Project Approval

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

As delegate for the Minister for Planning and Infrastructure, I approve the application referred to in Schedule 1, subject to the conditions in Schedules 2 to 6.

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.

Red type represents the October 2024 modification (MOD 1)

Richard Pearson
Deputy Director General

Sydney 2012

SCHEDULE 1

Application No:	08_0068
Applicant:	Tweed Shire Council
Approval Authority:	Minister for Planning and Infrastructure
Land:	Lot 1 DP 34555 Lot 1 DP 1159352 Lot 1 DP 1170442 Lot 2 DP 1170442
Project:	Eviron Road Quarry Landfill Project – Stage 1

The Department has prepared a consolidated version of the consent which is intended to include all modifications to the original determination instrument.

The consolidated version of the consent has been prepared by the Department with all due care. This consolidated version is intended to aid the consent holder by combining all consents relating to the original determination instrument but it does not relieve a consent holder of its obligation to be aware of and fully comply with all consent obligations as they are set out in the legal instruments, including the original determination instrument and all subsequent modification instruments.

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DEFINITIONS

Applicant	Tweed Shire Council
ARI	Average Recurrence Interval
BCA	Building Code of Australia
BCS	Biodiversity Conservation and Science Group of NSW Department of Climate Change, Energy, the Environment and Water
Biodiversity offset strategy	The conservation and enhancement strategy described in the EA, and described and depicted conceptually in the figure in Appendix 4
Blue Book Volume 1	*Managing Urban Stormwater: Soils and Construction Volume 1 4th Edition (Landcom 2004)*
Blue Book Volume 2B	*Managing Urban Stormwater: Soils and Construction Volume 2B Waste Landfills (DECC 2008)*
Blue Book Volume 2E	*Managing Urban Stormwater: Soils and Construction Volume 2E Mines and Quarries (DECC 2008)*
Council	Tweed Shire Council
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
DCP	Development Control Plan
DCCEEW-Water	Water Group within the NSW Department of Climate Change, Energy, the Environment and Water
Department	Department of Planning, Housing and Infrastructure
DPIRD (Agriculture)	Agriculture division within the Department of Primary Industries and Regional Development.
EA	Environmental assessment titled Report for Eviron Road Quarry and Landfill Proposal Part 3A Environmental Assessment dated June 2011 and the associated response to submissions dated May 2012, and MOD 1 – 'Eviron Road Quarry-Landfill Project Modification Report dated May 2024
EEC	Endangered Ecological Community
EPA	NSW Environment Protection Authority
EP&A Act	*Environmental Planning & Assessment Act 1979*
EP&A Regulation	*Environmental Planning & Assessment Regulation 2021*
EPL	Environmental Protection Licence
Evening	The period from 6pm to 10pm
Feasible	Feasible relates to engineering considerations and what is practical to build
General Solid Waste	As defined by the *Waste Classification Guidelines (DECCW 2008)*
Haul Road	The area of the blue line shown on the plan in Appendix 2
Heritage NSW	Heritage NSW within the NSW Department of Climate Change, Energy, the Environment and Water
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
Landfilling Operations	Operations at Quirks Quarry 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 Public Spaces
Mitigation	Activities associated with reducing the impacts of the Project
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NSW Resources	NSW Resources within the Department of Primary Industries and Regional Development
Planning Secretary	Planning Secretary of the Department, or nominee
POEO Act	*Protection of the Environment Operations Act 1997*
Privately-owned Land	Land not owned by the Applicant or where a private agreement does not exist between the Applicant and the land owner
Project	The development described in the EA, as generally depicted in Appendix 2
Quarrying operations	Operations at West Valley Quarry
Quirks Quarry Landfill	The area shown as light blue shading on the plan in Appendix 2
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
RFS	Rural Fire Service
RL	Raised level
Site	The land listed in Schedule 1
Stage 1 Project Application	Project Application 08_0068 for Quirks Quarry Landfill and West Valley Quarry
Statement of Commitments	The Applicant's Statement of Commitments in Appendix 1
Stotts Creek RRC	The area shown on the plan in Appendix 2
TfNSW	Transport for NSW
VENM	Virgin Excavated Natural Material
West Valley Quarry	The area shown as yellow shading on the plan in Appendix 2

SCHEDULE 2
ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. The Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the project.

TERMS OF APPROVAL

2. The Applicant shall carry out the project generally in accordance with the:
   (a) EA;
   (b) statement of commitments (see Appendix 1); and
   (c) conditions of this approval.

3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of any inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.

4. The Applicant shall comply with any reasonable requirement/s of the Planning Secretary 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 ON APPROVAL

QUIRKS QUARRY LANDFILL

Landfilling Operations

5. The Applicant is only permitted to commence landfilling operations at Quirks Quarry once:
   (a) the leachate management and collection system has been installed to the satisfaction of the EPA (see Condition 4 of Schedule 3); and
   (b) quarrying operations have been substantially completed and the internal haul road has been constructed and sealed to the satisfaction of the Planning Secretary (see Condition 24 of Schedule 3).

Waste Material Volume

6. The Applicant shall not receive more than 75,000 tonnes of General Solid Waste on the site in any calendar year.

WEST VALLEY QUARRY

Quarrying Operations

7. The Applicant must not commence operations at West Valley Quarry until it has received written approval to do so from the Planning Secretary.

   Note: In seeking the Planning Secretary's written approval, the Applicant must demonstrate that quarrying operations will have negligible groundwater impacts and that the relevant requirements of Conditions 20 and 21 of Schedule 4 have been addressed.

8. Once quarrying operations commence, the Applicant may operate West Valley Quarry for a period of no more than 11 years.

   Note: Under this approval, the Applicant is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Planning Secretary. Consequently, this approval will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of West Valley Quarry and those undertakings have been carried out to a satisfactory standard.

Extractive Material Extraction

9. The Applicant must not extract more than 200,000 tonnes of extractive materials from the West Valley Quarry in any calendar year.

10. Unless the Planning Secretary agrees otherwise, the Applicant must not carry out quarrying operations below a pit base level of RL 4 metres.

Note: This condition does not apply to the construction of any bores approved by DCCEEW-Water or pollution and sediment control structures described in the EA.

Extractive Material Transport

11. The Applicant shall not transport more than 200,000 tonnes of extractive material from the site in any calendar year.

PRODUCTION DATA

12. The Applicant shall:
    (a) provide annual quarry production data to NSW Resources using the standard form for that purpose; and
    (b) include a copy of this data in the Annual Review (see Condition 6 of Schedule 6).

STRUCTURAL ADEQUACY

13. The Applicant 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 Applicant is required to obtain construction and occupation certificates for the proposed building works.*

PROTECTION OF PUBLIC INFRASTRUCTURE

14. The Applicant 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.

DEMOLITION

15. The Applicant 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

16. The Applicant 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.

SUBMISSION OF PLANS OR PROGRAMS

17. With the approval of the Planning Secretary, the Applicant may:
    (a) submit any strategy, plan or program required by this approval on a progressive basis; and/or
    (b) combine any strategy, plan or program required by this approval.

18. Until they are replaced by an equivalent strategy, plan or program approved under this approval, the Applicant shall continue to implement existing strategies, plans or programs for operations on site that have been approved by previous consents or approvals.

    Notes:
    - *If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages and the trigger for updating the strategy, plan or program.*
    - *There must be a clear relationship between the strategy, plan or program that are to be combined.*

SCHEDULE 3
SPECIFIC ENVIRONMENTAL CONDITIONS – QUIRKS QUARRY LANDFILL

WASTE

Restrictions on Receipt, Storage & Handling and Disposal of Waste

1. The Applicant shall only receive, store, handle or dispose of General Solid Waste or other classes of waste that are authorised for receipt on site by an EPL.

Landfill Operations

2. Unless otherwise authorised by an EPL, the Applicant 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;
   (e) maximise landfill compaction rates;
   (f) cover the active landfill area with at least 0.15 metres of VENM soil (or an 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;
   (h) revegetate the covered landfill cells following the capping of each cell and once they reach their final design height.
   (i) rehabilitate all areas in accordance with the rehabilitation objectives in Condition 35 of this schedule.

   Note: There is an accompanying requirement to prepare and implement a Landfill Management Plan under Condition 2 of Schedule 6 of this approval.

SOIL, WATER AND LEACHATE

Leachate Management and Collection System

3. No waste is permitted to be disposed of in the landfill until the Applicant has constructed the leachate management and collection system to the satisfaction of the EPA.

Leachate Management

4. The Applicant shall:
   (a) design and install the leachate management and collection system generally in accordance with the conceptual design in the EA and applicable Australian Standards or unless otherwise approved by the EPA;
   (b) ensure that leachate generated in the landfill is minimised and appropriately contained, collected and disposed of;
   (c) collect and store all leachate generated by the landfill within the landfill itself, until it is transferred to the leachate treatment plant for processing;
   (d) install a leachate barrier to be used for the direct impoundment of leachate (see Condition 5 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 Planning Secretary.

Stormwater Management

5. The Applicant shall:
   (a) design and install the stormwater management and collection system generally in accordance with the conceptual design in the EA and applicable Australian Standards;
   (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; and
   (e) prevent cross-contamination of clean and sediment or leachate laden water, to the satisfaction of the Planning Secretary.

Soil, Water and Leachate Management Plan

6. The Applicant shall prepare and implement a Soil, Water and Leachate Management Plan for landfilling operations in consultation with DCCEEW-Water and the EPA and to the satisfaction of the Planning Secretary. This plan must be prepared and implemented by a suitably qualified and experienced person and be submitted for approval prior to commencement of landfilling operations. The plan must include:
   (a) a site water balance that:
      - identifies the source of all water collected or stored on site, including rainfall, stormwater and groundwater;
      - includes details of all water use on site and any discharges; and
      - describes the measures that will be implemented to minimise water use on site.
   (b) an erosion and sediment control plan that:
      - is consistent with the requirements in the latest version of the Blue Book Volume 1 and Volume 2B;
      - identifies the activities on site that could cause soil erosion and generate sediment; and
      - describe the measures that will be implemented to:
         - 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;
         - 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 Conditions 3 and 4 of this schedule 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 4 of this schedule has been addressed;
   (e) a surface water, groundwater and leachate monitoring program that includes:
      - 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.
   (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.

Surface Water Discharges

7. The Applicant shall ensure that all surface water discharges from the site comply with the discharge limits (both volume and quality) set for the project in the EPL or with Section 120 of the POEO Act.

Bunding

8. The Applicant shall store all liquid chemicals, fuels and oils used on the site in appropriately bunded areas that have been designed and installed in accordance with the requirements of all relevant Australian Standards and DECCW's *Storing and Handling Liquids: Environmental Protection* manual.

AIR QUALITY

Meteorological Monitoring

9. During the life of the project, the Applicant shall ensure that there is a suitable meteorological station on the site that complies with the requirements in the latest version of the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline. The meteorological station must be maintained so as to be capable of continuously monitoring the following parameters: air temperature, wind direction, wind speed, rainfall and relative humidity.

Operating Conditions

10. The Applicant shall:
   (a) implement best management practice, including all reasonable and feasible dust and odour mitigation measures to prevent and minimise dust emissions from landfilling operations;

(b) prevent and minimise the air quality impacts of landfilling operations during adverse meteorological conditions and extraordinary events (see Note d to Tables 3 to 5 in Schedule 4);
(c) regularly assess air quality monitoring data and relocate, modify, and/or stop landfilling operations to ensure compliance with the relevant conditions of this approval;
(d) minimise any visible off-site air pollution; and
(e) minimise surface disturbance of the site, other than as permitted under this approval.

