BEFORE THE ENVIRONMENT COURT
I MUA I TE KOOTI TAIAO O AOTEAROA

IN THE MATTER	of the Resource Management act 1991 (the Act)
AND	of appeals under s 120 of the Act
BETWEEN	CLEVEDON PROTECTION SOCIETY 2017 INCORPORATED
	(ENV-2018-AKL-000044)
	FULTON HOGAN LIMITED
	(ENV-2018-AKL-000046)
	Appellants
	AUCKLAND COUNCIL
	Respondent

Environment Judge Kirkpatrick sitting alone under s 279 of the Act.
IN CHAMBERS at Auckland

CONSENT ORDER

[A] Under s 279(1)(b) of the Act, the Environment Court, by consent, orders that:

(1) Appeal ENV-2018-000046 by Fulton Hogan Ltd and Appeal ENV-2018-000044 by Clevedon Protection Society 2017 Incorporated are both allowed, and are resolved in their entirety, subject to the amendments set out in **Annexure A** to this order (mark-up) and in **Annexure B** to this order (clean copy).

[B] Under s 285 of the Act, there is no order as to costs.

REASONS

Introduction

[1] These appeals relate to resource consents that were granted to Fulton Hogan Limited by Auckland Council to redevelop the quarry at McNicol Road in Clevedon.

[2] Clevedon Protection Society 2017 Incorporated (CPS) did not oppose the grant of consents but appealed the conditions. The focus of the CPS appeal was on the quarry truck movements, and in particular when those quarry truck movements could occur and how many could occur on any day.

[3] The Fulton Hogan appeal related to the condition in the decision that precluded quarry truck movements on Saturday afternoon, and two components of the review condition (which would allow a s 128 review to examine the noise effects from quarry trucks on roads).

[4] The Court has previously issued a determination approving a partial consent order and making a direction that all consent conditions, except for conditions 65 and 66, should take effect.[1] These conditions were to remain outstanding, and be the subject of further discussion between the parties.

[5] The parties have now reached agreement on the outstanding conditions, such that with one minor amendment (i.e. the inclusion of the date of 4 July 2018 into condition 66), the consent conditions can now take effect in their entirety.

[6] In making this order the Court has considered the notice of appeal and the memorandum of the parties dated 6 November 2018.

[7] Clevedon Protection Society 2017 Incorporated, Auckland Transport, Clevedon Cares Incorporated, Clevedon Conversations, Clevedon School Board of Trustees joined the appeals under s 274 of the Act, and have signed the memorandum of the parties seeking this consent order.

[8] The Court is making this consent order under s 279(1) of the Act, such order being by consent, rather than representing a decision or determination on the merits pursuant to s 297 of the Act.

[1] *Clevedon Protection Society 2017 Incorporated v Auckland Council* [2018] NZEnvC 96.

[9] The Court understands for present purposes that:

(a) All parties to the proceeding have executed the memorandum requesting this order.

(b) All parties are satisfied that all matters proposed for the Court's endorsement fall within the Court's jurisdiction and conform to the relevant requirements and objectives of the Act, including in particular Part 2.

Order

[10] Therefore, the Court orders by consent that:

Appeals ENV-2018-000046 by Fulton Hogan Ltd and Appeal ENV-2018-000044 by Clevedon Protection Society 2017 Incorporated are both allowed, and are resolved in their entirety, subject to the amendments set out in **Annexure A** to this order (mark-up) and in **Annexure B** to this order (clean copy).

[11] There is no order as to costs.

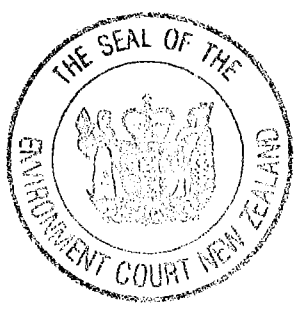
[12] The appeals are otherwise dismissed.

DATED at Auckland this 14th day of November 2018

D A Kirkpatrick
Environment Judge

THE SEAL OF THE ENVIRONMENT COURT NEW ZEALAND

ANNEXURE A



Part A - General Conditions applying to all consents

Activity in General accordance with documents

1. Subject to the conditions listed below, the expansion of Clevedon Quarry (Quarry) within that part of the special purpose quarry zone shown in the application shall be undertaken generally in accordance with the land use consent application (Fulton Hogan, dated may 2017), subsequent section 92 responses received by council during September to November 2017, all referenced by the Council as BUN60302442 (application material), and the reduction in application area as shown in the plans attached (Attachment 3) to exclude that part of the site zoned Rural - Rural Production Zone:

   (a) Assessment of Environmental Effects Report Clevedon Quarry Expansion, Fulton Hogan, dated 28 April 2017;

   (b) Draft Quarry Management Plan CQ-FHIMS-EN_2001, Fulton Hogan, dated 3 April 2017;

   (c) McNicol Road Quarry Assessment of Noise Effects, Marshall Day, dated 27 April 2017;

   (d) Assessment of Effects of Discharges to Air from Clevedon Quarry, Beca, dated 26 April 2017;

   (e) External Lighting Assessment of Effects, Kern Consultants, dated 26 April 2017;

   (f) Transportation Assessment, Traffic Engineering & Management Ltd, dated March 2017;

   (g) Clevedon Quarry: McNicol Road, Visual Effects Assessment, Boffa Miskell dated 4 May 2017;

   (h) Assessment of Terrestrial Ecology Effects, Boffa Miskell, dated 4 May 2017;

   (i) Assessment of Ecological Effects on Ephemeral Streams, Boffa Miskell, dated 4 May 2017;

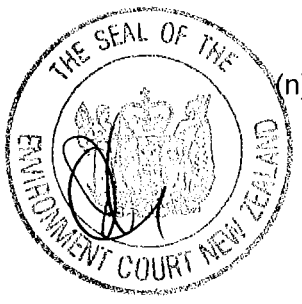
   (j) Assessment of Hydrological Changes on Stream Receiving Environments, Boffa Miskell, dated 27 April 2017;

   (k) Preliminary Statement on Groundwater/Surface Water Effects, PDP, dated 19 April 2017;

   (l) Resource and Geotechnical Assessment Quarry Expansion Clevedon Quarry, Riley Consultants, dated 5 May 2017;

   (m) Riley Consultants Drawing Numbers 15211 Figures 13, 14, 15, 16, 17 & 18 dated November 2016 Revision 0 and Figure 20 dated 1/12/2017 Revision 2;

   (n) Boffa Miskell Drawings A16127 Clevedon Quarry Figures 1 to 4 inclusive dated 4 December 2017 Revision C;



(o) Fulton Hogan drawing CQ100.001 Clevedon Quarry – New Office and Entrance Layout dated 10 April 2017;

(p) Fulton Hogan drawing McNicol Rd Topo 171121 (2018) (REV B) 3 sheets illustrating the McNicol Road Proposed Walkway;

(q) Fulton Hogan drawing HPMV Tracking Curve Existing Road 171204 (REV A) 3 sheets;

(r) Fulton Hogan drawing McNicol Road Design Site Plan illustrating the upgrades to the unsealed section of McNicol Road 170912A (REV B) 3 sheets dated 12/9/2017 and McNicol Road Pavement Typical Cross-Sections 170912B (REV B) 1 sheet dated 4 December 2017;

(s) Letter titled Clevedon Quarry consent applications – section 92 further information by Jonathan Green, Fulton Hogan dated 2 November 2017;

(t) Letter Proposed Expansion of Clevedon Quarry – Terrestrial Ecology section 92 response by Eddie Sides, Boffa Miskell dated 4 October 2017;

(u) Letter titled Response to Section 92 Request Geotechnical Information Clevedon Quarry Expansion by Steven Price, Riley Consultants, dated 7 September 2017;

(v) Memo Clevedon Quarry Section 92 Responses Erosion and Sediment Control by Campbell Stewart, Southern Skies dated 18 October 2017 and revised Clevedon Quarry Erosion and Sediment Control Plan CG-ESCP 2017-2018 dated 17 October 2017 Issue No. 2 Revision B;

(w) Groundwater and surface water effects – section 92 responses, PDP, dated 17 October 2017;

(x) Boffa Miskell section 92 request response to landscape architect Sally Peake, Auckland Council, undated;

(y) Letter Clevedon Quarry – 546 McNicol Road, Clevedon BUN60302442 s92 lighting response, Kern Consultants, dated 29 August 2017; and

(z) Letter 546 McNicol Road, Clevedon – traffic response to section 92 request for further information by Traffic Engineering & Management Ltd dated 19 September 2017.

2. To the extent that there are any inconsistencies between the conditions of this consent and the application material, then these conditions take precedence.

Quarry Management Plan

3. The consent holder shall develop and implement for the duration of this consent a Quarry Management Plan (QMP), which shall be held on site at all times. The overall objective of the QMP shall be to set out the practices and procedures to be adopted to ensure compliance with the conditions of consent.

4. Within 20 days of the date of commencement of this consent, the QMP shall be submitted to the team leader-southern monitoring for certification, to confirm that the activities undertaken in accordance with the QMP will achieve the objectives of the Plan and compliance with the relevant consent conditions. Any subsequent review of

the QMP, or any document within the QMP, shall also be submitted to the Team Leader – Southern Monitoring for certification. The consent holder shall meet the costs of the production, certification, monitoring and review of the QMP.

5. The QMP shall comprise:

(a) A site plan indicating:

(i) existing topography, contours, drainage, natural watercourses, vegetation cover and any other significant landform or features;

(ii) site layout, general design and location of buildings;

(iii) areas for extraction (including pits and faces), storage (including overburden), stockpiling, processing and distribution;

(iv) predicted final contours and drainage; and

(v) areas where land disturbance activities are not proposed.

(b) A description of current and future operations, including:

(i) vegetation removal and site preparation, including stripping and stockpiling or disposal of soil and overburden;

(ii) the method of site access, vehicle circulation and onsite parking; and

(iii) monitoring and reporting proposed in relation to the above measures.; ~~and~~

~~the proposed methodology for certifying imported cleanfill.~~

(c) Details of how the hydro-seeding or other mitigation is to be undertaken on completed benches in accordance with condition 48 below, and details of how the harvesting of the pine trees on the northern ridge will be managed in accordance with condition 49 below.

