wide due to potential deposition of asbestos containing materials from off-site sources; and
- AEC 6 – Weathering of hazardous materials adjacent the water tank.

Generally the likelihood of contamination associated with the above AEC was generally assessed to be low to moderate. A limited sampling program was adopted, targeting these AECs, with a focus on AECs 2 and 3. Possible fill material was observed within a borehole in AEC 3, and reworked residual soils were encountered in AEC 4, however observations at the remainder of the sampling locations did not indicate the presence of fill material. The laboratory results indicated concentrations of chemicals of concern (OCPs, OPPs, herbicides, TPH, PAH, heavy metals and asbestos) were all below the adopted SILs in soil samples. This was also consistent with field observations. Based on the limited sampling undertaken, it is therefore concluded that there is a low likelihood of contamination at the site.

The dumped material in AEC 3 is in an area of the site that is not part of the initial earthworks stage, however it is understood that the dumped material is likely to be removed prior to commissioning of the hospital. This material should be appropriately disposed of to a licensed waste facility. Following removal of this material, sampling and analysis in this location should be considered to confirm the absence of contamination in residual fill or soils beneath the dumped material.

14 LIMITATIONS

The findings contained in this report are the result of discrete/specific methodologies used in accordance with normal practices and standards. To the best of our knowledge, they represent a reasonable interpretation of the general condition of the parts of the site assessed at the time the assessment was carried out. The works carried out did not include any intrusive investigations.

Under no circumstances, however, can it be considered that these findings represent the actual state of the site at all points.

This report does not provide geotechnical information. Information provided on likely materials within site structures is indicative and based on general observations and does not constitute a hazardous materials building survey.

This report should be read in conjunction with the attached sheets entitled "Important Information about your Coffey Environmental Report".

15 REFERENCES

1. Douglas Partners (2012). Draft report on Geotechnical Investigation, Proposed South East Regional Hospital, 1614 Tathra Road, Bega, NSW. Report number 78385, dated July 2012.
2. Lewis P.C. and Glen R.A. (1995). 1:250,000 Bega-Mallacoota Geological Map (Sheet No. SJ/55-04 & part SJ/55-08), Second Edition. Geological Survey of NSW, Sydney.
3. NEPC (1999), National Environment Protection (Assessment of Site Contamination) Measure
4. NSW Department of Lands (2009). 1:25,000 Bega Topographic Map.
5. NSW DWLC (1997). 1:250,000 Acid Sulfate Soil Risk Map, Bega, Map Sheet 8824S1, Second Edition
6. NSW EPA (1994), Guidelines for Assessing Service Station Sites;
7. NSW EPA (1995), Sampling Design Guidelines;
8. NSW OEH (2011), Guidelines for Consultants Reporting on Contaminated Sites;
9. NSW DEC (2006), Guidelines for the NSW Auditor Scheme 2nd Ed;

Important information about Coffey Environmental Report

Uncertainties as to what lies below the ground on potentially contaminated sites can lead to remediation costs blow outs, reduction in the value of the land and to delays in the redevelopment of land. These uncertainties are an inherent part of dealing with land contamination. The following notes have been prepared by Coffey to help you interpret and understand the limitations of your report.

Your report has been written for a specific purpose

Your report has been developed on the basis of a specific purpose as understood by Coffey and applies only to the site or area investigated. For example, the purpose of your report may be:

- To assess the environmental effects of an on-going operation.
- To provide due diligence on behalf of a property vendor.
- To provide due diligence on behalf of a property purchaser.
- To provide information related to redevelopment of the site due to a proposed change in use, for example, industrial use to a residential use.
- To assess the existing baseline environmental, and sometimes geological and hydrological conditions or constraints of a site prior to an activity which may alter the sites environmental, geological or hydrological condition.

For each purpose, a specific approach to the assessment of potential soil and groundwater contamination is required. In most cases, a key objective is to identify, and if possible, quantify risks that both recognised and unrecognised contamination pose to the proposed activity. Such risks may be both financial (for example, clean up costs or limitations to the site use) and physical (for example, potential health risks to users of the site or the general public).

Scope of Investigations

The work was conducted, and the report has been prepared, in response to specific instructions from the client to whom this report is addressed, within practical time and budgetary constraints, and in reliance on certain data and information made available to Coffey. The analyses, evaluations, opinions and conclusions presented in this report are based on those instructions, requirements, data or information, and they could change if such instructions etc. are in fact inaccurate or incomplete.

Subsurface conditions can change Interpretation of factual data

Subsurface conditions are created by natural processes and the activity of man and may change with time. For example, groundwater levels can vary with time, fill may be placed on a site and pollutants may migrate with time. Because a report is based on conditions which existed at the time of the subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. Consult Coffey to be advised how time may have impacted on the project and/or on the property.

Interpretation of factual data

Environmental site assessments identify actual subsurface conditions only at those points where samples are taken and when they are taken. Data derived from indirect field measurements and sometimes other reports on the site are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions. Actual conditions may differ from those inferred to exist, because no professional, no matter how well qualified, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, parties involved with land acquisition, management and/or redevelopment should retain the services of Coffey through the development and use of the site to identify variances, conduct additional tests if required, and recommend solutions to unexpected conditions or other problems encountered on site.

Your report will only give preliminary recommendations

Your report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until project implementation has commenced and therefore your report recommendations can only be regarded as preliminary. Only Coffey, who prepared the report, is fully familiar with the background information needed to assess whether or not the report's recommendations are valid and whether or not changes should be considered with redevelopment or on-going use of the site. If another party undertakes the implementation of the recommendations of this report there is a risk that the report will be misinterpreted and Coffey cannot be held responsible for such misinterpretation.

Your report is prepared for specific purposes and persons

To avoid misuse of the information contained in your report it is recommended that you confer with Coffey before passing your report on to another party who may not be familiar with the background and the purpose of the report. In particular, a due diligence report for a property vendor may not be suitable for satisfying the needs of a purchaser. Your report should not be applied for any purpose other than that originally specified at the time the report was issued.

Interpretation by other professionals

Costly problems can occur when other professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, retain Coffey to work with other professionals who are affected by the report. Have Coffey explain the report implications to professionals affected by them and then review plans and specifications produced to see how they have incorporated the report findings.

Data should not be separated from the report

The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, laboratory data, drawings, etc. are customarily included in our reports and are developed by scientists, engineers or geologists based on their interpretation of field logs

(assembled by field personnel), field testing and laboratory evaluation of field samples. This information should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

Contact Coffey for additional assistance

Coffey is familiar with a variety of techniques and approaches that can be used to help reduce risks for all parties to land development and land use. It is common that not all approaches will be necessarily dealt with in your environmental site assessment report due to concepts proposed at that time. As a project progresses through planning and design toward construction and/or maintenance, speak with Coffey to develop alternative approaches to problems that may be of genuine benefit both in time and cost.

Responsibility

Environmental reporting relies on interpretation of factual information based on judgement and opinion and has a level of uncertainty attached to it, which is far less exact than other design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. To help prevent this problem, a number of clauses have been developed for use in contracts, reports and other documents. Responsibility clauses do not transfer appropriate liabilities from Coffey to other parties but are included to identify where Coffey's responsibilities begin and end. Their use is intended to help all parties involved to recognise their individual responsibilities. Read all documents from Coffey closely and do not hesitate to ask any questions you may have.

Tables

**Preliminary Contamination Assessment,
Proposed Bega Hospital, 1614 Tathra Rd, Bega, NSW**

TABLE LR1:
SUMMARY OF LABORATORY RESULTS
TPH, BTEX, PAH, OCP, OPP, Herbicides, Heavy Metals and Asbestos
(All results in mg/kg)

Sample ID	THRESHOLD CONCENTRATIONS		W1	W2	CBH1	CBH2	CBH3	CBH4	CBH5	CBH6	QC2	CBH7	CBH8	CBH8	CBH9	CBH10	CBH11	CBH12	CBH13	CBH14	QC4	CBH15
Media			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date of Sampling			22-Aug-12	22-Aug-12	22-Aug-12	22-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12	23-Aug-12
Depth (m)			0.6-0.7m	1.2-1.3m	0.0-0.1m	0.0-0.1m	0.0-0.1m	0.5-0.6m	0.0-0.1m	0.0-0.1m	0.0-0.1m	0.0-0.1m	0-0.1m	0.8-0.9m	0.0-0.1m	0-0.15m	0.0-0.1m	0.0-0.1m	0.0-0.1m	0.0-0.1m	0.0-0.1m	0.0-0.1m
Soil Type			Residual	Residual	Residual	Topsoil	Topsoil	Reworked Residual	Reworked Residual	Topsoil	Duplicate of CBH6 0-01	Residual	Possible Fill	Possible Fill	Residual	Organic Silt	Topsoil	Topsoil	Topsoil	Topsoil	Duplicate of CBH14 0-0.1m	Topsoil
	HIL (NEHF F)	EILs																				
HEAVY METALS (Total)																						
Arsenic	500 ¹	20 ¹	2.3	4.4	3.3	3.1	-	< 2	-	< 2	< 2	2.6	3.1	< 10	3	3.1	-	-	-	-	-	-
Cadmium	100 ¹	3 ¹	< 0.4	< 0.4	0.5	0.4	-	< 0.4	-	< 0.4	< 0.4	< 0.4	0.4	< 2	< 0.4	0.6	-	-	-	-	-	-
Chromium	600,000 ^{1a}	400 ^{1a}	15	13	19	16	-	7.9	-	9.3	9.5	17	12	< 25	26	19	-	-	-	-	-	-
Copper	5,000 ¹	100 ¹	< 5	< 5	5.4	11	-	< 5	-	< 5	< 5	< 5	18	< 25	< 5	7.7	-	-	-	-	-	-
Lead	1,500 ¹	600 ¹	< 5	< 5	< 5	5.8	-	6	-	< 5	< 5	< 5	7.9	< 25	5.5	12	-	-	-	-	-	-
Mercury	75 ^{1b}	1 ^{1b}	< 0.1	< 0.1	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	-	-	-	-	-	-
Nickel	3,000 ¹	60 ¹	< 5	< 5	7.6	6	-	< 5	-	< 5	< 5	6.1	< 5	< 25	8.6	6.8	-	-	-	-	-	-
Zinc	35,000 ¹	200 ¹	9.5	16	20	81	-	< 5	-	22	28	22	180	< 25	45	46	-	-	-	-	-	-
TOTAL PETROLEUM HYDROCARBONS																						
C6 - C9 Fraction	65 ²	-	< 20	< 20	< 20	< 20	-	< 20	-	< 20	< 20	< 20	< 20	< 20	< 20	< 20	-	-	-	-	-	-
C10 - C14 Fraction	-	-	< 20	< 20	< 20	< 20	-	< 20	-	< 20	< 20	< 20	< 20	< 20	< 20	< 20	-	-	-	-	-	-
C15 - C28 Fraction	-	-	< 50	< 50	< 50	< 50	-	< 50	-	< 50	< 50	< 50	< 50	< 50	< 50	< 50	-	-	-	-	-	-
C29 - C36 Fraction	-	-	< 50	< 50	< 50	< 50	-	< 50	-	< 50	< 50	< 50	110	< 50	< 50	< 50	-	-	-	-	-	-
Total C10-C36	1000 ²	-	<LOR	<LOR	<LOR	<LOR	-	<LOR	-	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-	-	-	-	-
POLYCYCLIC AROMATIC HYDROCARBONS																						
Benzo(a)pyrene	5 ¹	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
Total PAH ³	100 ¹	-	<LOR	<LOR	<LOR	<LOR	-	<LOR	-	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-	-	-	-	-
ORGANOCHLORINE PESTICIDES																						
Heptachlor	50 ¹	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlordane	250 ¹	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin + Dieldrin	50 ¹	-	<LOR	-	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
DDT + DDE + DDD	1,000 ¹	-	<LOR	-	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
Total OCP			<LOR	-	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
ORGANOPHOSPHOROUS PESTICIDES																						
Total OPP	-	-	<LOR	-	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
HERBICIDES																						
2,4,5-T	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,5-TP	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-D	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-DB	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mecoprop	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Herbicides	-	-	<LOR	-	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
ASBESTOS	ND ³	-	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:

Bold	Concentration exceeds the Human Health Investigation Levels (HIL)
Bold	Contains asbestos

Based on NSW DECC (2009) Waste Classification Guidelines - Part 1 Classifying Waste

¹ Based on NSW DEC (2006), Guidelines for the NSW Site Auditor Scheme 2nd Edition (NEHF F) - Commercial and Industrial landuse

^a Based on Chromium III

^b Based on Inorganic Mercury

² Based on NSW EPA (1994), Guidelines for Assessing Service Station Sites

³ On the advice of the NSW Department of Health, the NSW EPA have advised NSW Site Auditors (Site Auditors Meeting 1 March 2000) that "no asbestos in the soil at the surface is permitted". The phrase 'at the surface'has not been defined.

⁴ Based on NSW DEC (2006), Guidelines for the NSW Site Auditor Scheme 2nd Edition Provisional Phytotoxicity-based investigation levels (EILs)

ND Not Detected

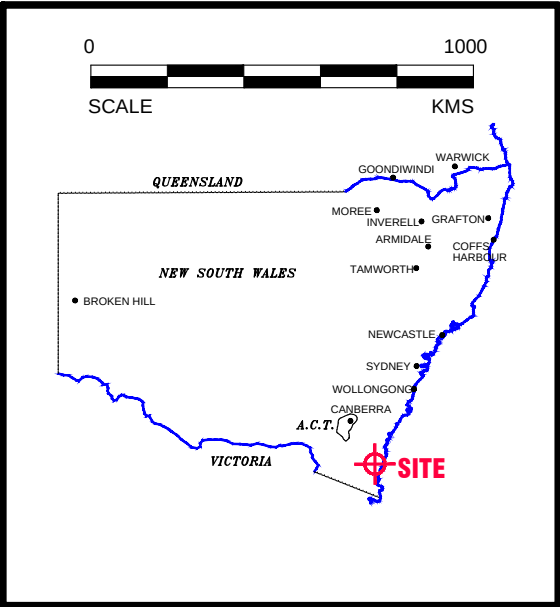
¹ Not Tested

⁶ Total PAHs is the sum of detectable concentrations of individual PAH compounds

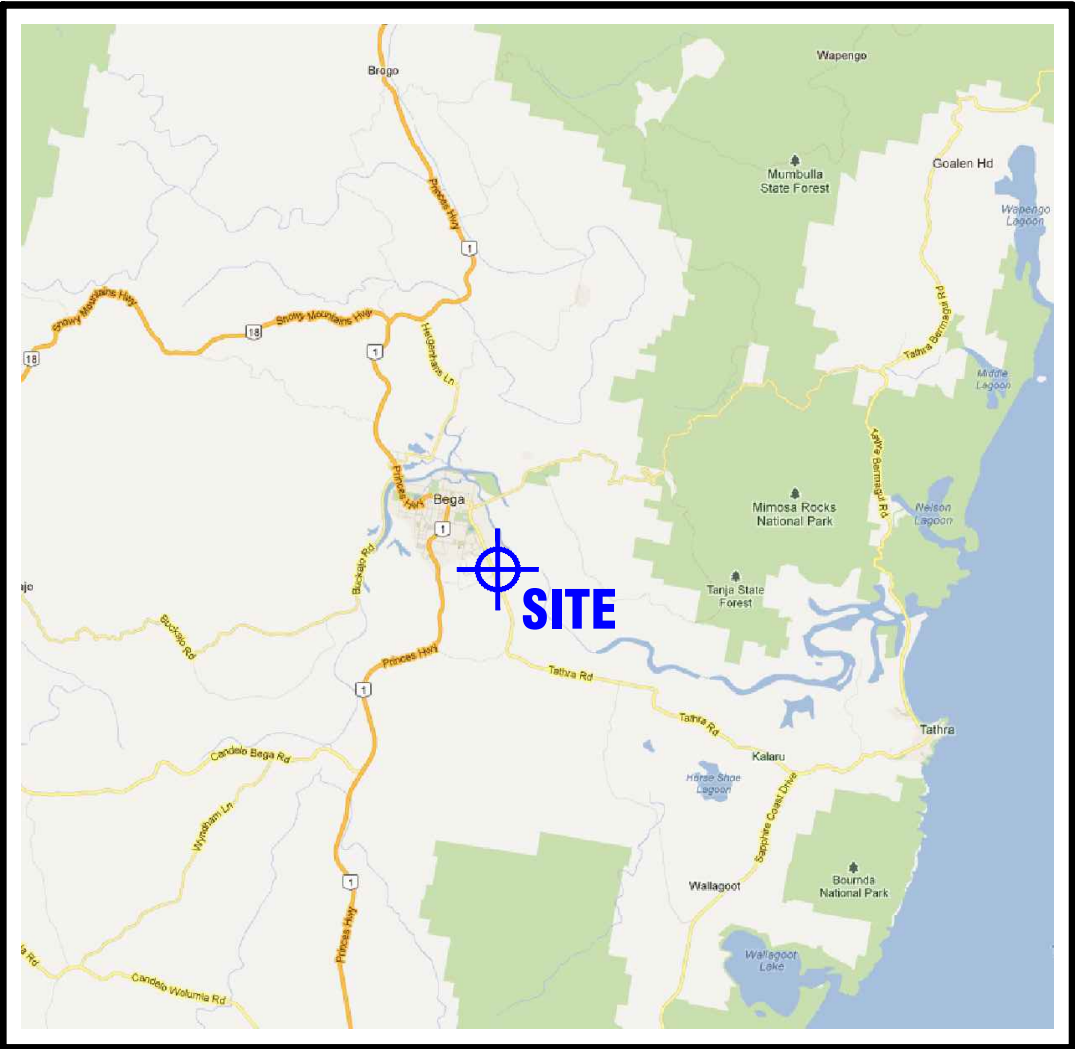
See original laboratory reports for detection limits

Figures

**Preliminary Contamination Assessment,
Proposed Bega Hospital, 1614 Tathra Rd, Bega, NSW**



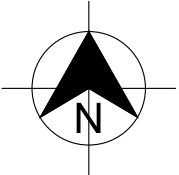
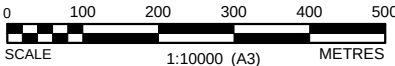
GENERAL AREA MAP



REGIONAL AREA MAP



© maps.google.com



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Rev	Date	Revision Details	Drn
A	27.08.12	ISSUE	LZ

coffey environments
SPECIALISTS IN ENVIRONMENTAL,
SOCIAL AND SAFETY PERFORMANCE

118 Auburn Street
Wollongong NSW 2500
Ph: (02) 4201 1400
Fax: (02) 4201 1401

Client:
**JOHNSTAFF PROJECTS
PTY (NSW)**

Project:
PRELIMINARY CONTAMINATION ASSESSMENT

Location:
**1614 TATHRA ROAD
BEGA, NSW**

Drawing Title:
SITE LOCALITY PLAN

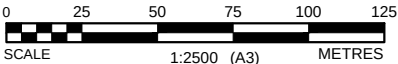
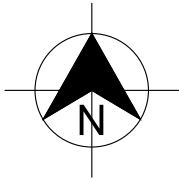
Drawn LZ	Date 27.08.12	
Project - Drawing No. ENAUBRAD01199AA-D01	Figure No. 1	Rev. A



THIS IS ONE INTERPRETATION ONLY
OTHER INTERPRETATIONS ARE POSSIBLE.

LEGEND

-  AEC 1: FORMER SILAGE PITS
 -  AEC 3: DUMPED MATERIAL
 -  AEC 4: REWORKED EARTHEN DAM BUND
 -  AEC 6: ADJACENT WATER TANK DUE TO WEATHERING OF HAZARDOUS MATERIALS
- AEC 2: POSSIBLE PESTICIDE/HERBICIDE APPLICATION (SITE WIDE)
- AEC 5: SITE WIDE DUE TO MIGRATION OF ASBESTOS FROM OFF-SITE



NOTE:
ALL LOCATIONS ARE APPROXIMATE.
DIMENSIONS IN METRES.

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PTY (NSW)**

Project:
PRELIMINARY CONTAMINATION ASSESSMENT

Location:

1614 TATHRA ROAD
BEGA, NSW

Drawing Title:

**SITE LAYOUT PLAN WITH
APPROXIMATE AREAS OF
ENVIRONMENTAL CONCERN**

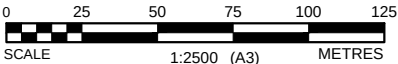
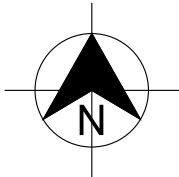
Drawn LZ	Date 27.08.12	
Project - Drawing No. ENAUBRAD01199AA-D01	Figure No. 2	Rev. A



THIS IS ONE INTERPRETATION ONLY
OTHER INTERPRETATIONS ARE POSSIBLE.

LEGEND

- BOREHOLE LOCATION
- × SURFACE SAMPLE LOCATION



NOTE:
ALL LOCATIONS ARE APPROXIMATE.
DIMENSIONS IN METRES.

Coffey Environments Australia Pty Ltd

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Rev	Date	Revision Details	Drm

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Client:

**JOHNSTAFF PROJECTS
PTY (NSW)**

Project:
PRELIMINARY CONTAMINATION ASSESSMENT

Location:

1614 TATHRA ROAD
BEGA, NSW

Drawing Title:

**APPROXIMATE LOCATIONS
OF SAMPLES**

Drawn LZ	Date 27.08.12	
Project - Drawing No. ENAUBRAD01199AA-D01	Figure No. 3	Rev. A

Appendix A Site History and Groundwater Bore Search Results

**Preliminary Contamination Assessment,
Proposed Bega Hospital, 1614 Tathra Rd, Bega, NSW**

A1 LAND TITLE SEARCH

Land titles dating back to 1896 were sourced from a title search carried out by Advance Legal Searches Pty Ltd at the Lands Title Office. The land titles search was for Lot 1 DP1176012. The results of the search are included at the end of this Appendix.

The title records indicate that Lot 1 was recently amalgamated in 2012, and was formerly comprised of three lots (Lots 1, 2 and 3 DP827161). From 1896 to the mid 1970's, the site was owned by a variety of individuals with listed occupation as farmers. From the mid 1970's to 1980, the site was owned by the Youth Welfare association of Australia. Between 1980 and 2010, the site was owned by Lavoni Investments Pty Ltd, before being acquired by Applegum Investments Pty Ltd. From 2012, the site has been owned by Health Infrastructure.

A2 AERIAL PHOTOGRAPH REVIEW

Aerial photographs dating back to 1957 were obtained from both Bega Valley Shire Council (1957 aerial photograph), the NSW Department of Lands and Google Earth Images. Table A1 briefly summarises the main relevant observations made during the review. Copies of the aerial photographs are included at the end of this appendix.

TABLE A1 – AERIAL PHOTOGRAPH REVIEW

DATE	OBSERVATIONS
1957 (black & white)	This image was provided by the Council. The quality and resolution of this image is poor, and no observations are able to be made of the site.
16/3/1967 (black & white)	On Site: The site appears to be generally vacant land with several dozen trees across the site. A track transverses through the northern area of the site, and along the southwestern boundary of the site. Several lighter patches are visible, and may be granite boulders and outcrops that were observed across the site during the recent site walkover. A rectangular shaped object is visible in the northeastern corner of the site (in the vicinity of the existing silage pit excavation). Off Site: Several buildings are visible to the properties to the southwest, north and south of the site. These buildings are in a similar location to the buildings current present of these properties, and may be used for farming purposes. Several structures (possibly buildings) are visible approximately 150m to the east of the eastern site boundary. The general surrounding land use appears to be agricultural.
8/9/1975 (black & white)	On Site: There appears to be slightly less trees across the site, and the ground cover in the southeastern quarter of the site appears to be a darker colour (possibly a different type of pasture than the rest of the site. The remainder of the site appears similar to the previous aerial photograph. Off Site: The surrounding site use appears generally similar to the previous aerial photograph.
11/1/1985 (black and white)	On Site: There appears to be significantly less tree cover across the site. A circular object, similar in size and location to the dam, is visible in the southern area of the site. There appears to be exposed/disturbed ground along the central western site boundary (adjacent Tathra Road). A darker strip of ground cover extending from the Tathra Road to Bega River, is visible. Off Site: The surrounding site use appears generally similar to the previous aerial photograph.

DATE	OBSERVATIONS
25/04/1994 (colour)	On Site: A rectangular strip (similar in location and size to the silage pit) is visible in the north-western corner of the site. Three circular structures (similar in size and location to the water tank and concrete cattle drinking troughs) are visible in the western area of the site. An area of disturbed soil and several relatively small objects, similar in location and size to the excavations in the central western area of the site, are visible. The ground cover appears to be divided into several rectangular strips, separated by dirt tracks, and may be pastoral land. A dirt track is visible from Tathra Road along the southwestern boundary of the site, and is likely to be an access road for the property located to the southwest of the site. The remainder of the site appears similar to the previous aerial photograph. Off Site: The surrounding land use appears generally similar to the previous aerial photograph.
2012 (Google earth image, viewed on 27/08/12)	On Site: There appears to be a lower density of tree cover across the site. The ground cover appears to be a similar colour, suggesting that pastoral growing is not being undertaken. Several small objects are visible, and are in a similar location and size to granite boulders observed across the site during the site walkover. The dirt tracks across the site are no longer visible. The remainder of the site appears similar to the previous aerial photograph. Off Site: There appears to be residential development to the west of Tathra Road. The structures to the east of the site are no longer visible. The surrounding land use appears similar to previous aerial photographs.

A.3 COUNCIL RECORDS AND PLANNING CERTIFICATES

Coffey made an informal request to Council to review relevant information pertaining to the site, such as property files, development applications (DA), complaints history, issues relating to contamination and current and previous zoning. From this request, Council made available a list of several property files relating to developments and historical landuse at the site since 2005. The search revealed a number of files, including:

- DA-2005/0631, 4 Lot Subdivision - Withdrawn
- DA-2005/0815, Subdivision to create three concessional lots – approved 21 June 2006; and
- DA-2011/0427, Subdivision to create a lot for proposed hospital, approved 6 February 2012,

A summary of the relevant information from the files provided is presented below.

Council provided a site plan (included within the 2005 development application) showing the presence of a pit in the northeast of the site, a dam in the southern area of the site, and a quarry located to the immediate north of the site. Council indicated that there does not appear to be any additional other relevant information relating to previous complaints or development history of the site.

Section 149s

A copy of the Section 149(2) and 149(5) certificates dated 8 August 2012 were obtained from Bega Valley Shire Council. The certificates indicate that the site is zoned, Zone 1A (Rural General Zone) and 2F (Future Urban Zone) under Bega Valley Local Environmental Plan 2002.

The certificates indicated that the land is not affected by the following (or at least has no record of):

- Located within 100m of an item of environmental heritage;
- Conservation Area;
- Mine subsidence;
- Acid Sulfate Soils;
- Bush fire prone;
- Land slip; and
- Reserved for acquisition by a public authority.

The section 149 certificate does not specifically mention whether the site is affected by contaminated or filled land, however in Section 7(vi), the Council states that the land is not subject to 'any other risk (other than flooding)'.

The certificates indicate that the land is affected by the following:

- Areas of the site Zoned 2F are affected by tree preservation orders; and
- The site is identified as flood prone land.
- Council has not been advised that:
 - o The land is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997;
 - o The land is subject to a management order within the meaning of the Contaminated Land Management Act 1997;
 - o The land is subject to an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997;
 - o The land is subject to an ongoing maintenance order within the meaning of the contaminated Land Management Act 1997; and
 - o The Land is Subject to a site audit statement within the meaning of the Contaminated Land Management Act 1997

Copies of the certificates have been included at the end of this appendix.

A.4 INTERVIEWS

A telephone interview was carried out with Mr Ray Miller on 14 August 2012. The relevant information noted from the interview included:

- Mr Miller was the former owner of the site until recently.
- The site has been used for farming purposes (dairy farming). At some stage the site may have been used to grow crops (such as corn).

- Two silage pits are present, one in the east, and one in the western area of the site. The eastern silage pit is concrete lined. The purpose of the pits is to store silage for feeding cattle. The reduced oxygen environment in the pit preserves the silage.
- As far as Mr Miller is aware, there is no imported fill or infilled dams on the site, nor were there any former buildings on-site.
- In the surrounding area, various granite outcrops were quarried (using hand tools or small machinery) to provide headstones for the local cemetery.
- Apart from a water tank in the western portion of the site, Mr Miller is unaware of any above ground or underground storage tanks across the site; and
- Mr Miller is unaware of any chemical storage at the site, however it is possible that herbicides were historically used at the site to control blackberry growth.

A telephone interview was carried out with a local farmer (Rex) on 16 August 2012. The relevant information noted from the interview included:

- Rex had been involved with the site for over 40years, as his relatives have farmed in the area since this time;
- The site has been used for farming purposes (dairy farming). Crop growing was generally undertaken in the low lying areas to the east of the site. The site was formerly part of a larger property, and farm buildings were located to the north and east of the site;
- Silage pits were only used for storage of silage. Pastures were placed in these pits for storage, and covered with tyres to prevent cattle from accessing the silage. During periods of poor pastoral growth (e.g. summer, drought periods), the silage would be removed from the pit and feed to the cattle.
- Silage pits are present on-site. The eastern silage pit is concrete lined. The purpose of the pits is to store silage for feeding cattle in drought periods. The reduced oxygen environment in the pit preserves the silage.
- As far as Rex is aware, there is no imported fill or infilled dams on the site, nor were there any former buildings on-site.
- Rex indicated that herbicides may historically have been used to control blackberries, and pesticides (Lindane) was used to treat crops to the north and east of the site prior to the 1980's.
- The bund wall of the dam in the southern portion of the site was created with material excavated during the construction of the adjacent dam.

A.5 NSW OEH NOTICES

A search of the NSW OEH Contaminated Land Record² was carried out on the 13 August 2012. The contaminated land public record is a searchable database of:

- Actions taken by the EPA under section 15, 17, 19, 21, 23, 26 or 28 of the Contaminated Land Management Act 1997 (CLM Act)
- Actions taken by the EPA under section 35 or 36 of the Environmentally Hazardous Chemicals Act 1985 (EHC Act) (Note: Some notices under section 35 of the EHC Act 1985 were issued by the State Pollution Control Commission, which was the NSW government agency responsible for managing contaminated sites before the EPA was established in 1992.)
- Site audit statements provided to the EPA under section 52 of the CLM Act on sites subject to an in-force declaration or order.

The search noted no records or listings for the site, or within 1km of the site.

A search of the NSW DECC Public Register of the Protection of the Environment Operations (POEO) Act 1997³ was carried out on the 13 August 2012. The POEO public record is a searchable database of:

- Environment protection licences
- Applications for new licences and to transfer or vary existing licences
- Environment protection and noise control notices
- Convictions in prosecutions under the POEO Act
- The results of civil proceedings
- Licence review information. Submissions regarding licence review can be made at any time
- Exemptions from the provisions of the POEO Act or regulations
- Approvals granted under clause 9 of the POEO (Control of Burning) Regulation
- Approvals granted under clause 7A of the POEO (Clean Air) Regulation

The search noted that there was a license (license number 4012) granted for Bega Council sewerage treatment works in 2001, which is located approximately 400m to the north of the site (Lot 8 Taronga Crescent). The license was amended several times since this time (most recent amendment was dated February 2012). A license revision (notice number 1502403, February 2012) indicated that the treatment plan was producing effluent with a high ammonia concentration (as indicated in EPA report 130670). The license revision introduced a number of pollution reduction programs. There were no further POEO licenses within 500m of the site.

² www.environment.nsw.gov.au/clm/aboutclmrecord.htm

³ www.environment.nsw.gov.au/prpoeo

A.6 WORKCOVER RECORDS

The WorkCover search of the Stored Chemical Information Database (SCID) for licenses to keep dangerous goods dated 23 July 2012 indicated WorkCover NSW has no records for the site.

WorkCover correspondence is included at the end of this Appendix.

A.7 GROUNDWATER BORE SEARCH

The NSW Office of Water provides information to a website listed as www.nratlas.nsw.gov.au/wmc with search tools that provide summary reports on registered bores in NSW. Coffey carried out a search of registered bores on this website on the 13 August 2012. The results of this search indicated that that there were fourteen registered bores within a 1 kilometre radius of the Site. Bore search details are discussed further in Section 3.2.

Groundwater bore search results are included at the end of this Appendix.

LAND TITLE SEARCH

ADVANCE LEGAL SEARCHERS PTY LIMITED

(ACN 147 943 842)
ABN 82 147 943 842

PO Box 149
Yagoona NSW 2199

Telephone: +612 9754 1590
Mobile: 0412 169 809
Facsimile: +612 9754 1364
Email: alsearch@optusnet.com.au

11th August, 2012

COFFEY ENVIRONMENTS PTY LTD

118 Auburn Street
WOLLONGONG NSW 2500

Attention: James Boyle,

RE:

**1614 Tathra Road, Bega
REF: ENAUBRAD01199AA
PO: EWOLL23**

Current Search

Folio Identifier 1/1176012 (title attached)
DP 1176012 (plan attached)
Dated 6th August, 2012
Registered Proprietor:
HEALTH ADMINISTRATION CORPORATION

Title Tree
Lot 1 DP 1176012

Folio Identifier 1/1176012

See Notes (a), (b) & (c)

(a)

Folio Identifier 1/827161

PA 63338

Conveyance Book 3437 No. 244

Conveyance Book 3158 No. 615

Conveyance Book 2311 No. 598

(b)

Folio Identifier 2/827161

/ \

(bi)

PA 63338

Conveyance Book 3437 No. 244

Conveyance Book 3158 No. 615

Conveyance Book 2311 No. 598

(bii)

Folio Identifier 2/243464

Certificate of Title Volume 13068 Folio 241

PA 52330

Conveyance Book 2311 No. 598

(c)

Folio Identifier 3/827161

/

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(ci)

(cii)

PA 63338

Folio Identifier 2/243464

Conveyance Book 3437 No. 244

Certificate of Title Volume 13068 Folio 241

Conveyance Book 3158 No. 615

PA 52330

Conveyance Book 2311 No. 598

Conveyance Book 2311 No. 598

Summary of Proprietor(s)
Lot 1 DP 1176012

Year

Proprietor

	(Lot 1 DP 1176012)
2012 – todate	Health Administration Corporation
2012 – 2012	Applegum Properties Pty Ltd

See Notes (a), (b) & (c)

Note (a)

	(Lot 1 DP 827161)
2010 – 2012	Applegum Properties Pty Ltd
1993 – 2010	Lavoni Investments Pty Limited
	(Part of Suburban Allotments 10, 11 & 12, Parish of Bega – Area 142 Acres 3 Roods 0 Perches – Conv Bk 3437 No. 244)
1980 – 1993	Lavoni Investments Pty Limited
1980 – 1980	Youth Welfare Association of Australia
	(Part of Suburban Allotments 10, 11 & 12, Parish of Bega – Area 142 Acres 3 Roods 0 Perches – Conv Bk 3158 No. 615)
1974 – 1980	Youth Welfare Association of Australia
1974 – 1974	Allen George Burgess, farmer
	(Part of Suburban Allotment 10, Parish of Bega – Area 46 Acres 2 Roods 0 Perches – Conv Bk 2311 No. 598)
1954 – 1974	Allen George Burgess, farmer
1914 – 1954	Henry Howard, farmer
1896 – 1914	John Howard, farmer
1896 – 1896	William Hibburd, farmer

Note (b)

	(Lot 2 DP 827161)
2010 – 2012	Applegum Properties Pty Limited
1993 – 2010	Lavoni Investments Pty Limited

See Notes (bi) & (bii)

Note (bi)

	(Part of Suburban Allotments 10, 11 & 12, Parish of Bega – Area 142 Acres 3 Roods 0 Perches – Conv Bk 3437 No. 244)
1980 – 1993	Lavoni Investments Pty Limited
1980 – 1980	Youth Welfare Association of Australia
	(Part of Suburban Allotments 10, 11 & 12, Parish of Bega – Area 142 Acres 3 Roods 0 Perches – Conv Bk 3158 No. 615)
1974 – 1980	Youth Welfare Association of Australia
1974 – 1974	Allen George Burgess, farmer
	(Part of Suburban Allotment 11, Parish of Bega – Area 47 Acres 1 Rood 0 Perches – Conv Bk 2311 No. 598)
1954 – 1974	Allen George Burgess, farmer
1914 – 1954	Henry Howard, farmer
1910 – 1914	John Howard, farmer
1910 – 1910	George Alfred Heath, farmer

Note (bii)

	(Lot 2 DP 243464)
1987 – 1993	Lavoni Investments Pty Limited
	(Lot 2 DP 243464 – Area 1 Acre 0 Roods 14 ½ Perches – CTVol 13068 Fol 241)
1980 – 1987	Lavoni Investments Pty Limited
1976 – 1980	Youth Welfare Association of Australia
1976 – 1976	The Commissioner for Main Roads
	(Part of Suburban Allotments 11 & 12, Parish of Bega – Area 1 Acre 0 Roods 14 ½ Perches – Conv Bk 2311 No. 598)
1928 – 1976	The Commissioner for Main Roads
1914 – 1928	Henry Howard, farmer
1910 – 1914	John Howard , farmer
1910 – 1910	George Alfred Heath, farmer

Note (c)

	(Lot 3 DP 827161)
2010 – 2012	Applegum Properties Pty Limited
1993 – 2010	Lavoni Investments Pty Limited

See Notes (ci) & (cii)

Note (ci)

	(Part of Suburban Allotments 10, 11 & 12, Parish of Bega – Area 142 Acres 3 Roods 0 Perches – Conv Bk 3437 No. 244)
1980 – 1993	Lavoni Investments Pty Limited
1980 – 1980	Youth Welfare Association of Australia
	(Part of Suburban Allotments 10, 11 & 12, Parish of Bega – Area 142 Acres 3 Roods 0 Perches – Conv Bk 3158 No. 615)
1974 – 1980	Youth Welfare Association of Australia
1974 – 1974	Allen George Burgess, farmer
	(Part of Suburban Allotment 12, Parish of Bega – Area 49 Acres – Conv Bk 2311 No. 598)
1954 – 1974	Allen George Burgess, farmer
1914 – 1954	Henry Howard, farmer
1910 – 1914	John Howard, farmer
1910 – 1910	George Alfred Heath, farmer

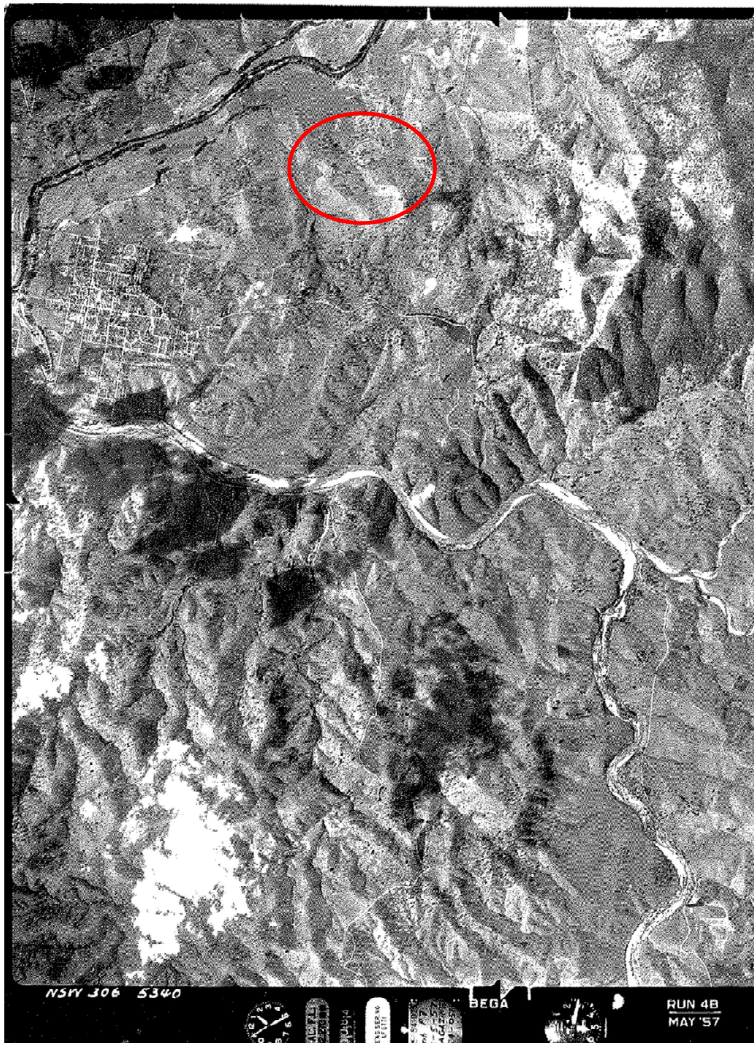
Note (cii)

	(Lot 2 DP 243464)
1987 – 1993	Lavoni Investments Pty Limited
	(Lot 2 DP 243464 – Area 1 Acre 0 Roods 14 ½ Perches – CTVol 13068 Fol 241)
1980 – 1987	Lavoni Investments Pty Limited
1976 – 1980	Youth Welfare Association of Australia
1976 – 1976	The Commissioner for Main Roads
	(Part of Suburban Allotment 12, Parish of Bega – Area 49 Acres – Conv Bk 2311 No. 598)
1928 – 1976	The Commissioner for Main Roads
1914 – 1928	Henry Howard, farmer
1910 – 1914	John Howard, farmer
1910 – 1910	George Alfred Heath, farmer

AERIAL PHOTOS

1957 Aerial Photo (As provided by
Council)

Approximate site
location



1967 Aerial Photo



1975 Aerial Photo





1994 Aerial Photo



COUNCIL RECORDS



6 February 2012

R Miller
C/- Caddey Searl & Jarman
PO Box 259
Bega NSW 2550

NOTICE OF DETERMINATION

under Section 81(1)(a) of the *Environmental Planning and Assessment Act 1979* (as amended).

The development application has been determined by granting consent under Clause 18 of the *Bega Valley Local Environmental Plan 2002* subject to conditions.

APPLICANT	R Miller C/- Caddey Searl & Jarman
LAND	Lots 1, 2 and 3 DP 827161, Lot 1 DP 69801 and Lot 9 DP 750190
LOCATION	1614 Tathra Road BEGA
ZONE	1(a) Rural General Zone
PROPOSED DEVELOPMENT	Subdivision to create a lot for proposed hospital
CLASSIFICATION(S) UNDER BUILDING CODE OF AUSTRALIA	N/A
DETERMINATION MADE ON	6 February 2012
CONSENT TO OPERATE FROM	6 February 2012
CONSENT TO LAPSE ON	6 February 2017

DEVELOPMENT CONSENT

ADDRESS ALL
CORRESPONDENCE TO:

PO Box 492
Bega NSW 2550

DX 4904
ABN 26 987 935 332

Council Chambers
Zingel Place, Bega

PHONE
(02) 6499 2222
FAX
(02) 6499 2200

INFORMATION
www.begavalley.nsw.gov.au
EMAIL
council@begavalley.nsw.gov.au

Conditions of approval

1. The plan of subdivision shall be in accordance with the Approved Development Plan, the application form and any supporting documentation received with the application, except as may be amended in red on the attached plans and by the following conditions.
2. The proposed Lot described as Hospital is created for another purpose pursuant to Clause 18 of the *Bega Valley Local Environmental Plan, 2002*, and the erection of a dwelling-house on this land is prohibited. The final plan of subdivision shall include a suitable restrictive covenant pursuant to Section 88B of the *Conveyancing Act, 1919* which prohibits the erection of a dwelling house on this land. The Council shall be the authority benefited by this covenant and the Council shall have sole authority to release, vary or modify this covenant.
3. This development consent is for the subdivision of land and related works. No approval of existing buildings or structures is granted or implied by this consent.
4. As part of any subsequent subdivision certificate application, the applicant shall submit to Council documentary evidence / compliance certificate to confirm compliance with all conditions of this Consent.
5. The subdivider shall appoint a Principal Certifying Authority for this development who will have the responsibility to issue a Subdivision Certificate in conformity with the relevant provisions of the *Environmental Planning and Assessment Act, 1979* and related Regulations.

At the date of endorsement of this development consent, only the Council is able to carry out the functions of a Principal Certifying Authority for subdivisions.

6. The subdivider must obtain a Subdivision Certificate for this subdivision from the appointed Principal Certifying Authority before the plan of subdivision can be registered by the Department of Land and Property Information NSW. All conditions of consent must be satisfied, or suitable bonding arrangements made with Council, before a Subdivision Certificate can be issued. A copy of the prescribed form for an Application for a Subdivision Certificate is enclosed. (Council's current fee for a Subdivision Certificate as at the date of this consent is \$ 450).
7. Where any easement, right-of-carriageway or restrictive covenant is to be created pursuant to Section 88B of the *Conveyancing Act, 1919*, the subject S88B Instrument shall be submitted to the Principal Certifying Authority with the final plan of subdivision as a prerequisite to the endorsement of the Subdivision Certificate by the Principal Certifying Authority.
8. Each allotment in the proposed subdivision shall be serviced with electricity at no cost to Council. A letter from Country Energy advising that its requirements have been met shall be sufficient to establish compliance with this condition.
9. The subdivider shall arrange for the provision of telephone services to the lots in the subdivision. Prior to the endorsement of a subdivision certificate, the subdivider shall submit to the Principal Certifying Authority written notification from a recognised telecommunications carrier to confirm that arrangements have been undertaken to satisfy this condition.
10. **Bush Fire Safety Authority under the provisions of Section 100B of the Rural Fires Act 1997**
The subdivision shall comply with the requirements of the Bush Fire Safety Authority,

issued by the NSW Rural Fire Service, dated 28 November 2011.

Note: The general terms of approval issued by the NSW RFS are provided as Attachment A to this development consent.

Subdivision Engineering Conditions:

11. Procedures - Requirements before commencement of subdivision work:

- A. Subdivision work in accordance with this development consent must not be commenced until:
 - a) **Construction Certificate** for this subdivision work has been issued by:
 - i) the council, or
 - ii) an accredited certifier, and
 - b) the person having the benefit of this development consent:
 - i) has appointed the Council as Principal Certifying Authority for this development, and
 - ii) has notified the Council of this appointment (see below), and
 - c) 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 subdivision 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.

- B. The notification to Council of appointment of the Principal Certifying Authority must contain the following information:
 - a) the name and address of the person by whom the notice is being given, and
 - b) a description of the work to be carried out, and
 - c) the address of the land on which the work is to be carried out, and
 - d) the registered number and date of issue of this development consent, and
 - e) the name and address of the Principal Certifying Authority (Council).
- C. The notice to Council of intention to commence the subdivision work must contain the following information:
 - a) the name and address of the person by whom the notice is being given, and
 - b) a description of the work to be carried out, and
 - c) the address of the land on which the work is to be carried out, and
 - d) the registered number and date of issue of this development consent, and

- e) the registered number and date of issue of the relevant Construction Certificate, and
 - f) 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
 - g) the date on which the work is intended to commence.
- D. 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.
- E. 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.
- F. 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 80A, 81A and 109F and *Environmental Planning and Assessment Regulation 2000*, Clauses 103 and 104.)

12. Easements for services

The plan of subdivision shall establish easements for services as necessary to provide for the connection of water supply, sewerage, electricity and telecommunications services to lots.

(Reason: to secure the authority for land benefited to install, use and maintain connections to utility services across other land.)

13. Dedication of road widening

The final plan of subdivision shall include the dedication as Public Road of such land as is necessary to contain the construction of a road to serve as access to future development. The registered surveyor who prepares the plan of subdivision 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 subdivision.

Note: The future developer of the proposed hospital lot and residue lot will be responsible for the full cost of the construction of the future public road marked on the approved plan.

(Reason: To rectify encroachments as part of the subdivision).

14. Dedication of splay corners at road junctions

The final plan of subdivision shall include the dedication as Public Road of splay corners 5 metres by 5 metres at each road junction.

(Reason: To improve sight distance and space for utility services at road junctions).

The above conditions are in the public interest to reduce any potential environmental impact and to ensure the proposed development complies with:

- the provisions of the *Environmental Planning and Assessment Act 1979* and Regulations
- any environmental planning instruments applying to the subject land
- Council's codes and policies
- *Section 94 Development Contribution Plan* and *Tree Preservation Order*.

Notes:

1. In accordance with the provisions of Section 82A of the *Environmental Planning and Assessment Act 1979* (as amended) the applicant can request Council to review this determination. The request must be made within a period of 6 months from the date shown on this determination. A fee, as prescribed under Council's current *Management Plan – Fees and Charges*, is payable for such a review.
2. Section 97 of the *Environmental Planning and Assessment Act 1979* (as amended), gives the applicant the right to appeal to the Land and Environment Court within 6 months after the date on which you receive this notice. Section 97 does not apply to the determination of a development application for State significant development or local designated development that has been the subject of a Commission of Inquiry.
3. Before any subdivision works are commenced a Construction Certificate must be obtained from Council or an accredited certifier.
4. It is an offence under the *National Parks and Wildlife Act 1974* to destroy, deface or damage an Aboriginal relic. If during works on site any Aboriginal relic is discovered then you should immediately stop work and contact representatives of the Office of Environment and Heritage and the Local Aboriginal Land Council.
5. The *Native Vegetation Act 2003* requires consent for the clearing of remnant native vegetation or protected regrowth from the Southern Rivers Catchment Management Authority. It is the proponent's responsibility to consult the Southern Rivers Catchment Management Authority to determine the need or otherwise for their approval and you should not construe the granting of this development consent as notification to you that the NSW Native Vegetation Act does not apply. The NSW Native vegetation Act 2003 may have direct application to your proposal and you should obtain advice about this matter directly from the Southern Rivers Catchment Management Authority.
6. It is the applicant's responsibility to advise Council of any changes to contact details in a timely manner. Council will not be held responsible for any lost documents, delays or missed inspections if any of the details are in any way not up-to-date. Should duplicate documents be required they will incur an additional fee in this circumstance.



Mark Fowler
Development Control Planner
FOR BEGA VALLEY SHIRE COUNCIL

James Boyle

From: Fowler, Mark <MFowler@begavalley.nsw.gov.au>
Sent: Friday, 17 August 2012 2:29 PM
To: James Boyle
Subject: Request for Council Planning information and aerial photography for 1614 Tathra Road, Bega
Attachments: img-817133108.pdf; img-807152054-0001.pdf; img-807153255-0001.pdf

<<img-817133108.pdf>>

<<img-807152054-0001.pdf>> <<img-807153255-0001.pdf>>

Hi James

Please find attached a bit of history of the site with also an approved development plan that provides some site reference points. The attached aerial photograph was taken in 1957. It did not scan well.

DA history for the site is :

1. 2005.0631 – 4 Lot subdivision – withdrawn
2. 2005.0815 – Subdivision to create three concessional lots and residue – approved 21 June 2006
3. 2011.0427 – Subdivision to create a lot for proposed hospital – approved 6 February 2012.

On the 2005.0815 file the approved plan shows a quarry and a pit, see attached. There is no mention on the file if the pit is contaminated.

A copy of the 2011.0427 consent is also attached.

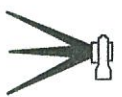
Regards

Mark Fowler

Development Control Planner

Check out all the latest news and events at Council on www.begavalley.nsw.gov.au.

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R W Surveying
and Valuations

35 Finders Street
Eden, NSW 2551
PHONE (02) 6496 3418
FAX (02) 6496 2259
email property@rwsurveying.com

NOTES:
DIMENSIONS AND AREAS ARE APPROXIMATE AND
SUBJECT TO FINAL SURVEY

SIGNIFICANT TREES SHOWN ARE GENERALLY NATIVE EUCALYPTS

Plan

SHOWING DETAILS, CONTOURS
AND 1:100 YEAR FLOOD LINE
PROPOSED SUBDIVISION, TATHRA ROAD, BEGA

BEG LOT 1, 2 & 3 IN DP 827161 & LOT 9 IN DP 750190 & LOT 1 IN DP 169801

AMENDED 28/04/2006 - ADDED 20 WIDE ROC

Date: 6/9/2005

Scale: 1:2500

Datum: AHD

Contour Interval: 1.0m

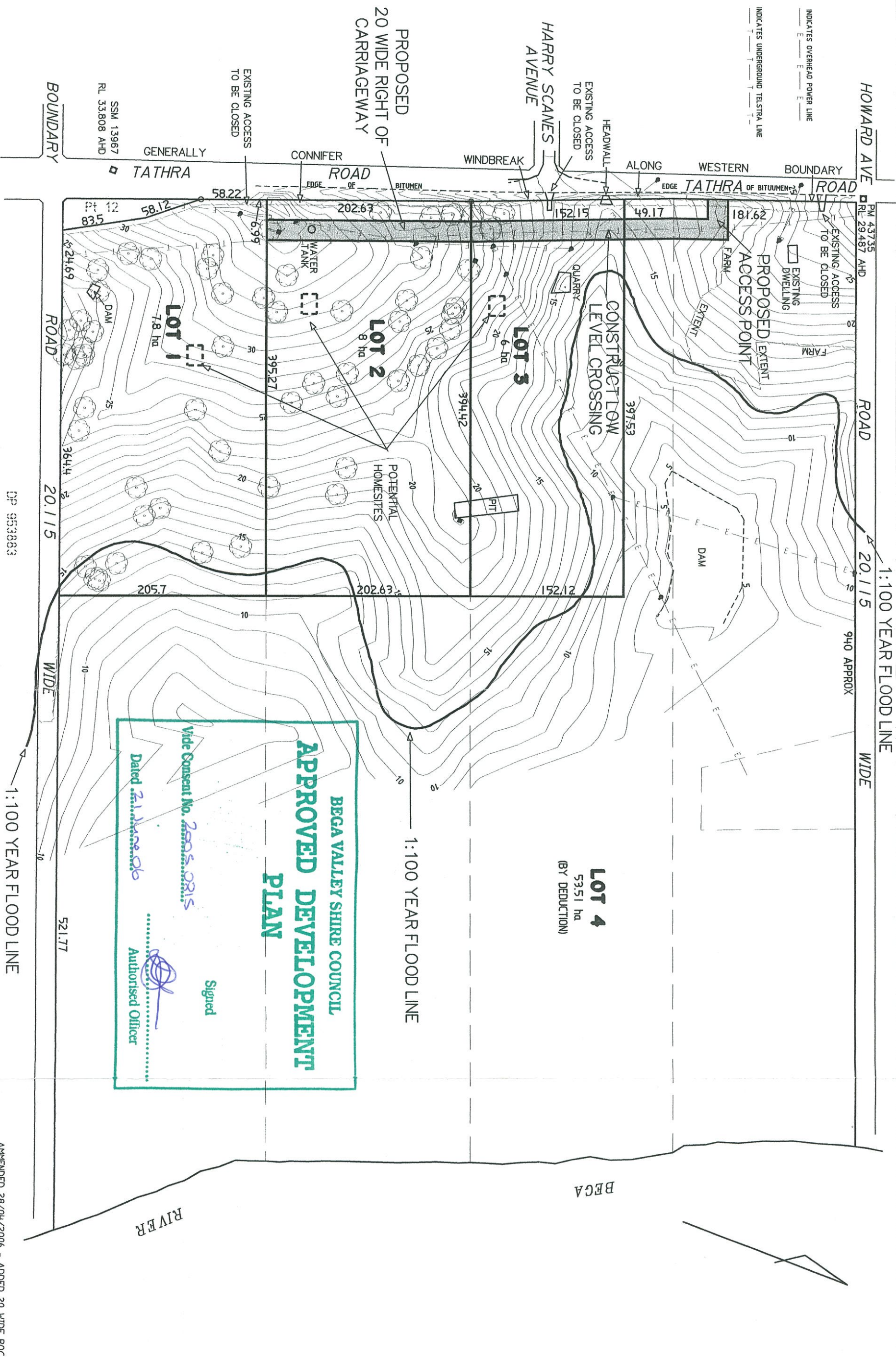
Sheet No:

1/1

A2

Job No: 1042

DWG No: 1042P



NSW 306 5340



CAL. F.L.
2270

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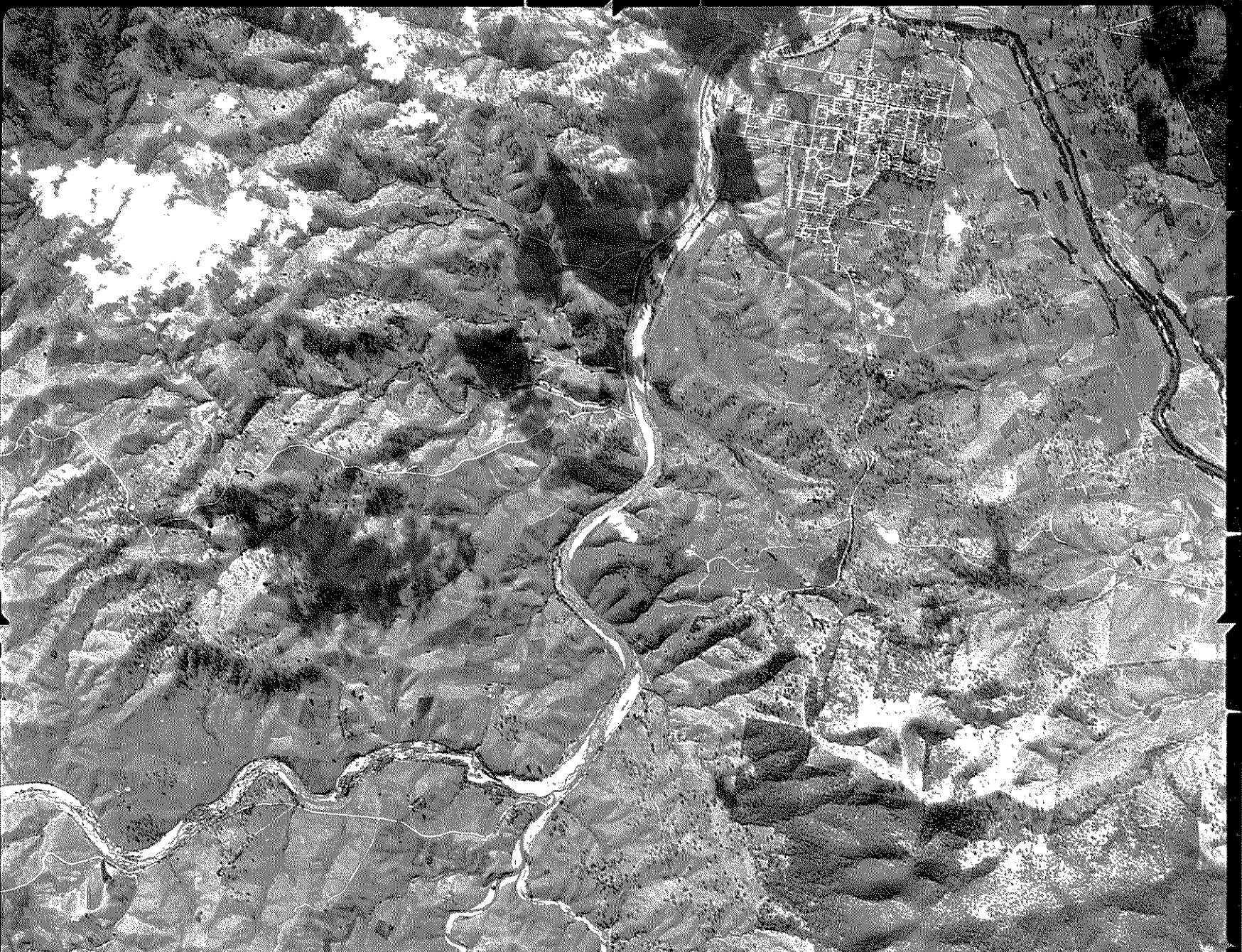
SENSER NO
XF6771

54-025
66 P7
3-5-57
MAGAZINE
54-057

BEGA



RUN 4B
MAY 57



SECTION 149 PLANNING CERTIFICATE



Bega Valley Shire Council

Planning certificate under Section 149(2) Environmental Planning and Assessment Act 1979

Coffey Wollongong RECEIVED	
09 AUG 2012	
Job No.	Action
Rec'd by	

Applicant: Coffey Environments
118 Auburn Street
WOLLONGONG NSW 2550

Certificate No: 5001 **Receipt No:** 288841

Certificate Date: 08/08/2012 **Applicant's Ref:**

Property: Tathra Road BEGA 2550

Description: Lot: 1 DP: 1176012 **Parcel No:** 38297

In accordance with the requirements of section 149(2) of the Environmental Planning and Assessment Act 1979, the following prescribed matters relate to the land at the date of this certificate.

1 Names of relevant planning instruments and DCPs

(a) The name of each environmental planning instrument that applies to the carrying out of development on the land.

