Eviron Road Quarry Landfill Project Stage 1

Environmental Management Strategy

Report 2

Date: September 2017

Tweed Shire Council

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Document History

Version	Authors	Issue date
Report 1	Kristy Harvey and Michael Donohue; NSW Public Works	May 2014
Report 2	Waste Unit, Tweed Shire Council	September 2017

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1 Introduction

Tweed Shire Council's (TSC) existing landfill, the Stotts Creek landfill, is predicted to reach capacity in the near future. As such, Council has sought approval from the Department of Planning and Infrastructure (DoPI) to develop waste infrastructure to meet the Tweed local government area's (LGA) projected medium and long term needs. Council has proposed to establish the Shire's new landfill facilities on existing Council owned land at Eviron Road, Eviron, within the Tweed LGA. Council has developed a concept plan for the proposed infrastructure which includes a landfill within the existing void space created by Quirks Quarry, the development of two further quarries to be used as landfills after exhaustion of the quarry resource, and necessary operational infrastructure such as haul roads, a dedicated acid sulfate soils treatment area, and other service buildings/storage facilities as required.

DoPI provided approval to Council in December 2012.

The environmental assessment for this approval was prepared by GHD Pty Ltd (GHD) in accordance with the requirements of Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act).

Tweed Shire Council engaged NSW Public Works to Project Manage initial components of Stage 1 including preparation of the Environmental Management Strategy and supporting plans. Tweed Shire Council is responsible for subsequent revisions and updates of all documentation.

1.1 The Site

The site for the project (referred to as 'the site' for the purposes of this assessment) is located at Eviron Road, Eviron within the Tweed LGA, approximately 16 km northeast of Murwillumbah. The site, which has an area of 158 hectares, comprises Council-owned land, being Lot 1 DP 34555, Lot 1DP 1159352, and Lot 602 DP 1001049.

1.2 Purpose

The purpose of this report is to provide an Environmental Management Strategy for the whole project as required by Schedule 6 (Environmental Management, Reporting and Auditing), Condition of Approval 3, of the Minister for Planning and Infrastructure's Project Approval.

It details the overarching Environmental Management Structure for the project and what plans and strategies are proposed to be put in place and who is responsible for preparing implementing, reporting and auditing each of the strategies.

The Environmental Management Strategy is a dynamic document and will be reviewed quarterly and/or as plans and monitoring programmes are prepared and endorsed, and as projects elements are commenced and completed.

1.3 Scope

This document applies to all aspects of environmental management at Eviron Road Quarry Landfill.

2 Strategic Framework for Environmental Management

2.1 Management

Management plans/programs relating to the environmental aspects of Eviron Road Quarry and Landfill exist to ensure both legislative compliance and to assist in overall management on the site.

The range of environmental documents that make up the Environmental Management System are in Figure 1 below.

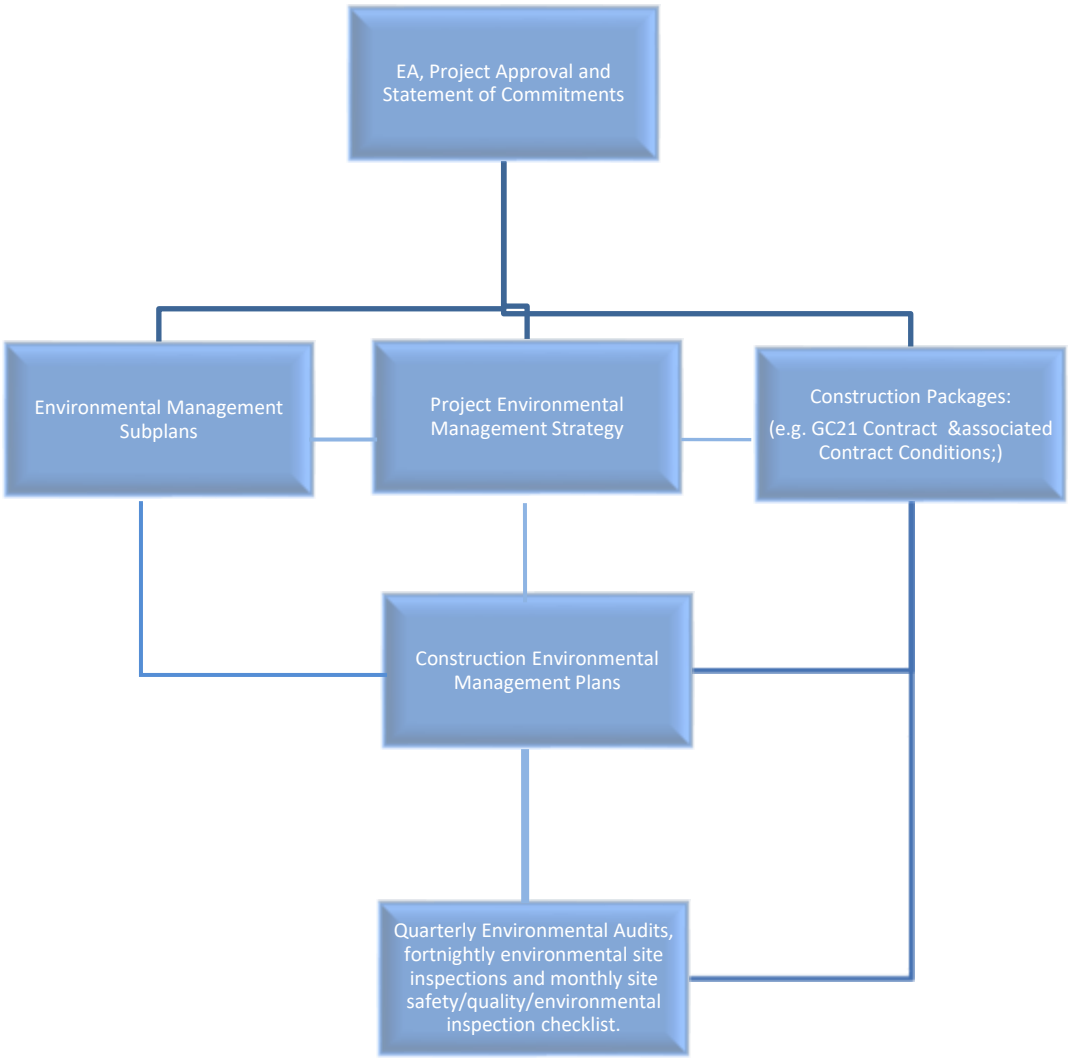


Figure 1- Environmental Management System Documents

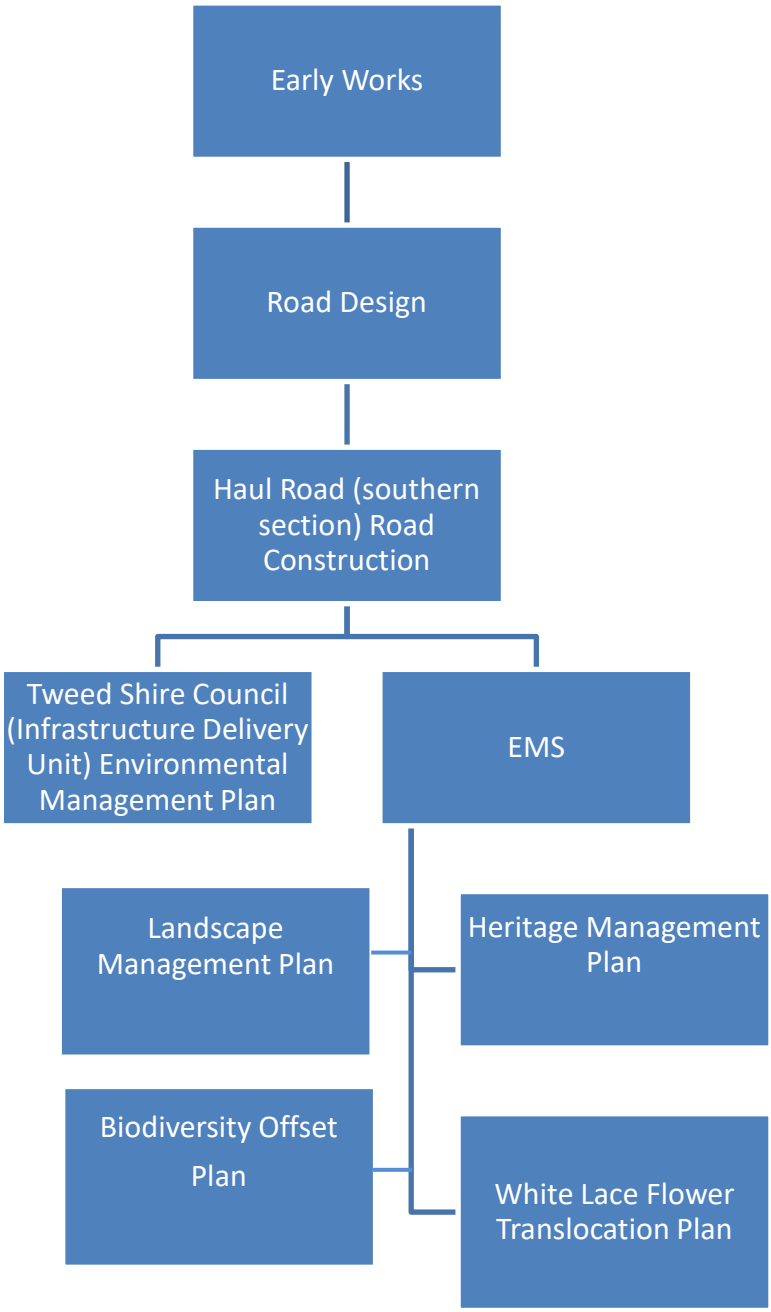


Figure 2: Phase 1- Early Works by Tweed Shire Council for haul road construction (southern section) and relationships with environmental documentation.

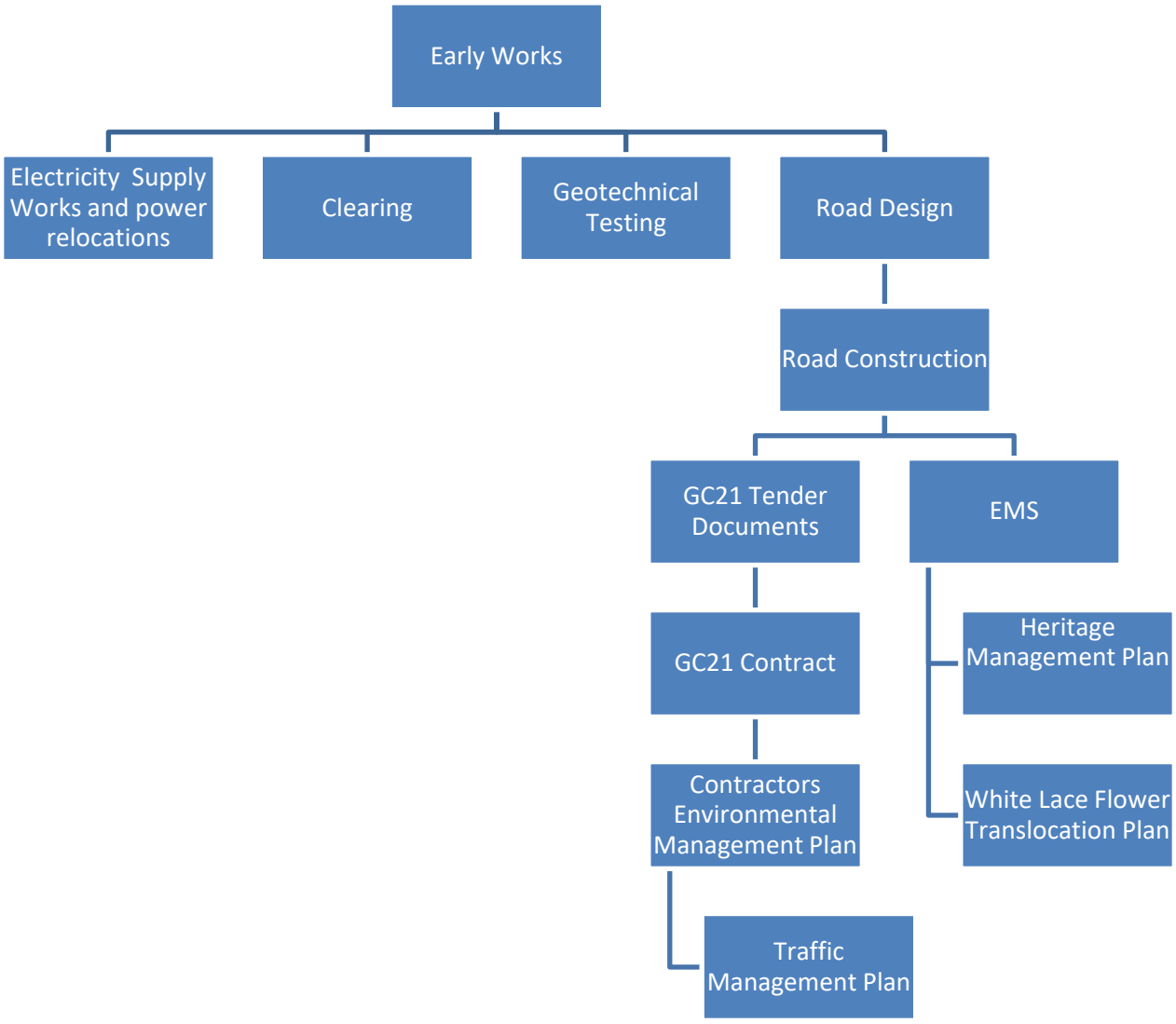


Figure 3: Phase 1- Early Works under contract and relationships with environmental documentation.