6. The QMP shall also include the following management plans, each of which is more particularly described in later conditions of this consent:

(a) Traffic Management Plan (TMP);

(b) Dust Management Plan (DMP);

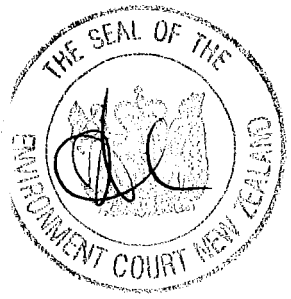
(c) Slope Stability Monitoring Plan (SSMP);

(d) Groundwater and Surface Water Monitoring and Contingency Plan (GSWMCP);

(e) Erosion and Sediment Control Plan (ESCP);

(f) Noise Management Plan (NMP);

(g) Consent Compliance Plan, including a complaints procedure;



(h) Stakeholder and Community Engagement Plan; and

(i) End Use/Quarry Rehabilitation Plan (to be developed towards the end of the Quarry's life).

6A. If the QMP or any of the management plans required by this consent does not meet the requirements of the relevant conditions then the Team Leader – Southern Monitoring will require the consent holder to amend those plans so as to comply.

Community Liaison Group

7. The consent holder shall, in consultation with mana whenua, local community groups and representatives of local residents (particularly those on Tourist Road and McNicol Road), form a Community Liaison Group (CLG). The purpose of the CLG is to discuss matters relevant to the quarry including, but not limited to:

(a) concerns and complaints and aspects of non-compliance and ways of alleviating them, particularly in respect of truck movements to and from the Quarry;

(b) dissemination of information to the CLG about the Quarry, including the presentation of the Quarry Management Plan and amendments, up and coming quarry operations, and any future proposals for the quarry, relevant monitoring information, in particular the monitoring data on quarry truck movements required by condition 22; and

(c) assisting with the development and implementation of any mitigation or enhancements proposed by the consent holder over the life of the consent.

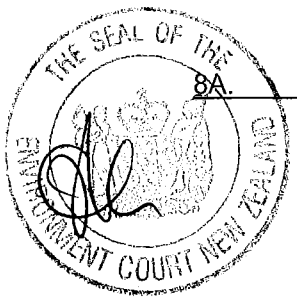
For the avoidance of doubt, the CLG may, by majority resolution at a meeting, seek a formal written response from the consent holder on a matter relevantly and reasonably raised. The Consent Holder must within 10 working days provide a written response responding to the matter raised by the CLG, including any steps to be taken.

7A. The consent holder will provide advance notice to the CLG of any projects that require the use of the 60 evening periods (6pm-9pm, Monday to Thursday) (**evening periods**) provided for in condition 23(a).

7B. The consent holder will use its best endeavours to provide at least seven days' advance notice to the CLG for any major projects that require the use of 3 or more consecutive nights of the 60 evening periods (6pm-9pm, Monday to Thursday).

8. Subject to the following groups agreeing to participate, the CLG shall comprise an independent chair, and a representative of Nga Tai Ki Tamaki, Clevedon community and business association, the Local Board, Auckland Transport, two representatives of the residents of McNicol Road and Tourist Road, ~~and~~ a representative from the consent holder, and, unless another representative previously referred to is also a member of the Clevedon Protection Society 2017, a representative from the Clevedon Protection Society 2017. The CLG shall comprise no fewer than 6 and no more than 10 representatives (including the chair). Meetings of the CLG should be held on a quarterly basis (or less frequently as determined by the CLG) and meeting minutes taken and distributed to members of the CLG. The consent holder will cover the costs of the meeting venue and the independent chair.

8A. The Consent Holder shall inform the CLG prior to any application to vary the



conditions of this consent, or any other consent application concerning the McNicol Road Quarry, which in either case has potential adverse effects beyond the boundary of the site.

8B. The Consent Holder shall ensure that a suitably qualified independent professional, mutually acceptable to the Council, the CLG and the Consent Holder, reviews and verifies the quarry manager's report, any other information received over the previous quarter (including any complaints) relating to the quarry's operation, and including any monitoring information received in the previous quarter, annual, or 5 yearly period. The professional shall prepare a report on that information, including a specific comment on any potential non-compliances, and provide it to the Council 2 weeks prior to any CLG meeting scheduled above, and, subject to any feedback from Council, provide to the CLG at least one week from a scheduled CLG meeting.

Advice note:

The quarry manager's report shall be prepared by the Consent Holder specifically summarising truck movements, complaints (and responses to those complaints), and any monitoring data collected under the consent.

Council Access

9. The servants or agents of the Council shall be permitted to have access to relevant parts of the property at all reasonable times for the purpose of carrying out inspections, surveys, investigations, tests, measurements and/or to take samples.

Enforcement and Compliance

10. The costs incurred by the Council in monitoring and ensuring compliance with the conditions of this consent may be on-charged to the consent holder. If the Council's costs are on-charged payment must be made within 20 working days unless prior approval of a longer credit period has been given by the Southern Manager, Resource Consents and Compliance.

11. If, in the Council's opinion, a breach of any of the conditions of this resource consent is occurring, the costs of investigating any such breach may be on-charged to the consent holder. If such costs are on-charged payment must be made within 20 days unless prior approval of a longer credit period has been given by the Southern Manager, Resource Consents and Compliance.

12. If enforcement action is taken in respect of a breach of any condition of this resource consent the Council may, pursuant to section 128(1)(a) of the RMA, review any or all of the conditions of this resource consent to ensure that they remain appropriate in light of the breach referred to above.

13. Where, in the Council's opinion, any non-compliance has arisen from inaccuracies contained in the application for consent, the Council may also initiate a review under section 128(1)(c) of the RMA, which may in some circumstances result in cancellation of the resource consent.

Charges

14. The consent holder shall pay the Council a consent compliance monitoring charge of $960.00 (excluding GST), plus any further monitoring charge or charges to recover the actual and reasonable costs that have been incurred to ensure compliance with

the conditions attached to this consent (this charge is to cover the cost of inspecting the site, carrying out tests, reviewing conditions, updating files, etc, all being work to ensure compliance with the resource consent).

15. The $960.00 (excluding GST) charge shall be paid as part of the resource consent fee and the consent holder will be advised of any further monitoring charge or charges as they fall due. Such further charges are to be paid within one month of the date of invoice.

Lapse

16. In accordance with section 125 of the RMA, this consent will lapse five years after the date on which it commences unless it has been given effect to before the end of that period.

Term

17. All land use consents have an unlimited term. All water, air and discharge permits shall have a term of 35 years from commencement of each of those consents.

Surrender of existing consents

18. Within one month of notice being given to the Team Leader, Southern Monitoring, Resource Consenting and Compliance, that these consents are being given effect to:

    (a) the existing groundwater consent (permit 35864) shall be surrendered;

    (b) the land use consent attached to the Environment Court's decision C34/2000 (2000 Consent) shall be superseded, to the extent that that earlier consent relates to works within the Special Purpose - Quarry Zone. (For the avoidance of doubt, the limits on truck movements in this consent shall replace those in the 2000 Consent.)

Review

19. Under section 128 of the RMA the conditions of this consent may be reviewed by the Manager Resource Consents at the consent holder's cost at ~~five yearly~~annual intervals following commencement of consent in order to:

    (a) Deal with any adverse effect on the environment which may arise or potentially arise from the exercise of this consent and which it is appropriate to deal with at a later stage, in particular adverse effects on groundwater levels, groundwater quality and stream base flows.

    (b) Avoid or mitigate an adverse effect on the environment relating to traffic and access (Rule H28.7.1.(1)(a) including the matters described in Rule H28.7.2(1)(a) of the Auckland Unitary Plan);~~, particularly (but not solely) those associated with truck noise along McNicol Road (south of Tourist Road) and Tourist Road,~~; noise and vibration levels from on-site operations; and any significant adverse visual effects of the Quarry as experienced from those residential dwellings that are in close proximity to the Quarry and existed at the date of commencement of this consent.

    (c) Vary the quantities, monitoring and reporting requirements, and mitigation and contingency measures in order to take account of information, including

the results of previous monitoring and changed environmental knowledge, on:

(i) water availability, including rate of groundwater inflow into the quarry pit dewatering pond;

(ii) actual and potential quantity of water taken including, but not limited to, monitoring information and reporting required;

(iii) groundwater levels and inflow;

(iv) review of water level data and geology including information obtained from any new boreholes drilled since the commencement of consent within the zone of dewatering influence;

(v) spring flows and stream flows;

(vi) groundwater quality and stream water quality and ecology; and

(vii) ~~noise levels from quarry truck operations along McNicol Road (south of Tourist Road) and Tourist Road~~those matters covered in condition 19(b).

(d) Assess the effectiveness of erosion and sediment control measures and the relative impact of sediment on the environment, including to:

(i) implement such changes as are necessary to site runoff, erosion and sediment control measures to more appropriately control the actual and potential effects of the discharge of sediment on the environment;

(ii) amend the monitoring requirements and the discharge standard from the site; and

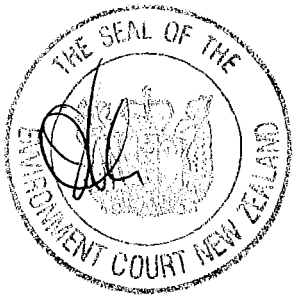
(iii) assess the rehabilitation of quarried areas so that sediment loss from finished surfaces resembles their natural state.

(e) To deal with any significant adverse effect on the environment arising from the exercise of the consent that was not foreseen at the time the application was considered and which is appropriate to deal with at the time of the review.

(f) In respect of the discharge to air consent, to consider the adequacy of conditions which prevent nuisance beyond the boundary of the site, particularly if regular or frequent complaints have been received and validated by an enforcement officer, including:

(i) to consider developments in control technology and management practices that would enable practical reductions in the discharge of contaminants to air, and

(ii) to alter the monitoring requirements, including requiring further monitoring, or increasing or reducing the frequency of monitoring.



Advice Notes:

I. The consent holder is advised that it will be required to pay to the Council any

administrative charge fixed in accordance with section 36(1) of the RMA and any additional charge required pursuant to section 36(3) of the RMA in respect of the receiving and processing of the resource consent application up to and including the issuing of the section 42a report.

II. The consent holder is advised that, pursuant to section 126 of the RMA, if this resource consent has been exercised, but is not subsequently exercised for a continuous period of five years, the consent may be cancelled by the Council unless other criteria contained within section 126 are met.

III. The consent holder shall obtain all other necessary consents and permits, including those under the Building Act 2004, and the Heritage New Zealand Pouhere Taonga Act 2014. This consent does not remove the need to comply with all other applicable acts (including the property law act 2007), regulations, relevant bylaws, and rules of law. This consent does not constitute building consent approval. Please check whether a building consent is required under the Building Act 2004. Please note that the approval of this resource consent, including consent conditions specified above, may affect a previously issued building consent for the same project, in which case a new building consent may be required.