Air Quality Management Plan

11. The Applicant shall prepare and implement an Air Quality Management Plan for landfilling operations in consultation with the EPA and to the satisfaction of the Planning Secretary. The plan must:
(a) be prepared and implemented by a suitably qualified and experienced person whose appointment has been approved by the Planning Secretary;
(b) be submitted for approval by the Planning Secretary prior to commencement of landfilling operations;
(c) describe the measures that will be implemented to ensure:
- best management practice is employed;
- the air quality impacts from landfilling are minimised during adverse meteorological conditions and extraordinary events; and
- compliance with the relevant conditions of this approval.

(d) describes the air quality management system;
(e) includes an air quality monitoring program that:
- is capable of evaluating the performance of the landfill;
- includes a protocol for determining any exceedances of the relevant conditions of approval and responding to complaints;
- adequately supports the air quality management system; and
- evaluates and reports on the effectiveness of the air quality management system.

Greenhouse Gas

12. The Applicant shall implement all reasonable and feasible measures to minimise:
(a) energy use from landfilling operations; and
(b) greenhouse gas emissions from landfilling operations,
to the satisfaction of the Planning Secretary.

Greenhouse Gas Abatement Strategy

13. The Applicant shall prepare and implement a Greenhouse Gas Abatement Investigation Report to the satisfaction of the Planning Secretary. The report must:
(a) be submitted to the Planning Secretary by 31 December 2013; and
(b) examine opportunities to flare or reuse greenhouse gas emissions from landfilling operations.

Energy Savings Action Plan

14. The Applicant shall prepare and implement an Energy Savings Action Plan for the project to the satisfaction of the Planning Secretary. This plan must:
(a) be prepared in accordance with the *Guidelines for Energy Savings Action Plans* (DEUS 2005, or its latest version);
(b) be submitted to the Planning Secretary for approval by 31 December 2013; and
(c) include a program to monitor the effectiveness of measures to reduce energy use on site.

Odour

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

NOISE

Landfill Operating Hours

16. The Applicant must comply with the hours of operation in Table 1, unless agreed to in writing by the Planning Secretary.

Table 1: Landfill Hours of Operation

Activity	Days	Hours
Landfilling and associated activities	Monday to Friday	7am to 4pm
	Saturday and Sunday	9am to 4pm
	Public Holidays	9am to 4pm

Note: Operational activities are permitted to take place outside of these hours provided they are inaudible from surrounding receivers.

Operating Conditions

17. The Applicant 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 landfilling operations;
    (b) minimise the noise impacts of landfilling operations 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 landfilling operations to ensure compliance with the relevant conditions of this approval.

Noise Management Plan

18. The Applicant shall prepare and implement a Noise Management Plan for landfilling operations in consultation with the EPA and to the satisfaction of the Planning Secretary. The plan must:
    (a) be prepared and implemented by a suitably qualified and experienced person whose appointment has been approved by the Planning Secretary;
    (b) be submitted for approval by the Planning Secretary prior to commencement of landfilling operations;
    (c) describe the measures that will be implemented to ensure:
        - best management practice is being employed on site; and
        - the noise impacts of landfilling operations are minimised during any meteorological conditions when the noise criteria in this approval do not apply;
        - compliance with the relevant conditions of this approval.
    (d) describe the noise management system;
    (e) includes a noise monitoring program that:
        - is capable of evaluating the performance of the landfill;
        - includes a protocol for determining exceedances of the relevant conditions of this approval and responding to complaints; and
        - adequately supports the noise management system; and
        - evaluates and reports on the effectiveness of the noise management system.

TRANSPORT

Traffic Monitoring

19. The Applicant shall:
    (a) keep accurate records of the volume of waste transported to the site;
    (b) nominate a haulage route to be used by heavy vehicles accessing the landfill; and
    (c) make these records available in its Annual Report.

Road Signage

20. Prior to carrying out landfilling operations under this approval, the Applicant shall:
    (a) clear roadside vegetation and install intersection distance advisory sign on the approach to the Leddays Creek Road/Site Access intersection to improve driver awareness of the intersection;
    (b) install hinged “Trucks entering” warning signs 200 metres either side of the Site Access, and ensure that these signs are open during hours in which the landfill is operating (see Condition 17 of this schedule); and
    (c) install Koala crossing signs on either side of the landfill entrance,
    to the satisfaction of the Planning Secretary.

Operating Conditions

21. The Applicant shall ensure that:
    (a) landfill vehicles on site do not exceed a speed limit of 30 kilometres per hour;
    (b) all loaded landfill vehicles entering or leaving the site have their loads covered; and
    (c) all loaded landfill vehicles leaving the site are cleaned of dirt, sand and other materials before they leave the site, to avoid tracking these materials on public roads.

22. The Applicant shall implement all reasonable and feasible measures to minimise project-related heavy vehicle traffic on the landfill haulage routes during hours in which school buses are operating these routes to the satisfaction of the Planning Secretary.

Traffic Management Plan

23. The Applicant shall prepare and implement a Transport Management Plan for landfilling operations in consultation with TfNSW and to the satisfaction of the Planning Secretary. The plan must:
    (a) be prepared and implemented by a suitably qualified and experienced person whose appointment has been approved by the Planning Secretary;
    (b) be submitted for approval by the Planning Secretary prior to commencement of landfilling operations;
    (c) include a plan showing the landfill haulage route to be used by heavy vehicles;
    (d) include a drivers code of conduct;
    (e) describe the measures that will be implemented to ensure:
        - the nominated haulage route in used;
        - haulage is minimised or routes altered to avoid school buses;
        - a CB radio communication protocol is established with local bus companies, to improve driver awareness of landfill truck and school bus locations along haulage routes;
        - drivers adhere to the code of conduct; and
        - compliance with the relevant conditions of this approval.
    (f) include a program to monitor the effectiveness of these measures.

Internal Haul Road

24. The Applicant shall ensure that the internal haul road from the Site Access to Quirks Quarry Landfill is constructed generally in accordance with the concept design in the EA and applicable Australian Standards to the satisfaction of the Planning Secretary.

FIRE MANAGEMENT

Bushfire

25. The Applicant shall prepare and implement a Bushfire Assessment for the site to the satisfaction of the Planning Secretary. This plan must:
    (a) be prepared in consultation with NSW RFS;
    (b) be submitted to the Planning Secretary for approval prior to commencement of landfilling operations;
    (c) be prepared in accordance with *Planning for Bush Fire Protection 2006* and any other relevant guidelines.

Fire Management

26. The Applicant shall:
    (a) implement suitable measures to prevent and minimise the risk of fire on site;
    (b) extinguish any fires on site promptly; and
    (c) maintain adequate fire-fighting capacity on site, including a fire fighting tanker.

INFRASTRUCTURE AND SERVICES

Infrastructure and Services

27. The Applicant shall prepare and implement an Infrastructure and Services Plan for the project to the satisfaction of the Planning Secretary. This plan must:
    (a) be prepared in consultation with relevant utility and service providers;
    (b) include an implementation schedule which shows how all essential infrastructure and services are to be provided on site, including:
        - water supply, sewer, gas, electricity, telecommunications services;
        - fire-fighting services, including the location of fire brigade access;
        - external lighting;
        - stormwater management, including the provision of any rainwater harvesting infrastructure; and
        - parking and access.
    (c) provide a copy of all necessary approvals from relevant utility and service providers showing that access to these utilities and services is available and secured.

VISUAL

Lighting

28. The Applicant 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.

Signing and Fencing

29. The Applicant shall not install any signage or fencing on site without the written approval of the Planning Secretary. In seeking this approval, the Applicant shall:
    (a) submit detailed plans of the proposed signage or fencing; and
    (b) demonstrate that the proposed signage or fencing is consistent with the relevant requirements of Council's DCP.

SECURITY AND PEST CONTROL

Site Security

30. The Applicant shall:
    (a) install and maintain a perimeter stock fence and security gates on the site; and
    (b) ensure that the security gates on site are locked whenever the site is unattended.

Litter Control

31. The Applicant shall:
    (a) implement suitable measures to prevent the proliferation of litter both on and off site, including the installation and maintenance of a mesh fence of not less than 1.8 metres high around the proposed landfill area; and
    (b) inspect daily and clear the site (and the surrounding area) of litter on at least a weekly basis.

Pest, Vermin & Noxious Weed Management

32. The Applicant 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.

WASTE

33. The Applicant shall
    (a) minimise the waste generated by the project; and
    (b) ensure that the waste generated by the project is appropriately stored, handled and disposed of,
    to the satisfaction of the Planning Secretary.

34. The Applicant shall prepare and implement a Waste Management Plan for the project in consultation with the EPA and to the satisfaction of the Planning Secretary. This plan must:
    (a) be submitted for approval prior to commencement of landfilling operations;
    (b) identify the waste streams of the project; and
    (c) monitor the volumes of waste material being generated by the project.

REHABILITATION

Rehabilitation Objectives

35. The Applicant shall rehabilitate the site to the satisfaction of the Planning Secretary. This rehabilitation must be generally consistent with the proposed rehabilitation strategy in the EA and depicted in Appendix 5, and comply with the objectives in Table 2.

Table 2: Rehabilitation Objectives

Feature	Objective
Site (as a whole)	Safe, stable & non-polluting
Quirks Quarry Landfill	Suitable for grazing
Benched Quarry Walls	Landscaped with native endemic flora species
Quarry Pit Floors	Suitable for grazing
Other land affected by the project	Restore ecosystem function, including maintaining or self sustaining eco-systems comprising of native endemic species

Surface Infrastructure	To be decommissioned and removed, unless the Planning Secretary agrees otherwise

Progressive Rehabilitation

36. The Applicant shall rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim rehabilitation strategies shall be employed when areas prone to dust generation cannot yet be permanently rehabilitated.

SCHEDULE 4
SPECIFIC ENVIRONMENTAL CONDITIONS – WEST VALLEY QUARRY

IDENTIFICATION OF APPROVED LIMITS OF EXTRACTION

1. Prior to carrying out quarrying operations under this approval, the Applicant shall:
   (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction; and
   (b) submit a survey plan of these boundaries to the Planning Secretary.

2. Whenever quarrying operations are being carried out, the Applicant shall ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff and inspecting officers to clearly identify the limits of extraction.

AIR QUALITY

Air Quality Criteria

3. The Applicant shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated on site do not exceed the criteria in Tables 3 to 5 at any residence on privately-owned land, or on more than 25% of any privately-owned land.

Table 3: Long-Term Impact Assessment Criteria for Particulate Matter

Pollutant	Averaging Period	[d] Criterion
Total Suspended particulates (TSP)	Annual	[a] 90 µg/m^3
Particulate matter < 10 µg (PM_{10})	Annual	[a] 30 µg/m^3

Table 4: Short Term Impact Assessment Criteria for Particulate Matter

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

Table 5: Long-Term Impact Assessment 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 to Tables 3 to 5:
a Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to all 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.
d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Planning Secretary in consultation with EPA.

