Project Approval

Section 75J of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning and Infrastructure under delegation executed on 14 September 2011, the Planning Assessment Commission of New South Wales (the Commission) approves the application referred to in Schedule 1, subject to the conditions in Schedules 2 to 5.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the Project.

Brian Gilligan
Member of the Commission

David Johnson
Member of the Commission

Sydney 8 May 2013

SCHEDULE 1

Application No:	10_0139
Proponent:	Lake Macquarie City Council
Approval Authority:	Minister for Planning and Infrastructure
Land:	Lot 372 DP 723259; and the existing road reserves on Wilton, Wangi and Dorrington Roads along the sewer pipeline route.
Project:	Awaba Waste Management Facility Expansion Project

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SCHEDULE 2 - DEFINITIONS

AWMF	Awaba Waste Management Facility
AHD	Australian Height Datum
BCA	Building Code of Australia
Biodiversity offset strategy	The biodiversity offset approach and vegetation management plan described within the Environmental Assessment, Response to Submissions Report and Statement of Commitments
Construction	The demolition of buildings or works, carrying out of works and erection of buildings and other infrastructure covered by this approval
Council	Lake Macquarie City Council
Department	Department of Planning and Infrastructure
Director-General	Director-General of the Department (or nominee)
EA	Environmental assessment titled *'Additions to Awaba Waste Management Facility'* dated 29 August 2012 prepared by Cardno Pty Ltd
ENV	Excavated Natural Material
EPA	Environment Protection Authority
EP&A Act	*Environmental Planning & Assessment Act 1979*
EP&A Regulation	*Environmental Planning & Assessment Regulation 2000*
EPL	Environmental Protection Licence
Feasible	Feasible relates to engineering considerations and what is practical to build
General Solid Waste (Putrescible)	As defined in the *Waste Classification Guidelines* (DECCW)
General Solid Waste (Non-Putrescible)	As defined in the *Waste Classification Guidelines* (DECCW)
HWC	Hunter Water Corporation
Incident	An incident causing or threatening material harm to the environment, and/or an exceedance of the limits or performance criteria in this approval
Land	In general, the definition of land is consistent with the definition in the EP&A Act.
Landfill	Awaba Waste Management Facility Landfill
LEMP	Landfill Environmental Management Plan
LGA	Local Government Area
Material harm to the environment	Harm to the environment is material if it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Minister	Minister for Planning and Infrastructure
Mitigation	Activities associated with reducing the impacts of the Project
NOW	Department of Primary Industries – NSW Office of Water
NPWS	National Parks and Wildlife Service
OEH	NSW Office of Environment and Heritage
Operations	Operations are triggered by the receipt of waste at the new landfill cells covered by this approval.
POEO Act	*Protection of the Environment Operations Act 1997*
Privately-owned Land	Land not owned by the Proponent or where a private agreement does not exist between the Proponent and the land owner
Project	The development described in the EA
Proponent	Lake Macquarie City Council, or its successor
Reasonable	Reasonable relates to the application of judgment in arriving at a decision, taking into account: mitigation benefits, costs of mitigation versus benefits provided, community views, and the nature and extent of potential improvements
Rehabilitation	The treatment or management of land disturbed by the Project for the purpose of establishing a safe, stable and non-polluting environment
Response to Submissions Report	Response to Submissions Report prepared titled '*Additions to Awaba Waste Management Facility Submissions Report and Revised Statement of Commitments'* prepared by Cardno Pty Ltd dated 22 March 2013
RMS	Roads and Maritime Services
Site	The land referred to in Schedule 1
Special Waste	As defined in the *Waste Classification Guidelines* (DECCW)
Statement of Commitments	The Proponent's Statement of Commitments in Appendix 1
VENM	Virgin Excavated Natural Material
WAD	Works Authorisation Deed

SCHEDULE 3 - ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or decommissioning of the Project.

TERMS OF APPROVAL

2. The Proponent shall carry out the Project generally in accordance with the:
   (a) EA and Response to Submissions Report;
   (b) Statement of Commitments (see Appendix 1);
   (c) site layout plans and drawings in the EA, (as shown in Appendix 2 to Appendix 8); and
   (d) conditions of this approval.

3. If there is any inconsistency between the above, the conditions of this approval shall prevail to the extent of any inconsistency.

4. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:
   (a) any reports, plans, strategies, programs or correspondence that are submitted in accordance with this approval; and
   (b) the implementation of any actions or measures contained in these reports, plans, strategies, programs or correspondence.

LIMITS OF APPROVAL

5. The Proponent shall ensure that no more than 150,000 tonnes per annum of waste is accepted at the landfill in any one calendar year.

SURRENDER OF EXISTING DEVELOPMENT CONSENTS

6. Upon commencement of the development, or as otherwise agreed by the Director-General, the Proponent shall surrender the development consents identified in Table 1 in accordance with Sections 75YA and 104A of the EP&A Act.

Table 1: Existing development consents to be surrendered

DA No.	***DA description***	***Date Consent Granted***
DA 170/1986	Solid waste disposal depot and associated works (original consent)	7 October 1986
DA 976/1994	Recycling area and building	6 December 1994
DA 82/1994	Extension of waste disposal site (current working approval to filling levels)	13 February 1995
DA 2185/1999	Additions to consol window (additional window to weighbridge)	4 January 1999
DA 504/2004	Compactor shed storage	13 May 2009

Note: This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under Part 4A of the EP&A Act. Surrender of a consent or approval should not be understood as implying that works legally constructed under a valid consent or approval can no longer be legally maintained or used.

7. To the extent of any inconsistency between the DA's identified in Table 1 and this approval, this approval shall prevail.

TRANSITIONAL ARRANGEMENTS

8. All existing environmental management plans that apply to the site under those DAs listed in Table 1 of this Schedule shall continue to be fully applied until replaced under this approval.

ACQUISITION OF LAND

9. Prior to the commencement of construction or within 12 months from the date of this approval, whichever occurs first, the Proponent shall acquire Lot 372 DP 723259 from the Crown under the *Land Acquisition (Just Terms Compensation) Act 1991*.

STRUCTURAL ADEQUACY

10. The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures are constructed in accordance with the relevant requirements of the BCA.

Notes:

- *Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works.*
- *Part 8 of the EP&A Regulation sets out the requirements for the certification of the Project.*

UTILITIES

11. Prior to the construction of any utility works, the Proponent shall obtain the relevant approvals from service providers and Council.

DEMOLITION

12. The Proponent shall ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601:2001: The Demolition of Structures*, or its latest version.

OPERATION OF PLANT AND EQUIPMENT

13. The Proponent shall ensure that all plant and equipment used for the Project is:
    (a) maintained in a proper and efficient condition; and
    (b) operated in a proper and efficient manner.

PROTECTION OF PUBLIC INFRASTRUCTURE

14. The Proponent shall:
    (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the Project; and
    (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the Project.

STAGED SUBMISSION OF PLANS OR PROGRAMS

15. With the approval of the Director-General, the Proponent may submit any plan or program required by this approval on a progressive basis.

DISPUTE RESOLUTION

16. In the event that a dispute arises between the Proponent and a public authority, other than the Department, in relation to the reasonableness of any requirements proposed by a public authority arising from the conditions of this approval, the matter can be referred by either party to the Director-General for resolution.

SCHEDULE 4
SPECIFIC ENVIRONMENTAL CONDITIONS

WASTE

Restrictions on Receipt, Storage & Handling of Waste

1. The Proponent shall only receive waste on Site that is authorised for receipt by an EPL.

2. The Proponent shall ensure that any waste generated on the Site during construction is classified in accordance with the EPA's *Waste Classification Guidelines* and disposed of to a facility that may lawfully accept the waste.

Resource Recovery

3. The Proponent shall implement all reasonable and feasible measures to recover resources from the waste stream to the satisfaction of the Director-General.

Screening and Acceptance

4. The Proponent shall:
   (a) implement auditable procedures to:
      - ensure that the Site does not accept wastes that are prohibited;
      - screen incoming waste loads; and
   (b) ensure that:
      - all waste types that are controlled under a tracking system have the appropriate documentation prior to acceptance at the Site;
      - staff receive adequate training in order to be able to recognise and handle any hazardous or other prohibited waste.

Monitoring

5. The Proponent shall prepare and implement a Waste and Resource Recovery Monitoring Program for the Site to the satisfaction of the Director-General. The Program shall:
   (a) be prepared in consultation with the EPA, and submitted to the Director-General for approval prior to the commencement of operations on Site;
   (b) detail the screening and acceptance procedures required by Condition 4 above; and
   (c) monitor:
      - the quantity, type and source of waste received on Site; and
      - the effectiveness of the resource recovery measures (see condition 3 above).

   This Program shall be documented in the landfill EMP (see Condition 2 of Schedule 4)

Trade Waste Agreement

6. Prior to commencement of operation, the Proponent shall ensure that a Trade Waste Agreement is in place with Hunter Water Corporation for the life of the Project.

Landfill Operations

7. Unless the Director-General agrees otherwise, the Proponent shall:
   (a) minimise the exposed or cleared areas at the landfill;
   (b) progressively revegetate all completed areas of the landfill and stabilise any exposed areas that are not required for operational purposes for a period greater than 90 days;
   (c) minimise the tracking of mud and waste from the Site on public roads;
   (d) fill the landfill cells in a systematic manner as detailed in the Staging Plan at Appendix 3;
   (e) maximise landfill compaction rates;
   (f) cover the active landfill area with at least 0.15 m of VENM soil (or a suitable alternative material approved by the EPA) at the end of daily waste disposal and compaction activities;
   (g) progressively cap the landfill cells with a capping layer approved by the EPA; and
   (h) revegetate the covered landfill cells following the capping of each cell once they reach their final design height.

Cover Material

8. The Proponent shall ensure that all waste cover material used on Site is approved in writing by the EPA.

Litter Control

9. The Proponent shall:
   (a) implement suitable measures to prevent the unnecessary proliferation of litter both on and off Site resulting from the landfilling operations; and
   (b) inspect daily and clear the Site (and if necessary, surrounding area) of litter resulting from the landfilling operations, on a daily basis.

Pest, Vermin & Noxious Weed Management

10. The Proponent shall:
   (a) implement suitable measures to manage pests, vermin and declared noxious weeds on Site; and
   (b) inspect the Site on a regular basis to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on Site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in surrounding area.

   Note: For the purposes of this condition, noxious weeds are those species subject to an order declared under the Noxious Weed Act 1993.

Cell Design and Lining System

11. Prior to the commencement of any cell construction work under this approval, the Proponent shall submit comprehensive cell design details to the EPA for the Sidewall, Base and Piggyback components of the landfill. The design details shall be prepared to the satisfaction of the EPA and should include, but are not necessarily limited to:
   (a) plans with cross sections at a suitable scale depicting the dimensions of the proposed landfill cell extensions ie. length, width and depth, as well as details of the floor and wall gradients. The floors of the cells should have transverse gradients of greater than three percent and longitude gradients greater than one percent. All levels should be relative to AHD. A plan shall also be provided that depicts the boundary of the premises subject to the development application and the lot and DP numbers of this land;
   (b) engineering design detail of the proposed cell extension lining and proposed anchoring;
   (c) engineering design detail of the proposed cell extension capping;
   (d) plans and design specifications and arrangements of leachate collections and disposal systems;
   (e) plans indicating the design specifications and arrangement of landfill gas collection systems; and
   (f) the details required on items 11(a) to 11(e) above are to be prepared or overseen by a suitable qualified engineer who has considerable experience in the design and construction of medium to large scale municipal waste landfills. The engineer shall have qualifications acceptable to the Institution of Engineers Australia (IAE).

