Appendix I Quarry Management Plan

Environmental Monitoring Approved

Auckland Council

Date: 12/10/2026
LUC60291842
Approver: Rebecca Rees
Related conditions: Conditions 3, 4, 5 and 6
Revision: A (2026)

STEVENSON

Clevedon Quarry Management Plan

Updated July 2026



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1. General Information

1.1. Introduction

1.1.1. Purpose

This Quarry Management Plan (QMP) is for Clevedon Quarry located at 546 McNicol Road, Clevedon. This document sets out operating and management procedures for the Clevedon Quarry, as required by conditions 5-6 of the consents (LUC60291842, WAT60302444, DIS60302443).

The purpose of this document is to provide a comprehensive guide for the management of the quarry especially regarding environmental controls and guidelines. This plan includes summaries of all relevant environmental plans. In some instances, more detailed environmental plans will be approved separately by Auckland Council and referenced within this document.

In the event of any conflict in meaning, or ambiguity, between the terms and conditions of the resource consents and the provisions in the QMP, the resource consents take precedence.

1.2. Document Control

1.2.1. Structure of Document

The QMP has been designed as a permanent reference document in the field, and as a training manual. Every employee is expected to be familiar with its use and location at the site. Each section is tabbed and self-contained so that it can be updated easily and may be removed for use in the field, in training sessions, or for self-instruction.

1.2.2. Operational Policies and Standards

The objective of the owners of the quarry is to operate the quarry in an environmentally friendly manner in concert with the community, efficiently, within the legal framework (including the provisions of the Resource Management Act 1991 (RMA)).

1.2.3. Document Register

Copies of the QMP, any additional environmental plans and their amendments

will be issued to the following people:

Document Number	Distribution
1	Council Copy
2	Quarry site office

The Master QMP document will be maintained electronically.

1.2.4 Ongoing Review

If the procedures of the QMP require attention because of changed operating circumstances, the Environmental Engineer in conjunction with the Quarry Manager may issue amendments to the QMP.

1.2.5 Updates undertaken

The below is a brief table of the main amendments made to this version of the Quarry Management Plan

Section	Amendments made **(December 2023)**
1.2.3	Amended to suit Stevenson Aggregates Structure – owner of Clevedon Quarry since 2018.
3.4	Updated to include location of speed camera installed 2019 – also amended in **appendix 13.9**
5	Requirement for Annual slope stability monitoring report added to QMP
6	Update on status of Groundwater and Surface Water Monitoring and Contingency Plan

Section	Amendments made **(March 2024)**
3.5	Updated date of speed camera instalment
11.2	Updated to include date of landscape planting completion
13.1	Key contacts updated
13.4	Updated TMP drawing (2023 version)
13.6	Updated speed camera locations and drawing. Added potential location of "slow down" sign
13.7	Updated ESCP (2023-2024 version)
13.8.4	Updated Clevedon Quarry contacts
13.10	Updated date of most recent ESCP
13.10	Results of Clevedon Quarry flood assessment added – North Stream
8.1	Updated drawing of ESCP (2023 version)
	Changed Fulton Hogan to Stevenson throughout QMP where applicable

Section	Amendments made **(June 2025)**
3.7	Added section on on-site parking
4.1	Updated to include responsibilities in monitoring table and added monitoring reports table
4.2	Updated to include location map of meteorological monitoring station
4.3	Added information on sediment retention pond
13.4	Updated TMP drawing (2025 version)
13.4	Map added with key areas on site
13.5.1	Non-compliance protocols for the CCSRG added.

Section	Amendments made **(July 2026)**
13.1	Updated all relevant contact numbers – Quarry manager, divisional manager, Stakeholder manager, Council contact.
13.3	Updated ESCP drawing (2026-2027)
13.3	Updated TMP drawing (2026)
9 & 13.3	Added Light Management Plan information and approved map (2026)
13.5	Updated slow down sign information.
13.8	Updated community liaison section
7	Removed full ESCP to be consistent with other plan structures. The QMP will provide a summary of all reports, with individual reports being approved separately.
1.3	Added Document history

1.3. Document Approval

Any amendments are to be approved by Auckland Council prior to issue.

1.3 Document History

Report	Created/updated by	Date	Reviewed by	Date
2026 QMP	**Ella Kelso** – Environmental Engineer	7/09/2026	**Ashton Cogdale** – Quarry Manager	11/09/2026

2. Current and Future operations

2.1. Site Plans

The following site plans are included in Appendix 13.3

- Existing topography, contours, drainage, natural watercourses, vegetation cover and other significant landform or features.
- Site layout, general design and location of buildings.
- Areas of extraction (pits and faces included), storage (including overburden), stockpiling, processing and distribution.
- Predicted final contours and drainage.
- Areas where land disturbance activities are not proposed.
- Mining sequence plan
- Traffic circulation and onsite parking

2.1.1. Vegetation Removal and Site Preparation

Stripping and vegetation removal campaigns will be undertaken under the indicative mining sequence plan (Appendix 13.4)

Prior to each stripping campaign the erosion and sediment control plan will be updated and sent to Auckland Council for approval.

3. Traffic Management Plan

3.1. Hydro Seeding and Visual Mitigation

Hydro seeding or other visual mitigation will take place on the final batter slope of benches between RL 200 m and 290 m, as soon as practical and within six months of completion of the quarrying in that area.

Any areas of exposed overburden that is not intended to be worked over a period of 24 or more months will be hydro seeded or otherwise visually mitigated.

Pine trees on the top of the northern ridgeline marked on the site plan will not be harvested, to maintain a visual screen (refer to Appendix 13.4).

3.2. Cartage Contractors Safety Rules and Guidelines/Driver Inductions

A physical copy of the following Cartage Contractors Safety Rules and Guidelines (CCSRG) will be given to all truck drivers visiting the quarry on their induction. During the induction, the CCSRG will be discussed to ensure that the drivers fully understand what is expected of them. A register will be kept of all of the quarry truck drivers who have been through the driver induction. Refer to Appendix 13.5.
Compliance with the CCSRG will be monitored through quarry staff observations, as well as the use of a speed camera positioned at McNicol Road. (Refer Appendix 13.6 for location). Any non-compliance will be recorded against the offending driver's name.

Drivers that breach the CCSRG will be re-educated on the rules and notified of the implications for further non-compliance.

Sanctions for non-compliances include drivers being excluded from the quarry after multiple offences, for set periods of time or permanently if offences are determined to be serious enough.

