ANNEXURE A

CONDITIONS OF CONSENT

SCHEDULE 1 – APPLICATION AND SITE DESCRIPTION

APPLICATION NO:	MP09_0074
PROPONENT:	Dellara Pty Ltd
LAND:	123 – 179 Patons Lane, Orchard Hills Lot 40 DP738126
PROJECT PROPOSAL:	Orchard Hills Waste and Resource Management Facility

SCHEDULE 2 – DEFINITIONS

AHD	Australian Height Datum
ARI	Average Recurrence Interval
BCA	Building Code of Australia
BMP	Best Management Practice
BATEA	Best Available Technology Economically Achievable
CLC	Community Liaison Committee
CLM Act	*Contaminated Land Management Act 1997*
Council	Penrith City Council
Day	The period from 7 am to 6 pm on Monday to Saturday, and 8 am to 6 pm on Sundays and Public Holidays
Department	Department of Planning & Infrastructure
Director-General	Director-General of the Department of Planning & Infrastructure (or delegate)
EEC	Endangered Ecological Community
EPA	Environment Protection Authority
EP&A Act	*Environmental Planning & Assessment Act 1979*
EP&A Regulation	*Environmental Planning & Assessment Regulation 2000*
EPL	Environment Protection Licence
Evening	The period from 6 pm to 10 pm
Feasible	Engineering considerations of what is practical to build
Heavy Vehicle	Any vehicle with a gross vehicle mass of 5 tonnes or more
Incident	An event causing or threatening material harm to the environment, and/or an exceedance of the limits or performance criteria in this approval
Material Harm to the Environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Mitigation	Activities associated with reducing the impacts of the Project
Night	The period from 10 pm to 7 am on Monday to Saturday, and 10 pm to 8 am on Sundays and Public Holidays
NOW	NSW Office of Water
OEH	Office of Environment and Heritage
Operation	Operation includes but is not limited to: – the receipt, handling and/or emplacement of waste in a landfill cell on the site; – the extraction and/or despatch of clay/shale, except for the extraction of clay/shale for the purposes of construction cell 1;

	– the construction of cells 2 to 4 inclusive; – progressive re-shaping/removal of the northern and north-eastern bund walls; and – rehabilitation including progressive and final rehabilitation work Operation excludes works and activities referred to in the definition of 'Site Establishment' below
POEO Act	*Protection of the Environment Operations Act 1997*
Proponent	Dellara Pty Ltd or its successor in title, or any person acting with the benefit of this approval
Reasonable	Relates to the application of judgment in arriving at a decision, taking into account: benefits, costs, community opinion, and the nature and extent of improvements
Rehabilitation	The treatment or management of land disturbed by the Project for the purpose of establishing a safe, stable and non-polluting environment
RMS	Roads and Maritime Services
RL	Relative Level
Site	The land described in Schedule 1
Site Establishment	Site establishment includes: – initial shaping of the northern and north-eastern bund walls; – reshaping of the southern and south-western bunds – emplacement of onsite waste resulting from the reshaping of the bunds described above; – construction work for buildings and infrastructure; – roadworks required by this approval; and – construction work for cell 1 and any clay/shale extraction associated with the construction of cell 1, and as otherwise shown on Figure 2.6 'Site Establishment Activities (Amended)' of the FMPPR at p18 (Exhibit Z in Appeal No 10928 of 2010). Site establishment excludes works and activities referred to the definition of 'Operation' above.
Tpa	Tonnes per annum

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 harm to the environment that may result from the Project.

TERMS OF APPROVAL

2. The Proponent shall carry out the Project generally in accordance with the:

   a) *Environmental Assessment* prepared by RW Corkery & Co Pty Ltd dated April 2010;

   b) *Response to* Submissions prepared by RW Corkery & Co Pty Ltd dated July 2010;

   c) *Further Modified Preferred Project Report for the Orchard Hills Waste and Resource Management Facility September 2011* prepared by R.W. Corkery & Co. Pty. Ltd (Exhibit Z in Appeal No 10928 of 2010);

   d) *Report for Modifications to Modified Preferred Project – Overview Report:* September 2011 prepared by GHD (Exhibit Z in Appeal No 10928 of 2010);

   e) The documents listed in Schedule 6.

   Where any plans and diagrams are marked with the word 'indicative', or 'indicative only' or similar terms, the plan or diagram is to be read as if that word does not appear on the plan or diagram unless otherwise approved by the Director-General.

3. In the event of an inconsistency between the documents in condition 2 above, the later document prevails.

4. In the event of an inconsistency between the documents in condition 2 above and the conditions of this approval, the conditions of this approval prevail.

5. The Proponent shall comply with any reasonable requirement 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 the submitted reports, plans, strategies, programs or correspondence.

5A. The facility must not accept waste from members of the public.

ENGINEERING PLANS

6. Detailed engineering plans must be prepared and certified by a registered NPER3 engineer prior to commencement of site establishment. The engineering plans must include:

a) a detailed geotechnical investigation of the site, including an assessment of the stability of the cell and quarry walls;
b) design for battered slopes of the landfill waste no greater than 1:3 (Vertical:Horizontal), unless otherwise approved by the EPA;
c) the engineering specifications for the internal haul road design, including sufficient width to carry two lanes of heavy vehicle traffic where appropriate, and all other internal roads, so as to minimise traffic conflicts within the site;
d) a set of amended staging plans incorporating the results of the detailed geotechnical investigation and engineering design. The amended staging plans must include:
    - all stages of the quarrying and landfilling operations, to address the incorrect sub-vertical cut and batter slopes in the Further Modified Preferred Project Report Figures including Figure 2.10a, 2.10b, 2.10c, 2.11a, 2.11b, 2.11c, 2.11d, 2.12a, 2.12b, 2.12c, and more clearly show how the measures to be utilised to ensure separation between the landfilling and extraction operations will be undertaken, and the effect of the 1:3 (V:H) landfill batter slopes on the location of the acoustic mounds;
    - show all active quarrying and landfilling areas, internal bunds, batter slopes (of the earthworks, landfill cell walls, and landfill batter slopes), location of noise and visual bunds / barriers, location of landfill cell access roads and earthwork haul roads, stormwater drainage / management works and leachate manage works.
e) These plans should be consistent with the Further Modified Preferred Project Report, other conditions of this approval and the Figure in Schedule 10.

6A The engineering plans and amended staging plans must be provided to the Director-General prior to the pre-site establishment compliance audit.

SITE REHABILITATION PERFORMANCE BOND

7. Prior to the commencement of Operation, the Proponent shall lodge a rehabilitation bond in the form of a bank guarantee for the project with the Director-General to provide security for the carrying out of site rehabilitation in accordance with this Project approval. The sum of the bond shall be calculated at $5/m^2 for the area marked with a red line and shown as 'Project Site Boundary' on the plans at schedule 8 and be to the satisfaction of the Director-General in consultation with the EPA. In determining the amount of the rehabilitation bond, the Director-General will have regard to the level of financial assurance provided to the EPA for the provision of the EPL so that the Proponent is not required to bond the rehabilitation of the site twice.

8. Within 3 months of each Independent Environmental Audit (see condition 6 of schedule 5), the Proponent shall review, and if necessary revise, the sum of the rehabilitation bond to the satisfaction of the Director-General. This review must consider:

   a) the effects of inflation (CPI);
   b) any changes to the total area of site disturbance as shown in schedule 8; and
   c) the performance of the rehabilitation and revegetation to date.

   In relation to (c) above, if the rehabilitation works or part thereof are completed to the satisfaction of the Director-General, the Director-General will release all or part of the rehabilitation bond. If the rehabilitation works are not completed to the satisfaction of the Director-General, the Director General may call in all or part of the rehabilitation bond to arrange for the satisfactory completion of the relevant works to the extent that the bond allows.

9. Deleted

10. Deleted

PRE-SITE ESTABLISHMENT COMPLIANCE AUDIT

11. The Proponent shall commission and pay the full cost of an independent pre-site establishment compliance audit. The audit must:

a) be conducted by a suitably qualified, experienced and independent team of experts covering all facets of the Project whose appointment has been endorsed by the Director-General;
b) assess compliance with all pre-site establishment and pre-work conditions of this approval;
c) assess all pre-site establishment and pre-work management plans, strategies and programs for consistency with the conclusions and recommendations in the documents listed in condition 2 of Schedule 3 and Schedule 6 and condition 6 of Schedule 3; and
d) be submitted to the Department prior to the commencement of any work.

PRE-OPERATION COMPLIANCE AUDIT

12. The Proponent shall commission and pay the full cost of an independent pre-operation compliance audit. The audit must:

a) be conducted by a suitably qualified, experienced and independent team of experts covering all facets of the Project whose appointment has been endorsed by the Director-General;
b) assess compliance with all pre-operation conditions of this approval;
c) assess all pre-operation management plans, strategies and programs for consistency with the conclusions and recommendations in the documents listed in condition 2 of Schedule 3 and Schedule 6 and condition 6 of Schedule 3; and
d) be submitted to the Department prior to the commencement of operation.

SURRENDER OF EXISTING DEVELOPMENT CONSENT(S)

13. Deleted

14. Prior to the commencement of site establishment or as otherwise agreed by the Director-General, the Proponent shall surrender all existing development consent(s) and project approval(s) for the site and project (apart from this approval and DA 2003/0627) in accordance with the EP&A Act.

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.

LICENCES AND OTHER APPROVALS

15. The Proponent shall obtain any licence or approval required to undertake the project including, but not limited to, an EPL, a water access licence, and permission for work in the electricity easement, on site sewage management, and Roads Act approval.

LIMITS OF APPROVAL

Project duration

16. Deleted

17. The Project, including operation and all rehabilitation but excluding site establishment, shall not exceed 25 years duration from the date of commencement of work. This limitation does not apply to any ongoing environmental management and monitoring of the site.

Site establishment duration

18. Site establishment shall not exceed 6 months duration from the date of commencement of work, unless otherwise agreed to by the Director-General.