IV. A copy of this consent should be held on site at all times. The consent holder is requested to notify the council, in writing, of their intention to begin works, a minimum of seven days prior to commencement. Such notification should be sent to the (name and title and email address and phone number) and include the following details:

a. name and telephone number of the project manager and the site owner;

b. site address to which the consent relates;

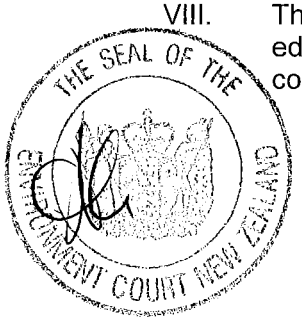
c. activity to which the consent relates.

V. Compliance with the consent conditions will be monitored by the Council in accordance with section 35(d) of the RMA. This will typically include site visits to verify compliance (or non-compliance) and documentation (site notes and photographs) of the activity established under the resource consent. In order to recover actual and reasonable costs, inspections, in excess of those covered by the base fee paid, shall be charged at the relevant hourly rate applicable at the time. Only after all conditions of the resource consent have been met, will council on request of the consent holder issue a letter confirming this fact.

VI. The conditions of consent should be included with any relevant contract documents and all personnel working on the site (consultants, contractors and subcontractors) should have access to the relevant documentation inclusive of the consent conditions.

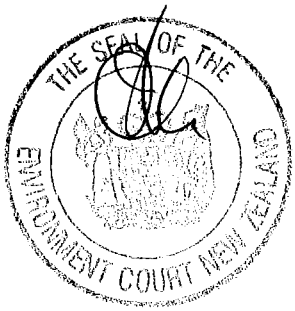
VII. The consent holder should ensure that there are adequate provisions on site to prevent possible fuel spillage.

VIII. The consent holder should make all relevant site personnel aware of the industry education course available to plan preparers and plan implementers through the council.



IX. For the purpose of compliance with the conditions of consent, "the Council" refers to the Council's monitoring inspector unless otherwise specified. Please contact the Team Leader – Southern Monitoring on 09 3010101 or monitoring@aucklandcouncil.govt.nz to identify your allocated officer.

X. Some specific conditions have been offered by the applicant and accepted by the decision makers on an **Augier** basis. Those conditions are clearly labelled accordingly.



Part B - Land Use Consent (Application LUC60291842)

Hours of operation

20. Subject only to any specific limitation included in the conditions below, the hours of operation for on-site mineral extraction activities within the Special Purpose - Quarry Zone as defined by the Auckland Unitary Plan shall be 24 hours per day seven days a week.

Limitation on truck movements

21. For the purposes of this consent:

    (a) "truck movement" means a truck with a Gross Vehicle Mass (Gvm) of more than 3,500 kg travelling to or from Clevedon Quarry either carrying or intended to carry aggregate or overburden (quarry truck); and

    (b) "emergency works" mean works relating to emergencies and natural disasters, including floods, slips, earthquakes and storms.

22. Quarry truck movements to and from the quarry shall not exceed an hourly maximum of 90 truck movements (Monday to Saturday), or exceed an average of 900 truck movements per day (Monday to Saturday) measured on a 12-month rolling basis, and this shall be monitored through a data recorder/logbook at the quarry weighbridge. That data shall be summarised on a monthly basis on a spreadsheet and made available for inspection at any time by a Council officer and be reported quarterly ~~as required by~~ and to the Community Liaison Group.

23. All quarry truck movements to and from the quarry shall only occur between 6.30 ~~7.00~~am and 6pm~~and 9.00pm~~) on Monday to Friday, and between ~~7.00~~6.30am and 1.00 ~~12.00~~pm on Saturday (excluding public holidays), except ~~for~~:

    (a) that truck movements may occur between 6.00pm and 9.00pm Monday to Thursday on a maximum of 60 days during a calendar year; or ~~A maximum of 10 quarry truck movements that may occur between 6.00am and 7.00am Monday to Friday (excluding public holidays); or~~

    (b) for ~~D~~deliveries of aggregate required by emergency works.

    For the avoidance of doubt, except as required for emergency works, no loaded quarry trucks shall exit the quarry weighbridge before 7am on Monday to Saturday, after 1pm on Saturdays, after 6pm on Monday to Friday, or after 9pm for the 60 days per year described in condition 23(a) above.

    Advice Note: The consent holder records that if and when the consent holder adopts a fleet of electric trucks or similar, the consent holder may reconsider the above limitations on hours of operation and truck movements. That is likely to require a variation to this consent and/or an additional consent.

24. The consent holder will take all practicable steps to ensure that quarry trucks do not enter Tourist Road or McNicol Road before 6.30 ~~6.00~~am, Monday to ~~Friday~~Saturday.~~, or before 7.00am on Saturday.~~

25. The Consent Holder shall take all practicable measures to ensure that a~~A~~ll quarry trucks must not exceed a speed of 50 kilometres per hour on all of McNicol Road, or on Tourist Road east of the one-lane bridge.

26. The Consent Holder shall take all practicable measures to ensure that ~~N~~no quarry trucks shall use the section of McNicol Road north of Tourist Road, unless they are visiting Clevedon, or are associated with deliveries (in this area or environs beyond), or are required to use this route due to temporary restrictions imposed on Tourist Road.

27. The Consent Holder shall take all practicable measure to ensure that n~~N~~o parking of quarry trucks shall occur on McNicol Road north of 530 McNicol Road or on Tourist Road at any time, except where stopping is required for legal or safety related reasons.

Temporary limits on truck movements and hours of operation

28. Notwithstanding conditions 22 - 27 above, the following additional restrictions shall apply:

    (a) For a period of 5 years from commencement of consent (**Augier** condition):

        ~~(i) quarry trucks shall only operate between 6.00pm and 9.00pm on 60 working days of each calendar year, with the record of those days to be kept in the logbook required by condition 22;~~

        ~~(ii) the hours for truck movements on Saturdays shall be restricted to between 8.00am and 12.00pm, with no trucks entering Tourist Road or McNicol Road before 7.45am on Saturdays.~~

        (i)~~(iii)~~ Where temporary restrictions apply to Tourist Road (for example closure due to flooding), the number of quarry truck movements through Clevedon Village shall not exceed 200 per day.

    (b) Quarry truck movements shall be limited to a maximum of 45 per hour until the sealing of the unsealed section and all of the road widening works (described in condition 60(a)-(f)) have been completed on McNicol Road.

Section 16 of the Resource Management Act

29. In recognition of the intent of s16, Resource Management Act 1991, namely to avoid unreasonable noise, ensure, as far as reasonably practicable, that all tailgates on quarry trucks are securely fixed to avoid "clanging", the consent holder shall advise Auckland Transport of any areas of road that become worn or are beginning to pothole (thereby contributing to increased noise), avoid unnecessary engine braking, especially on McNicol Road or at the Monument Road/Tourist Road intersection, and require all quarry trucks owned or directly managed by the consent holder to be regularly serviced to ensure engine and other noise is minimised. (***Augier*** condition).

Dusty Loads

30. The consent holder shall ensure that~~, as far as reasonably practicable,~~ all quarry trucks exiting the quarry conveying dusty loads are covered, or where covers are not available that any dusty loads are dampened prior to leaving the quarry.

Cartage Contractors Safety Rules and Guidelines

The following matters shall be included in a Cartage Contractors Safety Rules and Guidelines document, or similar, to be provided to all quarry truck operators, and the consent holder shall take all practicable steps to ensure that~~, as far as reasonably~~

~~practicable, that~~ all ~~of its~~ quarry truck operators using the quarry are alerted to these matters and abide by them:

(a) Hours of operation and limitations on truck movements, short term and longer term;

(b) The specific matters referred to in conditions 24 to 27;

(c) The general need to be courteous and observe safe distances when passing pedestrians, horse riders and cyclists;

(d) The active on-demand traffic signals and the need to observe the Give Way requirements of the one lane bridge on Tourist Road;

(e) Extra care to be taken when travelling through the curved section at the eastern end of Tourist Road;

(f) The location of schools along the route, including Alfriston, Clevedon, Ardmore and Brookby schools, the location of school bus routes and stops, the lower speed limit when passing a parked school bus (20 km/h) or through an active school zone between 8.00am – 9.30am and 2.30pm - 4.00pm (40 km/h), and the need to actively look out for school children at these times;

(g) Reasonably practicable alternative routes (if any) for the quarry trucks to use during times of significant peak traffic at Ardmore School (e.g. at the beginning and end of each term or at other times agreed between the School and the consent holder), and contain a process for the consent holder to advise Ardmore School if there are likely to be times of high quarry truck movements; and

(h) The covering or dampening of dusty loads and the securing of loads.

Implementation of Transport Matters

32. The matters stated in condition 31 are to be implemented by and augmented by the following measures:

(a) Information packages and formal inductions for quarry truck operators; and

(b) Signage for the following safety and amenity matters:

I. The covering or dampening of dusty loads and the securing of loads;

II. The restriction on parking of quarry trucks on Tourist Road and McNicol Road north of 530 McNicol Road;

III. The speed limit of 50 km/h on McNicol Road and on Tourist Road east of the one lane bridge for all quarry trucks; and

IV. The presence of the unsealed path along McNicol Road as referred to in condition 59(e);

(c) Requirements for all quarry truck drivers entering the quarry to sign a copy of the Cartage Contractors Safety Rules and Guidelines and undertake to comply with them;

(d) Sanctions for non-compliance with the Cartage Contractors Safety Rules and Guidelines, including temporary bans or exclusions.

Traffic Management Plan and Reporting

33. The requirements of conditions 31 and 32 above are to be submitted to the Team Leader – Southern Monitoring as a TMP for certification that the contents will meet the conditions of consent and serve to mitigate adverse safety and amenity matters. The contents of the TMP shall include:

(a) The Cartage Contractors Safety Rules and Guidelines (or similar);

(b) Information packages and an outline of the formal induction process for quarry truck operators;

(c) The details of the signage proposed at the quarry and, subject to the approval of Auckland Transport, signage at other locations along the route to and from the quarry.

(d) The details for how compliance with the limitations on hours of operation, maximum quarry truck movements, times of entry to McNicol Road, and performance against the Cartage Contractors Safety Rules and Guidelines (or similar) will be monitored and reported upon, and how any complaints about any of those requirements will be recorded and responded to. This shall include a specific requirement to report, on a ~~6 monthly~~ quarterly basis, or less frequently as agreed with the Team Leader – Southern Monitoring, on the speeds of quarry trucks recorded on Tourist Road and McNicol Road and on the log of daily movements.

(e) The details of the sanctions regime for non-compliance with the Cartage Contractors Safety Rules and Guidelines.

(f) The details of speed camera locations.

34. The TMP shall also include the details for the monitoring of the Tourist Road/Creightons Road/Papakura-Clevedon Road intersection, as required by condition 62. The details are to be submitted to the Team Leader – Southern Monitoring as a TMP for certification that they meet the purposes outlined in condition 62.