3.3. Signage

The Quarry Manager to ensure the following signage is onsite and maintained in a good condition at all times:

- *The name of the Quarry Supervisor*
- *Hours of operations*
- *Conditions of vehicle entry*
- *PPE requirements*
- *Dusty loads must be covered or dampened*
- *No engine braking on local roads (on exit)*
- *50 kph on McNicol/Tourist Roads (on exit)*

Speed and directional signage will be positioned at appropriate points along the quarry access road and haul road.

3.4. Hours of Operation and Limits on Quarry Truck Movements

Hours of operation for onsite extraction activities are 24 hours, seven days a week.

Quarry truck movements shall occur within the times detailed in the table below.

Monday – Friday	06:30 – 18:00
Saturday (excluding public holidays)	06:30 – 13:00

Quarry truck movements may continue between 18:00 and 21:00, Monday to Thursday, on a maximum of 60 days per calendar year. Advance notice will be provided to the Community Liaison Group of any upcoming projects that will require the use of these 60 days.

Quarry truck movements may occur outside of the specified times, including on Sundays and public holidays, if deliveries of aggregate are required by emergency works.

Truck movements to and from the quarry shall be limited to a maximum rate of 45 per hour. This will be increased to a maximum rate of 90 per hour once the widening and sealing of the unsealed section of McNicol Road has been completed.

Truck speeds and movements are reported quarterly in the Quarry Managers Report.

Complaints will be managed according to the procedure outlined in section 11.1

3.5. Speed Camera Locations

The details of the location of the speed camera installed 2019 are included in Appendix 13.6.

3.6. Monitoring of Tourist/Creightons/Papakura-Clevedon Intersection

At the Tourist Road/Creightons Road/Papakura-Clevedon Road Intersection, the vegetation on the northern corner between Tourist Road and Papakura-Clevedon Road will be monitored annually to make sure the visibility is suitable for quarry trucks travelling away from the quarry.



Figure 1: Location of vegetation monitoring

3.7 Onsite parking

Onsite parking is located outside of the main offices, shown in the yellow areas in figure 2. Further information on the site layout is located in appendix 13.4.



Figure 2: Location of onsite parking

4. Dust Management Plan

4.1. Management and Monitoring Practices

Methods used to manage dust on site include

- Wetting of the road by use of a water cart, front end loader or sprinklers.

The Quarry Manager will ensure; The haul roads and access roads, including the site entrance, are inspected daily to ensure they are clear of debris and maintained by grading and laying of fresh gravel. The site entrance/exit was paved in May 2025 which has reduced dust generation and tracking in the area, we will continue to maintain the area as per the DMP.

- Quarry staff are aware of the consent conditions relevant to dust management
- Vehicles travelling within the quarry do not exceed 30 km/h, to minimise the risk of generating dust.
- The drop height of material being loaded onto trucks is kept to a minimum.
- Where practicable, loading and unloading is undertaken on the leeward side of stockpiles
- Haul distances are minimised as far as practical
- The stockpiles are monitored daily to ensure wind is not creating dust.
- Exposed areas are monitored or stabilised to ensure wind is not creating dust that is objectionable beyond the quarry boundary.
- Contouring and re-vegetation of overburden dumps takes place as soon as practicable, to reduce windblown dust.

Contingency plan: If dust mitigation measures are not effective and areas of the site become excessive sources of dust then work in those areas will be stopped until the issue has been resolved or the area irrigated.

The following table outlines the dust monitoring methodology that will be implemented at the quarry. The frequency of monitoring is defined but it in the instance of strong winds, observations of dust moving off-site or a complaint being received, the monitoring programme will require to be undertaken more regularly.

Monitoring Activities	Frequency	Responsibility's
Check weather forecasts for strong winds and rainfall.	Daily	Quarry manager
Observe weather conditions, wind via observations (Beaufort scale).	Daily and as conditions change	Quarry manager
Inspect dust generating activities to ensure dust emissions are effectively controlled.	Daily and as new activities are commenced.	Quarry manager and quarry supervisor
Inspect dust generating activities to ensure dust emissions are effectively controlled.	Hourly in winds over 5 ms^{-1} (Beaufort scale 4 or greater)	Quarry manager and quarry supervisor

Inspect the sediment retention pond.	Weekly	Quarry supervisor / Quarry manager
Meteorological station maintenance	When needed / Quarterly	External professional

The following table outlines the general environmental reports that are undertaken. The daily reports cover questions on the ponds, dust, turbidity, water runoff, and more. The weekly and monthly reports are more detailed with questions on dust, spill kits, chemical substances etc.

Monitoring reports	Frequency	Responsibilities
Daily environmental checks	Daily	Quarry supervisor/ Quarry Manager
Weekly environmental checks	Weekly	Quarry supervisor/ Quarry Manager
Monthly environmental checks	Monthly	Quarry supervisor/ Quarry Manager

Should it be required by Auckland Council, instrumental monitoring of dust concentrations beyond the site boundary will be implemented. The methodology, including the design of the monitoring system, the monitoring methods used, location of monitoring points, alert thresholds and reporting systems will be determined in consultation with Auckland Council, prior to monitoring taking place.

Complaints will be managed according to the procedure outlined in section 11.1

4.2. Meteorological Monitoring Station

A Meteorological Monitoring Station measuring rainfall is located on site, this was upgraded in 2019 to include measuring of wind speed, wind direction and temperature. This was destroyed during Cyclone Gabrielle. A new Meteorological monitoring station was installed on the 1st of November 2023 – the station's model is HSN 26061 (pictured below). Meteorological data from the station will be continuously logged and will be available to site staff and Auckland Council on request. The data is monitored regularly, and notifications are set up for significant rainfall. The meteorological station has quarterly maintenance checks by an external professional to check everything is in working order and to verify the accuracy.



Figure 3: Meteorological station



Figure 4: Location of meteorological monitoring station shown in blue.

4.3 Sediment Retention Ponds

We have an active Sediment Retention Pond on site. Water from the quarry is directed to the holding pond where it is treated via a floc box and able to settle and is then transferred to the main ponds forebay where it continues the settling process before discharging to the north stream. Water from the wheel wash is treated via floc box before entering the holding pond. The ponds are inspected on a weekly basis for water and sediment levels and receive maintenance when needed. The sediment retention pond supplies water to the water cart.



Figure 5: Sediment Retention Pond and Holding Pond.