Lapsing of approval

19. This approval lapses 5 years from the date of issue unless Site Establishment is completed.

Waste receipt, emplacement and throughput

20. The Proponent shall only receive waste on the site after an occupation certificate has been issued and while the Recycling and Re-Processing Area is operational.

21. The Proponent shall obtain the Director-General's written approval prior to the emplacement of waste in Cell 3. Before granting approval, the Director General must consider whether rehabilitation has been adequately progressed according to the approved Rehabilitation Plan.

22. The Proponent shall not exceed the waste receipt and waste emplacement volumes specified in Table 1.

Table 1 - Maximum waste receipt and emplacement

Maximum total waste emplacement	***Maximum annual waste receipt***	***Maximum annual on-site waste emplacement***
4,300,000 tonnes	450,000 tonnes	205,000 tonnes

Resource Extraction

23. The Proponent shall not exceed clay/shale extraction and despatch specified in Table 2.

Table 2 - Maximum clay/shale extraction and despatch

Maximum total clay/shale extraction	***Maximum total extracted clay/shale despatch***	***Maximum annual extracted clay/shale despatch***
5,200,000 tonnes	3,150,000 tonnes	160,000 tonnes

Stockpile Height

24. No stockpile of any material shall exceed RL 54 metres AHD.

Heavy Vehicle Movements

25. Despite any other limit in this approval, the Proponent shall ensure that heavy vehicle traffic generation for the Project does not exceed the maximum limit specified in Table 3.

Table 3 - Maximum Daily Heavy Vehicle Movements

Maximum daily heavy vehicle movements (including into and out of the site)
250

26. The Proponent shall keep an accurate register of daily heavy vehicle movements and provide the register to the Director-General upon request.

STRUCTURAL ADEQUACY

27. 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 requirements of the BCA.

Note: Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building Works.

DEMOLITION

28. The Proponent shall ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601:2001: The Demolition of Structures.*

OPERATION OF PLANT AND EQUIPMENT

29. 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

30. Prior to commencement of any work, the Proponent shall:

a) prepare a dilapidation report of the public infrastructure in the vicinity of the site (including roads, gutters, footpaths, etc) in consultation with Council; and
b) submit a copy of this report to the Director-General.

31. The Proponent shall:

a) repair, or if the Director-General agrees pay the full costs associated with repairing, any public infrastructure that is damaged by the Project; and

b) relocate, or if the Director-General agrees 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

32. The Proponent may submit any plan or program required by this approval on a progressive basis with the approval of the Director-General.

SCHEDULE 4 - SPECIFIC ENVIRONMENTAL CONDITIONS

WASTE MANAGEMENT

Restriction on waste types

1. The Proponent shall only receive and/or emplace waste on-site that is classified as general solid (non-putrescible waste) unless otherwise authorised for receipt and/or emplacement by an EPL.

2. No restricted solid waste shall be permitted to enter the site.

3. Stockpiles of construction and demolition waste shall only be stored within the Material Recycling Facility Warehouse.

Storage and Handling – Waste and Products

4. The Proponent shall store all chemicals, fuels and oils on-site in accordance with the requirements of all relevant Australian standards, including DECCW's Environment Protection Manual, *Technical Bulletin Bunding and Spill Management*.

Waste and Resource Monitoring

5. The Proponent shall prepare and implement a Waste and Resource Recovery Monitoring Program for the Project to the satisfaction of the Director-General. This program must:

   a) be prepared in consultation with the EPA;
   b) be approved by the Director-General prior to commencement of operation; and
   c) include monitoring for:
      i) the quantity, type and source of waste received; and
      ii) quantity, type and quality of the outputs produced.

Waste Outputs

6. Except for the following, the Proponent shall dispose of all outputs produced from the Material Recycling Facility Warehouse to the landfill on-site:

a) recyclables extracted and exported off-site for resource recovery purposes;
b) waste not authorised by an EPL extracted from the input waste stream, which shall be exported for lawful disposal off-site; and
c) output waste derived materials approved for use under the POEO Act and Regulations.

CONTAMINATION AND ASBESTOS MANAGEMENT

Asbestos and Contamination Management Plan

7. The Proponent shall prepare and implement a Contamination and Asbestos Management Plan for the Project. This plan must:

a) be prepared by an independent expert whose appointment is endorsed by the Director-General;

b) be prepared in consultation with WorkCover NSW, NOW and EPA;

c) be reviewed and endorsed at each stage by an independent accredited site auditor

d) be approved by the Director-General prior to commencement of site establishment;

e) be based on the results of such further testing or monitoring of the contaminated bunds, the site or groundwater as may be required by the independent accredited site auditor;

f) adequately characterise the types and quantities of contaminants within the bunds that are proposed to be disturbed and in groundwater in the area of the bunds;

g) provide for the appropriate remediation of any contaminated material;

h) ensure that the environmental and human health risks posed by contamination are adequately addressed;

i) provide a protocol for addressing the environmental and human health risks posed by any unexpected finds of contaminants;

j) demonstrate that the proposed control measures will minimise emissions to the atmosphere of asbestos to the maximum extent achievable in accordance with the "*Approved methods for the sampling and analysis air pollutants in NSW*";

k) include a Section B Site Audit Statement under the CLM Act; and

l) include a regime for the issue of Section A Site Audit Statements under the CLM Act at appropriate stages of work.

COVER AND CAPPING MATERIAL

8. The Proponent shall ensure that all material used to cover and cap waste is Virgin Excavated Natural Material, or excavated natural material provided the use of the excavated natural material is approved in writing by EPA.

8A. The proponent may emplace up to 7,500m^3 of special waste (asbestos) identified under Condition 7 Schedule 4 above in the landfill.

All other special waste (asbestos) shall be disposed of off site at a licenced facility unless agreed to by the Director-General and EPA.

Nothing in this condition permits an exceedance of the limits of heavy vehicle movements, air quality limits and noise limits set out in this approval.

LITTER CONTROL

9. The Proponent shall prepare a Litter Management Plan which includes:

a. measures to prevent the proliferation of litter, including the installation and maintenance of a mesh fence of not less than 1.8 metres high around the landfill; and

b. establish a regime for daily inspections and a program to clear the site and surrounds of litter.

10. The proponent shall include the plan in the Landfill Operations Management Plan and implement the plan.

ENERGY MANAGEMENT

11. The Proponent shall implement all reasonable and feasible measures to minimise energy use.

AIR QUALITY

Odour Discharge Limits

12. The Proponent shall not cause or permit the emission from the site of offensive odours as defined under Section 129 of the POEO Act.

Dust and Particulate Matter Limits

13. The Proponent shall ensure that dust and particulates generated by the Project do not exceed the criteria listed in tables 4, 5 and 6 at any residence or on more than 25 percent of any privately owned land surrounding the Site.

Table 4 - 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 5 - 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 6 - Long term criteria for deposited dust

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

Notes for Tables 4 -6:

[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, sea fog, fire incidents, illegal activities or any other activity agreed to by the Director-General in consultation with EPA.

Dust and Particulate Matter Management

14. Prior to commencement of operation, all operating, storage, unloading and loading areas, including the recycling and re-processing areas of the facility must be paved.

15. The Proponent must employ all feasible and practicable measures to minimise as far as possible any visible dust emissions from the site.

Air Quality and Greenhouse Gas Management Plan

16. The Proponent shall prepare and implement an Air Quality and Greenhouse Gas Management Plan. This plan must:

a) be prepared in consultation with EPA by a suitably qualified and experienced expert whose appointment has been endorsed by the Director-General;
b) be approved by the Director-General prior to commencement of any work;
c) describe in detail the measures that would be implemented to manage the air quality and greenhouse gas impacts of the Project to ensure compliance with this approval and other relevant statutory controls;
d) Include a protocol for the observations and recording of site dust levels on a daily basis. Instances of visible dust must be noted in a log along with date, time, cause and response/remedy;
e) include a monitoring program for real-time air quality impacts of the Project;
f) identify the number and location of continuous monitoring points for fine particulates (PM_{10});
g) include development and identification of PM_{10} concentration trigger levels at which:
    i) dust management actions shall be taken, and specification of the relevant actions; and
    ii) when work at the site shall cease;
h) include a program for monitoring subsurface gas, surface gas emission, and gas accumulation in general accordance with the guidance in sections 15-18 of Appendix A of the *Environmental Guidelines for Solid Waste Landfills EPA, 1996*;
i) include a protocol to remedy any-non-compliances.

SOIL AND WATER

Discharge Limits

17. Except as may be expressly provided in the EPL, the Proponent shall comply with Section 120 of the POEO Act.

Note: Section 120 of the POEO Act prohibits the pollution of waters.

Soil

18. The Proponent shall:

a) minimise soil loss;
b) set aside any topsoil won on-site for the 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.

19. The Proponent shall not track mud or waste from vehicles on public roads.

Soil, Water and Leachate Management

20. The Proponent shall prepare and implement a Soil, Water and Leachate Management Plan for the Project. This plan must:

a) be prepared in consultation with the Council, EPA and NOW by a suitably qualified and experienced expert whose appointment has been endorsed by the Director-General;
b) be approved by the Director-General prior to commencement of site establishment;
c) include a site water balance;
d) include an erosion and sediment control plan that is consistent with the requirements in the latest version of *Managing Urban Stormwater*: *Soils and Construction* (Volume 1, Landcom, and Volume 2b: Waste Landfills, DECCW, 2008);

e) include a stormwater management scheme that is consistent with the latest version of *Managing Urban Stormwater: Volume 2b: Waste Landfills (DECCW, 2008)*;

f) include design specifications and plans for the leachate containment system that comply with the minimum design specifications in Schedule 7 of this Approval and the relevant Benchmark Techniques in Appendix A of the *Environmental Guidelines for Solid Waste Landfills EPA, 1996,* unless otherwise approved by the EPA;

g) includes a surface water, groundwater and leachate monitoring program that:
   i) is in accordance with the requirements of the EPL;
   ii) includes:
      - collection of baseline data;
      - details of the proposed monitoring network; and
      - the parameters for testing and respective trigger levels for action under the surface water, groundwater and leachate response plan;

h) specifies that any stormwater from all areas of the site which has the potential to interact with waste shall be managed as leachate and directed into the leachate containment system;

i) include a sampling and testing program to be developed in consultation with the EPA, to further characterise the quality of the water in the quarry void as well as any settled sediment at the base of the flooded quarry void. This is to occur prior to any of the permitter bunds being disturbed;

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

NOISE

Limits

21. The Proponent shall ensure that the noise generated by the Project does not exceed the limits in Table 7. Noise is to be measured in accordance with the relevant modifying/correction factors and meteorological conditions in the NSW Industrial Noise Policy.