12. The Proponent shall ensure that the cell design details meet all the recommendations and requirements of the Mine Subsidence Board and are prepared to the satisfaction of the EPA. Confirmation shall be provided to both the Director-General and the EPA at Licence Variation Application Stage that the Mine Subsidence Board has reviewed and approved the final cell design details.

SOIL & WATER

Erosion and Sediment Control

13. During the construction of the Project, the Proponent shall implement suitable erosion and sediment control measures on Site, in accordance with the relevant requirements in the latest version of the *Managing Urban Stormwater: Soils and Construction* guideline. These measures shall be documented in the Construction Environmental Management Plan (see Condition 1 of Schedule 5).

Soil

14. The Proponent shall:
   (a) minimise any soil loss through erosion on Site;
   (b) set aside any topsoil won on Site for the proposed revegetation and rehabilitation of the Site; and
   (c) ensure that any topsoil stockpiles on Site are suitably managed to ensure that the topsoil in these stockpiles can be beneficially used in the proposed revegetation and rehabilitation of the Site.

Water Supply

15. The Proponent shall ensure that:
    (a) all water supplies for construction and operation are sourced from an authorised and reliable supply; and
    (b) the taking of water for purposes other than water supply, such as dewatering during construction, is appropriately authorised.

Surface Water Discharge Limits

16. The Proponent shall ensure that all licensed surface water discharges from the Site comply with discharge limits (volume and quality) set for the Project in any EPL or relevant provisions of the POEO Act.

Stormwater Management

17. The Proponent shall:
    (a) design and install the stormwater management and collection system generally in accordance with the conceptual design in the EA (as shown in Appendix 5), applicable Australian Standards and industry standard best practice guidelines;
    (b) ensure that the system capacity has been designed in accordance with the Blue Book Volumes 1 and 2B;
    (c) divert existing clean surface water around operational areas of the Site;
    (d) direct all sediment laden water in overland flow away from the leachate management system;
    (e) ensure peak stormwater discharge rates from the site at each stage of the project do not exceed predevelopment values; and
    (f) prevent cross contamination of clean and sediment or leachate laden water,

    to the satisfaction of the Director-General.

Leachate Management

18. The Proponent shall:
    (a) design and install the leachate management and collection system generally in accordance with the conceptual design in the EA (as shown in Appendix 5), applicable Australian Standards and industry standard best practice guidelines, or otherwise approved by the EPA;
    (b) ensure that leachate generated by the Project is minimised and appropriately contained, collected and disposed of;
    (c) as required, leachate generated by the Project shall be transferred for disposal to the Rathmines No. 6 WWPS in accordance with HWC's requirements;
    (d) install a leachate barrier system to be used for the direct impoundment of leachate (see conditions 11 and 12 of this Schedule);
    (e) design and operate the leachate management system to prevent leachate from escaping to surface water, groundwater or the surrounding subsoils;
    (f) direct all surface water from areas not subject to waste disposal or leachate disposal away from the leachate management system; and
    (g) treat all water that has entered areas filled with waste, or been contaminated by leachate, as leachate.

    to the satisfaction of the Director-General.

Soil, Water and Leachate Management Plan

19. The Proponent shall prepare and implement a Soil, Water and Leachate Management Plan for the Project. The Plan shall be prepared by a suitably qualified and experienced expert in consultation with LMCC, the NOW and the EPA and be submitted to the Director-General for approval prior to the commencement of Operations. The Plan shall include:
    (a) a Site water balance for the Project, that details:
        - sources and security of water supply;
        - water use on Site;
        - water management on Site;
    (b) an erosion and sediment control plan that:
        - is consistent with the requirements of the latest version of the Blue Book Volume 1 and Volume 2B;
        - identifies activities on Site that could cause soil erosion and generate sediment; and
        - describes the measures that will be implemented to:

i. minimise soil erosion and the transport of sediment to downstream waters, including the location, function and capacity of any erosion and sediment control structures and maintain these structures over time;
ii. ensure that any topsoil stockpiles on Site are suitably managed to ensure that the topsoil in these stockpiles can be beneficially used in the proposed revegetation and rehabilitation of the Site.

(c) a leachate management plan that:
- includes final detailed design specifications of the leachate management and collection system on Site; and
- demonstrates how the requirements of Condition 18 of Schedule 4 have been addressed;

(d) a stormwater management plan that:
- is consistent with the guidance in the latest version of the Blue Book Volume 1 and Volume 2B;
- includes final detailed design specifications for the stormwater management and collection system; and
- demonstrates how the requirements of Condition 17 of Schedule 4 have been addressed;

(e) a surface water, groundwater and leachate monitoring program that includes:
- baseline data (including water flow and quality);
- details of the proposed monitoring network; and
- the parameters for testing and respective impact assessment criteria and trigger levels for action under the surface water, groundwater and leachate response plan.

(f) a surface water, groundwater and leachate response plan that:
- includes a protocol for the investigation, notification and mitigation of any exceedances of the respective trigger levels; and
- describes the measures that could be implemented to respond to any surface or groundwater contamination that may be caused by any development.

The Plan shall be documented in the Landfill Environmental Management Plan (see Condition 3 in Schedule 5).

Contamination Management Plan

20. The Proponent shall prepare and implement a Contamination Management Plan for the Project to the satisfaction of the Director-General. The Plan shall:
(a) be prepared by a suitably qualified and experienced expert;
(b) be submitted to the Director-General for approval prior to commencement of construction;
(c) detail the protocols to be put in place and followed in the event that contaminated soil (including Acid Sulphate Soils) or water is encountered during construction;
(d) be prepared in accordance with the relevant best practice industry guidelines such as the NSW State Government's *Acid Sulphate Soil Manual* (ASSMAC, 1998);
(e) detail how excavated soil will be tested, handled and stockpiled;
(f) detail the measures that will be employed to prevent erosion and sedimentation of contaminated soil; and if necessary;
(g) outline how contaminated soil and water will be disposed of off Site (eg. at a licenced facility).

The Plan shall be documented in the Construction Environmental Management Plan (see Condition 2 in Schedule 5).

AIR QUALITY

Odour

21. The Proponent shall ensure the development does not cause or permit the emission of any offensive odour (as defined by the POEO Act).

Dust Criteria

22. The Proponent shall ensure that dust generated by the Project does not exceed the criteria listed in Tables 2 to 4 at any private residential receiver, or on more than 25 percent of any privately owned land surrounding the Site.

Table 2: Long term criteria for particulate matter

Pollutant	***Averaging period***	***[d]Criterion***
Total suspended particulate (TSP) matter	Annual	[a]90 µg/m^3

Particulate matter < 10 µm (PM_{10})	Annual	[a]30 µg/m^3

Table 3: Short term criterion for particulate matter

Pollutant	***Averaging period***	***[d] Criterion***
Particulate matter < 10 µm (PM_{10})	24 hour	[a] 50 µg/m^3

Table 4: Long term criteria for deposited dust

Pollutant	***Averaging period***	***Maximum increase in deposited dust level***	***Maximum total[1] deposited dust level***
[c]Deposited dust	Annual	[b]2 g/m^2/month	[a]4 g/m^2/month

Notes for Tables 2 -4:

- *[a]Total impact (i.e. incremental increase in concentrations due to the Project plus background concentrations due to other sources);*
- *[b] Incremental impact (i.e. incremental increase in concentrations due to the Project on its own);*
- *[c] Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method*; *and*
- *[d] Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agree to by the Director-General in consultation with the EPA.*

Dust and Odour Minimisation

23. The Proponent shall:
    (a) implement best management practice, including all reasonable and feasible dust and odour mitigation measures to prevent and minimise dust and odour emissions from operations;
    (b) prevent and minimise air quality impacts from the development during adverse meteorological conditions and extraordinary events; and
    (c) minimise surface disturbance of the Site, other than as permitted under this consent.

24. During construction, the Proponent shall ensure that:
    (a) all vehicles on Site do not exceed a speed limit of 25 kilometres per hour;
    (b) all loaded vehicles entering or leaving the Site have their loads covered; and
    (c) all loaded vehicles leaving the Site are clean of dirt, sand and other materials before they leave the Site, to avoid tracking these materials on public roads.

Air Quality Management Plan

25. The Proponent shall prepare and implement an Air Quality and Odour Management Plan for the Project in consultation with the EPA. The Plan shall:
    (a) be prepared and implemented by a suitably qualified and experienced expert;
    (b) be submitted to the Director-General for approval prior to commencement of operations;
    (c) identify all potential odour sources at the Site;
    (d) describe the measures that will be implemented to ensure:
        - best management practice is employed;
        - the air quality and odour impacts from landfilling are minimised during adverse meteorological conditions and extraordinary events; and
        - compliance with the relevant conditions of this approval; and
    (e) describes the air quality and odour management system.

    The Plan shall be documented in the Landfill Environmental Management Plan (see Condition 3 in Schedule 5).

Greenhouse Gas Management Plan

26. The Proponent shall develop and implement a Greenhouse Gas Management Plan prior to the commencement of operations of the new landfill cells. The Plan shall include, as a minimum:
    (a) proposed active landfill gas management system including flaring and / or combustion to reduce potential greenhouse gas emissions from the landfill;
    (b) energy saving measures to be implemented ;
    (c) detail greenhouse gas monitoring program;
    (d) a program to monitor the effectiveness of these measures; and
    (e) a protocol to periodically review the Plan.

The Plan shall be documented in the Landfill Environmental Management Plan (see Condition 3 in Schedule 5).

NOISE

Noise Limits

27. Noise from the premises shall not exceed:
    (a) an LA10(15 minute) noise emission criterion of 45dB(A) (7am to 6pm) Monday to Sunday;
    (b) an LA10 (15 minute) noise emission criterion of 45 dB(A) during the evening (6pm to 10pm) Monday to Friday; and
    (c) at all other times, an LA10 (15 minutes) noise emission criterion of 35dB(A), except as expressively provided by the EPL.

    Noise from the Site is to be measured at any point within six (6) metres of the nearest effected residential receiver or other noise sensitive areas in the vicinity to determine compliance with this condition.