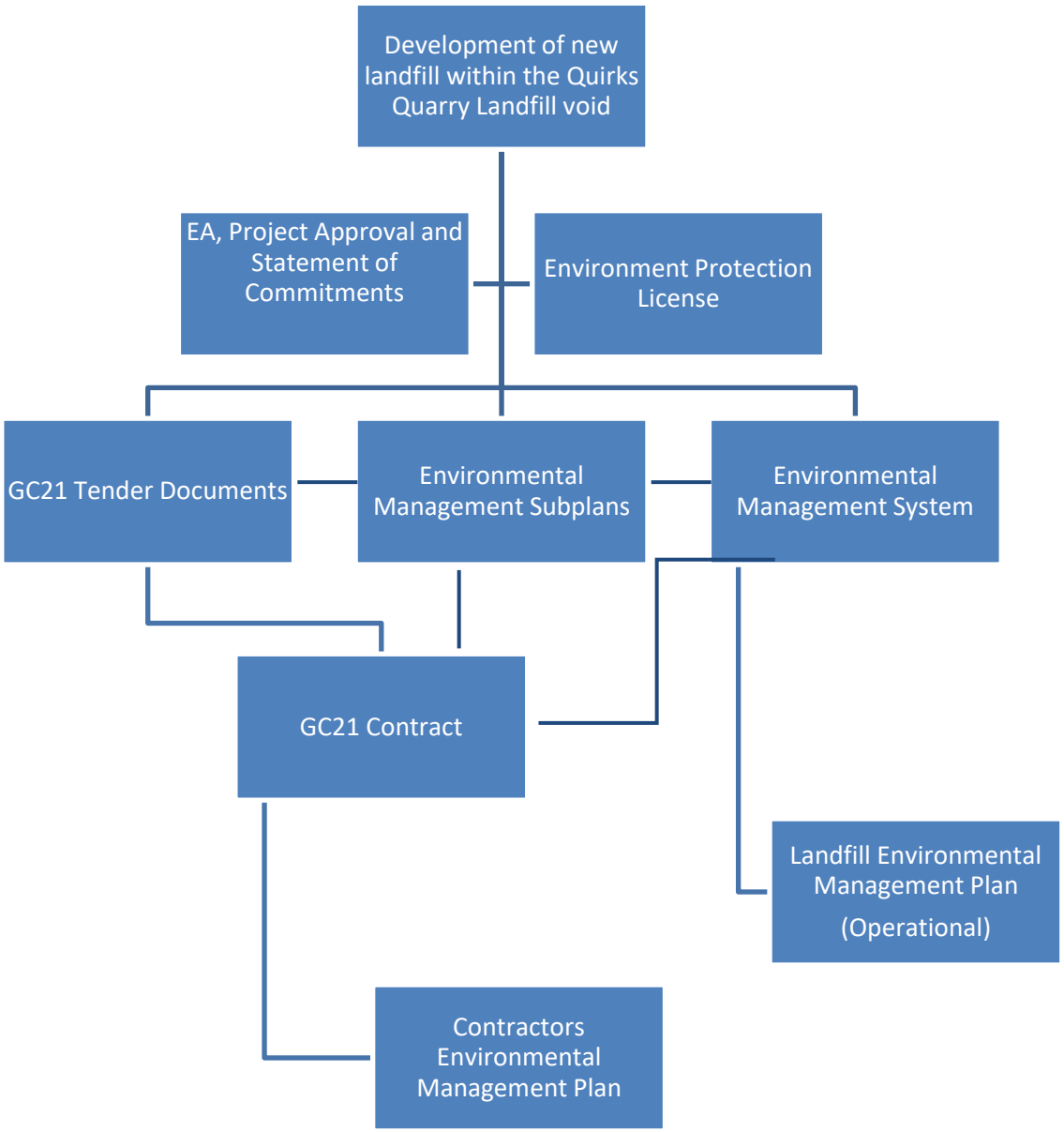


Figure 4: Phase 2- Development of a new landfill within the Quirks Quarry void and relationships with environmental documentation.

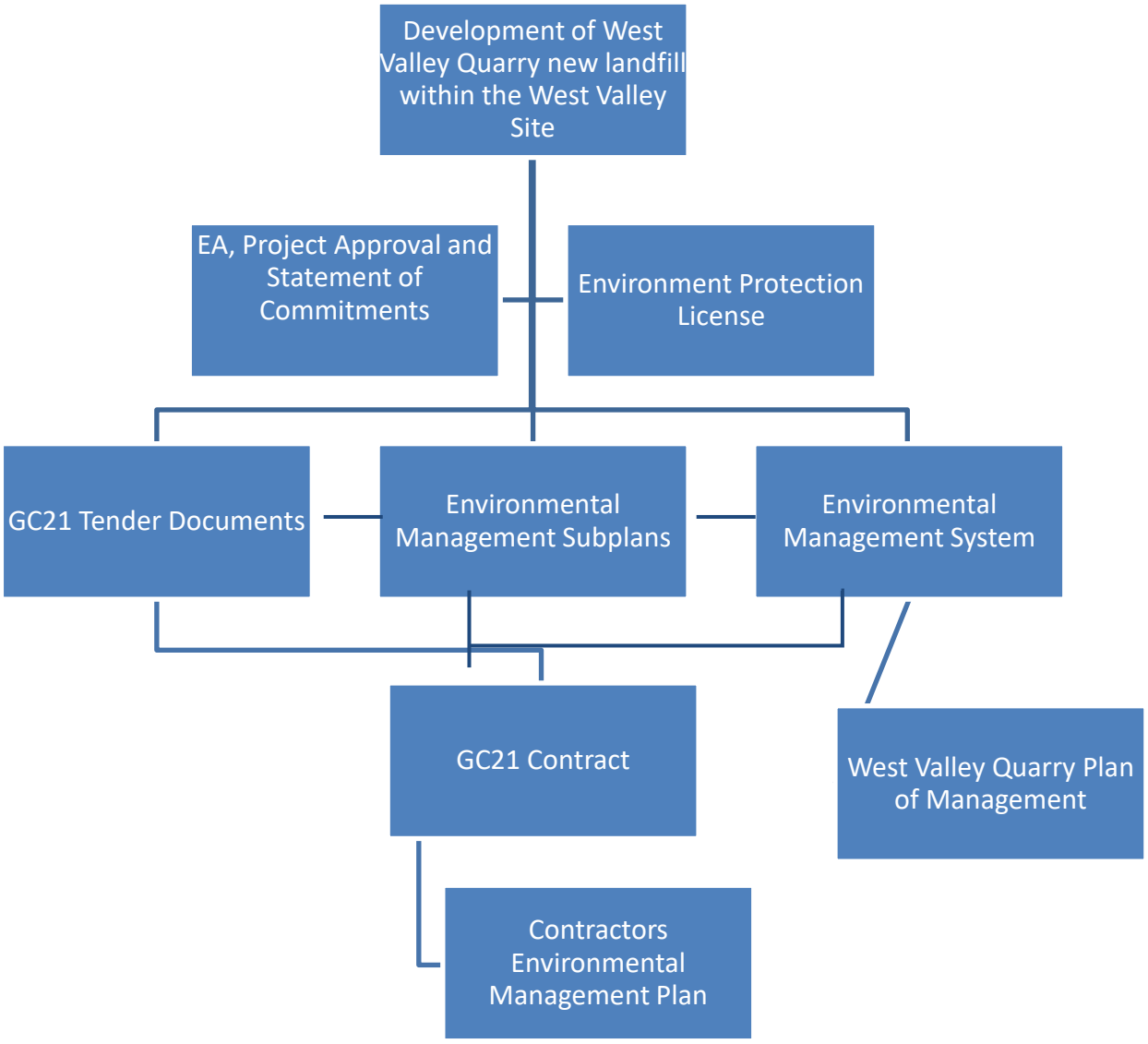


Figure 5: Phase 3- Development of West Valley Quarry within the West Valley site and relationships with environmental documentation.

2.2 Monitoring

The known monitoring requirements for the Project are contained within Section 6 of the EMS and the EMS Sub plans, and additionally in Table 1 below. Monitoring requirements will be updated as plans are prepared, and incorporated into the EMS.

Table 1: Monitoring Requirements

Monitoring Target	Frequency	Status	Action
Water Quality Monitoring - Surface Water	Data to be collected during rain events and on a monthly basis	Currently monitored	To be refined on completion and endorsement of the Water Management Plans as required by Schedule 3 and 4 of the Conditions of Approval.
Water Quality Monitoring – Groundwater Bores	Quarterly and standing water level to be monitored monthly	Currently monitored quarterly	To be refined on completion and endorsement of the Water Management Plans as required by Schedule 3 and 4 of the Conditions of Approval.
Meteorological Station	In accordance with the latest version of the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline	Installed	Ongoing monitoring.
Cultural Heritage Monitoring	During Early Works in High Risk areas- Ridgeline	To be actioned at commencement of early works	Cultural Heritage Monitoring in accordance with the Heritage Management Plan
Contractors CEMP, Environmental Controls.	Frequency to be determined by Construction Contractor and submitted plans	Throughout the Project	Review and determine in CEMP development.
Quarterly Internal Environmental Audit	Quarterly	Throughout the Project	PM to implement.
Fortnightly Environmental Control Checklists	Fortnightly	Throughout the Project	Construction Contractor
Monthly WH&S/Quality/Environmental Inspections	Monthly	Throughout the Project	Project Manager and Site Surveillance

3 Description of Works

3.1 Stages

Stage 1 of the Concept Plan includes:

- Construction of a haul road from Stott's Creek Resource Recovery Centre to the new landfill to be constructed in the Quirks Quarry;
- Development of a landfill within the Quirks Quarry void; and
- Development of a quarry within the West Valley site

This Strategy and its associated plans related to the Stage 1 works only.

Stage 2 includes:

- Landfill at West Valley;
- Quarrying at North Valley; and
- Landfill at North Valley.

The Stage 1 works will consist of three main phases:

1. Early Works- Survey, geotechnical investigation, construction of a haul road from Stott's Creek Resource Recovery Centre to Quirks Quarry;
    - Note that the haul road will be constructed in two sections:
        - The southern section will be constructed by Tweed Shire Council. The works will be from Chainage 0.0 at Quirks Quarry extending north to Chainage 1010 at the foothills in the North Valley area.
        - The northern section will be constructed under a Design and Construct Tender
2. Development of a new landfill within the Quirks Quarry void;
3. Development of West Valley Quarry within the West Valley site.

3.2 Timing

Table 2: Milestone Programme

Activity	Start	Complete
Haul Road Design	1/07/2014	November 2016 (Southern section issued for construction; northern section preliminary concept stage)
Haul Road Construction (Southern Section)	1/10/2017	2019 (Timing for northern section subject to tender process)
Landfill Design (Quirks)	1/1/2020	30/11/2020
Landfill Construction (Quirks)	1/04/2021	30/12/2021
Quarry Design (West Valley)	1/04/2020	30/11/2020
Quarry Operation (West Valley)	1/04/2021	30/07/2026

NOTE: These dates are nominal and area subject to review due to factors such as available airspace at the Stott's Creek Resource Recovery Centre reaches capacity. 2: it is anticipated that Quarry material from West Valley Quarry would be used for Quirks landfill construction.