Table 7 - Noise impact assessment criteria dB(A)

Receiver	***Day Site Establishment Limit*** $L_{Aeq(15\ minute)}$ ***dB(A)***	***Day Operation Limit*** $L_{Aeq(15\ minute)}$ ***dB(A)***
11 Cabernet Circuit	43	39
3 Chablis Place	41	38
Newham Residence "Roughwood Park", Luddenham Road, Orchard Hills Bates Residence "Glenholme Farm" Luddenham Rd, Orchard Hills	39	39
210 Luddenham Road	35	38
Residence & Hall at the Croatian Cultural Association	37	39

Noise Compliance Monitoring

22. The Proponent shall submit a noise compliance assessment to the Director-General three months after the commencement of site establishment. The assessment shall be prepared by a suitably qualified and experienced acoustic consultant and assess compliance with noise limits in Table 7 for the first three months of work.

Operating Hours

23. The Proponent shall comply with the operating hours in Table 8.

Table 8 - Operating Hours

Activity	***Day***	***Hours***
Site establishment	Monday – Friday	7 am – 6 pm
	Saturday	8 am – 1 pm
	Sunday & Public Holidays	Nil
Operation	Monday – Friday	7 am – 5 pm
	Saturday	8 am – 2 pm
	Sunday & Public Holidays	Nil

Operating hours for heavy vehicles

24. Notwithstanding the provisions of Table 8 the Proponent shall ensure that:

a) heavy vehicles travelling to or from the Site shall not arrive at the site prior to 7am or leave the site after 5pm on a weekday and shall not arrive at the site prior to 8 am or leave the site after 2pm on a Saturday, or any time on a Sunday or Public Holiday; and

b) heavy vehicles travelling to or from the Site do not travel upon Luddenham Road south of its junction with Patons Lane.

25. Deleted

Noise Management Plans

26. The Proponent shall prepare and implement a Site Establishment Noise Management Plan. This plan must:

a) be prepared by a suitably qualified expert whose appointment has been approved by the Director-General;

b) be prepared in consultation with the EPA;

c) be approved by the Director-General prior to commencement of site establishment;
d) identify each site establishment work area, site compound and access route (both private and public);
e) identify all potentially affected sensitive receivers;
f) specify the construction noise and vibration objectives;
g) include an assessment of potential noise and vibration from the proposed construction methods (including noise from traffic) against those objectives;
h) identify where additional Feasible and Reasonable noise mitigation measures can be implemented;
i) describe management methods, procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during site establishment, including the early erection of noise control barriers and the relevant matters outlined in Schedule 9;
j) include procedures for notifying residents of site establishment activities that are likely to affect amenity;
k) include a program for monitoring the noise impacts of the Project, including real time noise monitors to measure noise emissions during site establishment;
l) describe procedures for remedial action when a non-compliance is identified in real time monitoring;
m) include procedures for reporting non-compliances to the relevant government agencies;
n) include specifications and protocols for the installation and relocation of mobile noise barriers; and
o) identify the extent of and/or limitations of the work area behind or associated with mobile noise barriers to maintain compliance with noise limits.

27. The Proponent shall prepare and implement an Operation Noise Management Plan. This plan must:

a) be prepared by a suitably qualified expert whose appointment has been endorsed by the Director-General;
b) be prepared in consultation with the EPA;
c) be approved by the Director-General prior to the commencement of operation;
d) include a system that allows for periodic assessment of BMP and BATEA that has the potential to minimise noise levels from the Project;

e) specify effective implementation of identified BMP and BATEA measures and describe management methods, procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during site operations, including the early erection of noise control barriers and the relevant matters outlined in Schedule 9;
f) include a program for monitoring the noise impacts of the Project, including real-time noise monitors to measure noise emissions during operation;
g) describe procedures for remedial action when a non-compliance is identified by real-time monitoring;
h) include measures to record and respond to complaints;
i) include measures for community consultation including site contact details; and
j) identify the extent of and / or limitations of the work area behind or associated with mobile noise barriers and earth-mounds to maintain compliance with noise limits.

28. The Proponent shall prepare and implement a Traffic Noise Management Plan, which shall ensure that feasible and reasonable noise management strategies for vehicle movements associated with the facility are identified and applied. This plan must:

a) be prepared by a suitably qualified expert whose appointment has been endorsed by the Director-General;
b) be prepared in consultation with the EPA;
c) be approved by the Director-General prior to commencement of operation;
d) include driver training to ensure that noisy practices, such as the use of compression engine brakes, are not used near sensitive receivers unless necessary;
e) include BATEA for noise suppression in the selection and maintenance of vehicle fleets;
f) include communication and management strategies for non-licensee/proponent owned and operated vehicles to ensure the provision of the plan are implemented;
g) include a system of audited management practices that identifies non-conformances, initiates and monitors corrective and preventative action (including disciplinary action for breaches of noise minimisation procedures) and assesses the implementation and improvement of the plan;

h) specify procedures for drivers to minimise impacts at identified sensitive receivers; and

i) describe methods for the prevention of heavy vehicle parking outside and near the site.

This plan must be documented in the Transport Code of Conduct.

METEOROLOGICAL MONITORING

29. The Proponent shall install a weather station to monitor (by sampling and obtaining results by analysis) the parameters specified in column 1 of Table 9, using the sampling method, units of measure, averaging period and sampling frequency specified in columns 2 to 5 of Table 9. All data (including raw data and/or reports derived from raw data) shall be made available to the Director-General and EPA on request.

Table 9 - Meteorological monitoring parameters

Meteorological Parameters (Column 1)	***Units of measure (Column 2)***	***Sample Frequency (Column 3)***	***Averaging Period (Column 4)***	***Sampling method (Column 5)***
Rainfall	mm	Continuous	1 hour	AM-4
Wind speed @ 10 metres	m/s	Continuous	15 minute	AM-2 & AM-4
Wind direction @ 10 metres	º	Continuous	15 minute	AM-2 & AM-4
Temperature @ 2 metres	ºC	Continuous	15 minute	AM-4
Temperature @ 10 metres	ºC	Continuous	15 minute	AM-4
Sigma theta @ 10 metres	º	Continuous	15 minute	AM-2 & AM-4
Solar Radiation	W/m^2	Continuous	15 minute	AM-4
Additional:				

Meteorological Parameters ***(Column 1)***	***Units of measure*** ***(Column 2)***	***Sample Frequency*** ***(Column 3)***	***Averaging Period*** ***(Column 4)***	***Sampling method*** ***(Column 5)***
- Siting				AM-1 & AM-4
- Measurement				AM-2 & AM-4

TRAFFIC AND TRANSPORT

Construction Traffic Management Plan

30. The Proponent shall prepare and implement a Construction Traffic Management Plan. The plan must be prepared in consultation with Council and the RMS and approved by the Director-General prior to the commencement of site establishment.

Bridge Capacity Investigation

31. Prior to commencement of site establishment the Proponent shall engage a suitably qualified person to carry out an investigation of the existing bridge over South Creek on Luddenham Road to assess its capacity to accommodate the anticipated heavy vehicle traffic loadings from the proposed development. If inadequate, the investigation shall make recommendations to render the bridge adequate. The investigation must be carried out in consultation with Council and to the satisfaction of the Director General.

32. Prior to commencement of Operation, the Proponent must upgrade the bridge according to any recommendations made in the investigation specified in Condition 29 above to the satisfaction of the Director-General.

Road approvals

33. B-Double trucks must not be used for the Project, including for delivering waste or materials to the site or for removing waste or materials from the site, unless conditions 34(a) and 35(c) are complied with.

34. Prior to the commencement of operation the Proponent must:

a) if the Proponent proposes to use B-Double vehicles for the Project, the Proponent must obtain approval for a Restricted Access Vehicle route on Patons Lane and Luddenham Road to service the Project;

b) obtain Roads Act approval for the works in Patons Lane and Luddenham Road required in Condition 35 below.

Road upgrades

35. Prior to the commencement of operation the Proponent must:

a) upgrade Patons Lane in the following manner:
   i) pavement widening and reconstruction of the existing road pavement;
   ii) trafficable pavement width of 6.6m;
   iii) 1.2m wide sealed shoulders;
   iv) 3m wide table drains;
   v) design loading for the full life of the development;

b) upgrade Luddenham Road in the following manner:
   i) pavement reconstruction from chainage 1.45 to 1.9km south of Mamre Road to accommodate a design traffic loading of 5.31×10^6 Equivalent Standard Axles (ESA).

c) if the Proponent proposes to use B-Double vehicles for the Project, the Proponent must upgrade the intersection on the corner of Mamre Road and Luddenham Road in consultation with Council and to the satisfaction of the RTA. The intersection upgrade must provide:
   i) an acceleration lane and an extension to the acceleration lane contained within the painted 'seagull treatment' on Mamre Road; and
   ii) adequate storage and acceleration distance within the acceleration lanes for 'B-double' vehicles;

d) provide truck turning warning signs in both directions on Mamre Road to the satisfaction of the RTA; and

e) provide adequate car-parking on the site in accordance with *Australian Standard 2890.1 Parking Facilities* to the satisfaction of the Director-General;

f) provide a contribution of $31,200 to the Council towards Council's upgrade of 1.45km of Luddenham Road, south of Mamre Road.