Operational Noise Validation

28. By 21 January 2016 or at a date approved by the Director-General, the Proponent shall undertake a Noise Validation of activities at the Site. The Validation shall be performed in accordance with the *NSW Industrial Noise Policy* (EPA, 2000) or the relevant policy adopted by the EPA at the time of the Validation and submitted to both the Director-General and EPA. The Validation shall include, but not be limited to, the following information:
    (a) identification of any noise sensitive locations ('sensitive receivers') likely to be affected by activities at the Site, such as residential properties, schools, hospitals and passive recreation areas. The location of any noise sensitive locations in relation to the Site shall be mapped;
    (b) existing background (L_{A90}) and ambient (L_{Aeq}) noise levels determined for each sensitive receiver in accordance with the *NSW Industrial Noise Policy* (EPA, 2000) or the relevant policy adopted by the EPA at the time of the validation;
    (c) derivation and identification of the Project specific noise levels for each sensitive receiver in accordance with the *NSW Industrial Noise Policy* (EPA, 2000) or the relevant policy adopted by the EPA at the time of the validation;
    (d) the expected noise level and noise character (for example tonality, impulsiveness, vibration(etc) likely to be generated from noise sources during Operation. Include noise source data for each source in 1/1 or 1/3 octave band frequencies including methods or references used to determine noise source levels;
    (e) the noise levels likely to be received at the most sensitive receivers, including potential impacts for any identified significant adverse meteorological conditions, including:
        - a plan showing the assumed location of each noise source for each prediction scenario;
        - a list of the number and type of noise sources used in each prediction or direct monitoring scenario to simulate all potential significant operating conditions on the Site;
        - any assumptions made in the predictions such as source heights, directivity effects, shielding from topography, buildings or barriers;
        - methods used to predict noise impacts including identification of any noise models used. Where modelling approaches other than the ENM or SoundPlan computer models are adopted, the approach should be appropriately justified and validated;
        - an assessment of appropriate weather conditions for the noise predictions, including reference to any weather data used to justify the assumed conditions;
        - the predicted noise impacts for each noise source as well as the combined noise level for each prediction scenario under any identified significant adverse weather conditions as well as calm conditions where appropriate;
        - an assessment of the need to including modification factors as detailed in Section 4 of the NSW Industrial Noise Policy (EPA 2000) or the relevant policy adopted by the EPA at the time of the Validation.
    (f) discuss the findings of the predictive modelling and direct monitoring and, where relevant noise criteria have not been met, recommend additional mitigation measures;
    (g) include details of any mitigation proposed including the attenuation that will be achieved and the revised noise impact predictions following mitigation;
    (h) after application of all feasible and reasonable mitigation measures, quantify the residual level of noise impact by identifying:
        - locations (if any) where the noise level exceeds the criteria and the extent of exceedance;
        - numbers of people (or areas) affected;
        - times when criteria will be exceeded;
        - likely impact on activities (speech, sleep, relaxation, listening etc);

- change in ambient conditions; and
- the result of any community consultation or negotiated agreement.

Operating Conditions

29. The Proponent shall:
    (a) implement best management practice, including all reasonable and feasible noise management and mitigation measures to prevent and minimise operational, low frequency and traffic noise generated by the Project;
    (b) minimise the noise impacts of the Project during adverse meteorological conditions when noise criteria do not apply;
    (c) maintain the effectiveness of any noise suppression equipment on plant at all times and ensure defective plant is not used operationally until fully repaired; and
    (d) regularly assess noise monitoring data and relocate, modify and/or stop operations to ensure compliance with the relevant conditions of this consent.

Operating Hours

30. The Proponent shall comply with the construction and operation hours detailed in Table 2 for the Site, unless otherwise agreed in writing by the Director-General.

Table 2: Construction and Operation Hours

Activity	Day	Time
Construction	Monday - Friday	7.00am – 6.00pm
	Saturday	8.00am – 1.00pm
	Sunday and Public Holidays	Nil
Operation	Monday to Friday	7.30am – 4.30pm
	Saturdays, Sundays and Public Holidays	8.00am – 4.00pm

Noise Management Plans

31. The Proponent shall prepare and implement a Construction Noise Management Plan in consultation with the EPA and to the satisfaction of the Director-General. The Plan shall:
    (a) be prepared and implemented by a suitably qualified and experienced person;
    (b) be submitted for approval by the Director-General prior to commencement of construction;
    (c) identify each work area, Site compound and access route (both private and public);
    (d) identify the specific activities that will be carried out and associated noise sources at the Site and access routes;
    (e) identify all potentially affected sensitive receivers;
    (f) include the construction noise and vibration objectives identified in accordance with the *NSW Interim Construction Noise Guideline and Assessing Vibration: A Technical Guideline*;
    (g) assess potential noise and vibration from the proposed construction methods (including noise from construction traffic) against the objectives identified in (f);
    (h) where the objectives are predicted to be exceeded, include an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise impacts;
    (i) describe management methods and procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during construction, including the early erection of operational noise barriers;
    (j) detail procedures for notifying residents of construction activities that are likely to affect their noise and vibration amenity; and
    (k) detail measures to monitor noise performance and respond to complaints.

    The Plan shall be documented in the Construction Environmental Management Plan (see Condition 2 in Schedule 5).

32. The Proponent shall prepare and implement an Operational Noise Management Plan for the Project in consultation with the EPA and to the satisfaction of the Director-General. The Plan shall:
    (a) be prepared and implemented by a suitably qualified and experienced person;
    (b) be submitted for approval by the Director-General prior to commencement of operations;
    (c) describe the measures that will be implemented to ensure:
        - best management practice is being employed on site;
        - traffic management noise is effectively managed; and

- the noise impacts of the Project are minimised during any meteorological conditions when the noise criteria in this consent do not apply;
- compliance with the relevant conditions of this consent.

(d) describe the noise management system;
(e) includes a noise monitoring program that:
- is capable of evaluating the performance of the Project;
- includes a protocol for determining exceedances of the relevant conditions of this consent and responding to complaints; and
- adequately supports the noise management system; and
- evaluates and reports on the effectiveness of the noise management system.

The Plan shall be documented in the Landfill Environmental Management Plan (see Condition 3 in Schedule 5).

TRANSPORT

33. Prior to the commencement of operations, a Seagull Type intersection with raised kerbs and street lighting shall be provided at the intersection of Wangi Road (MR217) and Wilton Road. The intersection shall be designed and constructed in accordance with the Austroads *Guide to Road Design 2009* (with RTA supplements) to the satisfaction of the RMS.

34. Prior to the commencement of any works on a State road, the proponent shall enter into a Works Authorisation Deed (WAD) with the RMS.

Note: Further advice regarding the WAD process is provided in Appendix 8.

35. Prior to the commencement of operations, the Proponent shall complete all road works under the WAD to practical completion, to the satisfaction of the RMS.

36. All works shall be undertaken at full cost to the Proponent, to the satisfaction of RMS.

37. The Proponent shall ensure that:
(a) the internal roads and parking associated with the Project are constructed and maintained in accordance with the latest versions of AS 2890.1 and AS 2890.2; and
(b) vehicles associated with the Project do not park or queue on the public road network.

38. The Proponent shall prepare and implement a Construction Traffic Management Plan (CTMP), including a Vehicle Movement Plan for the Project in consultation with the RMS and to the satisfaction of the Director-General. The Plan shall:
(a) be prepared and implemented by a suitably qualified and experienced person;
(b) be submitted for approval by the Director-General prior to commencement of construction; and
(c) be prepared with the intention of having minimal impact to the operation of the road network.

VISUAL AMENITY

Lighting

39. The Proponent shall ensure that the lighting associated with the Project:
(a) complies with the latest version of AS 4282(INT) - *Control of Obtrusive Effects of Outdoor Lighting*; and
(b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.

Signage

40. The Proponent shall not install any advertising signs on Site without the written approval of the Director-General.

HAZARDS & RISKS

Bunding

41. The Proponent shall store all chemicals, fuels and oils used on Site in appropriately bunded areas in accordance with the requirements of all relevant Australia Standards, and/or EPA's *Storing and Handling Liquids: Environmental Protection – Participants Handbook*.

Fire Management

42. The Proponent shall:
    (a) ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures are constructed in accordance with Section 3 and Section 7 (BAL 29) Australian Standard AS3959-2009 c of buildings in bush fire-prone areas;
    (b) prior to the commencement of operations, prepare a Fire Management Plan for the Site:
    (c) implement suitable measures to minimise the risk of fire on Site, including in the landfill area;
    (d) extinguish any fires on Site promptly; and
    (e) maintain adequate fire-fighting capacity on Site.

Emergency Response

43. The Proponent shall prepare and implement an Emergency Response Plan for the Project to the satisfaction of the Director-General. The Plan shall:
    (a) be prepared and implemented by a suitably qualified and experienced person whose appointment has been approved by the Director-General;
    (b) be submitted for approval by the Director-General prior to commencement of operations; and
    (c) include a Bush Fire Emergency Evacuation Plan in accordance with the NSW Rural Fire Service document *Guide for Developing a Bush Fire Emergency Evacuation Plan*.

CONSERVATION

Heritage Management

44. The Proponent shall consult with and involve all the registered Aboriginal parties for the Project in the ongoing management of the Aboriginal cultural heritage values. Evidence of this consultation shall be collated and provided to the Director-General upon request.

45. The Proponent shall prepare and implement a Cultural Heritage Management Plan (CHMP) to the satisfaction of the Director-General. The Plan shall:
    (a) be prepared in consultation with the OEH by a suitably qualified and experienced expert;
    (b) be approved by the Director-General prior to the commencement of any ground disturbance or development works;
    (c) be implemented in consultation with the registered Aboriginal parties;
    (d) detail:
        - procedures for managing the Aboriginal cultural heritage values associated with the Project;
        - the involvement and responsibilities of the Aboriginal stakeholders in the implementation of all cultural heritage management actions;
        - the responsibilities of all other stakeholders;
        - all mitigation and management strategies (including monitoring program, further investigations etc);
        - procedures for the identification and management of previously unrecorded sites (including human remains);
        - an appropriate keeping place agreement with local Aboriginal community representatives for any Aboriginal objects salvaged through the development process;
        - the Aboriginal Cultural Heritage Education Induction Program for all contractors and personnel associated with construction activities; and
        - compliance procedures in the unlikely event that non-compliance with the CHMP is identified.

46. The Proponent is to provide fair and reasonable opportunities for the registered Aboriginal parities to monitor any initial ground disturbance activities associated with the Project. In the event that additional Aboriginal objects are uncovered during the monitoring program, the objects are to be recorded and managed in accordance with the requirements of Sections 85A and 89A of the *National Parks and Wildlife Act 1974*.

47. All Aboriginal sites impacts by the Project shall have an Aboriginal Site Impact Recording (ASIR) form completed and be submitted to the AHIMS Registrar within three (3) months of being impacted.

48. If human remains are located in the event that surface disturbance occurs, all works shall halt in the immediate area to prevent any further impacts to the remains. The NSW Police are to be contacted immediately. No action is to be undertaken until the NSW Police provide written notification to the Proponent. If the skeletal remains are identified as Aboriginal, the Proponent

shall contact the Environment Line on 131 555 and representatives of the local Aboriginal community. No works are to continue until the NSW OEH provides written notification to the Proponent.

49. An Aboriginal Cultural Education Induction Program shall be developed for the induction of all personnel and contactors involved in the construction activities on Site. Records are to be kept of which staff / contractors were inducted and when for the duration of the Project. The program should be developed and implemented in collaboration with the registered Aboriginal parties.