3.3 Staged Preparation of Environmental Management Documentation and Project Works

3.3.1 Early Works-

- Prepare Preconstruction Management Plans including:-
  - Project Environmental Management Strategy
  - Establishment of Meteorological Monitoring Station
  - Targeted surveys for threatened flora species following completion of final design footprint.
  - Cultural Heritage Management Plan (SOC)
- Preconstruction of Internal Haul Road between Stotts Creek Resource Recovery Centre and the new landfill that will be constructed in the Quirks Quarry Void
  - Survey
  - Geotechnical Investigations
  - Road works Design
  - Aboriginal Cultural Induction to project team and contractors
  - Electricity and power supply for Quirks Quarry Landfill- trenching (530m) and overhead (190).
- Construction of the Haul Road from Stott's Creek Resource Recovery Centre to Quirks Quarry including:
  - Preparation of a Contractors Construction Environmental Management Plan based on mitigations in 5.1 of the EMS and Table 6.1 of the Landscape Management Plan
  - Aboriginal Cultural Induction for all contractors based on Heritage Management Plan,
  - Construction of the Haul Road and the associated stormwater management systems Commence implementation of the Biodiversity Offset Strategy by beginning implementation of protection for Area 1, letting of contract for revegetation contractor to undertake progressive implementation of Biodiversity Offset Strategy.
  - Biodiversity Offset Strategy.
- Preconstruction of Landfill to be built in the Quirks Quarry void
  - Design of landfill including provision for leachate and stormwater management
  - Preparation of Soil and Water Leachate Management Plan
  - Greenhouse Gas Abatement Strategy (31 Dec 2013)
  - Energy Savings Action Plan (31 Dec 2013)
  - Preparation of Contractors Construction Environmental Management Plan
  - Preparation of Infrastructure and Services Plan
  - Preparation of Construction and Operational Signage and Fencing Plan
  - Aboriginal Cultural Induction to contractors

3.3.2 Development of a landfill within the Quirks Quarry void;

- Pre-operational Plans

- Submission of Infrastructure and Services Plan
- Submission of Construction and Operational Signage and Fencing Plan
- Submission of Soil and Water Leachate Management Plan
- Landfill Environmental Management Plan including sub plans for operational air quality, noise, traffic and waste management.
- Preparation and Implementation of Community Education Program
- Preparation of a Construction Environmental Management Plan
- Bushfire Assessment

• Operation new Landfill constructed in the Quirks Quarry void
- Induction of Staff and handover
- Obtain EPL
- Preparation of Rehabilitation and Post Closure Plan

• Preconstruction and operation of West Valley Quarry plans:
- Ground Water Assessment Plan and model

• Water Management Plan:
- Site Water Balance
- Surface Water Management Plan
- Groundwater Management Plan

• Acid Sulfate Soil Management Plan

• Landscape Management Plan and associated sub plans
- Implementation of Landscape Management Plan and associated sub plans
- Stage 1 of the Conservation and Rehabilitation Bond assessment.

• Operational Traffic Management Plan

• Plan of Management for West Valley Quarry including an air quality management plan, noise management plan and blast management plan.

• Aboriginal Cultural Induction to contractors

• Stage 2 of the Conservation and Rehabilitation Bond assessment.

3.3.3 Development and Operation of West Valley Quarry within the West Valley site

• Obtain EPL

• Induction into Operational Management Plans and handover to operational contractor

4 Planning

4.1 Identification of Environmental Aspects

The Risk Assessment Matrix in Appendix 11.4 is used to determine the risk of each environmental aspect relevant to the construction phase of the project. The level of risk determined from the matrix identifies the level of control measures required for that environmental aspect. These risks can be mitigated through the application of measures identified in this EMS and associated sub plans.

Table 3: Risk Assessment Matrix

Aspect	Impact	Probability	Consequence	Risk Ranking	Controls
Soil and Water	Sedimentation and erosion resulting in decline of water quality within ephemeral watercourses downstream of the site.	D	3	M	Refer to main body of the EMS.
	Impacts on surface water and groundwater quality from leachate.	D	4	L	Refer to main body of the EMS.
	Exposure of ASS or PAF	D	4	L	Refer to main body of the EMS and also managed in detail design.
	Contamination of soil or water through spills and leaks associated with chemical, oils and fuels.	D	4	L	Refer to main body of the EMS.
Noise, blasting and vibration	Noise nuisance impacts upon nearby sensitive receivers.	B	4	M	Refer to main body of the EMS.
	Property damage from vibration	D	4	L	Dilapidation surveys prior to start
Air Quality and Odour	Landfill component has potential to be a source of odour if not managed correctly	C	4	M	Managed in detailed design.
	Construction air quality reduction from localised dust and emissions	C	4	M	Refer to main body of the EMS.
Greenhouse Gas	Produced during construction and operation of quarry and landfills	C	4	M	Refer to main body of the EMS and also managed in detailed design.
Biodiversity	Habitat fragmentation	D	4	L	Refer to main body of the EMS.
	Loss of biodiversity	D	4	L	Refer to main body of the

Aspect	Impact	Probability	Consequence	Risk Ranking	Controls
					EMS.
	Fauna Mortality	D	4	L	Refer to main body of the EMS.
	Stockpiling disturbance and weeds	D	4	L	Refer to main body of the EMS.
	Habitat Degradation	D	4	L	Refer to main body of the EMS.
Transport	Alterations to traffic movement as a result of situating an internal haul road.	B	4	M	Internal Haul Road will reduce the impact of traffic on local roads
Heritage	Impact an item of historic or Aboriginal heritage	D	4	L	Refer to main body of the EMS and Heritage Management Plan.
Visual	Reduction in amenity as a result of clearing and locating quarry and landfill operations.	C	3	M	Refer to main body of the EMS and also managed in detail design.
Waste Management	Potential contamination of land and water due to inappropriate handling of waste materials.	D	4	L	Refer to main body of the EMS.
	Non conformance with waste hierarchy and WRAPP principles.	D	4	L	Refer to main body of the EMS.

4.2 Legal Requirements

Works undertaken on the Eviron Road Quarry Landfill site are required to comply with legislation of the Commonwealth and the State of New South Wales. Tweed Shire Council is committed to complying with all regulatory requirements for the works.

An annual compliance review conducted during the compilation of the Annual Review (March each year) will ensure all requirements are identified and actions undertaken if a non-compliance is identified.

Changes to environmental legislation shall be monitored throughout the works and implemented as applicable.

Statutory Approvals that apply to Eviron Road Quarry Landfill Project are outlined in Section 4.4 and 4.5.

4.3 Applicable Legislation

Environmental Planning and Assessment Act 1979

Protection of Environment Operations Act 1997

Waste Avoidance and Resource Recovery Act 2001

Water Act 1912

National Parks and Wildlife Act 1974

Water Management Act 2000

Biodiversity Conservation Act 2016 Biosecurity Act 2015

Heritage Act 1977

Environment Protection and Biodiversity Conservation Act 1999

Local Government Act 1993

Rural Fires Act 1997

4.4 Principal Approvals

Table 4: Principal Approvals

Act	Approval/requirements to be obtained by Tweed Shire Council	Authority	Status
Environmental Planning and Assessment Act 1979	Eviron Road Quarry Landfill Project – Stage 1 - Part 3A Major Project Approval Section 75J	NSW Department of Planning and Infrastructure	Obtained
Environmental Planning and Assessment Act 1979	Environ Road Quarry Landfill Project – Section 75 O and 75 P Major Project Concept Plan Approval	NSW Department of Planning and Infrastructure	Obtained
Protection of Environment Operations Act 1997	Resource Recovery Order & Exemption (Land Application) for Excavated Public Road Material for haul road construction	Environment Protection Authority	Obtained
	Clause 19 –extractive industry EPL for quarry component		To be obtained prior to Operation
	Clause 39 –Waste disposal to land EPL for landfill component		To be obtained prior to Operation
Water Act 1912	Groundwater Bore Licence- Under Part 5 of the Act	NSW Office of Water	Prior to bore construction
Water Act 1912	Form A- Particulars of Completed Work	NSW Office of Water	Within 2 months of the completion of the bores.
Water Act 1912	Part 5 Application for groundwater flow	NSW Office of Water	To be determined following further

Act	Approval/requirements to be obtained by Tweed Shire Council	Authority	Status
	dewatering if required at West Valley Quarry		groundwater study
Water Management Act 2000	Water access licence and a work approval if using surface water. Instead of using stormwater for processing and dust suppression.	NSW Office of Water	To be determined through the preparation of management plans.
National Parks and Wildlife Act 1974	Licence under Section 132C to pick a threatened plant for scientific, educational or conservation purposes.- White Lace Flower	Office of Environment and Heritage- Biodiversity Section	Obtained for works by Tweed Shire Council (in the name of David Hannah) Contractors involved in the collection of propagation material, propagation and out planting require s132C licence.

4.5 Contractor Approvals

Table 5: Contractor Approvals

Act	Approval/requirements to be obtained by Contractor/Operator	Authority	Status
Water Act 1912	Section 118A (3A) – Application for NSW Drillers Licence	NSW Office of Water	Drillers of groundwater bore to have licence.

5 Project Management Structure

5.1 Project Management Structure

The Table 7 at Section 6.1 summarises the Plans that are required to be prepared in accordance with the DoPI Project Approval. It provides the framework for Environmental Management for the project and details who prepares the plans and who implements and audits each plan. This Environmental Management Strategy will be a living document that will require regular updating and review due to the time frames for the project and the likelihood of unknown issues arising.

Key personnel in the project team are listed below. The responsibility for the overall project lies with TSC's Director Community and Natural Resources, with project management of the project being carried out by NSW Public Works. The project structure is listed in Figure 5 below.

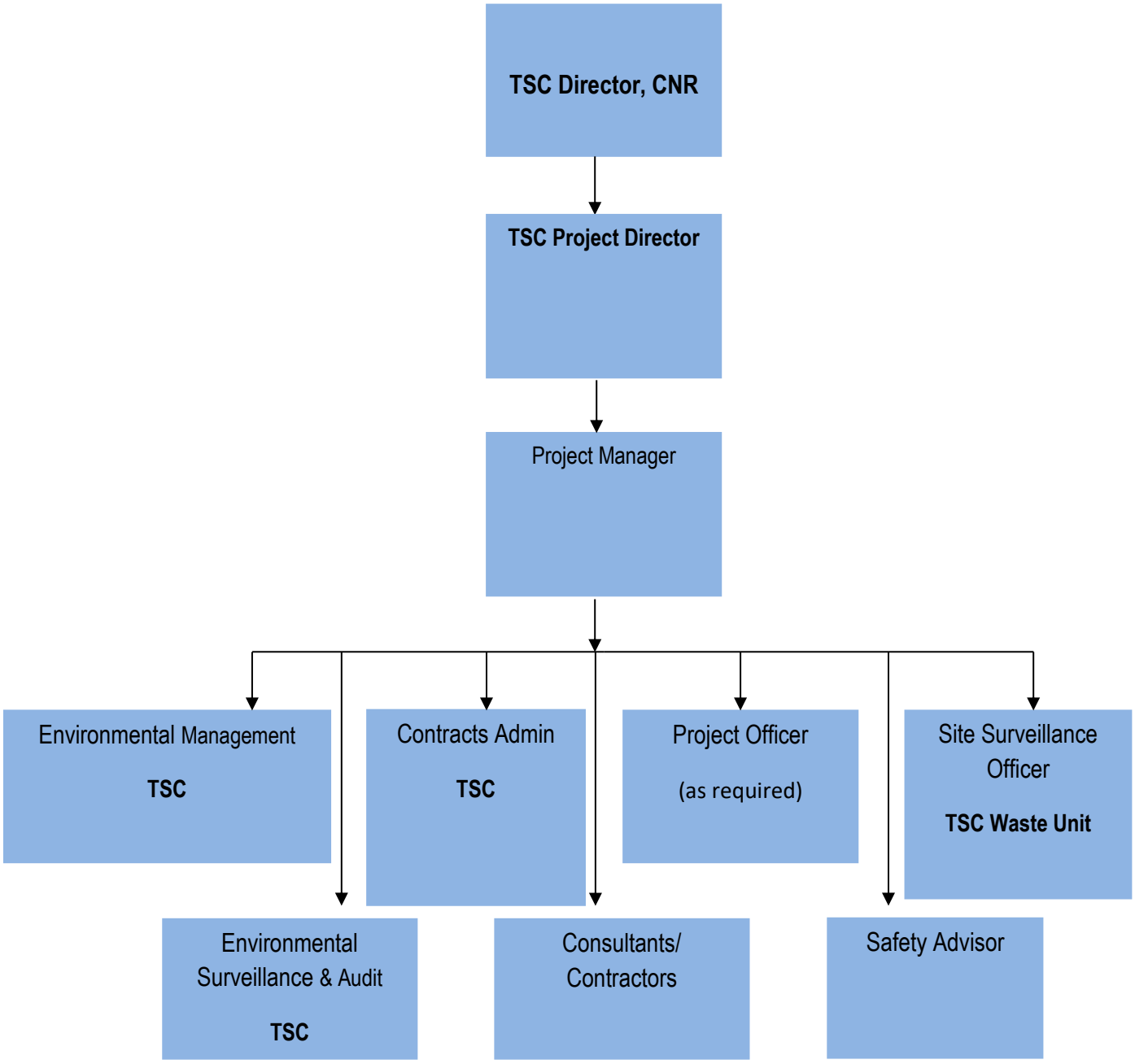


Figure 5: Project Management Structure

The basic outline of environmental responsibilities is described below.

