



## **Environmental Management Plan**

**Introduction:** Manukau Quarries LP is committed to leadership and providing sufficient and appropriate resources to enable its employees and contractors to fulfill their environmental responsibilities. In conjunction with the current quarry management plan and resource consent conditions, this Environmental Management Plan (EMP) determines the monitoring and reporting requirements.

### **Testing Requirement Summary**

Test	Frequency	Reporting	Due Date	Specific Test
Rainfall Recording	Daily	Quarterly	Mar,Jun,Sept,Dec	
Weather Data	Daily	Quarterly	Mar,Jun,Sept,Dec	
Community Liason Group	6 monthly	1 Month	Nov,May	
Cleanfill	1*1000m3	Quarterly	Mar,Jun,Sept,Dec	
		Non compliance	Immediately	
WaterDischarge	>15mm Rain	Quarterly	Mar,Jun,Sept,Dec	Suspended Solids, Turbidity PH(if treated)
		Non compliance	Immediately	
New Bores	monthly	Quarterly	2021 or RL-20	Depth,water level, pumping level,location
Old Bores	monthly	Quarterly	Mar,Jun,Sept,Dec	
Water Meter		replacement	2021 replace	
	Daily	Quarterly	Mar,Jun,Sept,Dec	Volume per day>400Cum
Groundwater Inflow	Summer	31-Jul	31-Jul	Volume per day
Te Puru Stream Flow	2x Jan-Mar	31-Jul	31-Jul	
Te Puru Stream Quality	2x Jan-Mar	31-Jul	31-Jul	Boron, Dissolved Oxygen, Temp.
Management Plan	Annual	31-Jul	31-Jul	Annual Report
Dust Emmisions	Daily	Quarterly	Mar,Jun,Sept,Dec	Complaints, Visual log

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# Consent 32855 – Land Use Consent

## 1. Pre Works Requirements

- All personnel working on the site shall be made aware of and have access to the contents of this consent document and the associated erosion and sediment control plan and methodology
- Prior to commencement of works the Manager shall be Informed in writing at least 2 weeks prior to the date of the works authorized by this resource consent.
- A regular meeting shall be held between the consent holder and the regulator to discuss any site works or future development
- All Works shall be carried out in accordance with Consent 32855

## 2. Erosion and Sediment Control

### 2.1. Construction

- 2.1.1. All Sediment control Works shall be carried out in accordance with Consent 32855, and be constructed using the TP90 guidelines.
- 2.1.2. Amendments or proposed works shall be notified to the regulator for approval
- 2.1.3. Any Wheel wash installation shall be approved by the regulator prior to construction
- 2.1.4. Where flocculant is required to meet discharge standards, a plan shall be submitted to the regulator and approved prior to installation. This plan shall include but not limited to:
  - Specific design details of the flocculant system
  - A monitoring, maintenance and contingency program including a record sheet
  - Details of optimum dosage including assumptions
  - Results of the initial flocculant trial
  - A spill contingency plan

## 3. Restrictions

- All perimeter controls shall be installed prior to Earthworks
- All Cleanwater shall be diverted from Earthworks where practicable.
- A maximum of 1Ha of Overburden stripping at one time with appropriate controls installed
- Sediment Retention ponds shall be inspected for sediment and cleaned out when they are 20% full
- The Floating pump intake shall have 1.5m freeboard from the sediment
- Stabilization shall occur prior to 30 April to TP90 Standards
- Discharge of site water shall not increase the median suspended solid load for the receiving watercourse

### 3.1. Monitoring & Reporting

- 3.1.1. Rainfall shall be measured daily and recorded. This shall be included in the quarterly reports and upon request from the regulator
- 3.1.2. Samples from the discharge point shall be taken if rainfall exceeds **15mm** or more in a **24hr period**
  - Three samples of **One Liter** shall be analyzed at an accredited lab and tested for Suspended solids, Turbidity and PH (if chemically treated)
  - Sample points are:
    - \*Quarry Retention Pond (prior to discharge)
    - \*10m Upstream of discharge entry point
    - \*30m Downstream of discharge entry point
  - Ecological survey shall be carried out for the first three years of the consent within the receiving stream

## 4. Cleanfilling

Cleanfilling criteria is set out within consent 32855 Conditions 24 – 33 and shall be referred to in conjunction with this document

### 4.1. Records & Acceptance

4.1.1. All imported fill shall comply with the Ministry of Environment “cleanfill” definition as stated in Consent 32855 note 13

4.1.2. A Log book must be kept and provided on a **three monthly basis** (quarterly report) and shall contain (but not limited to):

- Registration of the Vehicle
- Date and time of arrival
- Approximate load size
- Source of material
- Contractor Carting material

### 4.2. Management

4.2.1. Sampling of the cleanfill material shall occur at a rate of no less than **1 test per 1000m3** of imported material.