Bega Valley Local Environmental Plan 2002

State Environmental Planning Policy No. 1 - Development Standards

State Environmental Planning Policy No. 4 - Development Without Consent and Miscellaneous Complying Development

State Environmental Planning Policy No. 6 - Number of Storeys in a Building

State Environmental Planning Policy No. 15 - Rural Land-Sharing Communities

State Environmental Planning Policy No. 21 - Caravan Parks

State Environmental Planning Policy No. 22 - Shops and Commercial Premises

State Environmental Planning Policy No. 30 - Intensive Agriculture

State Environmental Planning Policy No. 32 - Urban Consolidation (Re-Development of Urban Land)

State Environmental Planning Policy No. 33 - Hazardous and Offensive Development

State Environmental Planning Policy No. 36 - Manufactured Home Estates

State Environmental Planning Policy No. 44 - Koala Habitat Protection

State Environmental Planning Policy No. 50 - Canal Estate

State Environmental Planning Policy No. 55 - Remediation of Land

State Environmental Planning Policy No. 62 - Sustainable Aquaculture

ADDRESS ALL
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PLANNING CERTIFICATE

State Environmental Planning Policy No. 64 - Advertising Signs
 State Environmental Planning Policy No. 65 - Design Quality of Residential Flat Development
 State Environmental Planning Policy (Affordable Rental Housing) 2009
 State Environmental Planning Policy (Building Sustainability Index: BASIX 2004)
 State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
 State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
 State Environmental Planning Policy (Infrastructure) 2007
 State Environmental Planning Policy (Major Development) 2005
 State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
 State Environmental Planning Policy (Rural Lands) 2008
 State Environmental Planning Policy (Temporary Structures and Places of Public Entertainment) 2007

(b) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Environmental Planning and Assessment Act 1979 (unless the Director-General has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved).

Draft State Environmental Planning Policy (Application of Development Standards) 2004
 Draft State Environmental Planning Policy No. 66 - Integration of Land Use and Transport
 Draft Bega Valley Local Environmental Plan 2010
 Draft Bega Valley Development Control Plan 2011

(c) The name of each development control plan that applies to the carrying out of development on the land.

Development Control Plan No. 2 – Subdivision Standards
 Development Control Plan No. 3 – Notification Policy
 Development Control Plan No. 4 – Exempt and Complying Development
 Development Control Plan No. 5 – On-Site Sewage Management
 Development Control Plan No. 6 – Minimum Setbacks to Roads and Nominated Waterways
 Development Control Plan No. 7 – Parking
 Development Control Plan No. 8 – Contaminated Land

Development Control Plan No.11 - Bed and Breakfast Establishments

Development Control Plan No.12 - Primitive Camping

(d) In this clause, proposed environmental planning instrument includes a planning proposal for a LEP or a draft environmental planning instrument.

2 Zoning and land use under relevant LEPs

For each environmental planning instrument or proposed instrument referred to in clause 1 (other than a SEPP or proposed SEPP) that includes the land in any zone:

a) The identity of the zone

Zone 1(a) Rural General Zone

b) The purposes for which the instrument provides that development may be carried out within the zone without the need for development consent

Development for the purpose of: agriculture; environmental facilities; farm forestry

c) The purposes for which the instrument provides that development may not be carried out within the zone except with development consent

Any development not included in subclause (b) or (d)

d) The purposes for which the instrument provides that development is prohibited within the zone

Development for the purpose of: advertisements not displaying how the land is lawfully used or directional information; boarding houses; brothels; bulk stores; bulky goods retail outlets; caretakers' residences; commercial premises; detached dual occupancies; exhibition homes; granny flats; heavy industries; hostels; hotels; medical centres; motels; motor showrooms; multi unit housing; public buildings; recreation facilities; refreshment rooms; serviced apartments; sex shops; shops; warehouses.

e) Are there any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land.

Yes, minimum land dimensions for a dwelling vary in this zone. See Clauses 15 & 17 of the Bega Valley Local Environmental Plan 2002. Purchasers are strongly advised to make separate enquiries to Council about dwelling house permissibility for this land.

a) The identity of the zone

Zone 2(f) Future Urban Zone

b) The purposes for which the instrument provides that development may be carried out within the zone without the need for development consent

Nil

c) The purposes for which the instrument provides that development may not be carried out within the zone except with development consent

Development for the purpose of: animal establishments; bed and breakfast establishments; child care centres; clearing of land; community facilities; granny flats; dwelling houses; educational establishments; farm forestry; home businesses; home industries; places of public worship; plant nurseries; reception establishments; recreation areas; utility installations

d) The purposes for which the instrument provides that development is prohibited within the zone

Any development not included in subclause (b) or (c)

e) Are there any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land.

Yes, the minimum land dimension for a dwelling is 550 sqm if sewerer, or 2000 sqm if unsewered land. See Clause 26 & 27 of the Bega Valley Local Environmental Plan 2002.

(f) Does the land include or comprise critical habitat?

Council does not have any notification of where critical habitat is located within the Bega Valley Shire. Council is aware that a number of endangered species and endangered ecological communities do exist in the Shire. It is strongly recommended that the purchaser make their own enquiries with regard to critical habitat.

(g) Is the land in a conservation area?

No, the land is not in a conservation area.

(h) Is an item of environmental heritage situated on the land?

No, an item of environmental heritage is not situated on the land.

3 Complying development

Is the land, land on which complying development may be carried out under each of the codes for complying development because of the provisions of clause 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008? If complying development may not be carried out on that land because of the provisions of clause 1.19 of that Policy, what are the reasons why it may not be carried out?

The land is identified as Flood prone land. A complying development certificate can only be issued in low risk flood prone land.

(a) General Housing Code

Yes. Complying development under the General Housing Code in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 may be carried out on this land.

(b) Housing Alterations Code

Yes. Complying development under the Housing Internal Alterations Code in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 may be carried out on this land.

(c) General Commercial and Industrial Code

Yes. Complying development under the General Commercial and Industrial Code in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 may be carried out on this land.

(d) Subdivision Code

Yes. Complying development under the Subdivisions Code in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 may be carried out on this land.

(e) Rural Housing Code

No. Complying development under the Rural Housing Code in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 may not be carried out on this land. This land is excluded as it is less than the minimum lot size for the erection of a dwelling house under an environmental planning instrument.

No, the subject land is not zoned Rural.

No, unless complying development is carried out on the part of the lot to which clause 1.19 or 1.17A of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 does not apply.

(f) General Development Code

Yes. Complying development under the General Development Code in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 may be carried out on this land.

(g) Demolition Code

Yes. Complying development under the Demolition Code in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 may be carried out on this land.

4 Coastal protection

To the extent that the council has been notified by the Department of Public Works, is the land affected by the operation of section 38 or 39 of the Coastal Protection Act 1979?

No, the land is not affected by the operation of section 38 or 39 of the Coastal Protection Act 1979, but only to the extent that Council has been notified by the Department of Public Works.

4A Information relating to beaches and coasts

(1) Has an order been made under Part 4D of the Coastal Protection Act 1979 in relation to emergency coastal protection works (within the meaning of the act) on the land (or on public land adjacent to that land), except where the council is satisfied that such an order has been fully complied with?

No.

(2) (a) Has the Council been notified under section 55X of the Coastal Protection Act 1979 that emergency coastal protection works (within the meaning of the act) have been placed on the land (or on public land adjacent to that land)?

No works have been placed on the land.

(2) (b) If works have been so placed, is Council satisfied that the works have been removed and the land restored in accordance with the Act?

No.

(3) Is there any information as required by the regulations under section 56B of the Coastal Protection Act 1979 to be included in the planning certificate and of which the council has been notified pursuant to those regulations?

No.

4B Annual charges for coastal protection services under Local Government Act 1993

Has the owner (or any previous owner) of the land has consented in writing to the land being subject to annual charges under section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

Note. "Existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of section 553B of the Local Government Act 1993.

No.

5 Mine subsidence

Is the land proclaimed to be a mine subsidence district within the meaning of section 15 of the Mine Subsidence Compensation Act 1961?

No, the land is not within an area proclaimed to be a mine subsidence district within the meaning of section 15 of the Mine Subsidence Compensation Act 1961.

6 Road widening and road realignment

Is the land affected by any road widening or road realignment under:

(a) Division 2 of Part 3 of the Roads Act 1993, or

No

(b) any environmental planning instrument, or

No

(c) any resolution of the council?

No

7 Council and other public authority policies on hazard risk restrictions

(a) Is the land affected by a policy adopted by the council that restricts the development of the land because of the likelihood of:

(i) land slip

No

(ii) bushfire

No

(iii) tidal inundation

No

(iv) subsidence

No

(v) acid sulphate soils

No

(vi) any other risk (other than flooding

No

Note: The fact that the subject land has not been identified as being affected by a policy to restrict development because of the risks referred to does not mean that the risk is non-existent.

(b) Is the land affected by a policy adopted by any other public authority and notified to the council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the council that restricts the development of the land because of the likelihood of:

(i) land slip

No

(ii) bushfire

No, the subject land is not bushfire prone land.

(iii) tidal inundation

No

(iv) subsidence

No

(v) acid sulphate soils

No

(vi) any other risk (other than flooding)

No

Note: The fact that the subject land has not been identified as being affected by a policy to restrict development because of the risks referred to does not mean that the risk is non-existent.

7A Flood related development controls information

(a) Is development on the land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to flood related development controls?

No (However it is strongly recommended that the purchaser make their own enquiries in regard to flooding).

(b) Is development on that land or part of the land for any other purpose is subject to flood related development controls?

Yes, Council records indicate the land, or part of the land, may be subject to flooding. See Clause 81 of the Bega Valley Local Environmental Plan 2002. (However it is strongly recommended that the purchaser make their own enquiries in regard to flooding).

8 Land reserved for acquisition

Does any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 make provision in relation to the acquisition of the land by a public authority, as referred to in section 27 of the Environmental Planning and Assessment Act 1979?

No, an environmental planning instrument or proposed environmental planning instrument referred to in clause 1 does not make provision in relation to the acquisition of the land by a public authority.

9 Contribution plans

The name of each contribution plan applying to the land

Section 94 Contribution Plan No. 2 – Carparking
Section 94 Contribution Plan No. 3 – Recreation Facilities and Public Reserves
Bega Valley Shire Council Development Servicing Plan for Sewerage February 2006
Bega Valley Shire Council Development Servicing Plan for Water February 2006
Section 94 Contribution Plan No.1 - Existing Rural Roads

10 Biobanking agreements

To the extent that the council has been notified by the Director-General of the Department of Environment, Climate Change and Water, is the land affected by a biobanking agreement under Part 7A of the Threatened Species Conservation Act 1995?

No, the land is not affected by a biobanking agreement under Part 7A of the Threatened Species Conservation Act 1995, but only to the extent that Council has been notified by the Director-General of the Department of Environment, Climate Change and Water.

11 Bush fire prone land

Is any of the land bush fire prone land (as defined in the Environmental Planning and Assessment Act 1979)?

See question 7 (a)(ii) and (b)(ii)

12 Property vegetation plans

Has council been notified whether the land is land to which a property vegetation plan under the Native Vegetation Act 2003 applies?

No, Council has not been notified of the existence of a property vegetation plan.

13 Orders under Trees (Disputes Between Neighbours) Act 2006

Has council been notified whether an order has been made under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land?

No, Council has not been notified of an order has been made under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land.

14 Directions under Part 3A

Is there a direction by the Minister in force under section 75P (2) (c1) of the Environmental Planning and Assessment Act 1979 that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Environmental Planning and Assessment Act 1979 does not have effect?

No, Council is not aware of a direction by the Minister that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Environmental Planning and Assessment Act 1979 does not have effect.

15 Site compatibility certificates and conditions for seniors housing

If the land is land to which State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 applies:

Has a current site compatibility certificate (seniors housing), of which the council is aware, been issued under clause 25 of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land?

No, Council is not aware of a current site compatibility statement being issued.

16 Site compatibility certificates for infrastructure

Has a valid site compatibility certificate (infrastructure), of which the council is aware, been issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007 in respect of proposed development on the land?

No, Council is not aware of a current site compatibility statement being issued

17 Site compatibility certificates and conditions for affordable rental housing

Has a current site compatibility certificate (affordable rental housing), of which the council is aware, been issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009 in respect of proposed development on the land?

No, Council is not aware of a current site compatibility statement being issued

18 Matters arising under the Contaminated Land Management Act 1997

The following matters are prescribed by section 59 (2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate:

(a) Is the land to which the certificate relates is significantly contaminated land?

The land is not declared significantly contaminated by the Department of Environment and Climate Change under the Contaminated Land Management Act 1997.

(b) Is the land to which the certificate relates is subject to a management order?

The land is not subject to a management order issued by the Department of Environment and Climate Change under the Contaminated Land Management Act 1997.

(c) Is the land to which the certificate relates is the subject of an approved voluntary management proposal?

A voluntary management proposal for the site has not been agreed to.

(d) Is the land to which the certificate relates is subject to an ongoing maintenance order?

The land is not subject to an ongoing maintenance order.

(e) Is the land to which the certificate relates is the subject of a site audit statement?

The land is not the subject of a site audit statement.

NOTE:



Bega Valley Shire Council

**Planning certificate under Section 149(5) Environmental Planning
and Assessment Act 1979**

Applicant: Coffey Environments
118 Auburn Street
WOLLONGONG NSW 2550

Coffey Wollongong RECEIVED	
09 AUG 2012	
Job No.	Action
Lead by	

Certificate No: 5002 **Receipt No:** 288841

Certificate Date: 08/08/2012 **Applicant's Ref:**

Property: Tathra Road BEGA 2550

Description: Lot: 1 DP: 1176012 **Parcel No:** 38297

In accordance with the requirements of section 149(5) of the *Environmental Planning and Assessment Act 1979*, the following prescribed matters relate to the land at the date of this certificate.

1 Is the land affected by a tree preservation order?

Yes, see Clause 72 of the Bega Valley Local Environmental Plan 2002, however the tree preservation order does not apply to those portions of the land zoned 1(a), 1(c) or 1(f).

2 The following development has been granted by Council within the previous five years.

ADDRESS ALL
CORRESPONDENCE TO

PO Box 492
Bega NSW 2550

DX 4904
ABN 26 987 935 332

Council Chambers
Zingel Place, Bega

PHONE
(02) 6499 2222
FAX
(02) 6499 2200

INFORMATION
www.begavalley.nsw.gov.au
EMAIL
council@begavalley.nsw.gov.au

04/05/2012 - Development Applications APPROVAL 2011/427 Subdivision to
create a lot for proposed hospital

06/02/2012 - Development Applications APPROVAL 2011/427 Subdivision to
create a lot for proposed hospital

PLANNING CERTIFICATE

3 Has any development consent with respect to the subject land been granted by the Minister for Planning?

No

4 Does any order under the Heritage Act 1977 affect the land?

No

5 Does the subject land contain land that is classified as being steep? That is, it has a gradient of equal or greater than 15% or 7.5°.

No

6 Does the subject land fall within an extractive industry buffer?

No

7 Is the subject land located within 100 metres of an item of environmental heritage?

No

8 Other advice

No

CAUTION:

The absence of any reference to a matter affecting the land shall not imply that the land is not affected by that matter not referenced in this certificate.

When advice in accordance with Section 149(5) of the Environmental Planning and Assessment Act 1979, (the Act) is requested the Council is under no obligation to furnish any advice. If advice is provided, Council draws your attention to section 149(6) and section 145B of the Act which have the effect that the Council shall not incur any liability in respect of advice provided in good faith pursuant to section 149(5), including the furnishing of advice in respect of contaminated land.

OEH RECORDS

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<u>Number</u>	<u>Name</u>	<u>Location</u>	<u>Type</u>	<u>Status</u>
1511	BEGA CHEESE LIMITED	LAGOON STREET, RIDGE STREET, BUCKAJO ROAD AND ANGLEDALE ROAD , BEGA, NSW 2550	POEO licence	Issued
1006181	BEGA CHEESE LIMITED	LAGOON STREET, RIDGE STREET, BUCKAJO ROAD AND ANGLEDALE ROAD , BEGA, NSW 2550	S 58 Licence Issued Variation	
1015771	BEGA CHEESE LIMITED	LAGOON STREET, RIDGE STREET, BUCKAJO ROAD AND ANGLEDALE ROAD , BEGA, NSW 2550	S 58 Licence Issued Variation	
1025641	BEGA CHEESE LIMITED	LAGOON STREET, RIDGE STREET, BUCKAJO ROAD AND ANGLEDALE ROAD , BEGA, NSW 2550	S 58 Licence Issued Variation	
1026446	BEGA CHEESE LIMITED	LAGOON STREET, RIDGE STREET, BUCKAJO ROAD AND ANGLEDALE ROAD , BEGA, NSW 2550	S 58 Licence Issued Variation	
1031689	BEGA CHEESE LIMITED	LAGOON STREET, RIDGE STREET, BUCKAJO ROAD AND	S 58 Licence Issued Variation	

1040145	BEGA CHEESE LIMITED	ANGLEDALE ROAD , BEGA, NSW 2550 LAGOON STREET, RIDGE STREET, BUCKAJO ROAD AND ANGLEDALE ROAD , BEGA, NSW 2550	S 58 Licence Issued Variation	(
1098687	BEGA CHEESE LIMITED	LAGOON STREET, RIDGE STREET, BUCKAJO ROAD AND ANGLEDALE ROAD , BEGA, NSW 2550	S 58 Licence Issued Variation	(
1112727	BEGA CHEESE LIMITED	LAGOON STREET, RIDGE STREET, BUCKAJO ROAD AND ANGLEDALE ROAD , BEGA, NSW 2550	S 58 Licence Issued Variation	:
1501914	BEGA CHEESE LIMITED	LAGOON STREET, RIDGE STREET, BUCKAJO ROAD AND ANGLEDALE ROAD , BEGA, NSW 2550	S 58 Licence Issued Variation	:
1503619	BEGA CHEESE LIMITED	LAGOON STREET, RIDGE STREET, BUCKAJO ROAD AND ANGLEDALE ROAD , BEGA, NSW 2550	S 58 Licence Issued Variation	(
1507467	BEGA CHEESE LIMITED	LAGOON STREET, RIDGE STREET, BUCKAJO ROAD AND ANGLEDALE ROAD , BEGA, NSW 2550	S 58 Licence Issued Variation	:
20148	BEGA VALLEY SHIRE COUNCIL	Wanatta Lane, BEGA, NSW 2550	POEO licence	Pending
4120	BEGA VALLEY SHIRE COUNCIL	LOT NO. 8 TARONGA CRESCENT, BEGA, NSW 2550	POEO licence	Issued :
2849	BEGA VALLEY SHIRE COUNCIL	KERRISONS LANE, BEGA, NSW 2550	POEO licence	Surrendered :
1002618	BEGA VALLEY SHIRE COUNCIL	KERRISONS LANE, BEGA, NSW 2550	S 58 Licence Issued Variation	(
1006561	BEGA VALLEY SHIRE COUNCIL	LOT NO. 8 TARONGA CRESCENT, BEGA, NSW 2550	S 58 Licence Issued Variation	:
11338	BEGA VALLEY SHIRE COUNCIL	YELLOW PINCH DAM ROAD, BEGA, NSW 2550	POEO licence	Issued (
1029139	BEGA VALLEY SHIRE COUNCIL	LOT NO. 8 TARONGA CRESCENT, BEGA, NSW 2550	S 58 Licence Issued Variation	:

[1045021](#) BEGA VALLEY SHIRE
COUNCIL

LOT NO. 8 TARONGA
CRESCENT, BEGA,
NSW 2550

S 58 Licence Issued
Variation

1:

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Search results

Your search for: LGA: Bega Valley Shire Council

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.

The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).

Contamination at the site may be being managed under the [planning process](#).

More information about particular sites may be available from:

The [POEO public register](#)

The appropriate planning authority: for example, on a planning certificate local council under [section 149 of the Environmental Planning and Assessment Act 1979](#)

See [What's in the record and What's not in the record](#).

If you want to know whether a specific site has been the subject of notices issued under the CLM Act, we suggest that you search by Local Government Area or review the sites that are listed.

This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear in the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act 1979. In addition the EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).

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<u>Number</u>	<u>Name</u>	<u>Location</u>	<u>Type</u>	<u>Status</u>
1060673	BEGA VALLEY SHIRE COUNCIL	LOT NO. 8 TARONGA CRESCENT, BEGA, NSW 2550	S 58 Licence Issued Variation	
1067837	BEGA VALLEY SHIRE COUNCIL	LOT NO. 8 TARONGA CRESCENT, BEGA, NSW 2550	S 58 Licence Issued Variation	
1083718	BEGA VALLEY SHIRE COUNCIL	LOT NO. 8 TARONGA CRESCENT, BEGA, NSW 2550	S 58 Licence Issued Variation	
1090711	BEGA VALLEY SHIRE COUNCIL	LOT NO. 8 TARONGA CRESCENT, BEGA, NSW 2550	S 58 Licence Issued Variation	
1502403	BEGA VALLEY SHIRE COUNCIL	LOT NO. 8 TARONGA CRESCENT, BEGA, NSW 2550	S 58 Licence Issued Variation	
10921	GREATER SOUTHERN AREA HEALTH SERVICE	McKEE STREET, BEGA, NSW 2550	POEO licence	No longer in force
1012123	GREATER SOUTHERN AREA HEALTH SERVICE	McKEE STREET, BEGA, NSW 2550	S 58 Licence Issued Variation	
1026976	GREATER SOUTHERN AREA HEALTH SERVICE	McKEE STREET, BEGA, NSW 2550	S 58 Licence Issued Variation	
1036029	GREATER SOUTHERN AREA HEALTH SERVICE	McKEE STREET, BEGA, NSW 2550	S 58 Licence Issued Variation	
3079	KEVIN JAMES KEEVERS	13 GROSSES CREEK ROAD, SPRINGVALE VIA BEGA, BEGA, NSW 2550	POEO licence	Surrendered

1015009 KEVIN JAMES KEEVERS	13 GROSSES CREEK ROAD, SPRINGVALE VIA BEGA, BEGA, NSW 2550	S 58 Licence Issued Variation	:

1:

Licence Variation

Section 58(5) Protection of the Environment Operations Act 1997

BEGA VALLEY SHIRE COUNCIL,
ABN 26 987 935 332,
PO BOX 492,
BEGA NSW 2550

Attention: Mr. JIM COLLINS

Notice Number 1045021
File Number 280328
Date 15-Apr-2005

NOTICE OF VARIATION OF LICENCE NO. 4120

BACKGROUND

- A. BEGA VALLEY SHIRE COUNCIL ("the licensee") is the holder of Environment Protection Licence No. 4120 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of Scheduled Activity - Premises Based at TARONGA CRESCENT, BEGA, NSW.
- B. Licence varied as an outcome of the Licence Review conducted by the Environment Protection Authority (EPA) as required under s78 of the POEO Act 1997.

VARIATION OF LICENCE NO. 4120

1. By this notice the EPA varies licence No. 4120 as set out in the Appendix. *(for licences with a lot of changes and where the whole licence document will be in the appendix: The Appendix is a copy of the licence marked with the variations that are made to it by this notice. (for licences with a small number of changes where only the conditions will be printed: The Appendix is a copy of the provisions of the licence which are varied by this notice, marked with the variations that are made to them.*
2. The variations to the licence are indicated in the following way:
 - if a strike through mark appears through any word or other text (eg. ~~Solids or~~) this indicates that the word or other text is deleted from the licence by this notice; and
 - if a double underline appears under any word or other text (eg. must be treated) this indicates that the word or other text is added to the licence by this notice.
3. Except as provided by section 84(2) of the Act, the variations to the licence by this notice begin to operate at the expiry of the period of 21 days after you receive notice of the variations, unless another date is specified in this notice.
4. Section 84(2) of the Act provides that a variation to a licence does not operate:

Licence Variation

Section 58(5) Protection of the Environment Operations Act 1997



- until the expiry of the period of 21 days after you are given notice of the decision to vary the licence; or
- if an appeal against the decision is lodged within that period, until the Land and Environment Court confirms the decision or the appeal is withdrawn; or
- until you notify the EPA in writing that no appeal is to be made against the decision to vary the licence,

whichever first occurs.

.....

Mr Peter Bloem
Head Regional Operations Unit
South Coast
(by Delegation)

INFORMATION ABOUT THIS NOTICE

- Section 287 of the Act enables appeals to be made in connection with decisions about licences within 21 days after you are given notice of the decision.
- Details provided in this notice will be available on the EPA's Public Register in accordance with section 308 of the Act.
- This notice is issued under section 58(5) of the Act .

Environment Protection Authority

Environment Protection Licence

Section 55 Protection of the Environment Operations Act 1997

- ♦ Licence number: 4120
- ♦ File number: 280328
- ♦ Licence Anniversary Date: 01-September
- ♦ Review date not later than 28-Jun-2005

Licence Type

Premises

Licensee

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

Licensed Premises

BEGA SEWAGE TREATMENT PLANT
TARONGA CRESCENT
BEGA NSW 2550

Fee Based Activity

Sewage Treatment - processing by small plants (<
10000 ML per year) (71[a])

Scale

> 219 - 1000 ML discharged

EPA Region

South Coast
Level 3, NSW Govt Offices, 84 Crown Street
WOLLONGONG NSW 2500
Phone: 02 4224 4100
Fax: 02 4224 4110

PO Box 513 WOLLONGONG EAST
NSW 2520

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Information about this licence

Dictionary

The licence contains a dictionary, which defines terms used in the licence. It is found at the end of the licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- Ensure persons associated with you comply with this licence, as set out in section 64 of the Act.
- Control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act).
- Report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Transfer of licence

Transfer of the licence to another person may be requested by the licensee using the form for this purpose available from the EPA.

Variation of licence conditions

Variations to the conditions of this licence may be requested by the licensee using the form for this purpose available from the EPA. The EPA may also vary a licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 3 years after the issue of the licence, as

set out in Part 3.6 of the Act. You will receive advance notice of the licence review. For licences held immediately before 1 July 1999, the first review will take place before 1 July 2002.

Fees and annual return to be sent to the EPA

The licence requires you to forward to the EPA an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints).

The Annual Return must be submitted within 60 days after the end of each reporting period. Where a licence is transferred, surrendered or revoked, a special reporting period applies.

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Usually the licence fee period is the same as the reporting period.

See condition R1 and the accompanying form regarding the Annual Return requirements.

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications
- licence conditions and variations
- statements of compliance

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

Licence anniversary date

01-September

This licence is issued to

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

subject to the conditions which follow:

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity
Sewage Treatment Systems

Fee Based Activity	Scale
Sewage Treatment - processing by small plants (< 10000 ML per year) (71[a])	> 219 - 1000 ML discharged

A1.3 Not applicable.

A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
BEGA SEWAGE TREATMENT PLANT
TARONGA CRESCENT
BEGA
NSW
2550
LOT 8 IN DP 750190

A2.2 The premises also includes the reticulation system owned and operated by the licensee that is associated with the sewage treatment plant(s) identified in condition A2.1.

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- (a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- (b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

A5 Objectives of this licence

A5.1 The objectives of this licence are to:

- (a) prevent as far as practicable sewage overflows and sewage treatment plant bypasses;
- (b) require proper and efficient management of the system to minimise harm to the environment and public health; and

- (c) require practical measures to be taken to protect the environment and public health from sewage overflows and sewage treatment plant effluent.

A5.2 This licence is to be construed in a manner that will promote the objectives referred to in A5.1.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

Water and land

EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
1		Discharge to utilisation area	Pipe to the STP property line from the southwest wall leading to the finishing pond to Rixons Effluent Lagoon labelled as "EPA Point 1" on map titled "Bega Sewerage Treatment Works" received by the EPA on 7 March 2002.
2		Discharge to waters	Pipe from Oxidation Pond No. 4 to Bega River labelled as "Point 2" on map titled "EPA Point 2" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.
3	Effluent quality monitoring		Oxidation pond No. 4 labelled as "EPA Point 3" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.
4	Volume monitoring		Effluent pipeline from humus tank to oxidation ponds labelled as "EPA Point 4" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.
5	Volume monitoring		Flow meter on pipe to the southwest wall leading to the finishing pond to Rixons Effluent Lagoon labelled as "EPA Point 5" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.
6	Volume monitoring		Flow meter on pipe from Oxidation Pond No. 4 to Bega River labelled as "EPA Point 6" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.

3 Limit conditions

L1 Pollution of waters

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.
- L1.2 This licence does not permit the pollution of waters classified as Class S or Class P under the Clean Waters Regulations 1972 to the extent that such pollution would breach a standard applicable to those waters by the operation of clause 6 of schedule 5 of the Act.
- L1.3 The licensee may only discharge untreated or partially treated sewage from the sewage treatment plant and/or the reticulation system subject to the conditions of this licence, including O1 and O2.

L2 Load limits

- L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

- L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
BOD (Enclosed Waters)	8733
Nitrogen (total) (Enclosed Waters)	11650
Oil and Grease (Enclosed Waters)	2915
Phosphorus (total) (Enclosed Waters)	3080
Total suspended solids (Enclosed Waters)	11650

Note: The load limits referred to in condition L2.1 do not apply to discharges from the reticulation system.

L3 Concentration limits

- L3.1 For each monitoring/discharge point or utilisation area specified in the table\ below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.
- L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be

within the specified ranges.

- L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\.

Water and Land

POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	mg/L				See note 1
Total suspended solids	mg/L				30
Biochemical oxygen demand	mg/L				20

POINT 2

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	mg/L				See note 1
Total suspended solids	mg/L				30
Biochemical oxygen demand	mg/L				20

Note 1: A 100 Percentile Concentration Limit of "10 mg/L and no visible oil and grease" applies for Point 1 and Point 2.

Note 2: The monitoring at Point 3, required by Condition M2.1, is conducted by the licensee to determine compliance with limits specified for discharges to Point 1 and Point 2 as described in Condition L3.

L4 Volume and mass limits

- L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:

- (a) liquids discharged to water; or;
- (b) solids or liquids applied to the area;

must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of measure	Volume/Mass Limit
1	kL/day	2500
2	kL/day	2500

L4.2 Notwithstanding the volume limits specified in condition L4.1, the combined volume discharged from point(s) 1 and 2 shall not exceed 2500kL/day.

L5 Waste

- L5.1 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 as expressly permitted by the licence.
- L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.
- L5.3 The licensee may receive and/or transfer sewage and Group C waste generated outside the premises for treatment, processing or reprocessing at the premises. The licensee must take reasonable steps to ensure that sewage received at the premises has been lawfully discharged in accordance with a trade waste agreement or customer contract (as applicable) in force between the licensee and the generator of the waste. The licensee must treat, process or reprocess the sewage and Group C waste in accordance with this licence prior to discharge from the premises.
- L5.4 The licensee may receive, store, treat, process or reprocess and/or transfer at the premises sewage products generated or stored outside the premises by the licensee's other sewage treatment systems. Sewage products must be received, treated, processed or reprocessed in accordance with this licence.
- L5.5 Grit or screenings generated by activities on the premises may be disposed of by the licensee within the boundary of the sewage treatment plant(s) on the premises, but only if they are disposed of in a manner that prevents or minimises material harm to the environment.

L6 Noise Limits

L6.1 Not applicable.

L7 Frequency limits

L7.1 Not applicable.

L8 Potentially offensive odour

L8.1 No condition in this licence 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 licensee 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 a licence directed at minimising odour.

4 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.

Note: The requirements of O1.1 apply to the whole of the premises, including the reticulation system.

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.

Note: The requirements of O2.1 apply to the whole of the premises, including the reticulation system.

O3 Appropriate treatment processes

O3.1 Sewage or effluent must not be discharged from Point(s) 1 and/or 2 unless it has been treated in accordance with the requirements of the table below.

Required treatment process	Flow range
screening, degritting, sedimentation, trickling, filtration, secondary sedimentation (humus tank) and oxidation ponding	all liquid waste inflow

The flows noted in the table above are the inflows to the premises' sewage treatment plant(s).

- O3.2 However the licensee is not taken to have breached this condition if the licensee can demonstrate:
- (a) the failure to treat the liquid waste as required was solely as a result of a failure of the power supply to the premises, or a failure of essential equipment;
 - (b) the failure of power supply or equipment could not reasonably have been prevented; and
 - (c) normal operating conditions were restored as soon as possible after the power supply failure or the failure of essential equipment.

O4 Prohibition on acceptance of pesticides

- O4.1 The licensee must not enter into any trade waste agreement to discharge organophosphate pesticides (including chlorpyrifos, diazinon, malathion) into the sewerage system.
- O4.2 The licensee must not consent to any discharge of organochlorine pesticides (such as dieldrin, heptachlor and chlordane) into the sewerage system.

O5 Biosolids management

- O5.1 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guidelines, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

O6 Effluent application to land

- O6.1 Not applicable.

O7 New sewage pumping stations

- O7.1 Dry weather overflows resulting in pollution of waters from any sewage pumping station(s) installed within the sewage treatment system after January 2004 are not permitted.

O8 Extensions to the reticulation system

- O8.1 The licensee must ensure that any extensions to the reticulation system after January 2004 are planned, designed, constructed and installed to prevent as far as practicable overflows from the premises.

Note: "The premises" includes both the new and the previously existing parts of the sewage treatment system.

5 Monitoring and recording conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this 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 for the purposes of this licence:
- (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 licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Water and Land

POINT 3

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	mg/L	Monthly	Representative Composite sample
Chlorophyll a	mg/L	Special Frequency 1	Representative Grab sample
Nitrogen (total)	mg/L	Monthly	Representative Composite sample
Oil and Grease	mg/L	Monthly	Representative Grab sample
Phosphorus (total)	mg/L	Monthly	Representative Composite sample
Total suspended solids	mg/L	Monthly	Representative Composite sample

Note: Special Frequency 1 means collect and store sample monthly, at the same time as Biochemical Oxygen Demand or Total Suspended Solids sampling. If the Biochemical Oxygen Demand or Total Suspended Solids 100 percentile concentration limit is exceeded as per condition L3.3, then analyse the stored sample for chlorophyll a and report results to the EPA as soon as the results become available.

Note: For the purpose of this licence, a composite sample is defined as at least three grab samples forming a pooled sample, with the first and last sample taken at least seven hours apart.

- M2.2 The monitoring at point(s) 3 required by condition M2.1 is conducted to determine compliance with limits specified for discharge to point(s) 1 and 2 respectively.

M3 Testing methods - concentration limits

M3.1 Not applicable.

M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

Note: Testing methods - load limit

Note: Clause 18 (1) and (2) of the Protection of the Environment Operations (General) Regulation 1998 requires that monitoring of actual loads of assessable pollutants listed in L2.1 must be carried out in accordance with the testing method set out in the relevant load calculation protocol for the fee-based activity classification listed in condition A1.2.

M4 Recording of pollution complaints

M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M4.2 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 licensee in relation to the complaint, including any follow-up contact with the complainant; and
- (f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

M5.1 The licensee 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.

M5.2 The licensee 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.

- M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:
- (a) the date of the issue of this licence or
 - (b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.
- M5.4 For the purpose of condition M5.1, operating hours are defined as twenty-four hours a day, seven days a week.
- M5.5 The public notification referred to in condition M5.2 must include specific reference to the fact that the complaints line may be used by the community for the reporting of overflows.

M6 Requirement to monitor volume or mass

- M6.1 For each discharge point or utilisation area specified below, the licensee must monitor:
- (a) the volume of liquids discharged to water or applied to the area;
 - (b) the mass of solids applied to the area;
 - (c) the mass of pollutants emitted to the air;

at the frequency and using the method and units of measure, specified below.

POINT 4

Frequency	Unit Of Measure	Sampling Method
Daily	kL/day	Magnetic flow meter

POINT 5

Frequency	Unit Of Measure	Sampling Method
Daily	kL/day	Magnetic flow meter

POINT 6

Frequency	Unit Of Measure	Sampling Method
Daily	kL/day	Magnetic flow meter

- M6.2 In the event that the licensee cannot comply with a volume monitoring method as required by this licence solely due to the failure or malfunction of essential monitoring equipment, volume may be estimated using another agreed method approved in writing by the EPA. This provision only applies for the duration of the failure or malfunction. The licensee is to rectify the failure or malfunction as soon as practicable.
- M6.3 The licensee must:
- (a) submit in writing to the EPA ~~by October 2003~~ a proposal for a method of volume estimation; or
 - (b) use a method of volume estimation already approved in writing by the EPA,

to be used in the event that essential monitoring equipment referred to in the previous condition has failed or malfunctioned.

M7 Requirement to record sewage treatment plant bypasses

M7.1 The licensee must record the following details in respect of each bypass of any of the appropriate treatment processes required by condition O3 which may be reasonably expected to adversely affect the quality of the final discharge:

- (a) the EPA point identification number through which the bypass discharged;
- (b) the date, estimated start time and estimated duration of the bypass;
- (c) the estimated volume of the bypass;
- (d) the level of treatment of the sewage at the STP prior to discharge;
- (e) the probable cause of the bypass;
- (f) any actions taken to stop the bypass happening; and
- (g) any actions taken to prevent the bypass happening again.

M7.2 In addition to the details listed in the previous condition, the licensee must also record classification as a wet or dry weather bypass in respect of each bypass referred to in the previous condition. A dry weather bypass is a bypass that occurs when the flow rate of sewage at the inflow volume monitoring point of the STP does not exceed 2500k/L day and a wet weather bypass occurs when this flow is equalled or exceeded at any time during the bypass event.

M8 Biosolids monitoring

M8.1 Biosolids at the premises must be recorded, monitored and classified in accordance with the Biosolids Guidelines, to the extent that those Guidelines are applicable, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

M9 Requirement to record overflows

M9.1 From October 2003 the licensee must record the following details in relation to each observed or reported overflow from the reticulation system and from the sewage treatment plant:

- (a) the location of the overflow;
- (b) the date, estimated start time and estimated duration of the overflow;
- (c) the estimated volume of the overflow;
- (d) a description of the receiving environment of the overflow;
- (e) classification as a dry or wet weather overflow;
- (f) the probable cause of the overflow;
- (g) any actions taken to stop the overflow happening;
- (h) any actions taken to clean up the overflow; and
- (i) any actions taken to prevent the overflow happening again.

M10 Environmental monitoring

M10.1 Not applicable.

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

- R1.1 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.

Period covered by Annual Return

- R1.2 An Annual Return must be prepared in respect of each reporting period, 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.

- R1.3 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.

R1.4 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.

Deadline for Annual Return

- R1.5 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').

Notification where actual load can not be calculated

R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:

- (a) the assessable pollutants for which the actual load could not be calculated; and
- (b) the relevant circumstances that were beyond the control of the licensee.

Licensee must retain copy of Annual Return

R1.7 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.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

R1.8 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.

R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee 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 Act.

R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- (a) where this licence applies to premises, an event has occurred at the premises; or
 - (b) where this 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.

R3.2 The licensee 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.

- R3.3 The request 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;
 - (g) any other relevant matters.
- R3.4 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.

R4 Notification of bypass or overflow incidents

- R4.1 Where either:
- (a) sewage or partially treated sewage is discharged from the premises as a result of a bypass of the sewage treatment plant, or
 - (b) an observed or reported overflow has occurred from the reticulation system, and overflow or bypass may pose a risk to public health, the licensee is to promptly give appropriate notification to any parties that are likely to be affected, including:
 - (i) the potentially affected community,
 - (ii) the Safe Food NSW Shellfish Quality Assurance Program, where the bypass or overflow could have potential impacts on shellfish production; and
 - (iii) the Department of Health.

Note: It is the EPA's intention to vary the licence to replace the above condition with a requirement that the licensee follow the Incident Notification Protocol required by PRP101, when the protocol has been implemented.

- R4.2 When the licensee notifies the Department of Health or Safe Food NSW Shellfish Quality Assurance Program of a bypass or overflow incident, the licensee must also notify the EPA by telephoning its Pollution Line service on 131 555. Notifications are to be given as soon as practicable after the licensee or one of the licensee's employees or agents becomes aware of the incident, and must include all relevant information including the information required under condition M9.1 or M7.1.

R5 Annual System Performance Report

- R5.1 The licensee must supply to the EPA an Annual System Performance Report not later than 60 days after the end of each reporting period.
- R5.2 The report is to supplement the Annual Return and must include but need not be limited to:

- (a) the 50 percentile, 90 percentile, 100 percentile and 3DGM values calculated from the monitoring data required by this licence for the reporting period for each pollutant which has corresponding concentration limits specified in this licence;
- (b) the total amounts of biosolids, as classified in the Biosolids Guideline, disposed of on-site, off-site and to landfill during the reporting period;
- (c) a diagram showing the major process elements, discharge points and monitoring points at the premises' sewage treatment plant(s), where there has been any significant change since the previous reporting period or this information has not been provided previously to the EPA;
- (d) the number of dry and wet weather bypasses recorded over the reporting period (recorded in accordance with condition M7);
- (e) a breakdown of the total number of complaints received by the licensee during the reporting period in relation to the premises into categories of "odours – sewage treatment plant", "odours – reticulation system", "water pollution – sewage treatment plant", "water pollution – reticulation system" and any other category indicated by the complaints;
- (f) a summary of observed, reported or recorded wet weather overflows and observed, reported or recorded dry weather overflows and sewage treatment plant bypasses. These data are to be for the current reporting period and for the four previous twelve-month periods, for which data has been collected. Any significant actions taken to address bypasses or overflows are to be noted;
- (g) the amount of rainfall measured at a rain gauge at the STP, or at the rain gauge closest to the centre of the catchment of the sewage treatment system, for each month of the reporting period; and
- (h) a brief progress report on the implementation over the reporting period of actions specified in PRP100.

R5.3 The Annual System Performance Report must be presented in a format approved in writing by the EPA.

R5.4 The requirements of R5.2 (d), (e), (f) and (g) apply to the part of the reporting period beginning three months after the date the licence is varied to include this condition.

General conditions

G1 Copy of licence kept at the premises

G1.1 A copy of this licence must be kept at the premises 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.

Note: For the purposes of this condition, "the premises" refers to each Sewage Treatment Plant(s) described in condition A2.1.

G2 Signage

- G2.1 The location of EPA point number(s) 1, 2, 3, 4, 5 and 6 must be clearly marked by signs that indicate the point identification number used in this licence and be located as close as practical to the point.

G3 Contact number for incidents and responsible employees

- G3.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:
- (a) respond at all times to incidents relating to the premises; and
 - (b) contact the licensee's senior employees or agents authorised at all times to:
 - (i) speak on behalf of the licensee; and
 - (ii) provide any information or document required under this licence.
- G3.2 The licensee is to inform the EPA in writing of the appointment of any subsequent contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.

G4 Clean-up

- G4.1 In the event of an overflow or bypass that harms or is likely to harm the environment, the licensee must use all practicable measures to minimise the impact of the overflow or bypass on the environment and public health. These measures are to be implemented as soon as practical after the licensee or one of the licensee's employees or agents becomes aware of the overflow or bypass.

Pollution studies and reduction programs

~~U1 PRP 3 Investigation of Microbial Wastewater Quality of Reuse Waters~~

~~Completed Pollution Reduction Programs~~

~~The licensee must monitor the quality of the wastewaters being transferred to Rixon's Farm and the waters in Rixon's Effluent Pond for reuse. This monitoring must consist of monthly monitoring for pH, Suspended Solids and Thermotolerant Coliforms (Faecal Coliforms) and be undertaken for a period of 12 months. This monitoring must be completed by 1 September 2003.~~

~~The results of the monitoring must written into a report that compares the results to the relevant criteria as outlined in National Water Quality Management Strategy document "Guidelines for Sewerage Systems – Use of Reclaimed Water" dated November 2000 (the guidelines). Where the results do not meet the criteria for the type of reuse being undertaken, or proposed to be undertaken, an assessment must be made in the report as to the licensee's preferred unit operations that are proposed to be installed to achieve the quality as outlined in the guidelines.~~

The report must also include the licensee's proposed timeframes to install the preferred unit operations at the Sewage Treatment Plant. This report must be submitted to the EPA by 31 October 2003.

PRP ID	Details of PRP	Completion date
PRP 1	Assessment of Options to Reduce the Risks of Sewage Overflows This PRP was an assessment of options, and presentation of recommendations, which can be used to prevent overflows and to enable effective responses to emergencies that impact on the sewerage system. This PRP was due on 31 March 1999.	31 March 1999
PRP 2	Preparation of Contingency Plan The preferred options as identified in PRP 1 were required to be incorporated into a contingency plan for the sewerage reticulation system. This PRP was due 31 May 1999.	31 May 1999
PRP 3	Investigation of Microbial Wastewater Quality of Reuse Waters The licensee must monitor the quality of the wastewaters being transferred to Rixon's Farm and the waters in Rixon's Effluent Pond for reuse.	31 October 2003
PRP 101	Incident Notification Protocol Develop and implement an effective protocol to ensure all relevant organizations and any affected communities are notified of overflows and STP bypasses that have caused or are likely to cause adverse impacts on the environment or public health.	October 2003

Due Dates:

Begin Monitoring – 31 August 2002

Complete Monitoring – 1 September 2003

Completed Report Submitted – 31 October 2003

PRP100 Sewer Overflow Investigations Report

- 100.1 The objective of this PRP is to identify overflows from the sewage reticulation system that pose a significant risk of harm to the environment or public health, and to identify management priorities and actions required to reduce this risk.
- 100.2 The licensee must prepare a Sewer Overflow Investigations Report for the premises' reticulation system. The report must include but need not be limited to:
- identification of the location of all designed overflow points and other frequent overflow points within the reticulation system and an assessment of the likelihood of overflows from these points;
 - assessment of the significance of impacts on the environment and public health resulting from these overflows;
 - evaluation and ranking of the resultant risk to the environment and public health from these overflows; and
 - identification of management priorities and actions to reduce the risk of harm to the environment and public health.

- 100.3 With regard to the identification of actions to reduce the risk of harm to the environment and public health, as required by condition 100.2(d), the licensee must consider the effects of any actions that improve the performance of the reticulation system with respect to the performance of the sewage treatment plant, for example with respect to the frequency and volume of bypasses or overflows from the sewage treatment plant, to ensure that the actions minimise the potential environmental and public health impact of discharges from the whole of the premises.
- 100.4 The report must also include the identification of any sewage pumping stations within the premises that are not capable of meeting a condition prohibiting dry weather overflows, including reasons why any sewage pumping station is not capable of meeting such a condition and whether it should be upgraded.
- 100.5 This report is to be submitted to the EPA in writing by July 2007.
- 100.6 Nothing in this PRP is to be construed as authorising pollution of waters or a discharge to Class P or S waters.

Notes:

- (1) If this requirement is included on a number of sewage treatment system licences held by the licensee, a single report may be submitted to the EPA provided that it meets the requirements relating to all of the licences.
- (2) The requirement to prepare this report does not affect the requirement to comply with any other condition of this licence.
- (3) It is the EPA's intention to include, at some point in the future, a licence condition prohibiting dry weather overflows from those sewage pumping stations that have been identified as being capable of meeting such a condition. This would be consistent with the requirement for proper and efficient maintenance and operation of the system.
- (4) Progress reports on the implementation over the reporting period of actions specified in PRP100 are required in the Annual System Performance Report under condition R5 of this licence.

PRP101 Incident Notification Protocol

~~101.1 The objective of this PRP is to develop and implement an effective protocol to ensure all relevant organisations and any affected communities are notified of overflows and sewage treatment plant bypasses that have caused or are likely to cause adverse impacts on the environment or public health.~~

~~101.2 The licensee must develop a protocol for effectively notifying relevant organisations (other than the EPA) and the affected community of overflows and sewage treatment plant bypasses where those incidents have caused or are likely to cause adverse impacts to the environment, or pose or are likely to pose a risk to public health.~~

~~101.3 The licensee must liaise with the potentially affected community, the following organisations, and any other organisations considered appropriate, and develop agreed procedures for notifying them of these overflow or bypass incidents:~~

~~the Department of Health;~~
~~the Department of Infrastructure, Planning and Natural Resources;~~
~~the section(s) of relevant local council(s) responsible for community relations;~~
~~the Sydney Catchment Authority [for premises in the SCA's area of operation]; and~~
~~Safe Food (NSW Shellfish Program) [for systems with a potential to impact on shellfish production].~~

~~101.4 The Incident Notification Protocol may include a water quality monitoring protocol, agreed with a public authority, to be implemented in response to an overflow incident.~~

~~101.5 The Incident Notification Protocol must include a mechanism to regularly review the protocol to assess its effectiveness and identify any necessary refinements.~~

~~101.6 The incident Notification Protocol must be implemented by October 2003.~~

~~101.7 The licensee must advise the EPA in writing when the protocol is implemented.~~

~~Note: It is the EPA's intention to replace condition R4.1 with a condition that requires the licensee to follow this protocol once it has been implemented.~~

~~Completed PRPs~~

~~PRP 1 – Assessment of Options to Reduce the Risks of Sewage Overflows~~

~~This PRP was an assessment of options, and presentation of recommendations, which can be used to prevent overflows and to enable effective responses to emergencies that impact on the sewerage system. This PRP was due on 31 March 1999.~~

~~Status: Complete~~

~~PRP 2 – Preparation of Contingency Plan.~~

~~The preferred options as identified in PRP 1 were required to be incorporated into a contingency plan for the sewerage reticulation system. This PRP was due 31 May 1999.~~

~~Status: Complete~~

Special conditions

~~E1. E1~~ Not applicable.

Dictionary

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]

Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples

Act

Means the Protection of the Environment Operations Act 1997

activity

Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997

actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.
flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
industrial waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
inert waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

	1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
reprocessing of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TSP	Means total suspended particles
TSS	Means total suspended solids
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B.
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Special Dictionary

ug/L	Means micrograms per litre.
access chamber	a structure constructed to provide physical access to sewer pipes. Also known as a manhole.
approved	Means approved in writing by the EPA. The EPA's approval may be given unconditionally, or subject to conditions.
Biosolids	Has the same meaning as in Schedule 1, Part 3 of the <i>Protection of the Environment Operations Act 1997</i> .

Biosolids Guidelines	Means the "Environmental Guidelines: Use and disposal of biosolids products" published by the EPA in October 1997, or any subsequently updated guidelines which replace this publication.
bypass	Means circumstances where sewage has been received at the sewage treatment plant but is discharged from the plant without it being treated, processed or reprocessed by means of any or all of the designed treatment processes of the plant. A new bypass event is defined as a bypass that commences at least 24 hours after the end of the previous bypass.
cfu	Means colony forming units
class P waters	Has the same meaning as Clause 8 of the Clean Waters Regulation 1972.
class S waters	Has the same meaning as Clause 8 of the Clean Waters Regulation 1972.
condition	Means a condition of this licence.
designed overflow structure	Means a designed structure (excluding access chambers) in the reticulation system which operates as a relief to allow sewage to discharge at a planned location or a sewage pumping station, but does not include a bypass from a sewage treatment plant.
designed overflow	Means an overflow from a designed overflow structure.
dry weather bypass	Means a bypass that occurs when the flow rate of sewage at the inflow point of the STP does not exceed the flow rate specified in M7.2.
dry weather overflow	Means an overflow that is not a wet weather overflow.
dry weather sewage treatment plant discharge	Means a discharge of sewage or effluent from the STP that occurs when the flow rate of sewage at the inflow point of the STP does not exceed the flow rate specified in M7.2
effluent	Means sewage that has received all of the designed treatment processes at the sewage treatment plant.
fc	Means faecal coliforms expressed in colony forming units per 100mL.
Group C waste	Has the same meaning as in Part 3 of Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> .
ISO	Means International Standards Organisation.
kL	Means kilolitre.
L/s	Means litres per second.
metal-A	Means the following metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc.
mL	Means millilitres.
ML	Means megalitres.
offensive odour	Has the same meaning as in the <i>Protection of the Environment Operations Act 1997</i> .
overflow	Is a discharge of untreated or partially treated sewage from the sewage treatment system.
reticulation system	Means that part of the sewage treatment system owned and operated by the licensee which collects and transports sewage to the sewage treatment plant and includes all sewer pipes (whether greater or less than 300mm diameter), sewer rising mains, access chambers, vent shafts, designed overflow structures, sewage ejection units and sewage pumping stations, but does not include the sewage treatment plant.
sewage	Means untreated liquid waste received in the reticulation system.
sewage ejection unit	Is a pump intended to control the transport of sewage from premises normally occupied by no more than 10 persons, or of an average daily flow of sewage not exceeding 2,000 litres through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage

	to the sewage treatment plant.
sewage products	Means any by-product of the treatment processes and includes biosolids, raw sludge, liquid sludge, thickened sludge, digested sludge, screenings and grit.
sewage pumping station (SPS)	Is a structure which controls the transport of sewage through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant, but does not include a sewage ejection unit.
sewage treatment plant (STP)	Is a facility at which sewage is stored and treated following delivery from the reticulation system prior to discharge, and includes discharge structures and STP bypass points.
sewage treatment system	Means the reticulation system and the sewage treatment plant used for the transport, treatment and discharge of effluent and sewage.
Trade waste agreements	Means agreements reached between the licensee and industrial and commercial customers to restrict the amount of toxic and other potentially harmful substances discharged to the reticulation system.
TRC	Means total residual chlorine.
waters	Has the same meaning as in the <i>Protection of the Environment Operations Act 1997</i> .
wet weather bypass	Means a bypass that occurs when the flow rate of sewage at the inflow point of the STP equals or exceeds the rate specified in condition M7.2.
wet weather overflow	A wet weather overflow is an overflow where the probable cause is rainfall.

Mr Tim Gilbert

Principal Officer
 Environment Protection Authority

(By Delegation)

Date of this edition - 08-Sep-2003

Licence Variation

Section 58(5) Protection of the Environment Operations Act 1997



End Notes

- 1 Licence varied by notice V/M upgrade, issued on 08-Jul-2000, which came into effect on 08-Jul-2000.
- 2 Licence varied by notice 1006561, issued on 27-Jun-2002, which came into effect on 22-Jul-2002.
- 3 Licence varied by notice 1029139, issued on 14-Aug-2003, which came into effect on 08-Sep-2003.
- 4 **EPA Condition ID S40934 amended 13-08-04**

Licence Variation

Section 58(5) Protection of the Environment Operations Act 1997



BEGA VALLEY SHIRE COUNCIL,
ABN 26 987 935 332,
PO BOX 492,
BEGA NSW 2550
STANDARD POST

Attention: Mr. JIM COLLINS

Notice Number 1029139
File Number 280328
Date 14-Aug-2003

NOTICE OF VARIATION OF LICENCE 4120

BACKGROUND

- A. BEGA VALLEY SHIRE COUNCIL ("the licensee") is the holder of environment protection licence 4120 for Scheduled Activity - Premises Based ("the licence") under the Protection of the Environment Operations Act 1997 ("the POEO Act").
- B. Under the POEO Act licences are to be held for "sewage treatment systems". The sewage treatment system includes the reticulation system and the sewage treatment plant used for the transport, treatment and discharge of effluent and sewage.
- C. The EPA has developed a Regional Sewage Treatment System Model Licence and supporting guideline.
- D. This variation notice adds the model conditions relating to the sewage reticulation system to the licence.

VARIATION OF LICENCE 4120

- 1. By this notice the EPA varies licence 4120 as set out in the Appendix. *(for licenses with a lot of changes and where the whole licence document will be in the appendix: The Appendix is a copy of the licence marked with the variations that are made to it by this notice. (for licences with a small number of*

Licence Variation

Section 58(5) Protection of the Environment Operations Act 1997

changes where only the conditions will be printed: The Appendix is a copy of the provisions of the licence which are varied by this notice, marked with the variations that are made to them.

2. The variations to the licence are indicated in the following way:
 - if a strike through mark appears through any word or other text (eg. ~~Solids or~~) this indicates that the word or other text is deleted from the licence by this notice; and
 - if a double underline appears under any word or other text (eg. must be treated) this indicates that the word or other text is added to the licence by this notice.
3. Except, as provided by s84(2) of the POEO Act, the variations to the licence by this notice begin to operate at the expiry of the period of 21 days from when you get notice of the variations, unless another date is specified in this notice.
4. Note: Section 84(2) provides that a variation to a licence does not operate until
 - the expiry of the period of 21 days after notice of the decision to vary the licence is given to the licensee, or
 - if an appeal against the decision is lodged, until the Land and Environment Court determines the appeal, or
 - the licensee notifies the EPA in writing that no appeal is to be made against the decision to vary the licence,whichever first occurs.
5. This notice is issued under section 58(5) of the Protection of the Environment Operations Act 1997.

.....
Ms Michelle Bruce
Manager Regulation Section
Regulation and Audit
(by Delegation)

INFORMATION ABOUT THIS NOTICE

- Section 287 of the Act enables appeals to be made in connection with decisions about a licence application within 21 days after notice of the decision is given to the applicant.
- Details provided in this notice will be available on the EPA's Public Register in accordance with section 308 of the Protection of the Environment Operations Act 1997.

Environment Protection Authority

Environment Protection Licence

Section 55 Protection of the Environment Operations Act 1997

2005

- ♦ Licence number: 4120
- ♦ File number: 280328
- ♦ Licence Anniversary Date: 01-September
- ♦ Review date not later than 01-Jul-2002 23-Jun-2005

Licence Type

Premises

Licensee

BEGA VALLEY SHIRE COUNCIL

PO BOX 492

BEGA NSW 2550

Licensed Premises

BEGA SEWAGE TREATMENT PLANT

TARONGA CRESCENT

BEGA NSW 2550

Fee Based Activity

Sewage Treatment - processing by small plants (< 10000 ML per year) (71[a])

Scale

> 219 - 1000 ML discharged

EPA Region

South Coast

Level 3, NSW Govt Offices, 84 Crown Street

WOLLONGONG NSW 2500

Phone: 02 4226 8100 4224 4100

Fax: 02 4227 2348 4224 4110

PO Box 513 WOLLONGONG EAST

NSW 2520

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Information about this licence

Dictionary

The licence contains a dictionary, which defines terms used in the licence. It is found at the end of the licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- Ensure persons associated with you comply with this licence, as set out in section 64 of the Act.
- Control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act).
- Report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Transfer of licence

Transfer of the licence to another person may be requested by the licensee using the form for this purpose available from the EPA.

Variation of licence conditions

Variations to the conditions of this licence may be requested by the licensee using the form for this purpose available from the EPA. The EPA may also vary a licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 3 years after the issue of the licence, as

set out in Part 3.6 of the Act. You will receive advance notice of the licence review. For licences held immediately before 1 July 1999, the first review will take place before 1 July 2002.

Fees and annual return to be sent to the EPA

The licence requires you to forward to the EPA an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints).

The Annual Return must be submitted within 60 days after the end of each reporting period. Where a licence is transferred, surrendered or revoked, a special reporting period applies.

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Usually the licence fee period is the same as the reporting period.

See condition R1 and the accompanying form regarding the Annual Return requirements.

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications
- licence conditions and variations
- statements of compliance

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

Licence anniversary date

01-September

This licence is issued to

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

subject to the conditions which follow:

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity
Sewage Treatment Systems

Fee Based Activity	Scale
Sewage Treatment - processing by small plants (< 10000 ML per year) (71[a])	> 219 - 1000 ML discharged

A1.3 Not applicable.

A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
BEGA SEWAGE TREATMENT PLANT
TARONGA CRESCENT
BEGA
NSW
2550
LOT 8 IN DP 750190

A2.2 The premises also includes the reticulation system owned and operated by the licensee that is associated with the sewage treatment plant(s) identified in condition A2.1.

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- (a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998 and
- (b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

A5 Objectives of this licence

A5.1 The objectives of this licence are to:

- (a) prevent as far as practicable sewage overflows and sewage treatment plant bypasses;
- (b) require proper and efficient management of the system to minimise harm to the environment and public health; and

require practical measures to be taken to protect the environment and public health from sewage overflows and sewage treatment plant effluent;

- (c) ~~(b) — minimise the frequency and volume of sewage treatment plant bypasses.~~

A5.2 This licence is to be construed in a manner that will promote the objectives referred to in A5.1.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

Water and land

EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
1		Discharge to utilisation area	Pipe to the STP property line from the southwest wall leading to the finishing pond to Rixons Effluent Lagoon labelled as "EPA Point 1" on map titled "Bega Sewerage Treatment Works" received by the EPA on 7 March 2002.
2		Discharge to waters	Pipe from Oxidation Pond No. 4 to Bega River labelled as "Point 2" on map titled "EPA Point 2" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.
3	Effluent quality monitoring		Oxidation pond No. 4 labelled as "EPA Point 3" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.
4	Volume monitoring		Effluent pipeline from humus tank to oxidation ponds labelled as "EPA Point 4" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.
5	Volume monitoring		Flow meter on pipe to the southwest wall leading to the finishing pond to Rixons Effluent Lagoon labelled as "EPA Point 5" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.
6	Volume monitoring		Flow meter on pipe from Oxidation Pond No. 4 to Bega River labelled as "EPA Point 6" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.

3 Limit conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L1.2 This licence does not permit the pollution of waters classified as Class S or Class P under the Clean Waters Regulations 1972 to the extent that such pollution would breach a standard applicable to those waters by the operation of clause 6 of schedule 5 of the Act

L1.3 The licensee may only discharge untreated or partially treated sewage from the sewage treatment plant and/or the reticulation system subject to the conditions of this licence, including O1 and O2.