Table 6: Eviron Road, Quarry and Landfill Roles and Responsibilities

Role	Responsibilities
TSC Director	Provide adequate resources for ensuring effective implementation of the Project and of this environmental management strategy.
Project Director	Responsible for reinforcing leadership and commitment by being actively involved in the review of environment and community policy, objectives and targets and promoting continual improvement in the operations of environmental management. Must also ensure that adequate financial and personnel resources are made available for the implementation of the environmental management system.
Project Manager	Responsible for ensuring the environmental management strategy is adhered to. Is responsible in for overseeing the development, implementation and review of the environmental management strategy to ensure effective and ongoing management is implemented onsite. Responsible for coordinating the interface between the existing Stotts Creek Landfill and the Project. Organises access to the site during the Project and provides advice on site issues. Supports the Environmental Managers, through providing contractual obligation to contractors for environmental management and compliance with the EIS, EMS, COA's. • Promoting best practice management; • Coordinating monitoring in accordance with the environmental management system documents; • Assisting employees, contractors and managers in fulfilling their environmental responsibilities; • Coordination of inductions, training and education; • Ensuring complaints are recorded and actioned in a timely manner.
Environmental Management	Responsible for reporting of the environmental performance to management for review. This forms the basis for improvement of the system and continual improvement in environmental management. The environmental management team also acts as a contact person with government authorities and community in relation to the environmental performance during the construction of the haul road, landfill and quarry. Specific responsibilities include: • Maintaining and providing assistance in the implementation of environmental policy, management plans, procedures, other environmental management system documents and statutory requirements; • Assisting employees, contractors and managers in fulfilling their environmental responsibilities; • Increasing environmental awareness amongst site personnel via training and education; • (In collaboration with the Project Manager) Maintaining environmental records including environmental monitoring data, complaints and environmental incident reports;
Environmental Surveillance	Provides regular surveillance of the site to ensure environmental compliance.
Contracts Administration	Processes variations, Extensions of Time and payment claims for contractors and consultants.
Consultants/Cont	All Contractors (and their employees) are responsible for safety and environment

Role	Responsibilities
ractors	management at the work site and will be involved in : • Identifying hazards; • Assessing the risks; and • Evaluating and monitoring controls • Reporting hazards, incidents and emergency events to the Project Manager immediately; • Cooperating with Tweed Shire Council personnel in the conduct of environmental inspections and audits; • Compliance with the Project Environmental Management Strategy and associated Subplans/procedures.
Project Officer	Provides support to the Project Manager as required.
Site Surveillance Officer	Is responsible for the daily surveillance of contractors' compliance with the environmental requirements of the site. Reports breaches immediately to the Project Manager who will take action with the contractor.
Safety Advisor	Review Work Method Statements and Safety Management Plans. Undertake Safety and Quality Audits.

5.2 Contractor Engagement and Contract Management Processes

5.2.1 PROCUREMENT MANAGEMENT

Tweed Shire Council would engage Consultants and Contractors to carry out various aspects of a project. Council uses Council adopted Procurement Procedures to provide Standard Conditions of Engagement and Contract Conditions that ensure all relevant legislation and Government Guidelines are adhered to.

5.2.2 TENDER MANAGEMENT

Consultant Briefs, Conditions of Tendering and General Conditions of Contract will refer to this EMS and the various plans in the Project Approval that are relevant to work required. A Tender Evaluation Plan is prepared prior to the close of tenders that includes price and non-price criteria. Price and non-price weighting will be scored in the assessment of each contract. Non-price weighting for consultants and contractors include:

- Previous experience in carrying out works similar to that required under the contract
- The contractors safety and environmental management part performance.
- The contractors' capability to carry out the work in the times specified including a review of their existing workload.
- The financial capability to do the work

For construction contracts (eg the Haul Road northern section) the NSW Governments GC21 General Conditions of Contract Edition 2 or Australian Standard Condition of Contract AS2124 Construction would be used. These forms of contract documents are used for major capital works in the State.

5.2.3 CONTRACT MANAGEMENT

Contractors are required to submit detailed Construction Environmental Management Plans, WHS Management Plans and Project Quality Management Plans prior to commencing any work on site. These plans are reviewed by the Project Manager and Project Environmental Management Officer using standard comprehensive review forms to review their content. The review forms are then submitted for sign off by Senior Management. These Plans can also be made available to DoPI if required.

Check sheets to ensure safety and environmental compliance will be prepared by the Project Manager and used by site surveillance staff to ensure compliance. These check sheets will be developed around the Conditions of Approval, this EMS and relevant legislation.

Work will be reviewed progressively to ensure that the requirements are complied with and non-conformance issued where there are departures. Additionally, formal audits of the contractors system and compliance on site with these signed off plans will be carried out.

6 Environmental Control Measures

6.1 Environmental Mitigations

The following table details the mitigations and procedures for managing risk to the environment throughout the Project. These mitigations are derived from a number of sources to ensure appropriate environmental management. Mitigations present in Table 7 have been extracted from the:

- Project Approval Schedules 2 to 6;
- Project Approval Appendix 1 – Statement of Commitments;
- The 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;
- The Director-General's Environmental Assessment Report, Section 75I, of the *Environmental Planning and Assessment Act* 1979, November 2012.
- Best Industry Practice Guidelines- NSW Government Transport Roads and Traffic Authority- Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects.
- GC21 Standard Contract Clauses or AS2124 Construction.
- Associated Management Plans as required by the Conditions of Approval.

Table 7. Environmental Control Mitigation Measures

LEGEND

PM Project Manager

TSCPE Tweed Shire Council Project Ecologist

C Construction Contractor (includes Clearing Contractor)

CS Consultant

Note: Overall responsibility for the Project rests with the Project Manager. The PM will be assisted in this role by various specialists throughout the project.

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
V1	Vegetation Clearing	Review the environmental assessment maps and associated documentation for the project to identify features.	Pre-clearing Process Throughout the project	PM & TSCPE
V2	Vegetation Clearing	Consult with ecologist to determine the location of suitable nearby habitat for the release of fauna that may be encountered during the pre-clearing process or habitat removal. Mark the pre-determined habitat identified for fauna release on a map.	Pre-clearing Process	PM & TSCPE
V3	Vegetation Clearing	The extent of vegetation required for clearing is to be pegged by a surveyor, approved by the Project Ecologist, and then demarcated with flagging rope or similar. No clearing is to occur outside of this delineation.	Pre-clearing Process	PM & TSCPE
V4	Vegetation Clearing	Identify tree protection zones on treed areas to be excluded from clearing. The tree protection zone (TPZ) represents the area around the tree that	Pre-clearing process and throughout	PM & TSCPE

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
		should not be disturbed. Exclusion fencing and tree protection in accordance with the AS 4970-2009 Protection of trees on development sites shall be implemented. Tree dripline zones to be protected in retained vegetation.	construction.	
V5	Vegetation Clearing	Confirm the locations of biodiversity features	1-2 weeks prior to clearing	PM & TSCPE
V6	Vegetation Clearing	Identify fauna that may have the potential to be disturbed as a result of clearing activities.	1-2 weeks prior to clearing	PM & TSCPE
V7	Vegetation Clearing	Ensure an ecologist checks for the presence of threatened flora and fauna species that were identified in the Environmental Assessment as likely to occur. Undertake these checks during optimal conditions for the target species where possible.	1-2 weeks prior to clearing	PM & TSCPE
V8	Vegetation Clearing	Record the details of any hollow bearing trees/trees containing threatened fauna or threatened flora.	1-2 weeks prior to clearing	PM & TSCPE
V9	Vegetation Clearing	Mark habitat features to be protected during construction.	1-2 weeks prior to clearing	PM & TSCPE
V10	Vegetation Clearing	Confirm the location of pre-determined habitat identified for the release of any fauna encountered on site.	1-2 weeks prior to clearing	PM & TSCPE

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
V11	Vegetation Clearing	Licensed wildlife carers and/or ecologists should capture and /or remove fauna that have the potential to be disturbed as a result of clearing activities.	24 hours before clearing	PM
V12	Vegetation Clearing	Relocate fauna into pre-determined habitat identified for fauna release.	24 hours before clearing	PM
V13	Vegetation Clearing	All fauna handling to be carried out by licensed wildlife carers and/ or ecologists.	24 hours before clearing	PM
V14	Vegetation Clearing	Inform clearing contractors of any changes to the sequence of clearing if required.	24 hours before clearing	PM
V15	Vegetation Clearing	Contact vets and wildlife carers before works start to ensure they are willing to assist in treating injured animals if necessary. Provide their contact details to the site manager and clearly display them at the site office. Record all fauna fatalities or injuries and details of any relocated fauna.	Clearing	PM
V16	Vegetation Clearing	A licensed wildlife carer and/or ecologist should be onsite during habitat removal.	Clearing	PM
V17	Vegetation Clearing	Carry out staged habitat removal (for example clearing non-habitat trees followed by any habitat trees) so as to allow respite between the initial disturbance of the clearing process and the final removal of habitat.	Clearing	PM
V18	Vegetation Clearing	Identified habitat should be left for at least 24 hours after removing the non-habitat vegetation to	Clearing	PM

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
		allow fauna to escape. A licensed wildlife carer and/or ecologist should check trees for fauna before felling. If necessary, fauna may need to be trapped and relocated to pre-determined habitat identified for fauna release.		
V19	Vegetation Clearing	Fell potential habitat trees carefully to avoid injury to any fauna remaining in the trees. Where possible use equipment that would allow for any habitat trees to be lowered to the ground with minimal impact (i.e. claw extension). Do not fell trees towards exclusion zones.	Clearing	PM
V20	Vegetation Clearing	Native woody vegetation including hollows and dead trees and bush rock is to be salvaged where possible for reuse in habitat areas. Carry out removal, stockpiling, transportation and relocation of coarse woody debris (CWD) and/or bush rock in a manner that minimises disturbance to native vegetation (including the canopy, shrubs, dead trees, and fallen timber and groundcover species) and avoids the spread of weeds.	Clearing	PM
V21	Vegetation Clearing	An experience and licensed wildlife carer and/or ecologist should inspect the habitat once it is removed (eg. After the tree has been felled). Animals that emerge should be captured, inspected for injury then relocated to pre-determined habitat identified for fauna release.	Clearing	PM & TSCPE

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
V22	Vegetation Clearing	Reporting – The outcomes of the clearing process are to be recorded. Reports are to be submitted to the Project Manager and Environmental Advisor.	Clearing	PM & TSCPE
V23	Vegetation Clearing	Vegetative clearing waste to be taken to green waste landfill. Camphor Laurel may be mulched providing the seeds and foliage are not mulched.	Clearing	PM
F1	Fauna	Project site induction should ensure that all personnel do not feed the wildlife that may be encountered on construction sites (especially birds or lizards)	Throughout the Project	PM
F2	Encountering Wildlife- Koalas	In the event that a Koala is detected in vegetation approved for clearing, the following procedure is to be followed: - -An exclusion zone with a 30m radius is to be established around the tree that the Koala inhabits - -No clearing is permitted in this exclusion zone, including no clearing of the understorey. - - No site staff are to enter the exclusion zone, unless under the supervision of the Project Ecologist. - Clearing of this vegetation cannot occur until the Koala has left the tree of its own volition.	Throughout the Project	PM
F3	Unexpected Threatened	Threatened flora or fauna species unexpectedly	Throughout the Project	

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
	Species Find	encountered. Procedure us as follows: - STOP WORK - Notify the Project Manager. - Project Manager would arrange for an ecologist to conduct an assessment of significance of the likely impact, develop a management options and notify OEH, DPI and DSEWPC as appropriate. - If an impact is not likely to occur, work can recommence and regular inspections will be maintained. - If an impact is likely to occur, consultation will be had with OEH, DPI or DSEWPC as appropriate. Licences, approvals or permits will be then obtained as required. Works will recommence once advice is sought and necessary approvals, licences and permits are obtained. - The species will be included in subsequent inductions, toolbox talks and the environmental plans will be updated.		PM &C
NB1	Nest boxes	6 Nest boxes in Area 1 in order to offset a reduction in hollow recruitment in Eucalypts. Further nest boxes to be installed should any hollow bearing trees be impacted by the proposed works. Tweed Shire Council Project Ecologist will advise on nest box installation onsite. Taking into	Construction	PM

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
		consideration the aspect, proximity to food resources and presence of Common Mynas.		
NB2	Nest boxes	Nest box design to be for use of petaurid gliders. Dimensions of nest boxes to be 400mm in height with internal dimensions 250mm x 300mm. The entrance diameter to be 450mm. The nest box lid will have at least 4cm overlap at sides and 8-10cm at the front. The nest boxes will be placed approximately 6m height above ground and be attached to trees by the Habisure method if possible. Nest boxes to be installed approximately100m apart.	Construction	PM
NB3	Nest box Maintenance	Monitoring of nest boxes, once per year for the first two years, skip the third year and check nest boxes on the fourth year. The need for future monitoring will be reviewed at this stage.	Construction and operation	PM
B1	Biodiversity Offset Security	Area 1 to be secured.	Throughout the Project. As per the Biodiversity Offset Plan.	PM
B2	Restoration/Rehabilitation	Implement Plan of Management including Habitat Management Sub plan and Rehabilitation and Closure Plan	Throughout the Project	PM
B3	Translocation	White Lace Flower Translocation Plan	Collect seed June-January, Pre-clearing target surveys and	