4.2.2. Sampled material shall be “quarantined” to an area while testing performed. This will allow removal from site and avoid stockpile contamination is deemed contaminated. The regulator shall be immediately notified of the failing result

4.2.3. The Consent Holder shall ensure that any soil originating from industrial or commercial zoned land (excluding first time development of greenfields land), including all soil from within the Auckland Central Business District Area, or soil from land used for horticulture, viticulture or market gardening, Including glasshouses, will only be accepted with appropriate soil testing data, obtained from a suitably qualified and independent person, to confirm that the soil meets the cleanfill acceptance criteria of this consent

4.2.4. Soils are required to be tested for DDT if from a current or former horticultural site

### 4.3. Testing

4.3.1. The Consent Holder shall undertake analytical testing of the fill, not previously tested by the fill generator, at a rate of not less than **1test for every 1000 m3** of imported fill. The testing shall be to analyze for contaminant levels in the fill, including (but not limited to):

- Arsenic,
- Cadmium,
- Chromium,
- Copper,
- Nickel,
- Lead,
- Zinc,
- Total Petroleum Hydrocarbons
- Semi Volatile Organic Compounds

## 5. Bond

No bond is required to be held

## 6. Community Liaison Group (CLG)

The Consent Holder shall consult with the local community {including owners and occupiers of all premises within 500 meters of the site boundary, the Pohutakawa Coast Community Association, the ARC and any other parties

that have expressed an Interest and could potentially be adversely affected) as soon as practicable to facilitate the establishment of a Community Liaison Group (CLG). Refer to Consent 32855 Conditions 44-45

**6.1. CLG Details**

The CLG shall embody the following (but not limited to):

- 5 Representatives of the local community
- The Consent holder
- Regulator Representative
- Held once every 6 months (or less as requested)
- Open forum to discuss Quarry matters including complaints & compliance
- Minutes sent within 1 month of meeting
- Two weeks' notice of impending meeting

## Consent 33685 – Groundwater

To authorize the diversion of groundwater to a quarry pit dewatering pond and authorize the taking of stormwater and groundwater and groundwater for quarry dewatering the quarry uses in accordance with Section 14 of the Resource Management Act 1991.

### 7. Groundwater Bores

- Once new bores are required. Conditions 26,27,31-35 shall be added to the monitoring program
- The Consent Holder shall, when the quarry floor reaches **RL -20m or five years** from commencement of this consent, whichever is sooner, or as otherwise approved in writing by the manager, drill monitoring bores of construction and locations as specified in Schedule A in Consent 33685. When these bores are created, Reference to conditions 3-8 is required
- Bores as shown in Schedule A above shall be monitored monthly for:
  - Bore Depth
  - Static Water Level
  - Pumping Water Level
  - Location

### 8. Inflow Measurements

#### 8.1. Quarry Pump

- 8.1.1. A meter shall be installed to the outlet of the quarry pump to record the discharge of ingress and surface water. This meter shall read to **0.1CuM** and have an accuracy of +/- 5%
- 8.1.2. The meter shall be recorded prior to discharge with results entered into the Watercare website
- 8.1.3. The meter shall be replaced every **5 years** or recalibrated
- 8.1.4. Water shall be stored in the quarry sump during dry month for dust suppression.

#### 8.2. Groundwater Ingress

- 8.2.1. The rate of groundwater ingress to the quarry pond shall be measured in periods of no rain. This shall eliminate overland flows to be included in the calculation. The pond capacity shall be calculated using appropriate survey techniques to achieve a total holding capacity. A calibrated staff shall be located in a static position within the pond and read daily for one week. These measurements will allow calculation of inflows to the quarry ponds during the summer months.

### 9. Stream Flow Te Puru

#### 9.1. Monitoring and reporting

- 9.1.1. Te Puru stream shall be measured for flow at two monitoring points being 1779965mE 5914990mN & 1779890mE 5915315mN on two occasions on separate months during dry weather, without any Quarry discharge. This shall be measured during Jan-Mar.
- 9.1.2. Condition 28 -measure and record the boron concentration, maximum daily water temperature, and minimum daily dissolved oxygen in the Te Puru stream below the Pony Club Creek discharge point on two occasions without any discharge from the quarry operations.