L2 Load limits

L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
BOD (Enclosed Waters)	8733
Nitrogen (total) (Enclosed Waters)	11650
Oil and Grease (Enclosed Waters)	2915
Total Nitrogen Phosphorus (total) (Enclosed Waters)	11650 3080
Total Phosphorus suspended solids (Enclosed Waters)	3080 11650
Total Suspended Solids (Enclosed Waters)	11650

Note: The load limits referred to in condition L2.1 do not apply to discharges from the reticulation system.

L3 Concentration limits

L3.1 For each monitoring/discharge point or utilisation area specified in the table\ below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not

exceed the concentration limits specified for that pollutant in the table.

- L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\.

Water and Land

POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	mg/L				See note 1
Total Suspended Solids	mg/L				30
Biochemical Oxygen Demand	mg/L				20

POINT 2

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	mg/L				See note 1
Total Suspended Solids	mg/L				30
Biochemical Oxygen Demand	mg/L				20

Note 1: A 100 Percentile Concentration Limit of "10 mg/L and no visible oil and grease" applies for Point 1 and Point 2.

Note 2: The monitoring at Point 3, required by Condition M2.1, is conducted by the licensee to determine compliance with limits specified for discharges to Point 1 and Point 2 as described in Condition L3.

L4 Volume and mass limits

- L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:

(a) liquids discharged to water; or;

(b) solids or liquids applied to the area;

must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of measure	Volume/Mass Limit
1	kL/day	2500
2	kL/day	2500

L4.2 Notwithstanding the volume limits specified in condition L4.1, the combined volume discharged from point(s) 1 and 2 shall not exceed 2500 kL/day.

L5 Waste

L5.1 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 as expressly permitted by the licence.

L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.

L5.3 The licensee may receive **and/or transfer** sewage **and Group C waste** generated outside the premises for treatment, processing or reprocessing at the premises. The licensee must take reasonable steps to ensure that sewage received at the premises has been lawfully discharged in accordance with a trade waste agreement or customer contract (as applicable) in force between the licensee and the generator of **the** waste. The licensee must treat, process or reprocess the sewage **and Group C** waste in accordance with this licence prior to discharge from **this the** premises.

L5.4 The licensee may receive, store, treat, process or reprocess **and/or transfer** at the premises; sewage products generated or stored outside the premises by the **licensee's licensee's** other sewage **treatment** systems. Sewage products must be received, treated, processed or reprocessed in accordance with this licence.

L5.5 Grit or screenings generated by activities on the premises may be disposed of by the licensee within the boundary of the sewage treatment plant(s) on the premises, but only if they are disposed of in a manner that prevents or minimises material harm to the environment.

L6 Noise Limits

L6.1 Not applicable.

L7 ~~Potentially offensive odour~~ Frequency limits

L7.1 ~~The licensee must not cause or permit~~ Not applicable.

L8 Potentially offensive odour

~~L8.1 No condition in this licence identifies a potentially offensive odour for the emission purposes of offensive odour beyond the boundary of the premises. 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 licensee 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 a licence directed at minimising odour.

4 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.

~~O1.2 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guideline.~~

Note: The requirements of O1.1 apply to the whole of the premises, including the reticulation system.

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.

~~O2.2 For the purpose of this condition, "plant and equipment" includes drainage systems, infrastructure, pollution control equipment and fuel burning equipment, but does not refer to equipment which has been decommissioned but is still on site.~~

Note: The requirements of O2.1 apply to the whole of the premises, including the reticulation system.

O3 Appropriate treatment processes

O3.1 Sewage or effluent must not be discharged from Point[s] 1 and/or 2 unless it has been treated in accordance with this condition.

O3.2 All the liquid waste inflow must at least receive screening, degritting, sedimentation, trickling filtration, secondary sedimentation (humus tank) and oxidation ponding requirements of the table below.

Required treatment process	Flow range
screening, degritting, sedimentation, trickling filtration, secondary sedimentation (humus tank) and oxidation ponding	all liquid waste inflow

The flows noted in the table above are the inflows to the premises' sewage treatment plant(s).

O3.3 2 However the licensee is not taken to have breached this condition if the licensee can demonstrate:

- (a) the failure to treat the liquid waste as required was solely as a result of a failure of the power supply to the premises, or a failure of essential equipment;
- (b) the failure of power supply or equipment could not reasonably have been prevented; and
- (c) normal operating conditions were restored as soon as possible after the power supply failure or the failure of essential equipment.

O4 Prohibition on acceptance of pesticides

O4.1 The licensee must not enter into any trade waste agreement to discharge organophosphate pesticides (including chlorpyrifos, diazinon, malathion) into the sewerage system.

O4.2 The licensee must not consent to any discharge of organochlorine pesticides (such as dieldrin, heptachlor and chlordane) into the sewerage system.

O5 Biosolids management

O5.1 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guideline s, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

O6 Effluent application to land

O6.1 Not applicable

O7 New sewage pumping stations

O7.1 Dry weather overflows resulting in pollution of waters from any sewage pumping station(s) installed within the sewage treatment system after January 2004 are not permitted.

O8 Extensions to the reticulation system

O8.1 The licensee must ensure that any extensions to the reticulation system after January 2004 are planned, designed, constructed and installed to prevent as far as practicable overflows from the premises.

Note: "The premises" includes both the new and the previously existing parts of the sewage treatment system.

5 Monitoring and recording conditions

M1 Monitoring records

- M1.1** The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2** All records required to be kept by this 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 for the purposes of this licence:
- (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 licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

*Water and Land***POINT 3**

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical Oxygen Demand	mg/L	Monthly	Representative sample
Chlorophyll a	mg/L	Special Frequency 1	Representative sample
Nitrogen (total)	mg/L	Monthly	Representative sample
Oil and Grease	mg/L	Monthly	Representative sample
Total Nitrogen	mg/L	Monthly	Representative sample
Total Phosphorus	mg/L	Monthly	Representative sample
Total Suspended Solids	mg/L	Monthly	Representative sample

Note: ~~The monitoring at Point 3 required by condition M2.1 is conducted to determine compliance with limits specified at condition L3.3 for discharge to Point(s) 1 and 2.~~

~~M2.2~~ Special Frequency 1 means collect and store sample monthly, at the same time as Biochemical Oxygen Demand or Total Suspended Solids sampling. If the Biochemical Oxygen Demand or Total Suspended Solids 100 percentile concentration limit is exceeded as per condition L3.3, then analyse the stored sample for chlorophyll a and report results to the EPA as soon as the results become available.

~~M2.2 The monitoring at point(s) 3 required by condition M2.1 is conducted to determine compliance with limits specified for discharge to point(s) 1 and 2 respectively.~~

M3 Testing methods - concentration limits

M3.1 Not applicable.

M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

Note: Testing methods - load limit

Note: Clause 18 (1) and (2) of the Protection of the Environment Operations (General) Regulation 1998 requires that monitoring of actual loads of assessable pollutants listed in L2.1 must be carried out in accordance with the testing method set out in the relevant load calculation protocol for the fee-based activity classification listed in condition A1.2.

M4 Recording of pollution complaints

M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M4.2 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 licensee in relation to the complaint, including any follow-up contact with the complainant; and
- (f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

M5.1 The licensee 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.

M5.2 The licensee 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.

M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:

- (a) the date of the issue of this licence or
- (b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

M5.4 For the purpose of condition M5.1, operating hours are defined as twenty-four hours a day, seven days a week.

M5.5 The public notification referred to in condition M5.2 must include specific reference to the fact that the complaints line may be used by the community for the reporting of overflows.

M6 Requirement to monitor volume or mass

M6.1 For each discharge point or utilisation area specified below, the licensee must monitor:

- (a) the volume of liquids discharged to water or applied to the area;
- (b) the mass of solids applied to the area;
- (c) the mass of pollutants emitted to the air;

at the frequency and using the method and units of measure, specified below.

POINT 4

Frequency	Unit Of Measure	Sampling Method
Daily	kL	Magnetic flow meter

POINT 5

Frequency	Unit Of Measure	Sampling Method
Daily	kL	Magnetic flow meter

POINT 6

Frequency	Unit Of Measure	Sampling Method
Daily	kL	Magnetic flow meter

M7 Requirement to record wet and dry weather bypasses

M7.1 The licensee must record the following details in relation to each bypass from the premises:

M6.2 In the event that the licensee cannot comply with a volume monitoring method as required by this licence solely due to the failure or malfunction of essential monitoring equipment, volume may be estimated using another agreed method approved in writing by the EPA. This provision only applies for the duration of the failure or malfunction. The licensee is to rectify the failure or malfunction as soon as practicable.

M6.3 The licensee must:

- (a) submit in writing to the EPA by October 2003 a proposal for a method of volume estimation, or
- (b) use a method of volume estimation already approved in writing by the EPA

to be used in the event that essential monitoring equipment referred to in the previous condition has failed or malfunctioned.

M7 Requirement to record sewage treatment plant bypasses

M7.1 The licensee must record the following details in respect of each bypass of any of the appropriate treatment processes required by condition O3 which may be reasonably expected to adversely affect the quality of the final discharge:

- (a) the EPA point identification number through which the bypass discharged;
- (b) the start time, date, estimated start time and estimated duration of the bypass;
- (c) the estimated volume of the bypass;
- (d) the level of treatment of the sewage at the sewage treatment plant STP prior to discharge;
- (e) classification as a dry or wet weather bypass;
- (f) the most likely probable cause of the bypass; and
- (g) the name or names of the treatment process or processes bypassed;
- (f) any actions taken to stop the bypass happening; and
- (g) any actions taken to prevent the bypass happening again.

M7.2 In addition to the details listed in the previous condition, the licensee must also record classification as a wet or dry weather bypass in respect of each bypass referred to in the previous condition. A

dry weather bypass is a bypass that occurs when the flow rate of sewage at the **influent inflow volume monitoring** point of the STP does not exceed 2,500 kL/500k/L day and a wet weather bypass occurs when this flow is equalled or exceeded **at any time during the bypass event**

M8 Biosolids monitoring

M8.1 Biosolids at the premises must be recorded, monitored and classified in accordance with the Biosolids Guidelines, to the extent that those Guidelines are applicable, or as otherwise approved in writing by the EPA

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises

M9 Requirement to record overflows

M9.1 From October 2003 the licensee must record the following details in relation to each observed or reported overflow from the reticulation system and from the sewage treatment plant:

- (a) the location of the overflow;
- (b) the date, estimated start time and estimated duration of the overflow;
- (c) the estimated volume of the overflow;
- (d) a description of the receiving environment of the overflow;
- (e) classification as a dry or wet weather overflow;
- (f) the probable cause of the overflow;
- (g) any actions taken to stop the overflow happening;
- (h) any actions taken to clean up the overflow; and
- (i) any actions taken to prevent the overflow happening again.

M10 Environmental monitoring

M10.1 Not applicable

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

- R1.1** 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.

Period covered by Annual Return

R1.2 An Annual Return must be prepared in respect of each reporting period, 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.

R1.3 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.

R1.4 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.

Deadline for Annual Return

R1.5 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').

Notification where actual load can not be calculated

R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:

- (a) the assessable pollutants for which the actual load could not be calculated; and
- (b) the relevant circumstances that were beyond the control of the licensee.

Licensee must retain copy of Annual Return

R1.7 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.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

R1.8 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.

- R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee 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 Act.

- R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
- (a) where this licence applies to premises, an event has occurred at the premises; or
 - (b) where this 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.
- R3.2 The licensee 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.
- R3.3 The request 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;
 - (g) any other relevant matters.
- R3.4 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.

R4 Notification of bypass **or overflow** incidents

R4.1 Where ~~sewage that has bypassed the treatment processes at the sewage treatment plant and is discharged from the premises (whether in wet weather or dry weather conditions), the licensee must give each of the notifications listed below. Each notification is to be given as soon as practicable after the licensee or one of the licensee's employees or agents becomes aware of the incident, and in the case of (b) below, becomes aware that the incident is of significance for public health. Notifications must be made to the following groups or organisations in the following manner:~~

- ~~(a) telephoning the EPA's Pollution Line service on 131 555 when the requirements of Part 5.7 of the POEO Act are met;~~
- ~~(b) for incidents of public health significance, advising the Department of Health by fax on (02) 9816 0377 (during office hours) and by telephone on 0411 264 070 (after hours);~~
- ~~(c) issuing a media release to the media which, for dry weather bypasses, should include details (if known) of the nature of the operational incident that led to the bypass;~~
- ~~(d) for events of significance to shellfish production, advising the Shellfish Quality Assurance Program by fax on (02) 95184895.~~

~~The EPA is to be notified even if the licensee is unaware of the cause of the incident, or whether the incident is of significance to public health at the time of notification.~~

~~Note: These reporting requirements do not affect any obligations of the licensee to report under Part 5.7 of the Act incidents which cause or threaten material harm to the environment.~~

R5 ~~Supplying an annual return report~~

~~R5.1 The Report is to supplement the Annual Return and must include but need not be limited to:~~

~~in a tabular presentation(s) the 50 percentile, 80 percentile, 90 percentile, 100 percentile and 3DGM values calculated from the monitoring data for each pollutant which has corresponding concentration limits specified in this licence.~~

~~Additionally;~~

~~In the case of weekly faecal coliform monitoring results, details of the monthly median result and in the case of monthly faecal coliform monitoring results, details of the yearly median result.~~

~~The totals of the monthly and yearly volume being discharged from each discharge point. A comparison of the percentage of effluent discharged to each discharge point on a monthly and yearly basis.~~

~~the relevant reporting forms contained in the Biosolids Guidelines and completed for the reporting period in accordance with the Biosolids Guidelines or as otherwise approved in writing by the EPA;~~

~~a diagram showing the major process elements, discharge points and monitoring points at the sewage treatment plant(s);~~

~~a breakdown of the total number of complaints received by the licensee in relation to the premises into categories of "odours", "water pollution — sewage treatment plant", "water pollution — reticulation system" and any other category indicated by the complaints. A brief description of any significant unresolved issues arising out of the complaints must be provided.~~

General conditions

G1 Copy of licence kept at the premises

G1.1 A copy of this licence must be kept at the premises 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.

G2 Signage

G2.1 Each monitoring and discharge point must be clearly marked by a sign that indicates the EPA point identification number.

G3 Contact number for incidents and responsible employees

G3.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can either:

- (a) respond at all times to incidents relating to the premises, and
- (b) contact the licensee's senior employees or agents authorised at all times to:
 - (i) speak on behalf of the licensee
 - (ii) provide any information or document required under this licence.

G3.2 The licensee is to inform the EPA of the representative or representatives and their telephone number within 3 months of the date of the issue of this licence. The EPA must be notified of the telephone number on commencement of its operation.

- (a) G3.3 The licensee is to inform the EPA in writing sewage or partially treated sewage is discharged from the premises as a result of a bypass of the sewage treatment plant, or
- (b) an observed or reported overflow has occurred from the reticulation system, and overflow or bypass may pose a risk to public health, the licensee is to promptly give appropriate notification to any parties that are likely to be affected, including:
 - (i) the potentially affected community,
 - (ii) the Safe Food NSW Shellfish Quality Assurance Program, where the bypass or overflow could have potential impacts on shellfish production; and
 - (iii) the Department of Health.

Note: It is the EPA's intention to vary the licence to replace the above condition with a requirement that the licensee follow the Incident Notification Protocol required by PRP101, when the protocol has been implemented.

R4.2 When the licensee notifies the Department of Health or Safe Food NSW Shellfish Quality Assurance Program of a bypass or overflow incident, the licensee must also notify the EPA by telephoning its Pollution Line service on 131 555. Notifications are to be given as soon as practicable after the licensee or one of the licensee's employees or agents becomes aware of the incident, and must include all relevant information including the information required under condition M9.1 or M7.1

R5 Annual System Performance Report

R5.1 The licensee must supply to the EPA an Annual System Performance Report not later than 60 days after the end of each reporting period

R5.2 The report is to supplement the Annual Return and must include but need not be limited to:

- (a) the 50 percentile, 90 percentile, 100 percentile and 3DGM values calculated from the monitoring data required by this licence for the reporting period for each pollutant which has corresponding concentration limits specified in this licence;
- (b) the total amounts of biosolids, as classified in the Biosolids Guideline, disposed of on-site, off-site and to landfill during the reporting period;
- (c) a diagram showing the major process elements, discharge points and monitoring points at the premises' sewage treatment plant(s), where there has been any significant change since the previous reporting period or this information has not been provided previously to the EPA;
- (d) the number of dry and wet weather bypasses recorded over the reporting period (recorded in accordance with condition M7);
- (e) a breakdown of the total number of complaints received by the licensee during the reporting period in relation to the premises into categories of "odours – sewage treatment plant", "odours – reticulation system", "water pollution – sewage treatment plant", "water pollution – reticulation system" and any other category indicated by the complaints;
- (f) a summary of observed, reported or recorded wet weather overflows and observed, reported or recorded dry weather overflows and sewage treatment plant bypasses. These data are to be for the current reporting period and for the four previous twelve-month periods, for which data has been collected. Any significant actions taken to address bypasses or overflows are to be noted;
- (g) the amount of rainfall measured at a rain gauge at the STP, or at the rain gauge closest to the centre of the catchment of the sewage treatment system, for each month of the reporting period; and
- (h) a brief progress report on the implementation over the reporting period of actions specified in PRP100

R5.3 The Annual System Performance Report must be presented in a format approved in writing by the EPA

R5.4 The requirements of R5.2 (d), (e), (f) and (g) apply to the part of the reporting period beginning three months after the date the licence is varied to include this condition.

General conditions

G1 Copy of licence kept at the premises

G1.1 A copy of this licence must be kept at the premises 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.

Note: For the purposes of this condition, "the premises" refers to each Sewage Treatment Plant(s) described in condition A2.1.

G2 Signage

G2.1 The location of EPA point number(s) 1, 2, 3, 4, 5 and 6 must be clearly marked by signs that indicate the point identification number used in this licence and be located as close as practical to the point.

G3 Contact number for incidents and responsible employees

G3.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:

- (a) respond at all times to incidents relating to the premises; and
- (b) contact the licensee's senior employees or agents authorised at all times to:
 - (i) speak on behalf of the licensee; and
 - (ii) provide any information or document required under this licence.

G3.2 The licensee is to inform the EPA in writing of the appointment of any subsequent contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.

G4 Clean-up

G4.1 In the event of an overflow or bypass that harms or is likely to harm the environment, the licensee must use all practicable measures to minimise the impact of the overflow or bypass on the environment and public health. These measures are to be implemented as soon as practical after the licensee or one of the licensee's employees or agents becomes aware of the overflow or bypass.

Pollution studies and reduction programs

U1 PRP 3 - Investigation of Microbial Wastewater Quality of Reuse Waters

The licensee must monitor the quality of the wastewaters being transferred to Rixon's Farm and the waters in Rixon's Effluent Pond for reuse. This monitoring must consist of monthly monitoring for pH, Suspended Solids and Thermotolerant Coliforms (Faecal Coliforms) and be undertaken for a period of 12 months. This monitoring must be completed by 1 September 2003.

The results of the monitoring must be written into a report that compares the results to the relevant criteria as outlined in National Water Quality Management Strategy document "Guidelines for Sewerage Systems - Use of Reclaimed Water" dated November 2000 (the guidelines). Where the results do not meet the criteria for the type of reuse being undertaken, or proposed to be undertaken, an assessment must be made in the report as to the licensee's preferred unit operations that are proposed to be installed to achieve the quality as outlined in the guidelines. The report must also include the licensee's proposed timeframes to install the preferred unit operations at the Sewage Treatment Plant. This report must be submitted to the EPA by 31 October 2003.

Due Dates:

- Begin Monitoring - 31 August 2002
- Complete Monitoring - 1 September 2003
- Completed Report Submitted - 31 October 2003

Completed PRPs

PRP100 Sewer Overflow Investigations Report

PRP 1 - Assessment of Options to Reduce the Risks of Sewage Overflows 100.1 The objective of this PRP is to identify overflows from the sewerage reticulation system that pose a significant risk of harm to the environment or public health, and to identify management priorities and actions required to reduce this risk.

This PRP was an assessment of options, and presentation of recommendations, which can be used to prevent overflows and to enable effective responses to emergencies that impact on the sewerage system. This PRP was due on 31 March 1999.

Status: Complete

PRP

100.2 - Preparation of Contingency Plan

The preferred options as identified in PRP 1 were required to be incorporated into a contingency plan. The licensee must prepare a Sewer Overflow Investigations Report for the sewerage premises reticulation system. This PRP was due 31 May 1999. The report must include but need not be limited to:

- (a) Status: Complete identification of the location of all designed overflow points and other frequent overflow points within the reticulation system and an assessment of the likelihood of overflows from these points

Special conditions

- (b) assessment of the significance of impacts on the environment and public health resulting from these overflows
- (c) evaluation and ranking of the resultant risk to the environment and public health from these overflows; and

(d) identification of management priorities and actions to reduce the risk of harm to the environment and public health.

100.3 With regard to the identification of actions to reduce the risk of harm to the environment and public health, as required by condition 100.2(d), the licensee must consider the effects of any actions that improve the performance of the reticulation system with respect to the performance of the sewage treatment plant, for example with respect to the frequency and volume of bypasses or overflows from the sewage treatment plant, to ensure that the actions minimise the potential environmental and public health impact of discharges from the whole of the premises.

E1.1 Not applicable. 100.4 The report must also include the identification of any sewage pumping stations within the premises that are not capable of meeting a condition prohibiting dry weather overflows, including reasons why any sewage pumping station is not capable of meeting such a condition and whether it should be upgraded.

Dictionary 100.5 This report is to be submitted to the EPA in writing by July 2007.

Special Dictionary 100.6 Nothing in this PRP is to be construed as authorising pollution of waters or a discharge to Class P or S waters.

Notes:

- (1) If this requirement is included on a number of sewage treatment system licences held by the licensee, a single report may be submitted to the EPA provided that it meets the requirements relating to all of the licences.
- (2) The requirement to prepare this report does not affect the requirement to comply with any other condition of this licence.
- (3) It is the EPA's intention to include, at some point in the future, a licence condition prohibiting dry weather overflows from those sewage pumping stations that have been identified as being capable of meeting such a condition. This would be consistent with the requirement for proper and efficient maintenance and operation of the system.
- (4) Progress reports on the implementation over the reporting period of actions specified in PRP100 are required in the Annual System Performance Report under condition R5 of this licence.

PRP101 Incident Notification Protocol

101.1 The objective of this PRP is to develop and implement an effective protocol to ensure all relevant organisations and any affected communities are notified of overflows and sewage treatment plant bypasses that have caused or are likely to cause adverse impacts on the environment or public health.

101.2 The licensee must develop a protocol for effectively notifying relevant organisations (other than the EPA) and the affected community of overflows and sewage treatment plant bypasses where those incidents have caused or are likely to cause adverse impacts to the environment, or pose or are likely to pose a risk to public health.

101.3 The licensee must liaise with the potentially affected community, the following organisations, and any other organisations considered appropriate, and develop agreed procedures for notifying them of these overflow or bypass incidents:

Approved

Means approved in writing by the EPA. The EPA's approval may be given unconditionally, or subject to conditions.

Biosolids	Has the same meaning as in Schedule 1, Part 3 of the Protection of the Environment Operations Act 1997
Biosolids Guideline	Means the EPA publication Environmental Guidelines: Use and disposal of biosolids products, October 1997 or any subsequently updated guidelines which replace this publication.
bypass	Means circumstances where sewage has been received at the sewage treatment plant but is discharged from the plant without it being treated, processed or reprocessed by means of any or all of the designed treatment processes of the plant
CEC	Means cation exchange capacity
Cl₂	Means chlorine
CN	Means cyanide
discharge	has the same meaning as in Schedule 1, classification [71] of the Protection of the Environment Operations (General) Regulation 1998.
dry weather	Means less than 10 millimetres of rain falling within a 24 hour period
dry weather by-pass	means a by-pass that occurs when the flow rate of sewage at the influent point of the STP does not exceed the rate specified in M7.2.
Effluent	Is sewage that has received all of the designed treatment processes at the sewage treatment plant.
ESP	Means exchangeable sodium percentage
Ex	Means the exchangeable ion
FC	Means faecal coliforms expressed in colony forming units/100mL
Harm	Has the same meaning as in the Protection of the Environment Operations Act 1997
kL	Means kilolitre
L/s	Means litres per second
metal-A	Means the following metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc
Mequiv	Means milliequivalents as the ion
ML	Means megalitre
NH₃-N	Means nitrogen as ammonia
NO_x-N	Means nitrogen as nitrate and nitrite
Phenols	Means total phenols by distillation.
PSC	Means phosphorus sorption capacity
Solids	Means any solids and sludges extracted from effluent, and any sludges, sediments and surface scums originating from the pondage systems
STP	Means sewage treatment plant
STS	Means sewage treatment system
TDS	Means total dissolved solids
TKN-N	Means total Kjeldahl nitrogen
TN	Means total nitrogen

TOC	Means total organic carbon
TP	Means total phosphorus
TRC	Means total residual chlorine
Treatment plant	Means the part or parts of the premises in which liquid waste receives treatment
ug/L	Means micrograms per litre
Utilisation area	Means the geographical area as defined in condition P1 that has been set aside for the utilisation of effluent and biosolids
WSA	Means water stable aggregates
Wet weather by-pass	means a by-pass that occurs when the flow rate of sewage at the influent point of the STP exceeds the rate specified in M7.2

- (a) the Department of Health;
- (b) the Department of Infrastructure, Planning and Natural Resources;
- (c) the section(s) of relevant local council(s) responsible for community relations;
- (d) the Sydney Catchment Authority [for premises in the SCA's area of operation]; and
- (e) Safe Food (NSW Shellfish Program) [for systems with a potential to impact on shellfish production].

101.4 The Incident Notification Protocol may include a water quality monitoring protocol, agreed with a public authority, to be implemented in response to an overflow incident.

101.5 The Incident Notification Protocol must include a mechanism to regularly review the protocol to assess its effectiveness and identify any necessary refinements.

101.6 The Incident Notification Protocol must be implemented by October 2003.

101.7 The licensee must advise the EPA in writing when the protocol is implemented.

Note: It is the EPA's intention to replace condition R4.1 with a condition that requires the licensee to follow this protocol once it has been implemented.

Completed PRPs

PRP 1 - Assessment of Options to Reduce the Risks of Sewage Overflows

This PRP was an assessment of options, and presentation of recommendations, which can be used to prevent overflows and to enable effective responses to emergencies that impact on the sewerage system. This PRP was due on 31 March 1999.

Status: Complete

PRP 2 - Preparation of Contingency Plan.

The preferred options as identified in PRP 1 were required to be incorporated into a contingency plan for the sewerage reticulation system. This PRP was due 31 May 1999.

Status: Complete

Special conditions

E1.1 Not applicable

Dictionary

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.

flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
industrial waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
inert waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
reprocessing of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

TSP	Means total suspended particles
TSS	Means total suspended solids
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B.
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Special Dictionary

ug/L	Means micrograms per litre
access chamber	a structure constructed to provide physical access to sewer pipes. Also known as a manhole
approved	Means approved in writing by the EPA. The EPA's approval may be given unconditionally, or subject to conditions
Biosolids	Has the same meaning as in Schedule 1, Part 3 of the Protection of the Environment Operations Act 1997
Biosolids Guidelines	Means the "Environmental Guidelines: Use and disposal of biosolids products" published by the EPA in October 1997, or any subsequently updated guidelines which replace this publication
bypass	Means circumstances where sewage has been received at the sewage treatment plant but is discharged from the plant without it being treated, processed or reprocessed by means of any or all of the designed treatment processes of the plant. A new bypass event is defined as a bypass that commences at least 24 hours after the end of the previous bypass
cfu	Means colony forming units
class P waters	Has the same meaning as Clause 8 of the Clean Waters Regulation 1972
class S waters	Has the same meaning as Clause 8 of the Clean Waters Regulation 1972
condition	Means a condition of this licence
designed overflow structure	Means a designed structure (excluding access chambers) in the reticulation system which operates as a relief to allow sewage to discharge at a planned location or a sewage pumping station, but does not include a bypass from a sewage treatment plant
designed overflow	Means an overflow from a designed overflow structure
dry weather bypass	Means a bypass that occurs when the flow rate of sewage at the inflow point of the STP does not exceed the flow rate specified in M7.2
dry weather overflow	Means an overflow that is not a wet weather overflow
dry weather sewage treatment plant discharge	Means a discharge of sewage or effluent from the STP that occurs when the flow rate of sewage at the inflow point of the STP does not exceed the flow rate specified in M7.2
effluent	Means sewage that has received all of the designed treatment processes at the sewage treatment plant
fc	Means faecal coliforms expressed in colony forming units per 100ml
Group C waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

ISO	Means International Standards Organisation
kl	Means kilolitre
L/s	Means litres per second
metal-A	Means the following metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc
ml	Means millilitres
ML	Means megalitres
offensive odour	Has the same meaning as in the <i>Protection of the Environment Operations Act 1997</i>
overflow	Is a discharge of untreated or partially treated sewage from the sewage treatment system
reticulation system	Means that part of the sewage treatment system owned and operated by the licensee which collects and transports sewage to the sewage treatment plant and includes all sewer pipes (whether greater or less than 300mm diameter), sewer rising mains, access chambers, vent shafts, designed overflow structures, sewage ejection units and sewage pumping stations, but does not include the sewage treatment plant
sewage	Means untreated liquid waste received in the reticulation system
sewage ejection unit	Is a pump intended to control the transport of sewage from premises normally occupied by no more than 10 persons, or of an average daily flow of sewage not exceeding 2,000 litres through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant
sewage products	Means any by-product of the treatment processes and includes biosolids, raw sludge, liquid sludge, thickened sludge, digested sludge, screenings and grit
sewage pumping station (SPS)	Is a structure which controls the transport of sewage through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant, but does not include a sewage ejection unit
sewage treatment plant (STP)	Is a facility at which sewage is stored and treated following delivery from the reticulation system prior to discharge, and includes discharge structures and STP bypass points
sewage treatment system	Means the reticulation system and the sewage treatment plant used for the transport, treatment and discharge of effluent and sewage
Trade waste agreements	Means agreements reached between the licensee and industrial and commercial customers to restrict the amount of toxic and other potentially harmful substances discharged to the reticulation system
TRC	Means total residual chlorine
waters	Has the same meaning as in the <i>Protection of the Environment Operations Act 1997</i>
wet weather bypass	Means a bypass that occurs when the flow rate of sewage at the inflow point of the STP equals or exceeds the rate specified in condition M7.2
wet weather overflow	A wet weather overflow is an overflow where the probable cause is rainfall

Mr Tim Gilbert

Principal Officer **Sydney Industry**

(By Delegation)

Date of this edition - 22-Jul-2002

End Notes

1	Licence varied by notice V/M upgrade, issued on 08-Jul-2000, which came into effect on 08-Jul-2000.
2	Licence varied by notice 1006561, issued on 27-Jun-2002, which came into effect on 22-Jul-2002.

Licence Variation

Section 58(5) Protection of the Environment Operations Act 1997



BEGA VALLEY SHIRE COUNCIL,
ABN 26 987 935 332,
PO BOX 492,
BEGA NSW 2550
STANDARD POST

Attention: Mr. JIM COLLINS

1006561
280328

Date: 27-Jun-2002

NOTICE OF VARIATION OF LICENCE 4120

Section 58 of the Protection of the Environment Operations Act 1997

BACKGROUND

- (a) BEGA VALLEY SHIRE COUNCIL ("the licensee") is the holder of environment protection licence 4120 for Scheduled Activity - Premises Based ("the licence") under the Protection of the Environment Operations Act 1997 ("the POEO Act").
- (b) Licence varied as an outcome of the Licence Review conducted by the EPA as required under s78 of the POEO Act 1997
- (c) This notice relates to Bega STP.

VARIATION OF LICENCE 4120

- 1) By this notice the EPA varies licence 4120 as set out in the Appendix. *(for licenses with a lot of changes and where the whole licence document will be in the appendix: The Appendix is a copy of the licence marked with the variations that are made to it by this notice. (for licences with a small*

Licence Variation

Section 58(5) Protection of the Environment Operations Act 1997

number of changes where only the conditions will be printed: The Appendix is a copy of the provisions of the licence which are varied by this notice, marked with the variations that are made to them.

- 2) The variations to the licence are indicated in the following way:
 - if a strike through mark appears through any word or other text (eg. ~~Solids or~~) this indicates that the word or other text is deleted from the licence by this notice; and
 - if a double underline appears under any word or other text (eg. must be treated) this indicates that the word or other text is added to the licence by this notice.
- 3) Except, as provided by s84(2) of the POEO Act, the variations to the licence by this notice begin to operate at the expiry of the period of 21 days from when you get notice of the variations, unless another date is specified in this notice.

Note: Section 84(2) provides that a variation to a licence does not operate until

- the expiry of the period of 21 days after notice of the decision to vary the licence is given to the licensee, or
- if an appeal against the decision is lodged, until the Land and Environment Court determines the appeal, or
- the licensee notifies the EPA in writing that no appeal is to be made against the decision to vary the licence,

whichever first occurs.

(This notice is issued under section 58(5) of the Protection of the Environment Operations Act 1997.)

.....
Mr William Dove
Head Regional Operations Unit
South Coast
(by Delegation)

INFORMATION ABOUT THIS NOTICE:

- Section 287 of the Act enables appeals to be made in connection with decisions about a licence application within 21 days after notice of the decision is given to the applicant.

Environment Protection Authority

Environment Protection Licence

Section 55 Protection of the Environment Operations Act 1997

- ♦ Licence number: 4120
- ♦ File number: 280328
- ♦ Licence Anniversary Date: 01-September
- ♦ Review date not later than 01-Jul-2002

Licence Type

Premises

Licensee

BEGA VALLEY SHIRE COUNCIL

PO BOX 492

BEGA NSW 2550

Licensed Premises

BEGA SEWAGE TREATMENT PLANT

TARONGA CRESCENT

BEGA NSW 2550

Fee Based Activity

Sewage Treatment - processing by small plants (< 10000 ML per year) (71(a))

Scale

> 219 - 1000 ML discharged

EPA Region

South Coast

Level 3, NSW Govt Offices, 84 Crown Street

WOLLONGONG NSW 2500

Phone: 02 4226 8100

Fax: 02 4227 2348

PO Box 513 WOLLONGONG EAST

NSW 2520

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Information about this licence

Dictionary

The licence contains a dictionary, which defines terms used in the licence. It is found at the end of the licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- Ensure persons associated with you comply with this licence, as set out in section 64 of the Act.
- Control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act).
- Report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Transfer of licence

Transfer of the licence to another person may be requested by the licensee using the form for this purpose available from the EPA.

Variation of licence conditions

Variations to the conditions of this licence may be requested by the licensee using the form for this purpose available from the EPA. The EPA may also vary a licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 3 years after the issue of the licence, as

set out in Part 3.6 of the Act. You will receive advance notice of the licence review. For licences held immediately before 1 July 1999, the first review will take place before 1 July 2002.

Fees and annual return to be sent to the EPA

The licence requires you to forward to the EPA an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints).

The Annual Return must be submitted within 60 days after the end of each reporting period. Where a licence is transferred, surrendered or revoked, a special reporting period applies.

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Usually the licence fee period is the same as the reporting period.

See condition R1 and the accompanying form regarding the Annual Return requirements.

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications
- licence conditions and variations
- statements of compliance

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

Licence anniversary date

01-September

This licence is issued to

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

subject to the conditions which follow:

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity
Sewage Treatment Systems

Fee Based Activity	Scale
Sewage Treatment - processing by small plants (< 10000 ML per year) (71[a])	> 219 - 1000 ML discharged

A1.3 Not applicable.

A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
BEGA SEWAGE TREATMENT WORKS PLANT
TARONGA CRESCENT
BEGA
NSW
2550
LOT 8 IN DP 750190
BK 1855 NO 71 BK 1907 NO 13

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- (a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998 and
- (b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

A5 Objectives of this licence

A5.1 The objectives of this licence are to:

- (a) require practical measures to be taken to protect the environment and public health from sewage treatment plant effluent;
- (b) minimise the frequency and volume of sewage treatment plant bypasses.

A5.2 This licence is to be construed in a manner that will promote the objectives referred to in A5.1.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

Water and land

EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
1		Discharge to waters	Pipe to the STE property line from the south-west wall of the finishing pond to Rixons Effluent Lagoon labelled as "EPA Point 1" on map titled "Bega Sewerage Treatment Works" received by the EPA on 7 March 2002.
2		Discharge to waters	Pipe from Finishing Oxidation Pond No. 4 to Bega River labelled as "Point 2" on map titled "EPA Point 2" on map titled "Bega Sewerage Treatment Works submitted to the EPA on 7 March 2002.
3	Quality of effluent discharged to Rixons Effluent Lagoon		Oxidation pond No. 4 labelled as "EPA Point 3" on map titled "Bega Sewerage Treatment Works submitted to the EPA on 7 March 2002.
4	Total volume		Effluent pipeline from humus tank to oxidation ponds labelled as "EPA Point 4" on map titled "Bega Sewerage Treatment Works submitted to the EPA on 7 March 2002.
5	Quality of effluent discharged to Bega River		At the concrete discharge weir to the pipeline entering the Bega River flow meter on pipe to the southwest wall leading to the finishing pond to Rixons Effluent Lagoon labelled as "EPA Point 5" on map titled "Bega Sewerage Treatment Works submitted to the EPA on 7 March 2002.
6	Volume monitoring		Flow meter on pipe from Oxidation Pond No. 4 to Bega River labelled as "EPA Point 6" on map titled "Bega Sewerage Treatment Works submitted to the EPA on 7 March 2002.

3 Limit conditions

L1 Pollution of waters

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

- L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

- L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
BOD (Enclosed Waters)	8733
Oil and Grease (Enclosed Waters)	2915
Total Nitrogen (Enclosed Waters)	11650
Total Phosphorus (Enclosed Waters)	3080
Total Suspended Solids (Enclosed Waters)	11650

L3 Concentration limits

- L3.1 For each monitoring/discharge point or utilisation area specified in the table\ below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.
- L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\.

*Water and Land***POINT 1**

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	mg/L				10 See note 1
Total Suspended Solids	mg/L				30
Biochemical Oxygen Demand	mg/L				20

POINT 2

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	mg/L				10 See note 1
Total Suspended Solids	mg/L				30
Biochemical Oxygen Demand	mg/L				20

Note 1: A 100 Percentile Concentration Limit of "10 mg/L and no visible oil and grease" applies for Point 1 and Point 2.

Note 2: The monitoring at Point 3, required by Condition M2.1, is conducted by the licensee to determine compliance with limits specified for discharges to Point 1 and Point 2 as described in Condition L3.

L4 Volume and mass limits

L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:

- (a) liquids discharged to water; or;
- (b) solids or liquids applied to the area;

must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of measure	Volume/Mass Limit
1	~~KL~~ KL /day	2500
2	~~KL~~ KL /day	2500

L4.2 Notwithstanding the volume limits specified in condition L4.1, the combined volume discharged from point(s) 1 and 2 shall not exceed 2500 kL/day.

L5 Waste

- L5.1 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 as expressly permitted by the licence.
- L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.

L5.3 The licensee may receive sewage generated outside the premises for treatment, processing or reprocessing at the premises. The licensee must take reasonable steps to ensure that sewage received at the premises has been lawfully discharged in accordance with a trade waste agreement or customer contract (as applicable) in force between the licensee and the generator of waste. The licensee must treat, process or reprocess the sewage waste in accordance with this licence prior to discharge from this premises.

L5.4 The licensee may receive, store, treat, process or reprocess at the premises, sewage products generated or stored outside the premises by the licensee's other sewage systems. Sewage products must be received, treated, processed or reprocessed in accordance with this licence.

L5.5 Grit or screenings generated by activities on the premises may be disposed of by the licensee within the boundary of the sewage treatment plant(s) on the premises, but only if they are disposed of in a manner that prevents or minimises material harm to the environment.

L6 Noise Limits

- L6.1 Not applicable.

L7 Potentially offensive odour

L7.1 The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.

Note: Section 129 of the Protection of the Environment Operations Act 1997 provides that the licensee 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 a licence directed at minimising odour.

4 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.

O1.2 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guideline.

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.

O2.2 For the purpose of this condition, "plant and equipment" includes drainage systems, infrastructure, pollution control equipment and fuel burning equipment, but does not refer to equipment which has been decommissioned but is still on site.

O3 Appropriate treatment processes

O3.1 Sewage or effluent must not be discharged from Points 1 and/or 2 unless it has been treated in accordance with this condition.

O3.2 All the liquid waste inflow must at least receive screening, degritting, sedimentation, trickling filtration, secondary sedimentation (humus tank) and oxidation ponding.

O3.3 However the licensee is not taken to have breached this condition if the licensee can demonstrate:

- (a) the failure to treat the liquid waste as required was solely as a result of a failure of the power supply to the premises, or a failure of essential equipment;
- (b) the failure of power supply or equipment could not reasonably have been prevented; and
- (c) normal operating conditions were restored as soon as possible after the power supply failure or the failure of essential equipment.

O4 Prohibition on acceptance of pesticides

O4.1 The licensee must not enter into any trade waste agreement to discharge organophosphate pesticides (including chlorpyrifos, diazinon, malathion) into the sewerage system.

O4.2 The licensee must not consent to any discharge of organochlorine pesticides (such as dieldrin, heptachlor and chlordane) into the sewerage system.

O5 Biosolids management

O5.1 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guideline.

5 Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this 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 for the purposes of this licence:

- (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 licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

~~For the purposes of the table(s) above Special Frequency 1 means the collection of samples at least once every calendar month and at a minimum of 4 week intervals.~~

Water and Land

POINT 3

Pollutant	Units of measure	Frequency	Sampling Method
Ammonia-nitrogen	mg/L	Special Frequency 1 Monthly	Representative sample
Biochemical Oxygen Demand	mg/L	Special Frequency 1	Representative sample
Nitrate + nitrite (oxidised nitrogen)	mg/L	Special Frequency 1 Monthly	Representative sample
Oil and Grease	mg/L	Special Frequency 1 Monthly	Representative sample
Total Nitrogen	mg/L	Special Frequency 1 Monthly	Representative sample
Total Phosphorus	mg/L	Special Frequency 1 Monthly	Representative sample
Total Suspended Solids	mg/L	Special Frequency 1 Monthly	Representative sample

POINT 5

Pollutant	Units of measure	Frequency	Sampling Method
Ammonia-nitrogen	mg/L	Special Frequency 1	Representative sample
Biochemical Oxygen Demand	mg/L	Special Frequency 1	Representative sample
Nitrate + nitrite (oxidised nitrogen)	mg/L	Special Frequency 1	Representative sample
Oil and Grease	mg/L	Special Frequency 1	Representative sample
Total Phosphorus	mg/L	Special Frequency 1	Representative sample
Total Suspended Solids	mg/L	Special Frequency 1	Representative sample

Note: The monitoring at Point 3 required by condition M2.1 is conducted to determine compliance with limits specified at condition L3.3 for discharge to Point(s) 1 and 2.

M2.2 Special Frequency 1 means collect and store sample monthly, at the same time as Biochemical Oxygen Demand or Total Suspended Solids sampling. If the Biochemical Oxygen Demand or Total Suspended Solids 100 percentile concentration limit is exceeded as per condition L3.3, then analyse the stored sample for chlorophyll a and report results to the EPA as soon as the results become available.

M3 Testing methods - concentration limits

M3.1 Not applicable.

M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

Note: Testing methods - load limit

Note: Clause 18 (1) and (2) of the Protection of the Environment Operations (General) Regulation 1998 requires that monitoring of actual loads of assessable pollutants listed in L2.1 must be carried out in accordance with the testing method set out in the relevant load calculation protocol for the fee-

based activity classification listed in condition A1.2.

M4 Recording of pollution complaints

- M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M4.2 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 licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - (f) if no action was taken by the licensee, the reasons why no action was taken.
- M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

- M5.1 The licensee 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.
- M5.2 The licensee 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.
- M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:
- (a) the date of the issue of this licence or
 - (b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

M6 Requirement to monitor volume or mass

- M6.1 For each discharge point or utilisation area specified below, the licensee must monitor:
- (a) the volume of liquids discharged to water or applied to the area;
 - (b) the mass of solids applied to the area;
 - (c) the mass of pollutants emitted to the air;

at the frequency and using the method and units of measure, specified below.

POINT 4

Frequency	Unit Of Measure	Sampling Method
Daily	kL	Magnetic flow meter

POINT 5

Frequency	Unit Of Measure	Sampling Method
Daily	kL	Magnetic flow meter

POINT 6

Frequency	Unit Of Measure	Sampling Method
Daily	kL	Magnetic flow meter

M7 Requirement to record wet and dry weather bypassesM7.1 ~~Not applicable.~~M7.2 ~~Not applicable.~~

~~The licensee must record the following details in relation to M8—Requirement to monitor biosolids each bypass from the premises.~~

~~M8.1—The licensee must monitor and classify biosolids that are produced at the premises in accordance with the Biosolids Guideline. However, the licensee is not required to comply with the monitoring conditions in the Biosolids Guideline that relate to the reuse or disposal of biosolids at the locations other than the premises.~~

M9 Requirement to record details of biosolids removed from the premisesM9.1 ~~If biosolids are removed from the premises, the licensee must record the~~

- ~~(a) — date;~~
- ~~(b) — estimated weight of biosolids;~~
- ~~(c) — identity of the person removing biosolids.~~

- ~~(a) the EPA point identification number through which the bypass discharged;~~
- ~~(b) the start time, date and duration of the bypass;~~
- ~~(c) the estimated volume of the bypass;~~
- ~~(d) the level of treatment at the sewage treatment plant prior to discharge;~~
- ~~(e) classification as a dry or wet weather bypass;~~
- ~~(f) the most likely cause of the bypass; and~~
- ~~(g) the name or names of the treatment process or processes bypassed.~~

~~M7.2 A dry weather bypass is a bypass that occurs when the flow rate of sewage at the influent point of the STP does not exceed 2,500 kL/day and wet weather bypass occurs when this flow is equalled or exceeded.~~

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

- R1.1 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.

Period covered by Annual Return

- R1.2 An Annual Return must be prepared in respect of each reporting period, 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.

- R1.3 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.

- R1.4 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.

Deadline for Annual Return

- R1.5 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').

Notification where actual load can not be calculated

- R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any

event not later than the due date. The notification must specify:

- (a) the assessable pollutants for which the actual load could not be calculated; and
- (b) the relevant circumstances that were beyond the control of the licensee.

Licensee must retain copy of Annual Return

- R1.7 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.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

- R1.8 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.
- R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee 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 Act.

- R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
- (a) where this licence applies to premises, an event has occurred at the premises; or
 - (b) where this 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.
- R3.2 The licensee 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.
- R3.3 The request 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;
- (g) any other relevant matters.

R3.4 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.

R4 Notification of bypass incidents

R4.1 Where sewage that has bypassed the treatment processes at the sewage treatment plant and is discharged from the premises (whether in wet weather or dry weather conditions), the licensee must give each of the notifications listed below. Each notification is to be given as soon as practicable after the licensee or one of the licensee's employees or agents becomes aware of the incident, and in the case of (b) below, becomes aware that the incident is of significance for public health. Notifications must be made to the following groups or organisations in the following manner:

- (a) telephoning the EPA's Pollution Line service on 131 555 when the requirements of Part 5.7 of the POEO Act are met;
- (b) for incidents of public health significance, advising the Department of Health by fax on (02) 9816 0377 (during office hours) and by telephone on 0411 264 070 (after hours);
- (c) issuing a media release to the media which, for dry weather bypasses, should include details (if known) of the nature of the operational incident that led to the bypass;
- (d) for events of significance to shellfish production, advising the Shellfish Quality Assurance Program by fax on (02) 95184895.

The EPA is to be notified even if the licensee is unaware of the cause of the incident, or whether the incident is of significance to public health at the time of notification.

Note: These reporting requirements do not affect any obligations of the licensee to report under Part 5.7 of the Act incidents which cause or threaten material harm to the environment.

R5 Supplying an annual return report

R5.1 The Report is to supplement the Annual Return and must include but need not be limited to:

- a) in a tabular presentation(s) the 50 percentile, 80 percentile, 90 percentile, 100 percentile and 3DGM values calculated from the monitoring data for each pollutant which has corresponding concentration limits specified in this licence.

Additionally

~~In the case of weekly faecal coliform monitoring results, details of the monthly median result and in the case of monthly faecal coliform monitoring results, details of the yearly median result.~~

- ~~b) The totals of the monthly and yearly volume being discharged from each discharge point. A comparison of the percentage of effluent discharged to each discharge point on a monthly and yearly basis.~~
- ~~c) the relevant reporting forms contained in the Biosolids Guidelines and completed for the reporting period in accordance with the Biosolids Guidelines or as otherwise approved in writing by the EPA.~~
- ~~d) a diagram showing the major process elements, discharge points and monitoring points at the sewage treatment plant(s).~~
- ~~e) a breakdown of the total number of complaints received by the licensee in relation to the premises into categories of "odours", "water pollution – sewage treatment plant", "water pollution – reticulation system" and any other category indicated by the complaints. A brief description of any significant unresolved issues arising out of the complaints must be provided.~~

General conditions

G1 Copy of licence kept at the premises

- G1.1 A copy of this licence must be kept at the premises 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.

G2 Signage

- G2.1 ~~The location of EPA point numbers 1, 2, 3, 4 & 5~~ Each monitoring and discharge point must be clearly marked by a sign that indicates the EPA point identification number ~~used in the licence and located as close as practical to the point.~~

~~G2.2 This condition does not apply until 3 months after this condition takes effect.~~

G3 Contact number for incidents and responsible employees

- G3.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:
 - (a) respond at all times to incidents relating to the premises, and
 - (b) contact the licensee's senior employees or agents authorised at all times to:
 - (i) speak on behalf of the licensee

(ii) provide any information or document required under this licence.

- G3.2 The licensee is to inform the EPA of the representative or representatives and their telephone number within 3 months of the date of the issue of this licence. The EPA must be notified of the telephone number on commencement of its operation.
- G3.3 The licensee is to inform the EPA in writing of the appointment of any subsequent contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.

Pollution studies and reduction programs

U1.1 Not applicable.

U1 PRP 3 - Investigation of Microbial Wastewater Quality of Reuse Waters

The licensee must monitor the quality of the wastewaters being transferred to Rixon's Farm and the waters in Rixon's Effluent Pond for reuse. This monitoring must consist of monthly monitoring for pH, Suspended Solids and Thermotolerant Coliforms (Faecal Coliforms) and be undertaken for a period of 12 months. This monitoring must be completed by 1 September 2003.

The results of the monitoring must be written into a report that compares the results to the relevant criteria as outlined in National Water Quality Management Strategy document "Guidelines for Sewerage Systems - Use of Reclaimed Water" dated November 2000 (the guidelines). Where the results do not meet the criteria for the type of reuse being undertaken, or proposed to be undertaken, an assessment must be made in the report as to the licensee's preferred unit operations that are proposed to be installed to achieve the quality as outlined in the guidelines. The report must also include the licensee's proposed timeframes to install the preferred unit operations at the Sewage Treatment Plant. This report must be submitted to the EPA by 31 October 2003.

Due Dates:

- Begin Monitoring - 31 August 2002
- Complete Monitoring - 1 September 2003
- Completed Report Submitted - 31 October 2003

Completed PRPs

PRP 1 - Assessment of Options to Reduce the Risks of Sewage Overflows

This PRP was an assessment of options, and presentation of recommendations, which can be used to prevent overflows and to enable effective responses to emergencies that impact on the sewerage system. This PRP was due on 31 March 1999.

Status: Complete

PRP 2 - Preparation of Contingency Plan

The preferred options as identified in PRP 1 were required to be incorporated into a contingency plan for the sewerage reticulation system. This PRP was due 31 May 1999.

Status: Complete

Special conditions

E1.1 Not applicable.

Dictionary

Special Dictionary

Approved	Means approved in writing by the EPA. The EPAs approval may be given unconditionally, or subject to conditions.
Biosolids	Has the same meaning as in Schedule 1, Part 3 of the Protection of the Environment Operations Act 1997
Biosolids Guideline	Means the EPA publication Environmental Guidelines: Use and disposal of biosolids products, October 1997 or any subsequently updated guidelines which replace this publication.
bypass	Means circumstances where sewage has been received at the sewage treatment plant but is discharged from the plant without it being treated, processed or reprocessed by means of any or all of the designed treatment processes of the plant
CEC	Means cation exchange capacity
Cl₂	Means chlorine
CN	Means cyanide
discharge	has the same meaning as in Schedule 1, classification [71] of the <i>Protection of the Environment Operations (General) Regulation 1998</i> .
dry weather	Means less than 10 millimetres of rain falling within a 24 hour period
dry weather by-pass	means a by-pass that occurs when the flow rate of sewage at the influent point of the STP does not exceed the rate specified in M7.2.
Effluent	Is sewage that has received all of the designed treatment processes at the sewage treatment plant.
ESP	Means exchangeable sodium percentage
Ex	Means the exchangeable ion
FC	Means faecal coliforms expressed in colony forming units/100mL
Harm	Has the same meaning as in the Protection of the Environment Operations Act 1997
kL	Means kilolitre
L/s	Means litres per second
metal-A	Means the following metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc
Mequiv	Means milliequivalents as the ion
ML	Means megalitre

NH₃ N	Means nitrogen as ammonia
NO_x-N	Means nitrogen as nitrate and nitrite
Phenols	Means total phenols by distillation.
PSC	Means phosphorus sorption capacity
Solids	Means any solids and sludges extracted from effluent, and any sludges, sediments and surface scums originating from the pondage systems
STP	Means sewage treatment plant
STS	Means sewage treatment system
TDS	Means total dissolved solids
TKN-N	Means total Kjeldahl nitrogen
TN	Means total nitrogen
TOC	Means total organic carbon
TP	Means total phosphorus
TRC	Means total residual chlorine
Treatment plant	Means the part or parts of the premises in which liquid waste receives treatment.
ug/L	Means micrograms per litre
Utilisation area	Means the geographical area as defined in condition P1 that has been set aside for the utilisation of effluent and biosolids
WSA	Means water stable aggregates
Wet weather by-pass	means a by-pass that occurs when the flow rate of sewage at the influent point of the STP exceeds the rate specified in M7.2.

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.

annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.
flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
industrial waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
inert waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.

of a sample]	
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
reprocessing of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TSP	Means total suspended particles
TSS	Means total suspended solids
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B.
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Mr Tim Gilbert

Principal ~~Licence Conversion~~ Officer ~~Sydney Industry~~

(By Delegation)

Date of this edition - 08-Jul-2000

End Notes

- 1 Licence varied by notice V/M upgrade, issued on 08-Jul-2000, which came into effect on 08-Jul-2000.

Environment Protection Licence

Licence - 4120



Licence Details	
Number:	4120
Anniversary Date:	01-July

Licensee
BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

Premises
BEGA SEWAGE TREATMENT PLANT AND ASSOCIATED SEWERAGE NETWORK
LOT NO. 8 TARONGA CRESCENT
BEGA NSW 2550

Scheduled Activity
Sewage Treatment

Fee Based Activity	Scale
Sewage treatment processing by small plants	> 219-1000 ML discharged

Region
South East - Queanbeyan
11 Farrer Place
QUEANBEYAN NSW 2620
Phone: (02) 6229 7002
Fax: (02) 6229 7006
PO Box 622 QUEANBEYAN
NSW 2620

Environment Protection Licence

Licence - 4120



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Environment Protection Licence

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Environment Protection Licence

Licence - 4120



Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act); and
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Environment Protection Licence

Licence - 4120



The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

subject to the conditions which follow.

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1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Sewage Treatment	Sewage treatment processing by small plants	> 219 - 1000 ML discharged

A1.2 The objectives of this licence are to:

- a) prevent as far as practicable sewage overflows and sewage treatment plant bypasses;
- b) require proper and efficient management of the system to minimise harm to the environment and public health; and
- c) require practical measures to be taken to protect the environment and public health from sewage overflows and sewage treatment plant effluent.

A1.3 This licence is to be construed in a manner that will promote the objectives referred to in the condition above.

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
BEGA SEWAGE TREATMENT PLANT AND ASSOCIATED SEWERAGE NETWORK
LOT NO. 8 TARONGA CRESCENT
BEGA
NSW 2550
LOT 8 DP 750190

A2.2 The premises also includes the reticulation system owned and operated by the licensee that is associated with the sewage treatment plant(s) identified in condition A2.1.

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence

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replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
 b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

- P1.1 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.
- P1.2 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1		Discharge to waters	Pipe discharging to the Bega River, labelled "Point 1" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).
2		Discharge to utilisation area	Pipe discharging from reclaimed water storage to Happy Valley Farm utilisation area labelled "Point 2" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).
3	Effluent quality monitoring		Sampling point on pipe discharging to Bega River and reclaimed water storage labelled "Point 3" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).
4	Volume monitoring		Flow meter on inlet pipe to STP, labelled "Point 4" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).
5	Volume monitoring		Flow meter on pipe discharging from reclaimed water storage to Happy Valley Farm utilisation area labelled "Point 5" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).
6	Volume monitoring		Flow meter on pipe discharging to the Bega River labelled "Point 6" on map titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).

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7	Ambient water monitoring	Bega River 200m upstream of EPA Point 1 - Discharge to Bega River, labelled "Point 7" on photo titled "Bega STP #2", dated 1 April 2009 (DOC09/18039).
8	Ambient water monitoring	Bega River 200m downstream of EPA Point 1 - Discharge to Bega River, labelled as "Point 8" on photo titled "Bega STP #2", dated 1 April 2009 (DOC09/18039).

3 Limit Conditions

L1 Pollution of waters

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.
- L1.2 The licensee may only discharge untreated or partially treated sewage from the sewage treatment plant and/or the reticulation system subject to the conditions of this licence, including O1 and O2.

L2 Load limits

- L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

- L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
BOD (Enclosed Water)	2000.00
Nitrogen (total) (Enclosed Water)	3500.00
Oil and Grease (Enclosed Water)	500.00
Phosphorus (total) (Enclosed Water)	700.00
Total suspended solids (Enclosed Water)	4500.00

Note: The load limits referred to in condition L2.1 do not apply to discharges from the reticulation system.

L3 Concentration limits

- L3.1 For each monitoring/discharge point or utilisation area specified in the table below (by a point

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number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

- L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table's.
- L3.4 Water and/or Land Concentration Limits

POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Biochemical oxygen demand	milligrams per litre		10		15
Faecal Coliforms	colony forming units per 100 millilitres		200		1000
Nitrogen (ammonia)	milligrams per litre		2		5
Nitrogen (total)	milligrams per litre		10		15
Oil and Grease	milligrams per litre		2		10
pH	pH				6.5-8.5
Phosphorus (total)	milligrams per litre		0.5		2
Total suspended solids	milligrams per litre		10		20

L4 Volume and mass limits

- L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:
 - a) liquids discharged to water; or;
 - b) solids or liquids applied to the area;must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of Measure	Volume/Mass Limit

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1	kilolitres per day	2500

- L4.2 Notwithstanding the volume limits specified in condition L4.1, the combined volume discharged from point(s) 1 shall not exceed 2500kL/day.

L5 Waste

- L5.1 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 as expressly permitted by the licence.
- L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.
- L5.3 The licensee may receive and/or transfer sewage and Group C waste generated outside the premises for treatment, processing or reprocessing at the premises. The licensee must take reasonable steps to ensure that sewage received at the premises has been lawfully discharged in accordance with a trade waste agreement or customer contract (as applicable) in force between the licensee and the generator of the waste. The licensee must treat, process or reprocess the sewage and Group C waste in accordance with this licence prior to discharge from the premises.
- L5.4 The licensee may receive, store, treat, process or reprocess and/or transfer at the premises sewage products generated or stored outside the premises by the licensee's other sewage treatment systems. Sewage products must be received, treated, processed or reprocessed in accordance with this licence.

L6 Potentially offensive odour

- L6.1 No condition in this licence 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 licensee 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 a licence directed at minimising odour.

4 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.

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Note: The requirements of O1.1 apply to the whole of the premises, including the reticulation system.

O1.2 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guidelines, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

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.

Note: The requirements of O2.1 apply to the whole of the premises, including the reticulation system.

O3 Emergency response

O3.1 In the event of an overflow or bypass that harms or is likely to harm the environment, the licensee must use all practicable measures to minimise the impact of the overflow or bypass on the environment and public health. These measures are to be implemented as soon as practical after the licensee or one of the licensee’s employees or agents becomes aware of the overflow or bypass.

O4 Processes and management

O4.1 The licensee must ensure that any extensions to the reticulation system after January 2004 are planned, designed, constructed and installed to prevent as far as practicable overflows from the premises.

Note: “The premises” includes both the new and the previously existing parts of the sewage treatment system.

O4.2 Appropriate treatment processes

Sewage or effluent must not be discharged from Point(s) 1 unless it has been treated in accordance with the requirements of the table below.

Required treatment process	Flow range
Screening, degritting, anoxic and aerobic secondary treatment and UV disinfection	all liquid waste inflow

Note: The flows noted in the table above are the inflows to the premises' sewage treatment plant(s).