Operating Conditions

4. The Applicant shall:
   (a) implement best management practice, including all reasonable and feasible dust mitigation measures to prevent and minimise dust emissions from quarrying operations;
   (b) minimise the air quality impacts of quarrying operations during adverse meteorological conditions and extraordinary events (see Note d to Tables 3 to 5 in this schedule);
   (c) regularly assess air quality monitoring data and relocate, modify, and/or stop quarrying operations at to ensure compliance with the relevant conditions of this approval;
   (d) minimise any visible off-site air pollution; and
   (e) minimise surface disturbance of the site, other than as permitted under this approval.

Air Quality Management Plan

5. The Applicant shall prepare and implement an Air Quality Management Plan for quarrying operations in consultation with the EPA and to the satisfaction of the Planning Secretary. The plan must:
   (a) be prepared and implemented by a suitably qualified and experienced person whose appointment has been approved by the Planning Secretary;
   (b) be submitted for approval by the Planning Secretary prior to commencement of quarrying operations;
   (c) describe the measures that will be implemented to ensure:
      - best management practice is employed;
      - the air quality impacts of the project are minimised during adverse meteorological conditions and extraordinary events; and

- compliance with the relevant conditions of this approval.

(d) describes the air quality management system;
(e) includes an air quality monitoring program that:
- is capable of evaluating the performance of the quarry;
- includes a protocol for determining any exceedances of the relevant conditions of approval;
- adequately supports the air quality management system; and
- evaluates and reports on the effectiveness of the air quality management system.

Greenhouse Gas

6. The Applicant shall implement all reasonable and feasible measures to minimise:
(a) energy use from quarrying operations; and
(b) the greenhouse gas emissions produced from quarrying operations,
to the satisfaction of the Planning Secretary.

NOISE

Noise Criteria

7. The Applicant shall ensure that the noise generated by the project does not exceed the criteria in Table 6 at any residence on privately-owned land.

Table 6: Noise Criteria

Receivers	$L_{Aeq\ (15\ minute)}$ dB(A)
1, 2, 4, 5, 6, 7	47
All other privately owned land	35

Notes:
- *To identify the receivers referred to in Table 6, see the plan in Appendix 3.*
- *Noise generated by the site is to be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.*

These criteria do not apply if the Applicant has a written agreement with the relevant landowner to exceed the criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Hours of Operation

8. The Applicant must comply with the hours of operation in Table 7, unless agreed to in writing by the Planning Secretary.

Table 7: Quarry Hours of Operation

Activity	Days	Hours
Quarrying	Monday to Friday	7am to 5pm
	Saturday	7am to 12pm
Blasting	Monday to Friday	9am to 3pm
	Saturday	Nil
Hauling	Monday to Friday	7am to 5pm
	Saturday	7am to 12pm
	Sundays and Public Holidays	Nil

Note: Operational activities are permitted to take place outside of these hours provided they are inaudible from surrounding receivers.

Operating Conditions

9. The Applicant shall:
(a) implement best management practice, including all reasonable and feasible noise management and mitigation measures to minimise operational, low frequency and traffic noise generated by quarrying operations;
(b) minimise the noise impacts of quarrying operations 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 the monitoring data and relocate, modify and/or stop quarrying operations to ensure compliance with the relevant conditions of this approval.

Noise Management Plan

10. The Applicant shall prepare and implement a Noise Management Plan for quarrying operations in consultation with the EPA and to the satisfaction of the Planning Secretary. The plan must:
    (a) be prepared and implemented by a suitably qualified and experienced person whose appointment has been approved by the Planning Secretary;
    (b) be submitted for approval by the Planning Secretary prior to commencement of quarrying operations;
    (c) describe the measures that will be implemented to ensure:
        - best management practice is being employed on site;
        - the noise impacts of quarrying operations are minimised during any meteorological conditions when the noise criteria in this approval do not apply; and
        - compliance with the relevant conditions of this approval.
    (d) describe the noise management system;
    (e) includes a noise monitoring program that:
        - is capable of evaluating the performance of the quarry, including individual items of plant such the hard rock drill and the quarry processing plant;
        - includes a protocol for determining exceedances of the relevant conditions of this approval; and
        - evaluates and reports on the effectiveness of the noise management system.

BLASTING

Blasting Criteria

11. The Applicant shall ensure that blasting on site does not cause exceedances of the criteria in Table 8:

Table 8: Blasting Criteria

Receiver	Airblast Overpressure (dB(Lin Peak))	Ground Vibration (ppv(mm/s))	Allowable Exceedance
Residence on privately-owned land	115	5	5% of the total number of blasts over a period of 12 months
	120	10	0%
All public infrastructure	--	50, or alternatively a specific limit determined to the satisfaction of the Planning Secretary by the structural design methodology in AS 2187.2-2006, or its latest version	0%

Note: These criteria do not apply if the Applicant has a written agreement with the relevant owner, and has advised the Department in writing of the terms of this agreement.

Blasting Hours

12. The Applicant shall only carry out blasting on site between 9am and 3pm Monday to Friday inclusive. No blasting is permitted on Saturdays, Sundays, public holidays, or at any other time without the written approval of the Planning Secretary.

Blasting Frequency

13. The Applicant shall not carry out more than 1 blast a day unless an additional blast is required following a blast misfire.

Property Investigations

14. If the owner of any of the receivers shown on the plan in Appendix 3 claims that buildings and/or structures on his/her land have been damaged as a result of blasting on the site, then within 2 months of receiving this claim the Applicant shall:
    (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and
    (b) give the landowner a copy of the property investigation report.

If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Applicant shall repair the damage to the satisfaction of the Planning Secretary.
If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Planning Secretary for resolution.

Operating Conditions

15. During quarrying operations on site, the Applicant shall:
    (a) implement best management practice to:
        - protect the safety of people and livestock in the surrounding area;
        - protect public or private infrastructure/property in the surrounding area from any damage; and
        - minimise the dust and fume emissions of any blasting;
    (b) minimise the frequency and duration of any road closures, and avoid road closures during peak traffic periods; and
    (c) operate a suitable system to enable the public to get up-to-date information on the proposed blasting schedule on site,
    to the satisfaction of the Planning Secretary.

16. The Applicant shall not undertake blasting on site within 500 metres of:
    (a) any public road without the approval of the appropriate road authority; or
    (b) any land outside the site that is not owned by the Applicant, unless:
        - the Applicant has a written agreement with the relevant landowner to allow blasting to be carried out closer to the land, and the Applicant has advised the Department in writing of the terms of this agreement, or
        - the Applicant has:
            - demonstrated to the satisfaction of the Planning Secretary that the blasting can be carried out closer to the land without compromising the safety of the people or livestock on the land, or damaging the buildings and/or structures on the land; and
            - updated the Blast Management Plan to include the specific measures that will be implemented while blasting is being carried out within 500 metres of the land.

Blast Management Plan

17. The Applicant shall prepare and implement a Blast Management Plan for quarrying operations in consultation with the EPA and to the satisfaction of the Planning Secretary. The plan must:
    (a) be prepared and implemented by a suitably qualified and experienced person whose appointment has been approved by the Planning Secretary;
    (b) be submitted for approval by the Planning Secretary prior to commencement of quarrying operations;
    (c) describe the blast management and mitigation measures that will be implemented to ensure compliance with the relevant conditions of this approval;
    (d) describe the measures that will be implemented to ensure that the public can get up to date information on the proposed blasting schedule on the site; and
    (e) including a blast monitoring program to evaluate the performance of the project.

SOIL AND WATER

Licensing

18. Prior to commencement of quarry construction, the Applicant is required to obtain the necessary water licences for the project under the *Water Act 1912* and/or the *Water Management Act 2000*.

    Note: Licenses are required for groundwater bores, dams, excavations that may intercept groundwater, dewatering activities and extraction or interception of surface water.

Water Supply

19. The Applicant shall ensure that it has sufficient water during all stages of the project and, if necessary, adjust the scale of quarrying operations to match its available supply.

Groundwater Assessment

20. The Applicant shall prepare a groundwater assessment for quarrying operations in consultation with DCCEEW-Water and to the satisfaction of the Planning Secretary. The plan must:
    (a) be prepared by a suitably qualified and experienced person whose appointment has been approved by the Planning Secretary;
    (b) be submitted for approval by the Planning Secretary prior to commencement of quarrying operations;
    (c) include a monitoring program including:

- installation and monitoring of groundwater bores to determine groundwater levels, flow direction and quality within the alluvium of the Tweed River flood plain and adjacent hard rock aquifers;
- provision of bore logs showing construction details and geological units;
- 6 hourly data logging of groundwater levels and fortnightly sampling data of groundwater quality to establish temporal trends for a minimum period of 12 months; and
- pump testing to determine hydraulic properties and yield for the alluvium and hard rock aquifers;

(d) a groundwater model that identifies:

- the extent of depressurisation resulting from the project;
- the predicted drawdown or loss of supply to any water courses or groundwater users; and
- the predicted impacts on any groundwater dependent ecosystems.

Water Management Plan

21. The Applicant shall prepare and implement a Water Management Plan for quarrying operations in consultation with the EPA and DCCEEW-Water and to the satisfaction of the Planning Secretary. The plan must be prepared and implemented by a suitably qualified and experienced person whose appointment has been approved by the Planning Secretary and be submitted for approval by the Planning Secretary prior to commencement of quarrying operations. The plan must be consistent with the latest version of the Blue Book Volume 2E. The plan must include a:

(a) Site Water Balance that:

- includes details of:
  - sources and security of water supply, including contingency planning for future reporting periods;
  - water use on site;
  - any off-site water transfers;
  - water management on site;
  - reporting procedures, including comparisons of the site water balance each calendar year; and
- the measures that will be implemented to minimise clean water use on site.

(b) Surface Water Management Plan that includes:

- detailed baseline data on surface water flows and quality in the creeks and water-bodies that could be affected by the project;
- a detailed description of the surface water management system on site, including the:
  - clean water diversion systems;
  - erosion and sediment controls; and
  - water storages.
- a plan for extracting, handling, and emplacing any long term potentially acid-forming material identified on the site;
- detailed plans, including design objectives and performance criteria, for:
  - the water storage dams;
  - reinstatement of drainage lines on the rehabilitated areas of the site; and
  - control of water pollution from rehabilitated areas of the site.
- performance criteria, including trigger levels for investigating any potentially adverse or unpredicted surface water impacts from the project, for
  - the water management system;
  - surface water quality of local water ways and the Tweed River; and
  - ecosystem health of local water ways and the Tweed River.
- performance criteria for surface water quality attributes relevant to water quality impacts on biological diversity and aquatic ecological integrity, including salinity, heavy metals, sediment load, pH, hardness and biological oxygen demand;
- a program to monitor, assess and report on:
  - the effectiveness of the water management system;
  - surface water flows and quality in local water ways and the Tweed River;
  - ecosystem health of local water ways and the Tweed River; and
  - impacts on surface water users and stream health.
- a surface water response plan including:
  - a response protocol for any exceedances of the performance criteria;
  - measures to mitigate and/or offset any adverse surface water impacts; and
  - measures to compensate landowners whose surface water supply is adversely affected by the project.