Noise

35. Noise from mineral extraction activities within the Special Purpose - Quarry Zone must not exceed the noise levels in the table below at a notional boundary from any dwelling that existed at the date of commencement of this consent. (for the purposes of this consent, the closest dwelling that existed at the date of commencement of this consent outside the Special Purpose – Quarry Zone is 600 McNicol Road, approximately 480m away.)

Times	Noise levels
7am-9pm, Monday to Friday	L_{Aeq} 55dB
7am-4pm, Saturday	L_{Aeq} 55dB

All other times and on public holidays	L_{Aeq} 45dB L_{AFmax} 75dB

36. Noise must be measured and assessed in accordance with new Zealand Standard On Acoustics - Measurement Of Environmental Sound (NZS 6801:2008) and New Zealand Standard On Acoustics - Environmental Noise (NZS:6802:2008). The details of measurement, any results obtained, and any noise complaints received in respect of noise from the quarry, shall be described in the NMP. The NMP shall be completed and submitted to the Team Leader – Southern Monitoring for certification within three months of the commencement date of this consent.

37. Prior to the commencement of stage 3 of the quarry expansion (as shown on Riley Consultants Drawing Number 15211 Fig 20, dated 1/12/2017 Revision 2) and each stage thereafter, the consent holder shall arrange for monitoring of the proposed on-site activities by a suitably qualified expert so as to demonstrate that these noise limits continue to be met. Details of this monitoring, together with any details of complaints received about noise and any action taken in response, shall be described within the NMP and submitted to the Team Leader – Southern Monitoring.

Advice Note

The consent holder is reminded of its general obligation under section 16 of the Resource Management Act 1991 to adopt the best practicable option to ensure that the emission of noise from the quarry site does not exceed a reasonable level.

Vibration and Blasting

38. Noise created from the use of explosives must not exceed a peak overall sound pressure of 120db l_{zpeak}.

39. The measurement of blast noise (air blast) from blasting must be undertaken at the notional boundary of a dwelling that existed at the date of commencement of this consent (for the purposes of this consent, the closest dwelling that existed at the date of commencement of this consent outside the Special Purpose – Quarry Zone is 600 McNicol Road, approximately 480m away.)

40. Vibration generated by blasting shall be measured within a building in accordance with Appendix j of Part 2 of Australian Standard AS 2187 2006.

41. Except where necessary because of safety reasons, all blasting is restricted to:

(a) 9am - 5pm, Monday to Saturday; and

(b) an average of two occasions per day over a calendar fortnight.

42. Blasting activities must be controlled to ensure any resulting ground vibration does not exceed the limits set out in German Standard *DIN 4150-3 1999: Structural Vibration – Part 3 Effects Of Vibration On Structures* when measured on the foundation in the horizontal axis on the highest floor of an affected building.

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

Lighting

44. Any security or other lighting shall be designed and operated to ensure that it does not cause any direct light spill or disturbing glare for any occupiers of other properties. Any light spill or glare on to McNicol Road shall comply with the standards in E24.6 of the Auckland Unitary Plan.

45. Prior to any permanent external lighting being established, the consent holder shall provide a finalised lighting design plan to the Council that demonstrates that the proposed lighting meets the permitted standards in chapter E24.6 of the Auckland Unitary Plan.

46. Within 2 months of installation of lighting, the consent holder shall provide a report from a suitably qualified lighting expert confirming that all lighting has been installed in accordance with the approved finalised lighting design plan, and complies with the permitted standards in chapter E24.6 of the Auckland Unitary Plan.

Landscape

47. Within six months of the commencement of this consent the consent holder shall submit to Council (attention Team Leader – Southern Monitoring) a detailed planting plan for the establishment of the proposed front yard landscaping to be implemented within 12 months of the commencement of this consent. The details of this plan shall demonstrate that the proposed vegetation will be *myrtle rust* resistant, be planted and maintained for a period of 3 years in a manner that will ensure its successful establishment and continuing healthy state. This plan shall include, but not be limited to the following:

    (a) The proposed species, size at time of planting and plant spacing; and

    (b) An implementation, weed and pest animal control and maintenance schedule.

48. Within 6 months of completion of the quarrying and formation of the final benches in stages 5 and 6 (as shown on Boffa Miskell drawing Figure 4, Proposed Quarry Stages, dated 4 December 2017 Revision C), the consent holder shall hydro seed or otherwise visually mitigate the batter slopes of those benches from a height of RL 290m to a height of RL 200m.

48A. Any area of overburden (exposed clay or topsoil but not rock) shown within the ESCP that is not planned to be disturbed for a period of 24 months or more shall be hydro-seeded or otherwise visually mitigated where practicable.

49. To maintain screen planting on the ridgeline, the Consent Holder shall not harvest the pine trees in the hatched area of the northern ridgeline as illustrated on Figure X, attached to this consent.

~~In harvesting any of the pine trees on the ridge to the north of the quarry, consideration shall be given as to whether there are any significant adverse effects on dwellings in close proximity as a result of this harvesting exposing views of the quarry, and, if so, how those effects could be avoided, remedied or mitigated. This might include screen planting on the ridgeline, managing the harvesting times relative to the staging of works at the quarry and/or the offer of mitigation on surrounding sites. Any such consideration will be addressed within the QMP covering the period or periods over which the harvesting is proposed to occur. Details of the consideration of effects and confirmation of proposed mitigation measures, if required, shall be~~

~~submitted to the Team Leader – Southern Monitoring for certification prior to the removal of any trees~~

Ecology

50. Within six months of commencement of this consent, the consent holder shall submit to Council (attention the Southern Manager, Resource Consents and Compliance) a detailed planting plan for the establishment of the proposed planting of 600m^2 of native vegetation. Planting shall comprise eco-sourced native species including but not limited to kānuka, mānuka, flax, and cabbage trees. The details of this plan shall demonstrate that the proposed vegetation will be planted and maintained for a period of 3 years in a manner that will ensure its successful establishment and continuing healthy state. This plan shall include, but not be limited to the following:

    (a) The proposed species, size at time of planting and plant spacing; and

    (b) An implementation, weed and pest animal control and maintenance schedule.

51. The works shall be undertaken during the first planting season after the removal of the kānuka shrubland and shall provide a minimum area of 600 m^2 of native vegetation. Planting shall take place within the true left riparian margin of the North Stream in order to provide additional bank stability and buffering from quarrying activities. All planted areas shall be maintained in a generally weed-free state and actively maintained for a minimum 3 year period. Thereafter, and on an on-going basis, vegetation in all planted areas shall be monitored and maintained in a healthy state, with on-going replacement of dead or diseased vegetation to the satisfaction of the Council to ensure the integrity of the planting is maintained.

    Advice note:

    Based on the expert advice received, the proposed 600m^2 of native vegetation planting is not required to mitigate the effects of the kanuka removal, but has been offered by the consent holder ~~as a positive effect of the proposal~~.

Herpetofauna within Kanuka shrubland

52. Prior to any earthworks and vegetation removal within the identified area of kānuka shrubland as identified in the Boffa Miskell report, Figure 3, dated 4 May 2017, the consent holder shall provide for the certification of the Team Leader – Southern Monitoring and the Council's ecologist a Herpetofaunal Mitigation Plan to minimise any potential effects on indigenous skinks and/or geckos within that kānuka shrubland habitat. Copies of any Department of Conservation permits that are required shall also be attached to this plan. The Herpetofaunal Mitigation Plan shall be prepared by a qualified and experienced herpetologist, and shall include:

    (a) Timing of works;

    (b) A description of the methodology for trapping and relocation of herpetofauna;

    (c) A description of where any trapped herpetofauna are to be relocated;

    (d) Any monitoring requirements;

(e) The credentials and contact details of the herpetologist who will implement the Plan; and

(f) A suitably qualified and experienced herpetologist shall be onsite during the removal of any indigenous vegetation to supervise the removal of c.300 m^2 of kānuka shrubland in order to search for and rescue any indigenous skinks and/or geckos found and relocate them to the suitable alternative location on or adjacent to the site.

53. The removal of indigenous vegetation shall avoid the bird breeding season (August-December inclusive).

54. Within two weeks of the completion of the herpetofaunal mitigation programme, the herpetologist shall certify that the Herpetofaunal Mitigation Plan has been carried out in accordance with the approved plan, and shall provide details on any species removed or relocated to the Council's ecologist.

55. Any findings resulting from the implementation of the herpetofaunal mitigation plan shall be recorded on an amphibian and reptile distribution scheme card and sent to the Department of Conservation.

Long Tailed Bats in Mature Pine Trees

56. Prior to the consent holder undertaking any clearance of mature pine trees within the Special Purpose – Quarry Zone that might be required to implement this resource consent, the consent holder shall:

(a) Appoint a suitably qualified person to u~~U~~ndertake a survey to identify whether any of the mature pine trees to be removed are used as roosts by Long Tailed bats and provide their report to the Team leader – Southern Monitoring; and

(b) If those trees are used as roosts by Long Tailed bats, the consent holder:

(i) shall advise the Team Leader – Southern Monitoring of this finding prior to any tree removal;

(ii) may only clear those pine trees between October and April (inclusive); and

(iii) must, prior to undertaking any clearance within those months appoint a suitably qualified person to confirm that none of the mature pine trees contain Long Tailed bats.

Biological monitoring of permanent reaches of North and South Streams

57. Biological monitoring of permanent reaches of the North and South Streams shall be undertaken for a 2-year period (summer and winter) at the commencement of each of stages 3-6 of the quarry development, at fixed locations in order to detect changes in aquatic conditions. Two downstream (impact) locations and one upstream (control) shall be monitored in each of the streams (refer to Figure 1, Boffa Miskell report *Assessment of Hydrological Effects on Stream Ecology* dated 4 May 2017). Aquatic macroinvertebrates shall be collected and analysed so that a Macroinvertebrate Community Index (MCI) and Quantitative Macroinvertebrate Community Index (QMCI), or another appropriate metric specified within an approved Groundwater and

Surface Water Monitoring And Contingency Plan (GSWMCP), can be determined for each sampling location.

58. The GSWMCP shall include the baseline biological monitoring results (once undertaken) and specify what variations are considered biologically significant and shall describe the further investigations and reporting, or other contingency methods, that might be required if biologically significant changes are occurring as a result of activities associated with the quarry. The GSWMCP shall be submitted to the Team Leader – Southern Monitoring for certification prior to works commencing.

59. Prior to the commencement of stage 3 of the quarry development, baseline monitoring at the same locations as are to be used for the on-going biological monitoring required by condition 57 shall be undertaken for at least one summer and winter in the same 12-month period.