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O5 Other operating conditions

O5.1 The licensee must not enter into any trade waste agreement to discharge organophosphate pesticides (including chlorpyrifos, diazinon, malathion) into the sewerage system.

O5.2 Prohibition on acceptance of pesticides

The licensee must not consent to any discharge of organochlorine pesticides (such as dieldrin, heptachlor and chlordane) into the sewerage system.

O5.3 New sewage pumping stations

Dry weather overflows resulting in pollution of waters from any sewage pumping station(s) installed within the sewage treatment system after January 2004 are not permitted.

5 Monitoring and Recording Conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this 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 for the purposes of this licence:

- 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 licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Water and/ or Land Monitoring Requirements

POINT 3

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Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Monthly	Composite sample
Faecal Coliforms	colony forming units per 100 millilitres	Monthly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Monthly	Composite sample
Nitrogen (total)	milligrams per litre	Monthly	Composite sample
Oil and Grease	milligrams per litre	Monthly	Composite sample
pH	pH	Monthly	Composite sample
Phosphorus (total)	milligrams per litre	Monthly	Composite sample
Total suspended solids	milligrams per litre	Monthly	Composite sample

POINT 7

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Special Frequency 1	Grab sample
Faecal Coliforms	colony forming units per 100 millilitres	Special Frequency 1	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	Grab sample
Nitrogen (total)	milligrams per litre	Special Frequency 1	Grab sample
Oil and Grease	milligrams per litre	Special Frequency 1	Grab sample
pH	pH	Special Frequency 1	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 1	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample

POINT 8

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Special Frequency 1	Grab sample
Faecal Coliforms	colony forming units per 100 millilitres	Special Frequency 1	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	Grab sample
Nitrogen (total)	milligrams per litre	Special Frequency 1	Grab sample
Oil and Grease	milligrams per litre	Special Frequency 1	Grab sample
pH	pH	Special Frequency 1	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 1	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample

M2.3 The monitoring at point(s) 3 required by condition M2.1 is conducted to determine compliance with limits specified for discharge to point(s) 1 respectively.

M2.4 For the purposes of Condition M2.1, Special Frequency 1 means sampling monthly at least twice a year when a discharge is occurring from Point 1 on the day of sampling (discharge monthly

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samples) and sampling monthly at least twice a year when no discharge is occurring from Point 1 on the day of sampling (no discharge monthly samples). If a discharge from Point 1 occurs on less than two months in a year then there is a corresponding reduction in the number of discharge monthly samples required.

- M2.5 For the purposes of this licence, a composite sample is defined as at least three grab samples forming a pooled sample, with the first and last sample taken at least seven hours apart.

M3 Testing methods - concentration limits

- M3.1 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Testing methods - load limit

Note: Division 3 of the *Protection of the Environment Operations (General) Regulation 2009* requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the testing method set out in the relevant load calculation protocol for the fee-based activity classification listed in condition A1.1.

M5 Recording of pollution complaints

- M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M5.2 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 licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M6 Telephone complaints line

- M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose

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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.

M6.2 The licensee 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.

M6.3 The preceding two conditions do not apply until 3 months after:

- a) the date of the issue of this licence or
- b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

M6.4 For the purpose of condition M5.1, operating hours are defined as twenty-four hours a day, seven days a week.

M6.5 The public notification referred to in condition M5.2 must include specific reference to the fact that the complaints line may be used by the community for the reporting of overflows.

M7 Requirement to monitor volume or mass

M7.1 For each discharge point or utilisation area specified below, the licensee must monitor:

- a) the volume of liquids discharged to water or applied to the area;
- b) the mass of solids applied to the area;
- c) the mass of pollutants emitted to the air;

at the frequency and using the method and units of measure, specified below.

POINT 4

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Magnetic flow meter

POINT 5

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Magnetic flow meter

POINT 6

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Magnetic flow meter

M7.2 In the event that the licensee cannot comply with a volume monitoring method as required by this licence solely due to the failure or malfunction of essential monitoring equipment, volume may be estimated using another agreed method approved in writing by the EPA. This provision only applies for the duration of the failure or malfunction. The licensee is to rectify the failure or malfunction as soon as practicable.

M7.3 The licensee must:

- a) submit in writing to the EPA a proposal for a method of volume estimation; or

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b) use a method of volume estimation already approved in writing by the EPA,

to be used in the event that essential monitoring equipment referred to in the previous condition has failed or malfunctioned.

M8 Requirement to record overflow or bypass incidents

M8.1 The licensee must record the following details in respect of each bypass of any treatment process which may be reasonably expected to adversely affect the quality of the final discharge:

- a) the EPA point identification number through which the bypass discharged;
- b) the date, estimated start time and estimated duration of the bypass;
- c) the estimated volume of the bypass;
- d) the level of treatment of the sewage at the STP prior to discharge;
- e) the probable cause of the bypass;
- f) any actions taken to stop the bypass happening; and
- g) any actions taken to prevent the bypass happening again.

M8.2 In addition to the details listed in the previous condition, the licensee must also record classification as a wet or dry weather bypass in respect of each bypass referred to in the previous condition. A dry weather bypass is a bypass that occurs when the flow rate of sewage at the inflow volume monitoring point of the STP does not exceed 2500k/L day and a wet weather bypass occurs when this flow is equalled or exceeded at any time during the bypass event.

M8.3 From October 2003 the licensee must record the following details in relation to each observed or reported overflow from the reticulation system and from the sewage treatment plant:

- a) the location of the overflow;
- b) the date, estimated start time and estimated duration of the overflow;
- c) the estimated volume of the overflow;
- d) a description of the receiving environment of the overflow;
- e) classification as a dry or wet weather overflow;
- f) the probable cause of the overflow;
- g) any actions taken to stop the overflow happening;
- h) any actions taken to clean up the overflow; and
- i) any actions taken to prevent the overflow happening again.

M9 Other monitoring and recording conditions

M9.1 Biosolids at the premises must be recorded, monitored and classified in accordance with the Biosolids Guidelines, to the extent that those Guidelines are applicable, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

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6 Reporting Conditions

R1 Annual return documents

R1.1 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.

At 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.

R1.2 An Annual Return must be prepared in respect of each reporting period, 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.

R1.3 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.

R1.4 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.

R1.5 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').

R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:

- a) the assessable pollutants for which the actual load could not be calculated; and
- b) the relevant circumstances that were beyond the control of the licensee.

R1.7 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.

R1.8 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

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b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- a) where this licence applies to premises, an event has occurred at the premises; or
- b) where this 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.

R3.2 The licensee 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.

R3.3 The request 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;
- 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.

R3.4 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.

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R4 Notification of bypass or overflow incidents

R4.1 Where either:

- a) sewage or partially treated sewage is discharged from the premises as a result of a bypass of the sewage treatment plant, or
- b) an observed or reported overflow has occurred from the reticulation system, and overflow or bypass may pose a risk to public health, the licensee is to promptly give appropriate notification to any parties that are likely to be affected, including:
 - i) the potentially affected community,
 - ii) the Safe Food NSW Shellfish Quality Assurance Program, where the bypass or overflow could have potential impacts on shellfish production; and
 - iii) the Department of Health.

R4.2 When the licensee notifies the Department of Health or Safe Food NSW Shellfish Quality Assurance Program of a bypass or overflow incident, the licensee must also notify the EPA by telephoning its Pollution Line service on 131555. Notifications are to be given as soon as practicable after the licensee or one of the licensee's employees or agents becomes aware of the incident, and must include all relevant information including the information required under condition M9.1 or M7.1.

R5 Annual system performance report

R5.1 The licensee must supply to the EPA an Annual System Performance Report not later than 60 days after the end of each reporting period.

R5.2 The report is to supplement the Annual Return and must include but need not be limited to:

- a) the 50 percentile, 90 percentile, 100 percentile and 3DGM values calculated from the monitoring data required by this licence for the reporting period for each pollutant which has corresponding concentration limits specified in this licence;
- b) the total amounts of biosolids, as classified in the Biosolids Guideline, disposed of on-site, off-site and to landfill during the reporting period;
- c) a diagram showing the major process elements, discharge points and monitoring points at the premises' sewage treatment plant(s), where there has been any significant change since the previous reporting period or this information has not been provided previously to the EPA;
- d) the number of dry and wet weather bypasses recorded over the reporting period (recorded in accordance with condition M7);
- e) a breakdown of the total number of complaints received by the licensee during the reporting period in relation to the premises into categories of "odours – sewage treatment plant", "odours – reticulation system", "water pollution – sewage treatment plant", "water pollution – reticulation system" and any other category indicated by the complaints;
- f) a summary of observed, reported or recorded wet weather overflows and observed, reported or recorded dry weather overflows and sewage treatment plant bypasses. These data are to be for the current reporting period and for the four previous twelve-month periods, for which data has been collected. Any significant actions taken to address bypasses or overflows are to be noted;
- g) the amount of rainfall measured at a rain gauge at the STP, or at the rain gauge closest to the centre of the catchment of the sewage treatment system, for each month of the reporting period;
- h) a brief progress report on the implementation over the reporting period of actions specified in

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PRP100; and

i) a review of the sewage treatment plants capacity to meet the load based licence limits as specified in Condition L2.2.

R5.3 The Annual System Performance Report must be presented in a format approved in writing by the EPA.

R5.4 The requirements of R5.2 (d), (e), (f) and (g) apply to the part of the reporting period beginning three months after the date the licence is varied to include this condition.

7 General Conditions

G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises 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.

Note: For the purposes of this condition, “the premises” refers to each Sewage Treatment Plant(s) described in condition A2.1.

G2 Contact number for incidents and responsible employees

G2.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:

- a) respond at all times to incidents relating to the premises; and
- b) contact the licensee’s senior employees or agents authorised at all times to:
 - i) speak on behalf of the licensee; and
 - ii) provide any information or document required under this licence.

G2.2 The licensee is to inform the EPA in writing of the appointment of any subsequent contact persons, or changes to the person’s contact details as soon as practicable and in any event within fourteen days of the appointment or change.

G3 Signage

G3.1 The location of EPA point number(s) 1, 2, 3, 4, 5, 6,7 & 8 must be clearly marked by signs that indicate the point identification number used in this licence and be located as close as practical to the point.

Environment Protection Licence

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8 Pollution Studies and Reduction Programs

U1 Adequacy of Sludge Handling

U1.1 The licensee must, by 1 March 2012:

- a) Engage a suitably qualified process engineer to examine and report on the adequacy of sludge processing and biosolids handling infrastructure and practices at the premises (and all of the licensee's other sewage treatment plant facilities); and
- b) Notify the Manager, South East Region of the EPA of the engagement of the process engineer referred to in a), including the terms of their engagement by the licensee.

The licensee must submit a final report on sludge handling capacity and practices at its licensed sewage treatment plant facilities to the Manager, South East Region of the EPA by 30 December 2012.

U2 High Flow Treatment

U2.1 The licensee must submit a final report to the Manager, South East Region of the EPA by 30 December 2012 which details:

- a) The plant design parameters associated with the recently upgraded plant;
- b) The operational limitations of the plant in treating dry and wet weather flows;
- c) Operational practices undertaken to date to maximise the treatment of wet weather flows;
- d) Any works required to improve the treatment of wet weather flows; and
- e) A timetable for implementation of any works referred to in condition (d).

U3 Inflow & Infiltration Capital Works

U3.1 The licensee must provide two reports to the Manager, South East Region of the EPA as follows;

- a) By 1 March 2012, the capital works proposed to be undertaken in the Bega Sewerage network to reduce infiltration impacts on the plant in the 2011/2012 and 2012/2013 capital works programs; and
- b) 30 December 2012 a revised inflow and infiltration report and timetable for implementation of the works recommended in the report.

Environment Protection Licence

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Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .

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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition: 20-March-2000

Environment Protection Licence

Licence - 4120



End Notes

- 1 Licence varied by notice V/M upgrade, issued on 08-Jul-2000, which came into effect on 08-Jul-2000.
- 2 Licence varied by notice 1006561, issued on 27-Jun-2002, which came into effect on 22-Jul-2002.
- 3 Licence varied by notice 1029139, issued on 14-Aug-2003, which came into effect on 08-Sep-2003.
- 4 EPA Condition ID S40934 amended 13-08-04
- 5 Licence varied by notice 1045021, issued on 15-Apr-2005, which came into effect on 10-May-2005.
- 6 Licence varied by change to DEC Region allocation, issued on 24-Feb-2006, which came into effect on 24-Feb-2006.
- 7 Licence varied by notice 1060673, issued on 28-Jun-2006, which came into effect on 28-Jun-2006.
- 8 Licence varied by notice 1067837, issued on 03-Apr-2007, which came into effect on 03-Apr-2007.
- 9 Licence varied by notice 1083718, issued on 19-May-2008, which came into effect on 19-May-2008.
- 10 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 11 Licence varied by notice 1090711, issued on 29-Jun-2009, which came into effect on 29-Jun-2009.
- 12 Licence fee period changed by notice 1103278 approved on .
- 13 Licence varied by admin corrections to annual return, issued on 02-Jul-2009, which came into effect on 02-Jul-2009.
- 14 Licence varied by notice 1502403 issued on 09-Feb-2012

Licence Variation

Licence - 4120



Office of
Environment
& Heritage

BEGA VALLEY SHIRE COUNCIL

ABN 26 987 935 332

PO BOX 492

BEGA NSW 2550

Attention:

Notice Number 1502403
File Number LIC06/239
Date 09-Feb-2012

NOTICE OF VARIATION OF LICENCE NO. 4120

BACKGROUND

- A. BEGA VALLEY SHIRE COUNCIL ("the licensee") is the holder of Environment Protection Licence No. 4120 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of activities at LOT NO. 8 TARONGA CRESCENT, BEGA, NSW, 2550 ("the premises").
- B. On 24 August 2011 the EPA received Environment Line Report No. 130670, which reported that Bega Sewage Treatment Plant (STP) was producing effluent with a high ammonia concentration. ELR No. 130670 was investigated by the EPA including a site inspection undertaken on 6 September 2011.
- C. The EPA investigation into ELR No. 130670 concluded that the most likely cause of the high ammonia concentration was a lack of control of supernatant return from the sludge drying beds at the Bega STP and infiltration into the Bega Sewerage Network leading to high flows at the Bega STP.
- D. As a consequence, this notice varies the licence by introducing a number of Pollution Reduction Programs (PRP) to improve performance at the STP.

VARIATION OF LICENCE NO. 4120

1. By this notice the EPA varies licence No. 4120. The attached licence document contains all variations that are made to the licence by this notice.
2. The following variation have been made to the licence:
 - Introduction of PRP Condition U1, which will require BVSC to engage a process engineer to examine and report on the adequacy of sludge processing and biosolids handling at all BVSC's licensed facilities;

Licence Variation

- Introduction of PRP Condition U2, which will require BVSC to provide a report on the treatment of dry and wet weather flows at Bega STP;
- Introduction of PRP Condition U3, which will require BVSC to provide a report on proposed infiltration reduction works in the Bega Sewerage Network;
- Miscellaneous changes to licence formatting resulting from a change to the EPA's licence administration system.

.....
Sandie Jones
Acting Regional Manager
South East - Queanbeyan
(by Delegation)

INFORMATION ABOUT THIS NOTICE

- This notice is issued under section 58(5) of the Act.
- Details provided in this notice, along with an updated version of the licence, will be available on the EPA's Public Register (<http://www.environment.nsw.gov.au/prpoeo/index.htm>) in accordance with section 308 of the Act.

Appeals against this decision

- You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.

When this notice begins to operate

- The variations to the licence specified in this notice begin to operate immediately from the date of this notice, unless another date is specified in this notice.
- If an appeal is made against this decision to vary the licence and the Land and Environment Court directs that the decision is stayed the decision does not operate until the stay ceases to have effect or the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs first).

Environment Protection Licence

Licence - 4120



Licence Details	
Number:	4120
Anniversary Date:	01-July

Licensee
BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

Premises
BEGA SEWAGE TREATMENT PLANT AND ASSOCIATED SEWERAGE NETWORK
LOT NO. 8 TARONGA CRESCENT
BEGA NSW 2550

Scheduled Activity
Sewage Treatment

Fee Based Activity	Scale
Sewage treatment processing by small plants	> 219-1000 ML discharged

Region
South East - Queanbeyan
11 Farrer Place
QUEANBEYAN NSW 2620
Phone: (02) 6229 7002
Fax: (02) 6229 7006
PO Box 622 QUEANBEYAN
NSW 2620

Environment Protection Licence

Licence - 4120



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Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act); and
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Environment Protection Licence

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The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

subject to the conditions which follow.

Environment Protection Licence

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1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Sewage Treatment	Sewage treatment processing by small plants	> 219 - 1000 ML discharged

A1.2 The objectives of this licence are to:

- a) prevent as far as practicable sewage overflows and sewage treatment plant bypasses;
- b) require proper and efficient management of the system to minimise harm to the environment and public health; and
- c) require practical measures to be taken to protect the environment and public health from sewage overflows and sewage treatment plant effluent.

A1.3 This licence is to be construed in a manner that will promote the objectives referred to in the condition above.

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
BEGA SEWAGE TREATMENT PLANT AND ASSOCIATED SEWERAGE NETWORK
LOT NO. 8 TARONGA CRESCENT
BEGA
NSW 2550
LOT 8 DP 750190

A2.2 The premises also includes the reticulation system owned and operated by the licensee that is associated with the sewage treatment plant(s) identified in condition A2.1.

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence

Environment Protection Licence

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replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
 b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

- P1.1 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.
- P1.2 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1		Discharge to waters	Pipe discharging to the Bega River, labelled "Point 1" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).
2		Discharge to utilisation area	Pipe discharging from reclaimed water storage to Happy Valley Farm utilisation area labelled "Point 2" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).
3	Effluent quality monitoring		Sampling point on pipe discharging to Bega River and reclaimed water storage labelled "Point 3" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).
4	Volume monitoring		Flow meter on inlet pipe to STP, labelled "Point 4" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).
5	Volume monitoring		Flow meter on pipe discharging from reclaimed water storage to Happy Valley Farm utilisation area labelled "Point 5" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).
6	Volume monitoring		Flow meter on pipe discharging to the Bega River labelled "Point 6" on map titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).

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7	Ambient water monitoring	Bega River 200m upstream of EPA Point 1 - Discharge to Bega River, labelled "Point 7" on photo titled "Bega STP #2", dated 1 April 2009 (DOC09/18039).
8	Ambient water monitoring	Bega River 200m downstream of EPA Point 1 - Discharge to Bega River, labelled as "Point 8" on photo titled "Bega STP #2", dated 1 April 2009 (DOC09/18039).

3 Limit Conditions

L1 Pollution of waters

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.
- L1.2 The licensee may only discharge untreated or partially treated sewage from the sewage treatment plant and/or the reticulation system subject to the conditions of this licence, including O1 and O2.

L2 Load limits

- L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

- L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
BOD (Enclosed Water)	2000.00
Nitrogen (total) (Enclosed Water)	3500.00
Oil and Grease (Enclosed Water)	500.00
Phosphorus (total) (Enclosed Water)	700.00
Total suspended solids (Enclosed Water)	4500.00

Note: The load limits referred to in condition L2.1 do not apply to discharges from the reticulation system.

L3 Concentration limits

- L3.1 For each monitoring/discharge point or utilisation area specified in the table below (by a point

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number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

- L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table's.
- L3.4 Water and/or Land Concentration Limits

POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Biochemical oxygen demand	milligrams per litre		10		15
Faecal Coliforms	colony forming units per 100 millilitres		200		1000
Nitrogen (ammonia)	milligrams per litre		2		5
Nitrogen (total)	milligrams per litre		10		15
Oil and Grease	milligrams per litre		2		10
pH	pH				6.5-8.5
Phosphorus (total)	milligrams per litre		0.5		2
Total suspended solids	milligrams per litre		10		20

L4 Volume and mass limits

- L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:
 - a) liquids discharged to water; or;
 - b) solids or liquids applied to the area;must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of Measure	Volume/Mass Limit

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1	kilolitres per day	2500

- L4.2 Notwithstanding the volume limits specified in condition L4.1, the combined volume discharged from point(s) 1 shall not exceed 2500kL/day.

L5 Waste

- L5.1 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 as expressly permitted by the licence.
- L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.
- L5.3 The licensee may receive and/or transfer sewage and Group C waste generated outside the premises for treatment, processing or reprocessing at the premises. The licensee must take reasonable steps to ensure that sewage received at the premises has been lawfully discharged in accordance with a trade waste agreement or customer contract (as applicable) in force between the licensee and the generator of the waste. The licensee must treat, process or reprocess the sewage and Group C waste in accordance with this licence prior to discharge from the premises.
- L5.4 The licensee may receive, store, treat, process or reprocess and/or transfer at the premises sewage products generated or stored outside the premises by the licensee's other sewage treatment systems. Sewage products must be received, treated, processed or reprocessed in accordance with this licence.

L6 Potentially offensive odour

- L6.1 No condition in this licence 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 licensee 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 a licence directed at minimising odour.

4 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.

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Note: The requirements of O1.1 apply to the whole of the premises, including the reticulation system.

O1.2 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guidelines, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

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.

Note: The requirements of O2.1 apply to the whole of the premises, including the reticulation system.

O3 Emergency response

O3.1 In the event of an overflow or bypass that harms or is likely to harm the environment, the licensee must use all practicable measures to minimise the impact of the overflow or bypass on the environment and public health. These measures are to be implemented as soon as practical after the licensee or one of the licensee’s employees or agents becomes aware of the overflow or bypass.

O4 Processes and management

O4.1 The licensee must ensure that any extensions to the reticulation system after January 2004 are planned, designed, constructed and installed to prevent as far as practicable overflows from the premises.

Note: “The premises” includes both the new and the previously existing parts of the sewage treatment system.

O4.2 Appropriate treatment processes

Sewage or effluent must not be discharged from Point(s) 1 unless it has been treated in accordance with the requirements of the table below.

Required treatment process	Flow range
Screening, degritting, anoxic and aerobic secondary treatment and UV disinfection	all liquid waste inflow

Note: The flows noted in the table above are the inflows to the premises' sewage treatment plant(s).

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O5 Other operating conditions

O5.1 The licensee must not enter into any trade waste agreement to discharge organophosphate pesticides (including chlorpyrifos, diazinon, malathion) into the sewerage system.

O5.2 Prohibition on acceptance of pesticides

The licensee must not consent to any discharge of organochlorine pesticides (such as dieldrin, heptachlor and chlordane) into the sewerage system.

O5.3 New sewage pumping stations

Dry weather overflows resulting in pollution of waters from any sewage pumping station(s) installed within the sewage treatment system after January 2004 are not permitted.

5 Monitoring and Recording Conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this 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 for the purposes of this licence:

- 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 licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Water and/ or Land Monitoring Requirements

POINT 3

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Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Monthly	Composite sample
Faecal Coliforms	colony forming units per 100 millilitres	Monthly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Monthly	Composite sample
Nitrogen (total)	milligrams per litre	Monthly	Composite sample
Oil and Grease	milligrams per litre	Monthly	Composite sample
pH	pH	Monthly	Composite sample
Phosphorus (total)	milligrams per litre	Monthly	Composite sample
Total suspended solids	milligrams per litre	Monthly	Composite sample

POINT 7

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Special Frequency 1	Grab sample
Faecal Coliforms	colony forming units per 100 millilitres	Special Frequency 1	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	Grab sample
Nitrogen (total)	milligrams per litre	Special Frequency 1	Grab sample
Oil and Grease	milligrams per litre	Special Frequency 1	Grab sample
pH	pH	Special Frequency 1	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 1	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample

POINT 8

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Special Frequency 1	Grab sample
Faecal Coliforms	colony forming units per 100 millilitres	Special Frequency 1	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	Grab sample
Nitrogen (total)	milligrams per litre	Special Frequency 1	Grab sample
Oil and Grease	milligrams per litre	Special Frequency 1	Grab sample
pH	pH	Special Frequency 1	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 1	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample

M2.3 The monitoring at point(s) 3 required by condition M2.1 is conducted to determine compliance with limits specified for discharge to point(s) 1 respectively.

M2.4 For the purposes of Condition M2.1, Special Frequency 1 means sampling monthly at least twice a year when a discharge is occurring from Point 1 on the day of sampling (discharge monthly

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samples) and sampling monthly at least twice a year when no discharge is occurring from Point 1 on the day of sampling (no discharge monthly samples). If a discharge from Point 1 occurs on less than two months in a year then there is a corresponding reduction in the number of discharge monthly samples required.

- M2.5 For the purposes of this licence, a composite sample is defined as at least three grab samples forming a pooled sample, with the first and last sample taken at least seven hours apart.

M3 Testing methods - concentration limits

- M3.1 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Testing methods - load limit

Note: Division 3 of the *Protection of the Environment Operations (General) Regulation 2009* requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the testing method set out in the relevant load calculation protocol for the fee-based activity classification listed in condition A1.1.

M5 Recording of pollution complaints

- M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M5.2 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 licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M6 Telephone complaints line

- M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose

Environment Protection Licence

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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.

M6.2 The licensee 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.

M6.3 The preceding two conditions do not apply until 3 months after:

- a) the date of the issue of this licence or
- b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

M6.4 For the purpose of condition M5.1, operating hours are defined as twenty-four hours a day, seven days a week.

M6.5 The public notification referred to in condition M5.2 must include specific reference to the fact that the complaints line may be used by the community for the reporting of overflows.

M7 Requirement to monitor volume or mass

M7.1 For each discharge point or utilisation area specified below, the licensee must monitor:

- a) the volume of liquids discharged to water or applied to the area;
- b) the mass of solids applied to the area;
- c) the mass of pollutants emitted to the air;

at the frequency and using the method and units of measure, specified below.

POINT 4

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Magnetic flow meter

POINT 5

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Magnetic flow meter

POINT 6

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Magnetic flow meter

M7.2 In the event that the licensee cannot comply with a volume monitoring method as required by this licence solely due to the failure or malfunction of essential monitoring equipment, volume may be estimated using another agreed method approved in writing by the EPA. This provision only applies for the duration of the failure or malfunction. The licensee is to rectify the failure or malfunction as soon as practicable.

M7.3 The licensee must:

- a) submit in writing to the EPA a proposal for a method of volume estimation; or

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b) use a method of volume estimation already approved in writing by the EPA,

to be used in the event that essential monitoring equipment referred to in the previous condition has failed or malfunctioned.

M8 Requirement to record overflow or bypass incidents

M8.1 The licensee must record the following details in respect of each bypass of any treatment process which may be reasonably expected to adversely affect the quality of the final discharge:

- a) the EPA point identification number through which the bypass discharged;
- b) the date, estimated start time and estimated duration of the bypass;
- c) the estimated volume of the bypass;
- d) the level of treatment of the sewage at the STP prior to discharge;
- e) the probable cause of the bypass;
- f) any actions taken to stop the bypass happening; and
- g) any actions taken to prevent the bypass happening again.

M8.2 In addition to the details listed in the previous condition, the licensee must also record classification as a wet or dry weather bypass in respect of each bypass referred to in the previous condition. A dry weather bypass is a bypass that occurs when the flow rate of sewage at the inflow volume monitoring point of the STP does not exceed 2500k/L day and a wet weather bypass occurs when this flow is equalled or exceeded at any time during the bypass event.

M8.3 From October 2003 the licensee must record the following details in relation to each observed or reported overflow from the reticulation system and from the sewage treatment plant:

- a) the location of the overflow;
- b) the date, estimated start time and estimated duration of the overflow;
- c) the estimated volume of the overflow;
- d) a description of the receiving environment of the overflow;
- e) classification as a dry or wet weather overflow;
- f) the probable cause of the overflow;
- g) any actions taken to stop the overflow happening;
- h) any actions taken to clean up the overflow; and
- i) any actions taken to prevent the overflow happening again.

M9 Other monitoring and recording conditions

M9.1 Biosolids at the premises must be recorded, monitored and classified in accordance with the Biosolids Guidelines, to the extent that those Guidelines are applicable, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

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6 Reporting Conditions

R1 Annual return documents

R1.1 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.

At 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.

R1.2 An Annual Return must be prepared in respect of each reporting period, 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.

R1.3 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.

R1.4 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.

R1.5 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').

R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:

- a) the assessable pollutants for which the actual load could not be calculated; and
- b) the relevant circumstances that were beyond the control of the licensee.

R1.7 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.

R1.8 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

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b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

- R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

- R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
- a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this 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.
- R3.2 The licensee 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.
- R3.3 The request 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;
 - 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.
- R3.4 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.

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R4 Notification of bypass or overflow incidents

R4.1 Where either:

- a) sewage or partially treated sewage is discharged from the premises as a result of a bypass of the sewage treatment plant, or
- b) an observed or reported overflow has occurred from the reticulation system, and overflow or bypass may pose a risk to public health, the licensee is to promptly give appropriate notification to any parties that are likely to be affected, including:
 - i) the potentially affected community,
 - ii) the Safe Food NSW Shellfish Quality Assurance Program, where the bypass or overflow could have potential impacts on shellfish production; and
 - iii) the Department of Health.

R4.2 When the licensee notifies the Department of Health or Safe Food NSW Shellfish Quality Assurance Program of a bypass or overflow incident, the licensee must also notify the EPA by telephoning its Pollution Line service on 131555. Notifications are to be given as soon as practicable after the licensee or one of the licensee's employees or agents becomes aware of the incident, and must include all relevant information including the information required under condition M9.1 or M7.1.

R5 Annual system performance report

R5.1 The licensee must supply to the EPA an Annual System Performance Report not later than 60 days after the end of each reporting period.

R5.2 The report is to supplement the Annual Return and must include but need not be limited to:

- a) the 50 percentile, 90 percentile, 100 percentile and 3DGM values calculated from the monitoring data required by this licence for the reporting period for each pollutant which has corresponding concentration limits specified in this licence;
- b) the total amounts of biosolids, as classified in the Biosolids Guideline, disposed of on-site, off-site and to landfill during the reporting period;
- c) a diagram showing the major process elements, discharge points and monitoring points at the premises' sewage treatment plant(s), where there has been any significant change since the previous reporting period or this information has not been provided previously to the EPA;
- d) the number of dry and wet weather bypasses recorded over the reporting period (recorded in accordance with condition M7);
- e) a breakdown of the total number of complaints received by the licensee during the reporting period in relation to the premises into categories of "odours – sewage treatment plant", "odours – reticulation system", "water pollution – sewage treatment plant", "water pollution – reticulation system" and any other category indicated by the complaints;
- f) a summary of observed, reported or recorded wet weather overflows and observed, reported or recorded dry weather overflows and sewage treatment plant bypasses. These data are to be for the current reporting period and for the four previous twelve-month periods, for which data has been collected. Any significant actions taken to address bypasses or overflows are to be noted;
- g) the amount of rainfall measured at a rain gauge at the STP, or at the rain gauge closest to the centre of the catchment of the sewage treatment system, for each month of the reporting period;
- h) a brief progress report on the implementation over the reporting period of actions specified in

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PRP100; and

i) a review of the sewage treatment plants capacity to meet the load based licence limits as specified in Condition L2.2.

R5.3 The Annual System Performance Report must be presented in a format approved in writing by the EPA.

R5.4 The requirements of R5.2 (d), (e), (f) and (g) apply to the part of the reporting period beginning three months after the date the licence is varied to include this condition.

7 General Conditions

G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises 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.

Note: For the purposes of this condition, “the premises” refers to each Sewage Treatment Plant(s) described in condition A2.1.

G2 Contact number for incidents and responsible employees

G2.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:

- a) respond at all times to incidents relating to the premises; and
- b) contact the licensee’s senior employees or agents authorised at all times to:
 - i) speak on behalf of the licensee; and
 - ii) provide any information or document required under this licence.

G2.2 The licensee is to inform the EPA in writing of the appointment of any subsequent contact persons, or changes to the person’s contact details as soon as practicable and in any event within fourteen days of the appointment or change.

G3 Signage

G3.1 The location of EPA point number(s) 1, 2, 3, 4, 5, 6,7 & 8 must be clearly marked by signs that indicate the point identification number used in this licence and be located as close as practical to the point.

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8 Pollution Studies and Reduction Programs

U1 Adequacy of Sludge Handling

U1.1 The licensee must, by 1 March 2012:

- a) Engage a suitably qualified process engineer to examine and report on the adequacy of sludge processing and biosolids handling infrastructure and practices at the premises (and all of the licensee's other sewage treatment plant facilities); and
- b) Notify the Manager, South East Region of the EPA of the engagement of the process engineer referred to in a), including the terms of their engagement by the licensee.

The licensee must submit a final report on sludge handling capacity and practices at its licensed sewage treatment plant facilities to the Manager, South East Region of the EPA by 30 December 2012.

U2 High Flow Treatment

U2.1 The licensee must submit a final report to the Manager, South East Region of the EPA by 30 December 2012 which details:

- a) The plant design parameters associated with the recently upgraded plant;
- b) The operational limitations of the plant in treating dry and wet weather flows;
- c) Operational practices undertaken to date to maximise the treatment of wet weather flows;
- d) Any works required to improve the treatment of wet weather flows; and
- e) A timetable for implementation of any works referred to in condition (d).

U3 Inflow & Infiltration Capital Works

U3.1 The licensee must provide two reports to the Manager, South East Region of the EPA as follows;

- a) By 1 March 2012, the capital works proposed to be undertaken in the Bega Sewerage network to reduce infiltration impacts on the plant in the 2011/2012 and 2012/2013 capital works programs; and
- b) 30 December 2012 a revised inflow and infiltration report and timetable for implementation of the works recommended in the report.

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Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .

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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition: 20-March-2000

Environment Protection Licence

Licence - 4120



End Notes

- 1 Licence varied by notice V/M upgrade, issued on 08-Jul-2000, which came into effect on 08-Jul-2000.
- 2 Licence varied by notice 1006561, issued on 27-Jun-2002, which came into effect on 22-Jul-2002.
- 3 Licence varied by notice 1029139, issued on 14-Aug-2003, which came into effect on 08-Sep-2003.
- 4 EPA Condition ID S40934 amended 13-08-04
- 5 Licence varied by notice 1045021, issued on 15-Apr-2005, which came into effect on 10-May-2005.
- 6 Licence varied by change to DEC Region allocation, issued on 24-Feb-2006, which came into effect on 24-Feb-2006.
- 7 Licence varied by notice 1060673, issued on 28-Jun-2006, which came into effect on 28-Jun-2006.
- 8 Licence varied by notice 1067837, issued on 03-Apr-2007, which came into effect on 03-Apr-2007.
- 9 Licence varied by notice 1083718, issued on 19-May-2008, which came into effect on 19-May-2008.
- 10 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 11 Licence varied by notice 1090711, issued on 29-Jun-2009, which came into effect on 29-Jun-2009.
- 12 Licence fee period changed by notice 1103278 approved on .
- 13 Licence varied by admin corrections to annual return, issued on 02-Jul-2009, which came into effect on 02-Jul-2009.

Licence Variation

Licence - 4120



BEGA VALLEY SHIRE COUNCIL,
ABN 26 987 935 332,
PO BOX 492,
BEGA NSW 2550

Attention: Mr. JIM COLLINS

Notice Number 1090711
File Number LIC06/239
Date 29-Jun-2009

NOTICE OF VARIATION OF LICENCE NO. 4120

BACKGROUND

- A. BEGA VALLEY SHIRE COUNCIL ~~was~~ ("the licensee") is the holder of Environment Protection Licence No. 4120 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of Scheduled Activity - Premises Based at LOT NO. 8 TARONGA CRESCENT, BEGA, NSW.
- B. The Bega Sewage Treatment Plant (STP) has recently undergone augmentation works as a result of the licensee's Bega Valley Sewerage Program.
- C. The EPA undertook a review of the Environment Protection Licence (EPL) in light of the Bega STP upgrade, and, as part of the EPA's South Coast STP review program. The review included undertaking site inspections by the EPA of the STP, determining compliance with licence conditions, identification of upgrade works and resulting EPL condition amendments, and reviewing the EPL's consistency with relevant NSW policy and guidelines.
- D. As a result of the review and STP augmentation, a number of licence amendments are required to reflect current plant operations and best management practice. This notice of variation of licence reflects this review and its findings.

VARIATION OF LICENCE NO. 4120

1. By this notice the EPA varies licence No. 4120 as set out in the Appendix. The Appendix contains a copy of the provisions of the licence marked with the variations that are made to it by this notice.
2. The variations to the licence are indicated in the following way:
 - if a strike through mark appears through any word or other text (eg. ~~Solids or~~) this indicates that the word or other text is deleted from the licence by this notice; and
 - if a underline appears under any word or other text (eg. must be treated) this indicates that the word or other text is added to the licence by this notice.

Licence Variation

Licence - 4120

Department of **Environment & Climate Change** NSW



.....

Mr Nigel Sargent

Manager

South - Queanbeyan

(by Delegation)

INFORMATION ABOUT THIS NOTICE

- This notice is issued under section 58(5) of the Act.
- Details provided in this notice, along with an updated version of the licence, will be available on the EPA's Public Register (<http://www.environment.nsw.gov.au/prpoeo/index.htm>) in accordance with section 308 of the Act.

Appeals against this decision

- You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.

When this notice begins to operate

- The variations to the licence specified in this notice begin to operate immediately from the date of this notice, unless another date is specified in this notice.
- If an appeal is made against this decision to vary the licence and the Land and Environment Court directs that the decision is stayed the decision does not operate until the stay ceases to have effect or the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs first).

Environment Protection Licence

Licence - 4120

Department of Environment & Climate Change NSW



Licence Details

Number:	4120
Anniversary Date:	01-September
Review Due Date:	15-Apr-2010

Licensee

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

Licence Type

Premises

Premises

BEGA SEWAGE TREATMENT PLANT AND ASSOCIATED
SEWERAGE NETWORK
LOT NO. 8 TARONGA CRESCENT
BEGA NSW 2550

Scheduled Activity

Sewage treatment

Fee Based Activity

Sewage treatment - processing by small plants (< 10000 ML per year)

Scale

> 219 - 1000 ML discharged

Region

South - Queanbeyan
~~Suite 4, Robert Lowe Building, 30 Lowe Street~~ 11 Farrer Place
QUEANBEYAN NSW 2620
Phone: 02 6122 3100 6229 7002
Fax: 02 6299 3525 6229 7006
PO Box 622 QUEANBEYAN
NSW 2620

Environment Protection Licence

Licence - 4120

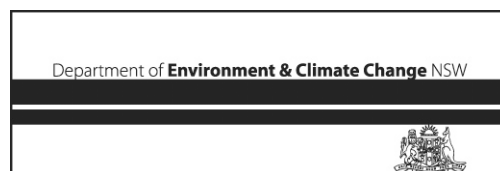
Department of Environment & Climate Change NSW



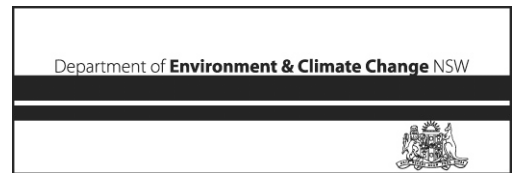
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Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act); and
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

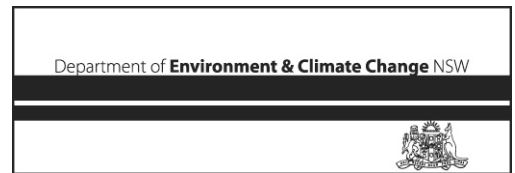
For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

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The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

subject to the conditions which follow.

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

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Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity
Sewage treatment

Fee Based Activity	Scale
Sewage treatment - processing by small plants (< 10000 ML per year)	> 219 - 1000 ML discharged

A1.3 Not applicable.

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A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
BEGA SEWAGE TREATMENT PLANT AND ASSOCIATED SEWERAGE NETWORK
LOT NO. 8 TARONGA CRESCENT
BEGA
NSW
2550
LOT 8 IN DP 750190

A2.2 The premises also includes the reticulation system owned and operated by the licensee that is associated with the sewage treatment plant(s) identified in condition A2.1.

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

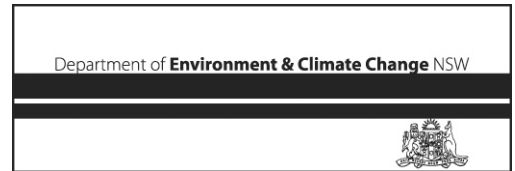
- (a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- (b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

A5 Objectives of this licence

A5.1 The objectives of this licence are to:

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- (a) prevent as far as practicable sewage overflows and sewage treatment plant bypasses;
- (b) require proper and efficient management of the system to minimise harm to the environment and public health; and
- (c) require practical measures to be taken to protect the environment and public health from sewage overflows and sewage treatment plant effluent.

A5.2 This licence is to be construed in a manner that will promote the objectives referred to in A5.1.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

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Department of Environment & Climate Change NSW



Water and land

EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
1		Discharge to <u>utilisation area</u>	Pipe from Oxidation Pond No. 3 leading <u>discharging</u> to Rixon's effluent lagoon <u>the Bega River</u> labelled as EPA Point 1, as indicated on Attachment 3, submitted with licence variation form <u>photo titled "Bega STP #1"</u> dated 29 November 2006 (TRIM - DOC06/58080) <u>1 April 2009 (DOC09/18039)</u> .
2		Discharge to <u>waters</u> <u>utilisation area</u>	Overflow from Rixon's effluent lagoon to Bega River anabranch labelled as EPA Point 2, as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080). <u>Pipe discharging from reclaimed water storage to Happy Valley Farm utilisation area labelled "Point 2" on photo titled "Bega STP #1" dated 1 April 2009 (DOC09/18039)</u> .
3	Effluent quality monitoring		Oxidation Pond No. 3 labelled as EPA Point 3, as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080). <u>Sampling point on pipe discharging to Bega River and reclaimed water storage labelled "Point 3" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039)</u> .
4	Volume monitoring		Effluent pipeline from humus tank to oxidation ponds labelled as "EPA Point 4", as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080). <u>Flow meter on inlet pipe to STP, labelled "Point 4" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039)</u> .

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EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
5	Volume monitoring		Flow meter on pipe from Oxidation Pond 3 leading to Rixons effluent lagoon labelled as "EPA Point 5", as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080). Flow meter on pipe discharging from reclaimed water storage to Happy Valley Farm utilisation area labelled "Point 5" on photo titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).
6	Volume monitoring		Weir on overflow from Rixon's effluent lagoon to Bega River anabranch labelled as EPA Point 6, as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080). Flow meter on pipe discharging to the Bega River labelled "Point 6" on map titled "Bega STP #1", dated 1 April 2009 (DOC09/18039).
7	Ambient water monitoring		Bega River 200m upstream of EPA Point 1 - Discharge to Bega River, labelled "Point 7" on photo titled "Bega STP #2", dated 1 April 2009 (DOC09/18039).
8	Ambient water monitoring		Bega River 200m downstream of EPA Point 1 - Discharge to Bega River, labelled as "Point 8" on photo titled "Bega STP #2", dated 1 April 2009 (DOC09/18039).

3 Limit conditions

L1 Pollution of waters

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

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- L1.2 The licensee may only discharge untreated or partially treated sewage from the sewage treatment plant and/or the reticulation system subject to the conditions of this licence, including O1 and O2.

L2 Load limits

- L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

- L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
BOD (Enclosed Waters)	87332000
Nitrogen (total) (Enclosed Waters)	116503500
Oil and Grease (Enclosed Waters)	2915500
Phosphorus (total) (Enclosed Waters)	3080700
Total suspended solids (Enclosed Waters)	116504500

Note: The load limits referred to in condition L2.1 do not apply to discharges from the reticulation system.

L3 Concentration limits

- L3.1 For each monitoring/discharge point or utilisation area specified in the table\ below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

- L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

- L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\.

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Water and Land

POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	milligrams per litre		2		10
Total suspended solids	milligrams per litre				30
pH					5-8.5
Biochemical oxygen demand	milligrams per litre		10		15
Nitrogen (total)					
Phosphorus (total)	milligrams per litre		0.5		2
Faecal Coliforms	colony forming units per 100 millilitres		200		1000
Total suspended solids	milligrams per litre		10		20
Biochemical oxygen demand	milligrams per litre		10		15
Nitrogen (ammonia)	milligrams per litre		2		5

L4 Volume and mass limits

L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:

- (a) liquids discharged to water; or;
- (b) solids or liquids applied to the area;

must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of measure	Volume/Mass Limit
1	kilolitres per day	2500
2	kilolitres per day	2500

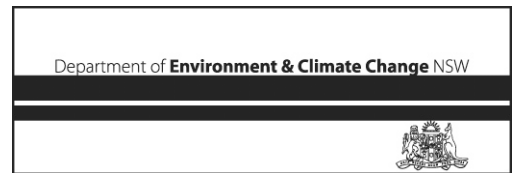
L4.2 Notwithstanding the volume limits specified in condition L4.1, the combined volume discharged from point(s) 1 and 2 shall not exceed 2500kL/day.

L5 Waste

L5.1 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 as expressly permitted by the licence.

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- L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.
- L5.3 The licensee may receive and/or transfer sewage and Group C waste generated outside the premises for treatment, processing or reprocessing at the premises. The licensee must take reasonable steps to ensure that sewage received at the premises has been lawfully discharged in accordance with a trade waste agreement or customer contract (as applicable) in force between the licensee and the generator of the waste. The licensee must treat, process or reprocess the sewage and Group C waste in accordance with this licence prior to discharge from the premises.
- L5.4 The licensee may receive, store, treat, process or reprocess and/or transfer at the premises sewage products generated or stored outside the premises by the licensee's other sewage treatment systems. Sewage products must be received, treated, processed or reprocessed in accordance with this licence.
- ~~L5.5 Grit or screenings generated by activities on the premises may be disposed of by the licensee within the boundary of the sewage treatment plant(s) on the premises, but only if they are disposed of in a manner that prevents or minimises material harm to the environment.~~

L6 Noise Limits

- L6.1 Not applicable.

L7 Frequency limits

- L7.1 Not applicable.

L8 Potentially offensive odour

- L8.1 No condition in this licence 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 licensee 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 a licence directed at minimising odour.

4 Operating conditions

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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.

Note: The requirements of O1.1 apply to the whole of the premises, including the reticulation system.

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.

Note: The requirements of O2.1 apply to the whole of the premises, including the reticulation system.

O3 Appropriate treatment processes

O3.1 Sewage or effluent must not be discharged from Point(s) 1 and/or 2 unless it has been treated in accordance with the requirements of the table below.

Required treatment process	Flow range
screening, degritting, sedimentation, trickling, filtration, anoxic and aerobic secondary sedimentation (humus-tank) and oxidation ponding treatment and UV disinfection	all liquid waste inflow

The flows noted in the table above are the inflows to the premises' sewage treatment plant(s).

~~O3.2 However the licensee is not taken to have breached this condition if the licensee can demonstrate:~~

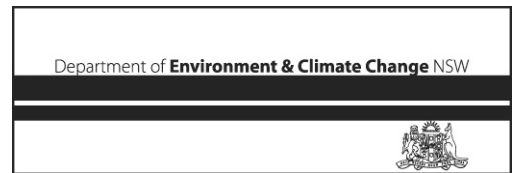
- ~~(a) the failure to treat the liquid waste as required was solely as a result of a failure of the power supply to the premises, or a failure of essential equipment;~~
- ~~(b) the failure of power supply or equipment could not reasonably have been prevented; and~~
- ~~(c) normal operating conditions were restored as soon as possible after the power supply failure or the failure of essential equipment.~~

O4 Prohibition on acceptance of pesticides

O4.1 The licensee must not enter into any trade waste agreement to discharge organophosphate pesticides (including chlorpyrifos, diazinon, malathion) into the sewerage system.

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- O4.2 The licensee must not consent to any discharge of organochlorine pesticides (such as dieldrin, heptachlor and chlordane) into the sewerage system.

O5 Biosolids management

- O5.1 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guidelines, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

O6 Effluent application to land

- O6.1 Not applicable.

O7 New sewage pumping stations

- O7.1 Dry weather overflows resulting in pollution of waters from any sewage pumping station(s) installed within the sewage treatment system after January 2004 are not permitted.

O8 Extensions to the reticulation system

- O8.1 The licensee must ensure that any extensions to the reticulation system after January 2004 are planned, designed, constructed and installed to prevent as far as practicable overflows from the premises.

Note: "The premises" includes both the new and the previously existing parts of the sewage treatment system.

5 Monitoring and recording conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

- M1.2 All records required to be kept by this 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.

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Department of Environment & Climate Change NSW



M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:

- (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 licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Water and Land

POINT 3

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Monthly	Composite sample
Chlorophyll a Faecal Coliforms	milligrams per litre colony forming units per 100 millilitres	Special Frequency 1 Monthly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Monthly	Composite sample
Nitrogen (total)	milligrams per litre	Monthly	Composite sample
Oil and Grease	milligrams per litre	Monthly	Grab Composite sample
Phosphorus (total)	milligrams per litre	Monthly	Composite sample
Total suspended solids	milligrams per litre	Monthly	Composite sample
pH	pH	Monthly	Composite sample

Note: Special Frequency 1 means collect and store sample monthly, at the same time as Biochemical Oxygen Demand or Total Suspended Solids sampling. If the Biochemical Oxygen Demand or Total Suspended Solids 100 percentile concentration limit is exceeded as per condition L3.3, then analyse the stored sample for chlorophyll a and report results to the EPA as soon as the results become available.

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POINT 7

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Special Frequency 1	Grab sample
Faecal Coliforms	colony forming units per 100 millilitres	Special Frequency 1	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	Grab sample
Nitrogen (total)	milligrams per litre	Special Frequency 1	Grab sample
Oil and Grease	milligrams per litre	Special Frequency 1	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 1	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample
pH	pH	Special Frequency 1	Grab sample

POINT 8

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Special Frequency 1	Grab sample
Faecal Coliforms	colony forming units per 100 millilitres	Special Frequency 1	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	Grab sample
Nitrogen (total)	milligrams per litre	Special Frequency 1	Grab sample
Oil and Grease	milligrams per litre	Special Frequency 1	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 1	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample
pH	pH	Special Frequency 1	Grab sample

Note: For the purposes of the above table, Special Frequency 1 means sampling monthly at least twice a year when a discharge is occurring from Point 1 on the day of sampling (discharge monthly samples) and sampling monthly at least twice a year when no discharge is occurring from Point 1 on the day of sampling (no discharge monthly samples). If a discharge from Point 1 occurs on less than two months in a year then there is a corresponding reduction in the number of discharge monthly samples required.

Note: For the purpose of this licence, a composite sample is defined as at least three grab samples forming a pooled sample, with the first and last sample taken at least seven hours apart.

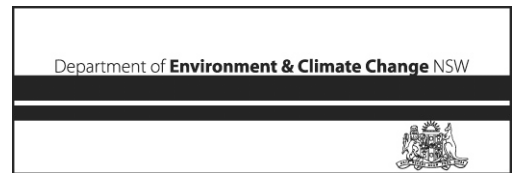
M2.2 The monitoring at point(s) 3 required by condition M2.1 is conducted to determine compliance with limits specified for discharge to point(s) 1 and 2 respectively.

M3 Testing methods - concentration limits

M3.1 Not applicable.

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- M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

Note: Testing methods - load limit

Note: Clause 18 (1) (1A) and (2) of the Protection of the Environment Operations (General) Regulation 1998 requires that monitoring of actual loads of assessable pollutants listed in L2.1 must be carried out in accordance with the testing method set out in the relevant load calculation protocol for the fee-based activity classification listed in condition A1.2.

M4 Recording of pollution complaints

- M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M4.2 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 licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - (f) if no action was taken by the licensee, the reasons why no action was taken.
- M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

- M5.1 The licensee 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.
- M5.2 The licensee 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.
- M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:
- (a) the date of the issue of this licence or
 - (b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

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- M5.4 For the purpose of condition M5.1, operating hours are defined as twenty-four hours a day, seven days a week.
- M5.5 The public notification referred to in condition M5.2 must include specific reference to the fact that the complaints line may be used by the community for the reporting of overflows.

M6 Requirement to monitor volume or mass

- M6.1 For each discharge point or utilisation area specified below, the licensee must monitor:

- the volume of liquids discharged to water or applied to the area;
- the mass of solids applied to the area;
- the mass of pollutants emitted to the air;

at the frequency and using the method and units of measure, specified below.

POINT 4

Frequency	Unit Of Measure	Sampling Method
Daily	kilolitres per day	Magnetic flow meter

POINT 5

Frequency	Unit Of Measure	Sampling Method
Daily	kilolitres per day	Magnetic flow meter

POINT 6

Frequency	Unit Of Measure	Sampling Method
Daily during any discharge	kilolitres per discharge event	By Calculation (volume flow rate or pump capacity multiplied by operating time) Magnetic flow meter

- M6.2 In the event that the licensee cannot comply with a volume monitoring method as required by this licence solely due to the failure or malfunction of essential monitoring equipment, volume may be estimated using another agreed method approved in writing by the EPA. This provision only applies for the duration of the failure or malfunction. The licensee is to rectify the failure or malfunction as soon as practicable.
- M6.3 The licensee must:
- submit in writing to the EPA a proposal for a method of volume estimation; or
 - use a method of volume estimation already approved in writing by the EPA,
- to be used in the event that essential monitoring equipment referred to in the previous condition has failed or malfunctioned.

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M6.4 In the event of a bypass at EPA Point 5, the EPA have approved an alternative method to calculate volume discharge, as per email correspondence dated 15 March 2007 (TRIM DOC07/10126)

M7 Requirement to record sewage treatment plant bypasses

M7.1 The licensee must record the following details in respect of each bypass of any of the appropriate treatment processes required by condition O3 which may be reasonably expected to adversely affect the quality of the final discharge:

- (a) the EPA point identification number through which the bypass discharged;
- (b) the date, estimated start time and estimated duration of the bypass;
- (c) the estimated volume of the bypass;
- (d) the level of treatment of the sewage at the STP prior to discharge;
- (e) the probable cause of the bypass;
- (f) any actions taken to stop the bypass happening; and
- (g) any actions taken to prevent the bypass happening again.

M7.2 In addition to the details listed in the previous condition, the licensee must also record classification as a wet or dry weather bypass in respect of each bypass referred to in the previous condition. A dry weather bypass is a bypass that occurs when the flow rate of sewage at the inflow volume monitoring point of the STP does not exceed 2500k/L day and a wet weather bypass occurs when this flow is equalled or exceeded at any time during the bypass event.

M8 Biosolids monitoring

M8.1 Biosolids at the premises must be recorded, monitored and classified in accordance with the Biosolids Guidelines, to the extent that those Guidelines are applicable, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

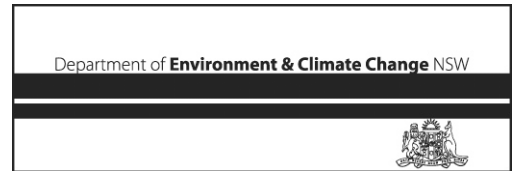
M9 Requirement to record overflows

M9.1 From October 2003 the licensee must record the following details in relation to each observed or reported overflow from the reticulation system and from the sewage treatment plant:

- (a) the location of the overflow;
- (b) the date, estimated start time and estimated duration of the overflow;
- (c) the estimated volume of the overflow;
- (d) a description of the receiving environment of the overflow;
- (e) classification as a dry or wet weather overflow;
- (f) the probable cause of the overflow;
- (g) any actions taken to stop the overflow happening;
- (h) any actions taken to clean up the overflow; and
- (i) any actions taken to prevent the overflow happening again.

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M10 Environmental monitoring

M10.1 Not applicable.

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

- R1.1 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.

Period covered by Annual Return

- R1.2 An Annual Return must be prepared in respect of each reporting period, 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.

- R1.3 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.

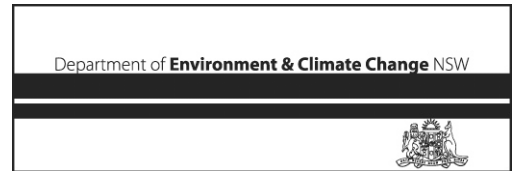
- R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
- (a) in relation to the surrender of a licence - the date when notice in 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.

Deadline for Annual Return

- R1.5 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

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than 60 days after the date the transfer was granted (the 'due date').

Notification where actual load can not be calculated

R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:

- (a) the assessable pollutants for which the actual load could not be calculated; and
- (b) the relevant circumstances that were beyond the control of the licensee.

Licensee must retain copy of Annual Return

R1.7 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.

Certifying of Statement of Compliance and signing of Monitoring and Complaints Summary

R1.8 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.

R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee 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 Act.

R2.1 Notifications must be made by telephoning the **EPA's Pollution Environment** Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

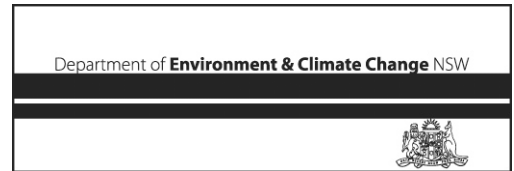
R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- (a) where this licence applies to premises, an event has occurred at the premises; or
- (b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,

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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.

- R3.2 The licensee 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.
- R3.3 The request 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;
 - (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.
- R3.4 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.

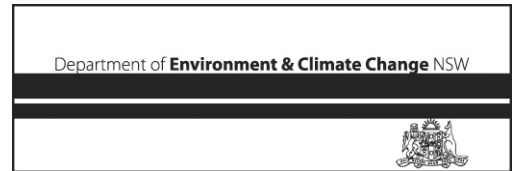
R4 Notification of bypass or overflow incidents

- R4.1 Where either:
- (a) sewage or partially treated sewage is discharged from the premises as a result of a bypass of the sewage treatment plant, or
 - (b) an observed or reported overflow has occurred from the reticulation system, and overflow or bypass may pose a risk to public health, the licensee is to promptly give appropriate notification to any parties that are likely to be affected, including:
 - (i) the potentially affected community,
 - (ii) the Safe Food NSW Shellfish Quality Assurance Program, where the bypass or overflow could have potential impacts on shellfish production; and
 - (iii) the Department of Health.
- R4.2 When the licensee notifies the Department of Health or Safe Food NSW Shellfish Quality Assurance Program of a bypass or overflow incident, the licensee must also notify the EPA by telephoning its Pollution Line service on 131 555. Notifications are to be given as soon as practicable after the licensee or one of the licensee's employees or agents becomes aware of the incident, and must include all relevant information including the information required under condition M9.1 or M7.1.

R5 Annual System Performance Report

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- R5.1 The licensee must supply to the EPA an Annual System Performance Report not later than 60 days after the end of each reporting period.
- R5.2 The report is to supplement the Annual Return and must include but need not be limited to:
- (a) the 50 percentile, 90 percentile, 100 percentile and 3DGM values calculated from the monitoring data required by this licence for the reporting period for each pollutant which has corresponding concentration limits specified in this licence;
 - (b) the total amounts of biosolids, as classified in the Biosolids Guideline, disposed of on-site, off-site and to landfill during the reporting period;
 - (c) a diagram showing the major process elements, discharge points and monitoring points at the premises' sewage treatment plant(s), where there has been any significant change since the previous reporting period or this information has not been provided previously to the EPA;
 - (d) the number of dry and wet weather bypasses recorded over the reporting period (recorded in accordance with condition M7);
 - (e) a breakdown of the total number of complaints received by the licensee during the reporting period in relation to the premises into categories of "odours – sewage treatment plant", "odours – reticulation system", "water pollution – sewage treatment plant", "water pollution – reticulation system" and any other category indicated by the complaints;
 - (f) a summary of observed, reported or recorded wet weather overflows and observed, reported or recorded dry weather overflows and sewage treatment plant bypasses. These data are to be for the current reporting period and for the four previous twelve-month periods, for which data has been collected. Any significant actions taken to address bypasses or overflows are to be noted;
 - (g) the amount of rainfall measured at a rain gauge at the STP, or at the rain gauge closest to the centre of the catchment of the sewage treatment system, for each month of the reporting period; **and**
 - (h) **a brief progress report on the implementation over the reporting period of actions specified in PRP100; and**
 - (i) **a review of the sewage treatment plants capacity to meet the load based licence limits as specified in condition L2.2.**
- R5.3 The Annual System Performance Report must be presented in a format approved in writing by the EPA.
- R5.4 The requirements of R5.2 (d), (e), (f) and (g) apply to the part of the reporting period beginning three months after the date the licence is varied to include this condition.

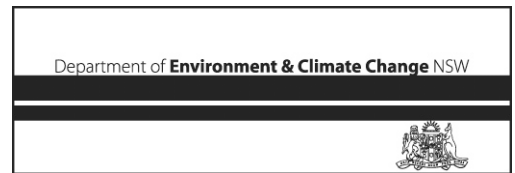
General conditions

G1 Copy of licence kept at the premises

- G1.1 A copy of this licence must be kept at the premises 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

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the premises.

Note: For the purposes of this condition, “the premises” refers to each Sewage Treatment Plant(s) described in condition A2.1.

G2 Signage

G2.1 The location of EPA point number(s) 1, 2, 3, 4, 5 and 6, 7 & 8 must be clearly marked by signs that indicate the point identification number used in this licence and be located as close as practical to the point.