5. Slope Stability Monitoring Plan

For the purpose of providing an on-going review of geological conditions that are revealed as the quarry pit is extended, and to provide pro-active pit slope design modifications where necessary for forward planning, geotechnical/geological inspections of the quarry pit slopes by an experienced geotechnical engineer or engineering geologist will take place, prior to any new area of the top cut batter slope being excavated, or following a slip event (apart from minor

slope frittering) observed either within the established quarry pit area, or within the quarry extension area.

Following an inspection, a report will be complied to provide a record of the inspections together with recommendations relating to remediation of slip areas and matters that will affect forward planning.

The latest Annual Slope Stability Monitoring Report (2023/2024) includes trigger levels and actions which are reviewed and actioned accordingly. The latest report (2026) has been approved by Auckland council and attached as an appendix.

6. Groundwater and Surface Water Monitoring and Contingency Plan

The Groundwater and surface water monitoring and contingency plan has been approved by Auckland council. This year PDP completed the Annual Monitoring Report (AMR) associated with this plan. We are awaiting council's approval for the AMR.

7. Erosion and Sediment Control Plan

Annual Erosion and Sediment Control reports are being provided as per consent condition 105 requirements.

A record will be kept of any maintenance carried out on erosion and sediment controls, and two days' notice will be provided to the Team Leader – Southern Monitoring prior to the removal of any required erosion and sediment controls.

7.1. Specific Erosion and Sediment Retention Measures

The general principles adopted during the earthworks activities which will be incorporated in the ESCP are as follows.

- Minimise the necessary area of disturbance as far as practically possible while satisfying all requirements for development of the site.
- Stage the earthworks and progressively stabilise exposed areas following completion.
- Where possible, divert clean water runoff away from the earthworks site, thus reducing the contributing catchment to the exposed earthwork areas.
- Intercept and divert sediment laden runoff from exposed areas to specifically designed treatment devices prior to discharging into the downstream environment.
- Implement measures to prevent construction traffic tracking sediment onto McNicol Road.
- Regularly inspect the erosion and sediment control measures and undertake any maintenance necessary to maximise the potential retention of sediment on the site.
- Undertake ongoing assessment of the erosion and sediment control methodology and, if required, adjust as the work progresses.
- Ensure site staff are aware of the requirements of the ESCP and the relevant resource consent conditions prior to the works commencing.

7.1.1. Site Exits

Site entry and exits are strictly controlled. The site exit is stabilised and will continue to be maintained in a good condition.

In addition, a stabilised turnaround and loading area is maintained within the quarry. This provides for the trucks to load from a stabilised platform ensuring that the trucks are kept clean at all times. The emphasis will be on maintaining the vehicles in a “clean” state to maximise the effectiveness of the stabilised site exit.

In May 2025 the entrance/exit of the quarry was paved. This has significantly reduced tracking from the quarry and has improved drainage in the area.

7.1.2. Sediment Retention Pond

The existing SRP (located in the north-west corner of the site) will continue to be operated and maintained in accordance with conditions of consent.

All runoff from the quarry face, crushing and stockpile areas will discharge to the quarry pit floor.

7.1.3. Flocculation

Ongoing monitoring and maintenance of the chemical treatment system will continue in accordance with the current requirements.

7.1.4. Stabilisation

Stabilisation forms a key component of the overall environmental strategy. Once the over burden is stripped and removed from site the remaining works are associated with the extraction of rock. This ensures that the sediment generating potential of the site is minimised.

The site exit and loading area will be maintained in a condition that will prevent tracking of sediment onto McNicol Road.

All bunds and stockpiles (that are not a rock-based product) will be grassed and mulched, or hydroseeded. Site management will continue to actively work to minimise exposed areas by evaluating and hydroseeding such areas as and where applicable to minimise dirty water run-off.

The methodology will ensure that that the site will be in a continual state of progressive stabilisation.

7.2. Monitoring and Maintenance

All erosion and sediment control measures will be inspected daily by the site staff and on a regular basis by the Site Manager. Site monitoring will be undertaken before and after rain events. Any required maintenance or improvements to control measures will be undertaken as soon as possible. Sediment retention measures will be cleaned of sediment when 20% full of sediment. All erosion and sediment control measures will be maintained in accordance with GD05.

The weather forecast will be checked for the week ahead and monitored every workday morning. Any potentially significant rainfall systems will be noted and monitored for development throughout the week.

Preparation for significant rainfall events will be managed by the quarry manager, with notice and instructions given to staff.

A significant rainfall event is one that is expected to produce over 15 mm of rain in any 24 hour period.

We have turbidity monitors installed in the North Stream (as of 2026), however we are still confirming the accuracy of these monitors. When necessary, manual samples are taken from the stream. All turbidity results following significant rainfall events are recorded and reported to council in the annual Erosion and Sediment Control Plan, as well as quarterly though the Quarry Managers Report.

***A full version of the ESCP has been approved by Auckland council for 2026.**

8. Noise Management Plan

8.1. Noise Measurement

Noise within the quarry will not exceed the noise levels displayed in the table below, at the notional boundary from any dwelling that existed on the 27th of July 2018.

Times	Noise levels
7am-9pm, Monday to Friday	LAeq 55dB
7am-4pm, Saturday	LAeq 55dB
All other times and on public holidays	LAeq 45dB LAFmax 75dB

Note: Independent noise measuring will take place if required by Auckland Council. The details of measurement, and any results obtained will be submitted to the Team Leader – Southern Monitoring, and be included in future revisions of the Noise Management Plan.

Complaints will be managed according to procedure outlined in section 11.1

8.2. Plant and Machinery

The Quarry Manager is to ensure that machinery and plant on site is operating to noise levels recommended by the manufacturer.

Noise from the crushing plant will be observed daily to ensure that the plant is not generating unexpected, objectionable noise.

The Quarry Manager and weighbridge operator will ensure that all vehicles entering the quarry comply with site noise limits. This will relate to issues such as broken exhausts, that may invoke noise complaints for the site. Should a vehicle exceed site noise limits in the view of the Quarry Manager, it will be refused entry until it complies.

8.3. Blasting

All blasting at the quarry is restricted to occur between 9am and 5pm, Monday to Saturday, and to an average of two occasions per day over a calendar fortnight. Exceptions to these restrictions may only occur if necessary for safety reasons.

Noise from the use of explosives must not exceed a peak overall sound pressure of 120db l_{zpeak}. The measurement of blast noise will be measured at the notional boundary of 600 McNicol Road.