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
			associated propagule collection and propagation.	PM & TSCPE
B4	Establish vegetation protection areas	Establish prior to construction	Pre-construction	PM
B5	Vegetation Protection Areas	Activities permitted in the vegetation protection areas would include: - Weed management, - Habitat management, - Restoration/translocation activities.	Construction	PM & C
B6	Protection of vegetation protection areas	Activities prohibited in vegetation protection areas 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.	Construction	PM & C
B7	Weeds	Implementation of Restoration Plan the Northern and Southern Ridgeline Corridor.	Construction	PM
B8	Weeds	Ecologist or person trained in weed identification and management should undertake a site weed assessment to identify and describe weed infested areas to be disturbed by the proposed Early Works.	Undertaken in Restoration Plan	PM & TSCPE

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
B9	Weeds	Haul Road Corridor As haul road construction commences effective weed control will be implemented in disturbed areas for early works for the weeds identified onsite in Appendix B of the Restoration Plan. <u>Noxious Weeds</u> Groundsel Bush (*Baccharis halimifolia*)- Class 3 Camphor Laurel (*Cinnamomum camphora*) Class 4 Lantana- Class 4 <u>Weeds associated with a TSC Act Key Threatening Process listed under TSC Act</u> Exotic vines or scramblers (*Ipomoea cairica*) Exotic perennial grasses (i.e. *Paspalum urvillei* and *Setariasphacelata*.	Construction	PM& C
B10	Weeds	Clean machinery, vehicles, and footwear before entering site and/or moving to a new work location.	Construction	PM & C
B11	Weeds	Securely cover loads of weed-contaminated material to prevent weed plant material falling or blowing off vehicles.	Construction	PM & C
B12	Weeds	Dispose of weed contaminated soil at an appropriately licensed waste management facility	Construction	

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
		or topsoil recovered from areas of low weed infestation can be reused onsite with treatment but should be stockpiled separately.		PM & C
B13	Weeds	Remove weeds immediately onto suitable trucks and dispose without stockpiling.	Construction	PM & C
B14	Weeds	Separate weeds from native vegetation where native vegetation is to be used for mulch.	Construction	PM & C
B15	Weeds	Dispose of weeds to an appropriate waste management facility; do not use weeds for mulch.	Construction	PM & C
B16	Weeds	Removal of Camphor Laurel in Haul Road access will require monitoring and treatment for weed infestation post clearing.	Construction	PM & C
B17	Weeds	Send samples of topsoil being imported onto site to a National Association of Testing Authorities (NATA) approved soil laboratory to ensure it contains no weed seeds or propagules (vegetative parts of plants such as buds or offshoots that can grow into new individuals).	Construction	PM & C
B18	Pest Management	Site to be kept clean and tidy at all times with no uncontrolled solid waste.	Construction and Operation	PM & C
B19	Pest Management	Domestic food scraps and waste not to be left onsite.	Construction and Operation	PM & C
B20	Pest Management	Waste receptacles are to be provided at any site compound facilities and amenities. These waste	Construction and Operation	

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
		receptacles to be maintained, classified as per waste hierarchy principles and waste removed from site lawfully in accordance with legislation.		PM & C
B21	Grazing	Management of Cattle entering site from adjacent properties will be undertaken, either by removal or fencing barriers around revegetation clusters.	Construction and Operation	PM
B22	Biodiversity	Council has realigned the haul road to avoid clearing of vegetation type 7. Council commits to the avoidance of clearing of vegetation type 7, and to avoiding the clearing of this vegetation type that falls within the eastern section of the quarry footprint currently shown. The quarry footprint will be revised to reflect this during detailed design.	Construction and Operation	PM & C
B23	Biodiversity	Restricted speed limits will be implemented near vegetated areas for all vehicles.	Construction and Operation	PM & C
B24	Biodiversity	Establish a vehicle wash down to remove dirt and seeds prior to entering clean properties;	Construction and Operation	PM & C
B25	Biodiversity	Cover crops for the purpose of soil stabilisation will be limited to certified clean seed of non-invasive annuals;	Construction and Operation	PM & C
B26	Biodiversity	Ensure any straw bales used for erosion and sediment control must contain no seed	Construction and Operation	PM & C
BF1	Fire Management	Schedule 3 Conditions of Approval 25 and 26.	Prior to operation of the landfill	PM
BF2	Fire Management	Water source for firefighting is via existing water tanker on Stotts Creek Landfill.	Construction	PM

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
BF3	Fire Management	No hot work without hot works fire permit onsite	Construction	PM & C
BF4	Fire Management	Fire extinguishers to be located on all mobile plant	Construction	PM
BF5	Fire Management	Refer to Emergency Response Plan in Section 5.6 of the Environmental Management Strategy.	Construction	PM & C
T1	Movement of Heavy Vehicles	Traffic Management Plan. Contractors to prepare progressive traffic control plans for the movement of vehicles into and around the site for clearing and road construction. Traffic control plans are to be prepared in consultation with the operators of the existing landfill to ensure construction traffic does not impact on the operation of the landfill and vice versa.	During haul road, Quirks Quarry Landfill and West Valley Quirks Quarry construction, and the operation of West Valley and Quirks Quarry Landfill.	PM & C
T2	Movement of Heavy Vehicles	Heavy vehicle movements to occur only during designated working hours, therefore avoiding many species foraging hours.	Construction	PM & C
T3	Traffic	Design of haul road will be in accordance with good practice for heavy vehicle traffic.	Construction	PM & C
I1	Induction and training	All construction team members, contractors and sub-contractors are to be inducted in relation to environmental management issues prior to commencing work on the project. Induction package to be developed by contractor and Project Manager to induct minor contractors.	Preconstruction	PM

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
		The induction program is to address environmental issues relevant to the project.		
I2	Induction and training	An induction procedure will be developed for all visitors to the site. The visitor induction is to address all environmental issues relevant to the activities that could be undertaken by the visitors. Visitors are not to be allowed to enter the site prior to completing the induction.	Throughout the Project.	PM & C
I3	Induction and training	A record is to be kept of all inductions.	Throughout the Project	PM & C
I4	Induction and training	All personnel involved in the project are to have access to the Environmental Management System.	Throughout the Project	PM & C
I5	Induction and training	Staff engaged in environmentally sensitive work such as vegetation clearing and erosion and sediment control are to be properly trained before undertaking the work.	Throughout the Project	PM & C
I6	Induction and training	Staff involved in environmental monitoring shall be trained and competent in the operation, calibration and maintenance of the equipment. Sampling staff shall also be trained and competent in sample collection, handling, storage and transport methodologies and techniques.	Throughout the Project	PM & C
I7	Induction and training	A record is to be kept of all training and an updated record is to be included in the contractors environmental and work health and safety monthly	Throughout the Project	PM & C

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
		report, which will be required under the contract		
S1	Erosion and Sediment Control/drainage	Erosion and sediment control measures to be implemented as per the 'Blue book'.	Construction	PM & C
S2	Erosion and Sediment Control/drainage	Dust suppression to be undertaken to avoid earth works degrading adjacent habitat by dust.	Construction	PM & C
S3	Erosion and Sediment Control/drainage	Install, operate and maintain all erosion and sediment control measures	Construction	PM & C
S4	Erosion and Sediment Control/drainage	Minimise extent and duration of soil disturbance	Construction	PM & C
S5	Erosion and Sediment Control/drainage	Control the location and velocity of drainage flow	Construction	PM & C
S6	Erosion and Sediment Control/drainage	Promptly revegetate/stabilise all exposed and/or unstable soil surfaces.	Construction	PM & C
S7	Erosion and Sediment Control/drainage	Maintain undisturbed and rehabilitated/revegetated area as filters for sediment from disturbance above.	Construction	PM & C
S8	Erosion and Sediment Control/drainage	Stage operations with a view to minimise disturbed/active areas onsite at any given time to minimise the volume of runoff to be managed from the contributing catchment area that is active at any particular time.	Construction	PM
S9	Erosion and Sediment Control/drainage	Maintain all stormwater runoff from disturbed areas as diffuse as possible to minimise sediment loads and maximise the opportunities for	Construction	PM & C

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
		vegetation to strip sediment from the runoff.		
S10	Erosion and Sediment Control/drainage	Keep sources of different quality water separate from each other namely: -'leachate' drainage from the base of the landfill and the active landfill area; - 'dirty' runoff containing sediment from quarrying and landfill active areas; and - 'clean' runoff from vegetated areas with no waste or quarry related activities.	Construction	PM
S11	Erosion and Sediment Control/drainage	Provide adequate stormwater detention volume and ensure that sufficient water is available for construction requirements.	Construction	PM
S12	Erosion and Sediment Control/drainage	Re-use or dispose of water on site: -re-use of 'dirty' runoff for dust suppression and - divert 'clean' runoff into dams for supplementary water supply or overflow off site.	Construction	PM & C
S13	Erosion and Sediment Control/drainage	Employ strategic placement of bunds in the quarry and landfill working areas to ensure that water falling in active areas is managed appropriately	Construction	PM & C
S14	Stockpiling	Topsoil stockpiles would be up to 1m high and subsoil/overburden stockpiles would not exceed 3 m in height.	Construction	PM & C
S15	Stockpiling	Subsoil and topsoil stockpiles would be located within the footprint of the landfill, quarry or on the upper surface of the completed landfill stages.	Construction	PM & C
S16	Stockpiling	Stabilisation measures would be used until vegetation is established on the stockpiled soil.	Construction	PM & C

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
S17	Stockpiling	Stockpiling out of the drip line of trees.	Construction	PM & C
A1	Access Control	Access to and from the site will be controlled as both entrances are gated and locked.No unauthorised access would be permissible	Throughout the Project	PM
Visual1	Visual Impact	The impact of the works will progressively become screened over time by detailed design and implementation of the Biodiversity Offset Strategy and Restoration Plan.	Throughout the Project	PM & TSCPE
WQ1	Water Quality	Any works within 40m of a watercourse will be undertaken in a manner consistent with the NOW (2008) Guidelines for Controlled Activity Approvals.	Construction	PM & C
WQ2	Water Quality	Any proposed sediment basins will 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.	Construction	PM & C
WQ3	Water Quality	NOW officers will be consulted to determine licensing issues during detailed design in the event that any onsite infrastructure intercepts the water table, or if dewatering is required.	Construction	PM & C
WQ4	Water Quality	Groundwater licenses and associated approvals will be obtained prior to works commencing where required.	Construction	PM & C

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
WQ5	Water Quality	No dangerous goods will be stored onsite, apart from small quantities primarily used for equipment maintenance, and herbicides used for controlling weeds onsite.	Construction	PM & C
WQ6	Water Quality	All chemicals, fuels and oils stored onsite will be contained within an appropriately designed imperviously bunded area capable of containing 110% of the largest container stored within the bund. Bunds shall be designed and installed in accordance with the requirements of the relevant Australian Standards and/or the EPA Environmental Protection Manual Storing and Handling Liquids – Environmental Protection.	Construction	PM & C
ASS	ASS and PAF Management of Acid Sulphate Soil and Potential Acid Forming Materials if Discovered	a. Avoid disturbance or drainage of Potential Acid Forming Materials. b. Where this is not feasible, management options will be based on: - The Acid Sulphate Soil Management Plan prepared by the Road Design Consultant; - 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	Construction	PM & C

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
		or storage in or beneath post-quarry landfill; - Carbonate –rich capping, to develop alkaline infiltration to neutralise leachate and coat sulphide grains to reduce oxidisation (passivation); - Direct neutralisation of potential acidity of excavated PAF material; or - A combination of the above.		
H1	Heritage	Cultural Heritage will be managed in accordance with the Cultural Heritage Management Plan.	Construction	PM & C
H2	Heritage	If the 5 springboard trees are to be impacted in early works they will be relocated to an appropriate location where they can be preserved and displayed along with some appropriate signage. Otherwise they will be retained in situ.	Construction	PM & C
N1	Noise	Council will design and operate the facilities to ensure that there are no adverse noise and vibration impacts at sensitive receivers.	Preconstruction	PM & TSCPE
N2	Noise	Follow up noise monitoring will be undertaken at the commencement of quarrying operations.	Operation	PM & TSCPE
N3	Noise	Hours of Construction will be in accordance with the Interim Construction Noise Guideline- standard hours Monday –Friday 7am- 6pm, Saturday 8am – 1pm and no work on Sundays or public holidays. Noting that blasting can only be undertaken	Construction	PM & C

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
		Monday to Friday 9 am-3 pm and Saturday 9am – 12pm.		
N4	Noise	Fixed and mobile plant and equipment is to be in good working order ensuring they produce minimal noise and where available fitted with appropriate noise attenuation such as mufflers.	Construction	PM & C
N5	Noise	Where practical, machines shall be operated at low speed or power and shall be switched off when not being used rather than left idling for prolonged periods;	Construction	PM & C
N6	Noise	Machines found to produce excessive noise shall be removed from the construction work areas or stood down until repairs or modifications can be made; and	Construction	PM & C
N7	Noise	All vehicles accessing the site will use designated haul routes and approved access points only;	Construction	PM & C
N8	Noise	Neighbouring properties shall be notified of the date and time of blasting activities in advance.	Operation	PM & TSCPE
C1	Fuel and Chemicals	Council will familiarise staff with procedures for the management of fuel and chemical spills and ensure they are aware of the location and use of spill kits. Spill kits will be kept in a location which is obvious and accessible;	Construction and Operation	PM & C
C2	Fuel and Chemicals	All construction vehicles will be well maintained to	Construction	PM & C