G3 Contact number for incidents and responsible employees

G3.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:

- (a) respond at all times to incidents relating to the premises; and
- (b) contact the licensee's senior employees or agents authorised at all times to:
 - (i) speak on behalf of the licensee; and
 - (ii) provide any information or document required under this licence.

G3.2 The licensee is to inform the EPA in writing of the appointment of any subsequent contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.

G4 Clean-up

G4.1 In the event of an overflow or bypass that harms or is likely to harm the environment, the licensee must use all practicable measures to minimise the impact of the overflow or bypass on the environment and public health. These measures are to be implemented as soon as practical after the licensee or one of the licensee's employees or agents becomes aware of the overflow or bypass.

Pollution studies and reduction programs

U1 Not applicable.

Special conditions

E1 Not applicable.

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Dictionary

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.
flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.

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**general solid waste
(non-putrescible)**

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

**general solid waste
(putrescible)**

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

grab sample

Means a single sample taken at a point at a single time

hazardous waste

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

industrial waste

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

inert waste

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

licensee

Means the licence holder described at the front of this licence

**load calculation
protocol**

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998

local authority

Has the same meaning as in the Protection of the Environment Operations Act 1997

material harm

Has the same meaning as in section 147 Protection of the Environment Operations Act 1997

MBAS

Means methylene blue active substances

Minister

Means the Minister administering the Protection of the Environment Operations Act 1997

mobile plant

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

motor vehicle

Has the same meaning as in the Protection of the Environment Operations Act 1997

O&G

Means oil and grease

**percentile [in
relation to a
concentration limit
of a sample]**

Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.

plant

Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.

**pollution of waters
[or water pollution]**

Has the same meaning as in the Protection of the Environment Operations Act 1997

premises

Means the premises described in condition A2.1

public authority

Has the same meaning as in the Protection of the Environment Operations Act 1997

regional office

Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence

reporting period

For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.

**reprocessing of
waste
restricted
solid waste**

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

scheduled activity

Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997

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solid special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code type	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B. Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Special Dictionary

ug/L	Means micrograms per litre.
access chamber	a structure constructed to provide physical access to sewer pipes. Also known as a manhole.
approved	Means approved in writing by the EPA. The EPA's approval may be given unconditionally, or subject to conditions.
Biosolids	Has the same meaning as in Schedule 1, Part 3 of the <i>Protection of the Environment Operations Act 1997</i> .
Biosolids Guidelines	Means the "Environmental Guidelines: Use and disposal of biosolids products" published by the EPA in October 1997, or any subsequently updated guidelines which replace this publication.
bypass	Means circumstances where sewage has been received at the sewage treatment plant but is discharged from the plant without it being treated, processed or reprocessed by means of any or all of the designed treatment processes of the plant. A new bypass event is defined as a bypass that commences at least 24 hours after the end of the previous bypass.
cfu	Means colony forming units
condition	Means a condition of this licence.
designed overflow structure	Means a designed structure (excluding access chambers) in the reticulation system which operates as a relief to allow sewage to discharge at a planned location or a sewage pumping station, but does not include a bypass from a sewage treatment plant.
designed overflow	Means an overflow from a designed overflow structure.
dry weather bypass	Means a bypass that occurs when the flow rate of sewage at the inflow point of the STP does not exceed the flow rate specified in M7.2.

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Department of **Environment & Climate Change** NSW

	the flow rate specified in M7.2.
dry weather overflow	Means an overflow that is not a wet weather overflow.
dry weather sewage treatment plant discharge	Means a discharge of sewage or effluent from the STP that occurs when the flow rate of sewage at the inflow point of the STP does not exceed the flow rate specified in M7.2
effluent	Means sewage that has received all of the designed treatment processes at the sewage treatment plant.
fc	Means faecal coliforms expressed in colony forming units per 100mL.
Group C waste	Has the same meaning as in Part 3 of Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> .
ISO	Means International Standards Organisation.
kL	Means kilolitre.
L/s	Means litres per second.
metal-A	Means the following metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc.
mL	Means millilitres.
ML	Means megalitres.
offensive odour	Has the same meaning as in the <i>Protection of the Environment Operations Act 1997</i> .
overflow	Is a discharge of untreated or partially treated sewage from the sewage treatment system.
reticulation system	Means that part of the sewage treatment system owned and operated by the licensee which collects and transports sewage to the sewage treatment plant and includes all sewer pipes (whether greater or less than 300mm diameter), sewer rising mains, access chambers, vent shafts, designed overflow structures, sewage ejection units and sewage pumping stations, but does not include the sewage treatment plant.
sewage	Means untreated liquid waste received in the reticulation system.
sewage ejection unit	Is a pump intended to control the transport of sewage from premises normally occupied by no more than 10 persons, or of an average daily flow of sewage not exceeding 2,000 litres through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant.
sewage products	Means any by-product of the treatment processes and includes biosolids, raw sludge, liquid sludge, thickened sludge, digested sludge, screenings and grit.
sewage pumping station (SPS)	Is a structure which controls the transport of sewage through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant, but does not include a sewage ejection unit.
sewage treatment plant (STP)	Is a facility at which sewage is stored and treated following delivery from the reticulation system prior to discharge, and includes discharge structures and STP bypass points.
sewage treatment system	Means the reticulation system and the sewage treatment plant used for the transport, treatment and discharge of effluent and sewage.
Trade waste agreements	Means agreements reached between the licensee and industrial and commercial customers to restrict the amount of toxic and other potentially harmful substances discharged to the reticulation system.
TRC	Means total residual chlorine.

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watersHas the same meaning as in the *Protection of the Environment Operations Act 1997*.**wet weather bypass**

Means a bypass that occurs when the flow rate of sewage at the inflow point of the STP equals or exceeds the rate specified in condition M7.2.

wet weather overflow

A wet weather overflow is an overflow where the probable cause is rainfall.

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition - 19-May-2008

End Notes

- 1 Licence varied by notice V/M upgrade, issued on 08-Jul-2000, which came into effect on 08-Jul-2000.
- 2 Licence varied by notice 1006561, issued on 27-Jun-2002, which came into effect on 22-Jul-2002.
- 3 Licence varied by notice 1029139, issued on 14-Aug-2003, which came into effect on 08-Sep-2003.
- 4 EPA Condition ID S40934 amended 13-08-04
- 5 Licence varied by notice 1045021, issued on 15-Apr-2005, which came into effect on 10-May-2005.
- 6 Licence varied by change to DEC Region allocation, issued on 24-Feb-2006, which came into effect on 24-Feb-2006.
- 7 Licence varied by notice 1060673, issued on 28-Jun-2006, which came into effect on 28-Jun-2006.
- 8 Licence varied by notice 1067837, issued on 03-Apr-2007, which came into effect on 03-Apr-2007.
- 9 Licence varied by notice 1083718, issued on 19-May-2008, which came into effect on 19-May-2008.
- 10 **Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>**

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Department of **Environment & Climate Change** NSW



Licence Variation

Licence - 4120

Department of Environment & Climate Change NSW



BEGA VALLEY SHIRE COUNCIL,
ABN 26 987 935 332,
PO BOX 492,
BEGA NSW 2550

Attention: Mr. JIM COLLINS

Notice Number 1083718
File Number LIC06/239
Date 19-May-2008

NOTICE OF VARIATION OF LICENCE NO. 4120

BACKGROUND

- A. BEGA VALLEY SHIRE COUNCIL ("the licensee") is the holder of Environment Protection Licence No. 4120 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of Scheduled Activity - Premises Based at TARONGA CRESCENT, BEGA, NSW.
- B. The Environmental Protection Authority (EPA) received written correspondence on 12 February 2008 which included a Sewer Overflow Investigation Report, submitted in accordance with pollution reduction program (PRP) 100.
- C. Accordingly, this variation notice removes PRP 100 from licence number 4120.

VARIATION OF LICENCE NO. 4120

1. By this notice the EPA varies licence No. 4120 as set out in the Appendix. The Appendix contains a copy of the provisions of the licence marked with the variations that are made to it by this notice.
2. The variations to the licence are indicated in the following way:
 - if a strike through mark appears through any word or other text (eg. ~~Solids or~~) this indicates that the word or other text is deleted from the licence by this notice; and
 - if a double underline appears under any word or other text (eg. must be treated) this indicates that the word or other text is added to the licence by this notice.

.....

Ms Sandie Jones

Licence Variation

Licence - 4120

Department of **Environment & Climate Change** NSW



Head Regional Operations Unit

South - Queanbeyan

(by Delegation)

INFORMATION ABOUT THIS NOTICE

- This notice is issued under 58(5) of the Act.
- Details provided in this notice, along with an updated version of the licence, will be available on the EPA's Public Register (<http://www.environment.nsw.gov.au/prpoeo/index.htm>) in accordance with section 308 of the Act.

Appeals against this decision

- You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.

When this notice begins to operate

- The variations to the licence specified in this notice begin to operate immediately from the date of this notice, unless another date is specified in this notice.
- If an appeal is made against this decision to vary the licence and the Land and Environment Court directs that the decision is stayed the decision does not operate until the stay ceases to have effect or the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs first).

Environment Protection Licence

Licence - 4120

Department of **Environment & Climate Change** NSW

Licence Details

Number:	4120
Anniversary Date:	01-September
Review Due Date:	15-Apr-2010

Licensee

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

Licence Type

Premises

Premises

BEGA SEWAGE TREATMENT PLANT
TARONGA CRESCENT
BEGA NSW 2550

Scheduled Activity

Sewage **Treatment Systems** **treatment**

Fee Based Activity

Sewage Treatment - processing by small plants (< 10000 ML per year)
(71(a))

Scale

> 219 - 1000 ML discharged

Region

South - Queanbeyan
Suite 4, Robert Lowe Building, 30 Lowe Street
QUEANBEYAN NSW 2620
Phone: 02 6122 3100
Fax: 02 6299 3525

PO Box 622 QUEANBEYAN
NSW 2620

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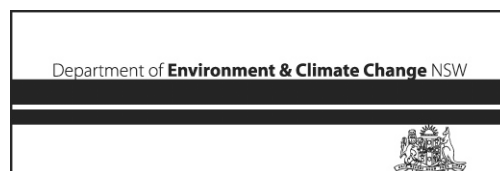
Department of Environment & Climate Change NSW



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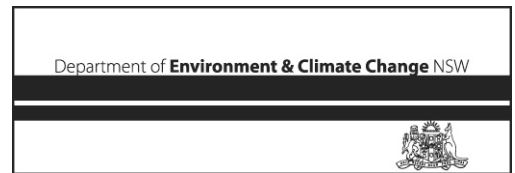
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Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act); and
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

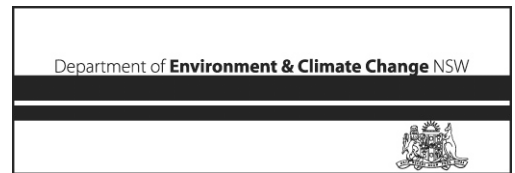
For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

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The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

subject to the conditions which follow.

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

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Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity

Sewage ~~Treatment System~~ treatment

Fee Based Activity	Scale
Sewage Treatment - processing by small plants (< 10000 ML per year) ~~(71(a))~~	> 219 - 1000 ML discharged

A1.3 Not applicable.

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A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
BEGA SEWAGE TREATMENT PLANT
TARONGA CRESCENT
BEGA
NSW
2550
LOT 8 IN DP 750190

A2.2 The premises also includes the reticulation system owned and operated by the licensee that is associated with the sewage treatment plant(s) identified in condition A2.1.

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- (a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- (b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

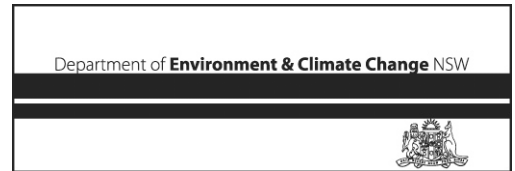
A5 Objectives of this licence

A5.1 The objectives of this licence are to:

- (a) prevent as far as practicable sewage overflows and sewage treatment plant bypasses;

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- (b) require proper and efficient management of the system to minimise harm to the environment and public health; and
- (c) require practical measures to be taken to protect the environment and public health from sewage overflows and sewage treatment plant effluent.

A5.2 This licence is to be construed in a manner that will promote the objectives referred to in A5.1.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

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Water and land

EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
1		Discharge to utilisation area	Pipe from Oxidation Pond No. 3 leading to Rixon's effluent lagoon labelled as EPA Point 1, as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080).
2		Discharge to waters	Overflow from Rixon's effluent lagoon to Bega River anabranch labelled as EPA Point 2, as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080).
3	Effluent quality monitoring		Oxidation Pond No. 3 labelled as EPA Point 3, as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080).
4	Volume monitoring		Effluent pipeline from humus tank to oxidation ponds labelled as "EPA Point 4", as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080).
5	Volume monitoring		Flow meter on pipe from Oxidation Pond 3 leading to Rixons effluent lagoon labelled as "EPA Point 5", as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080).
6	Volume monitoring		Weir on overflow from Rixon's effluent lagoon to Bega River anabranch labelled as EPA Point 6, as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080).

3 Limit conditions

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L1 Pollution of waters

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.
- L1.2 The licensee may only discharge untreated or partially treated sewage from the sewage treatment plant and/or the reticulation system subject to the conditions of this licence, including O1 and O2.

L2 Load limits

- L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

- L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
BOD (Enclosed Waters)	8733
Nitrogen (total) (Enclosed Waters)	11650
Oil and Grease (Enclosed Waters)	2915
Phosphorus (total) (Enclosed Waters)	3080
Total suspended solids (Enclosed Waters)	11650

Note: The load limits referred to in condition L2.1 do not apply to discharges from the reticulation system.

L3 Concentration limits

- L3.1 For each monitoring/discharge point or utilisation area specified in the table\ below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.
- L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\.

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Water and Land

POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	milligrams per litre				10
Total suspended solids	milligrams per litre				30
Biochemical oxygen demand	milligrams per litre				20

L4 Volume and mass limits

L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:

- (a) liquids discharged to water; or;
- (b) solids or liquids applied to the area;

must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of measure	Volume/Mass Limit
1	kilolitres per day	2500
2	kilolitres per day	2500

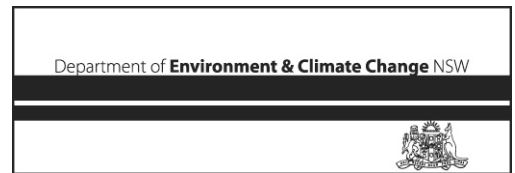
L4.2 Notwithstanding the volume limits specified in condition L4.1, the combined volume discharged from point(s) 1 and 2 shall not exceed 2500kL/day.

L5 Waste

- L5.1 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 as expressly permitted by the licence.
- L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.
- L5.3 The licensee may receive and/or transfer sewage and Group C waste generated outside the premises for treatment, processing or reprocessing at the premises. The licensee must take reasonable steps to ensure that sewage received at the premises has been lawfully discharged in accordance with a trade waste agreement or customer contract (as applicable) in force between

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the licensee and the generator of the waste. The licensee must treat, process or reprocess the sewage and Group C waste in accordance with this licence prior to discharge from the premises.

- L5.4 The licensee may receive, store, treat, process or reprocess and/or transfer at the premises sewage products generated or stored outside the premises by the licensee's other sewage treatment systems. Sewage products must be received, treated, processed or reprocessed in accordance with this licence.
- L5.5 Grit or screenings generated by activities on the premises may be disposed of by the licensee within the boundary of the sewage treatment plant(s) on the premises, but only if they are disposed of in a manner that prevents or minimises material harm to the environment.

L6 Noise Limits

- L6.1 Not applicable.

L7 Frequency limits

- L7.1 Not applicable.

L8 Potentially offensive odour

- L8.1 No condition in this licence 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 licensee 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 a licence directed at minimising odour.

4 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.

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Note: The requirements of O1.1 apply to the whole of the premises, including the reticulation system.

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.

Note: The requirements of O2.1 apply to the whole of the premises, including the reticulation system.

O3 Appropriate treatment processes

- O3.1 Sewage or effluent must not be discharged from Point(s) 1 and/or 2 unless it has been treated in accordance with the requirements of the table below.

Required treatment process	Flow range
screening, degritting, sedimentation, trickling, filtration, secondary sedimentation (humus tank) and oxidation ponding	all liquid waste inflow

The flows noted in the table above are the inflows to the premises' sewage treatment plant(s).

- O3.2 However the licensee is not taken to have breached this condition if the licensee can demonstrate:
- (a) the failure to treat the liquid waste as required was solely as a result of a failure of the power supply to the premises, or a failure of essential equipment;
 - (b) the failure of power supply or equipment could not reasonably have been prevented; and
 - (c) normal operating conditions were restored as soon as possible after the power supply failure or the failure of essential equipment.

O4 Prohibition on acceptance of pesticides

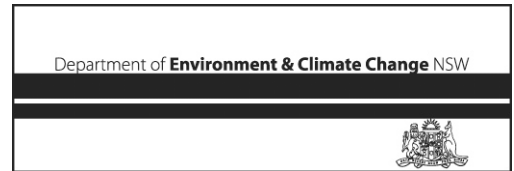
- O4.1 The licensee must not enter into any trade waste agreement to discharge organophosphate pesticides (including chlorpyrifos, diazinon, malathion) into the sewerage system.
- O4.2 The licensee must not consent to any discharge of organochlorine pesticides (such as dieldrin, heptachlor and chlordane) into the sewerage system.

O5 Biosolids management

- O5.1 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guidelines, or as otherwise approved in writing by the EPA.

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Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

O6 Effluent application to land

O6.1 Not applicable.

O7 New sewage pumping stations

O7.1 Dry weather overflows resulting in pollution of waters from any sewage pumping station(s) installed within the sewage treatment system after January 2004 are not permitted.

O8 Extensions to the reticulation system

O8.1 The licensee must ensure that any extensions to the reticulation system after January 2004 are planned, designed, constructed and installed to prevent as far as practicable overflows from the premises.

Note: "The premises" includes both the new and the previously existing parts of the sewage treatment system.

5 Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this 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 for the purposes of this licence:
(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.

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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 licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Water and Land

POINT 3

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Monthly	Composite sample
Chlorophyll a	milligrams per litre	Special Frequency 1	Grab sample
Nitrogen (total)	milligrams per litre	Monthly	Composite sample
Oil and Grease	milligrams per litre	Monthly	Grab sample
Phosphorus (total)	milligrams per litre	Monthly	Composite sample
Total suspended solids	milligrams per litre	Monthly	Composite sample

Note: Special Frequency 1 means collect and store sample monthly, at the same time as Biochemical Oxygen Demand or Total Suspended Solids sampling. If the Biochemical Oxygen Demand or Total Suspended Solids 100 percentile concentration limit is exceeded as per condition L3.3, then analyse the stored sample for chlorophyll a and report results to the EPA as soon as the results become available.

Note: For the purpose of this licence, a composite sample is defined as at least three grab samples forming a pooled sample, with the first and last sample taken at least seven hours apart.

M2.2 The monitoring at point(s) 3 required by condition M2.1 is conducted to determine compliance with limits specified for discharge to point(s) 1 and 2 respectively.

M3 Testing methods - concentration limits

M3.1 Not applicable.

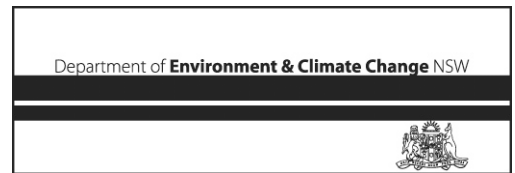
M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

Note: Testing methods - load limit

Note: Clause 18 (1) and (2) of the Protection of the Environment Operations (General) Regulation 1998 requires that monitoring of actual loads of assessable pollutants listed in L2.1 must be carried out in accordance with the testing method set out in the relevant load calculation protocol for the fee-

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based activity classification listed in condition A1.2.

M4 Recording of pollution complaints

- M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M4.2 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 licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - (f) if no action was taken by the licensee, the reasons why no action was taken.
- M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

- M5.1 The licensee 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.
- M5.2 The licensee 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.
- M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:
- (a) the date of the issue of this licence or
 - (b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.
- M5.4 For the purpose of condition M5.1, operating hours are defined as twenty-four hours a day, seven days a week.
- M5.5 The public notification referred to in condition M5.2 must include specific reference to the fact that the complaints line may be used by the community for the reporting of overflows.

M6 Requirement to monitor volume or mass

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M6.1 For each discharge point or utilisation area specified below, the licensee must monitor:

- (a) the volume of liquids discharged to water or applied to the area;
- (b) the mass of solids applied to the area;
- (c) the mass of pollutants emitted to the air;

at the frequency and using the method and units of measure, specified below.

POINT 4

Frequency	Unit Of Measure	Sampling Method
Daily	kilolitres per day	Magnetic flow meter

POINT 5

Frequency	Unit Of Measure	Sampling Method
Daily	kilolitres per day	Magnetic flow meter

POINT 6

Frequency	Unit Of Measure	Sampling Method
Daily during any discharge	kilolitres per discharge event	By Calculation (volume flow rate or pump capacity multiplied by operating time)

M6.2 In the event that the licensee cannot comply with a volume monitoring method as required by this licence solely due to the failure or malfunction of essential monitoring equipment, volume may be estimated using another agreed method approved in writing by the EPA. This provision only applies for the duration of the failure or malfunction. The licensee is to rectify the failure or malfunction as soon as practicable.

M6.3 The licensee must:

- (a) submit in writing to the EPA a proposal for a method of volume estimation; or
- (b) use a method of volume estimation already approved in writing by the EPA,

to be used in the event that essential monitoring equipment referred to in the previous condition has failed or malfunctioned.

M6.4 In the event of a bypass at EPA Point 5, the EPA have approved an alternative method to calculate volume discharge, as per email correspondence dated 15 March 2007 (TRIM DOC07/10126)

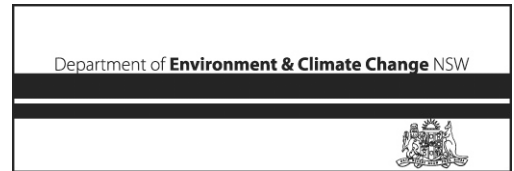
M7 Requirement to record sewage treatment plant bypasses

M7.1 The licensee must record the following details in respect of each bypass of any of the appropriate treatment processes required by condition O3 which may be reasonably expected to adversely affect the quality of the final discharge:

- (a) the EPA point identification number through which the bypass discharged;
- (b) the date, estimated start time and estimated duration of the bypass;

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- (c) the estimated volume of the bypass;
- (d) the level of treatment of the sewage at the STP prior to discharge;
- (e) the probable cause of the bypass;
- (f) any actions taken to stop the bypass happening; and
- (g) any actions taken to prevent the bypass happening again.

M7.2 In addition to the details listed in the previous condition, the licensee must also record classification as a wet or dry weather bypass in respect of each bypass referred to in the previous condition. A dry weather bypass is a bypass that occurs when the flow rate of sewage at the inflow volume monitoring point of the STP does not exceed 2500k/L day and a wet weather bypass occurs when this flow is equalled or exceeded at any time during the bypass event.

M8 Biosolids monitoring

M8.1 Biosolids at the premises must be recorded, monitored and classified in accordance with the Biosolids Guidelines, to the extent that those Guidelines are applicable, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

M9 Requirement to record overflows

M9.1 From October 2003 the licensee must record the following details in relation to each observed or reported overflow from the reticulation system and from the sewage treatment plant:

- (a) the location of the overflow;
- (b) the date, estimated start time and estimated duration of the overflow;
- (c) the estimated volume of the overflow;
- (d) a description of the receiving environment of the overflow;
- (e) classification as a dry or wet weather overflow;
- (f) the probable cause of the overflow;
- (g) any actions taken to stop the overflow happening;
- (h) any actions taken to clean up the overflow; and
- (i) any actions taken to prevent the overflow happening again.

M10 Environmental monitoring

M10.1 Not applicable.

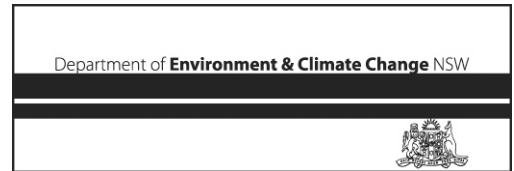
6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

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- R1.1 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.

Period covered by Annual Return

- R1.2 An Annual Return must be prepared in respect of each reporting period, 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.

- R1.3 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.

- R1.4 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.

Deadline for Annual Return

- R1.5 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').

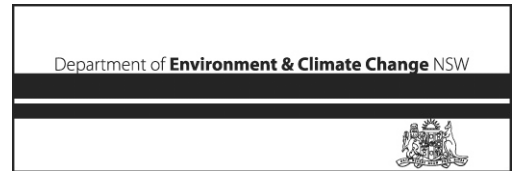
Notification where actual load can not be calculated

- R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:
- (a) the assessable pollutants for which the actual load could not be calculated; and
 - (b) the relevant circumstances that were beyond the control of the licensee.

Licensee must retain copy of Annual Return

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- R1.7 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.

Certifying of Statement of Compliance and signing of Monitoring and Complaints Summary

- R1.8 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.
- R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee 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 Act.

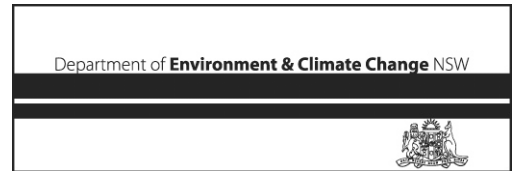
- R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
- (a) where this licence applies to premises, an event has occurred at the premises; or
 - (b) where this 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.
- R3.2 The licensee 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.
- R3.3 The request 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;
 - (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;

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- (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.

R3.4 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.

R4 Notification of bypass or overflow incidents

R4.1 Where either:

- (a) sewage or partially treated sewage is discharged from the premises as a result of a bypass of the sewage treatment plant, or
- (b) an observed or reported overflow has occurred from the reticulation system, and overflow or bypass may pose a risk to public health, the licensee is to promptly give appropriate notification to any parties that are likely to be affected, including:
 - (i) the potentially affected community,
 - (ii) the Safe Food NSW Shellfish Quality Assurance Program, where the bypass or overflow could have potential impacts on shellfish production; and
 - (iii) the Department of Health.

R4.2 When the licensee notifies the Department of Health or Safe Food NSW Shellfish Quality Assurance Program of a bypass or overflow incident, the licensee must also notify the EPA by telephoning its Pollution Line service on 131 555. Notifications are to be given as soon as practicable after the licensee or one of the licensee's employees or agents becomes aware of the incident, and must include all relevant information including the information required under condition M9.1 or M7.1.

R5 Annual System Performance Report

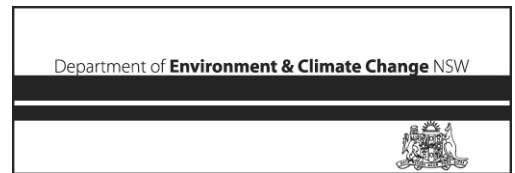
R5.1 The licensee must supply to the EPA an Annual System Performance Report not later than 60 days after the end of each reporting period.

R5.2 The report is to supplement the Annual Return and must include but need not be limited to:

- (a) the 50 percentile, 90 percentile, 100 percentile and 3DGM values calculated from the monitoring data required by this licence for the reporting period for each pollutant which has corresponding concentration limits specified in this licence;
- (b) the total amounts of biosolids, as classified in the Biosolids Guideline, disposed of on-site, off-site and to landfill during the reporting period;
- (c) a diagram showing the major process elements, discharge points and monitoring points at the premises' sewage treatment plant(s), where there has been any significant change since the previous reporting period or this information has not been provided previously to the EPA;
- (d) the number of dry and wet weather bypasses recorded over the reporting period (recorded in accordance with condition M7);

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- (e) a breakdown of the total number of complaints received by the licensee during the reporting period in relation to the premises into categories of “odours – sewage treatment plant”, “odours – reticulation system”, “water pollution – sewage treatment plant”, “water pollution – reticulation system” and any other category indicated by the complaints;
- (f) a summary of observed, reported or recorded wet weather overflows and observed, reported or recorded dry weather overflows and sewage treatment plant bypasses. These data are to be for the current reporting period and for the four previous twelve-month periods, for which data has been collected. Any significant actions taken to address bypasses or overflows are to be noted;
- (g) the amount of rainfall measured at a rain gauge at the STP, or at the rain gauge closest to the centre of the catchment of the sewage treatment system, for each month of the reporting period; and
- (h) a brief progress report on the implementation over the reporting period of actions specified in PRP100.

- R5.3 The Annual System Performance Report must be presented in a format approved in writing by the EPA.
- R5.4 The requirements of R5.2 (d), (e), (f) and (g) apply to the part of the reporting period beginning three months after the date the licence is varied to include this condition.

General conditions

G1 Copy of licence kept at the premises

- G1.1 A copy of this licence must be kept at the premises 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.

Note: For the purposes of this condition, “the premises” refers to each Sewage Treatment Plant(s) described in condition A2.1.

G2 Signage

- G2.1 The location of EPA point number(s) 1, 2, 3, 4, 5 and 6 must be clearly marked by signs that indicate the point identification number used in this licence and be located as close as practical to the point.

G3 Contact number for incidents and responsible employees

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Department of Environment & Climate Change NSW



- G3.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:
- (a) respond at all times to incidents relating to the premises; and
 - (b) contact the licensee's senior employees or agents authorised at all times to:
 - (i) speak on behalf of the licensee; and
 - (ii) provide any information or document required under this licence.

- G3.2 The licensee is to inform the EPA in writing of the appointment of any subsequent contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.

G4 Clean-up

- G4.1 In the event of an overflow or bypass that harms or is likely to harm the environment, the licensee must use all practicable measures to minimise the impact of the overflow or bypass on the environment and public health. These measures are to be implemented as soon as practical after the licensee or one of the licensee's employees or agents becomes aware of the overflow or bypass.

Pollution studies and reduction programs

PRP100 Sewer Overflow Investigations Report U1 Not applicable.

~~100.1 The objective of this PRP is to identify overflows from the sewage reticulation system that pose a significant risk of harm to the environment or public health, and to identify management priorities and actions required to reduce this risk.~~

~~100.2 The licensee must prepare a Sewer Overflow Investigations Report for the premises' reticulation system. The report must include but need not be limited to:~~

~~identification of the location of all designed overflow points and other frequent overflow points within the reticulation system and an assessment of the likelihood of overflows from these points;~~

~~assessment of the significance of impacts on the environment and public health resulting from these overflows;~~

~~evaluation and ranking of the resultant risk to the environment and public health from these overflows; and~~

~~identification of management priorities and actions to reduce the risk of harm to the environment and public health.~~

~~100.3 With regard to the identification of actions to reduce the risk of harm to the environment and public health, as required by condition 100.2(d), the licensee must consider the effects of any actions that improve the performance of the reticulation system with respect to the performance of the sewage treatment plant, for example with respect to the frequency and volume of bypasses or overflows from the sewage treatment plant, to ensure that the actions minimise the potential environmental and public health impact of discharges from the whole of the premises.~~

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100.4 The report must also include the identification of any sewage pumping stations within the premises that are not capable of meeting a condition prohibiting dry weather overflows, including reasons why any sewage pumping station is not capable of meeting such a condition and whether it should be upgraded.

100.5 This report is to be submitted to the EPA in writing by January 2008.

Notes:

If this requirement is included on a number of sewage treatment system licences held by the licensee, a single report may be submitted to the EPA provided that it meets the requirements relating to all of the licences.

The requirement to prepare this report does not affect the requirement to comply with any other condition of this licence.

It is the EPA's intention to include, at some point in the future, a licence condition prohibiting dry weather overflows from those sewage pumping stations that have been identified as being capable of meeting such a condition. This would be consistent with the requirement for proper and efficient maintenance and operation of the system.

Progress reports on the implementation over the reporting period of actions specified in PRP100 are required in the Annual System Performance Report under condition R5 of this licence.

Special conditions

E1 Not applicable.

Dictionary

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.

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annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.
flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
industrial waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
inert waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease

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percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
reprocessing of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B.
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Special Dictionary

ug/L	Means micrograms per litre.
access chamber	a structure constructed to provide physical access to sewer pipes. Also known as a manhole.

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approved	Means approved in writing by the EPA. The EPA's approval may be given unconditionally, or subject to conditions.
Biosolids	Has the same meaning as in Schedule 1, Part 3 of the <i>Protection of the Environment Operations Act 1997</i> .
Biosolids Guidelines	Means the "Environmental Guidelines: Use and disposal of biosolids products" published by the EPA in October 1997, or any subsequently updated guidelines which replace this publication.
bypass	Means circumstances where sewage has been received at the sewage treatment plant but is discharged from the plant without it being treated, processed or reprocessed by means of any or all of the designed treatment processes of the plant. A new bypass event is defined as a bypass that commences at least 24 hours after the end of the previous bypass.
cfu	Means colony forming units
condition	Means a condition of this licence.
designed overflow structure	Means a designed structure (excluding access chambers) in the reticulation system which operates as a relief to allow sewage to discharge at a planned location or a sewage pumping station, but does not include a bypass from a sewage treatment plant.
designed overflow	Means an overflow from a designed overflow structure.
dry weather bypass	Means a bypass that occurs when the flow rate of sewage at the inflow point of the STP does not exceed the flow rate specified in M7.2.
dry weather overflow	Means an overflow that is not a wet weather overflow.
dry weather sewage treatment plant discharge	Means a discharge of sewage or effluent from the STP that occurs when the flow rate of sewage at the inflow point of the STP does not exceed the flow rate specified in M7.2
effluent	Means sewage that has received all of the designed treatment processes at the sewage treatment plant.
fc	Means faecal coliforms expressed in colony forming units per 100mL.
Group C waste	Has the same meaning as in Part 3 of Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> .
ISO	Means International Standards Organisation.
kL	Means kilolitre.
L/s	Means litres per second.
metal-A	Means the following metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc.
mL	Means millilitres.
ML	Means megalitres.
offensive odour	Has the same meaning as in the <i>Protection of the Environment Operations Act 1997</i> .
overflow	Is a discharge of untreated or partially treated sewage from the sewage treatment system.
reticulation system	Means that part of the sewage treatment system owned and operated by the licensee which collects and transports sewage to the sewage treatment plant and includes all sewer pipes (whether greater or less than 300mm diameter), sewer rising mains, access chambers, vent shafts, designed overflow structures, sewage ejection units and sewage pumping stations, but does not include the sewage treatment plant.
sewage	Means untreated liquid waste received in the reticulation system.

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sewage ejection unit	Is a pump intended to control the transport of sewage from premises normally occupied by no more than 10 persons, or of an average daily flow of sewage not exceeding 2,000 litres through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant.
sewage products	Means any by-product of the treatment processes and includes biosolids, raw sludge, liquid sludge, thickened sludge, digested sludge, screenings and grit.
sewage pumping station (SPS)	Is a structure which controls the transport of sewage through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant, but does not include a sewage ejection unit.
sewage treatment plant (STP)	Is a facility at which sewage is stored and treated following delivery from the reticulation system prior to discharge, and includes discharge structures and STP bypass points.
sewage treatment system	Means the reticulation system and the sewage treatment plant used for the transport, treatment and discharge of effluent and sewage.
Trade waste agreements	Means agreements reached between the licensee and industrial and commercial customers to restrict the amount of toxic and other potentially harmful substances discharged to the reticulation system.
TRC	Means total residual chlorine.
waters	Has the same meaning as in the <i>Protection of the Environment Operations Act 1997</i> .
wet weather bypass	Means a bypass that occurs when the flow rate of sewage at the inflow point of the STP equals or exceeds the rate specified in condition M7.2.
wet weather overflow	A wet weather overflow is an overflow where the probable cause is rainfall.

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition - 03-Apr-2007

End Notes

- 1 Licence varied by notice V/M upgrade, issued on 08-Jul-2000, which came into effect on 08-Jul-2000.

Environment Protection Licence

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Department of **Environment & Climate Change** NSW



End Notes

2	Licence varied by notice 1006561, issued on 27-Jun-2002, which came into effect on 22-Jul-2002.
3	Licence varied by notice 1029139, issued on 14-Aug-2003, which came into effect on 08-Sep-2003.
4	EPA Condition ID S40934 amended 13-08-04
5	Licence varied by notice 1045021, issued on 15-Apr-2005, which came into effect on 10-May-2005.
6	Licence varied by change to DEC Region allocation, issued on 24-Feb-2006, which came into effect on 24-Feb-2006.
7	Licence varied by notice 1060673, issued on 28-Jun-2006, which came into effect on 28-Jun-2006.
8	Licence varied by notice 1067837, issued on 03-Apr-2007, which came into effect on 03-Apr-2007.

Licence Variation

Licence - 4120



BEGA VALLEY SHIRE COUNCIL,
ABN 26 987 935 332,
PO BOX 492,
BEGA NSW 2550

Attention: Mr. JIM COLLINS

Notice Number 1067837
File Number LIC06/239
Date 03-Apr-2007

NOTICE OF VARIATION OF LICENCE NO. 4120

BACKGROUND

- A. BEGA VALLEY SHIRE COUNCIL ~~was~~ ("the licensee") is the holder of Environment Protection Licence No. 4120 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of Scheduled Activity - Premises Based at TARONGA CRESCENT, BEGA, NSW.
- B. On 20 March 2007 the EPA received an application for the variation of the licence to allow the completion of Pollution Reduction Program (PRP) 100. The EPA has agreed to this variation.
- C. In addition, the Bega Sewage Treatment Plant is currently undergoing an upgrade as part of the Bega Valley Sewerage Program. An EIS for the project was prepared and approved under Part 5 of the Environmental Planning and Assessment Act 1979. The proposed licence variation will provide long term environmental benefits, with the lining of Oxidation Pond 4 reducing the occurrence of exfiltration of treated effluent into local groundwater resources.
- D. The licence variation will allow the final construction process to be completed prior to commissioning of the plant.

VARIATION OF LICENCE NO. 4120

1. By this notice the EPA varies licence No. 4120 as set out in the Appendix. The Appendix contains a copy of the provisions of the licence marked with the variations that are made to it by this notice.
2. The variations to the licence are indicated in the following way:
 - if a strike through mark appears through any word or other text (eg. ~~Solids or~~) this indicates that the word or other text is deleted from the licence by this notice; and
 - if a double underline appears under any word or other text (eg. must be treated) this indicates that the word or other text is added to the licence by this notice.

Licence Variation

Licence - 4120



.....
Mr Nigel Sargent
Acting Manager
South - Queanbeyan
(by Delegation)

INFORMATION ABOUT THIS NOTICE

- This notice is issued under 58(5) of the Act.
- Details provided in this notice, along with an updated version of the licence, will be available on the EPA's Public Register (<http://www.environment.nsw.gov.au/prpoeo/index.htm>) in accordance with section 308 of the Act.

Appeals against this decision

- You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.

When this notice begins to operate

- The variations to the licence specified in this notice begin to operate immediately from the date of this notice, unless another date is specified in this notice.
- If an appeal is made against this decision to vary the licence and the Land and Environment Court directs that the decision is stayed the decision does not operate until the stay ceases to have effect or the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs first).

Environment Protection Licence

Licence - 4120



Licence Details

Number:	4120
Anniversary Date:	01-September
Review Due Date:	15-Apr-2010

Licensee

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

Licence Type

Premises

Premises

BEGA SEWAGE TREATMENT PLANT
TARONGA CRESCENT
BEGA NSW 2550

Scheduled Activity

Sewage Treatment Systems

Fee Based Activity

Sewage Treatment - processing by small plants (< 10000 ML per year)
(71[a])

Scale

> 219 - 1000 ML discharged

Region

South - Queanbeyan
Suite 4, Robert Lowe Building, 30 Lowe Street
QUEANBEYAN NSW 2620
Phone: 02 6122 3100
Fax: 02 6299 3525

PO Box 622 QUEANBEYAN
NSW 2620

Environment Protection Licence

Licence - 4120



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Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- **Ensure** persons associated with you comply with this licence, as set out in section 64 of the Act;
- **Control** the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act); and
- **Report** incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

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The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications
- licence conditions and variations
- statements of compliance
- load based licensing information and
- load reduction agreements

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

subject to the conditions which follow:

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises

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specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity
Sewage Treatment Systems

Fee Based Activity	Scale
Sewage Treatment - processing by small plants (< 10000 ML per year) (71[a])	> 219 - 1000 ML discharged

A1.3 Not applicable.



A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
BEGA SEWAGE TREATMENT PLANT
TARONGA CRESCENT
BEGA
NSW
2550
LOT 8 IN DP 750190

A2.2 The premises also includes the reticulation system owned and operated by the licensee that is associated with the sewage treatment plant(s) identified in condition A2.1.

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- (a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- (b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

A5 Objectives of this licence

A5.1 The objectives of this licence are to:

- (a) prevent as far as practicable sewage overflows and sewage treatment plant bypasses;

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- (b) require proper and efficient management of the system to minimise harm to the environment and public health; and
- (c) require practical measures to be taken to protect the environment and public health from sewage overflows and sewage treatment plant effluent.

A5.2 This licence is to be construed in a manner that will promote the objectives referred to in A5.1.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

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EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
1		Discharge to utilisation area	Pipe to the STP property line from the southwest wall leading to the finishing pond to Rixons Effluent Lagoon labelled as "EPA Point 1" on map titled "Bega Sewerage Treatment Works" received by the EPA on 7 March 2002. Pipe from Oxidation Pond No. 3 leading to Rixon's effluent lagoon labelled as EPA Point 1, as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080).
2		Discharge to waters	Pipe overflow from Oxidation Pond No. 4 Rixon's effluent lagoon to Bega River anabranch labelled as "Point 2" on map titled "EPA Point 2" on map titled "Bega Sewerage Treatment Works, as indicated on Attachment 3, submitted to the EPA on 7 March 2002, with licence variation form dated 29 November 2006 (TRIM - DOC06/58080).
3	Effluent quality monitoring		Oxidation pond Pond No. 4 labelled as "EPA Point 3" on map titled "Bega Sewerage Treatment Works submitted to the EPA on 7 March 2002. 3 labelled as EPA Point 3, as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080).
4	Volume monitoring		Effluent pipeline from humus tank to oxidation ponds labelled as "EPA Point 4" as indicated on map titled "Bega Sewerage Treatment Works Attachment 3, submitted to the EPA on 7 March 2002, with licence variation form dated 29 November 2006 (TRIM - DOC06/58080).
5	Volume monitoring		Flow meter on pipe to the southwest wall leading to the finishing pond to Rixons Effluent Lagoon labelled as "EPA Point 5" on map titled "Bega Sewerage Treatment Works submitted to the EPA on 7 March 2002. Flow meter on pipe from Oxidation Pond 3 leading to Rixons effluent lagoon labelled as "EPA Point 5", as indicated on Attachment 3, submitted with licence variation form dated 29 November 2006 (TRIM - DOC06/58080).
6	Volume monitoring		Flow meter Weir on pipe overflow from Oxidation Pond No. 4 Rixon's effluent lagoon to Bega River anabranch labelled as "EPA Point 6" as indicated on map titled "Bega Sewerage Treatment Works Attachment 3, submitted to the EPA on 7 March 2002, with licence variation form dated 29 November 2006 (TRIM - DOC06/58080).

3 Limit conditions

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L1 Pollution of waters

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.
- L1.2 The licensee may only discharge untreated or partially treated sewage from the sewage treatment plant and/or the reticulation system subject to the conditions of this licence, including O1 and O2.

L2 Load limits

- L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

- L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
BOD (Enclosed Waters)	8733
Nitrogen (total) (Enclosed Waters)	11650
Oil and Grease (Enclosed Waters)	2915
Phosphorus (total) (Enclosed Waters)	3080
Total suspended solids (Enclosed Waters)	11650

Note: The load limits referred to in condition L2.1 do not apply to discharges from the reticulation system.

L3 Concentration limits

- L3.1 For each monitoring/discharge point or utilisation area specified in the table\ below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.
- L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\.

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Water and Land

POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	mg/L				See note 1
Total suspended solids	mg/L				30
Biochemical oxygen demand	mg/L				20

POINT 2

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	mg/L				See note 1
Total suspended solids	mg/L				30
Biochemical oxygen demand	mg/L				20

Note 1: A 100 Percentile Concentration Limit of "10 mg/L and no visible oil and grease" applies for Point 1 and Point 2.

Note 2: The monitoring at Point 3, required by Condition M2.1, is conducted by the licensee to determine compliance with limits specified for discharges to Point 1 and Point 2 as described in Condition L3.

L4 Volume and mass limits

L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:

- (a) liquids discharged to water; or;
- (b) solids or liquids applied to the area;

must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of measure	Volume/Mass Limit
1	kL/day	2500
2	kL/day	2500

L4.2 Notwithstanding the volume limits specified in condition L4.1, the combined volume discharged from point(s) 1 and 2 shall not exceed 2500kL/day.

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L5 Waste

- L5.1 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 as expressly permitted by the licence.
- L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.
- L5.3 The licensee may receive and/or transfer sewage and Group C waste generated outside the premises for treatment, processing or reprocessing at the premises. The licensee must take reasonable steps to ensure that sewage received at the premises has been lawfully discharged in accordance with a trade waste agreement or customer contract (as applicable) in force between the licensee and the generator of the waste. The licensee must treat, process or reprocess the sewage and Group C waste in accordance with this licence prior to discharge from the premises.
- L5.4 The licensee may receive, store, treat, process or reprocess and/or transfer at the premises sewage products generated or stored outside the premises by the licensee's other sewage treatment systems. Sewage products must be received, treated, processed or reprocessed in accordance with this licence.
- L5.5 Grit or screenings generated by activities on the premises may be disposed of by the licensee within the boundary of the sewage treatment plant(s) on the premises, but only if they are disposed of in a manner that prevents or minimises material harm to the environment.

L6 Noise Limits

- L6.1 Not applicable.

L7 Frequency limits

- L7.1 Not applicable.

L8 Potentially offensive odour

- L8.1 No condition in this licence 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 licensee 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 a licence directed at minimising odour.

4 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.

Note: The requirements of O1.1 apply to the whole of the premises, including the reticulation system.

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.

Note: The requirements of O2.1 apply to the whole of the premises, including the reticulation system.

O3 Appropriate treatment processes

O3.1 Sewage or effluent must not be discharged from Point(s) 1 and/or 2 unless it has been treated in accordance with the requirements of the table below.

Required treatment process	Flow range
screening, degritting, sedimentation, trickling, filtration, secondary sedimentation (humus tank) and oxidation ponding	all liquid waste inflow

The flows noted in the table above are the inflows to the premises' sewage treatment plant(s).

O3.2 However the licensee is not taken to have breached this condition if the licensee can demonstrate:

- (a) the failure to treat the liquid waste as required was solely as a result of a failure of the power supply to the premises, or a failure of essential equipment;
- (b) the failure of power supply or equipment could not reasonably have been prevented; and
- (c) normal operating conditions were restored as soon as possible after the power supply failure or the failure of essential equipment.



O4 Prohibition on acceptance of pesticides

- O4.1 The licensee must not enter into any trade waste agreement to discharge organophosphate pesticides (including chlorpyrifos, diazinon, malathion) into the sewerage system.
- O4.2 The licensee must not consent to any discharge of organochlorine pesticides (such as dieldrin, heptachlor and chlordane) into the sewerage system.

O5 Biosolids management

- O5.1 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guidelines, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

O6 Effluent application to land

- O6.1 Not applicable.

O7 New sewage pumping stations

- O7.1 Dry weather overflows resulting in pollution of waters from any sewage pumping station(s) installed within the sewage treatment system after January 2004 are not permitted.

O8 Extensions to the reticulation system

- O8.1 The licensee must ensure that any extensions to the reticulation system after January 2004 are planned, designed, constructed and installed to prevent as far as practicable overflows from the premises.

Note: "The premises" includes both the new and the previously existing parts of the sewage treatment system.

5 Monitoring and recording conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

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- M1.2** All records required to be kept by this 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 for the purposes of this licence:
- (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 licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Water and Land

POINT 3

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	mg/L	Monthly	Composite sample
Chlorophyll a	mg/L	Special Frequency 1	Grab sample
Nitrogen (total)	mg/L	Monthly	Composite sample
Oil and Grease	mg/L	Monthly	Grab sample
Phosphorus (total)	mg/L	Monthly	Composite sample
Total suspended solids	mg/L	Monthly	Composite sample

Note: Special Frequency 1 means collect and store sample monthly, at the same time as Biochemical Oxygen Demand or Total Suspended Solids sampling. If the Biochemical Oxygen Demand or Total Suspended Solids 100 percentile concentration limit is exceeded as per condition L3.3, then analyse the stored sample for chlorophyll a and report results to the EPA as soon as the results become available.

Note: For the purpose of this licence, a composite sample is defined as at least three grab samples forming a pooled sample, with the first and last sample taken at least seven hours apart.

- M2.2** The monitoring at point(s) 3 required by condition M2.1 is conducted to determine compliance with limits specified for discharge to point(s) 1 and 2 respectively.

M3 Testing methods - concentration limits

- M3.1** Not applicable.
- M3.2** Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in



writing before any tests are conducted.

Note: Testing methods - load limit

Note: Clause 18 (1) and (2) of the Protection of the Environment Operations (General) Regulation 1998 requires that monitoring of actual loads of assessable pollutants listed in L2.1 must be carried out in accordance with the testing method set out in the relevant load calculation protocol for the fee-based activity classification listed in condition A1.2.

M4 Recording of pollution complaints

- M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M4.2 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 licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - (f) if no action was taken by the licensee, the reasons why no action was taken.
- M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

- M5.1 The licensee 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.
- M5.2 The licensee 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.
- M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:
- (a) the date of the issue of this licence or
 - (b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.
- M5.4 For the purpose of condition M5.1, operating hours are defined as twenty-four hours a day, seven days a week.



M5.5 The public notification referred to in condition M5.2 must include specific reference to the fact that the complaints line may be used by the community for the reporting of overflows.

M6 Requirement to monitor volume or mass

M6.1 For each discharge point or utilisation area specified below, the licensee must monitor:

- (a) the volume of liquids discharged to water or applied to the area;
- (b) the mass of solids applied to the area;
- (c) the mass of pollutants emitted to the air;

at the frequency and using the method and units of measure, specified below.

POINT 4

Frequency	Unit Of Measure	Sampling Method
Daily	kL/day	Magnetic flow meter

POINT 5

Frequency	Unit Of Measure	Sampling Method
Daily	kL/day	Magnetic flow meter

POINT 6

Frequency	Unit Of Measure	Sampling Method
Daily during any discharge	kL/day discharge event	~~Magnetic flow meter~~ By Calculation (volume flow rate or pump capacity multiplied by operating time)

M6.2 In the event that the licensee cannot comply with a volume monitoring method as required by this licence solely due to the failure or malfunction of essential monitoring equipment, volume may be estimated using another agreed method approved in writing by the EPA. This provision only applies for the duration of the failure or malfunction. The licensee is to rectify the failure or malfunction as soon as practicable.

M6.3 The licensee must:

- (a) submit in writing to the EPA a proposal for a method of volume estimation; or
- (b) use a method of volume estimation already approved in writing by the EPA,

to be used in the event that essential monitoring equipment referred to in the previous condition has failed or malfunctioned.

M6.4 In the event of a bypass at EPA Point 5, the EPA have approved an alternative method to calculate volume discharge, as per email correspondence dated 15 March 2007 (TRIM DOC07/10126)



M7 Requirement to record sewage treatment plant bypasses

- M7.1 The licensee must record the following details in respect of each bypass of any of the appropriate treatment processes required by condition O3 which may be reasonably expected to adversely affect the quality of the final discharge:
- (a) the EPA point identification number through which the bypass discharged;
 - (b) the date, estimated start time and estimated duration of the bypass;
 - (c) the estimated volume of the bypass;
 - (d) the level of treatment of the sewage at the STP prior to discharge;
 - (e) the probable cause of the bypass;
 - (f) any actions taken to stop the bypass happening; and
 - (g) any actions taken to prevent the bypass happening again.
- M7.2 In addition to the details listed in the previous condition, the licensee must also record classification as a wet or dry weather bypass in respect of each bypass referred to in the previous condition. A dry weather bypass is a bypass that occurs when the flow rate of sewage at the inflow volume monitoring point of the STP does not exceed 2500k/L day and a wet weather bypass occurs when this flow is equalled or exceeded at any time during the bypass event.

M8 Biosolids monitoring

- M8.1 Biosolids at the premises must be recorded, monitored and classified in accordance with the Biosolids Guidelines, to the extent that those Guidelines are applicable, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

M9 Requirement to record overflows

- M9.1 From October 2003 the licensee must record the following details in relation to each observed or reported overflow from the reticulation system and from the sewage treatment plant:
- (a) the location of the overflow;
 - (b) the date, estimated start time and estimated duration of the overflow;
 - (c) the estimated volume of the overflow;
 - (d) a description of the receiving environment of the overflow;
 - (e) classification as a dry or wet weather overflow;
 - (f) the probable cause of the overflow;
 - (g) any actions taken to stop the overflow happening;
 - (h) any actions taken to clean up the overflow; and
 - (i) any actions taken to prevent the overflow happening again.

M10 Environmental monitoring

- M10.1 Not applicable.



6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

- R1.1 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.

Period covered by Annual Return

- R1.2 An Annual Return must be prepared in respect of each reporting period, 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.

- R1.3 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.

- R1.4 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.

Deadline for Annual Return

- R1.5 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').

Notification where actual load can not be calculated

- R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the

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licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:

- (a) the assessable pollutants for which the actual load could not be calculated; and
- (b) the relevant circumstances that were beyond the control of the licensee.

Licensee must retain copy of Annual Return

- R1.7 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.

Certifying of Statement of Compliance and ~~Signing~~ of Monitoring and Complaints Summary

- R1.8 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.
- R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee 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 Act.

- R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
 - (a) where this licence applies to premises, an event has occurred at the premises; or
 - (b) where this 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.
- R3.2 The licensee 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.

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- R3.3 The request 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.
- R3.4 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.

R4 Notification of bypass or overflow incidents

- R4.1 Where either:
- (a) sewage or partially treated sewage is discharged from the premises as a result of a bypass of the sewage treatment plant, or
 - (b) an observed or reported overflow has occurred from the reticulation system, and overflow or bypass may pose a risk to public health, the licensee is to promptly give appropriate notification to any parties that are likely to be affected, including:
 - (i) the potentially affected community,
 - (ii) the Safe Food NSW Shellfish Quality Assurance Program, where the bypass or overflow could have potential impacts on shellfish production; and
 - (iii) the Department of Health.
- R4.2 When the licensee notifies the Department of Health or Safe Food NSW Shellfish Quality Assurance Program of a bypass or overflow incident, the licensee must also notify the EPA by telephoning its Pollution Line service on 131 555. Notifications are to be given as soon as practicable after the licensee or one of the licensee's employees or agents becomes aware of the incident, and must include all relevant information including the information required under condition M9.1 or M7.1.

R5 Annual System Performance Report

- R5.1 The licensee must supply to the EPA an Annual System Performance Report not later than 60 days after the end of each reporting period.
- R5.2 The report is to supplement the Annual Return and must include but need not be limited to:



- (a) the 50 percentile, 90 percentile, 100 percentile and 3DGM values calculated from the monitoring data required by this licence for the reporting period for each pollutant which has corresponding concentration limits specified in this licence;
- (b) the total amounts of biosolids, as classified in the Biosolids Guideline, disposed of on-site, off-site and to landfill during the reporting period;
- (c) a diagram showing the major process elements, discharge points and monitoring points at the premises' sewage treatment plant(s), where there has been any significant change since the previous reporting period or this information has not been provided previously to the EPA;
- (d) the number of dry and wet weather bypasses recorded over the reporting period (recorded in accordance with condition M7);
- (e) a breakdown of the total number of complaints received by the licensee during the reporting period in relation to the premises into categories of "odours – sewage treatment plant", "odours – reticulation system", "water pollution – sewage treatment plant", "water pollution – reticulation system" and any other category indicated by the complaints;
- (f) a summary of observed, reported or recorded wet weather overflows and observed, reported or recorded dry weather overflows and sewage treatment plant bypasses. These data are to be for the current reporting period and for the four previous twelve-month periods, for which data has been collected. Any significant actions taken to address bypasses or overflows are to be noted;
- (g) the amount of rainfall measured at a rain gauge at the STP, or at the rain gauge closest to the centre of the catchment of the sewage treatment system, for each month of the reporting period; and
- (h) a brief progress report on the implementation over the reporting period of actions specified in PRP100.

- R5.3 The Annual System Performance Report must be presented in a format approved in writing by the EPA.
- R5.4 The requirements of R5.2 (d), (e), (f) and (g) apply to the part of the reporting period beginning three months after the date the licence is varied to include this condition.

General conditions

G1 Copy of licence kept at the premises

- G1.1 A copy of this licence must be kept at the premises 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.

Note: For the purposes of this condition, "the premises" refers to each Sewage Treatment Plant(s) described in condition A2.1.



G2 Signage

- G2.1 The location of EPA point number(s) 1, 2, 3, 4, 5 and 6 must be clearly marked by signs that indicate the point identification number used in this licence and be located as close as practical to the point.

G3 Contact number for incidents and responsible employees

- G3.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:
- (a) respond at all times to incidents relating to the premises; and
 - (b) contact the licensee's senior employees or agents authorised at all times to:
 - (i) speak on behalf of the licensee; and
 - (ii) provide any information or document required under this licence.
- G3.2 The licensee is to inform the EPA in writing of the appointment of any subsequent contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.

G4 Clean-up

- G4.1 In the event of an overflow or bypass that harms or is likely to harm the environment, the licensee must use all practicable measures to minimise the impact of the overflow or bypass on the environment and public health. These measures are to be implemented as soon as practical after the licensee or one of the licensee's employees or agents becomes aware of the overflow or bypass.

Pollution studies and reduction programs

PRP100 Sewer Overflow Investigations Report

- 100.1 The objective of this PRP is to identify overflows from the sewage reticulation system that pose a significant risk of harm to the environment or public health, and to identify management priorities and actions required to reduce this risk.
- 100.2 The licensee must prepare a Sewer Overflow Investigations Report for the premises' reticulation system. The report must include but need not be limited to:
- (a) identification of the location of all designed overflow points and other frequent overflow points within the reticulation system and an assessment of the likelihood of overflows from these points;

Environment Protection Licence

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- (b) assessment of the significance of impacts on the environment and public health resulting from these overflows;
- (c) evaluation and ranking of the resultant risk to the environment and public health from these overflows; and
- (d) identification of management priorities and actions to reduce the risk of harm to the environment and public health.

100.3 With regard to the identification of actions to reduce the risk of harm to the environment and public health, as required by condition 100.2(d), the licensee must consider the effects of any actions that improve the performance of the reticulation system with respect to the performance of the sewage treatment plant, for example with respect to the frequency and volume of bypasses or overflows from the sewage treatment plant, to ensure that the actions minimise the potential environmental and public health impact of discharges from the whole of the premises.

100.4 The report must also include the identification of any sewage pumping stations within the premises that are not capable of meeting a condition prohibiting dry weather overflows, including reasons why any sewage pumping station is not capable of meeting such a condition and whether it should be upgraded.

100.5 This report is to be submitted to the EPA in writing by ~~July 2007~~ January 2008.

Notes:

- (1) If this requirement is included on a number of sewage treatment system licences held by the licensee, a single report may be submitted to the EPA provided that it meets the requirements relating to all of the licences.
- (2) The requirement to prepare this report does not affect the requirement to comply with any other condition of this licence.
- (3) It is the EPA's intention to include, at some point in the future, a licence condition prohibiting dry weather overflows from those sewage pumping stations that have been identified as being capable of meeting such a condition. This would be consistent with the requirement for proper and efficient maintenance and operation of the system.
- (4) Progress reports on the implementation over the reporting period of actions specified in PRP100 are required in the Annual System Performance Report under condition R5 of this licence.

Special conditions

E1 Not applicable.

Dictionary

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]

Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples

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Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.
flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
industrial waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
inert waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence

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load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
reprocessing of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence



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waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B.
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Special Dictionary

ug/L	Means micrograms per litre.
access chamber	a structure constructed to provide physical access to sewer pipes. Also known as a manhole.
approved	Means approved in writing by the EPA. The EPA's approval may be given unconditionally, or subject to conditions.
Biosolids	Has the same meaning as in Schedule 1, Part 3 of the <i>Protection of the Environment Operations Act 1997</i> .
Biosolids Guidelines	Means the "Environmental Guidelines: Use and disposal of biosolids products" published by the EPA in October 1997, or any subsequently updated guidelines which replace this publication.
bypass	Means circumstances where sewage has been received at the sewage treatment plant but is discharged from the plant without it being treated, processed or reprocessed by means of any or all of the designed treatment processes of the plant. A new bypass event is defined as a bypass that commences at least 24 hours after the end of the previous bypass.
cfu	Means colony forming units
condition	Means a condition of this licence.
designed overflow structure	Means a designed structure (excluding access chambers) in the reticulation system which operates as a relief to allow sewage to discharge at a planned location or a sewage pumping station, but does not include a bypass from a sewage treatment plant.
designed overflow	Means an overflow from a designed overflow structure.
dry weather bypass	Means a bypass that occurs when the flow rate of sewage at the inflow point of the STP does not exceed the flow rate specified in M7.2.
dry weather overflow	Means an overflow that is not a wet weather overflow.
dry weather sewage treatment plant discharge	Means a discharge of sewage or effluent from the STP that occurs when the flow rate of sewage at the inflow point of the STP does not exceed the flow rate specified in M7.2
effluent	Means sewage that has received all of the designed treatment processes at the sewage treatment plant.
fc	Means faecal coliforms expressed in colony forming units per 100mL.
Group C waste	Has the same meaning as in Part 3 of Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> .
ISO	Means International Standards Organisation.
kL	Means kilolitre.
L/s	Means litres per second.