Vibration from blasting must not exceed the limits set out in German Standard DIN 41503 1999: Structural Vibration – Part 3 Effects of Vibration on Structures. Vibration from blasting will be measured within a building in accordance with Australian Standard AS 2187 2006, Part 2 Appendix j.

A siren will be used prior to blasting to alert people in the vicinity.

The nearest neighbouring property will be notified prior to blasting.

9. Lighting

Any lighting, security or other, shall be designed and operated so as not to cause any light spill or disturbance glare for occupiers of any other properties. Any spill or glare onto McNicol Road shall comply with E24.6 of the Auckland Unitary Plan (AUP).

We have one security light located on the property as seen in the lighting map. We have submitted a plan to Auckland council in compliance with the consent. The light causes no spill or glare for occupiers of neighbouring properties.

See section 13.3 for the lighting map.

***A full version of the lighting plan has been approved by Auckland Council in 2026.**

10. Archaeology

Should, at any time, potential koiwi (human remains), archaeology or artefacts be discovered, then the following protocol will be followed:

1. All earthworks will stop in the immediate vicinity (within 10 metres of the site of discovery) and a suitably qualified archaeologist will be consulted to establish the type of remains.
2. If the material is identified by the archaeologist as human, archaeology or artefact, earthworks must not be resumed in the affected area (as defined by the archaeologist). The consent holder must immediately advise the team leader, resource consenting and compliance, Heritage New Zealand Pouhere Taonga and NZ Police (if human remains are found) and arrange a site inspection with these parties.
3. Local iwi will be contacted immediately if any potential koiwi (human remains), archaeology or artefacts are discovered.

If any site that meets the RMA definition of historic heritage is exposed, these sites shall be recorded within the Auckland Council Cultural Heritage Inventory by the project archaeologist/historic heritage expert.

11. Monitoring and Reporting

11.1. Complaints

When a complaint is received the following details are to be recorded (includes, dust noise, traffic and stormwater):

- Date, time, and location and nature of the complaint
- Complainants name, address, and phone number (unless they refuse to supply these details)
- Weather conditions including rainfall, wind speed and direction.
- Investigate the cause/source and extent of any nuisance.
- Any relevant environmental controls used on the day.
- Any relevant equipment malfunctions and remedial actions put in place.
- Appropriate remedial actions to control the problem and prevent a reoccurrence.
- Record the incident on a complaint form.
- Follow up with the complainant and advise them of the remedial actions put in place.
- Record details for discussion at the next Clevedon Community meeting.
- File the complaint form in the online complaints register.

Further detail on the complaint handling process is contained in the Stakeholder and Community Engagement Plan (Appendix 13.8).

11.2. Ecology

Two planting plans are required by Auckland Council, one plan has already been submitted and the other plan is not yet required, as it is related to future planting. The plans will include the proposed species, size at the time of planting, plant spacing, and an implementation schedule for maintenance and, weed and pest animal control.

As per consent conditions, a planting plan was submitted to council on the 13th of March 2019. This plan was approved by council and includes plans for front yard landscape planting. This planting was completed in February 2020.

The second plan that is required is for the planting of 600m^2 of native vegetation following the removal of kanuka shrubland.

Before the removal of the kanuka shrubland, a plan to minimise potential effects on indigenous skinks/geckos will be submitted to the Team Leader – Southern Monitoring and Auckland Council's ecologist.

The Kanuka Shrubland has not been removed yet, we may remove it in December 2027. All consent conditions will be adhered to and we will seek approval from Auckland Council prior to removal.

11.3. Quarterly Reporting

Quarry Managers Report to be produced quarterly and should include

- Truck movements
- Complaints (including responses)
- Any monitoring data required by the land use consent conditions.

This will be provided quarterly, to an independent professional, at least two weeks prior to any Community Liaison Group meeting.

11.4. Groundwater Reporting

Ground water monitoring to occur in accordance with the following table and the GSWMCP.

Groundwater Reporting Requirements		
Information	**Reporting frequency**	**Due date(s) for reporting**
Water meter reading including time and date	Quarterly	No later than 20 working days after 28 February, 31 May, 31 August and 30 November
Daily rainfall	Quarterly	No later than 20 working days after 28 February, 31 May, 31 August and 30 November
Groundwater level reading including time and date	Quarterly	No later than 20 working days after 28 February, 31 May, 31 August and 30 November
Sump groundwater inflow estimation	Annual	30 June
Groundwater inflow quality	Annual	30 June
Stream flow monitoring	Annual	30 June
Stream flow quality	Annual	30 June
Stream augmentation flow rates	Quarterly	No later than 20 working days after 28 February, 31 March, 31 August and 30 November
Efficient water use	Annual	30 June

12. Stakeholder and Community Engagement

The Stakeholder and Community Engagement Plan outlines how Stevenson will engage and interact with stakeholders and community members with respect to matters concerning the Clevedon Quarry and is included in Appendix 13.8.

13. Appendices

13.1. Key Contacts

Name	Company/Position	Phone Number	Email
Ashton Cogdale	Quarry Manager	[redacted]	[redacted]
Roel Van Es	Quarry supervisor	[redacted]	[redacted]
Daniel Topp	Divisional Manager	[redacted]	[redacted]
Ella Kelso	Environmental Engineer	[redacted]	[redacted]
Caryn Gaffney	Community and stakeholder manager	[redacted]	[redacted]
Tara Edwards-Tusa	Māori Engagement Manager	[redacted]	[redacted]
Jo Young	Environment Manager	[redacted]	[redacted]
Margaret Faletagoai	Auckland Council	[redacted]	[redacted]

13.2. Copy of Resource Consent

A copy of the resource consent is kept onsite and is available upon request.

13.3 Site Plans

This is an uncontrolled copy if photocopied or printed from the Intranet.
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STEVENSON

Clevedon Quarry Key Areas



Fulton Hogan

N

WAIROA NORTH FAULT

PROCESSING & STOCKPILE AREA

LIMIT OF QUARRY OPERATIONAL AREA

INDICATIVE STREAM LOCATION

439 OTAU MOUNTAIN ROAD

WAIROA RIVER

McNICOL RD.