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
		avoid fuel and oil leakages;		
C3	Fuel and Chemicals	Plant will be refuelled a minimum of 50 metres away from drainage lines. Spill kits, drip trays will be on hand for use in mobile refuelling.	Construction	PM & C
C4	Fuel and Chemicals	All fuels, lubricants, chemicals, hazardous substances will be stored in bunded area(s) that are able to contain 110% of the total volume of material held in accordance with OEH and Workcover guidelines and Safety Data Sheet requirements;	Construction and Operation	PM & C
C5	Fuel and Chemicals	Overnight parking of plant and equipment will be at least 50 m from a waterway;	Construction	PM & C
AQ1	Air Quality	Council will Install a meteorological station onsite.	Preconstruction	PM & TSCPE
AQ2	Air Quality	High dust-generating activities would be avoided during adverse wind conditions when blowing directly toward the nearest residences.	Construction	PM & C
AQ3	Air Quality	Council will use 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.	Construction	PM & C
AQ4	Air Quality	Ensure materials are appropriately stored and contained to prevent windborne releases.	Construction and Operation	PM & C

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
AQ5	Air Quality	Trucks will be required to be covered where material is removed from the site or fill brought to the site.	Construction and Operation	PM & C
AQ6	Air Quality	Exposed surfaces including stockpiles unless revegetated would be watered.	Construction and Operation	PM & C
AQ7	Air Quality	Council will maintain a complaints register to record dust and odour issues.	Construction and Operation	PM & C
AQ8	Air Quality	Use of dust monitoring during the quarry and landfill operations, at locations representative of the nearest sensitive receptors to alert the quarry manager when dust levels exceed the nominated criteria.	Operation	PM & TSCPE
AQ9	Air Quality	During quarry crushing and screening, dust mitigations such as installing spray systems and stabilising work surfaces around the work area will be employed.	Operation	PM & TSCPE
AQ10	Air Quality	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 malodourous waste to minimise the time such wastes would be exposed and minimising the disturbance of previously filled areas.	Operation	PM & TSCPE
AQ11	Air Quality	Completed areas of landfill will be progressively rehabilitated and revegetated to minimise	Operation	PM & TSCPE

ID	Environmental Aspect	Resources Needed/ Requirement/Mitigation	When to Implement	Responsibility
		emissions.		
AQ12	Air Quality	Minimise surface disturbance.	Construction and Operation	PM & C
AQ13	Air Quality	Implement best practice, including all reasonable and feasible dust and odour mitigation measures to minimise emissions from operations.	Construction and Operation	PM & C
AQ14	Air Quality	Prevent and minimise air quality impacts of operations during adverse meteorological conditions and extraordinary events.	Construction and Operation	PM & C
AQ15	Air Quality	Regularly assess air quality monitoring data, and relocate, modify and/or stop operations to ensure compliance with approvals.	Construction and Operation	PM & C
AQ16	Air Quality	Minimise any visible off-site air pollution.	Construction and Operation	PM & C
AQ17	Air Quality	All reasonable and feasible measures will be undertaken to minimise energy use from landfilling and quarrying operations; and	Throughout the Project	PM & TSCPE
AQ18	Greenhouse Gas	All reasonable and feasible measures will be undertaken to minimise greenhouse gas emissions produced from landfilling and quarrying operations.	Throughout the Project	PM & TSCPE

7 Communication

Communication of the operation and environmental performance of the Project will be facilitated by Tweed Shire Council. Tweed Shire Council's Domestic Solid Waste Management Strategy includes objectives and targets for waste management in the Shire and associated Community Consultation.

Council will also prepare a 'Community Education Program' as required by the Condition of the Project Approval Schedule 6, Clause 1. As required by the Conditions of Approval, this Community Education Program will be prepared and submitted to the Director General of the Department of Planning and Infrastructure for approval prior to the commencement of land filling activities.

The Tweed Shire Council Media Unit will support the Waste Management Division of Council in the issue of community communication.

In accordance with Schedule 6 of the Project Approval, Condition of Approval 12, information that will be made publicly available and kept up to date on the Tweed Shire Council website (http://www.tweed.nsw.gov.au/WasteDepots) includes:

- The Environmental Assessment
- Current statutory approvals of the project;
- Approved strategies, plans or programs;
- Summary of monitoring results of the project;
- Complaints register, updated quarterly;
- Copies of annual reviews (over the last 5 years);
- Copies of independent audits, and Council's response to the recommendations of the audits.

Liaison, consultation and communication between Council and agencies will be managed by the Project Manager.

The community contact point for enquires and to lodge a complaint regarding the Eviron Road Quarry Landfill Project is via the Tweed Shire Council Office.

Table 8: Project Contact Details

Tweed Shire Council Contact Details	
Telephone	(02) 6670 2400 or 1300 292 872
After Hours Emergency Calls	1800 818 326
Email	tsc@tweed.nsw.gov.au
Postal Mail	PO Box 816, Murwilllumbah, NSW 2484
Council Website	http://www.tweed.nsw.gov.au/ReportAProblem

7.1 Complaints Management

Complaints about the development, construction or operation of the Eviron Road Quarry Landfill Project will be received by Tweed Shire Council and reviewed by the Project Team. Complaints will be managed according to the nature and subject of the complaint.

Complaints received from the community to any Contractor employed as part of the Project will be reported to the Project Manager. Complaints will also be reported to Tweed Shire Council and any actions as a result agreed. Resolution of complaints will be determined on a case by case basis.

Please see Appendix 10.2 Compliments and Complaints Handling Policy.

7.2 Dispute Resolution

Dispute resolution involving Contractors will be dealt with via contract management processes of the engagement.

Other methods of dispute resolution will be detailed in Management Plans applicable to the Project as required by the Conditions of Approval and Statement of Commitments.

8 Incidents, non-compliance and corrective actions

The Project Manager maintains the responsibility to issue site instructions and non-conformances to consultants or contractors or other Units of Council undertaking works associated with the project. Contractors engaged through the course of the Project will be required to either submit their own Management Plans detailing management of corrective actions in non-conformance situations, or commit contractually to undertaking works in accordance with developed non-compliance corrective action processes as per existing Management Plans for the Project.

Where incidents or non-compliances have occurred or have the potential to occur, the Contractor is to prepare a report that includes the following information as a minimum:

- All known details of the cause, time and duration of the event;
- all known details of the type, volume and concentration of every pollutant released as a result of the event;
- the name, address and telephone number of every person who witnessed the event;
- details of any remedial action taken in response to the event; and
- details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event.

Procedures that require modification as a result of the incident are to be updated in the relevant management plans where necessary.

The Contractor shall report, without delay, any incidents on site causing/ potentially causing material harm to the environment to:

- Tweed Shire Council's Project Manager,
- Environment Protection Authority(EPA) (Environment Line) 131 555
- Ministry of Health (02 9391 9000)
- WorkCover Authority 13 10 50
- Tweed Shire Council (as per Table 8 above)

Contractors and the Project Manager are also required to notify any other relevant authorities as required by the environmental legislation (e.g. NSW Environment and Heritage for incidents involving cultural heritage)

The Contractor shall provide a written report to the OEH (EPA) within 24 hours of receiving any complaint about a significant incident. This report shall detail the complaint, any actions taken to correct the problem and the proposed measures to prevent a recurrence of this or a similar incident.

9 Emergency Response

Tweed Shire Council staff working on the Project will be inducted into this EMS and the emergency response protocol required in environmental incidents. Tweed Shire Council staff will also be inducted into the Contractors' processes when on parts of the site under their control.

Contractors will be required to submit emergency response procedures as part of their Construction Environmental Management Plan, which are required by their contract of engagement.

Emergency Response Procedures will also be covered in the Operational plans for Quirks Quarry Landfill and West Valley Quarry. Emergency Response Procedures are in place for the existing Stotts Creek Landfill and the procedures for all three operations will be cross referenced.

In the event of an incident or potential incident with actual or potential significant off-site impact on people or the biophysical environment associated with the project, the Project Manager shall notify the Director-General and any other relevant agencies as soon as practicable after the Project Manager becomes aware of the incident. In accordance with Schedule 6, Clause 8 of the Conditions of Approval the Project Manager shall provide the Director-General, and any relevant agencies, with a detailed report on the incident.

Please Refer to Appendix 11.5 for further details on emergency response processes.

10 Plans, Strategies and Programs

This section of the Environmental Management Strategy refers to strategies, plans and programs prepared and approved under the COA. These plans will be attached, actions and monitoring scheduled following endorsement.

Timing of the submission of the following plans and strategies is subject to change, and the Department of Planning and Infrastructure will be updated on changes to the scheduled submission.

Table 9: Scheduled Plans, Strategies and Programs

No	PLAN	SCHEDULE	CLAUSE NO	RESPONSIBILITY			APPROVAL AUTHORITY	TIMEFRAME
				Preparation	Implementation	Audit		
1	Leachate Management	3	4	Consultant	TSC	TSC	EPA	Prior to landfilling
2	Stormwater Management Plan	3	5	Consultant	TSC/Contractor	TSC	DG	Prior to landfilling
3	Soil Water & Leachate Management Plan	3	6	TSC/Consultant/Contractor	TSC/Contractor	TSC	NOW EPA & DG	Prior to landfilling
	* site water balance			TSC/Consultant	TSC/Contractor	TSC		Prior to landfilling
	* erosion and sediment control			TSC/Consultant/Contractor	TSC/Contractor	TSC		Prior to landfilling
	* leachate management plan (See also No 1 above)			Consultant	TSC/Contractor	TSC		Prior to landfilling
	* stormwater management plan (See also No 2 above)			Consultant	TSC/Contractor	TSC		Prior to landfilling
	* surface water, groundwater and leachate monitoring program			TSC/Consultant	TSC/Contractor	TSC		Prior to landfilling
	* surface water, groundwater and leachate response plan			TSC/Consultant	TSC/Contractor	TSC		Prior to landfilling
4	Air Quality -* meteorological station	3	9	PW TSC	TSC	TSC		Installed
5	Air Quality Management Plan	3	11	Consultant	TSC	TSC	EPA & DG	Prior to landfilling
		4	5	Consultant	TSC	TSC		Prior to landfilling

No	PLAN	SCHEDULE	CLAUSE NO	RESPONSIBILITY			APPROVAL AUTHORITY	TIMEFRAME
				Preparation	Implementation	Audit		
6	Green House Abatement Strategy	3	13	TSC	TSC	TSC	DG	
		4	6	TSC	TSC	TSC		Submitted
7	Energy Savings Action Plan	3	14	TSC	TSC	TSC	DG & DEUS Guidelines	Submitted
8	Noise Management Plan	3	18	Consultant	TSC	TSC	EPA & DG	Prior to landfilling
		4	10	Consultant	TSC	TSC		Prior to landfilling
9	Traffic Management Plan	3	23	Consultant/Contractor	TSC/Contractor	TSC	DG & RMS	Prior to landfilling
		4	27	Consultant/Contractor	TSC/Contractor	TSC		Prior to landfilling
10	Bushfire Assessment	3	25	Consultant	TSC	TSC	DG & RFS	Prior to landfilling
11	Infrastructure & Services Plan	3	27	TSC	TSC	TSC	DG	Prior to landfilling
12	Security, Litter, Pest and Noxious Weed Management (policy/Procedure)	3	30-32	TSC	TSC	TSC		Prior to landfilling
13	Waste Management Plan	3	34	TSC	TSC	TSC	EPA & DG	Prior to landfilling
14	Rehabilitation	3	35	Appendix 5	TSC	TSC	DG	Prior to west valley quarry
15	Blast Management Plan	4	17	Consultant	TSC	TSC	EPA & DG	Prior to west valley quarry
16	Groundwater Assessment for Quarrying - See also 3 above	4	20	Consultant	TSC	TSC	NOW & DG	Prior to west valley quarry
17	Water Management Plan - See also 3 and 16 above	4	21	TSC/Consultant	TSC	TSC	NOW EPA & DG	Prior to landfilling and quarrying
	* site water balance			TSC/Consultant		TSC		
	* surface water management plan			TSC/Consultant		TSC		
	* groundwater management plan			TSC/Consultant		TSC		