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metal-A	Means the following metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc.
mL	Means millilitres.
ML	Means megalitres.
offensive odour	Has the same meaning as in the <i>Protection of the Environment Operations Act 1997</i> .
overflow	Is a discharge of untreated or partially treated sewage from the sewage treatment system.
reticulation system	Means that part of the sewage treatment system owned and operated by the licensee which collects and transports sewage to the sewage treatment plant and includes all sewer pipes (whether greater or less than 300mm diameter), sewer rising mains, access chambers, vent shafts, designed overflow structures, sewage ejection units and sewage pumping stations, but does not include the sewage treatment plant.
sewage	Means untreated liquid waste received in the reticulation system.
sewage ejection unit	Is a pump intended to control the transport of sewage from premises normally occupied by no more than 10 persons, or of an average daily flow of sewage not exceeding 2,000 litres through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant.
sewage products	Means any by-product of the treatment processes and includes biosolids, raw sludge, liquid sludge, thickened sludge, digested sludge, screenings and grit.
sewage pumping station (SPS)	Is a structure which controls the transport of sewage through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant, but does not include a sewage ejection unit.
sewage treatment plant (STP)	Is a facility at which sewage is stored and treated following delivery from the reticulation system prior to discharge, and includes discharge structures and STP bypass points.
sewage treatment system	Means the reticulation system and the sewage treatment plant used for the transport, treatment and discharge of effluent and sewage.
Trade waste agreements	Means agreements reached between the licensee and industrial and commercial customers to restrict the amount of toxic and other potentially harmful substances discharged to the reticulation system.
TRC	Means total residual chlorine.
waters	Has the same meaning as in the <i>Protection of the Environment Operations Act 1997</i> .
wet weather bypass	Means a bypass that occurs when the flow rate of sewage at the inflow point of the STP equals or exceeds the rate specified in condition M7.2.
wet weather overflow	A wet weather overflow is an overflow where the probable cause is rainfall.

Mr Tim Gilbert

Environment Protection Licence



Licence - 4120

Environment Protection Authority

(By Delegation)

Date of this edition - 28-Jun-2006

End Notes

1	Licence varied by notice V/M upgrade, issued on 08-Jul-2000, which came into effect on 08-Jul-2000.
2	Licence varied by notice 1006561, issued on 27-Jun-2002, which came into effect on 22-Jul-2002.
3	Licence varied by notice 1029139, issued on 14-Aug-2003, which came into effect on 08-Sep-2003.
4	EPA Condition ID S40934 amended 13-08-04
5	Licence varied by notice 1045021, issued on 15-Apr-2005, which came into effect on 10-May-2005.
6	Licence varied by change to DEC Region allocation, issued on 24-Feb-2006, which came into effect on 24-Feb-2006.
7	Licence varied by notice 1060673, issued on 28-Jun-2006, which came into effect on 28-Jun-2006.

Licence Variation

Section 58(5) Protection of the Environment Operations Act 1997



BEGA VALLEY SHIRE COUNCIL,
ABN 26 987 935 332,
PO BOX 492,
BEGA NSW 2550

Attention: Mr. JIM COLLINS

Notice Number 1060673
File Number 280328
Date 28-Jun-2006

NOTICE OF VARIATION OF LICENCE NO. 4120

BACKGROUND

- A. BEGA VALLEY SHIRE COUNCIL ("the licensee") is the holder of Environment Protection Licence No. 4120 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of Scheduled Activity - Premises Based at TARONGA CRESCENT, BEGA, NSW.
- B. The Clean Waters Regulation 1972 established the classification scheme for waters, and has had effect under provisions in the *Protection of the Environment Act 1997*.
- C. The *Protection of the Environment Operations Amendment Act 2005* ("the Amendment Act") which commenced on 1 May 2006, repeals these provisions.
- D. The Amendment Act 2005 requires the Department of Environment and Conservation ("DEC") to consider the environmental values of water, how these are affected by relevant activities, and the practical measures that could be taken to restore or maintain those environmental values.
- E. References to the Clean Waters Regulation are therefore redundant, and existing environment protection licenses must be varied to reflect the changes to the legislation. Accordingly, conditions L1.2. and PRP100.6 in the license must be revoked, and the special dictionary amended.

VARIATION OF LICENCE NO. 4120

1. By this notice the EPA varies licence No. 4120 as set out in the Appendix. *(for licences with a lot of changes and where the whole licence document will be in the appendix: The Appendix is a copy of the licence marked with the variations that are made to it by this notice. (for licences with a small number of changes where only the conditions will be printed: The Appendix is a copy of the provisions of the licence which are varied by this notice, marked with the variations that are made to them.*
2. The variations to the licence are indicated in the following way:

Licence Variation

Section 58(5) Protection of the Environment Operations Act 1997



- if a strike through mark appears through any word or other text (eg. ~~Solids or~~) this indicates that the word or other text is deleted from the licence by this notice; and
- if a double underline appears under any word or other text (eg. must be treated) this indicates that the word or other text is added to the licence by this notice.

.....

Mr Nigel Sargent

Head Regional Operations Unit

South - Queanbeyan

(by Delegation)

INFORMATION ABOUT THIS NOTICE

- This notice is issued under 58(5) of the Act.
- Details provided in this notice will be available on the EPA's Public Register in accordance with section 308 of the Act.

When this notice begins to operate

- The variations to the licence specified in this notice begin to operate immediately from the date of this notice, unless another date is specified in this notice.

Appeals against this decision

- You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.
- If an appeal is made against this decision and the Land and Environment Court directs that the decision is stayed the decision will not operate until the stay ceases to have effect or the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs first).

Environment Protection Authority

Environment Protection Licence

Section 55 Protection of the Environment Operations Act 1997

- ♦ Licence number: 4120
- ♦ File number: 280328
- ♦ Licence Anniversary Date: 01-September
- ♦ Review date not later than 15-Apr-2010

Licence Type

Premises

Licensee

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

Licensed Premises

BEGA SEWAGE TREATMENT PLANT
TARONGA CRESCENT
BEGA NSW 2550

Fee Based Activity

Sewage Treatment - processing by small plants (< 10000 ML per year) (71[a])

Scale

> 219 - 1000 ML discharged

EPA Region

South - Queanbeyan
Suite 4, Robert Lowe Building, 30 Lowe Street
QUEANBEYAN NSW 2620
Phone: 02 6122 3100
Fax: 02 6299 3525

PO Box 622 QUEANBEYAN
NSW 2620

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Information about this licence

Dictionary

The licence contains a dictionary, which defines terms used in the licence. It is found at the end of the licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- Ensure persons associated with you comply with this licence, as set out in section 64 of the Act.
- Control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act).
- Report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Transfer of licence

Transfer of the licence to another person may be requested by the licensee using the form for this purpose available from the EPA.

Variation of licence conditions

Variations to the conditions of this licence may be requested by the licensee using the form for this purpose available from the EPA. The EPA may also vary a licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as

set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

The licence requires you to forward to the EPA an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints).

The Annual Return must be submitted within 60 days after the end of each reporting period. Where a licence is transferred, surrendered or revoked, a special reporting period applies.

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Usually the licence fee period is the same as the reporting period.

See condition R1 and the accompanying form regarding the Annual Return requirements.

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications
- licence conditions and variations
- statements of compliance
- load based licensing information
- load reduction agreements

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

Licence anniversary date

01-September

This licence is issued to

BEGA VALLEY SHIRE COUNCIL
PO BOX 492
BEGA NSW 2550

subject to the conditions which follow:

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity
Sewage Treatment Systems

Fee Based Activity	Scale
Sewage Treatment - processing by small plants (< 10000 ML per year) (71[a])	> 219 - 1000 ML discharged

A1.3 Not applicable.

A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
BEGA SEWAGE TREATMENT PLANT
TARONGA CRESCENT
BEGA
NSW
2550
LOT 8 IN DP 750190

A2.2 The premises also includes the reticulation system owned and operated by the licensee that is associated with the sewage treatment plant(s) identified in condition A2.1.

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- (a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- (b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

A5 Objectives of this licence

A5.1 The objectives of this licence are to:

- (a) prevent as far as practicable sewage overflows and sewage treatment plant bypasses;
- (b) require proper and efficient management of the system to minimise harm to the environment and public health; and

- (c) require practical measures to be taken to protect the environment and public health from sewage overflows and sewage treatment plant effluent.

A5.2 This licence is to be construed in a manner that will promote the objectives referred to in A5.1.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

Water and land

EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
1		Discharge to utilisation area	Pipe to the STP property line from the southwest wall leading to the finishing pond to Rixons Effluent Lagoon labelled as "EPA Point 1" on map titled "Bega Sewerage Treatment Works" received by the EPA on 7 March 2002.
2		Discharge to waters	Pipe from Oxidation Pond No. 4 to Bega River labelled as "Point 2" on map titled "EPA Point 2" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.
3	Effluent quality monitoring		Oxidation pond No. 4 labelled as "EPA Point 3" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.
4	Volume monitoring		Effluent pipeline from humus tank to oxidation ponds labelled as "EPA Point 4" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.
5	Volume monitoring		Flow meter on pipe to the southwest wall leading to the finishing pond to Rixons Effluent Lagoon labelled as "EPA Point 5" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.
6	Volume monitoring		Flow meter on pipe from Oxidation Pond No. 4 to Bega River labelled as "EPA Point 6" on map titled "Bega Sewerage Treatment Works" submitted to the EPA on 7 March 2002.

3 Limit conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L1.2 ~~This licence does not permit the pollution of waters classified as Class S or Class P under the Clean Waters Regulations 1972 to the extent that such pollution would breach a standard applicable to those waters by the operation of clause 6 of schedule 5 of the Act.~~

L1.3 The licensee may only discharge untreated or partially treated sewage from the sewage treatment plant and/or the reticulation system subject to the conditions of this licence, including O1 and O2.

L2 Load limits

L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
BOD (Enclosed Waters)	8733
Nitrogen (total) (Enclosed Waters)	11650
Oil and Grease (Enclosed Waters)	2915
Phosphorus (total) (Enclosed Waters)	3080
Total suspended solids (Enclosed Waters)	11650

Note: The load limits referred to in condition L2.1 do not apply to discharges from the reticulation system.

L3 Concentration limits

L3.1 For each monitoring/discharge point or utilisation area specified in the table\ below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be

within the specified ranges.

- L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\.

Water and Land

POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	mg/L				See note 1
Total suspended solids	mg/L				30
Biochemical oxygen demand	mg/L				20

POINT 2

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	mg/L				See note 1
Total suspended solids	mg/L				30
Biochemical oxygen demand	mg/L				20

Note 1: A 100 Percentile Concentration Limit of "10 mg/L and no visible oil and grease" applies for Point 1 and Point 2.

Note 2: The monitoring at Point 3, required by Condition M2.1, is conducted by the licensee to determine compliance with limits specified for discharges to Point 1 and Point 2 as described in Condition L3.

L4 Volume and mass limits

- L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:

- (a) liquids discharged to water; or;
- (b) solids or liquids applied to the area;

must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of measure	Volume/Mass Limit
1	kL/day	2500
2	kL/day	2500

L4.2 Notwithstanding the volume limits specified in condition L4.1, the combined volume discharged from point(s) 1 and 2 shall not exceed 2500kL/day.

L5 Waste

- L5.1 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 as expressly permitted by the licence.
- L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.
- L5.3 The licensee may receive and/or transfer sewage and Group C waste generated outside the premises for treatment, processing or reprocessing at the premises. The licensee must take reasonable steps to ensure that sewage received at the premises has been lawfully discharged in accordance with a trade waste agreement or customer contract (as applicable) in force between the licensee and the generator of the waste. The licensee must treat, process or reprocess the sewage and Group C waste in accordance with this licence prior to discharge from the premises.
- L5.4 The licensee may receive, store, treat, process or reprocess and/or transfer at the premises sewage products generated or stored outside the premises by the licensee's other sewage treatment systems. Sewage products must be received, treated, processed or reprocessed in accordance with this licence.
- L5.5 Grit or screenings generated by activities on the premises may be disposed of by the licensee within the boundary of the sewage treatment plant(s) on the premises, but only if they are disposed of in a manner that prevents or minimises material harm to the environment.

L6 Noise Limits

L6.1 Not applicable.

L7 Frequency limits

L7.1 Not applicable.

L8 Potentially offensive odour

L8.1 No condition in this licence 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 licensee 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 a licence directed at minimising odour.

4 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.

Note: The requirements of O1.1 apply to the whole of the premises, including the reticulation system.

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.

Note: The requirements of O2.1 apply to the whole of the premises, including the reticulation system.

O3 Appropriate treatment processes

O3.1 Sewage or effluent must not be discharged from Point(s) 1 and/or 2 unless it has been treated in accordance with the requirements of the table below.

Required treatment process	Flow range
screening, degritting, sedimentation, trickling, filtration, secondary sedimentation (humus tank) and oxidation ponding	all liquid waste inflow

The flows noted in the table above are the inflows to the premises' sewage treatment plant(s).

- O3.2 However the licensee is not taken to have breached this condition if the licensee can demonstrate:
- (a) the failure to treat the liquid waste as required was solely as a result of a failure of the power supply to the premises, or a failure of essential equipment;
 - (b) the failure of power supply or equipment could not reasonably have been prevented; and
 - (c) normal operating conditions were restored as soon as possible after the power supply failure or the failure of essential equipment.

O4 Prohibition on acceptance of pesticides

- O4.1 The licensee must not enter into any trade waste agreement to discharge organophosphate pesticides (including chlorpyrifos, diazinon, malathion) into the sewerage system.
- O4.2 The licensee must not consent to any discharge of organochlorine pesticides (such as dieldrin, heptachlor and chlordane) into the sewerage system.

O5 Biosolids management

- O5.1 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guidelines, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

O6 Effluent application to land

- O6.1 Not applicable.

O7 New sewage pumping stations

- O7.1 Dry weather overflows resulting in pollution of waters from any sewage pumping station(s) installed within the sewage treatment system after January 2004 are not permitted.

O8 Extensions to the reticulation system

- O8.1 The licensee must ensure that any extensions to the reticulation system after January 2004 are planned, designed, constructed and installed to prevent as far as practicable overflows from the premises.

Note: "The premises" includes both the new and the previously existing parts of the sewage treatment system.

5 Monitoring and recording conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this 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 for the purposes of this licence:
- (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 licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Water and Land

POINT 3

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	mg/L	Monthly	Composite sample
Chlorophyll a	mg/L	Special Frequency 1	Grab sample
Nitrogen (total)	mg/L	Monthly	Composite sample
Oil and Grease	mg/L	Monthly	Grab sample
Phosphorus (total)	mg/L	Monthly	Composite sample
Total suspended solids	mg/L	Monthly	Composite sample

Note: Special Frequency 1 means collect and store sample monthly, at the same time as Biochemical Oxygen Demand or Total Suspended Solids sampling. If the Biochemical Oxygen Demand or Total Suspended Solids 100 percentile concentration limit is exceeded as per condition L3.3, then analyse the stored sample for chlorophyll a and report results to the EPA as soon as the results become available.

Note: For the purpose of this licence, a composite sample is defined as at least three grab samples forming a pooled sample, with the first and last sample taken at least seven hours apart.

- M2.2 The monitoring at point(s) 3 required by condition M2.1 is conducted to determine compliance with limits specified for discharge to point(s) 1 and 2 respectively.

M3 Testing methods - concentration limits

M3.1 Not applicable.

M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

Note: Testing methods - load limit

Note: Clause 18 (1) and (2) of the Protection of the Environment Operations (General) Regulation 1998 requires that monitoring of actual loads of assessable pollutants listed in L2.1 must be carried out in accordance with the testing method set out in the relevant load calculation protocol for the fee-based activity classification listed in condition A1.2.

M4 Recording of pollution complaints

M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M4.2 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 licensee in relation to the complaint, including any follow-up contact with the complainant; and
- (f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

M5.1 The licensee 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.

M5.2 The licensee 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.

- M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:
- (a) the date of the issue of this licence or
 - (b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.
- M5.4 For the purpose of condition M5.1, operating hours are defined as twenty-four hours a day, seven days a week.
- M5.5 The public notification referred to in condition M5.2 must include specific reference to the fact that the complaints line may be used by the community for the reporting of overflows.

M6 Requirement to monitor volume or mass

- M6.1 For each discharge point or utilisation area specified below, the licensee must monitor:
- (a) the volume of liquids discharged to water or applied to the area;
 - (b) the mass of solids applied to the area;
 - (c) the mass of pollutants emitted to the air;

at the frequency and using the method and units of measure, specified below.

POINT 4

Frequency	Unit Of Measure	Sampling Method
Daily	kL/day	Magnetic flow meter

POINT 5

Frequency	Unit Of Measure	Sampling Method
Daily	kL/day	Magnetic flow meter

POINT 6

Frequency	Unit Of Measure	Sampling Method
Daily	kL/day	Magnetic flow meter

- M6.2 In the event that the licensee cannot comply with a volume monitoring method as required by this licence solely due to the failure or malfunction of essential monitoring equipment, volume may be estimated using another agreed method approved in writing by the EPA. This provision only applies for the duration of the failure or malfunction. The licensee is to rectify the failure or malfunction as soon as practicable.
- M6.3 The licensee must:
- (a) submit in writing to the EPA a proposal for a method of volume estimation; or
 - (b) use a method of volume estimation already approved in writing by the EPA,

to be used in the event that essential monitoring equipment referred to in the previous condition has failed or malfunctioned.

M7 Requirement to record sewage treatment plant bypasses

M7.1 The licensee must record the following details in respect of each bypass of any of the appropriate treatment processes required by condition O3 which may be reasonably expected to adversely affect the quality of the final discharge:

- (a) the EPA point identification number through which the bypass discharged;
- (b) the date, estimated start time and estimated duration of the bypass;
- (c) the estimated volume of the bypass;
- (d) the level of treatment of the sewage at the STP prior to discharge;
- (e) the probable cause of the bypass;
- (f) any actions taken to stop the bypass happening; and
- (g) any actions taken to prevent the bypass happening again.

M7.2 In addition to the details listed in the previous condition, the licensee must also record classification as a wet or dry weather bypass in respect of each bypass referred to in the previous condition. A dry weather bypass is a bypass that occurs when the flow rate of sewage at the inflow volume monitoring point of the STP does not exceed 2500k/L day and a wet weather bypass occurs when this flow is equalled or exceeded at any time during the bypass event.

M8 Biosolids monitoring

M8.1 Biosolids at the premises must be recorded, monitored and classified in accordance with the Biosolids Guidelines, to the extent that those Guidelines are applicable, or as otherwise approved in writing by the EPA.

Note: This condition does not apply to the reuse or disposal of biosolids by the licensee at locations other than the premises.

M9 Requirement to record overflows

M9.1 From October 2003 the licensee must record the following details in relation to each observed or reported overflow from the reticulation system and from the sewage treatment plant:

- (a) the location of the overflow;
- (b) the date, estimated start time and estimated duration of the overflow;
- (c) the estimated volume of the overflow;
- (d) a description of the receiving environment of the overflow;
- (e) classification as a dry or wet weather overflow;
- (f) the probable cause of the overflow;
- (g) any actions taken to stop the overflow happening;
- (h) any actions taken to clean up the overflow; and
- (i) any actions taken to prevent the overflow happening again.

M10 Environmental monitoring

M10.1 Not applicable.

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

- R1.1 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.

Period covered by Annual Return

- R1.2 An Annual Return must be prepared in respect of each reporting period, 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.

- R1.3 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.

R1.4 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.

Deadline for Annual Return

- R1.5 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').

Notification where actual load can not be calculated

R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:

- (a) the assessable pollutants for which the actual load could not be calculated; and
- (b) the relevant circumstances that were beyond the control of the licensee.

Licensee must retain copy of Annual Return

R1.7 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.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

R1.8 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.

R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee 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 Act.

R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- (a) where this licence applies to premises, an event has occurred at the premises; or
 - (b) where this 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.

R3.2 The licensee 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.

- R3.3 The request 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;
 - (g) any other relevant matters.
- R3.4 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.

R4 Notification of bypass or overflow incidents

- R4.1 Where either:
- (a) sewage or partially treated sewage is discharged from the premises as a result of a bypass of the sewage treatment plant, or
 - (b) an observed or reported overflow has occurred from the reticulation system, and overflow or bypass may pose a risk to public health, the licensee is to promptly give appropriate notification to any parties that are likely to be affected, including:
 - (i) the potentially affected community,
 - (ii) the Safe Food NSW Shellfish Quality Assurance Program, where the bypass or overflow could have potential impacts on shellfish production; and
 - (iii) the Department of Health.

~~Note: It is the EPA's intention to vary the licence to replace the above condition with a requirement that the licensee follow the Incident Notification Protocol required by PRP101, when the protocol has been implemented.~~

- R4.2 When the licensee notifies the Department of Health or Safe Food NSW Shellfish Quality Assurance Program of a bypass or overflow incident, the licensee must also notify the EPA by telephoning its Pollution Line service on 131 555. Notifications are to be given as soon as practicable after the licensee or one of the licensee's employees or agents becomes aware of the incident, and must include all relevant information including the information required under condition M9.1 or M7.1.

R5 Annual System Performance Report

- R5.1 The licensee must supply to the EPA an Annual System Performance Report not later than 60 days after the end of each reporting period.
- R5.2 The report is to supplement the Annual Return and must include but need not be limited to:

- (a) the 50 percentile, 90 percentile, 100 percentile and 3DGM values calculated from the monitoring data required by this licence for the reporting period for each pollutant which has corresponding concentration limits specified in this licence;
- (b) the total amounts of biosolids, as classified in the Biosolids Guideline, disposed of on-site, off-site and to landfill during the reporting period;
- (c) a diagram showing the major process elements, discharge points and monitoring points at the premises' sewage treatment plant(s), where there has been any significant change since the previous reporting period or this information has not been provided previously to the EPA;
- (d) the number of dry and wet weather bypasses recorded over the reporting period (recorded in accordance with condition M7);
- (e) a breakdown of the total number of complaints received by the licensee during the reporting period in relation to the premises into categories of "odours – sewage treatment plant", "odours – reticulation system", "water pollution – sewage treatment plant", "water pollution – reticulation system" and any other category indicated by the complaints;
- (f) a summary of observed, reported or recorded wet weather overflows and observed, reported or recorded dry weather overflows and sewage treatment plant bypasses. These data are to be for the current reporting period and for the four previous twelve-month periods, for which data has been collected. Any significant actions taken to address bypasses or overflows are to be noted;
- (g) the amount of rainfall measured at a rain gauge at the STP, or at the rain gauge closest to the centre of the catchment of the sewage treatment system, for each month of the reporting period; and
- (h) a brief progress report on the implementation over the reporting period of actions specified in PRP100.

R5.3 The Annual System Performance Report must be presented in a format approved in writing by the EPA.

R5.4 The requirements of R5.2 (d), (e), (f) and (g) apply to the part of the reporting period beginning three months after the date the licence is varied to include this condition.

General conditions

G1 Copy of licence kept at the premises

G1.1 A copy of this licence must be kept at the premises 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.

Note: For the purposes of this condition, "the premises" refers to each Sewage Treatment Plant(s) described in condition A2.1.

G2 Signage

- G2.1 The location of EPA point number(s) 1, 2, 3, 4, 5 and 6 must be clearly marked by signs that indicate the point identification number used in this licence and be located as close as practical to the point.

G3 Contact number for incidents and responsible employees

- G3.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:
- (a) respond at all times to incidents relating to the premises; and
 - (b) contact the licensee's senior employees or agents authorised at all times to:
 - (i) speak on behalf of the licensee; and
 - (ii) provide any information or document required under this licence.
- G3.2 The licensee is to inform the EPA in writing of the appointment of any subsequent contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.

G4 Clean-up

- G4.1 In the event of an overflow or bypass that harms or is likely to harm the environment, the licensee must use all practicable measures to minimise the impact of the overflow or bypass on the environment and public health. These measures are to be implemented as soon as practical after the licensee or one of the licensee's employees or agents becomes aware of the overflow or bypass.

Pollution studies and reduction programs

Completed Pollution Reduction Programs

PRP-ID	Details of PRP	Completion date
PRP-1	Assessment of Options to Reduce the Risks of Sewage Overflows This PRP was an assessment of options, and presentation of recommendations, which can be used to prevent overflows and to enable effective responses to emergencies that impact on the sewerage system. This PRP was due on 31 March 1999.	31 March 1999
PRP-2	Preparation of Contingency Plan The preferred options as identified in PRP-1 were required to be incorporated into a contingency plan for the sewerage reticulation system. This PRP was	31 May 1999

	due 31 May 1999	
PRP 3	Investigation of Microbial Wastewater Quality of Reuse Waters The licensee must monitor the quality of the wastewaters being transferred to Rixon's Farm and the waters in Rixon's Effluent Pond for reuse.	31 October 2003
PRP 101	Incident Notification Protocol Develop and implement an effective protocol to ensure all relevant organizations and any affected communities are notified of overflows and STP bypasses that have caused or are likely to cause adverse impacts on the environment or public health.	October 2003

PRP100 Sewer Overflow Investigations Report

- 100.1 The objective of this PRP is to identify overflows from the sewage reticulation system that pose a significant risk of harm to the environment or public health, and to identify management priorities and actions required to reduce this risk.
- 100.2 The licensee must prepare a Sewer Overflow Investigations Report for the premises' reticulation system. The report must include but need not be limited to:
- identification of the location of all designed overflow points and other frequent overflow points within the reticulation system and an assessment of the likelihood of overflows from these points;
 - assessment of the significance of impacts on the environment and public health resulting from these overflows;
 - evaluation and ranking of the resultant risk to the environment and public health from these overflows; and
 - identification of management priorities and actions to reduce the risk of harm to the environment and public health.
- 100.3 With regard to the identification of actions to reduce the risk of harm to the environment and public health, as required by condition 100.2(d), the licensee must consider the effects of any actions that improve the performance of the reticulation system with respect to the performance of the sewage treatment plant, for example with respect to the frequency and volume of bypasses or overflows from the sewage treatment plant, to ensure that the actions minimise the potential environmental and public health impact of discharges from the whole of the premises.
- 100.4 The report must also include the identification of any sewage pumping stations within the premises that are not capable of meeting a condition prohibiting dry weather overflows, including reasons why any sewage pumping station is not capable of meeting such a condition and whether it should be upgraded.
- 100.5 This report is to be submitted to the EPA in writing by July 2007.
- ~~100.6 Nothing in this PRP is to be construed as authorising pollution of waters or a discharge to Glass P or S waters.~~

Notes:

- (1) If this requirement is included on a number of sewage treatment system licences held by the licensee, a single report may be submitted to the EPA provided that it meets the requirements relating to all of the licences.
- (2) The requirement to prepare this report does not affect the requirement to comply with any other condition of this licence.
- (3) It is the EPA's intention to include, at some point in the future, a licence condition prohibiting dry weather overflows from those sewage pumping stations that have been identified as being capable of meeting such a condition. This would be consistent with the requirement for proper and efficient maintenance and operation of the system.
- (4) Progress reports on the implementation over the reporting period of actions specified in PRP100 are required in the Annual System Performance Report under condition R5 of this licence.

Special conditions

E1 Not applicable.

Dictionary

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand

CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.
flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
industrial waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
inert waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997

premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
reprocessing of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B.
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Special Dictionary

ug/L	Means micrograms per litre.
access chamber	a structure constructed to provide physical access to sewer pipes. Also known as a manhole.
approved	Means approved in writing by the EPA. The EPA's approval may be given unconditionally, or subject to conditions.
Biosolids	Has the same meaning as in Schedule 1, Part 3 of the <i>Protection of the Environment Operations Act 1997</i> .
Biosolids Guidelines	Means the "Environmental Guidelines: Use and disposal of biosolids products" published by the EPA in October 1997, or any subsequently updated guidelines which replace this publication.
bypass	Means circumstances where sewage has been received at the sewage treatment plant but is discharged from the plant without it being treated, processed or reprocessed by means of any or all of the designed treatment processes of the plant. A new bypass event is defined as a bypass that commences at least 24 hours after the end of the previous bypass.

cfu	Means colony forming units
class P waters	Has the same meaning as Clause 8 of the Clean Waters Regulation 1972.
class S waters	Has the same meaning as Clause 8 of the Clean Waters Regulation 1972.
condition	Means a condition of this licence.
designed overflow structure	Means a designed structure (excluding access chambers) in the reticulation system which operates as a relief to allow sewage to discharge at a planned location or a sewage pumping station, but does not include a bypass from a sewage treatment plant.
designed overflow	Means an overflow from a designed overflow structure.
dry weather bypass	Means a bypass that occurs when the flow rate of sewage at the inflow point of the STP does not exceed the flow rate specified in M7.2.
dry weather overflow	Means an overflow that is not a wet weather overflow.
dry weather sewage treatment plant discharge	Means a discharge of sewage or effluent from the STP that occurs when the flow rate of sewage at the inflow point of the STP does not exceed the flow rate specified in M7.2
effluent	Means sewage that has received all of the designed treatment processes at the sewage treatment plant.
fc	Means faecal coliforms expressed in colony forming units per 100mL.
Group C waste	Has the same meaning as in Part 3 of Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> .
ISO	Means International Standards Organisation.
kL	Means kilolitre.
L/s	Means litres per second.
metal-A	Means the following metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc.
mL	Means millilitres.
ML	Means megalitres.
offensive odour	Has the same meaning as in the <i>Protection of the Environment Operations Act 1997</i> .
overflow	Is a discharge of untreated or partially treated sewage from the sewage treatment system.
reticulation system	Means that part of the sewage treatment system owned and operated by the licensee which collects and transports sewage to the sewage treatment plant and includes all sewer pipes (whether greater or less than 300mm diameter), sewer rising mains, access chambers, vent shafts, designed overflow structures, sewage ejection units and sewage pumping stations, but does not include the sewage treatment plant.
sewage	Means untreated liquid waste received in the reticulation system.
sewage ejection unit	Is a pump intended to control the transport of sewage from premises normally occupied by no more than 10 persons, or of an average daily flow of sewage not exceeding 2,000 litres through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant.
sewage products	Means any by-product of the treatment processes and includes biosolids, raw sludge, liquid sludge, thickened sludge, digested sludge, screenings and grit.

sewage pumping station (SPS)	Is a structure which controls the transport of sewage through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant, but does not include a sewage ejection unit.
sewage treatment plant (STP)	Is a facility at which sewage is stored and treated following delivery from the reticulation system prior to discharge, and includes discharge structures and STP bypass points.
sewage treatment system	Means the reticulation system and the sewage treatment plant used for the transport, treatment and discharge of effluent and sewage.
Trade waste agreements	Means agreements reached between the licensee and industrial and commercial customers to restrict the amount of toxic and other potentially harmful substances discharged to the reticulation system.
TRC	Means total residual chlorine.
waters	Has the same meaning as in the <i>Protection of the Environment Operations Act 1997</i> .
wet weather bypass	Means a bypass that occurs when the flow rate of sewage at the inflow point of the STP equals or exceeds the rate specified in condition M7.2.
wet weather overflow	A wet weather overflow is an overflow where the probable cause is rainfall.

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition - 26-Feb-2006

Licence Variation

Section 58(5) Protection of the Environment Operations Act 1997

End Notes

1	Licence varied by notice V/M upgrade, issued on 08-Jul-2000, which came into effect on 08-Jul-2000.
2	Licence varied by notice 1006561, issued on 27-Jun-2002, which came into effect on 22-Jul-2002.
3	Licence varied by notice 1029139, issued on 14-Aug-2003, which came into effect on 08-Sep-2003.
4	EPA Condition ID S40934 amended 13-08-04
5	Licence varied by notice 1045021, issued on 15-Apr-2005, which came into effect on 10-May-2005.
6	Licence varied by change to DEC Region allocation, issued on 24-Feb-2006, which came into effect on 24-Feb-2006.

WORKCOVER RECORDS



Our Ref: D12/105530
Your Ref: James Boyle

13 August 2012

Attention: James Boyle
Coffey Environments
118 Auburn St
Wollongong NSW 2500

Dear Mr Boyle,

RE SITE: 1614 Tathra Rd Bega NSW

I refer to your site search request received by WorkCover NSW on 23 July 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely


Brent Jones
Senior Licensing Officer
Dangerous Goods Team

Coffey Wollongong RECEIVED	
20 AUG 2012	
Job No.	Action
Rec'd by	

WorkCover NSW
92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

GROUNDWATER BORE SEARCH

Groundwater Works Summary

For information on the meaning of fields please see [Glossary](#)

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Work Requested -- GW059274

Works Details [\(top\)](#)

GROUNDWATER NUMBER GW059274
LIC-NUM
AUTHORISED-PURPOSES
INTENDED-PURPOSES IRRIGATION
WORK-TYPE Bore
WORK-STATUS Test Hole
CONSTRUCTION-METHOD Cable Tool
OWNER-TYPE Private
COMMENCE-DATE
COMPLETION-DATE 1983-03-01
FINAL-DEPTH (metres) 39.50
DRILLED-DEPTH (metres) 39.50
CONTRACTOR-NAME
DRILLER-NAME
PROPERTY
GWMA
GW-ZONE
STANDING-WATER-LEVEL
SALINITY
YIELD

Site Details [\(top\)](#)

REGION 10 - SYDNEY SOUTH COAST
RIVER-BASIN 219 - BEGA RIVER
AREA-DISTRICT
CMA-MAP 8824-1S
GRID-ZONE 55/3
SCALE 1:25,000
ELEVATION
ELEVATION-SOURCE (Unknown)
NORTHING 5936266.00
EASTING 755931.00
LATITUDE 36 41' 5"
LONGITUDE 149 51' 51"
GS-MAP 0089D3

AMG-ZONE 55
 COORD-SOURCE GD.,ACC.MAP
 REMARK

Form-A [\(top\)](#)

COUNTY AUCKLAND
 PARISH BEGA
 PORTION-LOT-DP 10

Licensed [\(top\)](#)

no details

Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;
 ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE- NO	PIPE- NO	COMPONENT- CODE	COMPONENT- TYPE	DEPTH- FROM (metres)	DEPTH- TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1	1	Opening	Screen	39.50	39.50	0		1	SL: 0mm; A: 0mm

Water Bearing Zones [\(top\)](#)

FROM- DEPTH (metres)	TO- DEPTH (metres)	THICKNESS (metres)	ROCK-CAT- DESC	S- W- L	D- D- L	YIELD	TEST- HOLE- DEPTH (metres)	DURATION	SALINITY
6.00	39.50	33.50	Unconsolidated						Good

Drillers Log [\(top\)](#)

FROM	TO	THICKNESS	DESC	GEO- MATERIAL	COMMENT
0.00	0.60	0.60	Topsoil		
0.60	8.00	7.40	Sand Silty Water Bearing		
8.00	13.50	5.50	Sand Coarse Water Bearing		
13.50	25.00	11.50	Mud Silty Marine Water Bearing		
25.00	38.00	13.00	Sand Grey Coarse Some Small Gravel Water Supply		
38.00	39.50	1.50	Sand Grey Water Bearing		
39.50	39.51	0.01	Rock		

Warning To Clients: This raw data has been supplied to the Department of Infrastructure, Planning and Natural Resources (DIPNR) by drillers, licensees and other sources. The DIPNR does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

Groundwater Works Summary

For information on the meaning of fields please see [Glossary](#)
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Work Requested -- GW039011

Works Details [\(top\)](#)

GROUNDWATER NUMBER GW039011
LIC-NUM
AUTHORISED-PURPOSES
INTENDED-PURPOSES MONITORING BORE
WORK-TYPE Bore
WORK-STATUS Equipped - bore used for obs
CONSTRUCTION-METHOD Cable Tool
OWNER-TYPE NSW Office of Water
COMMENCE-DATE
COMPLETION-DATE 1969-09-01
FINAL-DEPTH (metres) 11.70
DRILLED-DEPTH (metres) 16.60
CONTRACTOR-NAME
DRILLER-NAME
PROPERTY
GWMA
GW-ZONE
STANDING-WATER-LEVEL
SALINITY
YIELD

Site Details [\(top\)](#)

REGION 10 - SYDNEY SOUTH COAST
RIVER-BASIN 219 - BEGA RIVER
AREA-DISTRICT
CMA-MAP 8824-1S
GRID-ZONE 55/3
SCALE 1:25,000
ELEVATION
ELEVATION-SOURCE R.L. at Surface
NORTHING 5935775.00
EASTING 756109.00
LATITUDE 36 41' 21"
LONGITUDE 149 51' 59"
GS-MAP 0089D3

AMG-ZONE 55
 COORD-SOURCE Surveyed
 REMARK

Form-A [\(top\)](#)

COUNTY AUCKLAND
 PARISH BEGA
 PORTION-LOT-DP Rd Adj 3//1101354

Licensed [\(top\)](#)

no details

Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;
 ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE- NO	PIPE- NO	COMPONENT- CODE	COMPONENT- TYPE	DEPTH- FROM (metres)	DEPTH- TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1		Backfill	Backfill	11.70	16.60	0			
1		Casing	Casing Protector	-0.14	0.00	0			(Unknown)
1	1	Casing	P.V.C.	0.00	11.70	76			(Unknown)
1	1	Opening	Slots	9.30	11.70	76		1	Slotted On Site; SL: 0mm; A: 0mm
1	1	Annulus	(Unknown)		0.00	0			(Unknown)

Water Bearing Zones [\(top\)](#)

FROM- DEPTH (metres)	TO- DEPTH (metres)	THICKNESS (metres)	ROCK-CAT- DESC	S- W-L	D- D- L	YIELD	TEST- HOLE- DEPTH (metres)	DURATION	SALINITY
9.10	12.10	3.00	Unconsolidated	4.80					0-500 ppm

Drillers Log [\(top\)](#)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	0.30	0.30	Topsoil Grey		
0.30	1.52	1.22	Soil Black		
1.52	3.05	1.53	Dirt Grey		
3.05	4.57	1.52	Loam Grey Sandy		
4.57	6.10	1.53	Sand Fine		
6.10	9.14	3.04	Sand Coarse		
9.14	12.19	3.05	Sand Grey Fine-medium Water Bearing		
12.19	13.72	1.53	Sand Grey Fine Silty		

13.72	16.15	2.43	Sand Grey Clay
16.15	16.46	0.31	Shell Clay Sand
16.46	16.61	0.15	Granite

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Groundwater Works Summary

For information on the meaning of fields please see [Glossary](#)

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Work Requested -- GW039010

Works Details [\(top\)](#)

GROUNDWATER NUMBER GW039010
LIC-NUM
AUTHORISED-PURPOSES
INTENDED-PURPOSES MONITORING BORE
WORK-TYPE Bore
WORK-STATUS Equipped - bore used for obs
CONSTRUCTION-METHOD Cable Tool
OWNER-TYPE NSW Office of Water
COMMENCE-DATE
COMPLETION-DATE 1969-09-01
FINAL-DEPTH (metres) 45.80
DRILLED-DEPTH (metres) 47.20
CONTRACTOR-NAME
DRILLER-NAME
PROPERTY
GWMA
GW-ZONE
STANDING-WATER-LEVEL
SALINITY
YIELD

Site Details [\(top\)](#)

REGION 10 - SYDNEY SOUTH COAST
RIVER-BASIN 219 - BEGA RIVER
AREA-DISTRICT
CMA-MAP 8824-1S
GRID-ZONE 55/3
SCALE 1:25,000
ELEVATION
ELEVATION-SOURCE R.L. at Surface
NORTHING 5935808.00
EASTING 756211.00
LATITUDE 36 41' 20"
LONGITUDE 149 52' 3"
GS-MAP 0089D3

AMG-ZONE 55
 COORD-SOURCE Surveyed
 REMARK

Form-A [\(top\)](#)

COUNTY AUCKLAND
 PARISH BEGA
 PORTION-LOT-DP Rd Adj 3//1101354

Licensed [\(top\)](#)

no details

Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;
 ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE- NO	PIPE- NO	COMPONENT- CODE	COMPONENT- TYPE	DEPTH- FROM (metres)	DEPTH- TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1		Backfill	Backfill	45.80	47.20	0			
1		Casing	Casing Protector	-0.09	0.00	0			(Unknown)
1	1	Casing	P.V.C.	0.00	45.80	76			(Unknown)
1	1	Opening	Slots	39.70	45.80	76		1	Slotted On Site; SL: 0mm; A: 0mm
1	1	Opening	Screen	40.20	46.90	0		2	SL: 0mm; A: 0mm
1	1	Annulus	(Unknown)		0.00	0			(Unknown)

Water Bearing Zones [\(top\)](#)

FROM- DEPTH (metres)	TO- DEPTH (metres)	THICKNESS (metres)	ROCK-CAT- DESC	S- W-L	D- D- L	YIELD	TEST- HOLE- DEPTH (metres)	DURATION	SALINITY
33.50	46.90	13.40	Unconsolidated	4.10		45.47			(Unknown)

Drillers Log [\(top\)](#)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	0.30	0.30	Topsoil Grey		
0.30	7.62	7.32	Sand Fine Silty		
7.62	12.19	4.57	Sand Coarse Dry		
12.19	13.72	1.53	Sand Black Fine		
12.19	13.72	1.53	Clay Bands Black		
13.72	33.53	19.81	Sand Grey Fine Dry		
33.53	46.94	13.41	Sand Grey Coarse Gravel Large Water Supply		

46.94 47.24 0.30 Granite

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Groundwater Works Summary

For information on the meaning of fields please see [Glossary](#)

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Work Requested -- GW039009

Works Details [\(top\)](#)

GROUNDWATER NUMBER GW039009
LIC-NUM
AUTHORISED-PURPOSES
INTENDED-PURPOSES MONITORING BORE
WORK-TYPE Bore
WORK-STATUS Equipped - bore used for obs
CONSTRUCTION-METHOD Cable Tool
OWNER-TYPE NSW Office of Water
COMMENCE-DATE
COMPLETION-DATE 1969-09-01
FINAL-DEPTH (metres) 11.20
DRILLED-DEPTH (metres) 18.90
CONTRACTOR-NAME
DRILLER-NAME
PROPERTY
GWMA
GW-ZONE
STANDING-WATER-LEVEL
SALINITY
YIELD

Site Details [\(top\)](#)

REGION 10 - SYDNEY SOUTH COAST
RIVER-BASIN 219 - BEGA RIVER
AREA-DISTRICT
CMA-MAP 8824-1S
GRID-ZONE 55/3
SCALE 1:25,000
ELEVATION
ELEVATION-SOURCE R.L. at Surface
NORTHING 5935977.00
EASTING 756321.00
LATITUDE 36 41' 14"
LONGITUDE 149 52' 7"
GS-MAP 0089D3

AMG-ZONE 55
 COORD-SOURCE Surveyed
 REMARK

Form-A [\(top\)](#)

COUNTY AUCKLAND
 PARISH BEGA
 PORTION-LOT-DP 48//1127587

Licensed [\(top\)](#)

no details

Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;
 ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE- NO	PIPE- NO	COMPONENT- CODE	COMPONENT- TYPE	DEPTH- FROM (metres)	DEPTH- TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1		Backfill	Backfill	11.20	18.90	0			
1		Casing	Casing Protector	0.00	0.00	0			(Unknown)
1	1	Casing	P.V.C.	0.00	11.20	76			(Unknown)
1	1	Opening	Slots	8.70	11.10	76		1	Slotted On Site; SL: 0mm; A: 0mm
1	1	Annulus	(Unknown)		0.00	0			(Unknown)

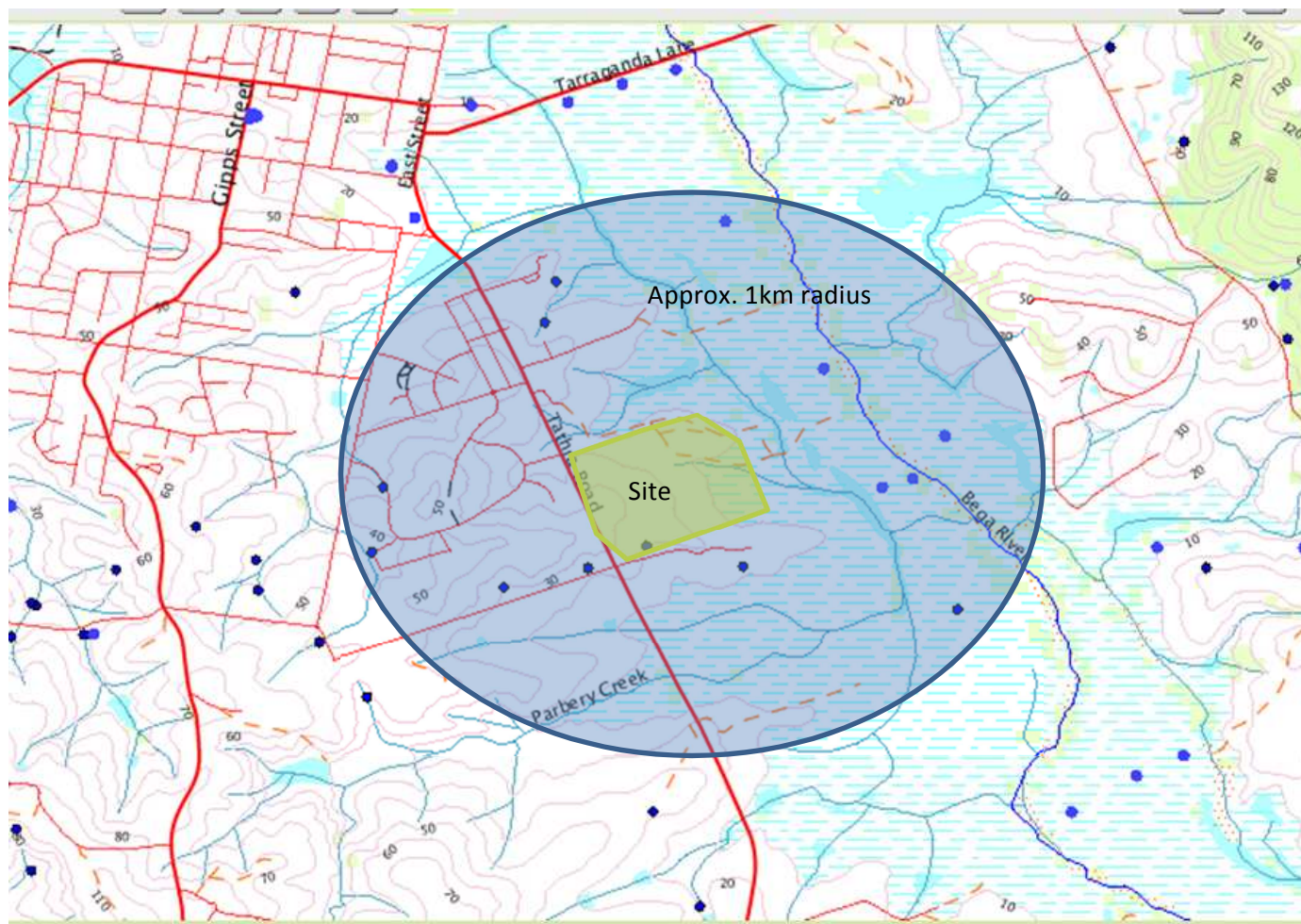
Water Bearing Zones [\(top\)](#)

FROM- DEPTH (metres)	TO- DEPTH (metres)	THICKNESS (metres)	ROCK-CAT- DESC	S- W-L	D- D- L	YIELD	TEST- HOLE- DEPTH (metres)	DURATION	SALINITY
6.10	10.70	4.60	Unconsolidated	5.60					(Unknown)

Drillers Log [\(top\)](#)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	1.52	1.52	Topsoil Grey		
1.52	6.10	4.58	Silt Grey Fine Sandy Dry		
6.10	10.67	4.57	Sand Coarse Gravel Water Bearing		
10.67	15.24	4.57	Clay Grey Fine Sandy		
15.24	18.29	3.05	Clay Grey Coarse Sandy		
18.29	18.75	0.46	Granite Decomposed		
18.75	18.90	0.15	Granite		

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Symbols & map layers

-  Towns
-  Groundwater Bores
-  Catchment Management Authority boundaries
-  Major rivers

Topographic base map:

-  Primary/arterial road
-  Motorway/freeway
-  Railway
-  Runway
-  Contour
-  Background

There are hidden layers - see 'Map layer control' tab

Groundwater Works Summary

For information on the meaning of fields please see [Glossary](#)
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Work Requested -- GW105859

Works Details [\(top\)](#)

GROUNDWATER NUMBER	GW105859
LIC-NUM	10CA101458
AUTHORISED-PURPOSES	IRRIGATION
INTENDED-PURPOSES	IRRIGATION
WORK-TYPE	Bore
WORK-STATUS	
CONSTRUCTION-METHOD	
OWNER-TYPE	
COMMENCE-DATE	
COMPLETION-DATE	2004-07-08
FINAL-DEPTH (metres)	39.00
DRILLED-DEPTH (metres)	39.00
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	RIXON
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	3.90
SALINITY	
YIELD	10.00

Site Details [\(top\)](#)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	219 - BEGA RIVER
AREA-DISTRICT	
CMA-MAP	8824-1S
GRID-ZONE	55/3
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	(Unknown)
NORTHING	5936879.00
EASTING	755624.00
LATITUDE	36 40' 46"
LONGITUDE	149 51' 38"
GS-MAP	

AMG-ZONE 55
COORD-SOURCE
REMARK

Form-A [\(top\)](#)

COUNTY AUCKLAND
PARISH BEGA
PORTION-LOT-DP 6//1060970

Licensed [\(top\)](#)

COUNTY AUCKLAND
PARISH BEGA
PORTION-LOT-DP 6 1060970

Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;
ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE- NO	PIPE- NO	COMPONENT- CODE	COMPONENT- TYPE	DEPTH- FROM (metres)	DEPTH- TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1		Hole	Hole	0.00	39.00	172			Rotary
1	1	Casing	PVC Class 9	-0.30	39.00	100			Glued; Seated on Bottom
1	1	Opening	Slots - Vertical	29.80	39.00	100			PVC Class 9; SL: 80mm; A: 3mm
1		Annulus	Waterworn/Rounded	2.00	5.00				Graded; GS: 24- 39mm

Water Bearing Zones [\(top\)](#)

FROM- DEPTH (metres)	TO-DEPTH (metres)	THICKNESS (metres)	ROCK- CAT- DESC	S- W-L	D- D- L	YIELD	TEST-HOLE- DEPTH (metres)	DURATION	SALINITY
9.10	10.60	1.50							
27.40	39.00	11.60		3.90		10.00			

Drillers Log [\(top\)](#)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	9.10	9.10	BLACK LOAM		
9.10	10.60	1.50	RED SAND		
10.60	27.40	16.80	BLACK SANDY LOAM		

27.40 39.00 11.60

MED. GREY SAND AND GRAVEL

Warning To Clients: This raw data has been supplied to the Department of Infrastructure, Planning and Natural Resources (DIPNR) by drillers, licensees and other sources. The DIPNR does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

Appendix B

Site Photographs

**Preliminary Contamination Assessment,
Proposed Bega Hospital, 1614 Tathra Rd, Bega, NSW**



Photograph 1: Looking northeast across the site from the centre of the site.



Photograph 2: Looking southeast towards granodiorite outcrop.



Photograph 3: Looking east towards the centre of the site. Note the granodiorite boulders.



Photograph 4: Looking north towards the former silage pit in the northeastern corner of the site.



Photograph 5: Looking south through the silage pit in the NE area of the site.



Photograph 6: Looking north towards the dumped material pile in a former silage pit excavation.



Photograph 7: Looking southeast towards the dumped material pile. Note that majority of the material appeared to be tyres, however there are a few other items (such as metal tins, timber, wire, plastic).



Photograph 8: Looking northwest towards the northern former silage pit excavation, located near the western boundary of the site.



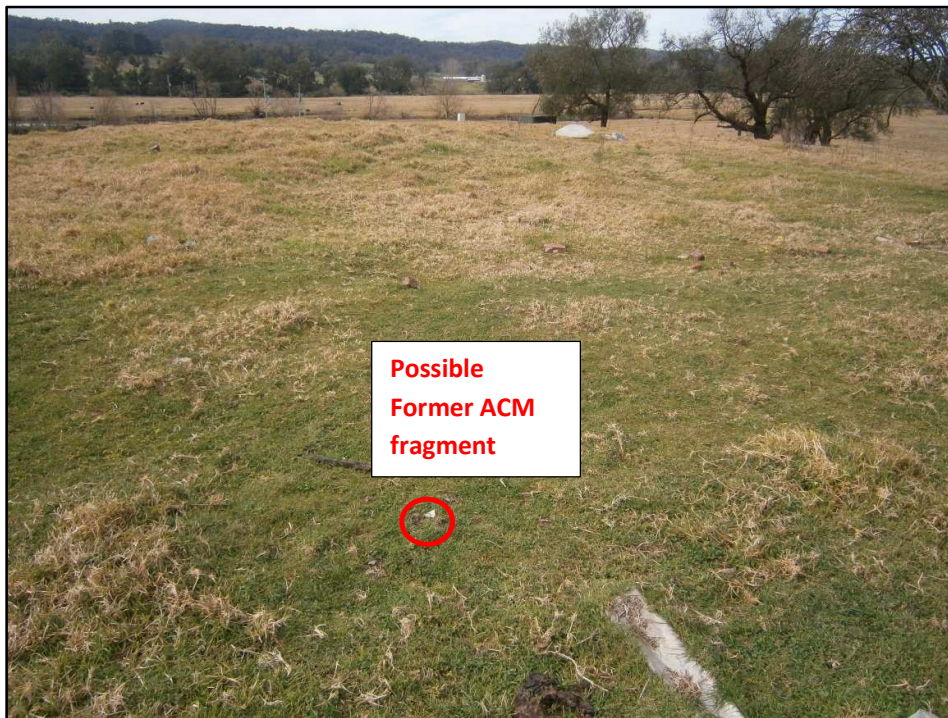
Photograph 9: Looking south towards concrete trough (foreground) and water tank (background).



Photograph 10: Looking south towards the dam in the southern portion of the site.



Photograph 11: Looking south towards quarried granodiorite (to the north of the site).



Photograph 12: Looking east towards the disturbed area approximately 150m to the east of the site (possible former building).

Appendix C

Borehole Logs with Explanation Sheets

**Preliminary Contamination Assessment,
Proposed Bega Hospital, 1614 Tathra Rd, Bega, NSW**

Soil Description Explanation Sheet (1 of 2)

DEFINITION:

In engineering terms soil includes every type of uncemented or partially cemented inorganic or organic material found in the ground. In practice, if the material can be remoulded or disintegrated by hand in its field condition or in water it is described as a soil. Other materials are described using rock description terms.

CLASSIFICATION SYMBOL & SOIL NAME

Soils are described in accordance with the Unified Soil Classification (UCS) as shown in the table on Sheet 2.

PARTICLE SIZE DESCRIPTIVE TERMS

NAME	SUBDIVISION	SIZE
Boulders		>200 mm
Cobbles		63 mm to 200 mm
Gravel	coarse	20 mm to 63 mm
	medium	6 mm to 20 mm
	fine	2.36 mm to 6 mm
Sand	coarse	600 μ m to 2.36 mm
	medium	200 μ m to 600 μ m
	fine	75 μ m to 200 μ m

MOISTURE CONDITION

Dry Looks and feels dry. Cohesive and cemented soils are hard, friable or powdery. Uncemented granular soils run freely through hands.

Moist Soil feels cool and darkened in colour. Cohesive soils can be moulded. Granular soils tend to cohere.

Wet As for moist but with free water forming on hands when handled.

CONSISTENCY OF COHESIVE SOILS

TERM	UNDRAINED STRENGTH s_u (kPa)	FIELD GUIDE
Very Soft	<12	A finger can be pushed well into the soil with little effort.
Soft	12 - 25	A finger can be pushed into the soil to about 25mm depth.
Firm	25 - 50	The soil can be indented about 5mm with the thumb, but not penetrated.
Stiff	50 - 100	The surface of the soil can be indented with the thumb, but not penetrated.
Very Stiff	100 - 200	The surface of the soil can be marked, but not indented with thumb pressure.
Hard	>200	The surface of the soil can be marked only with the thumbnail.
Friable	–	Crumbles or powders when scraped by thumbnail.

DENSITY OF GRANULAR SOILS

TERM	DENSITY INDEX (%)
Very loose	Less than 15
Loose	15 - 35
Medium Dense	35 - 65
Dense	65 - 85
Very Dense	Greater than 85

MINOR COMPONENTS

TERM	ASSESSMENT GUIDE	PROPORTION OF MINOR COMPONENT IN:
Trace of	Presence just detectable by feel or eye, but soil properties little or no different to general properties of primary component.	Coarse grained soils: <5% Fine grained soils: <15%
With some	Presence easily detected by feel or eye, soil properties little different to general properties of primary component.	Coarse grained soils: 5 - 12% Fine grained soils: 15 - 30%

SOIL STRUCTURE

ZONING	CEMENTING
Layers Continuous across exposure or sample.	Weakly cemented Easily broken up by hand in air or water.
Lenses Discontinuous layers of lenticular shape.	Moderately cemented Effort is required to break up the soil by hand in air or water.
Pockets Irregular inclusions of different material.	

GEOLOGICAL ORIGIN

WEATHERED IN PLACE SOILS

Extremely weathered material Structure and fabric of parent rock visible.

Residual soil Structure and fabric of parent rock not visible.

TRANSPORTED SOILS

Aeolian soil Deposited by wind.

Alluvial soil Deposited by streams and rivers.

Colluvial soil Deposited on slopes (transported downslope by gravity).

Fill Man made deposit. Fill may be significantly more variable between tested locations than naturally occurring soils.

Lacustrine soil Deposited by lakes.

Marine soil Deposited in ocean basins, bays, beaches and estuaries.

Soil Description Explanation Sheet (2 of 2)

SOIL CLASSIFICATION INCLUDING IDENTIFICATION AND DESCRIPTION

FIELD IDENTIFICATION PROCEDURES (Excluding particles larger than 60 mm and basing fractions on estimated mass)					USC	PRIMARY NAME		
COARSE GRAINED SOILS More than 50% of materials less than 63 mm is larger than 0.075 mm	(A 0.075 mm particle is about the smallest particle visible to the naked eye)	GRAVELS More than half of coarse fraction is larger than 2.36 mm	CLEAN GRAVELS (Little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes.			GW	GRAVEL
				Predominantly one size or a range of sizes with more intermediate sizes missing.			GP	GRAVEL
			GRAVELS WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML below)			GM	SILTY GRAVEL
				Plastic fines (for identification procedures see CL below)			GC	CLAYEY GRAVEL
		SANDS More than half of coarse fraction is smaller than 2.36 mm	CLEAN SANDS (Little or no fines)	Wide range in grain sizes and substantial amounts of all intermediate sizes			SW	SAND
				Predominantly one size or a range of sizes with some intermediate sizes missing.			SP	SAND
			SANDS WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML below).			SM	SILTY SAND
				Plastic fines (for identification procedures see CL below).			SC	CLAYEY SAND
FINE GRAINED SOILS More than 50% of material less than 63 mm is smaller than 0.075 mm	(A 0.075 mm particle is about the smallest particle visible to the naked eye)	SILTS & CLAYS Liquid limit less than 50	IDENTIFICATION PROCEDURES ON FRACTIONS <0.2 mm.					
			DRY STRENGTH	DILATANCY	TOUGHNESS			
			None to Low	Quick to slow	None	ML	SILT	
			Medium to High	None	Medium	CL	CLAY	
			Low to medium	Slow to very slow	Low	OL	ORGANIC SILT	
			SILTS & CLAYS Liquid limit greater than 50	Low to medium	Slow to very slow	Low to medium	MH	SILT
				High	None	High	CH	CLAY
Medium to High	None	Low to medium		OH	ORGANIC CLAY			
HIGHLY ORGANIC SOILS	Readily identified by colour, odour, spongy feel and frequently by fibrous texture.				Pt	PEAT		
• Low plasticity – Liquid Limit w _l less than 35%. • Medium plasticity – w _l between 35% and 50%. • High plasticity – w _l greater than 50%.								

• Low plasticity – Liquid Limit w_L less than 35%. • Medium plasticity – w_L between 35% and 50%. • High plasticity – w_L greater than 50%.