Threatened Biodiversity

Biodiversity Offset Strategy

50. The Proponent shall implement the biodiversity offset strategy described in the EA and RTS, summarised in Table 3 and shown in Appendix 2, to the satisfaction of the Director-General.

Table 3: Biodiversity Offset Strategy

Offset Area	Offset Type	Ecosystem credits	Species credits
Remainder of landfill site (part Lot 372, DP 723259)	Vegetation to be enhanced and retained including Smooth-barked Apple - Red Bloodwood open Forest and Scribbly Gum - Red Bloodwood heath woodland communities and *Tetratheca Juncea* (Black-eyed Susan)	153 (like for like) 27 (other vegetation)	69,792 (*Tetratheca Juncea*)
Land adjacent to site (part Lot 373, DP 723259)	Vegetation to be enhanced and retained, including Smooth-barked Apple - Red Bloodwood open Forest and Scribbly Gum - Red Bloodwood heath woodland communities and *Tetratheca Juncea* (Black-eyed Susan)		
Additional Land	Vegetation to be enhanced and retained, including Smooth-barked Apple - Red Bloodwood open Forest and Scribbly Gum - Red Bloodwood heath woodland communities	239 (like for like)	-
TOTAL		**419**	**69,792**

Note: to identify the areas referred to in Table 3, see the applicable figures in Appendix 2.

51. Prior to construction, the Proponent shall update the biodiversity offset strategy referred to in Table 3, in consultation with the Department, OEH and DSWEPAC and to the satisfaction of the Director-General. The updated strategy should include specific details on the Additional Land, including evidence that the land has been purchased by the Proponent.

Long Term Security of Offsets

52. Prior to construction, the Proponent shall enter into a Biobanking Agreement, in accordance with Part 7A of the *Threatened Species Conservation Act, 1995*, to the satisfaction of the Director-General. The Biobanking Agreement shall:
    (a) provide for the long term protection and conservation of the land referred to in Table 3;
    (b) describe the obligations of the Proponent for protection and enhancement of the offset areas; and
    (c) ensure protection of the land in perpetuity.

Pre-Clearance Surveys

53. Prior to construction, the Proponent shall carry out pre-clearing surveys by a suitably qualified and experienced ecologist in accordance with *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities* (DEC, 2004), to the satisfaction of the Director-General.

Biodiversity Management

54. The Proponent shall prepare and implement a Translocation Plan for the Project to the satisfaction of the Director-General. The Plan shall:
    (a) be prepared by a suitably qualified and experienced expert in consultation with the OEH;

(b) be reviewed by an independent agency that oversees land management outcomes in the region;
(c) be submitted to the Director-General for approval prior to the commencement of construction;
(d) describe the measures that will be implemented to:
- translocate and manage fauna species;
- monitor and report on the success of the translocation; and
- ensure suitable contingency measures are implemented if the monitoring suggests the translocation is not working as well as intended.

The Plan shall be documented in the Construction Environmental Management Plan (see Condition 2 in Schedule 5).

55. The Proponent shall prepare and implement a Vegetation and Fauna Management Plan for the Project to the satisfaction of the Director-General. The Plan shall:
(a) be prepared by a suitably qualified and experienced expert in consultation with the OEH;
(b) be reviewed by an independent agency that oversees land management outcomes in the region;
(c) be approved by the Director-General prior to the commencement of construction;
(d) map all identified vegetation cover and types;
(e) describe methods for monitoring and controlling vegetation, including prevention of litter and weed invasion into the Offset Areas during construction and operation;
(f) include a Vegetation Clearing Protocol;
(g) identify measures to manage edge effects along the interface of the Offset Areas and landfill sites;
(h) detail management of pest species; and
(i) detail ecological monitoring programs to be implemented.

56. The Vegetation Clearing Protocol shall:
(a) clearly identify the location and type of vegetation to be retained and to be removed from the Site;
(b) detail measures that would be implemented for vegetation clearing;
(c) ensure vegetation, including trees would not be pushed or felled into any retained bushland areas during the vegetation removal process; and
(d) detail the staging of construction to avoid breeding times for key species on Site.

LANDFILL CLOSURE AND REHABILITATION

Closure Management Plan

57. The Proponent shall prepare and implement a Landfill Closure and Rehabilitation Management Plan for the Site to the satisfaction of the Director-General. The Plan shall:
(a) be prepared in consultation with the EPA and other relevant agencies by suitably qualified and experienced expert;
(b) be submitted to the Director-General for approval within 12 months upon commencement of this approval;
(c) ensure that the final landform of the Site is consistent with the EA and Appendix 5 of this Consent; and

Rehabilitation Management Plan

58. The Proponent shall prepare and implement a Landfill Closure and Rehabilitation Management Plan for the Site to the satisfaction of the Director-General. The Plan shall:
(a) be prepared in consultation with the EPA by a suitably qualified and experienced expert;
(b) be submitted to the Director-General for approval within 12 months upon commencement of this approval;
(c) define the objectives and criteria for rehabilitation and closure;
(d) ensure that the final landform of the Site is consistent with the EA and Appendix 5 of this approval;
(e) describe the measures that would be implemented to achieve the specified objectives and criteria for rehabilitation and closure;
(f) calculate the cost of implementing these measures;
(g) describe how the performance of these measures would be monitored over time; and
(h) include details of the post closure management measures for all aspects of the Project.

SCHEDULE 5
ENVIRONMENTAL MANAGEMENT, REPORTING & AUDITING

ENVIRONMENTAL MANAGEMENT

Construction Environmental Management Plan

1. The Proponent shall prepare and implement a Construction Environmental Management Plan for the Project to the satisfaction of the Director-General. The Plan shall:
   (a) be approved by the Director-General prior to the commencement of construction;
   (b) identify the statutory consents and approvals that apply to the Development;
   (c) consolidate all relevant management plans and monitoring programs required in the conditions of this approval;
   (d) outline all environmental management practices and procedures to be followed during construction and demolition works associated with the Project;
   (e) describe all activities to be undertaken on the Site during construction of the Project, including a clear indication of construction stages;
   (f) detail how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts;
   (g) describe the roles and responsibilities for all relevant employees involved in construction and demolition works associated with the Project; and
   (h) include arrangements for community consultation and complaints handling procedures during construction and demolition.

   Note: Construction of the Project shall not commence until written approval of the Plan has been received from the Director-General.

Landfill Environmental Management Plan

2. Prior to the commencement of operations, the Proponent shall update the draft Landfill Environmental Management Plan for the Site to the satisfaction of the Director-General and in consultation with NOW. Following approval, the Proponent shall implement the Plan to the satisfaction of the Director-General. The Plan shall:
   (a) be prepared in consultation with the EPA and NOW;
   (b) be prepared by suitably qualified and experienced experts;
   (c) describe in detail the management measures that would be implemented to address:
      - the relevant matters referred to in the *Environmental Guidelines for Solid Waste Landfills*;
      - the conditions of this approval; and
      - requirements of the EPL;
   (d) include a copy of:
      - the relevant plans and programs required under this approval;
      - a quality assurance plan for the design and installation of the leachate management system and any capping of the landfill cells that covers the relevant issues outlined in sections 1 – 2 of Appendix A of the *Environmental Guidelines for Solid Waste Landfills*;
   (e) describe the procedures that would be implemented to:
      - keep the local community and relevant agencies informed about the operation and environmental performance of the Project;
      - receive, handle, respond to, and record complaints;
      - resolve any disputes that may arise during the course of the Project; and
      - respond to emergencies;
   (f) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Project; and
   (g) be placed on Council's website within 2 weeks of its approval.

Management Plan Requirements

3. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
   (a) detailed baseline data;
   (b) a description of:
      - the relevant statutory requirements (including any relevant approvals, licences or lease conditions);
      - any relevant limits or performance measures/criteria; and
      - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the Project or any management measures;
   (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;

(d) a program to monitor and report on the:
- impacts and environmental performance of the Project;
- effectiveness of any management measures (see c above);

(e) a contingency plan to manage any unpredicted impacts and their consequences;
(f) a program to investigate and implement ways to improve the environmental performance of the Project over time;
(g) a protocol for managing and reporting any:
- incidents;
- complaints;
- non-compliances with statutory requirements; and
- exceedances of the relevant limits and/or performance measures / criteria; and

(h) a protocol for periodic review of the plan.

Annual Review

4. One year after the commencement of operations, and annually thereafter, the Proponent shall review the environmental performance of the Project to the satisfaction of the Director-General. The review shall:
   a) describe the operations that were carried out in the past year;
   b) analyse the monitoring results and complaints records of the Project over the past year, which includes a comparison of these results against the
      - relevant statutory requirements, limits or performance measures/criteria;
      - monitoring results of previous years; and
      - relevant predictions in the EA;

   c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
   d) identify any trends in the monitoring data over the life of the Project; and
   e) describe what measures will be implemented over the next year to improve the environmental performance of the Project.

Revision of Plans & Programs

5. Within 3 months of the submission of an:
   a) audit under condition 9 of schedule 5;
   b) incident report under condition 7 of schedule 5; and
   c) annual review under condition 5 of schedule 5,

   the Proponent shall review, and if necessary revise the plans and programs required under this approval to the satisfaction of the Director-General.

   Note: This is to ensure the plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the Project.

REPORTING

Incident

6. The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the Project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident.

Regular

7. The Proponent shall provide regular reporting on the environmental performance of the Project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval, and to the satisfaction of the Director-General.

INDEPENDENT ENVIRONMENTAL AUDIT

8. Within a year of the commencement of operations of the Project, and every three (3) years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the Project. The Audit shall:
   a) be conducted by suitably qualified, experienced and independent team of expert/s whose appointment has been endorsed by the Director-General;
   b) include consultation with the relevant agencies;
   c) assess the environmental performance of the Project and assess whether it is complying with the relevant requirements in this approval and any relevant EPL (including any plan or program required under these approvals);
   d) review the adequacy of any plans or programs required under these approvals; and, if appropriate;

e) recommend measures or actions to improve the environmental performance of the Project, and/or any plan or program required under these approvals.

Note: This Audit team shall be led by a suitably qualified auditor and include experts in any fields specified by the Director-General.

9. Within 6 weeks of the completing of this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, together with its response to any recommendations contained in the audit report.

ACCESS TO INFORMATION

10. From the commencement of the construction of the Project, the Proponent shall make the following information publicly available on its website as it is progressively required by the approval:
    a) a copy of all current statutory approvals;
    b) a copy of the current plans and programs required under this approval;
    c) a summary of the monitoring results of the Project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;
    d) a complaints register, which is to be updated on a monthly basis;
    e) a copy of the Annual Reviews (over the last 5 years);
    f) a copy of any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit; and
    g) any other matter required by the Director-General.

COMMUNITY EDUCATION PROGRAM

11. The Proponent shall prepare and implement a Community Education Program for the Project to the satisfaction of the Director-General. The Program shall be submitted to the Director-General for approval prior to the commencement of operations, and shall at a minimum focus on promoting resource recovery activities provided at the Site.