No	PLAN	SCHEDULE	CLAUSE NO	RESPONSIBILITY			APPROVAL AUTHORITY	TIMEFRAME
				Preparation	Implementation	Audit		
18	Acid Sulphate Soil Testing in West Valley Quarry - if found a management plan is to be prepared	4	22	Consultant	TSC	TSC	DG	Prior to west valley quarry
19	Heritage Management Plan- whole site	4	28	Consultant	TSC/Contractor	TSC	DG, OEH Indigenous Stakeholders	Submitted
20	Biodiversity Offset	4	29	TSC	TSC	TSC	DG & OEH	Submitted
21	White Lace Flower Translocation Plan	4	30	TSC	TSC	TSC	DG & OEH	Submitted
22	Survey Plan	4	1	TSC	TSC	TSC	DG	Prior to quarry design
23	Landscape Management Plan	4	31	TSC	TSC	TSC	DG OEH DRE & DPI	Submitted
24	Landfill Environmental Management Plan	6	2	TSC	TSC	TSC	NOW EPA & DG	Prior to landfilling
25	Environmental Management Strategy	6	3	TSC	TSC		DG	Submitted
26	Independent Environmental Audit	6	10	Consultant		Consultant	DG	Within 12 months of commencement of Stage 1
27	Signage and Fencing Plan	3	29	TSC & PW	TSC/Contractor	TSC	DG	Prior to Stage 1
28	Conservation and Rehabilitation Bond Stage 1	4	32	TSC	TSC	TSC	DG	Within 6 months of approval of Landscape Management Plan (LMP – submitted)
29	Conservation and Rehabilitation Bond Stage 2	4	32	TSC	TSC	TSC	DG	As above
30	Plan of Management for Biodiversity Offset area	SOC		TSC	TSC & PW	TSC	TSC	March 2017
31	Annual Review	6	6	TSC	TSC & PW	TSC & PW	DG	March 2017 (submitted)

No	PLAN	SCHEDULE	CLAUSE NO	RESPONSIBILITY			APPROVAL AUTHORITY	TIMEFRAME
				Preparation	Implementation	Audit		
								then annually
32	Notification to Landholders	5	1	TSC	TSC/Contractor	TSC	TSC	As required
33	Independent Review	5	2	TSC	TSC/Contractor	TSC	DG	If required
34	Community Education Program	6	1	TSC	TSC	TSC	DG	Pre – operation of landfill
35	Adaptive Management and exceedance reporting	6	4	TSC, Contractor	TSC, PW, Contractor	TSC, PW, Contractor	DG	Adaptive Management throughout the project and exceedance reporting as required.
36	Incident Reporting	6	8	TSC, Contractor	TSC, PW, Contractor	TSC, PW, Contractor	DG	As required.
37	West Valley Quarry Plan of Management	SOC		TSC	TSC & PW	TSC & PW	TSC & PW	Prior to commencement
38	Rehabilitation and Closure Plan of Quirks Quarry Landfill	SOC		TSC	TSC	TSC	TSC	Prior to closure
40	Habitat Management Plan for the Site			TSC	TSC & PW	TSC & PW	TSC	March 2017

11 Appendices

11.1 Workplace Environmental Safety Policy

Eviron Road Quarry Landfill Project –Stage 1

Objective

To make environmental stewardship and ecological sustainability integral to Council operations.

Commitment

In all of its operations Tweed Shire Council will strive to:

- Minimise waste generation, particularly waste-to-landfill.
- Minimise greenhouse gas generation.
- Minimise the consumption of energy, water and natural resources.
- Prevent Pollution.
- Employ environmental considerations in purchasing decisions.
- Comply with all applicable environmental laws, regulations and agreements.
- Work closely with its employees, contractors, suppliers, clients and the community to develop and implement agreed environmental initiatives.
- Increase staff awareness of individual environmental responsibilities and ensure that ensure that environmental management is included within the staff induction and training programmes.
- Set and achieve measurable targets for energy, waste, water, transport and emissions in order to monitor and report our environmental performance against agreed baselines.
- Implement a process of continuous improvement.

11.2 Compliments and Complaints Handling Policy

Compliments and Complaints Handling

Policy Objective

This policy provides a framework for effectively managing customer compliments, complaints and anonymous requests.

Definitions

Not applicable

Policy Background

The policy is designed to:

- Ensure complaints are received, appropriately recorded and resolved in a timely manner
- Deal with complaints in a fair and equitable manner
- Increase the level of customer satisfaction with the way feedback is handled, and in the delivery of services and systems.
- Recognise and acknowledge compliments Council receives.

Policy

Compliments

There are many instances where Council is complimented on the broad range of services it provides to the community, often in the form of a follow up phone call, written thank you or certificate of appreciation. These occasions highlight when Council has met or exceeded citizen expectations. Information about compliments Council receives often goes unrecognised because, unlike complaints, they require little action. However Council values its staff and compliments are an important feedback mechanism to organisational performance as well as a good sign of an engaged and active community.

Compliments are welcomed because they:

- Indicate which Council services and programs that citizens value.
- Assist in recognising staff whom provide exceptional customer service in their daily duties and ultimately recognise staff who demonstrate Council's values.
- Provides Council and Councillors the chance to share and reinforce examples of best practice in serving the community.
- Builds morale and recognises a job well done across a diverse workforce.

Anonymous compliments will be forwarded to Council's Public Officer, however, identified compliments will be dealt with in the following manner.

Council will ensure any compliment received is:

- Registered in the Records Management System.

- Letters/emails mentioning a specific staff member or team will be forwarded to that team, recognised appropriately and also copied to Human Resources for personnel file.
- Certificates of Appreciation from organisations are displayed in a central folder in the public area Murwillumbah.

Compliments can be sent to:

- The General Manager, Tweed Shire Council PO Box 816 Murwillumbah NSW 2484
- Emailed to tsc@tweed.nsw.gov.au
- Sent through an online feedback form at www.tweed.nsw.gov.au
- Made in person at Council offices or over the phone on (02) 6670 2400 or 1300 292 872

Complaint Definition

What is a Complaint?

- A complaint is an expression of dissatisfaction, made in respect to:
- A Council Officer's role in the provision of service delivery or lack of service delivery that has allegedly affected an individual, group or body of stakeholders whether justified nor not.
- The quality of service provided by council.
- Council failing to act upon a request from the public,
- The policies adopted by council.
- Dissatisfaction with Council's action following the lodgment of a request for service (management through Council's customer request management system) or a request for information (managed through Government Information Public Access Act).

Dealing with anonymous complaints

Details of anonymous complaints should be recorded on a file note and referred to the Public Officer and under normal circumstances will not be pursued unless it is determined that further investigation is warranted based on the merit, seriousness and nature of the complaint and the information provided.

Due to anonymity, Council will be unable to provide any decision of any actions that may be taken.

What is not a Complaint?

- A request for service is covered by the customer request management (CRM) process. Examples are; reporting of road potholes, water leaks, dust and noise, overgrown allotments and dog issues.
- A request for information or an explanation of a policy or procedure.
- Objections to a development application before Council determination or appeals in relation to the determination by council.
- Concerns raised regarding decisions of the elected council.

Anonymous Customer Requests

Anonymous Customer Requests are recorded within councils Customer Request Management (CRM) system. The anonymous request will be entered and recorded; no further action will be undertaken unless it is identified that the issue may affect public safety or council infrastructure safety.

Anonymous Customer Requests have the propensity to redirect council resources from the conduct and provision of other vital services.

Complaints dealt with outside of this Policy

- Complaints made under the Code of Conduct or allegations of corrupt conduct, maladministration or criminal activity are administered through the application of the Code of Conduct, Protected Disclosures as well as by agencies external to council.

Disclosure of personal information

Sensitive personal information disclosed by a complainant in a complaint will not be released by Council to another party unless consent from the complainant is given. Sensitive personal information may include your name, contact and other personal details. Council is obliged to disclose sensitive information without your consent in very limited situations where there is a serious and immediate threat to a persons' health or safety.

How to Lodge a Complaint

Council's Preferred Action

- In writing to
  The General Manager
  Tweed Shire Council
  P.O. Box 816
  Murwillumbah NSW 2484
- By email to
  tsc@tweed.nsw.gov.au

Other Forms of Lodgement

- Telephone Council on (02) 6670 2400 or 1300 292 872 to a Council Officer
- In person at either of Council's offices located at Murwillumbah or Tweed Heads.

Recording of Complaints

Council will record all complaints received (other than anonymous complaints) in the Electronic Content Management System. The principal benefit for recording complaints is that it provides a valuable tool for identifying trends and organisational weaknesses. Further, the information will be utilised as part of a program of continuous improvement.

How Complaints are reviewed

Complaints will be reviewed in accordance with Council's Compliments and Complaints Handling Procedure, which provides an efficient, fair and accessible mechanism for resolving complaints. It recognises, promotes and protects the rights of individuals or organisations to comment and lodge complaints.

Dealing with difficult complainants

Council recognises and accepts members of the public will sometimes display frustration or other behaviour. Council staff are to ensure difficult complainants are not unreasonably denied rights.

Protecting Complainants

Council acknowledges the rights of members of the public to make a complaint. Council will ensure that people who complain are not subjected to victimisation, harassment, discriminated against or prejudged.

Disciplinary action will be taken against any member of staff who breaches this policy.

Complaints Handling Officer

Council's Corporate Compliance Officer is responsible for ensuring that Council's management of complaints is carried out in accordance with the Compliments and Complaints Handling Policy and Procedures.

The Corporate Compliance Officer will monitor policy and procedure compliance and undertake independent investigations of complaints when requested.

Reporting

Council's Corporate Compliance Officer will analyse and report to Council on compliments and complaints received by type and outcomes/actions on a quarterly basis.

Sourcing of the Policy

The policy is available:

- On the Council's Internet www.tweed.nsw.gov.au,
- At Council's offices located at Murwillumbah and Tweed Heads.

A Compliments and Complaints Handling Procedure for reference by staff is located on Council's web site and outlines the actions which Council Officers will implement when receiving either a compliment or complaint and at each of the three levels of complaint review handling.