Road upgrades / maintenance / monitoring

60. Within 3 months of the commencement of this resource consent, unless the works have already been undertaken, the consent holder shall submit an Engineering Works Approval to Council for the following upgrades as recommended in the Traffic Impact Assessment prepared by Traffic Engineering & Management Ltd (Team) dated March 2017:

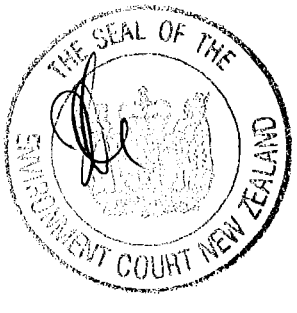
(a) Localised shoulder widening along McNicol Road between Tourist Road and south of Whiteside Lane. The minimum two-way sealed carriageway width shall be 7.2m. The works shall also include additional widening of the existing carriageway of McNicol Road at, and in the immediate vicinity of, the bend at the McNicol Road/Whiteside Lane intersection to accommodate the simultaneous movement of a truck and trailer travelling in each direction.

(b) Widening of the existing sealed carriage way of McNicol Road south of Whiteside Lane to the existing end of the sealed section of McNicol Road (near 530 McNicol Road) as follows:

(i) Between McNicol Road south of Whiteside Lane and north of 458 McNicol Road, the minimum two-way sealed width shall be 7.2m. This excludes the upgrade works associated with Bryan's Culvert on McNicol Road. The works shall also include additional widening of the existing bend on McNicol Road in the vicinity of 448 and 458 McNicol Road to accommodate the simultaneous movement of a quarry truck and trailer travelling in each direction.

(ii) Between 458 McNicol Road and 530 McNicol Road, the consent holder shall widen the existing carriageway to a width of 7m where practicable. Where this is not practicable because of constraints associated with the banks and riparian margin of the Wairoa River, a minimum carriageway width of 6.6m shall be achieved.

(c) Sealing, upgrading and widening of McNicol Road, from the existing end of the sealed section of McNicol Road (near 530 McNicol Road) to the Quarry entrance as shown on the McNicol Road Works Plans (Attachment 1). The minimum two way sealed width shall be 7m. Where sections of one-way road may be necessary due to topographical constraints, these sections should be no greater than 50m in length and should be clearly signposted as being single lane sections.



(d) Upgrading of the entrance to the Quarry, including the locational details of the weighbridge(s) and security gates, in a manner to be approved by Auckland Transport.

(e) Provision of an unsealed path of 1.5m width, separated wherever possible from the carriageway, on McNicol Road from Tourist Road to 458 McNicol Road, and then from 20m before the Quarry entrance to 20m after the Quarry entrance as shown on drawing McNicol Road South Recreational Trail Plans (Attachment 2). From 458 McNicol Road to 20m before the Quarry entrance, a path shall be provided where practicable along the route shown, or where it is unable to be separate because of topographical and legal constraints, that sight distance is available to allow short sections on the carriageway, or a berm or dish channel is provided for pedestrians to step off the road if required. Signs, markings and other measures (if necessary) shall be provided to Auckland Transport's satisfaction to clearly indicate where the unsealed path crosses McNicol Road, and in those sections where the unsealed path may not be practicable to construct, clearly indicate where road users are required to share the McNicol Road carriageway. Signage shall warn quarry trucks of the possibility of pedestrians on this section of McNicol Road.

(f) Widening the intersection of McNicol Road and Tourist Road to accommodate the simultaneous movement of a truck and trailer travelling in each direction and localised widening to achieve a minimum two-way sealed width of 7.2m between that intersection and the Tourist Road one-lane bridge. Alternatively, confirmation shall be provided that such widening is not necessary (e.g. swept paths for intersection).

(g) The design and installation of appropriate and comprehensive active on-demand traffic signals, able to be activated by pedestrians, cyclists and equestrians, shall be installed at the one-lane bridge on Tourist Road. Subject to obtaining any necessary approvals, including any resource consents, the consent holder shall also install street lighting at this bridge (note: the consent holder is not responsible for the on-going costs of this street lighting). This system, and any street lighting, should be developed and installed in consultation with, and to the satisfaction of, Auckland Transport.

(h) Unless already completed at the time of commencement of this consent, upgrade the Tourist Road/Monument Road intersection to the satisfaction of Auckland Transport. This work should have regard to:

(i) the potential provision of additional traffic safety devices on each approach of Tourist Road;

(ii) the provision of shoulder widening, remarking of the centreline and provision of edge lines in agreed areas of Monument Road to the north of Tourist Road;

(iii) the provision of chevron and speed advisory signage on the two horizontal curves on Monument Road immediately to the north of Tourist Road; and

(iv) measures to secure in perpetuity (unless and until the land is owned by Auckland Council / Auckland Transport)~~improve~~ safe sight

distance to the north from the eastern Tourist Road approach and / or reduce speeds on the northern Monument Road approach to the intersection.

61. The works identified in condition 60 shall be completed by the consent holder at its cost within the first summer period after the issue of Engineering Works Approval and any necessary resource consents that may be required to authorise those works.

62. The consent holder shall monitor the Tourist Road/Creightons Road/Papakura-Clevedon Road intersection within 5 years of the consent commencing, or sooner if required by the Council, to establish if some/all of the works identified in TEAM's concept design need to be implemented. The details of any proposed monitoring shall be described in the TMP.

63. The engineering plans in respect of the McNicol Road works shall include the following information regarding the engineering works:

(a) Design of the stormwater system and devices for the management of quality of the stormwater runoff from the new seal associated with McNicol Road, comprising catchpits and catchpit filters at the culvert inlets.

(b) Design of the road widening recognising the narrow nature of the road in some areas, and that minor works may only be needed in other areas.

(c) In particular:

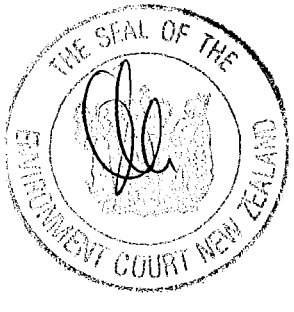
(i) Detailed design of all roads to be sealed or widened; and

(ii) A road marking and signage plan.

64. Except where associated with the works associated with the road maintenance/upgrading works, the consent holder shall ensure that no quarry trucks or other activities associated with the quarry result in any actual or potential restrictions on access to the banks and riparian margins of the Wairoa River.

Maintenance of McNicol Road and Tourist Road by the consent holder

65. Subject to Auckland Transport undertaking the necessary ~~remedial and upgrade~~ works on McNicol Road and Tourist Road (as described in condition 66 below), the consent holder will, at its cost, but otherwise in accordance with the usual contractual conditions with Auckland Transport in terms of response times etc, undertake any required maintenance of McNicol Road (to the intersection of Tourist Road), and Tourist Road. This maintenance will be strictly limited to digouts, stabilised patches, mills and fills, edge breaks and potholes. The consent holder shall undertake a condition report at the time of commencing this maintenance obligation based on the RCM requirements and shall undertake a second condition report at the conclusion of these maintenance obligations, and shall ensure that the nominated portion of McNicol Road and Tourist Road are of the same or similar condition at the end of the maintenance period. This obligation shall end on a date that is 4 years from commencement of this consent, or 15 January 2022, whichever occurs first. (***Augier*** condition) **[Condition 65 is still subject to any consequential changes following resolution of outstanding issues between Fulton Hogan and Auckland Transport]**



66. For the purposes of condition 65, the ~~remedial and upgrade~~ works to be undertaken by Auckland Transport on McNicol Road and Tourist Road before the obligations in condition 65 take effect ~~include~~ comprise those works agreed between the consent holder and Auckland Transport in correspondence dated **[date]**.~~:~~ **[Condition 66 will be finalised as part of the discussions with Auckland Transport on the outstanding issue]**

~~(a) Pavement repairs (digouts, stabilised patches, and deep mills and fills);~~

~~(b) Permanent slip repairs;~~

~~(c) Edge break repairs;~~

~~(d) Crack sealing;~~

~~(e) Shoulder maintenance;~~

~~(f) Drainage maintenance;~~

~~(g) Second coat sealing;~~

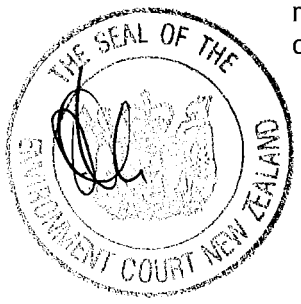
~~(h) Bryan's culvert upgrading; and~~

~~(i) Relocating adjacent fences back on to the property boundaries, between 458 and 530 McNicol Road.~~

For the avoidance of doubt, the consent holder's maintenance obligation for any of the particular matters stated above commences when the relevant matter has been undertaken by or on behalf of Auckland Transport.

End Use / Quarry Rehabilitation Plan

67. No later than 3 years prior to the consent holder giving notice to the Council that the quarry will be closed permanently, the consent holder shall prepare and submit for certification an End-Use and/or Rehabilitation Plan to the Team Leader – Southern Monitoring, which addresses the proposed end use and/or rehabilitation of the quarry. The plan shall incorporate, amongst other things, details on the nature and timing of any proposed rehabilitation work including any groundwater diversion and landscape rehabilitation measures proposed. The certified plan shall be implemented by the consent holder.



Part C - Groundwater Consent (Application WAT60302444)

Authorised quantities

68. The daily abstraction shall not exceed 2,500 cubic metres.

69. The total volume of water abstracted in each 12-month period, commencing 1 June of any year and ending 31 May of the following year, shall not exceed 912,500 cubic metres.

Advice Note:

Of the 2,500 cubic metres per day take it is anticipated that sustained groundwater inflows from the regional and perched aquifers will be less than 1,500 cubic metres per day, with the remaining 1,000 cubic metres per day being sourced from short term release from storage.

Actual groundwater inflows in dry conditions will be assessed in accordance with condition 77. The annual reporting to be provided under condition 101 shall include commentary on trends in total metered pump out from the quarry, compared to the actual groundwater inflows as assessed by condition 77 and will be reported against the authorised quantities noted above.

Installation of a water meter

70. A water meter with an electronic pulse output connected to a data logger shall be installed and maintained with any pump to the satisfaction of the Team Leader Compliance Monitoring. The water meter and recording device/system shall:

- be fit for the purpose and water it is measuring;
- measure the volume of water taken, with an accuracy of +/- 5% of the actual volume taken;
- provide data in a form suitable for electronic storage;
- be tamper-proof and sealed; and
- be installed and maintained in accordance to the manufacturer's specifications.