(c) a Groundwater Management Plan, which includes:

- detailed baseline data on groundwater levels, yield and quality in the area and privately owned groundwater bores, that could be affected by the project;
- a program to augment the baseline data of the quarry prior to the commencement of construction (see Condition 20(c) of this schedule);
- groundwater assessment criteria, including trigger levels for investigating any potentially adverse or unpredicted groundwater impacts from the project;

- a program to monitor, assess and report on:
  - groundwater inflows to quarrying operations;
  - the impacts of the project on:
    - the local aquifers in the area;
    - any groundwater bores on privately-owned land that could be affected by the project;
    - local waterways and the Tweed River water source and alluvium; and
    - groundwater dependent ecosystems.
  - seepage/leachate from water storages or backfilled voids on site;
  - any interaction between water from the re-use dam and the local aquifer identified within nearby alluvial sediments; and
- a groundwater response plan including:
  - a response protocol for any exceedances of the performance criteria;
  - measures to mitigate and/or offset any adverse groundwater impacts;
  - measures to compensate landowners whose groundwater supply is adversely affected by the project; and
  - measures to mitigate any adverse impacts on groundwater dependent ecosystems and/or riparian vegetation.

Acid Sulfate Soil

22. The Applicant shall:
    (a) carry out Acid Sulfate Soil (ASS) testing for areas of the site to be disturbed in accordance the NSW State Government's *Acid Sulfate Soils Manual (ASSMAC 1998)*;
    (b) provide all results of this testing to BCS; and
    (c) should testing indicate that any potential or actual ASS may be disturbed during the life of the project, the Applicant shall prepare and implement an ASS Management Plan in accordance with Condition 23 of this schedule.

23. If potential or actual ASS are identified on the site (refer to Condition 22 of this schedule), the Applicant shall prepare and implement an ASS Management Plan for the project to the satisfaction of the Planning Secretary. This Plan must:
    (a) be prepared in consultation with BCS and DCCEEW-Water by a suitably qualified and experienced expert;
    (b) be submitted for approval by the Planning Secretary prior to disturbing areas of the site where potential or actual ASS is present;
    (c) outline the preliminary investigations that have been undertaken to test for the presence of ASS;
    (d) detail the protocols to be put in place and followed in the event that ASS is encountered;
    (e) detail how the ASS will be tested, handled and stockpiled;
    (f) detail measures to prevent erosion and sedimentation of ASS; and, if necessary
    (g) outline how the ASS will be disposed of off-site (e.g. at a licensed facility).

TRANSPORT

Traffic Monitoring

24. The Applicant shall:
    (a) keep accurate records of amount of the volume of quarry products transported from the site;
    (b) nominate a haulage route to be used by heavy vehicles accessing the quarry; and
    (c) make these records available in its Annual Report.

Operating Conditions

25. The Applicant shall ensure that:
    (a) quarry vehicles on site do not exceed a speed limit of 30 kilometres per hour;
    (b) all loaded quarry vehicles entering or leaving the site have their loads covered; and
    (c) all loaded quarry vehicles leaving the site are cleaned of dirt, sand and other materials before they leave the site, to avoid tracking these materials on public roads.

26. The Applicant shall implement all reasonable and feasible measures to minimise project-related heavy vehicle traffic on the nominated quarry haulage routes during hours in which school buses are operating these routes to the satisfaction of the Planning Secretary.

Traffic Management Plan

27. The Applicant shall prepare and implement a Transport Management Plan for quarrying operations in consultation with TfNSW and to the satisfaction of the Planning Secretary. The plan must:
    (a) be prepared and implemented by a suitably qualified and experienced person whose appointment has been approved by the Planning Secretary;

(b) be submitted for approval prior to commencement of quarrying operations;
(c) include a plan showing the quarry haulage route to be used by heavy vehicles;
(d) include a drivers code of conduct;
(e) describe the measures that will be implemented to ensure:
- the nominated haulage route in used;
- haulage is minimised or routes altered to avoid school buses;
- a CB radio communication protocol is established with local bus companies, to improve driver awareness of quarry truck and school bus locations along haulage routes;
- drivers adhere to the code of conduct; and
- compliance with the relevant conditions of this approval.

(f) include a program to monitor the effectiveness of these measures.

HERITAGE

Heritage Management Plan

28. The Applicant shall prepare and implement a Heritage Management Plan for the project to the satisfaction of the Planning Secretary. This plan must:
(a) be prepared in consultation with Heritage NSW and Aboriginal stakeholders;
(b) be submitted to the Planning Secretary for approval prior to commencement of surface disturbance;
(c) include an Aboriginal Cultural Heritage Induction Program for all personnel and contractors involved in construction and operational activities on the site;
(d) describe the measures that will be implemented to:
- monitor all new surface disturbance on site for unidentified heritage objects;
- manage the discovery of any human remains or previously unidentified heritage objects on site; and
- ensure ongoing consultation with Aboriginal stakeholders in the conservation and management of any Aboriginal cultural heritage values on site.

LANDSCAPE

Biodiversity Offset

29. By 31 December 2013, unless the Planning Secretary agrees otherwise, the Applicant shall:
(a) implement the biodiversity offset strategy as described in the EA, summarised in Table 9, and described and depicted in the figure in Appendix 4; and
(b) make suitable arrangements, in consultation with BCS, to provide appropriate long term conservation security for Area 1,
to the satisfaction of the Planning Secretary.

Table 9: Biodiversity Offset Strategy

Area	Summary of Offset	Minimum Size
Area 1	Retention and management of existing vegetation to be designated as natural area of bushland	3.5 hectares
Area 2	Revegetation of drainage line using locally sourced swamp sclerophyll/koala feed trees and provide alternative corridor for connectivity across cleared area	1.9 hectares
Area 3	Revegetation of ridgeline using koala feed trees and other fauna resources to enhance connectivity along ridgeline	0.4 hectares
Area 5	Retention and management of native vegetation including potential koala feed trees	1.1 hectares
Area 6	Retention of vegetated corridor along ridgeline and connectivity to native vegetation	2.2 hectares

White Lace Flower Translocation Plan

30. The Applicant shall prepare and implement a Translocation Plan for the White Lace Flower to the satisfaction of the Planning Secretary. This plan must:
(a) be prepared by suitably qualified and experienced persons whose appointment has been approved by the Planning Secretary;
(b) be prepared in consultation with BCS;
(c) be submitted to the Planning Secretary for approval by the end of July 2013 or as otherwise agreed to in writing by the Planning Secretary;
(d) describe the measures that will be implemented to:
- translocate and manage the specimens;

- 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; and

(e) provide for the findings of the translocation process to be published in a suitable scientific publication.

Landscape Management Plan

31. The Applicant shall prepare and implement a Landscape Management Plan for the project to the satisfaction of the Planning Secretary. This plan must:
    (a) be prepared in consultation with BCS, NSW Resources and DPIRD (Agriculture);
    (b) be submitted to the Planning Secretary for approval prior to commencement of quarrying operations;
    (c) describe how the implementation of the Biodiversity Offset Strategy will be integrated with the overall rehabilitation of the site and the proposed Tweed Regional Botanical Gardens Project;
    (d) describe the short, medium and long term measures that will be implemented to:
        - manage remnant vegetation and habitat on site;
        - minimise the visual impacts of the project on surrounding receivers;
        - implement the Biodiversity Offset Strategy; and
        - ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this approval;
    (e) include detailed performance and completion criteria for evaluating the performance of the Biodiversity Offset Strategy and the rehabilitation of the site, including triggering remedial action (if necessary);
    (f) include a detailed description of the measures that will be implemented over the next 3 years, including the procedures to be implemented for:
        - ensuring compliance with the rehabilitation objectives and progressive rehabilitation obligations in this approval;
        - enhancing the quality of existing remnant vegetation and fauna habitat;
        - restoring native endemic vegetation and fauna habitat within the biodiversity offset areas and rehabilitation area, with due regard to restoring, as appropriate, Lowland Rainforest and providing Koala feed trees;
        - maximising the salvage of environmental resources within the approved disturbance area – including vegetative and soil resources – for beneficial reuse in the enhancement of the biodiversity areas or rehabilitation area;
        - collecting and propagating seed;
        - minimising the impacts on native fauna on site, including undertaking appropriate pre-clearance surveys and providing nest boxes;
        - the White Lace Flower Translocation Plan (see Condition 30 of this schedule);
        - controlling weeds and feral pests;
        - controlling erosion;
        - managing grazing and agriculture on site;
        - controlling access; and
        - bushfire management;
    (g) include a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria;
    (h) identify the potential risks to successful implementation of the Biodiversity Offset Strategy and rehabilitation of the site, and include a description of the contingency measures that will be implemented to mitigate against these risks; and
    (i) include details of who will be responsible for monitoring, reviewing, and implementing the plan.

Conservation & Rehabilitation Bond

32. Within 6 months of the approval of the Landscape Management Plan, the Applicant shall lodge a Conservation and Rehabilitation Bond with the Department to ensure that the Biodiversity Offset Strategy and the rehabilitation of the site is implemented in accordance with the performance and completion criteria set out in the Landscape Management Plan. The sum of the bond shall be determined by:
    (a) calculating the full future cost of implementing the Biodiversity Offset Strategy;
    (b) calculating the cost of rehabilitating the site, taking into account the likely surface disturbance over the next 3 years of quarrying operations; and
    (c) employing a suitably qualified quantity surveyor or other expert to verify the calculated costs;

    to the satisfaction of the Planning Secretary.

    Notes:
    - *If capital and other expenditure required by the Landscape Management Plan is largely complete, the Planning Secretary may waive the requirement for lodgement of a bond in respect of the remaining expenditure.*
    - *If the Biodiversity Offset Strategy and rehabilitation of the site area are completed to the satisfaction of the Planning Secretary, the Planning Secretary will release the bond. If the Biodiversity Offset Strategy and rehabilitation of the site are not completed to the satisfaction of the Planning Secretary, the Planning Secretary will call in all or part of the bond, and arrange for the completion of the relevant works.*

33. Within 3 months of each Independent Environmental Audit (see Condition 10 of Schedule 6), the Applicant shall review, and if necessary revise, the sum of the Conservation and Rehabilitation Bond to the satisfaction of the Planning Secretary. This review must consider the:
    (a) effects of inflation;
    (b) likely cost of implementing the Biodiversity Offset Strategy and rehabilitating the site (taking into account the likely surface disturbance over the next 3 years of the project); and
    (c) performance of the implementation of the Biodiversity Offset Strategy and rehabilitation of the site to date.

SCHEDULE 5
ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. As soon as practicable after obtaining monitoring results showing an:
   (a) exceedance of any relevant criteria in Schedule 4, the Applicant shall notify affected landowners in writing of the exceedance, and provide regular monitoring results to each of affected landowner until the project is again complying with the relevant criteria; and
   (b) an exceedance of the relevant air quality criteria in Schedule 4, the Applicant shall send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land.

INDEPENDENT REVIEW

2. If an owner of privately-owned land considers the project to be exceeding the relevant criteria in Schedule 4, then he/she may ask the Planning Secretary in writing for an independent review of the impacts of the project on his/her land.

   If the Planning Secretary is satisfied that an independent review is warranted, then within 2 months of the Planning Secretary's decision the Applicant shall:
   (a) commission a suitably qualified, experienced and independent expert, whose appointment has been approved by the Planning Secretary, to:
      - consult with the landowner to determine his/her concerns;
      - conduct monitoring to determine whether the project is complying with the relevant criteria in Schedule 4; and
      - if the project is not complying with these criteria, then identify the measures that could be implemented to ensure compliance with the relevant criteria; and
   (b) give the Planning Secretary and landowner a copy of the independent review.