Maintenance of Patons Lane

36. Prior to the commencement of operation the applicant must enter a Deed of Agreement with Public Domain and City Works at Council in relation to the upkeep of Patons Lane. The agreement is to include management of illegal dumping, litter removal, security, sweeping of Patons Lane, and routine pavement maintenance along Patons Lane.

Roadwork Performance Bond

37. Prior to the commencement of any roadwork in Patons Lane and Luddenham Road a performance bond is to be lodged with Council for the roadwork in Patons Lane and Luddenham Road and any required bridge works. The value of the bond shall be determined in accordance with Penrith City Council's Bond Policy to the satisfaction of the Director-General.

37A. The Proponent shall ensure that heavy vehicles travelling to or from the site do not travel upon Luddenham Road south of its junction with Patons Lane.

Transport Code of Conduct

38. The Proponent shall prepare and implement a Transport Code of Conduct. This code must:

a) be prepared in consultation with the RTA and Council, and approved by the Director-General prior to the commencement of operation;
b) describe the measures to be implemented to minimise the impacts of:
    i) the Project on the local and regional road network including traffic noise;
    ii) ensure compliance with the Traffic Noise Management Plan; and
    iii) minimise conflicts with other road users e.g. school bus operators.
c) include measures to ensure truck drivers are aware of the approved routes for the transport of waste by road; and
d) include the Traffic Noise Management Plan;
e) include a monitoring program and record movements of vehicles out of the site.

f) require that heavy vehicles travelling to or from the site do not travel upon Luddenham Road south of its junction with Patons Lane.

LANDSCAPING

Landscaping at 202 Luddenham Rd

39. Prior to site establishment the Proponent shall offer and implement (if the offer is accepted) landscaping treatments, including fencing, to the residents at 202 Luddenham Rd. These measures must be reasonable and feasible and directed toward minimising visual and acoustic impacts of the operation on the residents.

If within 3 months of receiving the offer, the proponent and owner cannot agree on landscaping treatment or if there is a dispute about the implementation of these measures then either party may refer the matter to the Director- General for resolution.

Bund Wall, Landscaping and Vegetation Management Plan

40. The Proponent shall prepare and implement a Bund Wall, Landscaping and Vegetation Management Plan to achieve the final landform and landscaping in Figure 2.22 of the Further Modified Preferred Project Report (Ex Z in Appeal No 10928 of 2010). This plan must:

a) be prepared in consultation with OEH, EPA and NOW by a suitably qualified and experienced expert(s);
b) be approved by the Director-General prior to the commencement of site establishment;
c) specify the staging milestones for implementation of landscaping works;
d) detail specifications for the approved removal, reshaping and/or landscaping of the bund walls;
e) specify riparian zone management within 50m of Blaxland Creek (measured from the top of the bank);
f) include measures to minimise native vegetation loss and additional tree planting to offset this loss;
g) include a landscape plan identifying locations of planting and identifying species to be planted;
h) specify the use of only indigenous species propagated from provenant seed;

i) specify the measures which shall be undertaken to protect the EECs on adjacent lands (particularly to the southern and western boundaries of the site), in particular measures to:
    i) stabilise exposed soils;
    ii) control of invasive weeds to prevent weeds from migrating to the EECs;
    iii) prevent dust from impacting on the EECs;
    iv) control sediment, stormwater and surface run-off from impacting on the EECs;
    v) prevent leachate from entering into the groundwater or migrating off-site; and
    vi) include all of the above measures in corresponding management plans.
j) identify protection measures for the vegetation and controls for each phase of the development;
k) specify details of maintenance actions to ensure the vegetation is maintained at all times including during the operations and for the post-closure period stipulated by the OEH and EPA;
l) specify details of a monitoring and compliance program; and
m) require an annual review for inclusion in the Annual Environmental Management Review that reports on the performance of the landscaping and vegetation management, including further recommendations to ensure the successful establishment of vegetation.

41. The Proponent shall maintain all landscaping and protection measures to satisfaction of the Director-General over the life of the Project and for a post-closure period stipulated by the OEH and EPA.

Pest, Vermin & Noxious Weed Management

42. The Proponent shall:

a) implement suitable measures to manage pests, vermin and declared noxious weeds on-site; and
b) inspect the site on a weekly 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.

FIRE AND EMERGENCY MANAGEMENT

43. The Proponent shall prepare and implement a Fire and Emergency Management Plan for the Site. This plan must:

a) be prepared by a suitably qualified expert whose appointment has been endorsed by the Director-General;
b) be approved by the Director-General prior to the commencement of any work;
c) identify all threats to the environment and public health that could arise from the operation of the Project (e.g. fire, overflow or dam failure);
d) detail a communication strategy for notifying the relevant government agencies and potentially affected community in the event of an emergency; and
e) identify strategies to contain and minimise the effects of any threats to the environment and public health such as (but not limited to) measures to:
    i) minimise the risk of fire on-site, including in the landfill area;
    ii) promptly extinguish any fires on-site; and
    iii) ensure adequate fire-fighting capacity on-site, including a fire-fighting tanker.

VISUAL AMENITY

44. 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.

SITE SECURITY

45. The Proponent shall:

a) install and maintain a perimeter fence and security gates on-site prior to the commencement of site establishment and which shall be maintained for the life of the Project; and
b) ensure that the security gates on-site are locked whenever the site is unattended.

REHABILITATION

46. The Proponent shall prepare and implement a Rehabilitation Plan to achieve the final landform and landscaping in Figure 2.22 of the Further Modified Preferred Project Report (Ex Z in Appeal No 10928 of 2010). This plan must:

a) be prepared by a suitably qualified expert whose appointment has been approved by the Director-General;
b) be prepared in consultation with EPA, NOW and Council;
c) be submitted to and approved by the Director-General prior to commencement of the site establishment works;
d) define the objectives and criteria for rehabilitation and closure;
e) comply with the minimum design specifications and operational/post closure requirements in Schedule 7 unless specified by the EPA;
f) identify the works required and the progressive timing to complete the rehabilitation of each part of the Project;
g) investigate options for the removal of Dam 2 outside the riparian corridor as part of the final landform once the operational purpose of the dam is complete;
h) investigate options for the future use of the site;
i) include provisions to monitor and manage settlement impacts during and after the operations;
j) describe the measures that would be implemented to achieve the specified objectives and criteria for the rehabilitation and closure;
k) calculate the cost of implementing these measures;
l) describe how the performance of these measures would be monitored over time;
m) address the issue of settlement post-closure and provide designs and ongoing maintenance procedures such as backfilling to maintain slope, drainage and prevent ponding.

SCHEDULE 5 - ENVIRONMENTAL MANAGEMENT, REPORTING & AUDITING

COMMUNITY LIAISON COMMITTEE

1. The Proponent shall establish and operate a CLC comprising representatives of the Proponent, local community and Council. Representatives of relevant government agencies may be invited to attend meetings of the CLC, if required. The Chairperson and procedures for the Committee including frequency of meetings shall be determined by the CLC and the CLC must convene at least twice annually over the life of the Project.

2. Within three months of the commencement of work, the Proponent shall submit details of the CLC members (including the Chairperson, procedures and frequency of meetings) for the Director-General's approval.

3. The Proponent shall inform the Director-General of any change in the composition of the CLC.

QUARRY OPERATION MANAGEMENT PLAN

4. The Proponent shall prepare and implement a Quarry Operation Management Plan for the Project. This plan must:

   a) be prepared by a suitably qualified team of experts;
   b) be prepared in consultation with the EPA and Council;
   c) be approved by the Director-General prior to the commencement of site establishment;
   d) include stockpile construction methods that minimise the visibility and acoustic impact of the use of equipment during the placement or removal of materials from any part of the stockpile, in particular where any part of the equipment would be above RL 54m AHD;
   e) shows the active land fill cell separate from all extraction activities at all times;
   f) include a protocol to ensure stockpiles of clay/shale materials for use by the brick industry are kept separate from material to be used for cell construction, daily waste covering and capping;

g) include provision for all clay/shale stockpiles for brick industry to be sign posted with a description of the material to ensure there is no contamination, and that plant operators know where to place the different materials;

h) include provision for regular staff or contractor training is to be undertaken to reinforce the importance of keeping the clay types separate;

i) specify management practices so that stockpiles are constructed, accessed and managed as follows:

- The clay material to be sold to the brick manufacturing industry will be kept separated from the material to be used during the cell, construction, daily waste covering and capping of the finished areas.
- The light-firing shale stockpiles will be located so as not to interfere with the construction of the cells or the emplacement of waste and all stockpiles will be sign posted with a description of the material to ensure there is no contamination. The sign posting will also ensure that the plant operators and the Stockpile Management Supervisor know where to place the different materials and regular training will take place to reinforce the importance of keeping the clay types separated.
- There will be several stockpiles on site at any one time based on the type of material, i.e. cream-firing clay, light pink-firing clay and red-firing clay.

Stockpile Construction

- The construction will use scrapers for placement of the first 5 to 6 metres and then dump trucks and a dozer for the final 2 to 3 metres.

Management of Stockpiled Materials

- Once an area on the site has been designated as a stockpile location, signs will be erected describing the material to be deposited within that location. The plant operator responsible for preparing the stockpile will have responsibility for ensuring that only the designated clay is deposited there.
- The Site Manager will arrange for quarterly surveys to be carried out on the stockpiles. The survey results will be correlated against the surveys undertaken on the site as a whole and the information provided in the original geological report undertaken on the site.

- All vehicles exporting material from the site will be required to do so via the weighbridge. A record will be maintained of the type, quantity and destination of the material exported on each vehicle.
- Monthly reports detailing the type of material exported from the site will be prepared for l&l NSW and the EPA if required.

j) Includes a protocol that requires surveys of the stockpiles once every three months, with the first survey being on or before the date that operations commence.

k) The batter slopes of stockpiles must be no more than 1:3 (Vertical: Horizontal), unless otherwise approved by the EPA.