APPENDIX 1
PROPONENT'S STATEMENT OF COMMITMENTS

Statement of Commitments

Issue	Commitments
• General	• LMCC will undertake the proposed works as described in this EA in accordance with the mitigation and management measures identified in this EA. • LMCC will ensure that a Construction Environmental Management Plan (CEMP) is prepared and implemented for the proposed works. The CEMP will detail appropriate mitigation measures for a range of construction activities and will address soil erosion and sediment control, slope stability, uncovering of contaminated, saline and/or acid sulfate soil, spill management, dust suppression, construction noise and vibration (as a minimum). • LMCC will gain all necessary approvals and permits supporting both the construction and operational phases, including: - Updating and obtaining a reissue of the existing EPL (Licence No. 5873) for the site, or obtaining a new EPL for the site; and - Obtaining approval under Section 15 of the *Mine Subsidence Compensation Act 1961.* • LMCC will update and continue to apply the existing LEMP for the AWMF to incorporate any new management/mitigation measures and monitoring requirements considered necessary for the proposed works. • LMCC will undertake community consultation as identified in **Section 4.4** during the exhibition period of this EA Report, including holding information sessions for the community and stakeholders. • LMCC will ensure that site monitoring is undertaken in accordance with the existing and future Environmental Protection Licence (EPL) for the site.
Waste Management	• LMCC will ensure that during construction the site will be kept clear of unnecessary construction waste. Waste materials generated during the construction phase on both the AWMF site and along the sewer pipeline route will be recycled or reused wherever possible in the first instance. • LMCC will stockpile and reuse soil and vegetation required to be excavated/cleared for the new landfill cells and either reuse these resources as daily cover material for the active tipping face (soil) or process as green waste and use as mulch (vegetation). • LMCC will, wherever practical, place any felled trees or tree limbs in nearby surrounding bushland to act as potential habitat for fauna and reduce the volume of green waste. • LMCC will extend the gas extraction infrastructure into the proposed new landfill Areas A, B and C on a progressive basis into the future so that the capacity for gas capture and energy generation will be enhanced. • LMCC will continue to apply cover material to the active tip face to suppress any litter from becoming airborne during strong winds and escaping into the surrounding environment. LMCC will also continue to undertake litter patrols to manage stray litter. • LMCC will construct the additional facilities at the AWMF out of recycled materials, wherever possible. • LMCC will adopt a phased "three-bin source separated organics" processing system as its preferred waste processing technology for targeting domestic waste, which includes the implementation of a three bin system for domestic use (general rubbish, recycling and organic waste).
Soil and	• LMCC will ensure that an *Erosion and Sediment Control Plan* (ESCP) will be prepared and implemented in accordance with the *Managing*

Issue	Commitments
Contamination	*Urban Stormwater: Soils and Construction Volume 2* series (DECC, 2008a, 2008b and 2008c) prior to works commencing. The ESCP should include a range of measures in accordance with best practice, including but not limited to progressive/staged vegetation clearing, implementation of sediment fences and flow diversion structures, covering or wetting of stockpiles, usage of excavation materials as future daily cover, ceasing of works and checking the integrity of erosion and sediment controls during heavy rainfall, stabilisation of access points and the installation of rumble grids at access points, and rapid backfilling of excavated pipeline trenches. • LMCC will ensure that an *Acid Sulfate Soils Management Plan* must be prepared for the proposed works in accordance with the *Acid Sulfate Soils Manual* (Stone et al., 1998) that will focus on the trenching works for the installation of the sewer pipeline. • LMCC will ensure that a *Salinity Management Plan* will be prepared for the proposed works that will focus on the trenching works for the installation of the sewer pipeline. • LMCC will ensure that a *Contamination Management Plan* is prepared and implemented in the event that contaminated land is encountered during excavation. In such an event, works would cease immediately and OEH would be notified. Emergency measures (such as diversion of surface runoff away from contaminated areas) would also be implemented in a timely fashion. • Prior to construction, LMCC will consider the existing Geotechnique Report (Appendix F) and the results of the subsidence risk assessment currently being undertaken by Centennial Coal to support an application being prepared to support future mine-workings. (This report is currently being prepared in partnership with LMCC, the Mine Subsidence Board, Centennial Coal, GSS Environmental, GHD and MSEC). LMCC will undertake a design review to ensure that the final design considers the worst case mine subsidence parameters, and will accommodate the worst case ground movement identified in either document without suffering structural failure or compromising environmental protection. • LMCC will facilitate the management of erosion and sediment in the operational phase through stability control measures, utilisation of the proposed wheel wash facility, progressive revegetation of capped landfill area and utilisation of the proposed road to minimise surface and vegetation disturbance.
Water Quality and Hydrology	• LMCC will ensure that a Site Water Management Plan is prepared and implemented. This Plan will be developed in consultation with the Office of Water and shall include: - Site Water Balance, which will include: • Sources and security of water supply, • Water use on site, and • Water management on site. - Surface Water Management Plan which will include: • Detailed baseline data on surface water flows and quality, • Surface water impact assessment criteria, including trigger levels for investigating any potentially adverse surface water impacts, • A program to monitor surface water flows and quality, and • A protocol for the investigation and mitigation of identified exceedences of the surface water impact assessment criteria. - Groundwater Management Plan which will include: • Detailed baseline data on groundwater levels and quality,

Issue	Commitments
	• Groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts, • A program to monitor groundwater levels and quality, and • A protocol for the investigation and mitigation of identified exceedences of the groundwater impact assessment criteria. • In accordance with the site's EPL, LMCC currently undertakes groundwater quality monitoring using annual or quarterly grab samples at five sites. Parameters monitored include alkalinity (as calcium carbonate), aluminium, ammonia, arsenic, biochemical oxygen demand (BOD), barium, benzene, cadmium, calcium, chloride, chlorinated volatile compounds, chromium (hexavalent), chromium (total), cobalt, conductivity, copper, ethyl benzene, fluoride, iron, lead, magnesium, manganese, mercury, nitrate, organochlorine pesticides, organophosphate pesticides, PCBs, phosphate, polycyclic aromatic , hydrocarbons, potassium, sodium, sulfate, toluene, total phenolics, total dissolved solids, total organic carbon, total petroleum hydrocarbons, zinc, pH. It is expected that the EPL will be amended for the site to account for the proposed site changes, and LMCC will continue to undertake monitoring according to the amended licence conditions. In addition, LMCC propose to install additional groundwater monitoring wells as shown in **Figure 5.5** to enable improved monitoring of groundwater quality. • LMCC will ensure that, should dewatering of groundwater be required as part of any excavation works, a licence is sought under the *Water Management Act 2000*. • LMCC will ensure that a *Stormwater Management Plan* is prepared and implemented for the construction phase of the proposed works to mitigate the impacts on water quality. • LMCC will ensure that temporary stormwater quantity and quality management measures are implemented during the construction phase, including the installation of silt curtains, hay bale filters and stormwater diversions. • In accordance with the site's EPL, LMCC currently undertakes stormwater quality monitoring using annual or quarterly grab samples at four sites. Parameters monitored include alkalinity (as calcium carbonate), aluminium, ammonia, arsenic, biochemical oxygen demand (BOD), barium, benzene, cadmium, calcium, chloride, chlorinated volatile compounds, chromium (hexavalent), chromium (total), cobalt, conductivity, copper, ethyl benzene, fluoride, iron, lead, magnesium, manganese, mercury, nitrate, organochlorine pesticides, organophosphate pesticides, PCBs, phosphate, polycyclic aromatic hydrocarbons, potassium, sodium, sulfate, toluene, total phenolics, total dissolved solids, total organic carbon, total petroleum hydrocarbons, total suspended solids, zinc and pH. LMCC will ensure that the quality of stormwater leaving the site will be in accordance with the limits outlined by ANZECC (2000) and the existing EPL. • LMCC will ensure that a 30m buffer zone will be established from the watercourse centre-line and that all water management measures, both temporary construction phase measures and permanent measures, are located outside of this buffer. • LMCC will ensure that the proposed expansion will incorporate appropriate design principles for leachate basins, including ensuring that basin liners are utilised, active storage depths in the proposed basins are 0.75m from the permanent water level to the level of the primary spillway, and overflows from the basins are conveyed to the outfall(s) via 0.5m deep rock lined channel with base widths of 2m and side slopes of 1(V):2(H).

Issue	Commitments
	• With regards to Hunter Water Corporation assets, LMCC will ensure that no sludge will be discharged to the receiving access chamber, if required.
Leachate	• Leachate will be managed in accordance with best practice: - The entire new landfill area will be lined (implementing a 'piggyback' liner over the existing waste using a LLDPE liner; - Leachate will be collected, treated and managed/disposed of appropriately for the operational lifetime of the landfill; and - The landfilling operations will be carefully staged, with care taken at all times to minimise the inflow of water into active landfill areas. • LMCC will incorporate aeration in the proposed 8ML leachate pond, as discussed in **Section 6.4.4** and determined in consultation with HWC, such that surplus leachate disposed of to the sewer network (via the proposed sewer pipeline) meets HWC's quality requirements. The existing 6ML leachate pond will be retained, and operated in series to provide additional physical treatment. • LMCC will ensure that engineering cell design drawings that meet EPA specifications (including the provision of cross sections, cell extension lining, anchoring and capping, leachate collection and disposal system and gas collection system) will be developed as part of the detailed design. LMCC note that this information is also required as part of the required application to vary the existing EPL (Licence No. 5873) to permit the construction of the cell extension. • LMCC will seek to establish a Trade Wastewater Agreement with HWC for the discharge of leachate from the AWMF site to the HWC sewer system. • LMCC will ensure that a sewer flowmeter is installed, and a sampling point established, at the AWMF package pumping station so that volumes and quality of leachate discharged to the HWC sewer network can be monitored. • LMCC currently undertakes leachate quality monitoring via quarterly grab samples at one location, and this includes testing for alkalinity (as calcium carbonate), ammonia, biochemical oxygen demand (BOD), calcium, chloride, fluoride, iron, magnesium, manganese, nitrate, organochlorine pesticides, potassium, sodium, sulfate, total phenolics, total organic carbon, total petroleum hydrocarbons, total suspended solids and pH. LMCC will ensure that leachate quality monitoring continues in accordance with the conditions of the new EPL to be issued for the site.
Flora and Fauna	• LMCC will ensure that a BioBanking Agreement is formalised for the site. LMCC will finalise a *BioBanking Statement* for the Lot 372 Development Site and a *BioBanking Agreement* for the proposed BioBank Site (comprising part of Lot 372, part Lot 373 and an additional suitable area of land (yet to be made available)) to offset the removal of 2,302 *Tetratheca juncea* plants and 7.2ha of native vegetation communities at the site (of a total 8.55ha of vegetation to be impacted). LMCC will make provision for these offset sites to be managed in perpetuity for conservation. The areas proposed to be biobanked on Lot 372 and 373 are shown in Figure 1. • LMCC will provide DP&I with a *BioBank Site Management Plan* that commits the proposed Awaba BioBank Site to in-perpetuity management and a fund deposit calculated on this basis. The required management actions will be determined in consultation with OEH and can be estimated using Part A of the BioBanking Credit Pricing Spreadsheet (OEH, 2011c). • LMCC will ensure that Lot 372 is acquired from the Crown such that ownership is transferred to LMCC, prior to the BioBanking Agreement being formalised.