## **10. Emergency Water Supply Action Plan (EWSAP)**

### **10.1. Monitoring and reporting**

- 10.1.1. If a claim is upheld that sufficient evidence shows dewatering within the quarry has significantly reduced the ability to draw water from a neighboring bore (<850m), the regulator can request that the EWSAP shall be implemented.
- 10.1.2. **EWSAP** Within 6 hours of notification from the regulator, the consent holder shall provide a daily supply of reasonable stock drinking water and domestic needs to the claimant. The supply shall continue until directed otherwise by the regulator. This supply would most likely be via water tanker due to the rural nature of this location

## **11. Water Supply Mitigation Plan (WSMP)**

### **11.1. Requirements**

- 11.1.1. If requested in writing by the regulator, the consent holder shall develop and implement a WSMP within one month. Mitigation in respect of an affected spring, stream and or bore may include but not limited to:
  - Lowering of a pump
  - Replacement of a pump
  - Deepening a bore
  - Providing a new bore or pump
  - Providing a water supply

## Consent 33120 – Air Discharge

To authorize the discharge of contaminants to the air, primary dust, from associated activities with the operation of a quarry pit in accordance with section 15(1)(c) of the Resource Management Act 1991.

### 12. Limit Conditions

- That the Consent Holder shall at all times operate, maintain, supervise, monitor and control the process so that emissions authorized by this consent are maintained at the minimum practicable level.
- That the Consent Holder shall ensure that beyond the boundary of the site there shall be no odour, dust, particulate, smoke, ash or fume caused by discharges from the site which, in the opinion of an enforcement officer, is noxious, dangerous, offensive or objectionable.
- That the Consent Holder shall ensure that no discharges from any activity on site shall give rise to visible emissions, other than water vapour and steam, to an extent which, in the opinion of an enforcement officer, is noxious, dangerous, offensive or objectionable.
- That beyond the boundary of the site there shall be no hazardous air pollutant caused by discharges from the site, which is present at a concentration that is, or is likely to be, detrimental to human health or the environment

### 13. Dust Suppression

- All plant & machinery shall be maintained and used to the best practice standard to minimize the creation of dust from the processing of aggregates. Sufficient dampening of the process, stockpiles or other dust generating works shall be evaluated by the quarry manager for excessive generation and subsequently watered for suppression.
- All unsealed roads shall be kept in a damp state to avoid visible discharge over the site boundary. Speed limits of 10Kmph shall be adhered to, reducing the distribution of dust.
- Sealed roads shall be kept clean of dust generating materials.
- The Quarry Manager shall visually inspect and record the site for dust emissions daily.
- If dust emissions require suppression, a suitable watering system shall be employed. This system shall water the emission sufficiently to eliminate further discharge from the site i.e. Water cart with spray nozzles



## Consent 33121 – Watercourse

To Authorize works in a watercourse including culverts and the diversion of a watercourse, being an unnamed tributary of Te Puru Stream, In accordance with Sections 13 and 14 of the Resource Management Act 1991.

### 14. Pre Works Requirements

- All Personnel shall be aware of and have access to the above consent and EMP
- Regulator shall be notified **2 weeks** prior to any works
- A preconstruction meeting shall be held and agreed prior to works
- Maintain a 15m Buffer from the Te Puru Stream
- Works to be completed during 1 October to 30 April

### 15. Environmental Methodology

- Any works within a watercourse requires a written methodology to be submitted to the regulator prior to any works. Any amendments shall be notified prior to commencement of the change and agreed upon by the regulator
- Methodology shall include but not limited to:
  - Stockpiling of cut material clear of stream channel
  - Erosion and sediment plan for the proposed works (TP90 Standard or equivalent)
  - All Machinery shall operate from the bank at all times unless alternative methods have been submitted and agreed by the regulator
  - Flow diversion of the works and emergency spillway\flow path
  - Design of Temporary Dams and mitigation of flow
  - Sediment discharge
  - Daily Stabilization
  - Culvert installation procedure including abutment stabilization
  - Aquatic wildlife mitigation plan (TP131)
  - Asbuilt Plans to be submitted within **4 weeks** of install (Condition 20)
  - Ecological Assessment Plan (future)
  - Planting and Maintenance Plan (Condition 22)