LANDFILL ENVIRONMENTAL MANAGEMENT PLAN

5. The Proponent shall prepare and implement a Landfill Environmental Management Plan for the Project to the satisfaction of the Director-General. This plan must:

a) be prepared by a suitably qualified team of experts whose appointment has been endorsed by the Director-General;

b) be prepared in consultation with the EPA, NOW and Council;

c) be approved by the Director-General prior to the commencement of site establishment;

d) be updated every five years from the commencement of operation;

e) provide the strategic framework for environmental management of the Project;

f) identify the statutory approvals that apply to the Project;

g) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Project;

h) include interim cell rehabilitation measures for the site including landscape details;

i) address the operational requirements and minimum design specifications in Schedule 7;

j) describe the procedures that would be implemented to:

i) keep the community and relevant agencies informed about the operation and environmental performance of the Project;

ii) receive, handle, respond to, and record complaints;

iii) resolve any disputes that may arise during the course of the Project;

iv) respond to any non-compliance; and

v) respond to emergencies;

k) include:

i) copies of the various strategies, plans and programs that are required under the conditions of this approval once they have been approved; and

ii) a clear plan depicting all the monitoring currently being carried out within the Project area;

l) include the design and operation of the Construction and Industrial Waste Warehouse.

ANNUAL ENVIRONMENTAL MANAGEMENT REVIEW

5. One year after the commencement of site establishment, and annually from the date of approval thereafter, the Proponent shall submit an Annual Environmental Management Report to review the environmental performance of the Project to the satisfaction of the Director-General. This report must:

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:

i) relevant statutory requirements, limits or performance measures/criteria;

ii) monitoring results of previous years; and

iii) 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.

INDEPENDENT ENVIRONMENTAL AUDIT

6. Every three years after the commencement of site establishment, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an independent environmental audit of the Project. This audit must:

a) be conducted by a suitably qualified, experienced, and independent team of experts covering all facets of the Project whose appointment has been endorsed by the Director-General;

b) assess the environmental performance of the Project, and its effects on the surrounding environment;
c) assess whether the Project is complying with the relevant standards, performance measures and statutory requirements;
d) review the adequacy of any strategy/plan/program required under this approval; and
e) recommend measures or actions to improve the environmental performance of the Project, and/or any strategy/plan/program required under this approval.

INCIDENT REPORTING

7. Upon detecting an exceedance of the limits/performance criteria in this approval or the occurrence of an incident that causes (or may cause) material harm to the environment, the Proponent shall immediately notify EPA and notify the Department as soon as practicable thereafter of the exceedance/incident.

8. Within six days of notifying the Department and EPA of an exceedance/incident, the Proponent shall provide the Department and these agencies with a written report that:

a) describes the date, time, and nature of the exceedance/incident;
b) identifies the cause (or likely cause) of the exceedance/incident;
c) describes what action has been taken to date; and
d) describes the proposed measures to address the exceedance/incident.

REVISION OF PLANS & PROGRAMS

9. Within three months of the submission of an:

a) annual review under condition 6 of Schedule 5;
b) audit under condition 7 of Schedule 5; and / or
c) incident report under condition 8 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.

ACCESS TO INFORMATION

10. From the commencement of site establishment the Proponent shall make the following information freely available on a publicly accessible website as it is progressively required under the approval:

    a) all current statutory approvals, including this approval;
    b) plans and programs required under this approval;
    c) technical analysis/reports of monitoring results, 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 any Annual Environmental Management Report (over the last 5 years);
    f) a copy of any Independent Environmental Audit and the Proponent's response to the recommendations;
    g) real time monitoring data (noise and air quality); and
    h) any other material as required by the Director-General.

SCHEDULE 6 – DOCUMENTS COMPRISING THE PROJECT

1. **Environmental Assessment** prepared by RW Corkery & Co Pty Ltd dated April 2010 (Ex A in Appeal No 10928 of 2010), including:
   a) *Preliminary In-Situ Waste Classification* prepared by Douglas Partners Pty Ltd dated September 2009;
   b) *Aboriginal Heritage Assessment* prepared Archaeological Surveys and Report Pty Ltd dated September 2009;
   c) *European Heritage Assessment* prepared by Archaeological Surveys and Report Pty Ltd dated September 2009;
   d) *Soils and Land Capability Assessment* prepared by Geoff Cunningham Natural Resource Pty Ltd dated September 2009;
   e) *Cell Design and Groundwater Assessment* prepared by Aquaterra Consulting Pty Ltd dated March 2010;
   f) *Surface Water Assessment* prepared by GSS Environmental & BMT WBM Pty Ltd dated February 2010;
   g) *Air Quality Assessment* prepared by PAE Holmes dated February 2010;
   h) *Traffic and Parking Assessment* prepared by Traffic Solutions Pty Ltd dated February 2010;
   i) *Visual Assessment* prepared by Design Collaborative Pty Ltd dated February 2010;
   j) *Flora Assessment* prepared by Geoff Cunningham Natural Resources Pty Limited dated September 2009; and
   k) *Fauna Assessment* prepared by Aquila Ecological Surveys dated September 2009.

2. **Response to Submissions** prepared by RW Corkery & Co Pty Ltd (Ex A in Appeal No 10928 of 2010), comprising:
   a) *Response to Submissions raised dated July 2010;*
   b) *Final Statement of Commitments;*
   c) *Supplementary Asbestos Assessment prepared by Douglas Partners Pty Ltd dated 19 July 2010;*
   d) *Draft Asbestos Management Plan prepared by Douglas Partners Pty Ltd dated May 2010;*
   e) *Correspondence re Asbestos Management Plan from Hibbs & Associates Pty Ltd dated 18 May 2010;*
   f) *Recycling Resources Recovery Capacity prepared by Mike Ritchie & Associates;*
   g) *Justifiable Demand for a Class 2 Landfill prepared by Mike Ritchie & Associates;*
   h) *Consultation Record with the Local Community;*
   i) *Valuation Letter prepared by CB Richard Ellis;*

3. **Modified Preferred Project Report ("MPPR")** prepared by RW Corkery & Co Pty Ltd dated January 2011 (Ex C in Appeal No 10928 of 2010), but only in relation to:

   a) *Planning Assessment prepared by Design Collaborative Pty Ltd (Appendix 1);*

   b) *Visual Assessment prepared by Richard Lamb & Associates (Appendix 3);*

4. **Deleted**

5. **Additional information in response to Court Order made 12 May 2011** ("Court Order") filed with the Court on 17 June 2011 (Ex D in Appeal No 10928 of 2010),:

   a) *Letter* prepared by Wilkinson Murray dated 18 May 2011;

   b) *Report* prepared by Mr Ron Wainberg dated 23 May 2011;

   c) *Report* prepared by Natural Resource Consultant Pty Ltd dated 19 May 2011;

   d) *Report* prepared by GHD Pty Ltd and GSS Environmental dated 19 May 2011;

   e) *Supplementary Air Quality Assessment* prepared by PAEHolmes dated 19 May 2011.

6. **(Revised) Overview Report for the Further Modified Project Report** prepared by GHD Pty Ltd dated September 2011 (received 30 September 2011, and incorporating Additional Information in Appendix G. Note this is a revised version of a document with the same name and date) (Ex Z in Appeal No 10928 of 2010).

7. **Further Modified Preferred Project Report** prepared by R.W Corkery and GHD Pty Ltd dated September 2011 (Ex Z in Appeal No 10928 of 2010), including the following Figures:

   (a) Figure 2.5 'Indicative Project Site Layout (Amended)';

   (b) Figure 2.6 'Site Establishment Activities (Amended)';

   (c) Figure 2.8 'Recycling and Reprocessing Area (Amended)';

   (d) Figure 2.9 'Leachate Collection System (Amended)';

   (e) Figures 2.10a-c (Amended), 2.11a-d (Amended), 2.12a-c (Amended) and 2.13 (Amended) comprising 'Stages 0 to 11 Operations';

   (f) Figure 2.14 'Activities Sequence in Cross Section North/South (Amended)';

   (g) Figure 2.15 ''Activities Sequence in Cross Section East/West (Amended)';

   (h) Figure 2.16 'Northern Face Typical Sections (Amended)';

(i) Figure 2.17 ‘Indicative Deconstruction of the Eastern Face (Amended)’;

(j) Figure 2.18 ‘Patons Lane – Approved Road Design’;

(k) Figure 2.20 ‘Indicative Final Landform (Amended)’;

(l) Figure 2.21 ‘Rehabilitation Status following Site Establishment (Amended)’;

(m) Figure 2.22 ‘Final Landform and Landscaping (Amended)’.

8. Updated Consolidated Acoustic Report by Wilkinson Murray dated February 2012 (Ex DD in Appeal No 10928 of 2010).

9. Report on Stage 1 – Investigation and Contamination Assessment prepared by Douglas Partners dated February 2012 (Ex BB in Appeal No 10928 of 2010).

10. Draft Bund Deconstruction Management Plan prepared by Douglas Partners dated February 2012 (Ex EE in Appeal No 10928 of 2010).

SCHEDULE 7 – MINIMUM DESIGN SPECIFICATIONS AND OPERATIONAL/POST CLOSURE REQUIREMENTS.

A. Minimum design requirements for C&I Waste stockpile building/stormwater/leachate systems

The C&I Waste Stockpile building must include the following measures unless otherwise approved by the EPA:

a. Stormwater management measures

   i. The design of the C&I storage facility stormwater conveyance system must be for the 20 year ARI stormwater event and discharge to stormwater management system (SMS).

   ii. The sediment dams storage for the SMS is are to be designed for a 90^{th} percentile 5 day rainfall event to ensure that stormwater and leachate are not mixed. The conveyance system is to be designed for the 20 year ARI stormwater event.

b. Leachate management measures

   i. Washdown water from within the C&I Waste Stockpile building is to be separated from stormwater and managed as leachate.

   ii. The SMS and the LMS must be completely separate around the border of the C&I waste stockpile building.

   iii. The concrete floor must be designed to support the mass of C&I waste and to shed washdown water to the LMS. The concrete floor must have a slope to facilitate flows of washdown water into the leachate management system (LMS).