3. If the independent review determines that the project is complying with the relevant criteria in Schedule 4, then the Applicant may discontinue the independent review with the approval of the Planning Secretary.

   If the independent review determines that the project is not complying with the relevant criteria in Schedule 4, then the Applicant shall:
   (a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent expert, and conduct further monitoring until the project complies with the relevant criteria; or
   (b) secure a written agreement with the landowner to allow exceedances of the relevant criteria,
   to the satisfaction of the Planning Secretary.

SCHEDULE 6
ENVIRONMENTAL MANAGEMENT, REPORTING & AUDITING

COMMUNITY EDUCATION PROGRAM

1. The Applicant shall prepare and implement a Community Education Program for the project to the satisfaction of the Planning Secretary. This program must be submitted to the Planning Secretary for approval prior to the commencement of landfilling operations, and shall at a minimum focus on:
   (a) promoting the:
      - resource recovery activities provided at the site;
      - community benefits of composting food and garden waste; and
      - importance of food waste recovery from all waste streams, but particularly the commercial and industrial waste stream.

ENVIRONMENTAL MANAGEMENT

Landfill Environmental Management Plan

2. The Applicant shall prepare and implement a Landfill Environmental Management Plan for the landfill in consultation with the EPA and DCCEEW-Water and to the satisfaction of the Planning Secretary. This plan must:
   (a) be prepared by suitably qualified and experienced experts whose appointment has been endorsed by the Planning Secretary;
   (b) be submitted to the Planning Secretary for approval prior to commencement of landfilling operations;
   (c) describe the management measures that will be implemented to address:
      - the *Environmental Guidelines for Solid Waste Landfills*; and
      - the conditions of this approval;
   (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 the *Environmental Guidelines for Solid Waste Landfills*;
   (e) describe the procedures that will 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; and
   (f) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project.

Environmental Management Strategy

3. The Applicant shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Planning Secretary. This strategy must:
   (a) be submitted to the Planning Secretary for approval prior to any development being carried out on the site under this approval;
   (b) provide the strategic framework for environmental management of the project;
   (c) identify the statutory approvals that apply to the project;
   (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;
   (e) describe the procedures that will 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;
      - respond to any non-compliance; and
      - respond to emergencies; and
   (f) include:
      - copies of any strategies, plans and programs approved under the conditions of this approval; and
      - a clear plan depicting all the monitoring required to be carried out under the conditions of this approval.

Adaptive Management

4. The Applicant shall assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedules 3 and 4. Any exceedances of these criteria and/or

performance measures constitute a breach of this approval and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant shall, at the earliest opportunity:

(a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur;
(b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
(c) implement remediation measures as directed by the Planning Secretary,

to the satisfaction of the Planning Secretary.

Management Plan Requirements

5. The Applicant 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 approval, licence 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 will 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; and
      - 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 impact assessment criteria and/or performance criteria; and
   (h) a protocol for periodic review of the plan.

Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

Annual Review

6. By the end of March each year, the Applicant shall review the environmental performance of the project to the satisfaction of the Planning Secretary. This review must:
   (a) describe the development (including rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;
   (b) include a comprehensive review of the monitoring results and complaints records of the project over the previous calendar year, which includes a comparison of these results against:
      - the relevant statutory requirements, limits or performance measures/criteria;
      - the monitoring results of previous years; and
      - the 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;
   (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and
   (f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the project.

Revision of Strategies, Plans & Programs

7. Within 3 months of the submission of an:
   (a) annual review under Condition 6 of this schedule;
   (b) incident report under Condition 9 of this schedule;
   (c) audit report under Condition 11 of this schedule; and
   (d) any modifications to this approval,

   the Applicant shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Planning Secretary.

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

REPORTING

Incident Reporting

8. The Applicant shall notify the Planning Secretary and any other relevant agencies of any incident or potential incident with actual or potential significant off-site impacts on people or the biophysical environment associated with the project as soon as practicable after the Applicant becomes aware of the incident. Within 7 days of the date of this incident, the Applicant shall provide the Planning Secretary and any relevant agencies with a detailed report on the incident.

Regular Reporting

9. The Applicant 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.

INDEPENDENT ENVIRONMENTAL AUDIT

10. Within a year of the date of this approval, and every 3 years thereafter, unless the Planning Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
    (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Planning Secretary;
    (b) include consultation with the relevant agencies;
    (c) assess the environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant EPL and/or Water License (including any assessment, plan or program required under these approvals);
    (d) review the adequacy of any approved strategy, plan or program required under the these approvals; and
    (e) recommend measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals.

    Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Planning Secretary.

11. Within 3 months of commissioning this audit, or as otherwise agreed by the Planning Secretary, the Applicant shall submit a copy of the audit report to the Planning Secretary, together with its response to any recommendations contained in the audit report.

ACCESS TO INFORMATION

12. The Applicant shall:
    (a) make the following information publicly available on its website:
        - the EA;
        - current statutory approvals for the project;
        - approved strategies, plans or programs;
        - 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;
        - a complaints register, updated on a quarterly basis;
        - copies of any annual reviews (over the last 5 years);
        - any independent environmental audit, and the Applicant's response to the recommendations in any audit; and
        - any other matter required by the Planning Secretary; and

    (b) keep this information up-to-date,

    to the satisfaction of the Planning Secretary.

APPENDIX 1
STATEMENT OF COMMITMENTS

Issue	Commitment
Environmental Management Plans	Environmental management plans would be prepared and implemented to guide environmental management and monitoring activities during establishment and operation of all landfills and quarries. This will take the form of an LEMP for Quirks Quarry Landfill and a Plan of Management for West Valley Quarry. Council is committed to best practice environmental management for both the quarry and landfill activities. A draft LEMP has already been prepared for the Quirks Quarry Landfill which outlines environmental management requirements for the waste disposal activities, including conceptual leachate management. The final LEMP will be developed in conjunction with the detail design of the landfill and will include a Soil, Water and Leachate Management Plan. It will address the EPA's requirements outlined in the recommended conditions of approval provided on 19 January 2012, and will include a surface water, groundwater and leachate response plan providing protocols to investigate and respond to potential surface or groundwater contamination associated with the development. The Office of Water and EPA will be consulted in the development of the LEMP which will be undertaken in conjunction with the detailed landfill design, particularly regarding the monitoring and management of stormwater, groundwater, leachate and landfill gas. The quarry plan of management will include the following sub-plans: ◗ Surface Water management and response plan – The plan would include a site water balance, the measures to retain and re-use the maximum amount of water on-site and ensure the surface run-off water is maintained at acceptable levels. The plan would also include erosion and sediment mitigation measures. ◗ Groundwater management and response plan – the plan would include baseline groundwater data, impact assessment criteria, trigger levels, a program to monitor, assess and report on groundwater inflows and impacts on regional aquifers and surrounding watercourses.
Environmental Management Plans (cont).	◗ Air quality management plan – The plan would include mitigation measures for control of odours, dust and particles and monitoring undertaken. Noise management plan – The noise management plan will include noise and vibration control measures and the required monitoring activities. ◗ Traffic management plan – The plan will include parking and access requirements, safety signage and training of personnel in traffic management. ◗ Fire management plan – The plan would include details of sources of water for firefighting, the need for fire extinguishers on all mobile equipment and suitable training for site-based personnel as well as a fire response plan.
Surface Water	Specific measures to maintain the quality of onsite and downstream surface water quality for the Stage 1 Project Application have been outlined in the Quirks Quarry Landfill Concept Design Report and draft Landfill Environmental Management Plan. General concepts for the West Valley Quarry have been provided in the Preliminary Quarry Study and include the following (note that a Soil, Water and Leachate Management Plan will accompany the application for an Environmental Protection Licence which will include further detail): ◗ A site water balance for quarrying and landfilling activities will be undertaken which will provide details of water sources and security of water supply, site water use and water management, off site water transfers, measure to minimise reuse of contaminated water ◗ Clean stormwater runoff from undisturbed or areas upstream of the quarry and landfill activities will be diverted around the activities to minimise the quantity of stormwater required to be stored (and potentially treated) onsite. ◗ Stormwater runoff generated from active areas of the quarry and landfill will be captured in sediment basins and reused onsite wherever possible (for example for dust suppression). Concept designs for sediment basins associated with the Stage 1 Project Application have been developed and devices have been sized to minimise

	the opportunity for uncontrolled discharge from the site. Sizing and location of the stormwater management devices will be further refined during detail design. ◗ A perimeter bund will be established around the northern end of the Quirks Quarry Landfill to a minimum RL of 6.5m AHD to address flooding in a 100 yr ARI regional flood event. In addition, the base of the landfill in Stage 3 will be raised by between 1m and 3m (based on the finished quarrying levels) such that the base of the landfill will fall towards the eastern end of the cell to reduce the impacts of potential overflowing of the perimeter bund. ◗ The haul road from Stotts Creek has been designed to provide flood immunity to activities in the North and West Valley areas in 100 yr ARI regional flood event. ◗ Any works within 40 m of a watercourse will be undertaken in a manner consistent with the NOW c(2008) *Guidelines for Controlled Activity Approvals.*
Surface Water (continued)	◗ Leachate generated by the landfill activities and any stormwater which comes into contact with waste will initially be stored within the waste cell and once characteristics such as quantity, quality and generation rates are determined a leachate treatment process will be established. Prior to the establishment of a leachate treatment process, leachate levels within the landfill will be closely monitored to ensure that the storage capacity of the waste is not exceeded and if necessary leachate can be pumped out and appropriately disposed of to avoid impacts on surface water quality. ◗ Should any of the sediment basins proposed, be classified as dams under SEPP 52 *Farm Dams,* they will be constructed and operated in accordance with this policy and with any Harvestable Right Order published under section 54 of the *Water Management Act 2000.* ◗ The baseline surface water monitoring program will continue in the lead up to the establishment of the landfill and quarry such that site specific water quality objectives/trigger values can be established. During quarry and landfill operations surface water monitoring will be conducted in accordance with the conditions of the Environmental Protection Licence (including specified frequencies and analytical suite). ◗ Following completion of landfilling, sediment basins used for stormwater detention will be converted to wetlands.
Groundwater	Minimisation of potential impacts to groundwater resources will be ensured by the following commitments: ◗ Preparation of a Soil, Water and Leachate Management Plan including details of planned responses and proposed measures to investigate potential groundwater contamination associated with the development. ◗ Further geotechnical and hydrogeological investigations will be undertaken during detail design of the landfills and quarries to address potential issues associated groundwater management such as dewatering during quarrying and hydraulic conductivity and connectivity between alluvial deposits and bedrock. ◗ The additional groundwater investigations for West Valley Quarry will be undertaken in consultation with the Office of Water and will include installation and monitoring of groundwater bores to determine groundwater levels, flow direction and quality within the alluvium and hard rock aquifers, bore logs, data logging of groundwater levels and fortnightly sampling data of groundwater quality to establish temporal trends for a minimum period of 12 months, and pump testing to determine hydraulic properties and yield for the alluvium and hard rock aquifers. ◗ A groundwater model for the West Valley Quarry will be prepared that identifies the extent of depressurisation resulting from the project, predicted drawdown or loss of supply to any water courses or groundwater users, and the predicted impacts on any groundwater dependent ecosystems
Groundwater (cont)	◗ No further excavation below the final quarry floor levels will be undertaken for the establishment of the waste cells for Quirks Quarry (and future North and West Valley) landfills. ◗ Council will ensure the proper compaction of the floor of each landfill cell to achieve a uniform low permeability equivalent to less than 1 x 10^{-9} m/s for a depth of at least 0.9