Issue	Commitments
	• It is noted that there is an existing mining lease and an exploration lease over the proposed biobanking site (ML1452 and EL5138). LMCC will ensure that consent from the leaseholder, the Minister for the Environment and the Minister for Resources and Energy, will be obtained for the proposed biobanking agreement prior to the agreement being finalised. • Upon establishment of the Awaba Biobank Site, LMCC will ensure that 392 Ecosystem Credits of the required vegetation types and 33,853 *Tetratheca juncea* Species Credits will be retired within the BioBanking Scheme. • LMCC will ensure that a *Vegetation Management Plan* is prepared and implemented prior to commencement of the proposed works that will include details pertaining to procedures for clearing, landscaping and revegetation/rehabilitation works that are planned for the AWMF site during the construction, operational and post-closure phases and also immediately following completion of the installation of the sewer pipeline. The plan will include a *Vegetation Clearing Protocol* and a *Weed Management Sub-Plan*. • LMCC will ensure that a *Fauna Management Plan* is prepared and implemented prior to commencement of the proposed works that will provide a protocol for responding to the detection and relocation of native fauna present in trees, hollows and logs that lie within the proposed areas for clearing. LMCC will ensure that details regarding the most appropriate season(s) to undertake clearing with regard to reducing disturbance to fauna (especially nestlings) are included in addition to details regarding the proposed management of pest species during the proposed works. Where they have been prepared and where applicable, LMCC will consider the details set out in *Recovery Plans*, *Threat Abatement Plans* or *Priority Action Statements* for listed threatened species and incorporate relevant mitigation measures into the *Fauna Management Plan*. • Suitably experienced wildlife handlers will be present during pre-clearance surveys to relocate any fauna located during the works.
Air Quality and Odour	• LMCC will ensure that a *Construction Environmental Management Plan* is prepared and implemented prior to commencement of the proposed works, and that this plan will include management/mitigation procedures for air quality, odour and dust, including minimising the number of stockpiles on site, limiting unnecessary vegetation clearing, and reducing/controlling the number of trips and trip distances where possible. • LMCC will ensure that standard odour management practices for landfill sites will be utilised in the operational phase of the works, including the continuation of current practices such as daily covering/capping of the active tip face, gas monitoring programs and an odour complaints register. • LMCC will ensure that standard air quality management practices for landfill sites will be utilised in the operational phase of the works, including the maintenance of gas collection infrastructure, power generation unit, flare stack, and plant and equipment on site, and a flare stack emission monitoring program. • LMCC will ensure that air quality, odour and dust mitigation measures are implemented during the operational phase of the works, including covering/capping of waste, gas emission monitoring programs, and maintenance of gas infrastructure and site plant/equipment. • LMCC currently undertakes environmental monitoring of methane which includes monthly, in-situ monitoring of %(v/v) methane inside buildings at the site and also on the surface of the landfill. LMCC will ensure that this monitoring continues. Additional gas monitoring locations are proposed as part of the works as shown in Figure 5.4 of the EA. • LMCC will prepare an Odour Control Plan and provide it to Hunter Water in support of the development application.

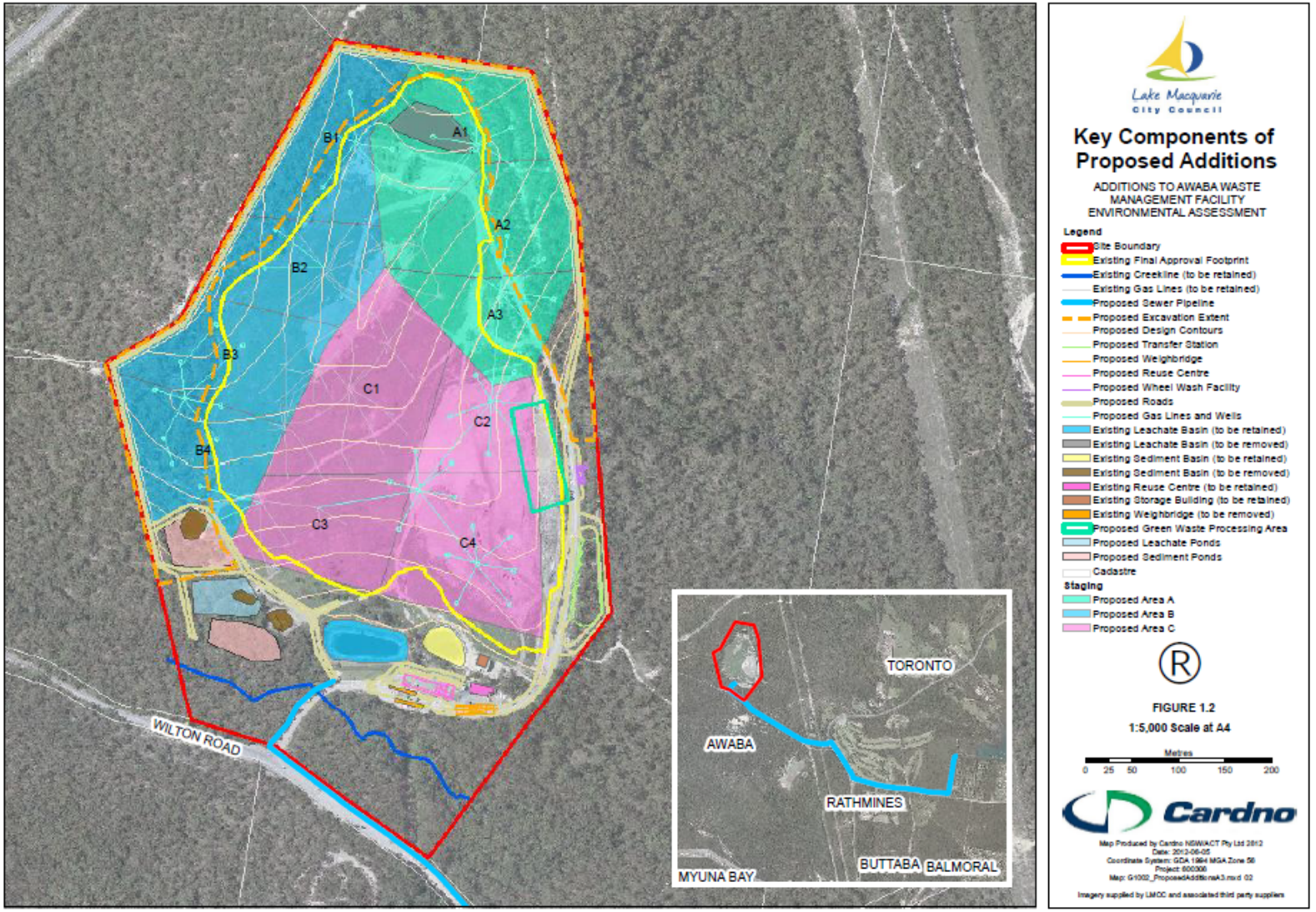
Issue	Commitments
Aboriginal Heritage	• LMCC will ensure that a *Cultural Heritage Management Plan* is prepared in partnership with the registered Aboriginal stakeholders and implemented for the construction phase of the proposed works. The CHMP will demonstrate that effective community consultation with local Aboriginal communities has been undertaken during the preparation of the Plan. The CHMP will include procedures for ongoing Aboriginal consultation and involvement, management of all Aboriginal cultural heritage values associated with the project area, the responsibilities of all stakeholders, details of proposed mitigation and management strategies of all sites; including any additional investigation processes, salvage activities, monitoring, etc.; procedures for the identification and management of previously unrecorded sites (excluding human remains), and compliance procedures in the unlikely event that non-compliance with the CHMP is identified. • LMCC will ensure that further archaeological survey around the creek lines at the AWMF site and sub-surface testing of the midden site identified along the pipeline route is undertaken prior to the commencement of construction works to determine the full nature and extent of these archaeologically sensitive areas. These investigations will initially comprise a series of 1m² probes spaced evenly over the area of impact along the creek line, but may be expanded if artefact densities warrant further investigation or salvage. A monitoring and collection program will then be undertaken by the registered Aboriginal stakeholders during all proposed sub-surface excavations to allow collection of any artefacts that may be disturbed in this area (with subsequent relocation and reburial "in country" and in a location that will not be subject to any future impacts). • LMCC will ensure that a minimum buffer of 5m around culturally modified trees to be retained will be delineated and enforced to reduce the impacts on these sites. LMCC will conduct further investigations during the detailed design phase as to whether an increase in the size of the buffer distance around culturally modified trees of the project is achievable given site constraints. • LMCC will provide an opportunity for the Registered Aboriginal Parties (RAPs) to monitor the initial ground disturbance works associated with all sections of the excavations (ground surface impacts) so that any potentially impacted artefacts may be collected by the RAPs. • LMCC will develop and implement an Aboriginal Cultural Heritage Induction Program for all personnel associated with the project, to make them aware of the site's Aboriginal heritage values and artefacts that are to be conserved at the site. • LMCC will ensure that any new Aboriginal artefacts located uncovered due to the development and/or sub-surface excavation or monitoring activities will be recorded and registered with the EPA as part of the assessment process in accordance with the requirements of Section 89A of the NPW Act. • LMCC will ensure that work is ceased immediately in the event that any bone or stone artefacts, discrete distributions of shell or any other objects of potential cultural association are uncovered during earthmoving or other activities, in accordance with the *National Parks and Wildlife Act 1974*, "stop work" provisions. • LMCC will ensure that strategies for the management of Aboriginal sites will be developed in collaboration with the Registered Aboriginal Parties and documented in an Aboriginal Cultural Heritage Management Plan, as recommended by the two Aboriginal Cultural Heritage Assessment Reports (ACHAR). • LMCC will ensure that archaeological excavations of known or Potential Archaeological Deposit/archaeological sensitivity will be conducted (as recommended by the ACHAR) where impacts may result from construction works. The objective of any such excavations will be to confirm whether there is a likelihood of any objects being present (and therefore impacted by the works), and where this is the case to develop