71. The water meter, and any device or system used to record water take volume, shall be verified in-situ as accurate by a suitably qualified professional at the following times:

(a) prior to the exercise of this permit;

(b) within 5 working days of the water meter being serviced or replaced;

(c) by 30 June of the fifth (5^{th}) year from the commencement of consent, and thereafter at five (5) yearly intervals.

72. The water meter, its verification and evidence of its accuracy shall be in accordance with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 (or any equivalent regulations that may replace them) and a copy

of the verification shall be provided to the Team Leader – Southern Monitoring within 10 working days of the meter/devices being verified as accurate.

Water meter readings

73. A water meter reading shall be taken consistently at one of these times:

(a) before pumping starts for that day;

(b) at the end of pumping for that day.

74. The time, date and the water meter reading shall be recorded and supplied to the Council in accordance with condition 100 below:

(a) readings shall be taken at weekly intervals for the first six months of each quarry expansion stage. Following this, readings can be reduced to fortnightly; and

(b) where a data logger is required, and in the event of failure of the data logger and/or associated electronic devices, the water meter shall be read manually at daily intervals until the devices are repaired and records kept of the date, time and corresponding water meter reading.

Advice Note:

If no water is taken during any period, the current meter reading must still be recorded.

Notice of commencement of dewatering

75. The Team Leader – Southern Monitoring shall be advised in writing at least 30 working days prior to commencement of any activities pursuant to this consent.

Dewatering Limit

76. Groundwater levels within the existing quarry floor area shall not be drawn down below 20 MRL.

Groundwater inflow estimation

77. The rate at which groundwater is diverted (groundwater inflow) into the Clevedon Quarry pit sump shall be measured and recorded. The methodology for determining groundwater inflow shall be outlined in the GSWMCP.

Quarry pit pumped quality

78. The consent holder shall, starting within one month of commencement of this consent and thereafter at annual intervals, collect a water sample from the quarry pit dewatering pond, have the sample analysed and record the results of analyses to establish water chemistry (including ph, temperature, DO and TDS). A further sample shall be collected when quarry pit groundwater inflow measurements required by condition 77 above are undertaken.

Daily rainfall

79. The consent holder shall measure rainfall at the same time each working day when the site is operating and keep records of each date and corresponding rainfall measurement. The records shall be submitted in accordance with reporting dates specified in conditions 100 and 101.

Technical review

80. A technical review shall be undertaken no less than three months and no more than six months prior to commencing stage 4 of the quarry expansion identified in the application documents (PDP 2017, Appendix A.1). The review shall include an analysis and interpretation of monitoring data, a comparison of actual groundwater level values to predicted values, and an assessment of any actual or potential adverse effects on the environment as a consequence of dewatering/diversion. The consent holder shall forward the technical review to the Team Leader – Southern Monitoring within one month of the completion of the review. If the technical review shows that the effects of the activity are greater than predicted in the application and that monitoring and mitigation provisions of this consent are not adequate for the avoidance or mitigation of adverse effects, then the dewatering shall not proceed to the next stage, unless the consent holder demonstrates to the Team Leader Compliance Monitoring South's satisfaction that those matters are satisfactorily resolved.

Groundwater and Surface Water Monitoring and Contingency Plan

81. A Groundwater and Surface Water Monitoring and Contingency Plan (GSWMCP) shall be completed and submitted to the team leader – southern monitoring within three months of the commencement date of this consent or before any further excavation below the elevation of the pit existing as at the date of commencement of consent, whichever occurs first, for review and written certification. The GSWMCP shall accurately record all management and operational procedures, monitoring requirements, methodologies and contingency measures necessary to comply with the conditions of this consent. Any proposed amendment of the GSWMCP shall also be submitted to the Team Leader for written approval.

82. The GSWMCP shall include but not be limited to:

(a) a monitoring and reporting schedule which integrates the requirements relating to pit groundwater inflow, quarry pit water levels, monitoring bore water levels, surface water flows and any other monitoring required by this consent;

(b) a schedule and updated final plan (based on Figure 2: Surface Water Catchment Plan, PDP 2017) of all monitoring bores and piezometers for groundwater pressures and / or groundwater level monitoring, giving location, elevation RL, construction details, and practices for bore water level monitoring;

(c) a procedure for quarry pit groundwater inflow measurement in accordance with condition 77;

(d) a procedure for review of the pit inflow rates annually (as part of the annual monitoring report) to confirm the augmentation rates;

(e) Details of the proposed timing and staging of the quarry expansion and step wise change in groundwater level and anticipated timing of technical reviews as per condition 80;

(f) A schedule and updated final plan (based on Figure 2: Surface Water Catchment Plan, PDP 2017) of all stream gauging sites and locations of stream augmentation;

(g) Details of all trigger levels established by monitoring required by this consent;

(h) Details of all contingency plans for remedial actions in response to decrease in stream base flows or lowering of bore water levels below expected values, caused by the exercising of this consent, in accordance with conditions of this consent;

(i) Details of the Clevedon Quarry site management structure and of personnel responsible for the maintenance of the GSWMCP, and of the related record keeping and reporting requirements;

(j) Procedures for demonstrating efficient water use; and

(k) Methods for assessing the significance of and any steps to be taken in response to elevated levels of sediment entering the Wairoa River between the two automatic turbidity meters described in condition 124.

Monitoring bore construction for water level measurements

83. Provision at the top of the monitoring bores for water level measurements shall be made and maintained so that a probe can be lowered vertically into the bore to measure the water level in the bore.

Monitoring bore construction for sampling

84. Provision at the top of the monitoring bores for water quality sampling shall be made and maintained so that a sample of water can be taken from the bore for water quality analysis.

Locations for groundwater level monitoring

85. Monitoring of groundwater levels shall be carried out in bores as set out in Schedule A below and located on Figure 2: Surface Water Catchment Plan prepared by PDP, 2017 and as may be confirmed by the operational GSWMCP.

Schedule A: Groundwater monitoring bores					
Bore	**Coordinates**		**Screened Interval**		**Monitoring Frequency**
	Easting	Northing	Geology	Elevation (mRL)	
FH1shallow	1784636	5899983	River Alluvium	9.4 to 15.4	**Monthly**
FH1deep	1784636	5899983	Fresh Greywacke	-15 to -9	**Monthly**

FH2shallow	1785787	5900241	Weathered Greywacke	198 to 204	**Monthly**
FH2deep	1785787	5900241	Fresh Greywacke	-1 to 13	**Monthly**
GW2N	1784803	5899969	Fresh Greywacke	-3.5 to 2.5	**Monthly**
FH4deep[1]	to be determined		Fresh Greywacke	to be determined	**Monthly**
[1] To be installed prior to commencing Stage 4 quarry expansion					

86. The necessity for the well FH4deep shall be considered as part of the technical review required by condition 80. In the event the review finds that the well is needed, it shall be installed, and details provided (in accordance with conditions 83, 84 and 85) to the Team Leader – Southern Monitoring prior to commencing the stage 4 quarry expansion.

Frequency of groundwater level monitoring

87. Groundwater levels in the bores shall be measured and recorded at monthly intervals in the monitoring bores listed in Schedule A. Records shall be kept of each date, time and corresponding water level(s) for each bore

As-built survey of groundwater level monitoring bores

88. The elevations of the top of the casings and the NZ Transverse Mercator map reference of each bore in Schedule A of condition 85 shall be measured and recorded to an accuracy of 0.01 m and 2 m respectively, and forwarded to the Team Leader – Southern Monitoring. These measurements shall be undertaken within three months of the commencement date of this consent and be included in the GSWMCP.

Maintenance of groundwater level monitoring bores

89. In the event of any of the monitoring bores being destroyed, becoming inoperable, the water level being at or dropping below the bottom of the bore, or the landowner on whose property the bore is located does not allow access, that bore shall be substituted with another constructed and/ or otherwise identified as suitable by a suitably qualified practitioner, with the written approval of the Team Leader – Southern Monitoring. Access to the bores shall be maintained for sampling, monitoring and compliance purposes.

Stream flow monitoring

90. Within at least three months of the date of commencement of this consent, stream flows shall be measured and recorded in the North Stream and South Stream at the locations specified in Schedule B and at the location shown on Figure 2: Surface Water Catchment Plan, prepared by PDP, 2017, or as otherwise revised by the GSWMCP.

The objective of this monitoring is to establish the natural (pre-stage 3 expansion) MALF based on the correlation with the continuous stream flow gauging at Wairoa River. The flow correlation shall relate to the natural stream flow data collected for

the monitoring period with concurrent flows at the Auckland Council Wairoa River station.

Schedule B: Stream flow monitoring locations				
Site	**Coordinates (NZTM)**		**Location**	**Monitoring Frequency**
	Easting	Northing	Geology	
M1			Wairoa River	**Twice yearly**
M2			Wairoa River	**Twice yearly**
N1	1785348	5900075	North Tributary	**Twice yearly**
N2	1785059	5899998	North Tributary	**Twice yearly**
N3	1784817	5899995	North Tributary	**Twice yearly**
N4	1784750	5900017	North Tributary	**Twice yearly**
S1	1785319	5899533	South Tributary	**Twice yearly**
S2	1785034	5899555	South Tributary	**Twice yearly**
S3	1784669	5899628	South Tributary	**Twice yearly**

Advice Note:

For the purpose of achieving the objectives, minor differences in gauging locations are tolerable. However, if any of the stations given in Schedule B shift by more than 50 m (e.g. due to stream channel conditions), alternative gauging sites shall be established upon written approval of the Team Leader.

Frequency of stream flow monitoring

91. Stream flows shall be measured on two occasions (separate days and not in the same week) during dry weather conditions (as agreed with Team Leader – Southern Monitoring) or on the tail of any stream flow recession at a range of flows, within the period commencing 1 October and ending 31 May of each 'water calendar' year (so twice every year).

Stream flow monitoring methodology

92. The stream flow records collected and reported shall include details of the method, dates and times of the gauging procedure employed, all measurements taken, and flow calculations. All field measurements and procedures, including appropriately

recognising any discharge from the Wairoa Dam, shall be as per the methodology set out in the GSWMCP.

Stream flow maintenance (augmentation)

93. Within the period from 1 November to 31 May (inclusive) of any 'water calendar' year, augmentation flow discharges, calculated in accordance with Schedule C and based on the percent of groundwater inflow measured according to condition 77, to the North and South Streams shall take place continuously if flow at the specified flow site drops below the specified value noted below. The discharge shall be at a constant rate over 24 hours. The default specified site and value (which will be confirmed in the annual monitoring report) is the Auckland Council Wairoa River @ Tourist Road, Clevedon flow site (site number 08516) and a value of 544.5 l/s (150 % of MALF) for a 48h period. In the event of the Wairoa River flow sites being disestablished or becoming inoperable, then the consent holder shall demonstrate to the Team Leader – Southern Monitoring's satisfaction a suitable alternative.