	m. The in situ permeability of compacted material would be tested by sampling and laboratory testing to ensure the required permeability level has been achieved in accordance with a construction quality assurance (CQA) plan. In addition a high density polyethylene liner will be installed across the base of the landfill to further prevent migration of leachate to the local groundwater environment. ◗ The base of the Stage 3 cell of the Quirks Quarry Landfill will also be raised by between 1m and 3m (based on the finished quarrying levels) to further reduce potential impacts to the local groundwater environment. ◗ Council would continue to undertake a groundwater monitoring program including groundwater level and quality monitoring both for continued baseline data collection prior to commissioning of site activities and will continue the program in accordance with the eventual EPL's for the proposed activities. ◗ In the event that any onsite infrastructure intercepts the water table, or if dewatering is required consultation will be undertaken with DCCEEW-Water officers during detail design to determine licencing issues. ◗ Any required groundwater licenses will be obtained and associated works appropriately authorised prior to works commencing.
Acid Sulfate Soils and Pyritic Materials	Council makes the following commitments to manage acid sulfate soils and pyritic materials: ◗ Additional acid sulfate soils investigations along the haul road during detail design to better characterise potential issues and identify management requirements for construction of the road; ◗ Development of a revised Acid Sulfate Soils Management Plan following completion of additional investigations; ◗ Ongoing groundwater monitoring as described in the groundwater commitments to monitoring acid sulfate soil indicators; and ◗ Vigilant monitoring of any clay imported from offsite sources for the construction of landfill liners.
Acid Sulfate Soils and Pyritic Materials (cont)	◗ If required the design of a management system for pyritic materials site will follow detailed drilling, testing and delineation of PAF material to be conducted as part of the detailed design for the quarry. The key management measure for pyritic materials will be to avoid disturbance or drainage of PAF. Where this is not feasible, typical management options will be based on: – Maintaining saturated conditions to exclude oxygen and prevent oxidisation; – Excluding air to prevent oxidisation; – Capping to exclude water, to prevent leachate generation, by separate cell construction or storage in or beneath post-quarry landfill; – Carbonate-rich capping, to develop alkaline infiltration to neutralise leachate and coat sulfide grains to reduce oxidisation (passivation); – Direct neutralisation of potential acidity of excavated PAF material; or – A combination of the above. ◗ Additional soil and rock testing for net acid generation (NAG) and net acid potential (NAPP) and metallic elements will be undertaken during detail design together with geotechnical investigations. Additional hydrogeological assessment will also be performed, based on water level data from all existing monitoring bores and core holes, to assess the final post-operation water table, to determine if significant quantities of PAF will be drained in-situ, leading to additional risk of AMD generation.
Soils and Land Capability	A Soil, Water and Leachate Management Plan will be prepared to the satisfaction of the EPA as part of the application for an Environmental Protection Licence and will include all detailed measures for managing soils and land capability. As a minimum Council will implement the following measures:

	◗ Minimise soil erosion and sediment mobilisation to the downstream receiving environment identification of high risk activities and areas, and development of appropriate mitigation and control measures. ◗ Topsoil removed for quarrying would be stockpiled and used later for revegetation and rehabilitation of the final landfill cover. ◗ Care would be taken to ensure that topsoils and subsoils are not stripped when they are too moist. ◗ Topsoil stockpiles would be up to 1 m high and subsoil/overburden stockpiles would not exceed 3 m in height. ◗ Subsoil and topsoil stockpiles would be located within the footprint of the landfill, quarry or on the upper surface of completed landfill stages. ◗ Stabilisation measures would be used until vegetation is established on the stockpiled soil.
Biodiversity	Council makes the following commitments in terms of maintenance and protection of the biodiversity values of the site: **Substantially avoid clearing of areas of higher ecological significance.** ◗ The quarry footprint and haul road have been designed such that they minimise clearing of native vegetation and predominantly avoid areas of higher ecological value vegetation. ◗ Council has realigned the haul road concept to avoid clearing of vegetation type 7, and commits to the avoidance of clearing of an area of this vegetation type that falls within the eastern section of the quarry footprint currently shown. The quarry footprint would be revised to reflect this during detailed design. ◗ Retain and Manage Higher Ecological Value Areas – Council commits to a restriction on use on a portion of Lot 1 DP 1159532 registered on the title imposing a legal obligation in perpetuity to abide by the management actions of a Habitat Management Plan (to be developed by Council). A plan showing the habitat areas on the lot would be registered with the s88B instrument to identify the area burdened by the restriction. ◗ Areas of higher ecological value will be clearly marked by fencing with high visibility fauna permeable fencing or similar. Include these areas as 'vegetation protection areas' in an approved Environmental Management Plan.
	Maintain and enhance or restore habitat connectivity. ◗ Retain a vegetated corridor along the ridgeline - the quarry footprints have been designed such that they retain a vegetated corridor along the western ridgeline. ◗ Develop an east-west movement corridor - To provide future potential habitat and an alternate route for connectivity across the site, planting of suitable riparian / floodplain vegetation will be undertaken adjacent to the watercourse in Lot 1 DP1159352. This will create a vegetated corridor that connects the lowland areas to the ridgeline and effectively connect vegetation adjacent to the eastern side of Quirks Quarry to retained eucalypt open forest in the central western area of the site and link to the ridgeline. ◗ Restore connectivity along the southern boundary – a vegetated corridor would be developed along the southern boundary of Lot 1 DP 34555 along Eviron Road that would contain species consistent with existing remnant vegetation along the ridgeline. ◗ Undertake works as per a finalised Restoration Plan. A Preliminary Restoration Plan (refer Appendix L) has been prepared by Council to guide works in the abovementioned corridors.
Biodiversity (continued)	**Minimise impact to conservation significant fauna species.** ◗ Manage Clearing - all clearing of vegetation will be undertaken in the presence of an experienced fauna spotter-catcher. ◗ Contractor awareness – all contractors (construction and operation) to be made aware of the potential presence of fauna species.

	◗ Heavy vehicle movements - restricted speed limits to be implemented near to vegetated areas. ◗ Environmental Management Plans - management plans will include actions for management of potential direct and indirect impacts to fauna species. ◗ **Locate and translocate threatened plant species.** ◗ Target surveys for threatened plant species will be undertaken once the final development footprint has been confirmed. ◗ A 'Preliminary Translocation Plan for Threatened Plants' has been prepared by Council in accordance with the *Guidelines for the Translocation of Threatened Plants in Australia* (Appendix L). ◗ In the event that any additional threatened species are located in the development footprint, the Preliminary Translocation Plan would be revised to incorporate additional individuals or species.
	Maintain habitat values. ◗ Environmental Management - implement measures detailed in the approved EMP and undertake site works in general accordance with AS 4970-2009. ◗ Maintain habitat - nest boxes will be installed in vegetation to be retained and managed on Lot 1 DP 1159532 in order to offset a reduction in hollow recruitment. In relation to vegetation protection: ◗ Establish vegetation protection areas prior to construction. ◗ Activities permitted in the vegetation protection area would include weed management, habitat management, and restoration / translocation activities. ◗ Activities prohibited in the vegetation protection areas would include: use of or parking of vehicles and equipment (unless associated with a permitted activity), placement of construction materials, refuse, excavated spoils and stockpiling, use of tree trunks as a winch support.
Cultural Heritage	Council commits to the following actions regarding the management of cultural heritage at the site: ◗ On-going consultation with all registered local Aboriginal representatives to develop a Cultural Heritage Management Plan for the site; ◗ All reasonable efforts will be made to avoid items of Aboriginal and European Cultural Heritage. If impacts are unavoidable, mitigation measures will be negotiated with the EPA and local community. ◗ The Cultural Heritage Management Plan will include as a minimum: – *Procedures for ongoing Aboriginal consultation and involvement.* – *Management of any recorded sites of higher archaeological potential within project footprint.* – *Responsibilities of all stakeholders.* – *Details of proposed mitigation and management strategies of all sites.* – *Procedures for the identification and management of previous unrecorded sites (excluding human remains).* – *Details of an Aboriginal cultural heritage education program for contractors and personnel associated with construction activities.* – *Corrective procedures in the unlikely event that a non compliance with the CHMP is identified.* ◗ A program of site monitoring by representatives of the Aboriginal Party during activities causing ground disturbance for the recognised areas with a higher potential