STAGE 1

STAGE 2

STAGE 3

STAGE 4

STAGE 5

FLOOR LEVEL VARIES RL 20m to RL 50m

CONSENTED QUARRY EXTENT

PIT EXTENT (ASSUMED 45° OVERALL BATTER)

INDICATIVE EXTENT OF STAGE BATTER

BOUNDARY

INDICATIVE STREAM LOCATION

LIMIT OF QUARRY OPERATIONAL AREA

PIT EXTENT (ASSUMED 45° OVERALL BATTER)

SCALE 1: 4000

0 40 80 120 160 240 (m)

600 McNICOL ROAD

NOTES:
1. PLAN & QUARRY DESIGN BASED ON TOPOGRAPHICAL DATA SUPPLIED BY FULTON HOGAN, NOVEMBER 2016, SUPPLEMENTED BY CONTOURS FROM AUCKLAND COUNCIL GIS.
2. ASSUMED OVERALL BATTER ANGLE = 45°.

REV	DESCRIPTION	BY	DATE
1	STAGE BATTERS ADDED		
0	FIRST ISSUE		

DESIGN MP | CHECKED
DRAWN MP | CHECKED
DATE DRAWN MARCH 2017

APPROVED FOR ISSUE: DRAFT
DATE: / /

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TITLE

FULTON HOGAN LTD.

CLEVEDON QUARRY, CLEVEDON

QUARRY EXTENT & EXISTING BOUNDARY & STREAMS

CADFILE 15211-FIG20
SCALES (A3) 1:4000
ACENZ
DRAWING No. 15211-FIG 20
REV. 1



Stevenson Aggregates Limited

STEVENSON

Private Bag 94000, Manukau,
2241, Auckland

Erosion and Sediment Control Plan 2026

Clevedon Quarry,
546 McNicol Road,
Clevedon 2585

LEGEND

- Pumped Water Flow
- Wheel Wash Water
- Drain Path
- Stockpile Area
- Work Area
- Sediment Retention Pond
- Process Equipment

N
W
E
S

0 50 100 Meters

SCALE	SHEET NUMBER
1:2700 (A3 Sheet)	1/1
PLOT DATE	
30 Mar 2026	

Notes

Aerial Imagery flown by Stevenson Aggregates Limited on 12 March 2026

Geodetic System:
NZGD2000 / Mount Eden Circuit
Auckland 1946 Height

Traffic Management Plan (2026 drawing)



Stevenson Aggregates Limited

STEVENSON

Private Bag 94000, Manukau, Auckland, 2241, New Zealand

Traffic Management Plan

Clevedon Quarry, 546 McNicol Road, Clevedon, 2585

LEGEND

- One-Way Road - Authorised Vehicles
- Two-Way Road - Authorised Vehicles
- One-Way Road
- Two-Way Road
- Overhead Powerline
- Automated External Defibrillator
- Evacuation Assembly Point
- First Aid Kit
- Spill Kit

0 40 80 Meters

SCALE	SHEET NUMBER
1:1000 (A1 Sheet)	1 / 1
PLOT DATE	
09 Sept 2026	

Notes

Aerial Imagery flown by Stevenson Aggregates Limited on 27 August 2026.

Geodetic System:
NZGD2000 / Mount Eden Circuit
Auckland 1946 height

Lighting management plan map (2026)



13.4 Cartage Contractor Safety Rules and Guidelines (CCSRG)

13.4.1 The local road network

- Quarry trucks, whilst travelling on McNicol Road, must not exceed the voluntary speed limit of 50 km/h.
- Quarry trucks, whilst travelling on the section of Tourist road east of the one-lane bridge, must not exceed the voluntary speed limit of 50 km/h.
- Quarry trucks, whilst travelling on the section of McNicol road south of 530 McNicol road, must not exceed the speed limit of 30 km/h.
- Quarry trucks must not enter onto either Tourist road or McNicol road before 06:30 am on any day of the week.
- Quarry trucks must not use the section of McNicol road North of the intersection with Tourist road, unless:
    - They are visiting Clevedon.
    - They are associated with deliveries in Clevedon or in environs beyond Clevedon.
    - They are required to use this route due to temporary restrictions imposed on Tourist road.
- Quarry trucks must not park on Tourist road or on McNicol road north of 530 McNicol Road at any time, unless stopping is required for legal or safety related reasons.
- Quarry trucks must not stop in any position where they may be obstructing any traffic wanting to get passed, along McNicol Road.
- Quarry trucks and vehicles should adhere to any signage or lights when entering/exiting the quarry.
- Quarry trucks should avoid unnecessary engine breaking while travelling on Tourist or McNicol road to reduce noise. This may be reviewed for modern/electric trucks if engine breaking does not cause excessive noise.
- Quarry trucks must be driven with extra caution through the following identified high risk areas:
    - The intersection between Clevedon-Papakura, Creightons, and Tourist roads.
    - The curved section at the western end of Tourist road.
    - The intersection between Tourist and Monument roads.
    - The one-lane bridge and on-demand traffic signals on Tourist road.
    - The curved section east of the one-lane bridge on Tourist road.
    - The intersection between Tourist and McNicol roads.
    - The sloped, curved section of McNicol road.
    - Alongside the unsealed path adjacent to McNicol Road.

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- When passing pedestrians, cyclists or horse riders, quarry trucks must slow down and provide as much space as is safely possible, and drivers are expected to show general courtesy.
- Non-compliance with the CCSRG will initially result in a verbal warning. A second offence will result in a written warning to the driver and/or the driving company. Repeated offences may result in the driver being suspended or banned from entering the quarry. Consequences for non-compliance with the CCSRG are determined based off the frequency and severity of the offence(s).

13.4.2 Schools

- Quarry trucks must not exceed a speed of 40 km/h when travelling through an active school zone between 08:00 am – 09:30 am and 02:30 pm – 04:00 pm on Monday to Friday. Drivers must actively look out for school children.
- School buses may be operating throughout the route to and from the quarry. Quarry trucks must not exceed a speed 0f 20 km/h when passing a parked school bus. Drivers must actively look out for school children.
- Clevedon School is located in Clevedon Township, with entrances on North road and Clevedon-Kawakawa Bay road.
- Ardmore School is located on Clevedon-Papakura road west of Burnside road.
- Brookby School is located on the corner of Brookby road and West road.
- Alfriston School is located at the corner of Alfriston road and Mill road.
- During times of significant peak traffic at Ardmore School, it is advised that quarry trucks bypass the school by using Clevedon-Takanini road.