Related Legislation

Not applicable

Compliance

Not applicable

Forms

Not applicable

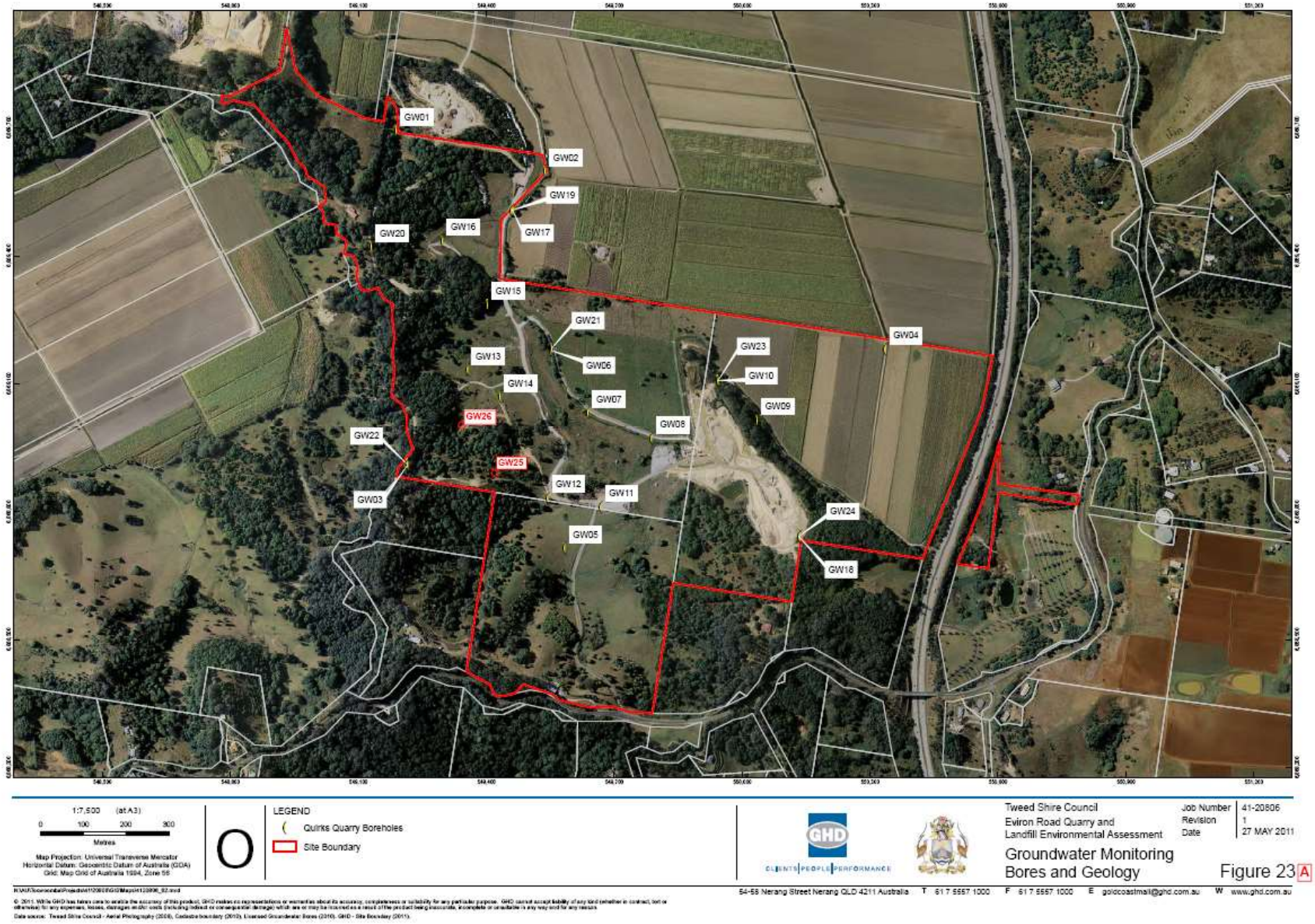
Review Period

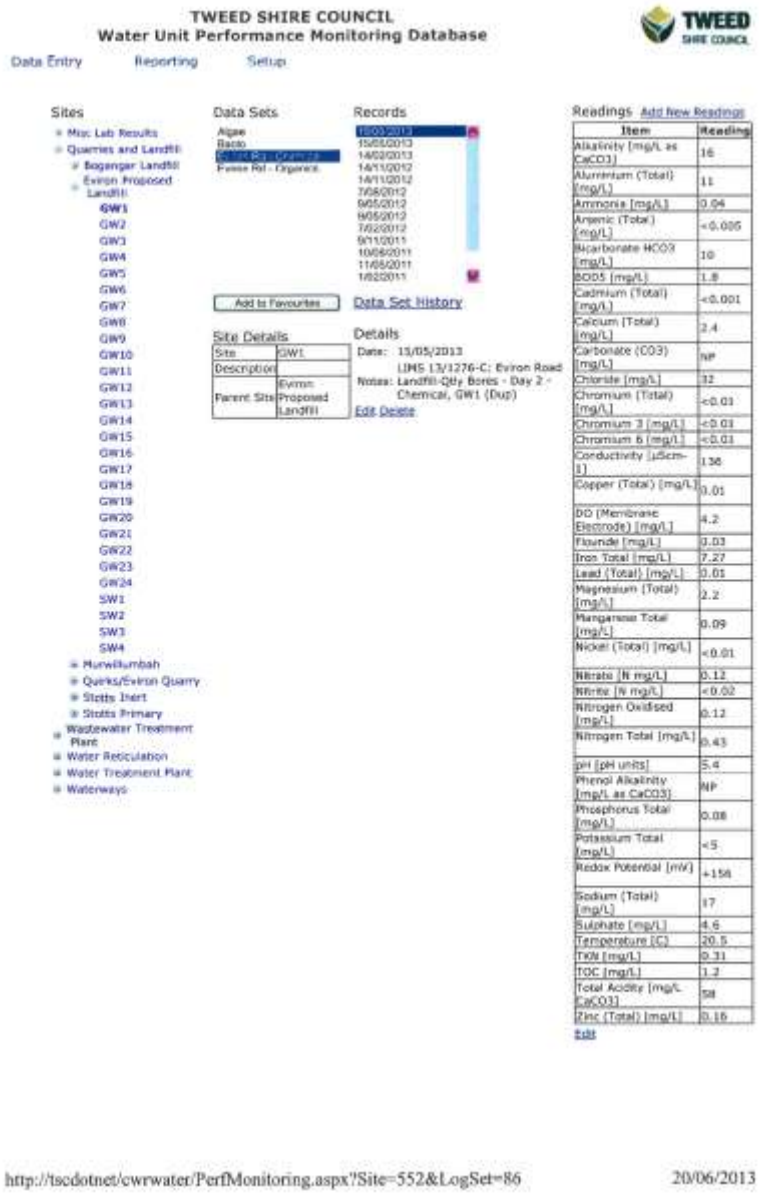
This policy will be reviewed within 12 months of the election of each new Council or more frequently in the event of any legislative changes or change in circumstances.

Useful Links

Tweed Shire Council website

11.3 Groundwater Monitoring Locations





http://tscdotnet/cwrwater/PerfMonitoring.aspx?Site=552&LogSet=86 20/06/2013

11.4 Environmental Risk Management

Risk Assessment Matrix:

Consequence	Probability				
	A	**B**	**C**	**D**	**E**
1	H	H	H	H	M
2	H	H	H	M	M
3	H	H	M	M	L
4	M	M	M	L	L
5	M	L	L	L	L

Risk Matrix Explanation:

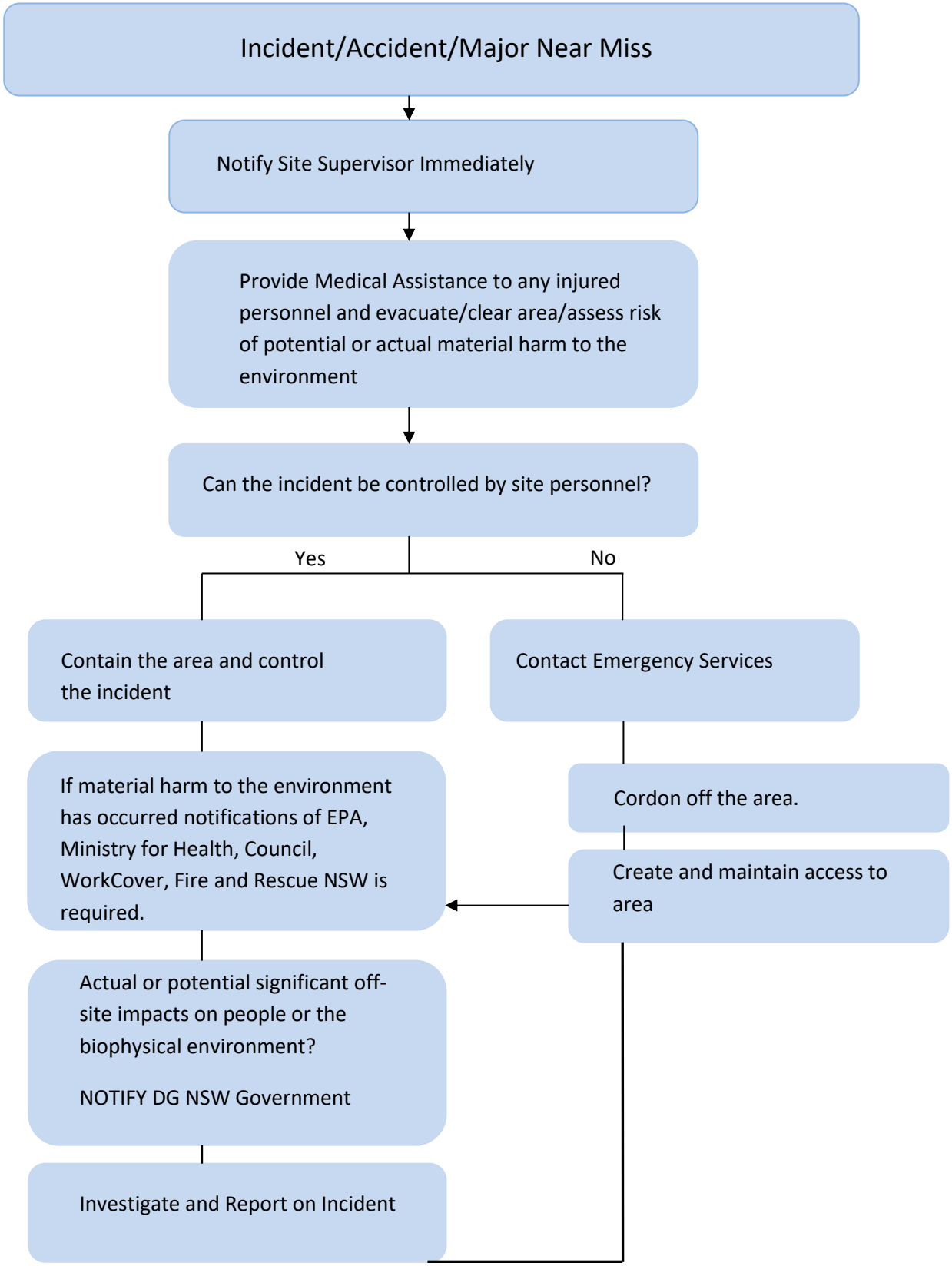
Probability			**Consequence**		
A	Almost Certain	Expected to occur, quite common	**1**	Major	• Major environmental harm, e.g. major pollution incident causing significant damage or potential to harm health or the environment. • Fines and prosecution likely.
B	Likely	Will probably occur	**2**	Significant	• Long term or serious environmental damage • Complaints • Potential for prosecution • Reputation Impact
C	Possible	Might occur at sometime	**3**	Moderate	• Moderate environmental impact. • Possible fine. • Complaints
D	Unlikely	Could occur at some time although unlikely	**4**	Minor	• Minimal environmental harm. • Potential for complaints. • Fine unlikely.
E	Rare	Might occur in exceptional circumstances	**5**	Insignificant	• Little or no environmental harm. • Little or no potential for fines or complaints.

11.5 Emergency Management Procedure

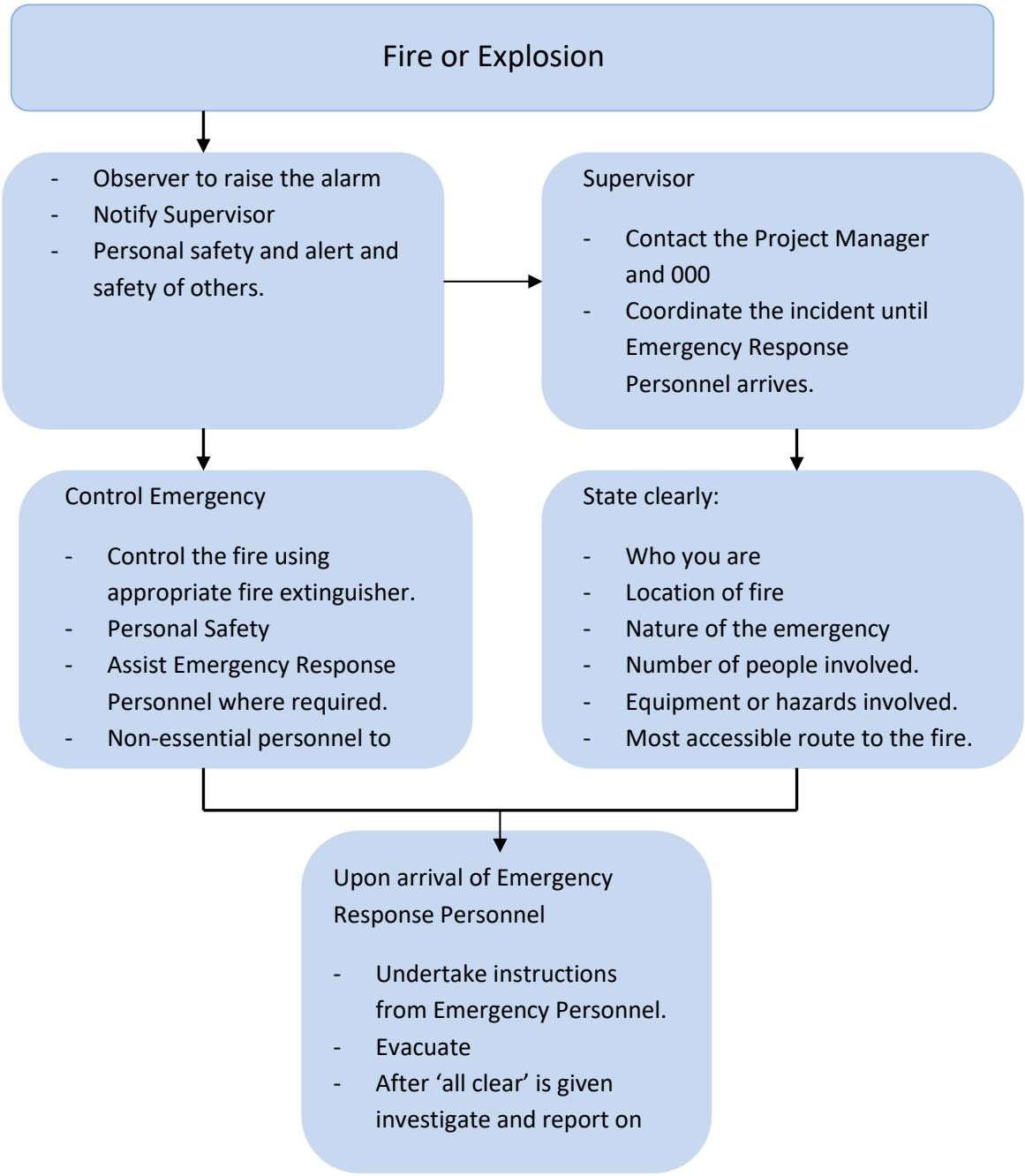
11.5.1 Emergency Contacts List

Emergency Services	000
WorkCover Authority	13 10 50
Energy (Essential Energy)	132 391
Dial Before You Dig	1100
Telstra	132 203
Optus	1800 505 777
EPA Pollution Hotline	131 555
Murwillumbah Hospital- Ewing St, Murwillumbah, NSW, 2484	(02) 6672 0299
Tweed Shire Council	1300 292 872 or (AH) 1800 8180326
Project Manager	07 5569 3147

11.5.2 Accident/Emergency Response



11.5.3 Fire or Explosion



11.5.4 Incident or Injury