Schedule C: Daily Augmentation Flows to North and South Streams		
Pit Inflow (m^3/d)	**North Stream** (% of pit inflow)	**South Stream** (% of pit inflow)
0 – 2500	11	3

94. The pit groundwater inflow shall be based on the sump groundwater inflow test in dry conditions over the previous 12 months ending 31 May, as determined annually and required by condition 101 in accordance with the GSWMCP.

Stream flow augmentation discharge points

95. The augmentation discharge points should be upstream of the stream reaches that may potentially be affected by the dewatering. The location of augmentation shall be shown on the revised Surface Water Catchment Plan prepared by PDP, 2017 and in the GSWMCP.

Establishing baseline stream water quality

96. Baseline monitoring of water temperature, dissolved oxygen, Ph and TDS at the location of the stream flow gauging sites along the North and South Streams shall be undertaken for one summer period between 1 November to 31 May, after commencement of consent and before implementing any augmentation programme. The measurements shall be undertaken every month using calibrated temperature, Ph and dissolved oxygen meter(s).

Stream Water Quality monitoring

97. Within two months of completing the baseline survey, the GSWMCP shall be updated to include details around the stream water quality monitoring (described in condition 98 below) and shall be submitted to the Team Leader – Southern Monitoring outlining whether any adverse effects resulting from any increases in water temperature or changes in Ph, total dissolved solids (TDS) or dissolved oxygen (DO) are anticipated in the streams (after reasonable mixing) and if so, outline mitigation measures to be implemented to address such effects.

98. The details to be provided in accordance with condition 97 shall include but not be limited to:

(a) A monitoring and reporting schedule for on-going water quality monitoring;

(b) A schedule and updated final plan showing the location of monitoring;

(c) The procedures for undertaking the monitoring;

(d) Details of trigger levels established by the monitoring in (a); and

(e) Details of all contingency plans for remedial actions in response to changes in stream water quality.

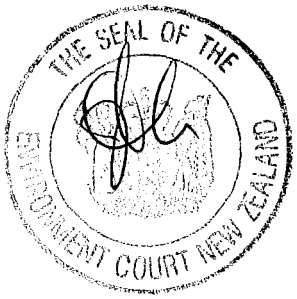
Monitoring of pumped stream augmentation flows

99. Water meters shall be installed on the outlet of the pumps used to augment stream flows that are compatible with an electronic storage device. The meters shall continuously (at a maximum 15-minute intervals) measure the total quantity of water being discharged as augmentation flow into the streams. The water meter should meet the requirements of conditions 70, 71 and 72.

Reporting requirements

100. The consent holder shall ensure that the monitoring records collected under the above conditions, and as summarised in Schedule D are submitted to the Team Leader – Southern Monitoring no later than 20 working days after the 28 February, 31 May, 31 August and 30 November each year.

Schedule D: 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



Schedule D: Reporting Requirements		
Information	**Reporting frequency**	**Due date(s) for reporting**
Stream flow quality	Annual	30 June
Stream augmentation flow rates	Quarterly	No later than 20 working days after 28 February, 31 May, 31 August and 30 November
Efficient water use	Annual	30 June

Annual reporting requirements

101. The consent holder shall submit by 30 June of each water calendar year, to the Team Leader – Southern Monitoring a report analysing and interpreting the results of groundwater and surface water monitoring required in accordance with the conditions of consent. The report should provide an overall analysis that includes but is not limited to:

(a) volume of water pumped from the quarry sump pit and any reuse of this water (efficiency of collective groundwater and surface water takes);

(b) trends in groundwater level or groundwater quality indicated by monitoring and comparison to expected trends;

(c) an estimation of groundwater inflow to the pit and implications for augmentation rates;

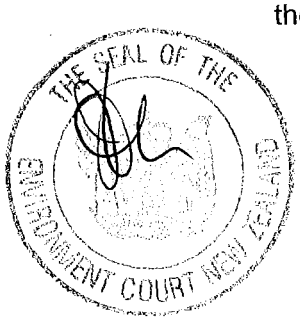
(d) trends in stream flow and quality indicated by monitoring (including catchment areas, the correlation graphs, and values for R2, y intercept, slope, regression expression, and specific discharge for the MALF) and comparison to expected trends; and

(e) details of augmentation (timing, duration, quantum) undertaken in the preceding water calendar year and effectiveness in maintaining stream conditions (flow and ecological values).

102. The report shall be prepared to a standard acceptable to the Team Leader – Southern Monitoring and consider all data collected, and in particular examine and evaluate compliance with the consent conditions and any effects on the environment during the previous year and since this consent was exercised.

Efficient Water Use

103. The annual reporting shall include a summary of water use efficiency that considers all groundwater and surface water take consents. The report shall assess the groundwater inflows and total pumped quarry volumes over the previous 12 months, and any water abstracted from the north stream, against best practice in respect of the efficient use of water for the purpose consented.



Part D — Earthworks Consent (Application LUC60291842)

Erosion and Sediment Control

104. An annual ESCP shall be submitted no later than 10 working days after 30 April each year, commencing 30 April 2018, for certification by the Team Leader – Southern Monitoring that it contains the information in condition 105, prior to the commencement of works proposed in the annual ESCP.

105. The annual ESCP shall contain the following information:

(a) calculations to confirm compliance with GD05 for quarrying and associated activities including overburden removal for the next 12 months;

(b) Overburden removal and disposal operations planned for the next 12 months;

(c) areas of expected quarry operations for the next 12 months;

(d) proposed maintenance and enhancement of riparian vegetation, as required by other conditions of consent;

(e) results of the previous 12 months of sampling inclusive of summarised rainfall records and assessment of results;

(f) the methodology of the ecological survey and the results of the ecological survey and assessment of results, as required by other conditions of consent;

(g) assessment of effectiveness of erosion and sediment control measures and any sediment related effects on the receiving environment; and

(h) procedures to ensure compliance with the requirements of condition 124.

106. Prior to the commencement of any land disturbance activities authorised by the granting of this consent, a certificate signed by an appropriately qualified and experienced person shall be submitted to the Team Leader – Southern Monitoring to certify that the erosion and sediment controls measures have been constructed in accordance with the annual ESCP.

107. Certified controls shall include temporary and permanent diversion bunds, and any sediment retention devices (e.g. sediment retention ponds (SRP) and decanting earth bunds (DEB)). The certification for these measures shall be supplied immediately upon completion of construction of those measures. Information supplied if applicable shall include:

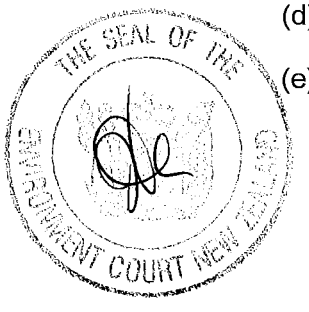
(a) contributing catchment area;

(b) retention volume of the structures;

(c) shape and composition of structures;

(d) position of inlets/outlets and drop structures;

(e) stabilisation of the structure; and



(f) confirmation of compliance with GD05.

108. All erosion and sediment control measures referred to in condition 105 above, including temporary measures shall be constructed and maintained in general accordance with Auckland Council guideline document 2016/005, Erosion and Sediment Control Guide for Land Disturbing Activities in The Auckland Region (GD05).

109. Accumulated sediment is to be removed from sediment retention devices before the sediment reaches 20% of the live storage capacity of the devices. Removed sediment is to be deposited in an area that cannot wash into receiving waters.

110. All sediment retention ponds shall incorporate an emergency spillway, which shall be constructed to withstand a 100 year return frequency storm event without breaching. ~~Any amendments to this design requirement shall be approved in writing by the Team Leader – Southern Monitoring prior to construction and implementations.~~

111. The operational effectiveness and efficiency of all erosion and sediment control measures specifically required as a condition of resource consent or by the ESCP referred to in condition 105 shall be maintained throughout the duration of land disturbing activities or until the site is permanently stabilised against erosion. A record of any maintenance work shall be kept and be supplied to the Team Leader – Southern Monitoring, on request.

112. Notice shall be provided to the Team Leader – Southern Monitoring at least two (2) working days prior to the removal of any erosion and sediment control works specifically required as a condition of resource consent.

Interim and Final Stabilisation

113. The site shall be progressively stabilised against erosion (bare rock excluded) at all stages of the land disturbing activity, and throughout the duration that the consent is exercised. Interim stabilisation measures may include the use of waterproof covers, geotextiles, or mulching; or aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.

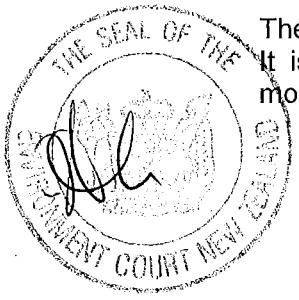
114. Upon abandonment or completion of land disturbing activities on the subject site, all areas of bare earth shall be permanently stabilised against erosion to the satisfaction of the Team Leader – Southern Monitoring.

115. If works are to be abandoned on-site, adequate preventative and remedial measures shall be undertaken to control sediment discharge, and shall thereafter be maintained for so long as necessary to prevent sediment discharge from the site. All such measures shall be of a type, and to a standard, which are to the satisfaction of the Team Leader – Southern Monitoring.

Advice Note

Measures may include the use of mulching, top-soiling, seeding and mulching of otherwise bare areas of earth, or aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.

The on-going monitoring of these measures is the responsibility of the consent holder. It is recommended that you discuss any potential measures with the Council's monitoring officer who will guide you on the most appropriate approach to take.



Please contact the Team Leader – Southern Monitoring for more details. Alternatively, please refer to Auckland Council Guideline Document 2016/005, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05).

Sediment on Roads

116. The consent holder shall install and make operational a wheel wash by 31 March 2018. All quarry trucks and vehicles exiting the operational quarry areas shall pass through the wheel wash prior to entering McNicol Road.

117. There shall be no deposition of earth, mud, dirt or other debris on any public road or footpath resulting from earthworks activity on the subject site. In the event that such deposition does occur, it shall immediately be removed. In no instance shall roads or footpaths be washed down with water without appropriate erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses or receiving waters.

North Stream

118. The consent holder shall ensure that~~, wherever practicable,~~ mineral extraction activities are set back from the North Stream by 10m (except in the areas illustrated by the blue line on Figure X attached to this consent, which shall be 10m where practicable) where within stages 1 to 3. From stage 4 onwards the setback shall be 20m from the North Stream. A 10m riparian margin (stages 1-3) and 20m riparian margin (stage 4 onwards) shall be planted with appropriate native species and maintained for a period of 5 years from completion of works in that stage.