13.4.3 Clevedon Quarry

- The quarry will be open to quarry trucks between 06:30 am and 06:00 pm on Monday to Friday, and between 06:30 am and 01:00 pm on Saturday. The quarry is not open to quarry trucks on Sundays or on public holidays.
- The quarry is restricted to an average of 900 truck movements per day. This means an average of 450 loaded trucks per day.
- When entering and exiting the quarry, quarry trucks must keep left.
- The speed limit inside the quarry is 30 km/h.
- Quarry trucks must give way to quarry machines and vehicles.
- Quarry truck drivers must stay inside their trucks whilst the trucks are being loaded.
- In the event of an emergency:
    - The assembly point is on the car park in front of the Lunch room.
    - The First Aid Kit is located inside the Lunch room.
    - A defibrillator is located in the weighbridge building.

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  - Fire Extinguishers can be found inside every building and attached to all quarry plant on site.
  - The site specific emergency procedures flip-chart can be found on the wall inside the Lunch room.
  - See quarry staff if help is required to report an incident.
- Quarry truck drivers must check their load security before exiting the quarry. This includes ensuring that loads are either covered or dampened.
- Onsite parking is located outside of the offices, as per the TMP.

13.5 Speed Camera Location

- One speed camera located on McNicol road.
- One "Slow Down" sign has been constructed on McNicol road in 2026 as per the proposed location in the below map.
- The speed camera data is reported quarterly in the quarry managers' report.

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Approximate speed camera location:

Proposed "slow down" sign location:

Drawn by: E. Kelso
Image source: google earth
Date: 7th March 2024

Clevedon Quarry Speed Camera location 2024

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13.8 Stakeholder and Community Engagement Plan

13.8.1 History

Clevedon Quarry has been a working quarry since 1963 and has been identified in the Auckland Unitary Plan as a significant resource for the Auckland region. It contains a large amount of high-quality Greywacke rock which is used as aggregate in the construction industry. Auckland's demand for aggregate is set to increase significantly. At the same time supply is slowing as other quarries around the region reach the end of their lifespans. Stevenson hold a resource consent to operate Clevedon Quarry at levels required to meet this growing demand.

As such, Stevenson will be operating the quarry in Clevedon for an extended duration and will be a neighbour to those who live and work in the area. We believe that Clevedon Quarry and Stevenson will have a long term and important role to play within the local and wider community.

13.8.2. Purpose

This plan sets a commitment and requirement for stakeholder and community engagement including:

- Establishment of a Community Liaison Group to enable communications about operations and facilitate engagement with the local and wider community over the lifespan of the Quarry.
- Provision of key contacts within Stevenson and the CLG Group
- Identifying key stakeholders affected by Quarry operations and their expectations
- Definition of general community communications and engagement
- Definition of a preliminary community interface through the CLG
- Establishment of a record of contact procedure
- Definition of a reporting protocol through the CLG
- Definition of a compliments and complaints procedure
- Setting internal protocol for media interactions

13.8.3. Community Liaison Group (CLG)

To facilitate clear lines of communication with the local and wider community, a Clevedon Quarry CLG will be maintained and meet quarterly (or less frequently if agreed) to discuss matters relevant with the Quarry including but not limited to:

1. Concerns and complaints and aspects of non-compliance and ways of alleviating them, particularly in respect of truck movements to and from the Quarry;
2. Dissemination of information to the CLG (and through the CLG, the wider community) about the Quarry, including the application of the Quarry Management Plan and

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amendments, up and coming quarry operations, future proposals for the quarry and relevant monitoring information. This includes advance notice of projects that require the use of the 60 day evening periods (6pm-9pm) as stipulated in the consent.

3. Assisting with the development and implementation of any mitigation or enhancements proposed by Stevenson over the life of the consent.

To ensure both local and wider community representation, the CLG will be made up of no fewer than six and no more than 10 members from the following representative groups subject to their agreement to participate:

- An Independent Chair
- A representative of Nga Tai Ki Tamaki
- A representative from the Clevedon Community and Business Association (CCBA)
- A representative from the Clevedon Protection Society (CPS) if not already represented
- A Local Board Member
- Two representatives of McNicol and Tourist Roads
- A representative of Stevenson

13.8.4. Clevedon Community Group 2024 update

As part of its commitment to the local community, upon consent being granted in June 2018 for the Clevedon Quarry, Stevenson established a Community Liaison Group (CLG).

CLG meetings are held quarterly and can include a representative of Ngāi Tai ki Tāmaki, Clevedon Community and Business Association (CCBA), the Franklin Local Board, Auckland Transport, two representatives of the residents of McNicol Road and Tourist Road, a representative from the consent holder, and a representative from the Clevedon Protection Society (CPS) 2017.

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13.8.5. Clevedon Quarry Contacts

The following key contacts are made available for the community.

Stevenson	CLG
Caryn Gaffney Engagement Manager [redacted]	Elected independent chairperson Maurice Hinton Mc Nicol Road residents' representatives
Ashton Cogdale Quarry manager [redacted]	Clevedon Protection Society (CPS) Clevedon Business Association (CBA)
Ella Kelso Environmental Engineer [redacted]	
Daniel Topp Divisional Manager [redacted]	
Kelvyn Jolly Regional Manager [redacted]	
Ben Hussey General manager [redacted]	

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13.8.6. Key Stakeholders – expectations and mitigations

As a neighbour, and in combination with the CLG, Clevedon Quarry will regularly interface and engage with the local and wider community to discuss issues, concerns or requests made in relation to operations. Based on experience and feedback, the following tables summarise key stakeholders, anticipated expectations and mitigations in regard to quarry operations and effects.