B. Minimum design requirements for Gas collection systems

a. The lateral collection pipes of the gas collection system are to be located not more than 50m apart.

b. Chimney drains are to be no more than 200 metres apart and must comprise non calcareous granular material with a permeability greater than $1x10^{-3}$ m/sec.

c. Chimney drains will be installed on the side liner to facilitate gas venting and prevent perching of leachate.

d. The landfill gas management system should be designed in accordance with the Handbook for the design, construction, operation, monitoring and maintenance of a passive landfill gas drainage and biofiltration system, UNSW and GHD, NSW DECCW, March 2010 unless otherwise approved by the EPA.

C. Minimum design requirements for Cell liners

a. The clay basal liner within each cell must:

   i. Extend up the side of the quarry wall for at least 2m to provide for capture of leachate and prevent leakage at the join of the HDPE side liner and the clay base liner.

   ii. Achieve an infiltration rate equivalent to or less than 90cm of compacted clay with a maximum permeability of 1×10^{-9} m/sec.

   iii. The extension of the clay liner up the side of the quarry wall shall be of equivalent thickness (when measured perpendicular to the liner surface) and permeability as the basal liner.

   iv. Refer to additional conditions regarding cell 2 below.

b. A groundwater depressurisation system (as described in Appendices of the (Revised) Overview Report for the Further Modified Project Report (Ex Z in Appeal No 10928 of 2010), accompanying the Further Modified Preferred Project Report (Ex Z in Appeal No 10928 of 2010) must be installed between the landfill cell liner and the natural geology where the cells are below the ground level. The design for the groundwater depressurisation system must be included in the design for the landfill cells and accompany the application for the EPL.

c. The HDPE side liner must:

   i. Overlap with the basal clay liner (which must extend up the side wall for at least 2m).

   ii. Be placed against an appropriate geotextile cushion material against the side of the quarry wall.

   iii. If, in the opinion of a certified CQA assessor, the HDPE will be damaged by the roughness of the inside wall surface, then a composite clay-HDPE liner system must be placed against the entire quarry wall unless otherwise approved by the EPA.

iv. Have a minimum thickness of 1.5mm, and conform to the relevant Australian Standards.

d. Geotextile must be placed on either side of the HDPE side liner.

e. All cell construction works are to be assessed by the CQA assessor and certified as suitable before emplacement of waste begins.

f. All cells and sub cells must include an active leachate extraction or drainage system as per Section 2.8.4 of the FMPPR.

D. Minimum design requirements for Capping

a. The capping design must be the modified cap design incorporating a geomembrane liner and drainage layer (as specified in Table 2.4 of the FMPPR) (note that the drainage layer is not optional).

b. The drainage layer permeability must be greater than $1x10^{-3}$ m/sec. The aggregate used in the drainage layer must not include crushed concrete.

c. The sealing clay layer must be a minimum of 600mm thick and have a permeability of not greater than 10^{-8} m/sec.

d. The subsoil layer must be a minimum thickness of 750mm

e. The bund walls on the north eastern and eastern boundaries of the site must be conditioned as part of the site development works and before any waste is placed on the site.

f. All barrier and drainage layers, including geomembrane, must be the subject of approval by the EPA.

E. Minimum design requirements for Cell 2

An additional groundwater depressurisation layer behind the HDPE side liner of Cell 2 must be installed if required to relieve groundwater pressure caused by the increase in depth.

F. Landfill operational requirements

1. In addition to the leachate management system specifications indicated above, the landfill operation must comply with the following requirements to ensure that leachate is minimised and that leachate is separated from stormwater throughout the operation of the Project unless otherwise approved by the EPA:

a. The active landfilling face must not exceed 420 m^2 in plan area at any time.

b. The daily cover must be placed on the active landfill area to a minimum thickness of 150mm. The area of landfilled waste with daily cover should not exceed 1ha.

c. The active cell must be covered with intermediate cover of clay rich soil, to a minimum thickness of 300mm should it not be landfilled within 90 days of placement of daily cover.

d. The combined area of daily cover and intermediate cover should not exceed 3 ha at any one time, excluding temporary batter slopes and any sub-cell that is undergoing final capping and revegetation, unless otherwise approved by the EPA.

e. Batter slopes must be covered with intermediate cover where exposed for more than 90 days. The final capping and revegetation works of any subcell should be completed within 3 months of all of the landfilled waste in that subcell reaching the approved final landform, unless otherwise approved by the EPA.

f. The cell must be progressively capped with the final capping profile as per condition D(a-f) of Schedule 7.

g. The active landfilling faces must be bunded to prevent run-off and run-on of stormwater/leachate from the exposed waste.

h. Collect and extract stormwater runoff from daily and intermediate covered areas and discharge this water as stormwater subject to testing and compliance with the specifications in the EPL.

i. All leachate drainage and capping drainage material must achieve a permeability of greater than $1x10^{-3}$ m/sec and comprise non calcareous granular material.

j. The leachate head is to be monitored as part of the monitoring program.

k. The leachate head on the liner system should not exceed 300mm above the cell floor throughout the operation of the facility, unless leachate is required to be stored in the landfill under extreme wet weather conditions.

l. If the leachate head exceeds 300mm, additional leachate, extraction measures are to be implemented immediately to reduce the leachate head to acceptable level.

m. The Leachate Management Plan must include contingency measures in the event of failure or severe storm event or excess leachate volumes greater than the modelled predictions or fugitive leachate emission.

n. During site establishment, the material within the dam in the Cell 1 area is to be treated as follows:

   i. Water is to be tested prior to pumping and appropriately disposed of;

   ii. Sediment is to be tested, classified and appropriately disposed of;

   iii. Testing procedures are to be carried out in accordance with EPA procedures and for EPA analyte list.

G. Waste inspection procedures

1. Detailed waste screening procedures for all waste received at the site and all waste extracted from bund walls are to be prepared and implemented to ensure that all waste meets the classification of general solid (non-putrescible) or special waste for asbestos recovered from the on-site bunds. The procedures must include:

   a. Visual inspection of all received waste;

   b. All staff members that monitor the site entrance shall be trained in the identification and classification of solid waste. Vehicles with unacceptable loads of waste will be refused entry to the site;

   c. Require documentation for all soils received from the site to confirm their origin;

   d. Random sampling and testing of soils to confirm that they meet the classification of general solid (non-putrescible) waste;

   e. Prominent signage at the entrance to the landfill defining acceptable wastes and directing users to contact the gateperson for information regarding disposal of other wastes;

   f. Random daily inspection of vehicles entering the landfill. All vehicles suspected of containing unacceptable waste will be refused permission to deposit waste until the waste is verified as being acceptable. Staff shall require and collect

appropriate evidence from the driver of the vehicle, eg. test certificate, approvals, etc, as appropriate, as verification that the waste is acceptable;

g. Directing vehicles with unacceptable wastes to an appropriate disposal facility;

h. Random monitoring and inspection of wastes as they are discharged from vehicles at the waste disposal areas by site personnel. All waste suspected of being unacceptable will be segregated and checked as to its acceptability, eg. by detailed inspection and/or testing, as deemed appropriate by site staff;

i. Monitoring of the deposited waste during spreading, compaction and covering at the landfill or stockpiling at the site. All waste suspected of being unacceptable will be segregated and checked to determine its acceptability eg. by detailed inspection and/or testing, as deemed appropriate by site staff; and

j. Recording of all incidences of identification of unacceptable wastes in the site's daily log. The record will include:

    i. Details of the waste eg. type;

    ii. Source of the waste eg. vehicle identification, driver identification and generator of the waste;

    iii. Recommended waste management facility(s);

    iv. Result(s) of contacting the waste management facility; and

    v. Date contacting the EPA.

k. In the event that unacceptable waste is identified in an incoming vehicle, the vehicle will be refused entry, re-directed, and details of the incident recorded as described above. Site personnel will advise the driver of the vehicle of appropriate waste management facilities, or to contact the EPA for advice on appropriate management of the unacceptable waste;

l. In the event that unacceptable waste is identified during deposition by a vehicle, staff will immediately segregate and contain the waste away from the active landfilling area or recycling & re-processing area. Site personnel will record the details of the waste, such as type, the source, and the vehicle and driver identification. Site personnel will advise the driver of the vehicle that the waste is not acceptable and may load the waste back onto the vehicle where practical and safe to do so. The vehicle will then be escorted from the landfill by Site personnel. Site personnel will advise the driver of the vehicle to contact the EPA for advice on the appropriate management of the unacceptable waste;

m. In the event that unacceptable waste is identified during the spreading and compaction of deposited waste or stockpiling at the site, site personnel will segregate and contain the waste away from the active waste disposal or recycling & re-processing areas. Site personnel will make all practical efforts to identify the source of the waste, including:

   i. Inspecting the waste for possible identification labels on containers; and

   ii. Identifying the type of waste and consequently the possible sources

n. Site personnel will contact the EPA to confirm appropriate management options and will document the final disposition of the unacceptable waste in accordance with the EPA's requirements.

o. In the case of asbestos and other waste contained in the bund walls a screening procedure must be developed based on information contained in the Preliminary In-Situ Waste Classification dated September 2009 to identify the procedures for ensuring all extracted waste from the bunds is appropriately classified and managed. This procedure should be implemented before waste activities commence at the site.

H. Surface water and groundwater management

1. A minimum total of seven groundwater observation bores will be drilled around the perimeter of the facility as part of the site establishment works. Bore construction will be in accordance with EPA requirements and sampling will be carried out in accordance with monitoring plan in the LEMP and in accordance with the EPL.
2. Prior to commencement of waste emplacement the groundwater will be sampled and monitored for an EPA approved analyte list using the bores to establish background conditions in surface water and groundwater.
3. Groundwater will be sampled and monitored throughout the operation of the facility and post closure for as long as deemed necessary by the EPA and at intervals specified by the EPA.
4. Stormwater runoff from intermediate cover areas (minimum 300mm thick) and bunded areas of the cell floor will be isolated from contact with the waste and will be collected and pumped from the landfill area and treated as stormwater in the stormwater management system.