Issue	Commitments
	appropriate management strategies in collaboration with the Registered Aboriginal Parties and to formalise these in an Aboriginal Cultural Heritage Management Plan.
Non-Aboriginal heritage	• LMCC will ensure that none of the non-Aboriginal heritage items identified in the vicinity of the proposed works will be impacted by the proposed works by making the Contractors aware of the items and ensuring the Contractors avoid them.
Visual Landscape	• LMCC will progressively excavate, fill and re-vegetate Areas A and B and subsequently fill and re-vegetate Area C (11 cell areas in total across Areas A, B and C) as shown in the Staging Plan in **Figure 6.9**, which has been developed to minimise the visual impacts of the proposed works. • LMCC will ensure that the application of daily cover to the active tipping face is continued during the construction and operational phases of the works to ensure regular concealment of the landfill emplacement. • LMCC will ensure that revegetation and rehabilitation will be undertaken at the site once the landfill has reached capacity, so that effective concealment of the emplacement will be achieved in the long term.
Greenhouse Gas	• LMCC will continue to recover gases produced by the AWMF for energy generation and to minimise GHG emissions from the AWMF landfill. LMCC will increase the potential for landfill gas harvesting and electricity generation on site through the expansion of gas extraction infrastructure at the site. • Prior to the commencement of the proposed works, LMCC will review the design of the final landfill gas management infrastructure to ensure that it meets the objective of capturing the majority of the gases from the landfill emplacement. • LMCC will continue to monitor landfill gases generated for reporting purposes.
Traffic and Transport	• LMCC will ensure that a *Construction Traffic Management Plan* is prepared and implemented for the proposed works. • LMCC will ensure that the intersection of Wilton/Wangi Roads is upgraded to appropriately provide for existing traffic volumes and to reduce average delays experienced at the intersection for vehicles turning right onto Wangi Road.
Hazards and Risks	• LMCC will continue to undertake the procedures detailed in the *Awaba Landfill Environmental Management Plan* (LMCC, 2006) to achieve compliance with the EPL issued for the site. • LMCC will undertake a detailed risk review during the detailed design of the proposed additions, and any additional mitigation measures identified as being required will be incorporated into the *Awaba Landfill Environmental Management Plan*. • LMCC will revise the site-specific *Fire Management Plan* within the *Awaba Landfill Environmental Management Plan* to ensure it remains current considering the proposed works. • LMCC will continue to implement OH&S practices and adhere to relevant OH&S standards to ensure employee and user safety at the AWMF site. • LMCC will work with HWC, as required, to enable the AWMF, pipeline and WWPS risks to be managed in an integrated manner. • The standards defined in Section 3 and Section 7 of the Australian Standard AS3959-2009 (Construction of buildings in bush fire-prone areas) will be adopted as minimum design standards during the detailed design phase.
Noise and Vibration	• LMCC will ensure that a *Noise and Vibration Management Plan* is

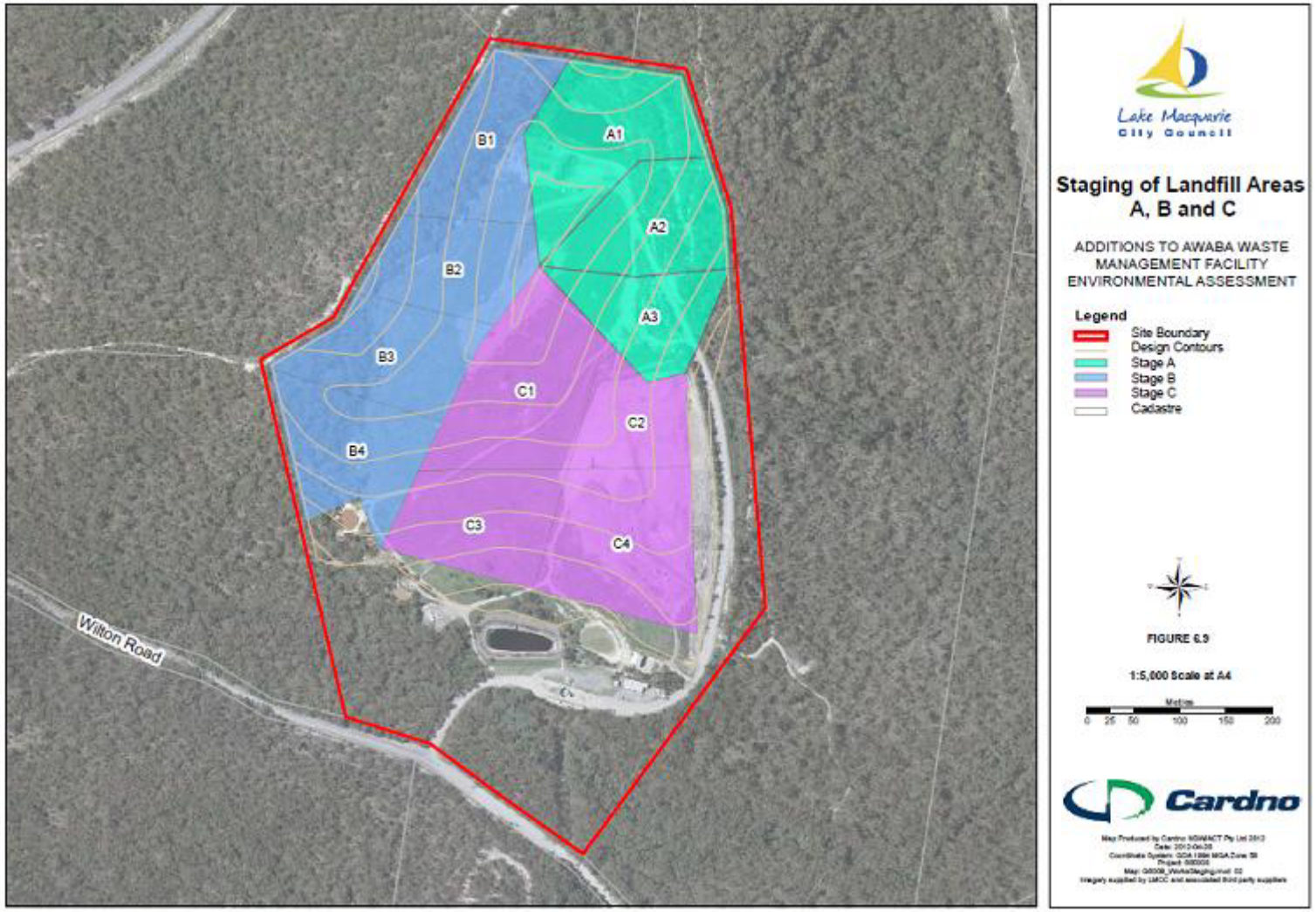
Issue	Commitments
	prepared in accordance with the *Interim Construction Noise Guideline* (DECC, 2009b) and implemented for the construction phase of the proposed works. • LMCC will continue to undertake the procedures detailed in the *Awaba Landfill Environmental Management Plan* (LMCC, 2006) to mitigate operational noise at the site. • LMCC will ensure that construction normally takes place only between the hours of 7am to 6pm Monday to Friday, and 8am to 1pm Saturday, with no construction on Sundays or Public Holidays. LMCC will obtain prior written permission from the EPA for any construction activities which are required outside these times. • LMCC will ensure that a Construction Noise Management Plan (CNMP) is prepared and implemented prior to commencement of construction activities. The Noise Assessment will be performed in accordance with the NSW Industrial Noise Policy (EPA 2000) or the relevant policy adopted by the EPA at the time of the Noise Assessment and is expected to include the following: - Identification of any noise sensitive locations (these will be mapped or described); - The existing background and ambient noise levels determined for each sensitive receiver; - Derivation and identification of the project-specific noise levels for each sensitive receiver; - The expected noise level and noise character (e.g. tonality, impulsiveness, vibration, etc.) likely to be generated from noise sources during operation. Noise source data will be included for each source in 1/1 or 1/3 octave band frequencies including methods or references used to determine noise source levels; - The noise levels likely to be received at the most sensitive receivers, including potential impacts for any identified significant meteorological conditions; - The findings of the predictive modelling and direct monitoring will be discussed and, where relevant noise criteria have not been met, additional mitigation measures will be recommended; - Details of any proposed mitigation will be provided, including the attenuation that will be achieved and the revised noise impact predictions following mitigation; and - After application of all feasible and reasonable mitigation measures, the residual level of noise impact will be quantified by identifying locations of where noise level exceeds the criteria and the extent of exceedance; numbers of people or areas affected; time when criteria will be exceeded; likely impact on activities; change in ambient conditions; and the result of any community consultation or negotiated agreement.

APPENDIX 2 – BIOBANKING AREAS ON LOTS 372 & 373

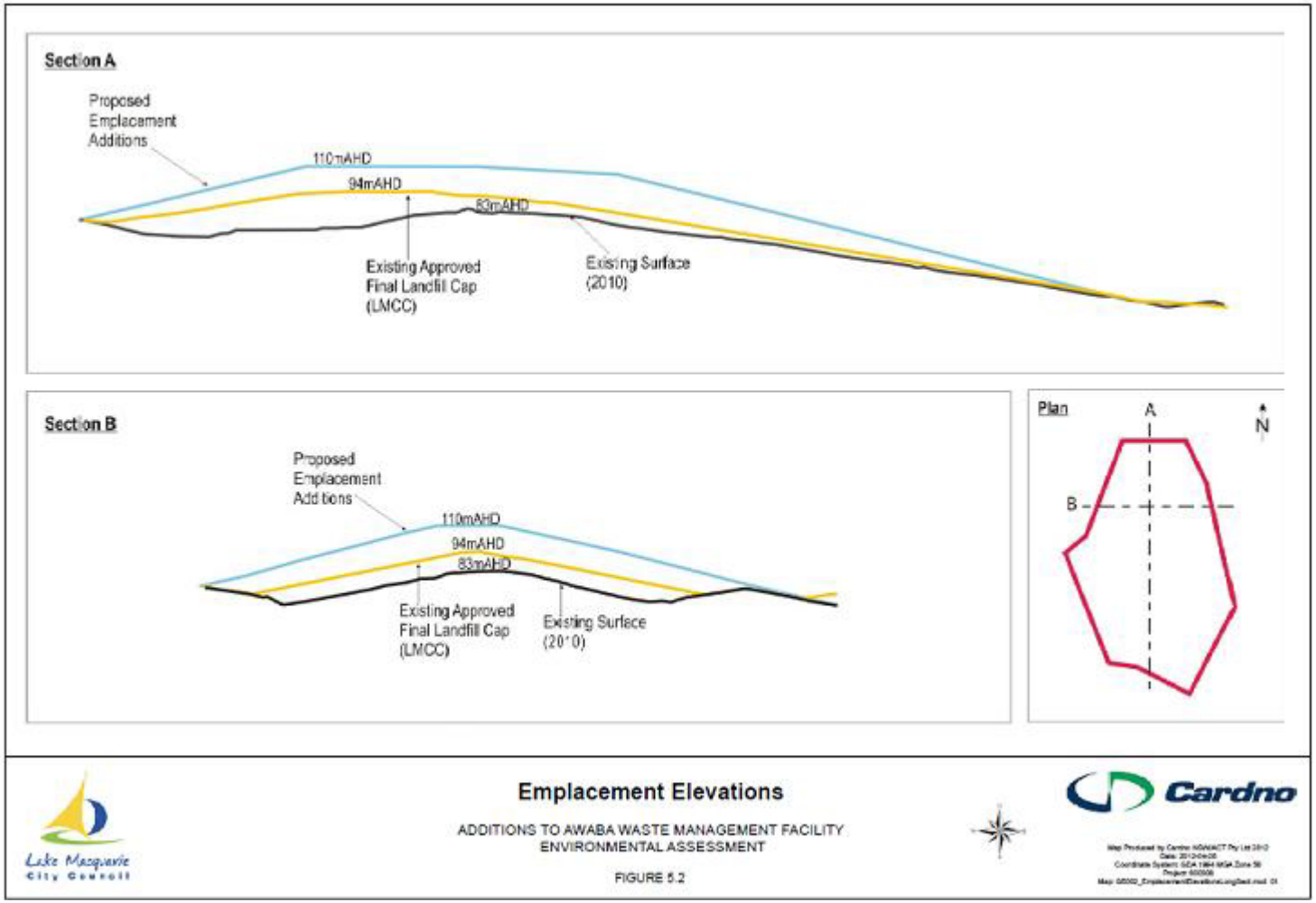
APPENDIX 3 - KEY COMPONENTS OF PROPOSED EXPANSION