Stakeholder	Expectations	Mitigations
Neighbouring properties on McNicol and Tourist Roads	Ability to raise concerns about the site and be heard. That the localised impact of operations (truck movements and internal quarry operations) is understood and minimised where practicable	CLG interface to aid interaction and communication. Truck driver inductions Complaints procedure including follow up as defined in this plan. Entry, main routes and self-imposed speed limits managed as per consent requirements. Informed of any changes to the site's activity level (ie evening works as part of the 60 6pm – 9pm period per annum or blasting) Availability of Stevenson staff Ongoing face to face, phone and email
Ngai Tai Ki Tamaki	Consultation regarding Quarry operations and environmental concerns	Iwi engagement Ngai Tai Ki Tamaki involvement in CLG Reporting available as required Availability of Stevenson staff
Local Community Organisations	Ability to work with Stevenson as a member of the community	CLG interface to aid interaction and communication. Availability of Stevenson staff and expertise

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Wider Clevedon Community	Ability to raise concerns about the site and be heard. Ability to work with Stevenson as a member of the community	CLG interface to aid interaction and communication. Truck driver inductions Complaints procedure including follow up as defined in this plan. Entry, main routes and self-imposed speed limits managed as per consent requirements. Informed of any changes to the site's activity level (ie evening works as part of the 60 6pm – 9pm period per annum) Use of collateral – letter drops, media releases for communications. Availability of Stevenson staff
Local Schools – Ardmore, Clevedon and Alfriston	Ability to raise concerns about the site and be heard	Informed of any changes to the site's activity level (ie work that requires increased numbers of trucks) Availability of Stevenson staff
Community	Ability to work with Stevenson as a member of the community	Educational opportunities
Clevedon Protection Society (CPS)	Ability to raise concerns about the site and be heard. Ability to work with Stevenson as a member of the community	CPS requirement to participate at CLG Reporting available as required Availability of Stevenson staff
Clevedon Community Business Association (CCBA)	Ability to raise concerns about the site and be heard. Ability to work with Stevenson as a member of the community	CCBA requirement to participate at CLG Reporting available as required Availability of Stevenson staff

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Auckland Council	Quarry managed in accordance with consent requirements	Auckland Council requirement as a representative at CLG Quarry Management Plan Reporting requirements Audits and compliance management Availability of Stevenson staff
Auckland Transport	Access roads managed in accordance with consent requirements	Auckland Transport requirement as a representative at CLG TBC
Franklin Local Board and Local MPs	Kept up to date of operations including community concerns and subsequent actions	Local Board requirement to participate at CLG Reporting available as required Availability of Stevenson staff
Employees, contractors, and users of Clevedon Quarry	Provision of a safe, secure, and fair employment / service	Stevenson requirement to participate at CLG. Quarry management Plan Process followed in regard to site induction and community expectation for all staff. Fair and measured response to complaints as per procedure

13.8.7. General community communications and engagement

Stevenson will continually supply information to the community, with a key objective being to ensure that identified issues are responded to and expectations are met where possible.

This will involve differing levels of engagement including informing, consulting, and involving depending on the community concerned and issue at hand.

The community will be engaged through a combination of the methods listed below, depending on the situation, including but not limited to:

- Contact details (phone and email) for the Communications Liaison Manager available
- Telephone calls
- Emails
- Face-to-face meetings
- Printed letters or fliers
- Print and / or social media through press releases

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- Company or CLG member websites

All correspondence will have a contact name and details for the community to contact if they have any queries or concerns relating to the matter outlined.

All Stevenson Quarry representatives who interact with the community will engage in a two-way communication process being clear on the purpose of the communication, including those matters that are non-negotiable.

13.8.9. Community applications / interface

Stevenson are committed to being a good neighbour. An aspect of this will be participating in the local community either directly through services offered or indirectly through funding.

It is anticipated that this interface will be managed through the CLG group. A process for application will be established and implemented as this group is bedded in.

13.8.10. Record of contact (stakeholder management software)

We will maintain a record of compliments and complaints including follow up and close out information via our online software. This will form part of the report presented to the CLG.

The stakeholder engagement manager will keep a record of meeting minutes from the CLG. These minutes will be provided to the CLG following the meeting. Important updates are shared with the wider community via the local newsletter and/or mail.

13.8.11. Reporting

A quarry manager's report will be prepared in advance of each CLG group meeting. This will summarise for the community truck movements, compliance with the Driver induction (Cartage Contractors Safety Rules and Guidelines) including sanctions, compliments and complaints (and responses), and monitoring data collected under the consent.

13.8.12. Compliments and complaints

From time to time there will be specific compliments and / or complaints regarding Quarry operations. The following chart and table define a procedure to manage these and ensure consistent and effective follow up.

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Clevedon Quarry - Complaint Definitions

Level 1	General verifiable poor driver behaviour / operational complaints including - entering McNicol or Tourist Rd early, minor parking violations, Minor lack of consideration, minor camera verified speeding	1. Driver / operator spoken to and reminded of expected behaviour 2. Driver is monitored more closely for a period following the complaint 3. Complainant is notified of outcome 4. Process and outcome recorded for CLG Report
Level 2	Repeat verifiable poor driver behaviour / operational complaints as above. Serious verifiable near miss	1. Formal disciplinary process is followed with Driver / operator (verbal warning) 2. Driver is banned from the Quarry for a period of three weeks 3. Complainant is notified of outcome 4. Process and outcome recorded for CLG Report
Level 3	Verifiable aggressive or intimidating behaviour. Continued verifiable poor driver behaviour / operational complaints as above	1. Driver / operator is directly spoken to and formal disciplinary process is followed (written warning) 2. Driver / operator is banned from the Quarry 3. Complainant is notified of outcome 4. Process and outcome recorded for CLG Report

13.8.13. Media protocol

Print media release

Media releases as an information tool may be used from time to time to provide wider updates to the community.

Any media release must be signed off by the Stevenson Aggregates General Manager.

Social media release

Any media release to social media will require the same approvals as print media.

Media queries

Any query from the media regarding Clevedon Quarry will be notified to the Engagement Manager in the first instance (cc'd to the Stevenson aggregates Divisional manager and Quarry manager) for response.

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13.9. Slope Stability Monitoring Plan

13.9.1. Geological and Geotechnical Background

- The geological background of the quarry is included in the "Resource and Geotechnical Assessment – Quarry Expansion, Clevedon Quarry dated May 2017".

- A geotechnical review of Slope Stability in Clevedon Quarry was undertaken by Rileys in 2026, this has been approved by Auckland Council.

13.9.2. Overburden and Rock Excavation Slopes – Inspection Procedures

Intervals between inspections

A geotechnical/geological inspection of the new quarry pit slopes will be carried out by an experienced geotechnical engineer/engineering geologist at the following times;

- Prior to a new area of the top cut batter slope being excavated, and
- Whenever a slip event (apart from minor slope frittering) is observed to occur either within the established quarry pit area, or within the quarry extension area.

Function and reporting procedures for inspections

The purpose of the inspections is to provide an on-going review of geological conditions that are revealed as the quarry pit is extended and to provide pro-active pit slope design modifications where necessary for forward planning.

The inspections are to be carried out in the company of on-site quarry management staff, with observed features photographed, documented and GPS-located for future reference.