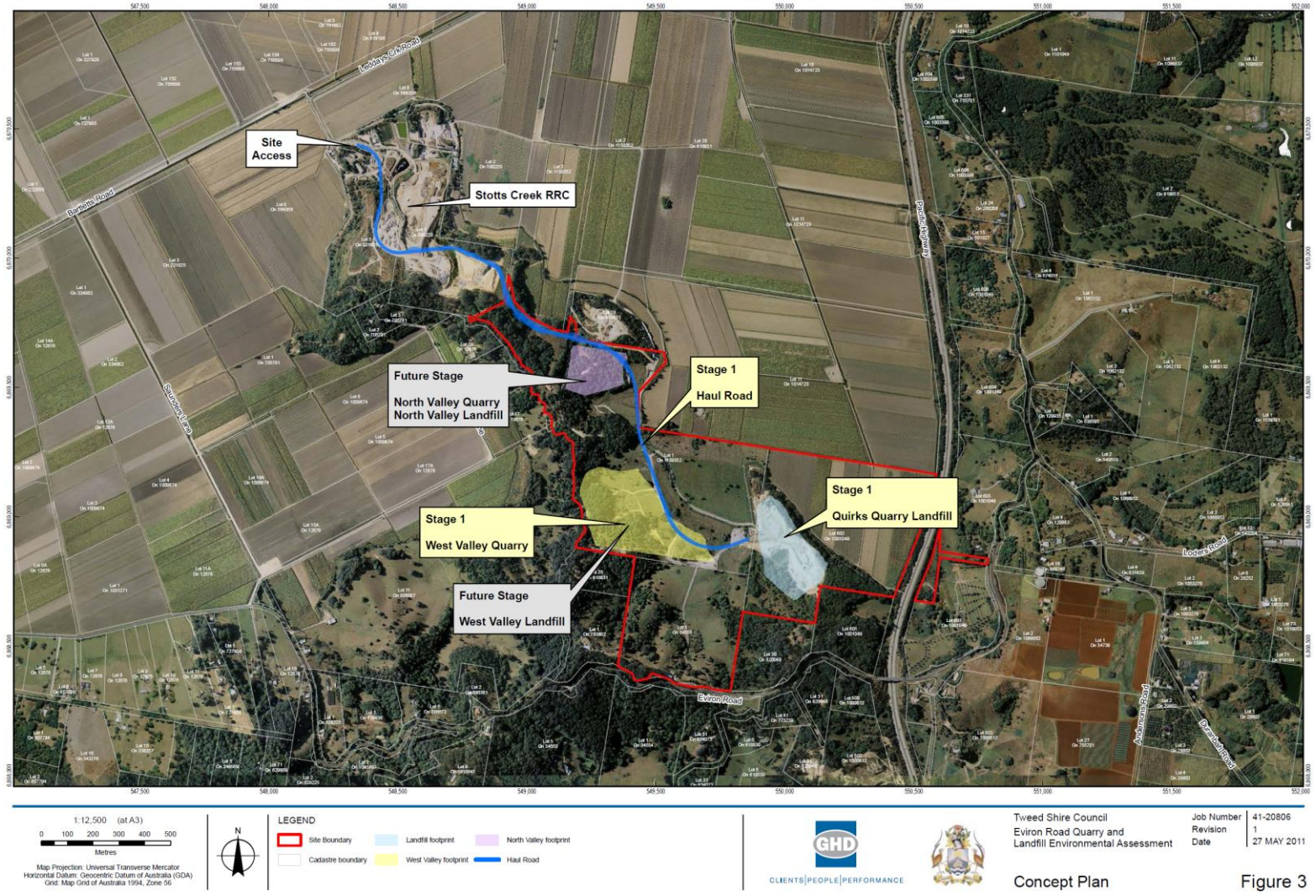
	for the presence of unidentified cultural heritage. In the event that additional Aboriginal objects are uncovered during the monitoring program, the objects are to be recorded and managed in accordance with the requirements of the *National Parks and Wildlife Act 1974*. ◗ If human remains are located, all works must halt in the immediate area and the NSW Police must be immediately contacted. No action is to be undertaken until police provide written notification. ◗ An Aboriginal Cultural Education Program will be developed in collaboration with the local Aboriginal community for the induction of all personnel and contractors involved in the construction activities. ◗ The five springboard trees will be retained *in situ* wherever possible and relocated to an appropriate location where they can be preserved and displayed along with appropriate interpretation where they cannot be retained *in situ*.
	◗ Cultural heritage inductions will be undertaken so that work crews are aware of specific obligations to look for cultural heritage material aiming at informing workers what archaeological materials may look like and give them clear instructions on procedures for inadvertent discoveries
Noise and Vibration	Council will design and operate the facilities to ensure that there are no adverse noise and vibration impacts at sensitive receivers. Follow up noise monitoring will be undertaken at the commencement of the Stage 1 activities. **Specific Control Measures** ◗ Hard rock drill: Although its operation is expected to be limited, it has potential to cause short-term noise impacts at the nearest receivers. Therefore, the use of other quarry equipment, such as the processing plant and dozer will be limited (or ceased) during times when drilling is occurring. ◗ Quarry processing plant: Specific noise mitigation measures will be implemented at West Valley Quarry to reduce the impacts of noise from the processing plant. Potential options include the following, however the feasibility will be reviewed during detail design when the quarry layout is developed, such that the most practical option can be adopted: – Locating the processing plant in locations on site which are naturally shielded by the existing topography will also assist in minimising noise impacts. As a last resort, treating the building facades of affected receivers will assist in minimising internal noise. Building treatments should generally be considered only when other measures, such as noise barriers are impractical or not cost-effective. Approaches to the acoustic treatment of buildings include improved window glazing and insulation to external walls. **Blasting Controls** Blasting will be limited to times when condition are suitable and avoided at times, as outlined below: ◗ Avoid at times of adverse wind condition, as this may promote the impact of blast over pressure. ◗ Avoid at times of temperature inversion. ◗ Avoid overfilling holes with blasting agent. ◗ Avoid firing holes in the front row which have insufficient burden. – All blasting designs should contain considerations to minimise factors such as ground vibration and air blast. The blast design should include an assessment of noise and vibration impacts based on blast specific parameters.

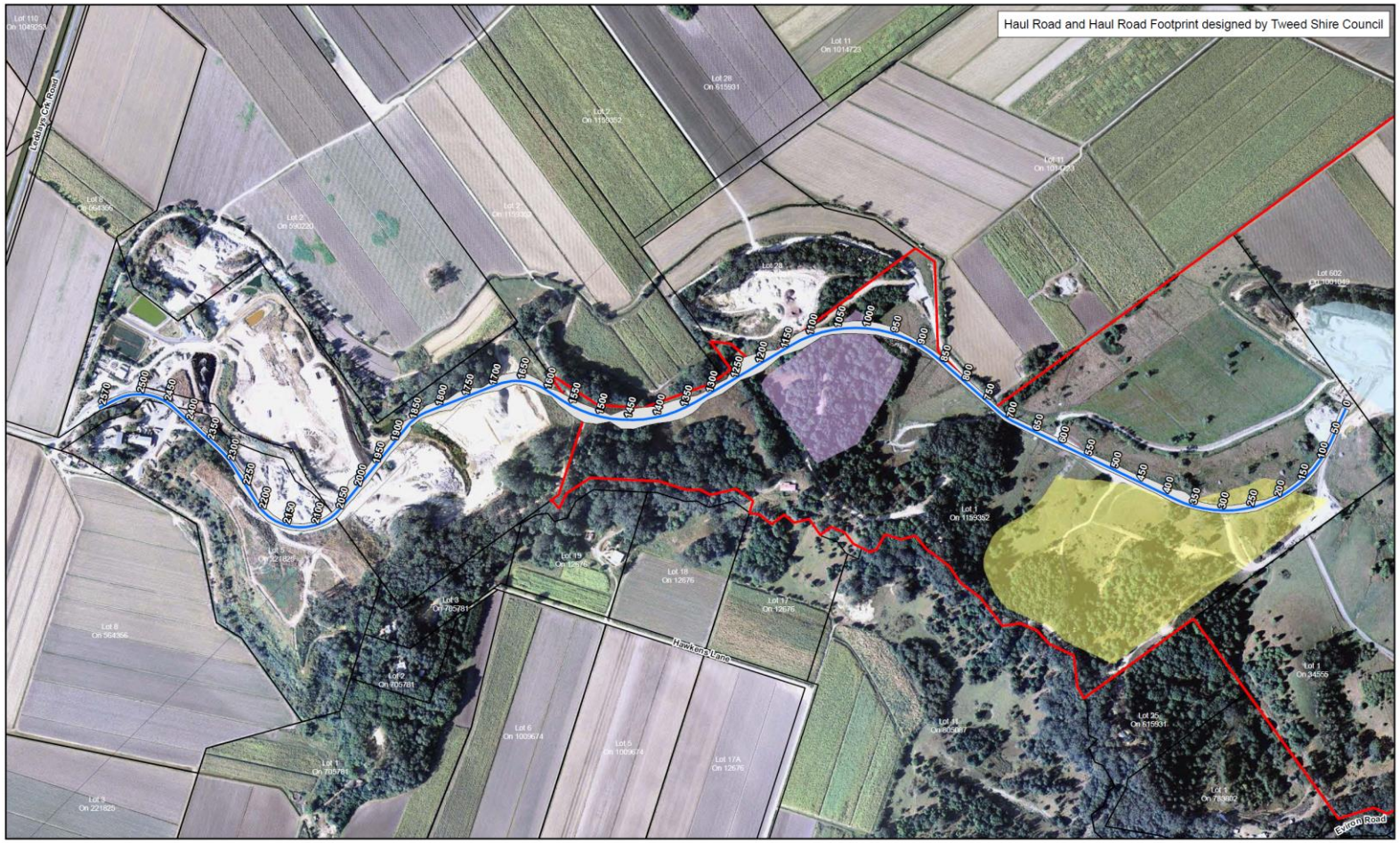
Noise and Vibration (continued)	**General Management Controls** General noise management controls that would be implemented during operation of the quarries and landfills are as follows. ◗ All activities would be undertaken during the approved operating hours only: Monday to Friday 7am – 5pm, Saturday 7am to 12pm noting that blasting can only occur Monday to Friday 9am – 3pm and Saturday 9am – 12pm. ◗ Review available fixed and mobile equipment fleet and prefer more recent and silenced equipment whenever possible. ◗ All equipment, particularly the quarry fleet and waste delivery trucks, will be maintained to a high standard to ensure there are no unnecessary noise emissions. ◗ All vehicles accessing the site will used the designated haul routes and approved access points only. ◗ Neighbouring properties shall be notified of the date and time of blasting activities in advance.
Air Quality and Odour	Council will design and operate the facilities to maintain the existing rural air quality. A dust management plan will be included for both the landfill and quarry activities with the LEMP and Quarry Plan of Management, respectively. The following will be implemented: ◗ Installation of a meteorological station onsite. ◗ High dust-generating activities would be avoided during adverse wind conditions when blowing directly towards the nearest residences. ◗ Cease or reduce operations when prevailing winds are in the direction of sensitive receptors, particularly to the south and south-west of the quarry (northerly or north-easterly winds). ◗ The use of a real-time reactive dust monitoring at locations representative of the nearest sensitive receptors to alert the quarry manager when dust levels exceed the nominated criteria. ◗ Specific dust control measures to increase the moisture content of quarried material. ◗ Use of water sprays/trucks and sprays to wet down access and haul roads. Clean sealed roads at access and egress points regularly to minimise the re-suspension of dust on sealed roads. ◗ Ensure materials are appropriately stored and contained to prevent windborne releases to the atmosphere. ◗ Where material is removed from the site or fill brought to the site, trucks will be covered whenever conditions are such that dust nuisance is occurring. ◗ To address dust generated by crushing and screening, install spray systems on equipment and stabilise working surfaces around the work area.
Air Quality and Odour (continued)	◗ Exposed surfaces, including stockpiles unless revegetated or have a stable surface, would be watered. ◗ Completed areas of the landfill would be progressively rehabilitated and revegetated to minimise dust emissions. ◗ Odour emissions from the landfill will be minimised by limiting the working face of disposal areas, covering all exposed waste at the end of each day, limiting the disposal of malodorous wastes, planning for receival of malodourous waste to minimise the time such wastes would be exposed and minimising the disturbance of previously filled areas. ◗ Records of any complaints would be kept with respect to odour and dust and correlating with weather conditions and deliveries of particularly odorous wastes.

Traffic and Transport	Council will commit to the following measures: ◗ Cessation of access to the site via Eviron Road; ◗ Design of the haul road in accordance with good practice for heavy vehicle traffic. ◗ Safety audit for the Tweed Valley Way and Leddays Creek Road intersection to ensure safe access to and from the major arterial, especially for heavy quarry traffic. ◗ Maintenance of the Leddays Creek Road access intersection and provision of maintenance for the duration of the operation of the quarry and landfill activities. ◗ Preparation of traffic management plans (as part of the environmental management plans) to ensure safe movement of vehicles into and around each the site. ◗ Requirement that each driver would sign a Code of Conduct (during their first visit to the operational site).
Visual	◗ Review the vantage point analysis conducted in the Environmental Assessment to include the property at 355 Farrants Hill Road. If necessary, undertake additional screening planting where feasible or consider other alternatives. ◗ Council will undertake strategic tree planting for screening purposes, including along a drainage line across Lot 1 DP1159352, which will in the longer term facilitate sheltered movement of species such as koalas across the presently cleared lowland area of the site. ◗ Progressive rehabilitation and revegetation of all landfill sites would be undertaken to visually blend the landfill capping with the surrounding landscape. ◗ The site will be kept clean and tidy at all times as per the LEMP and Quarry Plan of Management (or other site operations plans as relevant).
Greenhouse Gas	◗ Greenhouse gas emissions from landfilling activities will be minimised through active landfill gas management (as per the LEMP). Depending on the quantity of landfill gas generated and captured infrastructure such as a flare will be installed as a minimum, and investigations into the viability and feasibility of tapping into or replicating the Stotts Creek Renewable Energy Facility. ◗ As and when appropriate Council will consider alternative fuels for the onsite plant and equipment as well as more fuel efficient equipment (where cost competitive).
Hazards	Council will implement the following measures to address potential hazards: ◗ Hazard and risk associated with the proposed activities would be managed through development and implementation of a site operations plan which will address safety hazards and develop occupational health and safety procedures and emergency management procedures. ◗ The siltstone present at the site is likely to contain silica, which could potentially be released as respirable crystalline silica in rock dust released during crushing operations. Site-specific data on the mineral composition of the rock resource and the particle size distribution of the rock dust released during crushing operations will be analysed during detail design to facilitate an assessment of potential RCS exposure. ◗ A preliminary assessment of the hazard to building infrastructure and other assets within the lands under the care and control of Council will be undertaken as a priority when the initial activities on site begin as potential sources of ignition may become evident or will be reduced in some areas. ◗ A fire management plan will be included in the site management plans for fires caused by onsite and offsite activities. As part of the management plan, Council will identify risk reduction measures. ◗ Occupational health and safety procedures and appropriate personal protective equipment would be followed during use of plant and equipment as relevant to the particular activity. ◗ Residents would not be permitted to deliver waste to or access any of the landfills. All public access to waste management facilities will be conducted at Stotts Creek RRC.