COMMON DEFECTS IN SOIL

TERM	DEFINITION	DIAGRAM	TERM	DEFINITION	DIAGRAM
PARTING	A surface or crack across which the soil has little or no tensile strength. Parallel or sub parallel to layering (eg bedding). May be open or closed.		SOFTENED ZONE	A zone in clayey soil, usually adjacent to a defect in which the soil has a higher moisture content than elsewhere.	
JOINT	A surface or crack across which the soil has little or no tensile strength but which is not parallel or sub parallel to layering. May be open or closed. The term 'fissure' may be used for irregular joints <0.2 m in length.		TUBE	Tubular cavity. May occur singly or as one of a large number of separate or inter-connected tubes. Walls often coated with clay or strengthened by denser packing of grains. May contain organic matter	
SHEARED ZONE	Zone in clayey soil with roughly parallel near planar, curved or undulating boundaries containing closely spaced, smooth or slickensided, curved intersecting joints which divide the mass into lenticular or wedge shaped blocks.		TUBE CAST	Roughly cylindrical elongated body of soil different from the soil mass in which it occurs. In some cases the soil which makes up the tube cast is cemented.	
SHEARED SURFACE	A near planar curved or undulating, smooth, polished or slickensided surface in clayey soil. The polished or slickensided surface indicates that movement (in many cases very little) has occurred along the defect.		INFILLED SEAM	Sheet or wall like body of soil substance or mass with roughly planar to irregular near parallel boundaries which cuts through a soil mass. Formed by infilling of open joints.	

Rock Description Explanation Sheet (1 of 2)

The descriptive terms used by Coffey are given below. They are broadly consistent with Australian Standard AS1726-1993.

DEFINITIONS: Rock substance, defect and mass are defined as follows:

Rock Substance In engineering terms rock substance is any naturally occurring aggregate of minerals and organic material which cannot be disintegrated or remoulded by hand in air or water. Other material is described using soil descriptive terms. Effectively homogenous material, may be isotropic or anisotropic.

Defect Discontinuity or break in the continuity of a substance or substances.

Mass Any body of material which is not effectively homogeneous. It can consist of two or more substances without defects, or one or more substances with one or more defects.

SUBSTANCE DESCRIPTIVE TERMS:

ROCK NAME Simple rock names are used rather than precise geological classification.

PARTICLE SIZE Grain size terms for sandstone are:
Coarse grained Mainly 0.6mm to 2mm
Medium grained Mainly 0.2mm to 0.6mm
Fine grained Mainly 0.06mm (just visible) to 0.2mm

FABRIC Terms for layering of penetrative fabric (eg. bedding, cleavage etc.) are:

Massive No layering or penetrative fabric.

Indistinct Layering or fabric just visible. Little effect on properties.

Distinct Layering or fabric is easily visible. Rock breaks more easily parallel to layering of fabric.

CLASSIFICATION OF WEATHERING PRODUCTS

Term	Abbreviation	Definition
Residual Soil	RS	Soil derived from the weathering of rock; the mass structure and substance fabric are no longer evident; there is a large change in volume but the soil has not been significantly transported.
Extremely Weathered Material	XW	Material is weathered to such an extent that it has soil properties, ie, it either disintegrates or can be remoulded in water. Original rock fabric still visible.
Highly Weathered Rock	HW	Rock strength is changed by weathering. The whole of the rock substance is discoloured, usually by iron staining or bleaching to the extent that the colour of the original rock is not recognisable. Some minerals are decomposed to clay minerals. Porosity may be increased by leaching or may be decreased due to the deposition of minerals in pores.
Moderately Weathered Rock	MW	The whole of the rock substance is discoloured, usually by iron staining or bleaching, to the extent that the colour of the fresh rock is no longer recognisable.
Slightly Weathered Rock	SW	Rock substance affected by weathering to the extent that partial staining or partial discolouration of the rock substance (usually by limonite) has taken place. The colour and texture of the fresh rock is recognisable; strength properties are essentially those of the fresh rock substance.
Fresh Rock	FR	Rock substance unaffected by weathering.

Notes on Weathering:

- AS1726 suggests the term "Distinctly Weathered" (DW) to cover the range of substance weathering conditions between XW and SW. For projects where it is not practical to delineate between HW and MW or it is judged that there is no advantage in making such a distinction, DW may be used with the definition given in AS1726.
- Where physical and chemical changes were caused by hot gasses and liquids associated with igneous rocks, the term "altered" may be substituted for "weathering" to give the abbreviations XA, HA, MA, SA and DA.

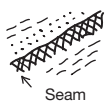
ROCK SUBSTANCE STRENGTH TERMS

Term	Abbreviation	Point Load Index, $I_{p(50)}$ (MPa)	Field Guide
Very Low	VL	Less than 0.1	Material crumbles under firm blows with sharp end of pick; can be peeled with a knife; pieces up to 30mm thick can be broken by finger pressure.
Low	L	0.1 to 0.3	Easily scored with a knife; indentations 1mm to 3mm show with firm bows of a pick point; has a dull sound under hammer. Pieces of core 150mm long by 50mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling.
Medium	M	0.3 to 1.0	Readily scored with a knife; a piece of core 150mm long by 50mm diameter can be broken by hand with difficulty.
High	H	1 to 3	A piece of core 150mm long by 50mm can not be broken by hand but can be broken by a pick with a single firm blow; rock rings under hammer.
Very High	VH	3 to 10	Hand specimen breaks after more than one blow of a pick; rock rings under hammer.
Extremely High	EH	More than 10	Specimen requires many blows with geological pick to break; rock rings under hammer.

Notes on Rock Substance Strength:

- In anisotropic rocks the field guide to strength applies to the strength perpendicular to the anisotropy. High strength anisotropic rocks may break readily parallel to the planar anisotropy.
- The term "extremely low" is not used as a rock substance strength term. While the term is used in AS1726-1993, the field guide therein makes it clear that materials in that strength range are soils in engineering terms.
- The unconfined compressive strength for isotropic rocks (and anisotropic rocks which fall across the planar anisotropy) is typically 10 to 25 times the point load index $I_{p(50)}$. The ratio may vary for different rock types. Lower strength rocks often have lower ratios than higher strength rocks.

Rock Description Explanation Sheet (2 of 2)

COMMON DEFECTS IN ROCK MASSES		Diagram	Map Symbol	Graphic Log (Note 1)	DEFECT SHAPE	TERMS
Term	Definition				Planar	The defect does not vary in orientation
Parting	A surface or crack across which the rock has little or no tensile strength. Parallel or sub parallel to layering (eg bedding) or a planar anisotropy in the rock substance (eg, cleavage). May be open or closed.		20 Bedding 20 Cleavage		Curved	The defect has a gradual change in orientation
Joint	A surface or crack across which the rock has little or no tensile strength, but which is not parallel or sub parallel to layering or planar anisotropy in the rock substance. May be open or closed.		60		Undulating	The defect has a wavy surface
Sheared Zone (Note 3)	Zone of rock substance with roughly parallel near planar, curved or undulating boundaries cut by closely spaced joints, sheared surfaces or other defects. Some of the defects are usually curved and intersect to divide the mass into lenticular or wedge shaped blocks.		35		Stepped	The defect has one or more well defined steps
Sheared Surface (Note 3)	A near planar, curved or undulating surface which is usually smooth, polished or slickensided.		40		Irregular	The defect has many sharp changes of orientation
Crushed Seam (Note 3)	Seam with roughly parallel almost planar boundaries, composed of disoriented, usually angular fragments of the host rock substance which may be more weathered than the host rock. The seam has soil properties.		50		ROUGHNESS TERMS	
Infilled Seam	Seam of soil substance usually with distinct roughly parallel boundaries formed by the migration of soil into an open cavity or joint, infilled seams less than 1mm thick may be described as veneer or coating on joint surface.		65		Slickensided	Grooved or striated surface, usually polished
Extremely Weathered Seam	Seam of soil substance, often with gradational boundaries. Formad by weathering of the rock substance in place.		32		Polished	Shiny smooth surface
					Smooth	Smooth to touch. Few or no surface irregularities
					Rough	Many small surface irregularities (amplitude generally less than 1mm). Feels like fine to coarse sand paper.
					Very Rough	Many large surface irregularities (amplitude generally more than 1mm). Feels like, or coarser than very coarse sand paper.
					COATING TERMS	
					Clean	No visible coating
					Stained	No visible coating but surfaces are discoloured
					Veneer	A visible coating of soil or mineral, too thin to measure; may be patchy
					Coating	A visible coating up to 1mm thick. Thicker soil material is usually described using appropriate defect terms (eg, infilled seam). Thicker rock strength material is usually described as a vein.
					BLOCK SHAPE TERMS	
					Blocky	Approximately equidimensional
					Tabular	Thickness much less than length or width
					Columnar	Height much greater than cross section

Notes on Defects:

1. Usually borehole logs show the true dip of defects and face sketches and sections the apparent dip.
2. Partings and joints are not usually shown on the graphic log unless considered significant.
3. Sheared zones, sheared surfaces and crushed seams are faults in geological terms.

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Principal:

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Test pit location: **1614 Tathra Rd, Bega**

Excavation No. **CBH01**

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

Date started: **22.8.2012**

Date completed: **22.8.2012**

Logged by: **JB**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755390 m R.L. Surface: excavation dimensions: m long m wide Northing: 5935469 m datum:

excavation information					material substance							
method	penetration	support	water	notes samples, tests, etc	depth RL	graphic log	classification symbol	material	moisture condition	consistency/density index	pocket penetrometer kPa	structure and additional observations
HA	1 2 3	NONE OBSERVED		E	0.5		GP	Sandy GRAVEL: Fine grained, poorly sorted, dark brown/brown/grey/white, medium to coarse grained sand. ... becoming brown/orange from 0.3m.	M	L	100 200 300 400	RESIDUAL No odour
				E	1.0			Test pit CBH01 terminated at 0.65m		L/MD		CBH01 terminated at 0.65m due to practical refusal on weathered granodiorite.
				E	1.5							
					2.0							

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet W _p plastic limit W _L liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Principal:

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Test pit location: **1614 Tathra Rd, Bega**

Excavation No. **CBH02**

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

Date started: **22.8.2012**

Date completed: **22.8.2012**

Logged by: **JB**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755369 m R.L. Surface: excavation dimensions: m long m wide Northing: 5936053 m datum:

excavation information						material substance						
method	penetration	support	water	notes samples, tests, etc	depth RL	graphic log	classification symbol	material	moisture condition	consistency/density index	pocket penetrometer kPa	structure and additional observations
HA	1 2 3			E			ML	TOPSOIL; Gravelly SILT: Low to medium plasticity, brown, fine to medium grained, sub angular gravel, medium to coarse grained sand.	<WL	S		TOPSOIL No odour
				E			GW	Sandy GRAVEL: Fine grained, poorly sorted, dark brown/brown/grey/white, medium to coarse grained sand.	M	L		RESIDUAL No odour
					0.5			Test pit CBH02 terminated at 0.4m				CBH02 terminated at 0.4m due to practical refusal on weathered granodiorite.
					1.0							
					1.5							
					2.0							

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet W _p plastic limit W _L liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Date started: **22.8.2012**

Principal:

Date completed: **22.8.2012**

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Logged by: **JB**

Test pit location: **1614 Tathra Rd, Bega**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755249 m R.L. Surface:
excavation dimensions: m long m wide Northing: 59355533 m datum:

excavation information						material substance									
method	penetration			support	water	notes samples, tests, etc	depth metres		graphic log	classification symbol	material	moisture condition	consistency/ density index	pocket penetro- meter kPa	structure and additional observations
HA	1	2	3	NONE OBSERVED	E	RL	0.5		SM	TOPSOIL; Silty SAND: Fine to medium grained, brown, trace of coarse grained sand and fine grained gravel, rootlets. ... increasing sand content.	M	L	100 200 300 400	TOPSOIL No odour	
			E												
									GP	Sandy GRAVEL: Fine to medium grained moderately sorted, brown, medium to coarse grained sand, some silt. Test pit CBH03 terminated at 0.55m				RESIDUAL No odour CBH03 terminated at 0.55m due to practical refusal on weathered granodiorite.	
							1.0								
							1.5								
							2.0								

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet W _p plastic limit W _L liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Principal:

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Test pit location: **1614 Tathra Rd, Bega**

Excavation No. **CBH04**

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

Date started: **22.8.2012**

Date completed: **22.8.2012**

Logged by: **JB**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755322 m R.L. Surface:

excavation dimensions: m long m wide Northing: 5935544 m datum:

excavation information						material substance								
method	penetration			support	water	notes samples, tests, etc	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro- meter kPa	structure and additional observations
HA	1	2	3											

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet W _p plastic limit W _L liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Principal:

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Test pit location: **1614 Tathra Rd, Bega**

Excavation No. **CBH05**

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

Date started: **22.8.2012**

Date completed: **22.8.2012**

Logged by: **JB**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755329 m R.L. Surface: excavation dimensions: m long m wide Northing: 5935545 m datum:

excavation information						material substance								
method	penetration			support	water	notes samples, tests, etc	depth RL metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro- meter kPa	structure and additional observations
HA	1	2	3											
			</											

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet Wp plastic limit WL liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Principal:

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Test pit location: **1614 Tathra Rd, Bega**

Excavation No. **CBH06**

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

Date started: **22.8.2012**

Date completed: **22.8.2012**

Logged by: **JB**

Checked by: **GB**

equipment type and model:					Pit Orientation:					Easting: 755182 m					R.L. Surface:				
excavation dimensions:					m long m wide					Northing: 5935722 m					datum:				
excavation information						material substance													
method	penetration			support	water	notes samples, tests, etc	depth RL metres		graphic log	classification symbol	material	moisture condition	consistency/ density index	pocket penetro- meter kPa	structure and additional observations				
HA	1	2	3																
						E				ML	TOPSOIL; Sandy SILT: Low to medium plasticity, brown, fine to medium grained sand, rootlets noted.	<WL	S		TOPSOIL No odour				
										SW	Gravelly SAND: Medium to coarse grained, brown/orange, fine grained, sub angular to angular, poorly sorted gravel.	M	L		RESIDUAL No odour				
						E	0.5												
						E													
							1.0				Test pit CBH06 terminated at 0.9m				CBH06 terminated at 0.9m due to slumping sands.				
							1.5												
							2.0												

Sketch

method N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	support S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	notes, samples, tests U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	classification symbols and soil description based on unified classification system moisture D dry M moist W wet W _p plastic limit W _L liquid limit	consistency/density index VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Excavation No. **CBH07**

Engineering Log - Excavation

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

Client: **HEALTH INFRASTRUCTURE**

Date started: **22.8.2012**

Principal:

Date completed: **22.8.2012**

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Logged by: **JB**

Test pit location: **1614 Tathra Rd, Bega**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755159 m R.L. Surface:
excavation dimensions: m long m wide Northing: 5935728 m datum:

excavation information						material substance						
method	penetration	support	water	notes samples, tests, etc	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro- meter kPa	structure and additional observations
HA	1 2 3	NONE OBSERVED		E			SM	Silty SAND: Medium to coarse grained, dark brown/grey, some fine grained gravel, rootlets noted.	M/W	L		RESIDUAL No odour
				E			GP	Sandy GRAVEL: Fine to medium grained, sub angular, brown/orange/grey, well sorted, medium to coarse grained sand.	M			
					0.5			Test pit CBH07 terminated at 0.3m				CBH07 terminated at 0.3m due to practical refusal on granodiorite.
					1.0							
					1.5							
					2.0							

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet W _p plastic limit W _L liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Principal:

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Test pit location: **1614 Tathra Rd, Bega**

Excavation No. **CBH08**

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

Date started: **22.8.2012**

Date completed: **22.8.2012**

Logged by: **JB**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755179 m R.L. Surface: excavation dimensions: m long m wide Northing: 5935705 m datum:

excavation information						material substance						
method	penetration	support	water	notes samples, tests, etc	depth RL metres	graphic log	classification symbol	material	moisture condition	consistency/ density index	pocket penetrometer kPa	structure and additional observations
HA	1 2 3			E				FILL; SANDY SILT: Low plasticity, brown/red, fine grained sand, high organic (decomposed timber) content.	M	VL		POSSIBLE FILL/ DECOMPOSED TIMBER No odour
				E	0.5			FILL; Silty SAND: Medium to coarse grained, brown, trace of fine grained gravel.		L		POSSIBLE FILL No odour
				E	1.0			FILL; Silty CLAY: Medium to high plasticity, dark brown/grey, with some sand, trace of white and red sand.	Wp	S/F		
				E	1.5			Test pit CBH08 terminated at 1.3m				CBH08 terminated at 1.3m due to practical refusal.
					2.0							

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet Wp plastic limit W _L liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Principal:

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Test pit location: **1614 Tathra Rd, Bega**

Excavation No. **CBH09**

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

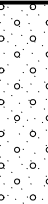
Date started: **22.8.2012**

Date completed: **22.8.2012**

Logged by: **JB**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755173 m R.L. Surface:
excavation dimensions: m long m wide Northing: 5935697 m datum:

excavation information						material substance						
method	penetration	support	water	notes samples, tests, etc	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro- meter kPa	structure and additional observations
HA	1 2 3	NONE OBSERVED		E	0.5			Gravelly SAND: Medium to coarse grained, brown/orange, fine grained, sub angular gravel.	M	L	100 200 300 400	RESIDUAL No odour
				E				Test pit CBH09 terminated at 0.55m				CBH09 terminated at 0.55m due to practical refusal on granodiorite.
					1.0							
					1.5							
					2.0							

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4  no resistance ranging to refusal water  water level on date shown  water inflow  water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet W _p plastic limit W _L liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Principal:

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Test pit location: **1614 Tathra Rd, Bega**

Excavation No. **CBH10**

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

Date started: **22.8.2012**

Date completed: **22.8.2012**

Logged by: **JB**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755180 m R.L. Surface: excavation dimensions: m long m wide Northing: 5935691 m datum:

excavation information						material substance								
method	penetration			support	water	notes samples, tests, etc	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro- meter kPa	structure and additional observations
HA	1	2	3				RL							
									ML	SILT: Medium plasticity, brown, trace of fine grained sand.	>WI	VS		ORGANIC SILT Wet on ground surface No odour
									SW	Gravelly SAND: Medium to coarse grained, grey, fine grained gravel.	M	L		RESIDUAL No odour
									SW	Sandy GRAVEL: Fine to medium grained, sub angular, poorly sorted, brown/grey, medium to coarse grained sand.				
										Test pit CBH10 terminated at 1.1m				

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet W _p plastic limit W _L liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Principal:

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Test pit location: **1614 Tathra Rd, Bega**

Excavation No. **CBH11**

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

Date started: **22.8.2012**

Date completed: **22.8.2012**

Logged by: **JB**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755152 m R.L. Surface: excavation dimensions: m long m wide Northing: 5935878 m datum:

excavation information						material substance					
method	penetration	support	water	notes samples, tests, etc	depth RL metres	graphic log	classification symbol	material	moisture condition	consistency/density index	structure and additional observations
HA	1 2 3			E			ML	TOPSOIL; Sandy SILT: Low plasticity, brown, fine grained sand, rootlets.	<W	S	TOPSOIL No odour
		NONE OBSERVED			0.5		SM	Silty SAND: Fine to coarse grained, brown/orange, trace of fine to medium grained, angular gravel.	M	L	RESIDUAL No odour
				E			SW	Gravelly SAND: Medium to coarse grained poorly sorted, orange with brown/white speckling, fine grained, sub angular gravel, some silt.			
				E	1.0			Test pit CBH11 terminated at 1m			
					1.5						
					2.0						

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet W _p plastic limit W _L liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Date started: **22.8.2012**

Principal:

Date completed: **22.8.2012**

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Logged by: **JB**

Test pit location: **1614 Tathra Rd, Bega**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755262 m R.L. Surface: excavation dimensions: m long m wide Northing: 5935782 m datum:

excavation information						material substance									
method	penetration			support	water	notes samples, tests, etc	depth metres		graphic log	classification symbol	material	moisture condition	consistency/ density index	pocket penetro- meter kPa	structure and additional observations
	1	2	3				RL				soil type: plasticity or particle characteristics, colour, secondary and minor components.			100 200 300 400	
				NONE OBSERVED	E	0.5		SM/ML	TOPSOIL; Silty SAND/ Sandy SILT: Low plasticity, fine grained, brown, rootlets noted.	M/WI	S/L				TOPSOIL No odour
								CL	Sandy CLAY: Medium plasticity, brown/orange mottled, medium to coarse grained sand, trace of fine to medium sub angular gravel.	<Wp	S				RESIDUAL No odour
					E										
					E										
					1.0		GW	Sandy GRAVEL: Fine to medium grained, brown with white and orange speckles poorly sorted, trace of clay.	M	L					
						1.5			Test pit CBH12 terminated at 1m						
					2.0										

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet Wp plastic limit WL liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Principal:

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Test pit location: **1614 Tathra Rd, Bega**

Excavation No. **CBH13**

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

Date started: **22.8.2012**

Date completed: **22.8.2012**

Logged by: **JB**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755399 m R.L. Surface: excavation dimensions: m long m wide Northing: 5935808 m datum:

excavation information					material substance									
method	penetration			support	water	notes samples, tests, etc	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro- meter kPa	structure and additional observations
HA	1	2	3				RL							
				NONE OBSERVED			0.5		ML	TOPSOIL; Silty SAND: Fine to medium grained, dark brown, rootlets noted.	M	L		TOPSOIL No odour
									CL	Gravelly CLAY: Medium plasticity, brown/pale brown/orange mottled, fine grained gravel, with some medium to coarse grained sand.	<Wp	S		RESIDUAL No odour
									GW	Sandy GRAVEL: Fine to medium grained, brown/orange with white speckles, medium to coarse grained sand.	M	L		
							1.0							
							1.5			Test pit CBH13 terminated at 1.1m				
							2.0							

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet Wp plastic limit WL liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Principal:

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Test pit location: **1614 Tathra Rd, Bega**

Excavation No. **CBH14**

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

Date started: **22.8.2012**

Date completed: **22.8.2012**

Logged by: **JB**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755486 m R.L. Surface: datum:

excavation dimensions: m long m wide Northing: 5935681 m

excavation information						material substance								
method	penetration			support	water	notes samples, tests, etc	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro- meter kPa	structure and additional observations
HA	1	2	3				RL							
				NONE OBSERVED			0.5		ML/SM	TOPSOIL; Silty SAND/ Sandy SILT Low plasticity, fine grained, brown, rootlets noted.	M/W	L/S	               	

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet Wp plastic limit WL liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Excavation No. **CBH15**

Sheet 1 of 1

Office Job No.: **ENAUBRAD01199AA**

Engineering Log - Excavation

Client: **HEALTH INFRASTRUCTURE**

Date started: **22.8.2012**

Principal:

Date completed: **22.8.2012**

Project: **PRELIMINARY CONTAMINATION ASSESSMENT**

Logged by: **JB**

Test pit location: **1614 Tathra Rd, Bega**

Checked by: **GB**

equipment type and model: Pit Orientation: Easting: 755379 m R.L. Surface:
excavation dimensions: m long m wide Northing: 5935621 m datum:

excavation information						material substance									
method	penetration			support	water	notes samples, tests, etc	depth metres		graphic log	classification symbol	material	moisture condition	consistency/ density index	pocket penetro- meter kPa	structure and additional observations
HA	1	2	3				RL				soil type: plasticity or particle characteristics, colour, secondary and minor components.			100 200 300 400	
						E			SM	TOPSOIL; Silty SAND: Fine to medium grained, dark brown, rootlets noted.	M	L			TOPSOIL No odour
									SW	Gravelly SAND: Medium to coarse grained, brown/orange, fine to medium grained, sub angular gravel, trace of sandy clay pockets.					RESIDUAL No odour
						E	0.5								
									GW	Sandy GRAVEL: Fine to medium grained, sub angular, brown/orange, with white speckling, medium to coarse grained sand, some clay.					
						E									
							1.0				Test pit CBH15 terminated at 0.8m				CBH08 terminated at 0.8m due to practical refusal on granodiorite.
							1.5								
							2.0								

Sketch

method	support	notes, samples, tests	classification symbols and soil description	consistency/density index
N natural exposure X existing excavation BH backhoe bucket B bulldozer blade R ripper E excavator	S shoring N nil penetration 1 2 3 4 no resistance ranging to refusal water water level on date shown water inflow water outflow	U ₅₀ undisturbed sample 50mm diameter U ₆₃ undisturbed sample 63mm diameter D disturbed sample V vane shear (kPa) Bs bulk sample E environmental sample R refusal	based on unified classification system moisture D dry M moist W wet Wp plastic limit WL liquid limit	VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable VL very loose L loose MD medium dense D dense VD very dense

Appendix D

Headspace Screening Results

**Preliminary Contamination Assessment,
Proposed Bega Hospital, 1614 Tathra Rd, Bega, NSW**

Photoionisation Detector Results

Client: Johnstaff Projects Pty (NSW)				Office: WOLLONGONG			
Principal:				Date: 22 and 23 August 2012			
Project: CONTAMINATION AND GROUNDWATER ASSESSMENT				By: JB			
Location: TATHRA ROAD, BEGA BEGA, NSW				Checked by: JB			
PID Serial Number: MINI RAE 2000 110-008460				Lamp Voltage: 10.6eV			
Last checked/calibrated: 22-23/8/2012				0ppm Calibration: 0			
Calibration gas type/concentration: Isobutylene/100ppm				100ppm Calibration: 100ppm			
Location Number	Test	Bore or sample probe depth (m)	Duration (mins)	Background Reading (ppm)	last reading (ppm)	Maximum Reading (ppm)	Notes
W1	HS	0.6-0.7	2	0	0	0	No odour
W2	HS	1.2-1.3	2	0	0	0	No odour
CBH1	HS	0.0-0.1	2	0	0	0	No odour
CBH1	HS	0.4-0.5	2	0	0	0	No odour
CBH1	HS	0.6-0.65	2	0	0	0	No odour
CBH2	HS	0.0-0.1	2	0	0	0	No odour
CBH2	HS	0.4-0.5	2	0	0	0	No odour
CBH3	HS	0.0-0.1	2	0	0	0	No odour
CBH3	HS	0.3-0.4	2	0	0	0	No odour
CBH3	HS	0.5-0.55	2	0	0	0	No odour
CBH4	HS	0.0-0.01	2	0	0	0	No odour
CBH4	HS	0.5-0.6	2	0	0	0	No odour
CBH4	HS	0.4-1.0	2	0	0	0	No odour
CBH5	HS	0.0-0.1	2	0	0	0	No odour
CBH5	HS	0.4-0.5	2	0	0	0	No odour
CBH6	HS	0.0-0.01	2	0	0	0	No odour
CBH6	HS	0.4-0.5	2	0	0	0	No odour
CBH6	HS	0.8-0.9	2	0	0	0	No odour
CBH7	HS	0.0-0.1	2	0	0	0	No odour
CBH7	HS	0.2-0.3	2	0	0	0	No odour
CBH8	HS	0.0-0.1	2	0	0	0	No odour
CBH8	HS	0.45-0.55	2	0	0	0	No odour
CBH8	HS	0.8-0.9	2	0	0	0	No odour
CBH8	HS	1.2-1.3	2	0	0	0	No odour
CBH9	HS	0.0-0.1	2	0	0	0	No odour
CBH9	HS	0.4-0.5	2	0	0	0	No odour

Appendix E

Laboratory Reports

**Preliminary Contamination Assessment,
Proposed Bega Hospital, 1614 Tathra Rd, Bega, NSW**

Coffey Environments Pty Ltd ACT
16 Mildura Street
Fyshwick
ACT 2609

Attention: James Boyle

Report **349362-W**
Client Reference ENAUBRAD01199AA
Received Date Aug 24, 2012

Client Sample ID			WB1	TRIP SPIKE	TRIP BLANK
Sample Matrix			Water	Water	Water
mgt-LabMark Sample No.			M12-Au22631	M12-Au22632	M12-Au22633
Date Sampled			Aug 23, 2012	Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-36 (Total)	0.1	mg/L	< 0.1	-	-
BTEX					
Benzene	0.001	mg/L	-	87%	< 0.001
Toluene	0.001	mg/L	-	110%	< 0.001
Ethylbenzene	0.001	mg/L	-	110%	< 0.001
o-Xylene	0.001	mg/L	-	110%	< 0.001
Total m+p-Xylenes	0.002	mg/L	-	110%	< 0.002
Xylenes(ortho.meta and para)	0.003	mg/L	-	110%	< 0.003
Fluorobenzene (surr.)	1	%	-	80	82
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *					
Naphthalene ^{N02}	0.02	mg/L	< 0.02	-	-
TRH C6-C10	0.02	mg/L	< 0.02	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	-	-
TRH >C10-C16	0.05	mg/L	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b)fluoranthene	0.001	mg/L	< 0.001	-	-
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	-	-
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-
Indeno(1,2,3-cd)pyrene	0.001	mg/L	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-



Client Sample ID			WB1	TRIP SPIKE	TRIP BLANK
Sample Matrix			Water	Water	Water
mgt-LabMark Sample No.			M12-Au22631	M12-Au22632	M12-Au22633
Date Sampled			Aug 23, 2012	Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit			
Phenanthrene	0.001	mg/L	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	-	-
Total PAH	0.001	mg/L	< 0.001	-	-
p-Terphenyl-d14 (surr.)	1	%	107	-	-
2-Fluorobiphenyl (surr.)	1	%	87	-	-
Organochlorine Pesticides					
4,4'-DDD	0.0001	mg/L	< 0.0001	-	-
4,4'-DDE	0.0001	mg/L	< 0.0001	-	-
4,4'-DDT	0.0001	mg/L	< 0.0001	-	-
a-BHC	0.0001	mg/L	< 0.0001	-	-
Aldrin	0.0001	mg/L	< 0.0001	-	-
b-BHC	0.0001	mg/L	< 0.0001	-	-
Chlordane	0.001	mg/L	< 0.001	-	-
d-BHC	0.0001	mg/L	< 0.0001	-	-
Dieldrin	0.0001	mg/L	< 0.0001	-	-
Endosulfan I	0.0001	mg/L	< 0.0001	-	-
Endosulfan II	0.0001	mg/L	< 0.0001	-	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	-	-
Endrin	0.0001	mg/L	< 0.0001	-	-
Endrin aldehyde	0.0001	mg/L	< 0.0001	-	-
Endrin ketone	0.0001	mg/L	< 0.0001	-	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	-	-
Heptachlor	0.0001	mg/L	< 0.0001	-	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	-	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	-	-
Methoxychlor	0.0001	mg/L	< 0.0001	-	-
Toxaphene	0.001	mg/L	< 0.001	-	-
Dibutylchlorodate (surr.)	1	%	71	-	-
Tetrachloro-m-xylene (surr.)	1	%	52	-	-
Organophosphorous Pesticides					
Bolstar	0.002	mg/L	< 0.002	-	-
Chlorpyrifos	0.002	mg/L	< 0.002	-	-
Demeton-O	0.002	mg/L	< 0.002	-	-
Diazinon	0.002	mg/L	< 0.002	-	-
Dichlorvos	0.002	mg/L	< 0.002	-	-
Disulfoton	0.002	mg/L	< 0.002	-	-
Ethion	0.002	mg/L	< 0.002	-	-
Ethoprop	0.002	mg/L	< 0.002	-	-
Fenitrothion	0.002	mg/L	< 0.002	-	-
Fensulfotthion	0.002	mg/L	< 0.002	-	-
Fenthion	0.002	mg/L	< 0.002	-	-
Merphos	0.002	mg/L	< 0.002	-	-
Methyl azinphos	0.002	mg/L	< 0.002	-	-
Methyl parathion	0.002	mg/L	< 0.002	-	-
Mevinphos	0.002	mg/L	< 0.002	-	-
Naled	0.002	mg/L	< 0.002	-	-
Phorate	0.002	mg/L	< 0.002	-	-
Ronnel	0.002	mg/L	< 0.002	-	-
Tokuthion	0.002	mg/L	< 0.002	-	-
Trichloronate	0.002	mg/L	< 0.002	-	-



Client Sample ID			WB1	TRIP SPIKE	TRIP BLANK
Sample Matrix			Water	Water	Water
mgt-LabMark Sample No.			M12-Au22631	M12-Au22632	M12-Au22633
Date Sampled			Aug 23, 2012	Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit			
Triphenylphosphate (surr.)	1	%	111	-	-
Heavy Metals					
Lead (filtered)	0.001	mg/L	< 0.001	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	-	-
Nickel (filtered)	0.001	mg/L	< 0.001	-	-
Arsenic (filtered)	0.001	mg/L	< 0.001	-	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	-	-
Chromium (filtered)	0.001	mg/L	< 0.001	-	-
Copper (filtered)	0.001	mg/L	< 0.001	-	-
Zinc (filtered)	0.001	mg/L	0.003	-	-

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * - Method: LM-LTM-ORG2010	Melbourne	Aug 24, 2012	7 Day
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: TRH C6-C36 - MGT 100A	Melbourne	Aug 24, 2012	7 Day
BTEX - Method: USEPA 8260 - MGT 350A Monocyclic Aromatic Hydrocarbons and MGT 100A	Melbourne	Aug 24, 2012	14 Day
Polycyclic Aromatic Hydrocarbons - Method: USEPA 8270 Polycyclic Aromatic Hydrocarbons	Melbourne	Aug 24, 2012	7 Day
Organochlorine Pesticides - Method: USEPA 8081 Organochlorine Pesticides	Melbourne	Aug 24, 2012	7 Day
Organophosphorous Pesticides - Method: USEPA 8141 Organophosphorus Pesticides	Melbourne	Aug 24, 2012	7 Day
Metals M8 filtered - Method: USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury	Melbourne	Aug 24, 2012	28 Day

Company Name: Coffey Environments Pty Ltd ACT
Address: 16 Mildura Street
Fyshwick
ACT 2609

Client Job No.: ENAUBRAD01199AA

Order No.:
Report #: 349362
Phone: +61 2 6216 0206
Fax: +61 2 6260 7211

Received: Aug 24, 2012 8:38 AM
Due: Aug 27, 2012
Priority: 1 Day
Contact Name: James Boyle

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	BTEX	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorous Pesticides	Acid Herbicides	Metals M8	Metals M8 filtered	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory						X										
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID												
W1 0.6-0.7	Aug 22, 2012		Soil	M12-Au22613	X	X				X	X	X	X	X		X
CBH1 0-0.1	Aug 22, 2012		Soil	M12-Au22614	X	X				X	X	X	X	X		X
CBH2 0-0.1	Aug 22, 2012		Soil	M12-Au22615	X	X				X	X	X	X	X		X
CBH3 0-0.1	Aug 23, 2012		Soil	M12-Au22616	X	X					X	X	X			
CBH4 0.5-0.6	Aug 23, 2012		Soil	M12-Au22617	X	X				X	X	X	X	X		X
CBH5 0-0.1	Aug 23, 2012		Soil	M12-Au22618	X	X					X	X	X			
CBH6 0.0-0.1	Aug 23, 2012		Soil	M12-Au22619	X	X				X	X	X	X	X		X
CBH7 0-0.1	Aug 23, 2012		Soil	M12-Au22620	X	X				X	X	X	X	X		X
CBH8 0.8-0.9	Aug 23, 2012		Soil	M12-Au22621	X	X				X	X	X	X	X		X

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Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	BTEX	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorous Pesticides	Acid Herbicides	Metals M8	Metals M8 filtered	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory						X										
CBH9 0-0.1	Aug 23, 2012		Soil	M12-Au22622	X	X				X	X	X	X	X		X
CBH10 0-0.15	Aug 23, 2012		Soil	M12-Au22623	X	X				X	X	X	X	X		X
CBH11 0-0.1	Aug 23, 2012		Soil	M12-Au22624	X	X					X	X	X			
CBH12 0-0.1	Aug 23, 2012		Soil	M12-Au22625	X	X					X	X	X			
CBH13 0-0.1	Aug 23, 2012		Soil	M12-Au22626	X	X					X	X	X			
CBH14 0-0.1	Aug 23, 2012		Soil	M12-Au22627	X	X					X	X	X			
CBH15 0-0.1	Aug 23, 2012		Soil	M12-Au22628	X	X					X	X	X			
QC2	Aug 23, 2012		Soil	M12-Au22629	X	X				X	X	X	X	X		X
QC4	Aug 23, 2012		Soil	M12-Au22630	X	X					X	X	X			
WB1	Aug 23, 2012		Water	M12-Au22631						X	X	X			X	X
TRIP SPIKE	Aug 23, 2012		Water	M12-Au22632					X							

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Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	BTEX	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorous Pesticides	Acid Herbicides	Metals M8	Metals M8 filtered	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory						X										
TRIP BLANK	Aug 23, 2012		Water	M12-Au22633				X	X							
W2 1.2-1.3	Aug 22, 2012		Soil	M12-Au22634			X									
CBH1 0.4-0.5	Aug 22, 2012		Soil	M12-Au22635			X									
CBH1 0.6-0.65	Aug 22, 2012		Soil	M12-Au22636			X									
CBH2 0.4-0.5	Aug 22, 2012		Soil	M12-Au22637			X									
CBH3 0.3-0.4	Aug 23, 2012		Soil	M12-Au22638			X									
CBH3 0.5-0.55	Aug 23, 2012		Soil	M12-Au22639			X									
CBH4 0-0.1	Aug 23, 2012		Soil	M12-Au22640			X									
CBH4 0.9-1.0	Aug 23, 2012		Soil	M12-Au22641			X									
CBH5 0.4-0.5	Aug 23, 2012		Soil	M12-Au22642			X									
CBH6 0.4-0.5	Aug 23, 2012		Soil	M12-Au22643			X									

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Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	BTEX	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorous Pesticides	Acid Herbicides	Metals M8	Metals M8 filtered	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory						X										
CBH6 0.8-0.9	Aug 23, 2012		Soil	M12-Au22644			X									
CBH7 0.2-0.3	Aug 23, 2012		Soil	M12-Au22645			X									
CBH8 0-0.1	Aug 23, 2012		Soil	M12-Au22646			X									
CBH8 0.45-0.55	Aug 23, 2012		Soil	M12-Au22647			X									
CBH8 1.2-1.3	Aug 23, 2012		Soil	M12-Au22648			X									
CBH9 0.4-0.5	Aug 23, 2012		Soil	M12-Au22649			X									
CBH10 0.9-1	Aug 23, 2012		Soil	M12-Au22650			X									
CBH11 0.8-0.9	Aug 23, 2012		Soil	M12-Au22651			X									
CBH11 0.4-0.5	Aug 23, 2012		Soil	M12-Au22652			X									
CBH12 0.4-0.5	Aug 23, 2012		Soil	M12-Au22653			X									

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Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	BTEX	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorous Pesticides	Acid Herbicides	Metals M8	Metals M8 filtered	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory						X										
CBH12 0.9-1.0	Aug 23, 2012		Soil	M12-Au22654			X									
CBH13 0.5-0.6	Aug 23, 2012		Soil	M12-Au22655			X									
CBH13 0.9-1.0	Aug 23, 2012		Soil	M12-Au22656			X									
CBH14 0.55-0.65	Aug 23, 2012		Soil	M12-Au22657			X									
CBH14 1.0-1.1	Aug 23, 2012		Soil	M12-Au22658			X									
CBH15 0.4-0.5	Aug 23, 2012		Soil	M12-Au22659			X									
CBH15 0.7-0.8	Aug 23, 2012		Soil	M12-Au22660			X									
QC1	Aug 23, 2012		Soil	M12-Au22661			X									
QC3	Aug 23, 2012		Soil	M12-Au22662			X									
CBH5 0.8-0.9	Aug 23, 2012		Soil	M12-Au22663			X									

General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
- All soil results are reported on a dry basis, unless otherwise stated.
- Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001)

For samples received on the last day of holding time, notification of testing requirements should have been received at least

6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as an RPD

UNITS

mg/kg: milligrams per Kilogram

µg/L: micrograms per litre

ppb: Parts per billion

org/100mL: Organisms per 100 millilitres

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/L: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Nephelometric Turbidity Units

TERMS

Dry:	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR:	Limit Of Reporting.
SPIKE:	Addition of the analyte to the sample and reported as percentage recovery.
RPD:	Relative Percent Difference between two Duplicate pieces of analysis.
LCS:	Laboratory Control Sample - reported as percent recovery.
CRM:	Certified Reference Material - reported as percent recovery.
Method Blank:	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate:	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate:	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate:	A second piece of analysis from a sample outside of the client's batch of samples but run within the laboratory batch of analysis.
Batch SPIKE:	Spike recovery reported on a sample from outside of the client's batch of samples but run within the laboratory batch of analysis.
USEPA:	U.S Environmental Protection Agency
APHA:	American Public Health Association
ASLP:	Australian Standard Leaching Procedure (AS4439.3)
TCLP:	Toxicity Characteristic Leaching Procedure
COC:	Chain Of Custody
SRA:	Sample Receipt Advice
CP:	Client Parent - QC was performed on samples pertaining to this report
NCP:	Non-Client Parent - QC was performed on samples not pertaining to this report, however QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
- Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
- Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS's.
- For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample
- Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data below the LOR with a positive RPD - eg: LOR 0.1, Result A = <0.1 (raw data is 0.02) & Result B = <0.1 (raw data is 0.03) resulting in a RPD of 40% calculated from the raw data.

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions TRH C6-C36 - MGT 100A							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX USEPA 8260 - MGT 350A Monocyclic Aromatic Hydrocarbons and MGT 100A							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Total m+p-Xylenes	mg/L	< 0.002			0.002	Pass	
Xylenes(ortho.meta and para)	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/L	< 0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons USEPA 8270 Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides USEPA 8081 Organochlorine Pesticides							
4,4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
Chlordane	mg/L	< 0.001			0.001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Metals M8 filtered USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury							
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.001			0.001	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions TRH C6-C36 - MGT 100A							
TRH C6-C9	%	108			70-130	Pass	
TRH C10-C14	%	76			70-130	Pass	
LCS - % Recovery							
BTEX USEPA 8260 - MGT 350A Monocyclic Aromatic Hydrocarbons and MGT 100A							
Benzene	%	90			70-130	Pass	
Toluene	%	96			70-130	Pass	
Ethylbenzene	%	86			70-130	Pass	
Total m+p-Xylenes	%	89			70-130	Pass	
Xylenes(ortho.meta and para)	%	89			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
TRH C6-C10	%	108			70-130	Pass	
TRH >C10-C16	%	77			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons USEPA 8270 Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	83			70-130	Pass	
Acenaphthylene	%	91			70-130	Pass	
Anthracene	%	85			70-130	Pass	
Benz(a)anthracene	%	94			70-130	Pass	
Benzo(a)pyrene	%	123			70-130	Pass	
Benzo(b)fluoranthene	%	105			70-130	Pass	
Benzo(g,h,i)perylene	%	110			70-130	Pass	
Benzo(k)fluoranthene	%	83			70-130	Pass	
Chrysene	%	86			70-130	Pass	
Dibenz(a,h)anthracene	%	115			70-130	Pass	
Fluoranthene	%	87			70-130	Pass	
Fluorene	%	88			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Indeno(1.2.3-cd)pyrene	%	117			70-130	Pass	
Naphthalene	%	79			70-130	Pass	
Phenanthrene	%	89			70-130	Pass	
Pyrene	%	87			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides USEPA 8081 Organochlorine Pesticides							
4,4'-DDD	%	95			70-130	Pass	
4,4'-DDE	%	84			70-130	Pass	
4,4'-DDT	%	93			70-130	Pass	
a-BHC	%	91			70-130	Pass	
Aldrin	%	86			70-130	Pass	
b-BHC	%	81			70-130	Pass	
d-BHC	%	93			70-130	Pass	
Dieldrin	%	85			70-130	Pass	
Endosulfan I	%	83			70-130	Pass	
Endosulfan II	%	90			70-130	Pass	
Endosulfan sulphate	%	97			70-130	Pass	
Endrin	%	76			70-130	Pass	
Endrin aldehyde	%	82			70-130	Pass	
Endrin ketone	%	104			70-130	Pass	
g-BHC (Lindane)	%	95			70-130	Pass	
Heptachlor	%	85			70-130	Pass	
Heptachlor epoxide	%	83			70-130	Pass	
Hexachlorobenzene	%	91			70-130	Pass	
Methoxychlor	%	96			70-130	Pass	
LCS - % Recovery							
Organophosphorous Pesticides USEPA 8141 Organophosphorus Pesticides							
Diazinon	%	101			70-130	Pass	
Ethion	%	113			70-130	Pass	
Fenitrothion	%	102			70-130	Pass	
Methyl parathion	%	94			70-130	Pass	
Mevinphos	%	121			70-130	Pass	
LCS - % Recovery							
Metals M8 filtered USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury							
Lead (filtered)	%	99			80-120	Pass	
Mercury (filtered)	%	98			70-130	Pass	
Nickel (filtered)	%	101			80-120	Pass	
Arsenic (filtered)	%	93			80-120	Pass	
Cadmium (filtered)	%	102			80-120	Pass	
Chromium (filtered)	%	99			80-120	Pass	
Copper (filtered)	%	101			80-120	Pass	
Zinc (filtered)	%	95			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M12-Au22342	NCP	%	125			70-130	Pass	
TRH C10-C14	M12-Au16919	NCP	%	119			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
TRH C6-C10	M12-Au22342	NCP	%	125			70-130	Pass	
TRH >C10-C16	M12-Au16919	NCP	%	120			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M12-Au18681	NCP	%	81			70-130	Pass	
Acenaphthylene	M12-Au18681	NCP	%	88			70-130	Pass	
Anthracene	M12-Au18681	NCP	%	97			70-130	Pass	
Benz(a)anthracene	M12-Au18681	NCP	%	80			70-130	Pass	
Benzo(a)pyrene	M12-Au18681	NCP	%	118			70-130	Pass	
Benzo(b)fluoranthene	M12-Au18681	NCP	%	85			70-130	Pass	
Benzo(g,h,i)perylene	M12-Au18681	NCP	%	94			70-130	Pass	
Benzo(k)fluoranthene	M12-Au18681	NCP	%	82			70-130	Pass	
Chrysene	M12-Au18681	NCP	%	78			70-130	Pass	
Dibenz(a,h)anthracene	M12-Au18681	NCP	%	99			70-130	Pass	
Fluoranthene	M12-Au18681	NCP	%	76			70-130	Pass	
Fluorene	M12-Au18681	NCP	%	90			70-130	Pass	
Indeno(1,2,3-cd)pyrene	M12-Au18681	NCP	%	102			70-130	Pass	
Naphthalene	M12-Au18681	NCP	%	72			70-130	Pass	
Phenanthrene	M12-Au18681	NCP	%	91			70-130	Pass	
Pyrene	M12-Au18681	NCP	%	77			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4,4'-DDD	M12-Au16470	NCP	%	101			70-130	Pass	
4,4'-DDE	M12-Au16470	NCP	%	87			70-130	Pass	
4,4'-DDT	M12-Au16470	NCP	%	85			70-130	Pass	
a-BHC	M12-Au16470	NCP	%	91			70-130	Pass	
Aldrin	M12-Au16470	NCP	%	93			70-130	Pass	
b-BHC	M12-Au16470	NCP	%	81			70-130	Pass	
d-BHC	M12-Au16470	NCP	%	95			70-130	Pass	
Dieldrin	M12-Au16470	NCP	%	90			70-130	Pass	
Endosulfan I	M12-Au16470	NCP	%	87			70-130	Pass	
Endosulfan II	M12-Au16470	NCP	%	95			70-130	Pass	
Endosulfan sulphate	M12-Au16470	NCP	%	106			70-130	Pass	
Endrin	M12-Au16470	NCP	%	87			70-130	Pass	
Endrin aldehyde	M12-Au16470	NCP	%	81			70-130	Pass	
Endrin ketone	M12-Au16470	NCP	%	103			70-130	Pass	
g-BHC (Lindane)	M12-Au16470	NCP	%	93			70-130	Pass	
Heptachlor	M12-Au16470	NCP	%	88			70-130	Pass	
Heptachlor epoxide	M12-Au16470	NCP	%	86			70-130	Pass	
Hexachlorobenzene	M12-Au16470	NCP	%	97			70-130	Pass	
Methoxychlor	M12-Au16470	NCP	%	122			70-130	Pass	
Spike - % Recovery									
Organophosphorous Pesticides				Result 1					
Diazinon	M12-Au18681	NCP	%	86			70-130	Pass	
Ethion	M12-Au18681	NCP	%	116			70-130	Pass	
Fenitrothion	M12-Au18681	NCP	%	108			70-130	Pass	
Methyl parathion	M12-Au18681	NCP	%	100			70-130	Pass	
Mevinphos	M12-Au18681	NCP	%	120			70-130	Pass	
Spike - % Recovery									
Metals M8 filtered				Result 1					
Lead (filtered)	M12-Au22631	CP	%	96			75-125	Pass	
Mercury (filtered)	M12-Au21791	NCP	%	79			70-130	Pass	
Nickel (filtered)	M12-Au22631	CP	%	98			75-125	Pass	
Arsenic (filtered)	M12-Au22631	CP	%	94			75-125	Pass	
Cadmium (filtered)	M12-Au22631	CP	%	101			75-125	Pass	
Chromium (filtered)	M12-Au22631	CP	%	96			75-125	Pass	
Copper (filtered)	M12-Au22631	CP	%	98			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Zinc (filtered)	M12-Au22631	CP	%	96			75-125	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M12-Au22342	NCP	%	98			70-130	Pass	
Toluene	M12-Au22342	NCP	%	107			70-130	Pass	
Ethylbenzene	M12-Au22342	NCP	%	107			70-130	Pass	
o-Xylene	M12-Au22342	NCP	%	102			70-130	Pass	
Total m+p-Xylenes	M12-Au22342	NCP	%	104			70-130	Pass	
Xylenes(ortho.meta and para)	M12-Au22342	NCP	%	104			70-130	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M12-Au22577	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M12-Au16918	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M12-Au16918	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	M12-Au16918	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
Naphthalene	M12-Au22577	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10	M12-Au22577	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M12-Au16918	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M12-Au16918	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	M12-Au16918	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
4,4'-DDD	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4,4'-DDE	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4,4'-DDT	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
a-BHC	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Aldrin	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
b-BHC	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Chlordane	M12-Au16469	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
d-BHC	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Dieldrin	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan I	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan II	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan sulphate	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin aldehyde	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin ketone	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
g-BHC (Lindane)	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor epoxide	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Hexachlorobenzene	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Methoxychlor	M12-Au16469	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Toxaphene	M12-Au16469	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Metals M8 filtered				Result 1	Result 2	RPD			
Lead (filtered)	M12-Au22631	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	M12-Au21791	NCP	mg/L	< 0.0001	< 0.0001	100	30%	Fail	Q15
Nickel (filtered)	M12-Au22631	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Arsenic (filtered)	M12-Au22631	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	M12-Au22631	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	M12-Au22631	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	M12-Au22631	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Metals M8 filtered				Result 1	Result 2	RPD			
Zinc (filtered)	M12-Au22631	CP	mg/L	0.003	0.003	6.0	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M12-Au22577	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M12-Au22577	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M12-Au22577	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
o-Xylene	M12-Au22577	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Total m+p-Xylenes	M12-Au22577	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Xylenes(ortho.meta and para)	M12-Au22577	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
Carroll Lee	Senior Analyst-Volatile (VIC)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Stacey Jenkins	Senior Analyst-Organic (VIC)

Glenn Jackson

Laboratory Manager

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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Certificate of Analysis

Coffey Environments Pty Ltd ACT
16 Mildura Street
Fyshwick
ACT 2609

Attention: James Boyle

Report 349362-S
Client Reference ENAUBRAD01199AA
Received Date Aug 24, 2012

Client Sample ID			W1 0.6-0.7	CBH1 0-0.1	CBH2 0-0.1	CBH3 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M12-Au22613	M12-Au22614	M12-Au22615	M12-Au22616
Date Sampled			Aug 22, 2012	Aug 22, 2012	Aug 22, 2012	Aug 23, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	-
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
p-Terphenyl-d14 (surr.)	1	%	118	100	98	-
2-Fluorobiphenyl (surr.)	1	%	107	104	103	-
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			W1 0.6-0.7	CBH1 0-0.1	CBH2 0-0.1	CBH3 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M12-Au22613	M12-Au22614	M12-Au22615	M12-Au22616
Date Sampled			Aug 22, 2012	Aug 22, 2012	Aug 22, 2012	Aug 23, 2012
Test/Reference	LOR	Unit				
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorodate (surr.)	1	%	88	88	82	123
Tetrachloro-m-xylene (surr.)	1	%	83	83	89	104
Organophosphorous Pesticides						
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl azinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Naled	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	94	127	143	143
Acid Herbicides						
2.4-D	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-DB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-T	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-TP	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Actril (loxynil)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dicamba	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			W1 0.6-0.7	CBH1 0-0.1	CBH2 0-0.1	CBH3 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M12-Au22613	M12-Au22614	M12-Au22615	M12-Au22616
Date Sampled			Aug 22, 2012	Aug 22, 2012	Aug 22, 2012	Aug 23, 2012
Test/Reference	LOR	Unit				
Dichlorprop	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dinitro-o-cresol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dinoseb	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
MCPA	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
MCPB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Mecoprop	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Warfarin (surr.)	1	%	114	116	107	111
Heavy Metals						
Arsenic	2	mg/kg	2.3	3.3	3.1	-
Cadmium	0.4	mg/kg	< 0.4	0.5	0.4	-
Chromium	5	mg/kg	15	19	16	-
Copper	5	mg/kg	< 5	5.4	11	-
Lead	5	mg/kg	< 5	< 5	5.8	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Nickel	5	mg/kg	< 5	7.6	6.0	-
Zinc	5	mg/kg	9.5	20	81	-
% Moisture	0.1	%	2.8	6.2	30	27
Asbestos			see attached	see attached	see attached	see attached

Client Sample ID			CBH4 0.5-0.6	CBH5 0-0.1	CBH6 0.0-0.1	CBH7 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M12-Au22617	M12-Au22618	M12-Au22619	M12-Au22620
Date Sampled			Aug 23, 2012	Aug 23, 2012	Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	-	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	-	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	-	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	-	< 50	< 50
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	-	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	-	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(b)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
p-Terphenyl-d14 (surr.)	1	%	103	-	91	83
2-Fluorobiphenyl (surr.)	1	%	110	-	91	86
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			CBH4 0.5-0.6	CBH5 0-0.1	CBH6 0.0-0.1	CBH7 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M12-Au22617	M12-Au22618	M12-Au22619	M12-Au22620
Date Sampled			Aug 23, 2012	Aug 23, 2012	Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit				
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorodate (surr.)	1	%	93	70	141	102
Tetrachloro-m-xylene (surr.)	1	%	89	81	105	109
Organophosphorous Pesticides						
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl azinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Naled	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	136	145	110	89
Acid Herbicides						
2.4-D	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-DB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-T	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-TP	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Actril (loxynil)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dicamba	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorprop	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dinitro-o-cresol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dinoseb	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
MCPA	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
MCPB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Mecoprop	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Warfarin (surr.)	1	%	116	110	105	111
Heavy Metals						
Arsenic	2	mg/kg	< 2	-	< 2	2.6
Cadmium	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Chromium	5	mg/kg	7.9	-	9.3	17
Copper	5	mg/kg	< 5	-	< 5	< 5

Client Sample ID			CBH4 0.5-0.6	CBH5 0-0.1	CBH6 0.0-0.1	CBH7 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M12-Au22617	M12-Au22618	M12-Au22619	M12-Au22620
Date Sampled			Aug 23, 2012	Aug 23, 2012	Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit				
Lead	5	mg/kg	6.0	-	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	-	< 5	6.1
Zinc	5	mg/kg	< 5	-	22	22
% Moisture	0.1	%	13	19	17	16
Asbestos			see attached	see attached	see attached	see attached

Client Sample ID			CBH8 0.8-0.9	CBH9 0-0.1	CBH10 0-0.15	CBH11 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M12-Au22621	M12-Au22622	M12-Au22623	M12-Au22624
Date Sampled			Aug 23, 2012	Aug 23, 2012	Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	-
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
p-Terphenyl-d14 (surr.)	1	%	95	97	93	-
2-Fluorobiphenyl (surr.)	1	%	99	100	98	-
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			CBH8 0.8-0.9	CBH9 0-0.1	CBH10 0-0.15	CBH11 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M12-Au22621	M12-Au22622	M12-Au22623	M12-Au22624
Date Sampled			Aug 23, 2012	Aug 23, 2012	Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit				
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorodate (surr.)	1	%	86	138	88	68
Tetrachloro-m-xylene (surr.)	1	%	83	125	114	65
Organophosphorous Pesticides						
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl azinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Naled	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	150	145	148	134
Acid Herbicides						
2.4-D	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-DB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-T	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-TP	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Actril (loxynil)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dicamba	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorprop	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dinitro-o-cresol	0.5	mg/kg	< 0.5	< 0.5	< 1	< 0.5
Dinoseb	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
MCPA	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
MCPB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Mecoprop	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Warfarin (surr.)	1	%	113	111	98	112
Heavy Metals						
Arsenic	2	mg/kg	G01< 10	3.0	3.1	-
Cadmium	0.4	mg/kg	G01< 2	< 0.4	0.6	-
Chromium	5	mg/kg	G01< 25	26	19	-
Copper	5	mg/kg	G01< 25	< 5	7.7	-

Client Sample ID			CBH8 0.8-0.9	CBH9 0-0.1	CBH10 0-0.15	CBH11 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M12-Au22621	M12-Au22622	M12-Au22623	M12-Au22624
Date Sampled			Aug 23, 2012	Aug 23, 2012	Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit				
Lead	5	mg/kg	^{G01} < 25	5.5	12	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Nickel	5	mg/kg	^{G01} < 25	8.6	6.8	-
Zinc	5	mg/kg	^{G01} < 25	45	46	-
% Moisture	0.1	%	25	7.2	66	16
Asbestos			see attached	see attached	see attached	see attached

Client Sample ID			CBH12 0-0.1	CBH13 0-0.1	CBH14 0-0.1	CBH15 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M12-Au22625	M12-Au22626	M12-Au22627	M12-Au22628
Date Sampled			Aug 23, 2012	Aug 23, 2012	Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorodate (surr.)	1	%	85	110	101	77
Tetrachloro-m-xylene (surr.)	1	%	79	97	83	87
Organophosphorous Pesticides						
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl azinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Naled	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	99	117	145	135
Acid Herbicides						
2,4-D	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-DB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			CBH12 0-0.1	CBH13 0-0.1	CBH14 0-0.1	CBH15 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			M12-Au22625	M12-Au22626	M12-Au22627	M12-Au22628
Date Sampled			Aug 23, 2012	Aug 23, 2012	Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit				
2.4.5-T	0.5	mg/kg	< 0.5	< 0.5	< 2	< 0.5
2.4.5-TP	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Actril (loxynil)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dicamba	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorprop	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dinitro-o-cresol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dinoseb	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
MCPA	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
MCPB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Mecoprop	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Warfarin (surr.)	1	%	111	107	112	112
% Moisture	0.1	%	25	22	4.1	17
Asbestos			see attached	see attached	see attached	see attached

Client Sample ID			QC2	QC4
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			M12-Au22629	M12-Au22630
Date Sampled			Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	-
TRH C10-C14	20	mg/kg	< 20	-
TRH C15-C28	50	mg/kg	< 50	-
TRH C29-C36	50	mg/kg	< 50	-
TRH C10-36 (Total)	50	mg/kg	< 50	-
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	0.5	mg/kg	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-
Benzo(b)fluoranthene	0.5	mg/kg	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	-
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	-
Total PAH	0.5	mg/kg	< 0.5	-
p-Terphenyl-d14 (surr.)	1	%	89	-
2-Fluorobiphenyl (surr.)	1	%	95	-
Organochlorine Pesticides				
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05
Chlordane	0.1	mg/kg	< 0.1	< 0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05

Client Sample ID			QC2	QC4
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			M12-Au22629	M12-Au22630
Date Sampled			Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit		
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05
Toxaphene	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	84	81
Tetrachloro-m-xylene (surr.)	1	%	97	95
Organophosphorous Pesticides				
Bolstar	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2
Methyl azinphos	0.2	mg/kg	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2
Naled	0.5	mg/kg	< 0.5	< 0.5
Phorate	0.2	mg/kg	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	143	133
Acid Herbicides				
2,4-D	0.5	mg/kg	< 0.5	< 0.5
2,4-DB	0.5	mg/kg	< 0.5	< 0.5
2,4,5-T	0.5	mg/kg	< 0.5	< 0.5
2,4,5-TP	0.5	mg/kg	< 0.5	< 0.5
Actril (loxynil)	0.5	mg/kg	< 0.5	< 0.5
Dicamba	0.5	mg/kg	< 0.5	< 0.5
Dichlorprop	0.5	mg/kg	< 0.5	< 0.5
Dinitro-o-cresol	0.5	mg/kg	< 0.5	< 0.5
Dinoseb	0.5	mg/kg	< 0.5	< 0.5
MCPA	0.5	mg/kg	< 0.5	< 0.5
MCPB	0.5	mg/kg	< 0.5	< 0.5
Mecoprop	0.5	mg/kg	< 0.5	< 0.5
Warfarin (surr.)	1	%	110	112
Heavy Metals				
Arsenic	2	mg/kg	< 2	-
Cadmium	0.4	mg/kg	< 0.4	-
Chromium	5	mg/kg	9.5	-
Copper	5	mg/kg	< 5	-