Following each inspection, a report is to be compiled that is to provide a record of all geological/geotechnical inspections of the quarry pit faces, together with any recommendations related to remediation of slip areas and matters that will affect forward planning.

The Site Manager to report these recommended changes and actions to Council in an independent 'slope and stability' report.

Inspections - Identification and mapping of rock discontinuities and major joint patterns

A fundamental reason for the periodic site inspections is to identify, at an early time, any potential and location of rock discontinuities that arise within the upper weathered rock strata. With such

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occurrences in greywacke-type rocks, it is likely that they will continue downwards as the quarry level deepens and may lead to access difficulties.

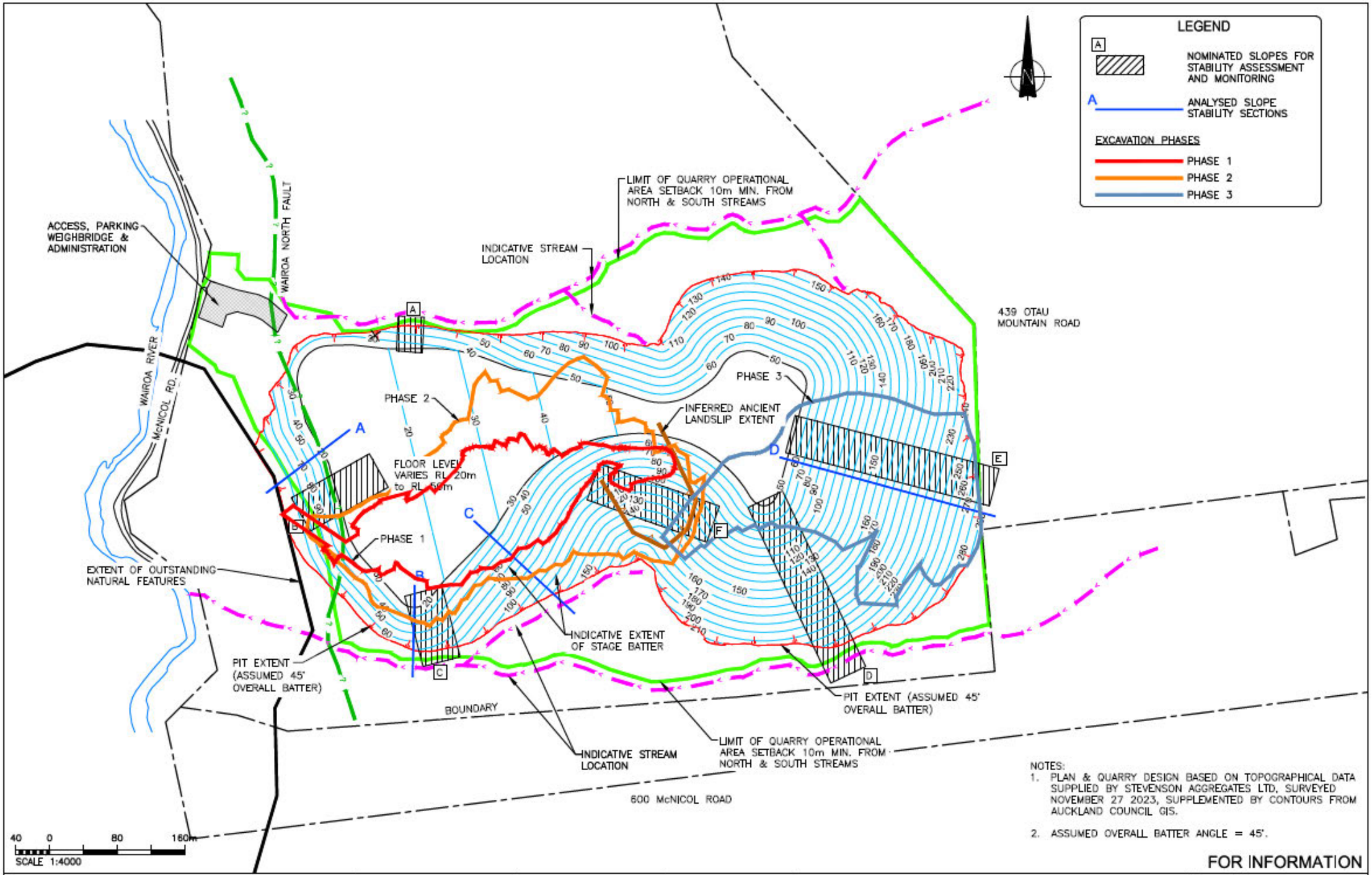
For example, a favourable aspect of jointing patterns of the wedge type is that, as they continue with depth, they become a natural chute through which rock can be transferred from one level to another. But the associated unfavorable aspect is in the likelihood of dropouts along the access benches and an encroachment into the overburden soils.

Therefore, following each inspection, the effects of any new, or extended discontinuities will be discussed with quarry operating staff, and appropriate measures taken to ensure that any boundary buffer zones are maintained.

But also, where the excavation faces are reasonably clear of defects and favourable conditions exist, it may be possible to steepen the cut batters and distances between benches in Accordance with Worksafe guidelines.

***The full SSMP for 2026 has been approved by Auckland Council and is kept as a separate document.**

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NOTES:
1. PLAN & QUARRY DESIGN BASED ON TOPOGRAPHICAL DATA SUPPLIED BY STEVENSON AGGREGATES LTD, SURVEYED NOVEMBER 27 2023, SUPPLEMENTED BY CONTOURS FROM AUCKLAND COUNCIL GIS.
2. ASSUMED OVERALL BATTER ANGLE = 45°.

FOR INFORMATION

REV	DATE	ISSUE	BY
1	21.12.23	FOR INFORMATION	AT

DESIGN	DES CHECK	APPROVED FOR ISSUE
SO	SO	B. BLACK
DRAWN	CAD CHECK	
AT	ZL	
DATE DRAWN		ISSUE DATE
DEC 23		21/12/23

RILEY
www.riley.co.nz

CLIENT	STEVENSON AGGREGATES LTD
ADDRESS	CLEVEDON QUARRY, CLEVEDON
PROJECT	SLOPE STABILITY MONITORING PROGRAM
SHEET TITLE	KEY SLOPES FOR STABILITY ASSESSMENT

CADFILE	150121-63.dwg
SCALE (A3)	ORIG. SHEET SIZE
1:4000	A3
DRAWING No.	REV.
150121-63	1