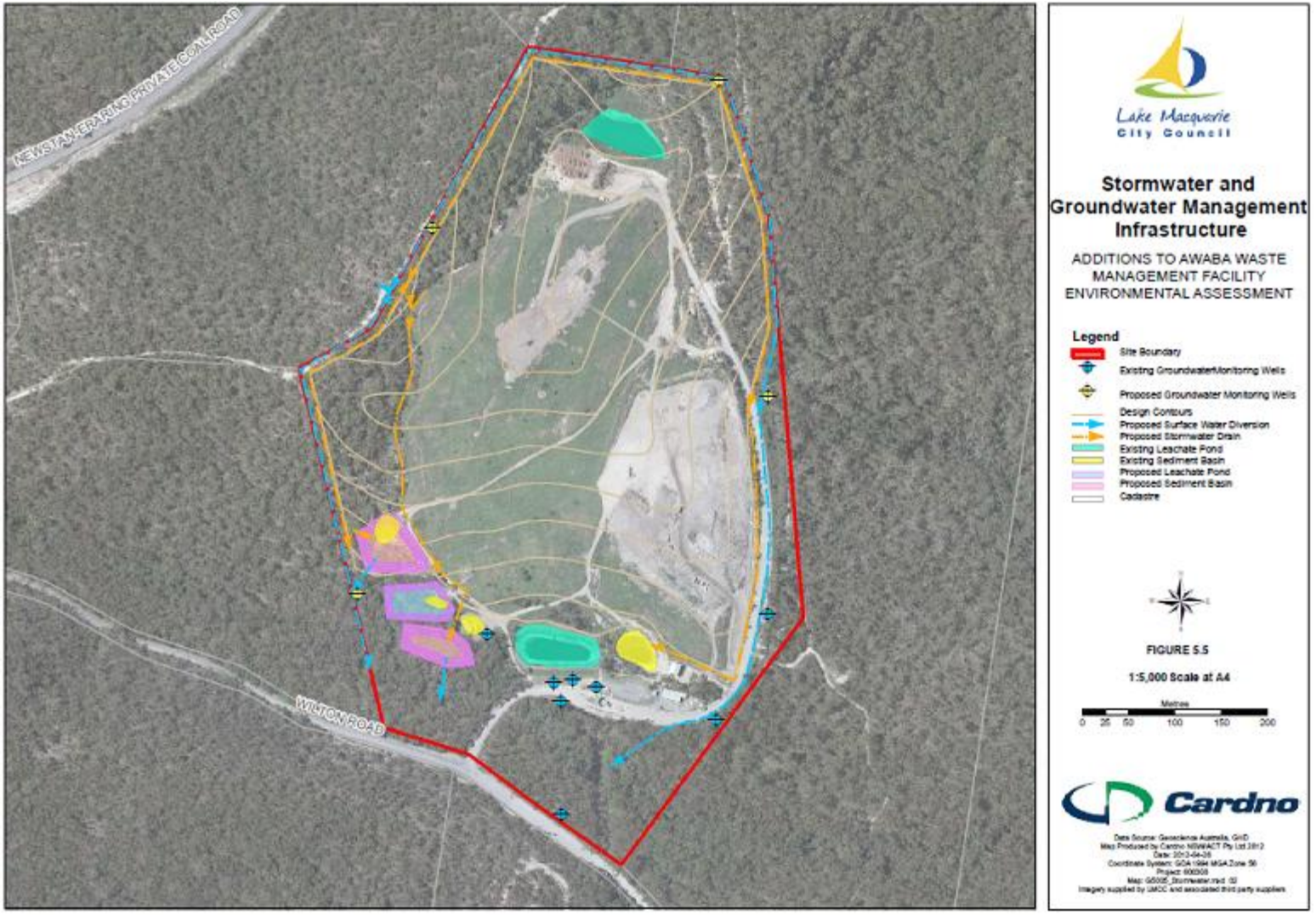
APPENDIX 4 - STAGING PLAN



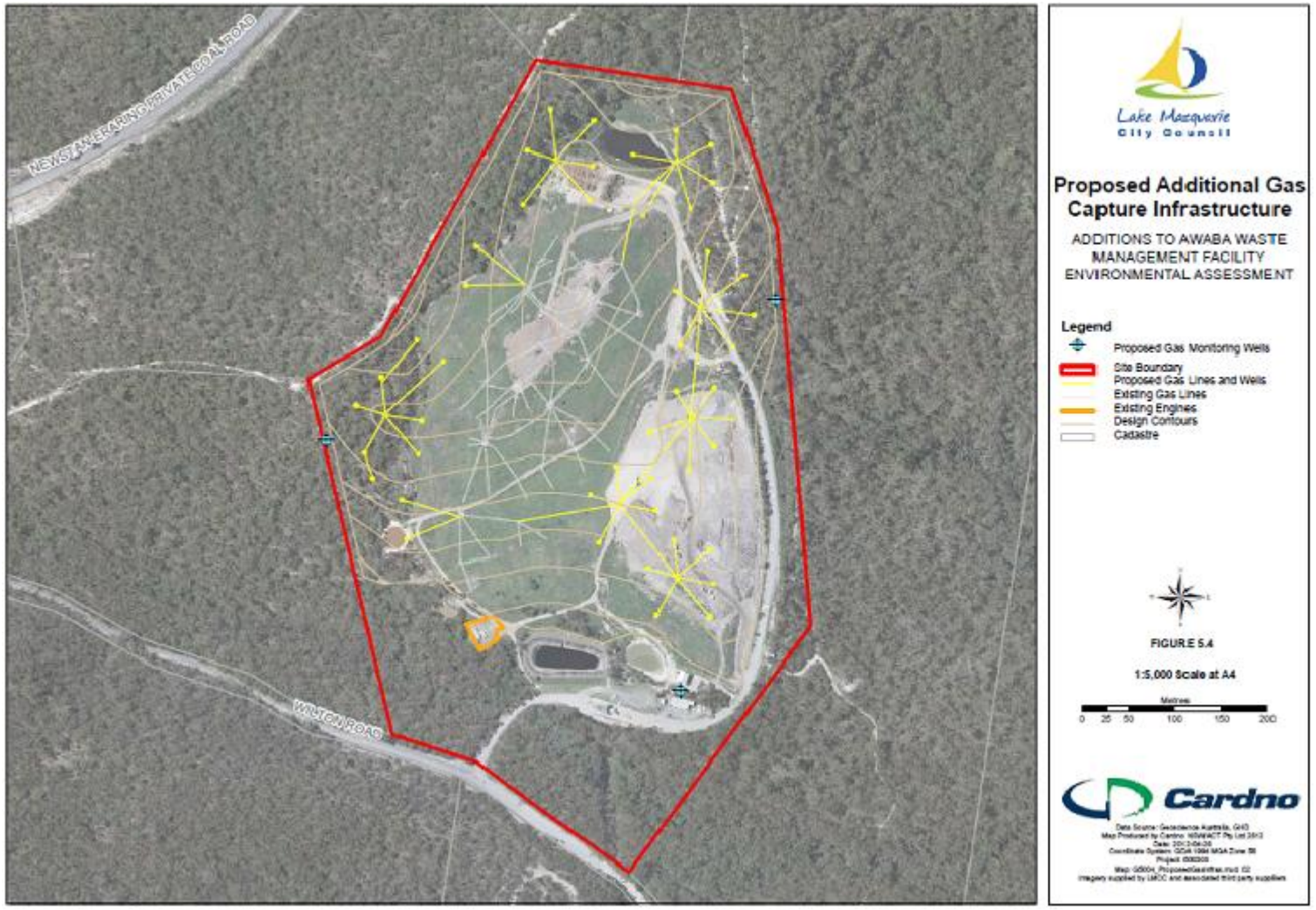
APPENDIX 5 - EMPLACEMENT ELEVATIONS



APPENDIX 6 - STORMWATER AND GROUNDWATER MANAGEMENT INFRASTRUCTURE



APPENDIX 7 - PROPOSED ADDITIONAL GAS CAPTURE INFRASTRUCTURE



APPENDIX 8

RMS PRELIMINARY WORKS AUTHORISATION ADVICE TO CONSENT AUTHORITY AND DEVELOPER

Advice to the Consent Authority

- On the Department's determination a copy of the Project Approval should be forwarded to RMS for advice / consideration and action where required.

- Conditions of development consent do not guarantee RMS' consent to the specific road works, traffic control signals and / or other structures or works for which it is responsible. The developer must obtain RMS' authorisation in writing prior to the commencement of any road works and traffic control signals, including traffic management, temporary or permanent road works associated with the proposed development.

Advice to the Developer

- Following development consent, early discussion with RMS' Project Manager is recommended. RMS will initiate the WAD process by sending out a letter and information pack on receipt of the Notice of Determination, including the name and contact details of the Project Manager.

- As the WAD process, including acceptance of design documentation and construction can take considerable time, you should allow sufficient lead time within the project development program to ensure that all documentation and works are completed in advance of occupation. RMS will not consider granting concurrence to occupation until it is satisfied all documentation and works under the WAD have been completed.

- Authorisation to commence construction will only be granted when RMS is satisfied that all requirements under the WAD have been met by the developer, including RMS' fees and charges, an unconditional bank guarantee for the full value of the works, detailed design documentation, environmental assessment, road occupancy license, among other matters. RMS will issue a letter to the developer advising of this authorisation.

- Any property acquisition / dedication required to accommodate the State road works / traffic control signals associated with the proposed development shall be at full cost to the developer, including all legal and survey costs. This land shall be dedicated by the developer as public road reserve in favour of the Council, as the owner.

- Part of the developers' timeline should make provision for RMS to satisfy its obligations under the *Environmental Planning and Assessment Act 1979* (EP&A Act) to assess the environmental impacts of the works within the road reserve. Further investigation and assessment to that undertaken for the development consent may be required to the satisfaction of RMS, under Part 5 of the EP&A Act.

- It is recommended that the developer use design consultants with the experience and knowledge of RMS' design requirements, in particular the Austroads *Guide to Road Design 2009* (with RMS supplements) and relevant Australian Standards.

- A factsheet providing further information on the WAD process can be obtained from the RMS Private Developments Website at:

  http://www.rta.nsw.gov.au/roadprojects/community_environment/private_developments.html

- Construction on a State road and / or traffic control signals requires the engagement of an RMS pre-qualified contractor. A list of pre-qualified contractors can be found on the RMS website below.

http://www.rta.nsw.gov.au/doingbusinesswithus/tenderscontracts/prequalifiedcontractors.html