Client Sample ID			QC2	QC4
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			M12-Au22629	M12-Au22630
Date Sampled			Aug 23, 2012	Aug 23, 2012
Test/Reference	LOR	Unit		
Lead	5	mg/kg	< 5	-
Mercury	0.1	mg/kg	< 0.1	-
Nickel	5	mg/kg	< 5	-
Zinc	5	mg/kg	28	-
% Moisture	0.1	%	21	19
Asbestos			see attached	see attached

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * - Method: LM-LTM-ORG2010	Melbourne	Aug 24, 2012	14 Day
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: TRH C6-C36 - MGT 100A	Melbourne	Aug 24, 2012	14 Day
Polycyclic Aromatic Hydrocarbons - Method: USEPA 8270 Polycyclic Aromatic Hydrocarbons	Melbourne	Aug 24, 2012	14 Day
Organochlorine Pesticides - Method: USEPA 8081 Organochlorine Pesticides	Melbourne	Aug 24, 2012	14 Day
Organophosphorous Pesticides - Method: USEPA 8141 Organophosphorus Pesticides	Melbourne	Aug 24, 2012	14 Day
Acid Herbicides - Method: MGT 200A Acid Herbicides	Melbourne	Aug 24, 2012	14 Day
Metals M8 - Method: USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury	Melbourne	Aug 24, 2012	28 Day
% Moisture - Method: Method 102 - ANZECC - % Moisture	Melbourne	Aug 24, 2012	14 Day
Asbestos	Melbourne	Aug 24, 2012	

Company Name: Coffey Environments Pty Ltd ACT
Address: 16 Mildura Street
Fyshwick
ACT 2609

Client Job No.: ENAUBRAD01199AA

Order No.:
Report #: 349362
Phone: +61 2 6216 0206
Fax: +61 2 6260 7211

Received: Aug 24, 2012 8:38 AM
Due: Aug 27, 2012
Priority: 1 Day
Contact Name: James Boyle

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	BTEX	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorous Pesticides	Acid Herbicides	Metals M8	Metals M8 filtered	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory						X										
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID												
W1 0.6-0.7	Aug 22, 2012		Soil	M12-Au22613	X	X				X	X	X	X	X		X
CBH1 0-0.1	Aug 22, 2012		Soil	M12-Au22614	X	X				X	X	X	X	X		X
CBH2 0-0.1	Aug 22, 2012		Soil	M12-Au22615	X	X				X	X	X	X	X		X
CBH3 0-0.1	Aug 23, 2012		Soil	M12-Au22616	X	X					X	X	X			
CBH4 0.5-0.6	Aug 23, 2012		Soil	M12-Au22617	X	X				X	X	X	X	X		X
CBH5 0-0.1	Aug 23, 2012		Soil	M12-Au22618	X	X					X	X	X			
CBH6 0.0-0.1	Aug 23, 2012		Soil	M12-Au22619	X	X				X	X	X	X	X		X
CBH7 0-0.1	Aug 23, 2012		Soil	M12-Au22620	X	X				X	X	X	X	X		X
CBH8 0.8-0.9	Aug 23, 2012		Soil	M12-Au22621	X	X				X	X	X	X	X		X

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Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	BTEX	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorous Pesticides	Acid Herbicides	Metals M8	Metals M8 filtered	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory						X										
CBH9 0-0.1	Aug 23, 2012		Soil	M12-Au22622	X	X				X	X	X	X	X		X
CBH10 0-0.15	Aug 23, 2012		Soil	M12-Au22623	X	X				X	X	X	X	X		X
CBH11 0-0.1	Aug 23, 2012		Soil	M12-Au22624	X	X					X	X	X			
CBH12 0-0.1	Aug 23, 2012		Soil	M12-Au22625	X	X					X	X	X			
CBH13 0-0.1	Aug 23, 2012		Soil	M12-Au22626	X	X					X	X	X			
CBH14 0-0.1	Aug 23, 2012		Soil	M12-Au22627	X	X					X	X	X			
CBH15 0-0.1	Aug 23, 2012		Soil	M12-Au22628	X	X					X	X	X			
QC2	Aug 23, 2012		Soil	M12-Au22629	X	X				X	X	X	X	X		X
QC4	Aug 23, 2012		Soil	M12-Au22630	X	X					X	X	X			
WB1	Aug 23, 2012		Water	M12-Au22631						X	X	X			X	X
TRIP SPIKE	Aug 23, 2012		Water	M12-Au22632					X							

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Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	BTEX	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorous Pesticides	Acid Herbicides	Metals M8	Metals M8 filtered	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory						X										
TRIP BLANK	Aug 23, 2012		Water	M12-Au22633				X	X							
W2 1.2-1.3	Aug 22, 2012		Soil	M12-Au22634			X									
CBH1 0.4-0.5	Aug 22, 2012		Soil	M12-Au22635			X									
CBH1 0.6-0.65	Aug 22, 2012		Soil	M12-Au22636			X									
CBH2 0.4-0.5	Aug 22, 2012		Soil	M12-Au22637			X									
CBH3 0.3-0.4	Aug 23, 2012		Soil	M12-Au22638			X									
CBH3 0.5-0.55	Aug 23, 2012		Soil	M12-Au22639			X									
CBH4 0-0.1	Aug 23, 2012		Soil	M12-Au22640			X									
CBH4 0.9-1.0	Aug 23, 2012		Soil	M12-Au22641			X									
CBH5 0.4-0.5	Aug 23, 2012		Soil	M12-Au22642			X									
CBH6 0.4-0.5	Aug 23, 2012		Soil	M12-Au22643			X									

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Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	BTEX	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorous Pesticides	Acid Herbicides	Metals M8	Metals M8 filtered	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory						X										
CBH6 0.8-0.9	Aug 23, 2012		Soil	M12-Au22644			X									
CBH7 0.2-0.3	Aug 23, 2012		Soil	M12-Au22645			X									
CBH8 0-0.1	Aug 23, 2012		Soil	M12-Au22646			X									
CBH8 0.45-0.55	Aug 23, 2012		Soil	M12-Au22647			X									
CBH8 1.2-1.3	Aug 23, 2012		Soil	M12-Au22648			X									
CBH9 0.4-0.5	Aug 23, 2012		Soil	M12-Au22649			X									
CBH10 0.9-1	Aug 23, 2012		Soil	M12-Au22650			X									
CBH11 0.8-0.9	Aug 23, 2012		Soil	M12-Au22651			X									
CBH11 0.4-0.5	Aug 23, 2012		Soil	M12-Au22652			X									
CBH12 0.4-0.5	Aug 23, 2012		Soil	M12-Au22653			X									

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Priority: 1 Day
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Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	BTEX	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorous Pesticides	Acid Herbicides	Metals M8	Metals M8 filtered	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory						X										
CBH12 0.9-1.0	Aug 23, 2012		Soil	M12-Au22654			X									
CBH13 0.5-0.6	Aug 23, 2012		Soil	M12-Au22655			X									
CBH13 0.9-1.0	Aug 23, 2012		Soil	M12-Au22656			X									
CBH14 0.55-0.65	Aug 23, 2012		Soil	M12-Au22657			X									
CBH14 1.0-1.1	Aug 23, 2012		Soil	M12-Au22658			X									
CBH15 0.4-0.5	Aug 23, 2012		Soil	M12-Au22659			X									
CBH15 0.7-0.8	Aug 23, 2012		Soil	M12-Au22660			X									
QC1	Aug 23, 2012		Soil	M12-Au22661			X									
QC3	Aug 23, 2012		Soil	M12-Au22662			X									
CBH5 0.8-0.9	Aug 23, 2012		Soil	M12-Au22663			X									

General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
- All soil results are reported on a dry basis, unless otherwise stated.
- Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001)

For samples received on the last day of holding time, notification of testing requirements should have been received at least

6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as an RPD

UNITS

mg/kg: milligrams per Kilogram

µg/L: micrograms per litre

ppb: Parts per billion

org/100mL: Organisms per 100 millilitres

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/L: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Nephelometric Turbidity Units

TERMS

Dry:	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR:	Limit Of Reporting.
SPIKE:	Addition of the analyte to the sample and reported as percentage recovery.
RPD:	Relative Percent Difference between two Duplicate pieces of analysis.
LCS:	Laboratory Control Sample - reported as percent recovery.
CRM:	Certified Reference Material - reported as percent recovery.
Method Blank:	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate:	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate:	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate:	A second piece of analysis from a sample outside of the client's batch of samples but run within the laboratory batch of analysis.
Batch SPIKE:	Spike recovery reported on a sample from outside of the client's batch of samples but run within the laboratory batch of analysis.
USEPA:	U.S Environmental Protection Agency
APHA:	American Public Health Association
ASLP:	Australian Standard Leaching Procedure (AS4439.3)
TCLP:	Toxicity Characteristic Leaching Procedure
COC:	Chain Of Custody
SRA:	Sample Receipt Advice
CP:	Client Parent - QC was performed on samples pertaining to this report
NC:	Non-Client Parent - QC was performed on samples not pertaining to this report, however QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
- Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
- Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS's.
- For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample
- Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data below the LOR with a positive RPD - eg: LOR 0.1, Result A = <0.1 (raw data is 0.02) & Result B = <0.1 (raw data is 0.03) resulting in a RPD of 40% calculated from the raw data.

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions TRH C6-C36 - MGT 100A							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons USEPA 8270 Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides USEPA 8081 Organochlorine Pesticides							
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
Chlordane	mg/kg	< 0.1			0.1	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Organophosphorous Pesticides USEPA 8141 Organophosphorus Pesticides							
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl azinphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Naled	mg/kg	< 0.5			0.5	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Acid Herbicides MGT 200A Acid Herbicides							
2,4-D	mg/kg	< 0.5			0.5	Pass	
2,4-DB	mg/kg	< 0.5			0.5	Pass	
2,4,5-T	mg/kg	< 0.5			0.5	Pass	
2,4,5-TP	mg/kg	< 0.5			0.5	Pass	
Actril (loxynil)	mg/kg	< 0.5			0.5	Pass	
Dicamba	mg/kg	< 0.5			0.5	Pass	
Dichlorprop	mg/kg	< 0.5			0.5	Pass	
Dinitro-o-cresol	mg/kg	< 0.5			0.5	Pass	
Dinoseb	mg/kg	< 0.5			0.5	Pass	
MCPA	mg/kg	< 0.5			0.5	Pass	
MCPB	mg/kg	< 0.5			0.5	Pass	
Mecoprop	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Metals M8 USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions TRH C6-C36 - MGT 100A							
TRH C6-C9	%	103			70-130	Pass	
TRH C10-C14	%	102			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
TRH C6-C10	%	103			70-130	Pass	
TRH >C10-C16	%	99			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons USEPA 8270 Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	80			70-130	Pass	
Acenaphthylene	%	83			70-130	Pass	
Anthracene	%	82			70-130	Pass	
Benz(a)anthracene	%	82			70-130	Pass	
Benzo(a)pyrene	%	112			70-130	Pass	
Benzo(b)fluoranthene	%	89			70-130	Pass	
Benzo(g,h,i)perylene	%	70			70-130	Pass	
Benzo(k)fluoranthene	%	83			70-130	Pass	
Chrysene	%	80			70-130	Pass	
Dibenz(a,h)anthracene	%	73			70-130	Pass	
Fluoranthene	%	89			70-130	Pass	
Fluorene	%	80			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	72			70-130	Pass	
Naphthalene	%	76			70-130	Pass	
Phenanthrene	%	82			70-130	Pass	
Pyrene	%	91			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides USEPA 8081 Organochlorine Pesticides							
4,4'-DDD	%	96			70-130	Pass	
4,4'-DDE	%	120			70-130	Pass	
4,4'-DDT	%	74			70-130	Pass	
a-BHC	%	99			70-130	Pass	
Aldrin	%	86			70-130	Pass	
b-BHC	%	100			70-130	Pass	
d-BHC	%	100			70-130	Pass	
Dieldrin	%	119			70-130	Pass	
Endosulfan I	%	105			70-130	Pass	
Endosulfan II	%	107			70-130	Pass	
Endosulfan sulphate	%	107			70-130	Pass	
Endrin	%	95			70-130	Pass	
Endrin aldehyde	%	99			70-130	Pass	
Endrin ketone	%	115			70-130	Pass	
g-BHC (Lindane)	%	101			70-130	Pass	
Heptachlor	%	107			70-130	Pass	
Heptachlor epoxide	%	103			70-130	Pass	
Hexachlorobenzene	%	93			70-130	Pass	
Methoxychlor	%	72			70-130	Pass	
LCS - % Recovery							
Organophosphorous Pesticides USEPA 8141 Organophosphorus Pesticides							
Diazinon	%	129			70-130	Pass	
Ethion	%	107			70-130	Pass	
Fenitrothion	%	119			70-130	Pass	
Methyl parathion	%	111			70-130	Pass	
Mevinphos	%	106			70-130	Pass	
LCS - % Recovery							
Acid Herbicides MGT 200A Acid Herbicides							

Test		Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
2.4-D		%	95			70-130	Pass		
2.4-DB		%	90			70-130	Pass		
2.4.5-T		%	88			70-130	Pass		
2.4.5-TP		%	108			70-130	Pass		
Actril (loxynil)		%	100			70-130	Pass		
Dicamba		%	99			70-130	Pass		
Dichlorprop		%	96			70-130	Pass		
Dinitro-o-cresol		%	109			70-130	Pass		
Dinoseb		%	102			70-130	Pass		
MCPA		%	103			70-130	Pass		
MCPB		%	97			70-130	Pass		
Mecoprop		%	103			70-130	Pass		
LCS - % Recovery									
Metals M8 USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury									
Arsenic		%	93			80-120	Pass		
Cadmium		%	102			80-120	Pass		
Chromium		%	107			80-120	Pass		
Copper		%	107			80-120	Pass		
Lead		%	111			80-120	Pass		
Mercury		%	91			75-125	Pass		
Nickel		%	107			80-120	Pass		
Zinc		%	115			80-120	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M12-Au22613	CP	%	102			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
TRH C6-C10	M12-Au22613	CP	%	102			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M12-Au22613	CP	%	108			70-130	Pass	
Acenaphthylene	M12-Au22613	CP	%	117			70-130	Pass	
Anthracene	M12-Au22613	CP	%	119			70-130	Pass	
Benz(a)anthracene	M12-Au22613	CP	%	114			70-130	Pass	
Benzo(a)pyrene	M12-Au22613	CP	%	120			70-130	Pass	
Benzo(b)fluoranthene	M12-Au22613	CP	%	94			70-130	Pass	
Benzo(g,h,i)perylene	M12-Au22613	CP	%	88			70-130	Pass	
Benzo(k)fluoranthene	M12-Au22613	CP	%	123			70-130	Pass	
Chrysene	M12-Au22613	CP	%	111			70-130	Pass	
Dibenz(a,h)anthracene	M12-Au22613	CP	%	95			70-130	Pass	
Fluoranthene	M12-Au22613	CP	%	124			70-130	Pass	
Fluorene	M12-Au22613	CP	%	112			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M12-Au22613	CP	%	103			70-130	Pass	
Naphthalene	M12-Au22613	CP	%	102			70-130	Pass	
Phenanthrene	M12-Au22613	CP	%	111			70-130	Pass	
Pyrene	M12-Au22613	CP	%	125			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDD	M12-Au22613	CP	%	116			70-130	Pass	
4.4'-DDE	M12-Au22613	CP	%	123			70-130	Pass	
4.4'-DDT	M12-Au22613	CP	%	118			70-130	Pass	
a-BHC	M12-Au22613	CP	%	123			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aldrin	M12-Au22613	CP	%	120			70-130	Pass	
b-BHC	M12-Au22613	CP	%	119			70-130	Pass	
d-BHC	M12-Au22613	CP	%	128			70-130	Pass	
Dieldrin	M12-Au22613	CP	%	108			70-130	Pass	
Endosulfan I	M12-Au22613	CP	%	130			70-130	Pass	
Endosulfan II	M12-Au22613	CP	%	125			70-130	Pass	
Endosulfan sulphate	M12-Au22613	CP	%	98			70-130	Pass	
Endrin	M12-Au22613	CP	%	113			70-130	Pass	
Endrin aldehyde	M12-Au22613	CP	%	107			70-130	Pass	
Endrin ketone	M12-Au22613	CP	%	107			70-130	Pass	
g-BHC (Lindane)	M12-Au22613	CP	%	123			70-130	Pass	
Heptachlor	M12-Au22613	CP	%	108			70-130	Pass	
Heptachlor epoxide	M12-Au22613	CP	%	127			70-130	Pass	
Hexachlorobenzene	M12-Au22613	CP	%	114			70-130	Pass	
Methoxychlor	M12-Au22613	CP	%	124			70-130	Pass	
Spike - % Recovery									
Organophosphorous Pesticides				Result 1					
Diazinon	M12-Au16660	NCP	%	122			70-130	Pass	
Ethion	M12-Au16660	NCP	%	121			70-130	Pass	
Fenitrothion	M12-Au16660	NCP	%	124			70-130	Pass	
Methyl parathion	M12-Au16660	NCP	%	112			70-130	Pass	
Mevinphos	M12-Au16660	NCP	%	71			70-130	Pass	
Spike - % Recovery									
Acid Herbicides				Result 1					
Atril (loxylin)	M12-Au22613	CP	%	97			70-130	Pass	
Dichlorprop	M12-Au22613	CP	%	71			70-130	Pass	
Spike - % Recovery									
Metals M8				Result 1					
Arsenic	M12-Au22613	CP	%	89			75-125	Pass	
Cadmium	M12-Au22613	CP	%	101			75-125	Pass	
Chromium	M12-Au22613	CP	%	106			75-125	Pass	
Copper	M12-Au22613	CP	%	111			75-125	Pass	
Lead	M12-Au22613	CP	%	99			75-125	Pass	
Mercury	M12-Au22613	CP	%	95			70-130	Pass	
Nickel	M12-Au22613	CP	%	100			75-125	Pass	
Zinc	M12-Au22613	CP	%	120			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M12-Au17388	NCP	%	85			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
TRH >C10-C16	M12-Au17388	NCP	%	93			70-130	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M12-Au22613	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
Naphthalene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M12-Au22613	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Benz(a)anthracene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b)fluoranthene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
4,4'-DDD	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chlordane	M12-Au22613	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
d-BHC	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M12-Au22613	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M12-Au22613	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Organophosphorous Pesticides				Result 1	Result 2	RPD			
Bolstar	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfotthion	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl azinphos	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Organophosphorous Pesticides				Result 1	Result 2	RPD			
Mevinphos	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Naled	M12-Au16660	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phorate	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M12-Au16660	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Acid Herbicides				Result 1	Result 2	RPD			
2.4-D	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-DB	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-T	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-TP	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Actril (loxyneil)	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dicamba	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorprop	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dinitro-o-cresol	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dinoseb	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
MCPA	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
MCPB	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Mecoprop	M12-Au22613	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Metals M8				Result 1	Result 2	RPD			
Arsenic	M12-Au22613	CP	mg/kg	2.3	2.4	5.0	30%	Pass	
Cadmium	M12-Au22613	CP	mg/kg	< 0.4	< 0.4	5.0	30%	Pass	
Chromium	M12-Au22613	CP	mg/kg	15	13	13	30%	Pass	
Copper	M12-Au22613	CP	mg/kg	< 5	< 5	3.0	30%	Pass	
Lead	M12-Au22613	CP	mg/kg	< 5	< 5	6.0	30%	Pass	
Mercury	M12-Au22613	CP	mg/kg	< 0.1	< 0.1	67	30%	Fail	Q15
Nickel	M12-Au22613	CP	mg/kg	< 5	< 5	5.0	30%	Pass	
Zinc	M12-Au22613	CP	mg/kg	9.5	9.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M12-Au17388	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M12-Au17388	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M12-Au17388	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
TRH >C10-C16	M12-Au17388	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M12-Au17388	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M12-Au17388	NCP	mg/kg	< 100	< 100	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
Carroll Lee	Senior Analyst-Volatile (VIC)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Stacey Jenkins	Senior Analyst-Organic (VIC)

Glenn Jackson

Laboratory Manager

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

mgt-LabMark shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall mgt-LabMark be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.



Chain of Custody

Laboratory Quotation / Order No: Coffey

Job No: EN/AV2:AB/11/1494

Sheet 1 of 3

No: **13723**

Dispatch to: MGT Melbourne 215 Kingston
(Address & Phone No.) Town Cler, O'Callaghan, Vic

Sampled by: James Boyle

Consigning Officer: WILL McNamee
Date Dispatched: 23/8/12

Attention: Sample Receipt

Project Manager: James Boyle Coffey
(report results to)

Courier Service: TEIL
Consignment Note No: 864030MEST
009430MEST

Relinquished by: J Boyle Date: 28/8 Time: 14:00 Received by: John - MGT Labmark Date: 24/8/12 Time: 8:38pm

Comments	Sample Matrix	Container Type and Preservative	Sample No.	Date Sampled	Analyses Required						Sample Condition on Receipt
					PAHs	TPHs	MAHs = BTEX	Metals: *			
	soil	glass jar 100	U1 0.6-0.7	22/8	/	/	/	/	/	/	h/c
			W2 1.2-1.3		/	/	/	/	/	/	h/c
			CEH1 0-0.1		/	/	/	/	/	/	h/c
			CEH1 0.4-0.5		/	/	/	/	/	/	h/c
			W1 0.6-0.65		/	/	/	/	/	/	h/c
			CEH2 0-0.1		/	/	/	/	/	/	h/c
			CEH2 0.4-0.5		/	/	/	/	/	/	h/c
			CEH3 0-0.1	23/8	/	/	/	/	/	/	h/c
			CEH3 0.3-0.4		/	/	/	/	/	/	h/c
			CEH4 0.5-0.55		/	/	/	/	/	/	h/c
			CEH4 0-0.1		/	/	/	/	/	/	h/c
			CEH4 0.5-0.6		/	/	/	/	/	/	h/c
			CEH5 0-0.1		/	/	/	/	/	/	h/c
			CEH5 0.4-0.5		/	/	/	/	/	/	h/c
			CEH6 0-0.01		/	/	/	/	/	/	h/c
			CEH6 0.4-0.5		/	/	/	/	/	/	h/c

Special Laboratory Instructions: MGT Labmark Report # 349362

Detection Limits: 24 HE111

Turnaround Required: 24 HE111

Job Number MUST BE REFERENCED ON ALL SUBSEQUENT PAGES



Chain of Custody

Laboratory Quotation / Order No:

Job No: EBC119/19

No: 13725
Sheet 3 of 3

Dispatch to:
(Address &
Phone No.)

Met Melbourne

Sampled by:

S Bepk

Consigning Officer:

Williamine

Date Dispatched:

23/8

Attention:

Sample kept

Project Manager:
(report results to)

James Boyle & Coffey.com

Courier Service:

Tell

Consignment Note No:

Relinquished by:

S Boyle

Date:

23/8

Time:

14:00

Received by:

John - Met Melbourne

Date:

24/8/19

Time:

8:35pm

Comments

Sample Matrix

Container Type
and Preservative

Sample No.

Date Sampled

PAHs

TPHs

Metals: ☒ BTEX

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Metals: ☒

Sample
Condition
on Receipt

Special Laboratory Instructions:

Met Melbourne # 349362

Detection Limits:

Turnaround Required: 24h TATI

JOB NUMBER MUST BE
REFERENCED ON ALL
SUBSEQUENT PAGES

Copies: WHITE: Sign on release. YELLOW: If dispatched to interstate Lab, Lab to sign on receipt and fax back to Coffey. BLUE: To be returned with results.

Sample Receipt Advice

Company name: **Coffey Environments Pty Ltd ACT**
Contact name: James Boyle
Client job number: ENAUBRAD01199AA
COC number: 13723-25
Turn around time: 1 Day
Date/Time received: Aug 24, 2012 8:38 AM
mgt-LabMark reference: **349362**

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Organic samples had Teflon liners.
- ☒ Sample containers for volatile analysis received with zero headspace.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: jean.heng@mgtlabmark.com.au

Results will be delivered electronically via e.mail to James Boyle - James_Boyle@coffey.com.

mgt-LabMark Sample Receipt

Company Name: Coffey Environments Pty Ltd ACT
Address: 16 Mildura Street
Fyshwick
ACT 2609

Client Job No.: ENAUBRAD01199AA

Order No.:
Report #: 349362
Phone: +61 2 6216 0206
Fax: +61 2 6260 7211

Received: Aug 24, 2012 8:38 AM
Due: Aug 27, 2012
Priority: 1 Day
Contact Name: James Boyle

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	BTEX	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorous Pesticides	Acid Herbicides	Metals M8	Metals M8 filtered	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory						X										
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID												
W1 0.6-0.7	Aug 22, 2012		Soil	M12-Au22613	X	X				X	X	X	X	X		X
CBH1 0-0.1	Aug 22, 2012		Soil	M12-Au22614	X	X				X	X	X	X	X		X
CBH2 0-0.1	Aug 22, 2012		Soil	M12-Au22615	X	X				X	X	X	X	X		X
CBH3 0-0.1	Aug 23, 2012		Soil	M12-Au22616	X	X					X	X	X			
CBH4 0.5-0.6	Aug 23, 2012		Soil	M12-Au22617	X	X				X	X	X	X	X		X
CBH5 0-0.1	Aug 23, 2012		Soil	M12-Au22618	X	X					X	X	X			
CBH6 0.0-0.1	Aug 23, 2012		Soil	M12-Au22619	X	X				X	X	X	X	X		X
CBH7 0-0.1	Aug 23, 2012		Soil	M12-Au22620	X	X				X	X	X	X	X		X
CBH8 0.8-0.9	Aug 23, 2012		Soil	M12-Au22621	X	X				X	X	X	X	X		X

Company Name: Coffey Environments Pty Ltd ACT
Address: 16 Mildura Street
Fyshwick
ACT 2609

Client Job No.: ENAUBRAD01199AA

Order No.:
Report #: 349362
Phone: +61 2 6216 0206
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Received: Aug 24, 2012 8:38 AM
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mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	BTEX	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorous Pesticides	Acid Herbicides	Metals M8	Metals M8 filtered	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory						X										
CBH9 0-0.1	Aug 23, 2012		Soil	M12-Au22622	X	X				X	X	X	X	X		X
CBH10 0-0.15	Aug 23, 2012		Soil	M12-Au22623	X	X				X	X	X	X	X		X
CBH11 0-0.1	Aug 23, 2012		Soil	M12-Au22624	X	X					X	X	X			
CBH12 0-0.1	Aug 23, 2012		Soil	M12-Au22625	X	X					X	X	X			
CBH13 0-0.1	Aug 23, 2012		Soil	M12-Au22626	X	X					X	X	X			
CBH14 0-0.1	Aug 23, 2012		Soil	M12-Au22627	X	X					X	X	X			
CBH15 0-0.1	Aug 23, 2012		Soil	M12-Au22628	X	X					X	X	X			
QC2	Aug 23, 2012		Soil	M12-Au22629	X	X				X	X	X	X	X		X
QC4	Aug 23, 2012		Soil	M12-Au22630	X	X					X	X	X			
WB1	Aug 23, 2012		Water	M12-Au22631						X	X	X			X	X
TRIP SPIKE	Aug 23, 2012		Water	M12-Au22632					X							

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Sample Detail					Total Recoverable Hydrocarbons	Metals M8 filtered	Metals M8	Acid Herbicides	Organophosphorous Pesticides	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	BTEX	TRH C6-C9	HOLD	Asbestos	% Moisture
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X			
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory														X		
TRIP BLANK	Aug 23, 2012		Water	M12-Au22633							X	X				
W2 1.2-1.3	Aug 22, 2012		Soil	M12-Au22634									X			
CBH1 0.4-0.5	Aug 22, 2012		Soil	M12-Au22635									X			
CBH1 0.6-0.65	Aug 22, 2012		Soil	M12-Au22636									X			
CBH2 0.4-0.5	Aug 22, 2012		Soil	M12-Au22637									X			
CBH3 0.3-0.4	Aug 23, 2012		Soil	M12-Au22638									X			
CBH3 0.5-0.55	Aug 23, 2012		Soil	M12-Au22639									X			
CBH4 0-0.1	Aug 23, 2012		Soil	M12-Au22640									X			
CBH4 0.9-1.0	Aug 23, 2012		Soil	M12-Au22641									X			
CBH5 0.4-0.5	Aug 23, 2012		Soil	M12-Au22642									X			
CBH6 0.4-0.5	Aug 23, 2012		Soil	M12-Au22643									X			

Client Job No.: ENAUBRAD01199AA

Order No.:
Report #: 349362
Phone: +61 2 6216 0206
Fax: +61 2 6260 7211

Received: Aug 24, 2012 8:38 AM
Due: Aug 27, 2012
Priority: 1 Day
Contact Name: James Boyle

mgt-LabMark Client Manager: Jean Heng

Sample Detail					Total Recoverable Hydrocarbons	Metals M8 filtered	Metals M8	Acid Herbicides	Organophosphorous Pesticides	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	BTEX	TRH C6-C9	HOLD	Asbestos	% Moisture
Laboratory where analysis is conducted																
Melbourne Laboratory - NATA Site # 1254 & 14271					X		X	X	X	X	X	X	X			
Sydney Laboratory - NATA Site # 18217																
Brisbane Laboratory - NATA Site # 20794																
External Laboratory														X		
CBH6 0.8-0.9	Aug 23, 2012		Soil	M12-Au22644									X			
CBH7 0.2-0.3	Aug 23, 2012		Soil	M12-Au22645									X			
CBH8 0-0.1	Aug 23, 2012		Soil	M12-Au22646									X			
CBH8 0.45-0.55	Aug 23, 2012		Soil	M12-Au22647									X			
CBH8 1.2-1.3	Aug 23, 2012		Soil	M12-Au22648									X			
CBH9 0.4-0.5	Aug 23, 2012		Soil	M12-Au22649									X			
CBH10 0.9-1	Aug 23, 2012		Soil	M12-Au22650									X			
CBH11 0.8-0.9	Aug 23, 2012		Soil	M12-Au22651									X			
CBH11 0.4-0.5	Aug 23, 2012		Soil	M12-Au22652									X			
CBH12 0.4-0.5	Aug 23, 2012		Soil	M12-Au22653									X			

Order No.:
Report #: 349362
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Fax: +61 2 6260 7211

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Sample Detail					Total Recoverable Hydrocarbons	Metals M8 filtered	Metals M8	Acid Herbicides	Organophosphorous Pesticides	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	BTEX	TRH C6-C9	HOLD	Asbestos	% Moisture
					Laboratory where analysis is conducted											
					Melbourne Laboratory - NATA Site # 1254 & 14271	X		X	X	X	X	X	X	X	X	X
					Sydney Laboratory - NATA Site # 18217											
					Brisbane Laboratory - NATA Site # 20794											
					External Laboratory		X									
					CBH12 0.9-1.0	Aug 23, 2012		Soil	M12-Au22654		X					
					CBH13 0.5-0.6	Aug 23, 2012		Soil	M12-Au22655		X					
					CBH13 0.9-1.0	Aug 23, 2012		Soil	M12-Au22656		X					
					CBH14 0.55-0.65	Aug 23, 2012		Soil	M12-Au22657		X					
					CBH14 1.0-1.1	Aug 23, 2012		Soil	M12-Au22658		X					
					CBH15 0.4-0.5	Aug 23, 2012		Soil	M12-Au22659		X					
					CBH15 0.7-0.8	Aug 23, 2012		Soil	M12-Au22660		X					
QC1	Aug 23, 2012		Soil	M12-Au22661		X										
QC3	Aug 23, 2012		Soil	M12-Au22662		X										
CBH5 0.8-0.9	Aug 23, 2012		Soil	M12-Au22663		X										

Coffey Environments Pty Ltd ACT
16 Mildura Street
Fyshwick
ACT 2609

Attention: James Boyle

Report **349739-S**
Client Reference ENAUBRAD01199AA
Received Date Aug 28, 2012



Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Client Sample ID			CBH8 0-0.1	W2 1.2-1.3
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			M12-Au25777	M12-Au25852
Date Sampled			Aug 22, 2012	Aug 22, 2012
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	110	< 50
TRH C10-36 (Total)	50	mg/kg	110	< 50
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5
p-Terphenyl-d14 (surr.)	1	%	72	105
2-Fluorobiphenyl (surr.)	1	%	68	140
Heavy Metals				
Arsenic	2	mg/kg	3.1	4.4
Cadmium	0.4	mg/kg	0.4	< 0.4

Client Sample ID			CBH8 0-0.1	W2 1.2-1.3
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			M12-Au25777	M12-Au25852
Date Sampled			Aug 22, 2012	Aug 22, 2012
Test/Reference	LOR	Unit		
Chromium	5	mg/kg	12	13
Copper	5	mg/kg	18	< 5
Lead	5	mg/kg	7.9	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5
Zinc	5	mg/kg	180	16
% Moisture	0.1	%	39	2.9

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * - Method: LM-LTM-ORG2010	Melbourne	Aug 28, 2012	14 Day
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: TRH C6-C36 - MGT 100A	Melbourne	Aug 28, 2012	14 Day
Polycyclic Aromatic Hydrocarbons - Method: USEPA 8270 Polycyclic Aromatic Hydrocarbons	Melbourne	Aug 28, 2012	14 Day
Metals M8 - Method: USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury	Melbourne	Aug 28, 2012	28 Day
% Moisture - Method: Method 102 - ANZECC - % Moisture	Melbourne	Aug 28, 2012	14 Day

Company Name: Coffey Environments Pty Ltd ACT
Address: 16 Mildura Street
Fyshwick
ACT 2609

Client Job No.: ENAUBRAD01199AA

Order No.:
Report #: 349739
Phone: +61 2 6216 0206
Fax: +61 2 6260 7211

Received: Aug 28, 2012 10:43 AM
Due: Aug 29, 2012
Priority: 1 Day
Contact Name: James Boyle

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Polycyclic Aromatic Hydrocarbons	Metals M8	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
CBH8 0-0.1	Aug 22, 2012		Soil	M12-Au25777	X	X	X	X
W2 1.2-1.3	Aug 22, 2012		Soil	M12-Au25852	X	X	X	X

General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
- All soil results are reported on a dry basis, unless otherwise stated.
- Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001)

For samples received on the last day of holding time, notification of testing requirements should have been received at least

6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as an RPD

UNITS

mg/kg: milligrams per Kilogram

µg/L: micrograms per litre

ppb: Parts per billion

org/100mL: Organisms per 100 millilitres

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/L: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Nephelometric Turbidity Units

TERMS

Dry:	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR:	Limit Of Reporting.
SPIKE:	Addition of the analyte to the sample and reported as percentage recovery.
RPD:	Relative Percent Difference between two Duplicate pieces of analysis.
LCS:	Laboratory Control Sample - reported as percent recovery.
CRM:	Certified Reference Material - reported as percent recovery.
Method Blank:	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate:	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate:	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate:	A second piece of analysis from a sample outside of the client's batch of samples but run within the laboratory batch of analysis.
Batch SPIKE:	Spike recovery reported on a sample from outside of the client's batch of samples but run within the laboratory batch of analysis.
USEPA:	U.S Environmental Protection Agency
APHA:	American Public Health Association
ASLP:	Australian Standard Leaching Procedure (AS4439.3)
TCLP:	Toxicity Characteristic Leaching Procedure
COC:	Chain Of Custody
SRA:	Sample Receipt Advice
CP:	Client Parent - QC was performed on samples pertaining to this report
NC:	Non-Client Parent - QC was performed on samples not pertaining to this report, however QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
- Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
- Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS's.
- For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample
- Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data below the LOR with a positive RPD - eg: LOR 0.1, Result A = <0.1 (raw data is 0.02) & Result B = <0.1 (raw data is 0.03) resulting in a RPD of 40% calculated from the raw data.

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions TRH C6-C36 - MGT 100A							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons USEPA 8270 Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Metals M8 USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions TRH C6-C36 - MGT 100A							
TRH C6-C9	%	106			70-130	Pass	
TRH C10-C14	%	85			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
TRH C6-C10	%	106			70-130	Pass	
TRH >C10-C16	%	86			70-130	Pass	
LCS - % Recovery							

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons USEPA 8270 Polycyclic Aromatic Hydrocarbons										
Acenaphthene				%	99			70-130	Pass	
Acenaphthylene				%	101			70-130	Pass	
Anthracene				%	105			70-130	Pass	
Benz(a)anthracene				%	100			70-130	Pass	
Benzo(a)pyrene				%	104			70-130	Pass	
Benzo(b)fluoranthene				%	88			70-130	Pass	
Benzo(g.h.i)perylene				%	111			70-130	Pass	
Benzo(k)fluoranthene				%	120			70-130	Pass	
Chrysene				%	104			70-130	Pass	
Dibenz(a.h)anthracene				%	94			70-130	Pass	
Fluoranthene				%	97			70-130	Pass	
Fluorene				%	100			70-130	Pass	
Indeno(1.2.3-cd)pyrene				%	87			70-130	Pass	
Naphthalene				%	92			70-130	Pass	
Phenanthrene				%	100			70-130	Pass	
Pyrene				%	97			70-130	Pass	
LCS - % Recovery										
Metals M8 USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury										
Arsenic				%	80			80-120	Pass	
Cadmium				%	89			80-120	Pass	
Chromium				%	87			80-120	Pass	
Copper				%	92			80-120	Pass	
Lead				%	91			80-120	Pass	
Mercury				%	96			75-125	Pass	
Nickel				%	89			80-120	Pass	
Zinc				%	109			80-120	Pass	
Test		Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery										
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					Result 1					
TRH C6-C9		M12-Au25827	NCP	%	110			70-130	Pass	
TRH C10-C14		M12-Au24370	NCP	%	87			70-130	Pass	
Spike - % Recovery										
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *					Result 1					
TRH C6-C10		M12-Au25827	NCP	%	110			70-130	Pass	
TRH >C10-C16		M12-Au24370	NCP	%	88			70-130	Pass	
Spike - % Recovery										
Polycyclic Aromatic Hydrocarbons					Result 1					
Acenaphthene		M12-Au24374	NCP	%	77			70-130	Pass	
Acenaphthylene		M12-Au24374	NCP	%	80			70-130	Pass	
Anthracene		M12-Au24374	NCP	%	81			70-130	Pass	
Benz(a)anthracene		M12-Au24374	NCP	%	79			70-130	Pass	
Benzo(a)pyrene		M12-Au24374	NCP	%	122			70-130	Pass	
Benzo(b)fluoranthene		M12-Au24374	NCP	%	84			70-130	Pass	
Benzo(g.h.i)perylene		M12-Au24374	NCP	%	88			70-130	Pass	
Benzo(k)fluoranthene		M12-Au24374	NCP	%	83			70-130	Pass	
Chrysene		M12-Au24374	NCP	%	85			70-130	Pass	
Dibenz(a.h)anthracene		M12-Au24374	NCP	%	78			70-130	Pass	
Fluoranthene		M12-Au24374	NCP	%	82			70-130	Pass	
Fluorene		M12-Au24374	NCP	%	77			70-130	Pass	
Indeno(1.2.3-cd)pyrene		M12-Au24374	NCP	%	70			70-130	Pass	
Naphthalene		M12-Au24374	NCP	%	71			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene	M12-Au24374	NCP	%	75			70-130	Pass	
Pyrene	M12-Au24374	NCP	%	81			70-130	Pass	
Spike - % Recovery									
Metals M8				Result 1					
Arsenic	M12-Au22704	NCP	%	83			75-125	Pass	
Cadmium	B12-Au24911	NCP	%	84			75-125	Pass	
Chromium	B12-Au24911	NCP	%	84			75-125	Pass	
Copper	B12-Au24911	NCP	%	101			75-125	Pass	
Lead	B12-Au24911	NCP	%	75			75-125	Pass	
Nickel	B12-Au24911	NCP	%	76			75-125	Pass	
Zinc	B12-Au24911	NCP	%	106			75-125	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M12-Au25827	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M12-Au24370	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M12-Au24370	NCP	mg/kg	< 50	< 50	35	30%	Fail	Q15
TRH C29-C36	M12-Au24370	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
Naphthalene	M12-Au25827	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M12-Au25827	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M12-Au24370	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M12-Au24370	NCP	mg/kg	< 100	< 100	38	30%	Fail	Q15
TRH >C34-C40	M12-Au24370	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b)fluoranthene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M12-Au24374	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Metals M8				Result 1	Result 2	RPD			
Arsenic	B12-Au24911	NCP	mg/kg	8.7	8.2	7.0	30%	Pass	
Cadmium	B12-Au24911	NCP	mg/kg	1.0	0.99	5.0	30%	Pass	
Chromium	B12-Au24911	NCP	mg/kg	120	130	5.0	30%	Pass	
Copper	B12-Au24911	NCP	mg/kg	23	24	5.0	30%	Pass	
Lead	B12-Au24911	NCP	mg/kg	7.3	7.3	<1	30%	Pass	
Nickel	B12-Au24911	NCP	mg/kg	39	39	2.0	30%	Pass	
Zinc	B12-Au24911	NCP	mg/kg	54	52	3.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
Carroll Lee	Senior Analyst-Volatile (VIC)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Stacey Jenkins	Senior Analyst-Organic (VIC)



Glenn Jackson

Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

mgt-LabMark shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall mgt-LabMark be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Enquiries

From: Jean Heng
Sent: Tuesday, 28 August 2012 10:43 AM
To: Enquiries
Cc: Floris VanRhyn; Glenn Jackson; Rhonda Chouman
Subject: FW: MGT Report 349362 : additional analysis

Importance: High

Follow Up Flag: Follow up
Flag Status: Blue

Hi,

Can this please get logged in for an urgent 1day TAT? Result must be ready by Wednesday lunch time. Please let me know if there will be any issue.

Report 349362 - TPH, metals (8) and PAH: CBH8 0-0.1

Thanks

Regards,
Jean Heng
NSW Client Services Manager
jean.heng@mgtLabMark.com.au

Reception
Unit F6, Building F
16 Mars Road
Lane Cove West, NSW 2066
T: (+61) (2) 8215 6222
F: (+61) (2) 9420 2977
M: 0403 637 214

Hi Jean

Please proceed with the TRH/PAH and metals only.

Kind Regards
JAMES BOYLE
Environmental Scientist

Coffey Environments
118 Auburn Street Wollongong NSW 2500 Australia T +61 2 4201 1400 F +61 2 4201 1401 M
+61 417 646 476 coffey.com -----Original Message-----
From: James Boyle [mailto:James_Boyle@coffey.com]
Sent: Monday, August 27, 2012 6:18 PM
To: Jean Heng
Subject: MGT Report 349362 : additional analysis
Importance: High

Hi Jean

Can you please analyse the following sample for TPH, metals (8) and PAH:
CBH8 0-0.1

Can you please put on a 24hr TAT.

Kind Regards
JAMES BOYLE

Tony W
28/8 10:43
Report: 349739


Sample Receipt
Unit F3, Building F
16 Mars Road
Lane Cove West, NSW 2066

Enquiries

From: Jean Heng
Sent: Tuesday, 28 August 2012 1:24 PM
To: Enquiries
Cc: Floris VanRhyn
Subject: FW: mgt-Labmark Test Results - Report 349362 : Site ENAUBRAD01199AA

Hi,

In followup to my previous email, can you please add this is into the additional report - FYI below 349362

Thank you.

Regards,
Jean Heng
NSW Client Services Manager
jean.heng@mgtLabMark.com.au

Reception
Unit F6, Building F
16 Mars Road
Lane Cove West, NSW 2066
T: (+61) (2) 8215 6222
F: (+61) (2) 9420 2977
M: 0403 637 214

Sample Receipt
Unit F3, Building F
16 Mars Road
Lane Cove West, NSW 2066

Tony Wong
28/8 1:24
Report: 349739
Ag

-----Original Message-----

From: James Boyle [mailto:James_Boyle@coffey.com]
Sent: Tuesday, August 28, 2012 1:24 PM
To: Jean Heng
Subject: RE: mgt-Labmark Test Results - Report 349362 : Site ENAUBRAD01199AA

Yes please.

Kind Regards
JAMES BOYLE
Environmental Scientist

Coffey Environments
118 Auburn Street Wollongong NSW 2500 Australia T +61 2 4201 1400 F +61 2 4201 1401 M
+61 417 646 476 coffey.com

-----Original Message-----

From: Jean Heng [mailto:Jean.Heng@mgtlabmark.com.au]
Sent: Tuesday, 28 August 2012 1:21 PM
To: James Boyle
Subject: RE: mgt-Labmark Test Results - Report 349362 : Site ENAUBRAD01199AA

James,

Sorry, I was out in a meeting before. Just to confirm when you mean W2, as in W2
1.2-1.3 ?

Regards,
Jean Heng
NSW Client Services Manager
jean.heng@mgtLabMark.com.au

Reception
Unit F6, Building F
16 Mars Road
Lane Cove West, NSW 2066
T: (+61) (2) 8215 6222
F: (+61) (2) 9420 2977
M: 0403 637 214

Sample Receipt
Unit F3, Building F
16 Mars Road
Lane Cove West, NSW 2066

-----Original Message-----

From: James Boyle [mailto:James_Boyle@coffey.com]
Sent: Tuesday, August 28, 2012 12:06 PM
To: Jean Heng
Subject: RE: mgt-Labmark Test Results - Report 349362 : Site ENAUBRAD01199AA

Hi Jean

Can you please analyse sample W2 for TPH/PAH and metals (8) on 24hr TAT?

Kind Regards
JAMES BOYLE
Environmental Scientist

Coffey Environments
118 Auburn Street Wollongong NSW 2500 Australia T +61 2 4201 1400 F +61 2 4201 1401 M
+61 417 646 476 coffey.com

-----Original Message-----

From: Jean Heng [mailto:Jean.Heng@mgtlabmark.com.au]
Sent: Tuesday, 28 August 2012 10:23 AM
To: James Boyle
Subject: RE: mgt-Labmark Test Results - Report 349362 : Site ENAUBRAD01199AA

James,

There shouldn't be a problem for TRH/PAH and Metals but herbicides/OCP/OPP and asbestos won't be ready by lunch time Wednesday. Would you still like to proceed ?

Regards,
Jean Heng
NSW Client Services Manager
jean.heng@mgtLabMark.com.au

Reception
Unit F6, Building F
16 Mars Road
Lane Cove West, NSW 2066
T: (+61) (2) 8215 6222
F: (+61) (2) 9420 2977
M: 0403 637 214

Sample Receipt
Unit F3, Building F
16 Mars Road
Lane Cove West, NSW 2066

-----Original Message-----

From: James Boyle [mailto:James_Boyle@coffey.com]
Sent: Tuesday, August 28, 2012 9:31 AM
To: Jean Heng
Subject: RE: mgt-Labmark Test Results - Report 349362 : Site ENAUBRAD01199AA
Importance: High

Hi Jean

Any news on if the results can be reported by Wednesday lunchtime? I need to know if these samples are to be scheduled asap.

Kind Regards
JAMES BOYLE
Environmental Scientist

Coffey Environments
118 Auburn Street Wollongong NSW 2500 Australia T +61 2 4201 1400 F +61 2 4201 1401 M
+61 417 646 476 coffey.com

-----Original Message-----

From: jean.heng@mgtlabmark.com.au [mailto:jean.heng@mgtlabmark.com.au]
Sent: Monday, 27 August 2012 8:00 PM
To: James Boyle
Subject: mgt-Labmark Test Results - Report 349362 : Site ENAUBRAD01199AA

Sample Receipt Advice

Company name: **Coffey Environments Pty Ltd ACT**

Contact name: James Boyle
Client job number: ENAUBRAD01199AA
COC number: Not provided
Turn around time: 1 Day
Date/Time received: Aug 28, 2012 10:43 AM
mgt-LabMark reference: **349739**

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Organic samples had Teflon liners.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: jean.heng@mgtlabmark.com.au

Results will be delivered electronically via e.mail to James Boyle - James_Boyle@coffey.com.

mgt-LabMark Sample Receipt

Company Name: Coffey Environments Pty Ltd ACT
Address: 16 Mildura Street
Fyshwick
ACT 2609

Client Job No.: ENAUBRAD01199AA

Order No.:
Report #: 349739
Phone: +61 2 6216 0206
Fax: +61 2 6260 7211

Received: Aug 28, 2012 10:43 AM
Due: Aug 29, 2012
Priority: 1 Day
Contact Name: James Boyle

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Polycyclic Aromatic Hydrocarbons	Metals M8	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X
Sydney Laboratory - NATA Site # 18217								
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
CBH8 0-0.1	Aug 22, 2012		Soil	M12-Au25777	X	X	X	X

Appendix F

Data Validation Reports

**Preliminary Contamination Assessment,
Proposed Bega Hospital, 1614 Tathra Rd, Bega, NSW**

Coffey Environments Australia Pty Ltd

A.C.N. 140 765 902 A.B.N. 65 140 765 902



QA/QC DATA VALIDATION REPORT

Job No: ENAUBRAD01199AA

MGT Batches: 349362, 349739

I. SAMPLE HANDLING

	Yes	No (Comment below)
1. Were the sample holding times met?	☒	☐
2. Were the samples in proper custody between the field and reaching the laboratory?	☒	☐
3. Were the samples properly and adequately preserved? <i>This includes keeping the samples chilled, where applicable.</i>	☒	☐
4. Were the samples received by the laboratory in good condition?	☒	☐

COMMENTS:

Sample Handling was:

☒ Satisfactory

☐ Unsatisfactory

☐ Partially Satisfactory

Coffey Environments Australia Pty Ltd

A.C.N. 140 765 902 A.B.N. 65 140 765 902



QA/QC DATA VALIDATION REPORT

Job No: ENAUBRAD01199AA

MGT Batches: 349362, 349739

II PRECISION/ACCURACY ASSESSMENT

1. Was a NATA registered laboratory used?
2. Did the laboratory perform the requested tests?
3. Were the laboratory methods adopted NATA endorsed?
4. Were the appropriate test procedures followed?
5. Were the reporting limits satisfactory?
6. Was the NATA Seal on the reports?
7. Were the reports signed by an authorised person?

Yes	No (Comment below)
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐
☒	☐

COMMENTS:

Precision/Accuracy of the Laboratory Report	☒ Satisfactory	☐ Unsatisfactory
	☐ Partially Satisfactory	

Coffey Environments Australia Pty Ltd

A.C.N. 140 765 902 A.B.N. 65 140 765 902



QA/QC DATA VALIDATION REPORT

Job No: ENAUBRAD01199AA

MGT Batches: 349362, 349739

III. FIELD QA/QC

1. Number of Primary Samples Analysed:

Soil: 17 (349362), 2 (349739)

Water: 0

2. Number of Days of Sampling:

Soil: 2

Water: N/A

3. Number and Type of QA/QC Samples Collected:

	SOIL	WATER
Field Duplicates (at least 1 in 10 samples)	2 intra lab	NA
Trip Spikes	1	NA
Trip Blanks (at least 1/day or sampling event)	1	NA
Wash Blanks (at least 1/day/matrix/equipment)	1	NA
Other (Field Blanks, etc.)	NA	NA

4. FIELD DUPLICATES

A. Were an Adequate Number of field duplicates analysed for each chemical (min. 10%)?

B. Were RPDs within Control Limits*?

a. Organics

b. Metals/Inorganics

Yes	No (Comment below)
☐	☒
☒ ☒	☐ ☐

* - Result < 10 times LOR then No Limit

- Result between 10 and 20 times LOR then control limit of 50%

COMMENTS:

- Due to time constraints, no inter laboratory duplicates were collected and analysed. This is not considered significant, due to the limited nature of this assessment and time constraints.
- In addition, the sampling procedures used were based on Coffey standard operating procedures and based on industry standards. Generally duplicates were collected and analysed at a rate of 1 in 10, as per industry guidance. The laboratory results for all analytes were generally consistent with field observations and site history information.

Coffey Environments Australia Pty Ltd

A.C.N. 140 765 902 A.B.N. 65 140 765 902



QA/QC DATA VALIDATION REPORT

Job No: ENAUBRAD01199AA

MGT Batches: 349362, 349739

5. TRIP BLANKS

A. Were an adequate number of trip blanks collected?

B. Were the trip blanks free of contaminants?

(If no, comment whether the contaminants present are also detected in the samples and whether they are common laboratory chemicals.)

Yes	No (Comment below)
☒	☐
☒	☐

6. TRIP SPIKES

A. Were an adequate number of trip spikes collected?

B. Were the spike recoveries within control limits (60% to 110%)?

Yes	No (Comment below)
☒	☐
☒	☐

7. WASH BLANKS

A. Were an adequate number of Wash Blanks collected?

B. Were the Wash Blanks free of contaminants?

(If no, comment whether the contaminants present are also detected in the samples and whether they are common laboratory chemicals.)

Yes	No (Comment below)
☒	☐
☐	☒

COMMENTS:

- Detectable concentrations of zinc were recorded in the wash blank sample collected off a hand auger which was used to facilitate sampling. The source of the detectable concentrations could not be determined. It is not considered to be the result of inappropriate decontamination procedures, as decontamination of sampling equipment was carried out in accordance with Coffey Environments standard operating procedures. It is therefore considered that cross contamination is unlikely.

Field QA/QC was:	☐ Satisfactory	☐ Unsatisfactory
	☒ Partially Satisfactory	

Coffey Environments Australia Pty Ltd

A.C.N. 140 765 902 A.B.N. 65 140 765 902



QA/QC DATA VALIDATION REPORT

Job No: ENAUBRAD01199AA

MGT Batches: 349362, 349739

IV LABORATORY INTERNAL QUALITY CONTROL PROCEDURES

1. Type of QA/QC Samples

	TPH (C ₆ -C ₉), BTEX	TPH (C ₁₀ -C ₃₆)	PAH	OCP/OPP	Herbicides	Metals
Laboratory Blanks/Reagent Blanks (at least 1 per batch)	✓	✓	✓	✓	✓	✓
Laboratory Duplicates (at least 1 per batch or 1 per 10 samples whichever is the smaller)	✓	✓	✓	✓	✓	✓
Matrix Spikes/Matrix Spike Duplicates (1 for each soil type)	✓	✓	✓	✓	✓	✓
Laboratory Control Spike	✓	✓	✓	✓	✓	✓
Surrogate (where appropriate)*	✓	-	✓	✓	✓	-

*Number of surrogates spikes carried out on each sample

2 Were the laboratory blanks/reagents blanks free of contamination?

3. Were the spike recoveries within laboratory control limits?*

a. Organics

b. Metals/Inorganic

4. Were the RPDs of the laboratory duplicates within control limits?#

5. Were the surrogate recoveries within control limits?

Yes	No (Comment below)
☒	☐
☒ ☒	☐ ☐
☐	☒
☒	☐

MGT Laboratory control limits:

* - Organics: MS (70 to 130%); LCS (70 to 130%); Surrogate (50 to 150%);

- Inorganic: MS (80 to 120%); LCS (80 to 120%)

- Result < 10 times LOR then No Limit

- Result between 10-20 times LOR then control limit of 50%

- Result > 20 times LOR then control limit of 30%

COMMENTS:

- An RPD of 35%, above the control limit of 30%, was recorded for TPH C₁₅-C₂₈ between a laboratory duplicate pair. This is not considered significant as the laboratory indicated that the RPD reported passes MGT's acceptance criteria.

5. The laboratory internal QA/QC was:	☒ Satisfactory	☐ Unsatisfactory
	☐ Partially Satisfactory	

Coffey Environments Australia Pty Ltd

A.C.N. 140 765 902 A.B.N. 65 140 765 902



QA/QC DATA VALIDATION REPORT

Job No: ENAUBRAD01199AA

MGT Batches: 349362, 349739

V. DATA USABILITY

1.	Data Directly Usable with the following comments (see comment below)	☒
2.	Data Usable with the following corrections/modifications (see comment below)	☐
3.	Data Not Usable.	☐

COMMENTS:

Detectable concentrations of zinc were recorded in the wash blank sample collected off a hand auger which was used to facilitate sampling. The source of the detectable concentrations could not be determined. It is not considered to be the result of inappropriate decontamination procedures, as decontamination of sampling equipment was carried out in accordance with Coffey Environments standard operating procedures. It is therefore considered that cross contamination is unlikely.

QA/QC Report Prepared by:

James Boyle

QA/QC Report Checked by:

Gary Bagwell

TABLE QAQC2:**SUMMARY OF QUALITY ASSURANCE/QUALITY CONTROL SAMPLES****Heavy Metals, TPH, BTEX, PAH, OCP and OPPs****(All results in mg/kg (soil) or µg/L (water))**

Sample ID	Trip Spike	Trip Blank	WB1
QAQC Type	Trip Spike	Trip Blank	Wash Blank - Hand Auger
Media	Soil	Soil	Water
Date of Sampling	23-Aug-12	23-Aug-12	23-Aug-12
HEAVY METALS Dissolved			
Arsenic	-	-	<1
Cadmium	-	-	<0.2
Chromium	-	-	<1
Copper	-	-	<1
Lead	-	-	<1
Mercury	-	-	<0.1
Nickel	-	-	<1
Zinc	-	-	3
TOTAL PETROLEUM HYDROCARBONS			
C6 - C9 Fraction	-	<20	<40
C10 - C14 Fraction	-	-	<100
C15 - C28 Fraction	-	-	<200
C29 - C36 Fraction	-	-	<200
Total C10-C36	-	-	<LOR
BTEX			
Benzene	87%	<0.1	<0.5
Toluene	110%	<0.1	<0.5
Ethylbenzene	110%	<0.1	<0.5
Total Xylene	110%	<0.3	<1.5
ORGANOCHLORINE PESTICIDES			
Total OCPs	-	-	<LOR
ORGANOPHOSPHOROUS PESTICIDES			
Total OPPs	-	-	<LOR
POLYCYCLIC AROMATIC HYDROCARBONS			
Benzo(a)pyrene	-	-	<0.01
Total PAH	-	-	<LOR

NOTES:

Bold

Concentration exceeds control limit.

ND Not Detected

- Not Tested

LOR Limits of Reporting

Table QAQC1: Relative Percentage Difference for Soil Samples

Batch							
		Primary Sample Conc. (mg/kg)	Duplicate Sample Conc. (mg/Kg)	RPD (%)	Primary Sample Conc. (mg/kg)	Duplicate Sample Conc. (mg/Kg)	RPD (%)
Sample No.	Depth (m)	CBH6 0-0.1	QC2		CBH14 0-0.1	QC4	
Analyte							
HEAVY METALS (Total)							
Arsenic		< 2	< 2	ND	-	-	-
Cadmium		< 0.4	< 0.4	ND	-	-	-
Chromium		9.3	9.5	2.13	-	-	-
Copper		< 5	< 5	ND	-	-	-
Lead		< 5	< 5	ND	-	-	-
Mercury		< 0.1	< 0.1	ND	-	-	-
Nickel		< 5	< 5	ND	-	-	-
Zinc		22	28	24	-	-	-
TOTAL PETROLEUM HYDROCARBONS							
C6 - C9 Fraction		< 20	< 20	ND	-	-	-
C10 - C14 Fraction		< 20	< 20	ND	-	-	-
C15 - C28 Fraction		< 50	< 50	ND	-	-	-
C29 - C36 Fraction		< 50	< 50	ND	-	-	-
Total C10-C36		<LOR	<LOR	ND	-	-	-
POLYCYCLIC AROMATIC HYDROCARBONS							
Benzo(a)pyrene		< 0.5	< 0.5	ND	-	-	-
Total PAH#		<LOR	<LOR	ND	-	-	-
ORGANOCHLORINE PESTICIDES5							
Heptachlor		<0.05	<0.05	ND	<0.05	<0.05	ND
Chlordane		<0.1	<0.1	ND	<0.1	<0.1	ND
Aldrin + Dieldrin		<LOR	<LOR	ND	<LOR	<LOR	ND
DDT + DDE + DDD		<LOR	<LOR	ND	<LOR	<LOR	ND
Total OCP		<LOR	<LOR	ND	<LOR	<LOR	ND
ORGANOPHOSPHOROUS PESTICIDES6							
Total OPP		<LOR	<LOR	ND	<LOR	<LOR	ND
HERBICIDES							
2,4,5-T		<0.5	<0.5	ND	<0.5	<0.5	ND
2,4,5-TP		<0.5	<0.5	ND	<0.5	<0.5	ND
2,4-D		<0.5	<0.5	ND	<0.5	<0.5	ND
2,4-DB		<0.5	<0.5	ND	<0.5	<0.5	ND
Mecoprop		<0.5	<0.5	ND	<0.5	<0.5	ND
Total Herbicides		<LOR	<LOR	ND	<LOR	<LOR	ND
Asbestos							
		ND	ND	ND	ND	ND	ND

Notes:

Bold

RPD exceeds control limit of 50%

ND Not Detected

- Not Tested

LOR Limits of Reporting

A Coffey International Limited Company