5. Surface water runoff and leachate must be kept separate at all times. To ensure this occurs the applicant is to ensure the control and mitigation measures referred to in the surface water report of GSS are to be incorporated into the design and implemented during each stage/phase/cell of the development, including but not limited to:
    a. Construct sedimentation dams for sediment-laden runoff.
    b. The surface water management system is to include measures to treat run off to where required to reach acceptable discharge under the EPL, according to guidelines from Managing Urban Stormwater - Soils and Construction Manual (DECC 2004) and EPA requirements.
    c. Re-use water from sedimentation dams for dust suppression and revegetation.
    d. Water discharged from site via a licensed discharge point where its quality is monitored.
    e. Temporary erosion and sediment control measures to be installed during construction.
    f. Clean runoff is must be directed away from disturbed areas.
    g. Maintenance of sediment control structures.
    h. Contingency procedures for breaches and cross-contamination between stormwater and leachate.
6. Only stormwater is to be reused onsite for dust suppression and revegetation, with excess stormwater managed and treated where required for monitored licensed discharge.
7. The Stormwater Soil, Water and Leachate Management Plan must identify the location of licensed discharge points for stormwater, and monitoring parameters and frequency of monitoring.
8. The stormwater system must be designed in accordance with the Managing Urban Stormwater – Soils and Construction Manual (the “Blue Book”) – DECC, 2004.
9. Monitoring requirements for surface water and groundwater (parameters and frequency) must be included in the Plan.

I. Monitoring

1. All groundwater piezometers must be installed around the site as per Annexure 5 in Appendix 1 contained the Cell Design and Groundwater Assessment (Aquaterra

2010). These piezometers must be installed and appropriately sampled during site establishment, and before any waste is received at the site, to determine background groundwater characteristics (groundwater quality and groundwater flow conditions).

2. The piezometers must be sampled during the detailed engineering design and site establishment phases to identify and confirm background groundwater characteristics and clarify the connectivity between groundwater and the creek.
3. The operator must engage an independent party (or parties) to monitor the following during the life of the project in accordance with the LEMP and the EPL:
    a. Groundwater levels and quality;
    b. Leachate levels in cells and quality;
    c. Leachate levels in dams and quality;
    d. Surface water quality at offsite discharge point;
    e. Cover and capping operations on waste cells;
    f. Background groundwater characteristics; and
    g. Clarify the connectivity between the groundwater and Blaxland Creek.
4. Leachate modelling must be validated through independent assessment and monitoring of leachate flows, levels and volumes in leachate storage ponds.
5. If validation assessment of the leachate model indicates excess leachate storage is required then potential contingency arrangements must be developed and implemented to the satisfaction of the EPA. If directed by the EPA, further waste receipt must be suspended until the EPA is satisfied with the arrangements.
6. Results of leachate validation assessment compared to the model provisions must be provided to the EPA upon request.

J. Construction Quality Assurance Plan

1. A Construction Quality Assurance Plan (CQA) must be prepared and implemented for the entire site, including development works, cell construction, stormwater and leachate management measures, capping and post closure rehabilitation.
2. The CQA plan must include provisions for the following in accordance with the POEO Act:
    a. Sources of construction material;
    b. Testing of construction materials;

c. Inspection and testing procedures for constructed cell liners (basal and side);

d. Construction methodology for compacting clays, including number of lifts and moisture conditioning for each cell;

e. Inspection and testing procedures for HDPE and geomembrane liners;

f. Rectification of non conforming components;

g. Certification / sign off by suitably qualified assessor on the completion of each of the specified works;

h. An independent certification report must be prepared to confirm that each of the specified works were completed as required and in accordance with the CQA plan and any EPL conditions. This report is to be submitted to the EPA at the completion of each of the specified works;

i. The CQA plan must be included in the LEMP;

j. Contingency measures in the event of failure or sever storm event or fugitive leachate emission; and

k. Leachate modelling for the Project must be provided to confirm the efficacy/adequacy of the proposed final leachate management and surface water management design and incorporated into the SWLMP.

K. Minimum Design Requirements for Rehabilitation and Post Closure Management

1. The cap design must include a drainage layer.
2. Appropriate vegetation must be properly established on site and cap.
3. Erosion must be controlled and managed.
4. Surface water runoff must meet discharge water quality requirements as specified in the surface water assessment dated February 2010 prepared by GSS Environmental and the EPL.
5. Surface water and testing must be incorporated into the monitoring plan of management.
6. The final landform height and profile is not to exceed the height and shape specified in Figure 2.20 of the FMPPR.
7. In order to ensure there is no need to increase the height of the landform, any settlement areas that may result in ponding of surface water will need to be backfilled and this process will continue until the EPA determines that the facility is stable and

does not represent a risk to human health or the environment. The following actions must be undertaken:

a. Regular maintenance of slopes through backfilling and revegetation of settled areas to prevent ponding of water and facilitate runoff; and

b. All backfilling activities are to be undertaken with subsoil of the same composition as proposed subsoil (on site clays) referred to the in the cap profile.

8. Regular inspection and reporting by an independent, suitably qualified assessor, on an annual basis to assess the integrity of the cap, the grade and the existence of differential settlement areas where ponding could occur.

9. All reports identified above are to be provided to the EPA and relevant certifying bodies within four weeks of the inspection date. Reports are also to be made publicly.

10. Monitoring is to continue until the EPA determines the facility is stable and no longer represents a risk to human health or the environment.

SCHEDULE 8 – PROJECT SITE BOUNDARY (Referred to in conditions 7 and 8 of Schedule 3)