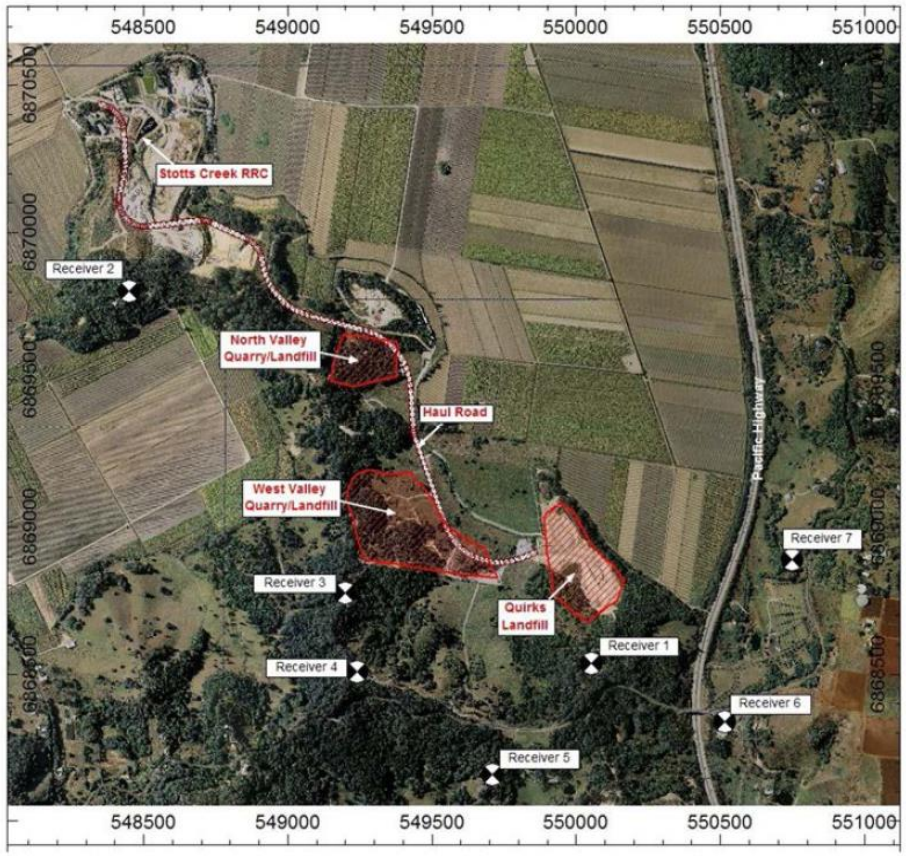
	◗ All landfills will be lined to prevent off-site migration of landfill gas, and a gas management system would be designed in the detailed design phase to prevent methane from being discharged to the atmosphere from closed areas of the landfill. ◗ No dangerous goods would be stored on site, apart from small quantities primarily used for equipment maintenance, and herbicides used for controlling weeds on site.
Hazards (continued)	◗ All chemicals, fuels and oils stored onsite will be contained within an appropriately designed impervious bunded area capable of containing 110% of the largest container stored within the bund. Bunds shall be design and installed in accordance with the requirements of relevant Australian Standards and/or the EPA Environment Protection Manual *Technical Bulletin Bunding and Spill Management*. ◗ Implement suitable measures to manage pests, vermin and declared noxious weeds including regular inspections, monitoring and management.
Revegetation, rehabilitation and post closure management	Council commits to the following: ◗ Preparation and implementation of a Rehabilitation and Closure Plan prepared by a suitably qualified and experience expert in consultation with EPA. ◗ Undertake a program of progressive revegetation in those areas disturbed by the operations taking account of the intended future Botanic Gardens. ◗ Conversion of stormwater detention areas to wetlands following cessation of landfilling activities. ◗ Continue to manage the site following closure of the landfill facility, in accordance with the commitments and procedures to be documented within the Site Closure plan. This includes long term monitoring of groundwater, leachate, surface water, landfill gas, revegetation success and capping integrity
Community	◗ Council will undertake consultation with relevant community stakeholders including during the site establishment period and will proactively engage with the community during operations. This will as a minimum include residents whose properties directly adjoining Council's landholding. ◗ The waste education facility at Kingscliff Wastewater Treatment Plant – adjacent to the Stotts Creek RRC will continue to be utilised. ◗ Areas not required for project-related activities will be maintained in a manner that enhances their ecological values as described in the Biodiversity and Rehabilitation section. ◗ The site will ultimately be returned as a community asset in the form of the Tweed Shire Botanic Gardens in accordance with the existing Master Plan. ◗ Council will implement a complaints management system that includes: – A hotline for receiving complaints about the development; – A commitment to investigate the source of all complaints and take the required immediate action to reduce the impact where valid, and to communicate this to the complainant; – A record of complaints and responses/actions which is readily accessible to the community and regulatory authorities; – A system for providing feedback to the community

APPENDIX 2
GENERAL LAYOUT OF THE PROJECT

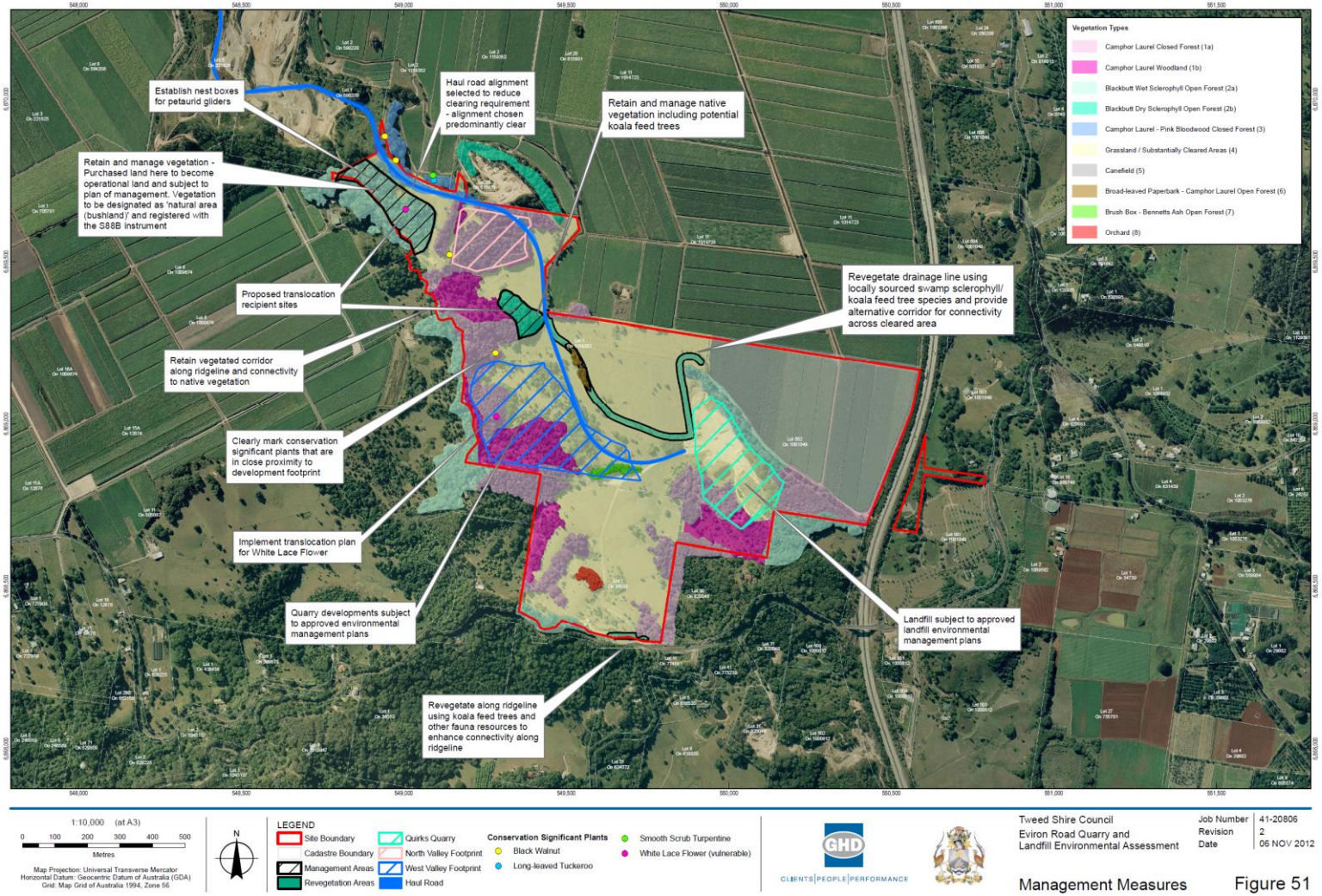



Haul Road and Haul Road Footprint designed by Tweed Shire Council
Lindisfarne Road
Hawkens Lane
Evans Road
LEGEND
Site Boundary
Cadastre boundary
Quirks Quarry Footprint
West Valley Footprint
North Valley Footprint
Haul Road Centreline
Haul Road Footprint
1:6,000 (at A3)
0 75 150 225 300
Metres
Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia (GDA)
Grid: Map Grid of Australia 1994, Zone 56
N:\AU\Toowoomba\Projects\41\20806\GIS\Maps\4120806_002.mxd
Tweed Shire Council
Eviron Road Quarry and
Landfill Environmental Assessment
Concept Haulage
Road Alignment
Job Number 41-20806
Revision 1
Date 27 MAY 2011
Figure 16
CLIENTS|PEOPLE|PERFORMANCE
54-58 Nerang Street Nerang QLD 4211 Australia T 61 7 5557 1000 F 61 7 5557 1000 E goldcoastmail@ghd.com.au W www.ghd.com.au

APPENDIX 3
SURROUNDING PRIVATE RECEIVERS



APPENDIX 4
BIODIVERSITY STRATEGY



APPENDIX 5
INDICATIVE FINAL LANDFORM – QUIRKS QUARRY LANDFILL