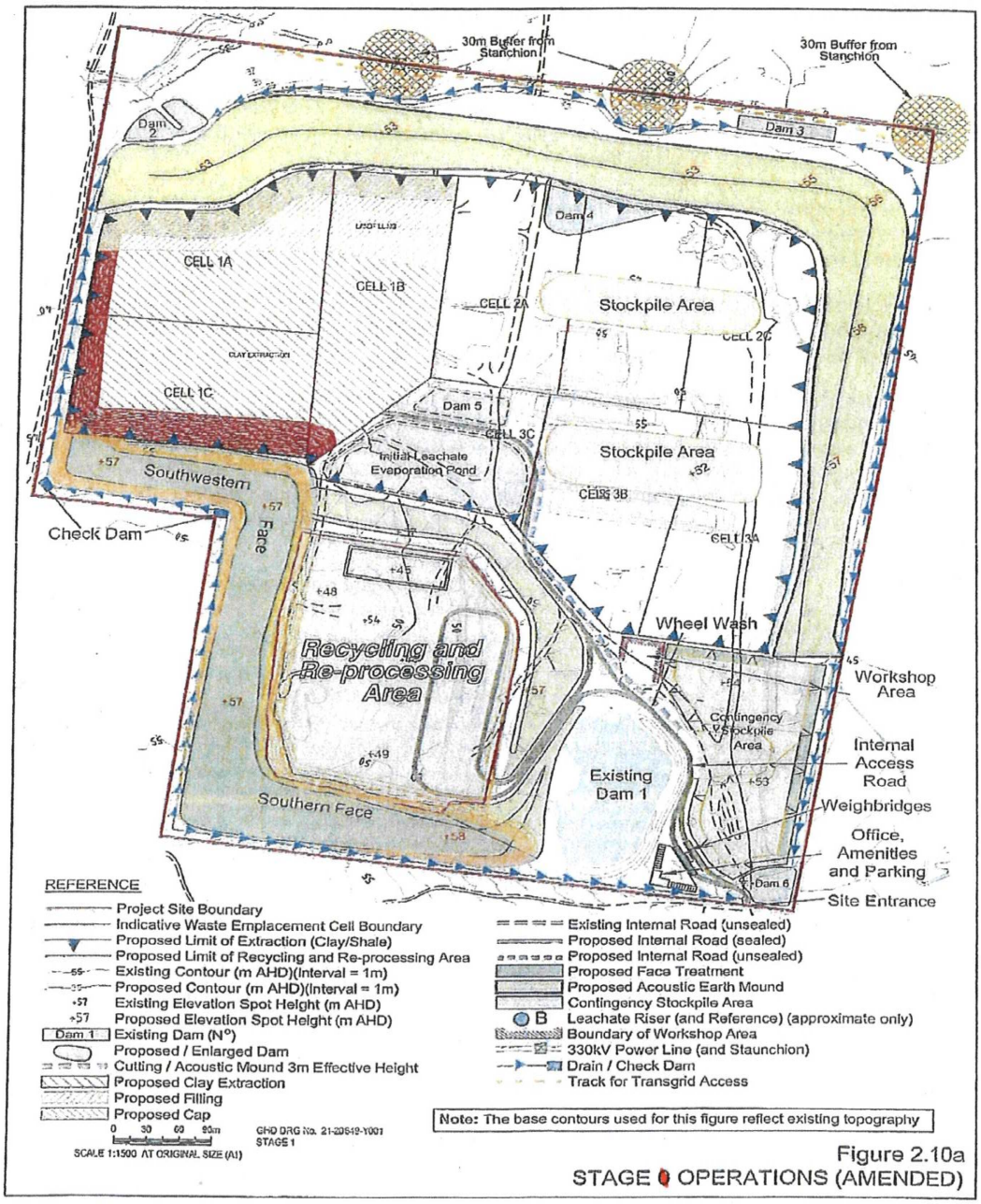


Figure 2.10a Stage 1 Operations

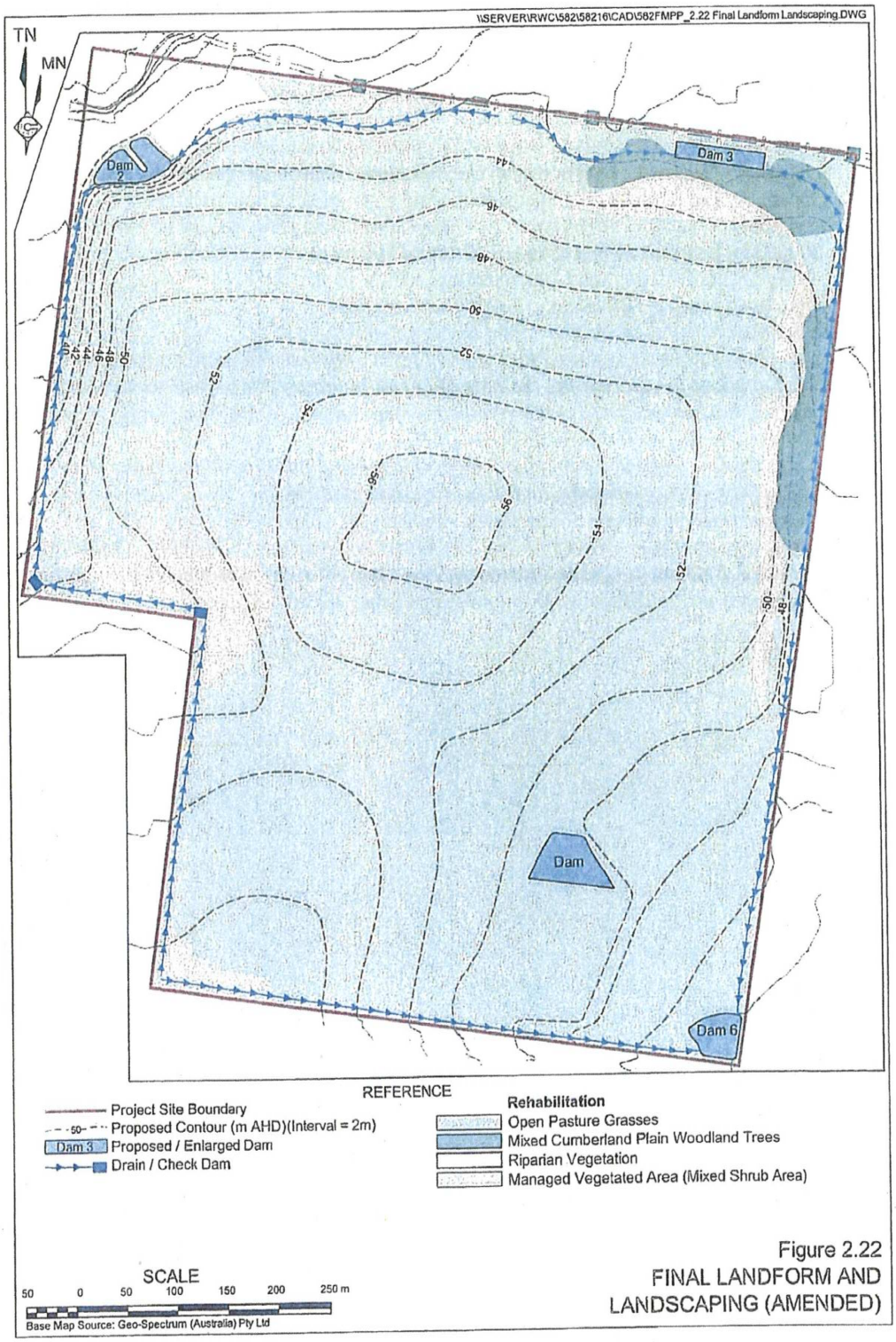


Figure 2.22
FINAL LANDFORM AND LANDSCAPING (AMENDED)

SCHEDULE 9 – MANAGEMENT METHODS, PROCEDURES AND SPECIFIC NOISE MITIGATION MEASURES (EX DD IN APPEAL NO 10928 OF 2010)

a) The waste recycling and re-processing facility must be sited on the project site at the furthest distance from residences, as shown in Appendix A to the Updated Consolidated Acoustic Report;

b) Earth mounding must be used on the northern, eastern and southern boundaries of the site, as shown in Appendix A to the Updated Consolidated Acoustic Report, during the periods when operations within the site require them;

c) Earth mounds must be provided within the site at the Central and Southern locations at specified times, as shown in Appendix A to the Updated Consolidated Acoustic Report;

d) Acoustic mounding must be used to enclose the waste recycling and re-processing cell;

e) The fixed recycling and re-processing equipment must be housed within acoustic enclosures;

f) During the construction phase, 4m-high mobile acoustic barriers must be deployed on the external perimeter of both the northern and eastern faces, and will be relocated on the outer surface of those faces to acoustically screen the works as required;

g) Acoustic treatment must be applied to selected mobile earthmoving and other equipment to be used on site, to achieve the specified noise criteria shown in Table 5.2 in the Updated Consolidated Acoustic Report;

h) Acoustic screening must be used for clay/shale loading operations, specifically in Cell 3, through strategic placement of 4m-high barriers in an east-west orientation across the active stockpile area, so as to always acoustically screen earthmoving equipment during loading operations;

i) No operational equipment having a sound power level greater than 106 dBA (unshielded) or 111 dBA (shielded) will be located on top of stockpiles;

j) No bobcats, front end loaders or bulldozers will be located on top of the stockpiles around the processing plant, other than during construction stage.

Moveable Noise Barriers

k) The following procedure for determining and verifying the location of "moveable"/"temporary fixed" barriers, and of any work conducted behind them, should be implemented:

   i) marking off an area behind the new barriers at which the RL of the ground is no more than 1m higher than that at the base of the barrier, (or lower at greater distances behind), in general accordance with Appendix A to the Updated Consolidated Acoustic Report, and within which there is no line of sight to any residence to the side of the barrier. The permitted work area must be marked off with tape, fibreglass poles or similar, to represent the area within which equipment must operate behind the barrier; and

   ii) an acoustic engineer must attend the site to formally verify the location of the barrier and the new working area.

l) No work will be conducted outside the site's perimeter bunds or the temporary fixed barriers during the above process, except that work required to actually move the barriers.

5M Earth Mounds

m) Earth mounds are to be used to shield equipment working close to the top of the final landform to control noise from this equipment.

n) The procedure for removing a bund to provide the final landform for the project must involve:

   i) initial removal of the top of the bund from behind (south) using a long-reach excavator; and

   ii) final shaping of the landform using a bobcat, with a sound power level not exceeding 106 dBA.

o) No work will be conducted outside the shielded areas of the site during the process referred to in (n) above.

Real Time Noise Monitoring

p) The Proponent shall undertake real time continuous noise monitoring, and separately, an ongoing attended noise monitoring program, for the operational life of the project, to be documented in the Site Establishment Noise Management

Plan (identified at Condition 26) and Operation Noise Management Plan (identified at Condition 27).

q) The Proponent shall submit a summary report of the real time monitoring results to Council and the OEH, which documents all non-compliances with Table 7, and any rectification works or modification of work practices undertaken to obtain compliance:

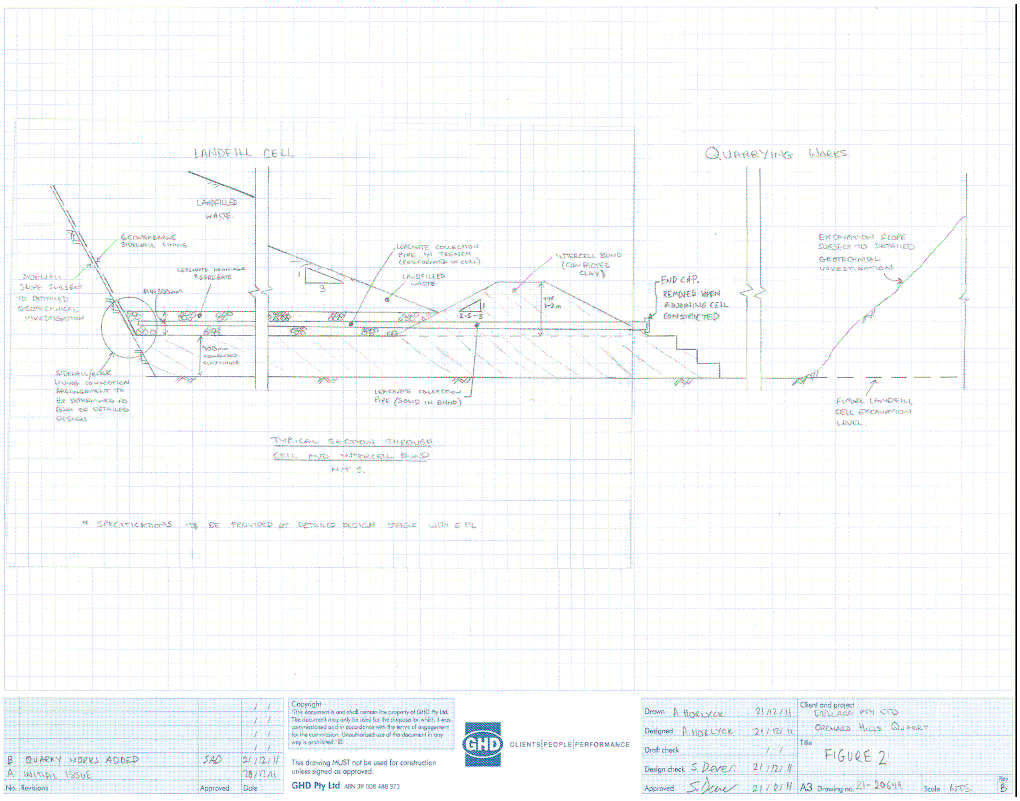
- at 3 month intervals during Site Establishment and the first two years of operation; and
- thereafter, on a six monthly basis.

r) The ongoing attended noise monitoring program must include environmental noise monitoring of the Project site's total noise emissions including fixed plant and mobile earthmoving equipment auditing, and identify whether fixed plant earthmoving equipment noise levels exceed the sound power levels in Table 5.2 contained in the Updated Consolidated Acoustic Report.

s) The real time continuous noise monitoring data must be made available to the Council within 14 days of the Council requesting access to that data.

SCHEDULE 10 – INTERACTION BETWEEN LANDFILL CELL AND QUARRYING WORK

(referred to in condition 6 of Schedule 3)



Annelise Tuor

Commissioner of the Court

David Johnson

A/Commissioner of the Court