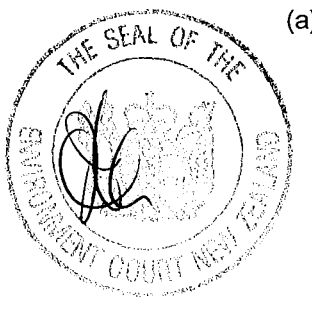
119. Within 3 months of this consent commencing the consent holder shall submit to the Team Leader Compliance Monitoring South, Auckland Council, a report prepared by a suitably qualified chartered professional engineer on the sufficiency of the bund height of the existing srp bund to exclude entry of flood water from the North Stream during a 20 year ARI flood with allowance for future increased rainfall associated with 2.1 degree C increase in temperature; and

(a) Should the existing bund be of insufficient height to exclude a 20 year ARI flood the report shall make detailed recommendations, in sufficient detail to allow the consent holder to implement any construction aspects of the recommendations with respect to raising the SRP bund or other suitable measure to ensure 20 year flood flows from the North Stream do not overtop the SRP bund; and

(b) Any recommendations on raising the SRP bund or other suitable measure to ensure 20 year flood flows from the North Stream do not overtop the SRP bund shall be carried out as soon as soon practical, but not later than 7 months after submitting the engineers report.

120. To ensure that the SRP (excluding the outlet and scour protection) is able to withstand potential damage from extreme flood flows and the existing bund adjoining the North Stream prevents such flows entering the quarry pit, the consent holder shall carry out the following:

(a) A report shall be prepared by a suitably qualified chartered engineer on flow velocities in the North Stream adjacent to the SRP bund during a 100 year ARI flood with allowance for future increased rainfall associated with a 2.1



degree C increase in temperature and assessment of the ability of the existing SRP bund to withstand these velocities without substantial scour or other damage to the bund embankment; and

(i) Should 100 year flood flow velocities be assessed to be likely to cause substantial scour and/or damage to the SRP bund the report shall make recommendations in sufficient detail suitable to allow the consent holder to implement any construction aspects of the recommendations for upgrading or strengthening the bund such that damage will not occur from a 100 year flood;

(ii) The above described report shall be prepared within 3 months of this consent commencing and a copy provided to the Team Leader Compliance Monitoring South, Auckland Council. Any recommendations on upgrading or strengthening the existing SRP bund shall be carried out as soon as soon practical, but not later than 7 months after receiving the engineers report; and

(iii) In the event that it is not practical to upgrade or strengthen the bund with the SRP in its existing location, the SRP shall be relocated to another location and the reporting carried out to demonstrate that damage will not occur to the bund during a 100 year flood. This shall be carried out as soon as practical, but not later than 8 months after receiving the engineers report.

(b) A report shall be prepared by a suitably qualified chartered engineer on the adequacy of the bund adjoining the North Stream to prevent flood flows from the stream entering the quarry pit and its ability to withstand erosion from flood flows in the North Stream in a 100 year ARI flood with allowance for future increased rainfall associated with a 2.1 degree C increase in temperature and

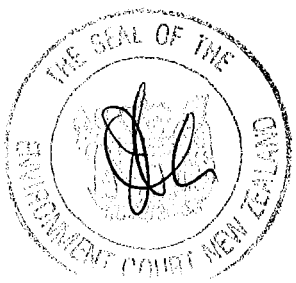
(i) Should the existing bund be of inadequate height to prevent flood flows from the stream entering the quarry pit and/or be unable to withstand erosion from flood flows in a 100 year ARI flood, the report shall make detailed recommendations, in sufficient detail to allow the consent holder to implement any construction aspects of the recommendations with respect to raising and/or reconstructing or strengthening the bund to ensure 100 year flood flows from the North Stream do not overtop or erode the bund;

(ii) The above described report shall be prepared within 3 months of this consent commencing and a copy provided to the Team Leader Compliance Monitoring South, Auckland Council; and

(iii) Any recommendations with respect to raising and/or reconstructing or strengthening the bund shall be carried out as soon as practical, but not later than 7 months after receiving the engineers report.

Slope Stability Monitoring Plan

121. A Slope Stability Monitoring Plan (SSMP), with trigger levels and actions shall be developed by a suitably qualified professional and approved by Council as part of the QMP processes if it complies with condition 122. The monitoring plan, trigger levels and action within the QMP shall be reviewed annually.



122. The SSMP shall present detailed quarry planning to demonstrate slopes have been designed to accepted industry best practice factors of safety against slope instability with respect to quarry batters.

Extent of works

123. Quarrying activities shall be restricted to those parts of the Special Purpose - Quarry Zone areas as described in documents lodged in support of the land use consent application (luc60291842).

Limit condition

124. An automatic and continuous recording turbidity meter shall operate to record water quality within the north stream upstream of the SRP discharge point and 20m downstream of the SRP discharge point. The water quality monitoring shall measure for threshold exceedance. Should the threshold change be greater than 20% between upstream and downstream NTU, specific methods of monitoring, actions required, and reporting to Council shall be undertaken as described in the ESCP.

Sampling programme

125. Site rainfall shall be measured at the same time each working day, when the site is operating or have access to daily rainfall figures for the quarry. A working day is defined as Monday through to Friday inclusive, plus those days outside this period when the quarry is operating.

Archaeological

126. If, at any time during site works, potential koiwi (human remains), archaeology or artefacts are discovered, then the following discovery protocol is to be followed:

(a) All earthworks will cease in the immediate vicinity (at least 10m from the site of the discovery) while a suitably qualified archaeologist is consulted to establish the type of remains.

(b) 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, southern monitoring, 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.

(c) If the discovery contains koiwi, archaeology or artefacts of maori origin, representatives from Ngai Tai Ki Tamaki are to be provided information on the nature and location of the discovery.

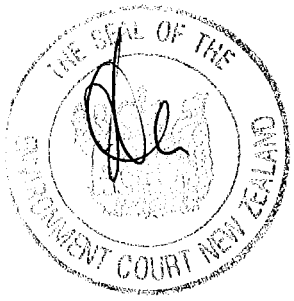
(d) Ngai Tai Ki Tamaki is to be given the opportunity to monitor the earthworks and conduct karakia and other such religious or cultural ceremonies and activities as are appropriate.

127. If any site that meets the RMA definition of historic heritage is exposed as a result of any activity associated with the consent proposals then these sites shall be recorded within the Auckland Council Cultural Heritage Inventory by the project archaeologist/historic heritage expert.

Advice note:

I. Māori artefacts such as carvings, stone adzes, and greenstone objects are considered to be tāonga (treasures). These are taonga tūturu within the meaning of the Protected Objects Act 1975 (hereafter referred to as the Act). According to that act (section 2) taonga tūturu means an object that – relates to māori culture, history, or society; and was, or appears to have been – manufactured or modified in New Zealand by māori; or brought into New Zealand by māori; or used by māori; and is more than 50 years old. The act is administered by the Ministry of Culture and Heritage. Tāonga may be discovered in isolated contexts, but are generally found within archaeological sites. The provisions of the Heritage New Zealand Pouhere Taonga Act 2014 in relation to the modification of an archaeological site should be considered by the consent holder if tāonga are found within an archaeological site, as defined by the Heritage New Zealand Pouhere Taonga Act 2014. It is the responsibility of the consent holder to notify either the chief executive of the Ministry of Culture and Heritage or the nearest public museum, which shall notify the chief executive, of the finding of the taonga tūturu, within 28 days of finding the taonga tūturu; alternatively provided that in the case of any taonga tūturu found during the course of any archaeological investigation authorised by Heritage New Zealand Pouhere Taonga under section 48 of the Heritage New Zealand Pouhere Taonga Act 2014, the notification shall be made within 28 days of the completion of the field work undertaken in connection with the investigation. Under section 11 of the Act, newly found taonga tūturu are in the first instance Crown-owned until a determination on ownership is made by the Māori Land Court. For information please contact the Ministry of Culture and Heritage - 04 499 4229 / protected-objects@mch.govt.nz.

II. The Heritage New Zealand Pouhere Taonga Act 2014 provides for the identification, protection, preservation and conservation of the historic and cultural heritage Of New Zealand. It is an offence under this Act to destroy, damage or modify any archaeological site without an authority from Heritage New Zealand Pouhere Taonga. An archaeological site is defined as a place associated with pre-1900 human activity where there may be evidence relation to history of New Zealand. Archaeological features' may include old whaling stations, ship wrecks, shell middens, hangi or ovens, pit depressions, defensive ditches, artefacts, or koiwi tangata (human skeletal remains), etc. For guidance and advice on managing the discovery of archaeological features, contact the Team Leader Cultural Heritage Implementation, Auckland Council on 09 301 0101.



Part E: Air Discharge Consent (Application DIS60302443)

128. The consent holder shall, at all times, operate, maintain, supervise, monitor and control all processes on site so that in the opinion of the Team Leader, Southern Monitoring, Resource Consents and Compliance emissions authorised by this consent are maintained at the minimum practicable level:

(a) beyond the boundary of the site there shall be no odour, dust or fume caused by discharges from the site which, in the opinion of an enforcement officer, is noxious, offensive or objectionable;

(b) no discharge 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, offensive or objectionable; and

(c) 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 likely to be detrimental to human health or the environment.

Advice Note:

In assessing whether the effects are noxious, offensive or objectionable, the following factors will form important considerations:

1. The frequency of dust/visible emission nuisance events

2. The intensity of events, as indicated by dust quantity and the degree of nuisance

3. The duration of each dust nuisance event

4. The offensiveness of the discharge, having regard to the nature of the dust; and

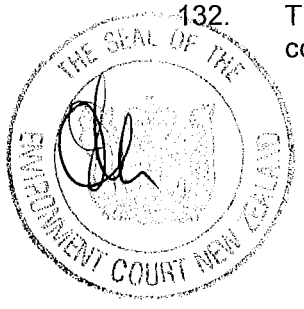
5. The location of the dust nuisance, having regard to the sensitivity of the receiving environment

129. The consent holder shall, as far as practicable, operate the plant and associated processes in accordance with the documentation submitted to the Council as part of application number DIS60302443, where not amended by the conditions of this resource consent. No alterations shall be made to the plant or processes that do not~~, or are not likely to,~~ comply with the provisions of this consent, a regional rule, or regulations under the RMA.

130. The consent holder shall be responsible for all discharges to air from the site and shall make any person on site aware of any relevant conditions of this consent.

131. The consent holder shall ensure techniques are used for excavating rock, blasting and drilling which minimise dust emissions. Dust emissions from all crushing, screening and transfer operations shall be kept to a practicable minimum. Dust suppression equipment shall be maintained in good condition.

132. The consent holder shall limit vehicle speed in dry weather to a speed such that, in conjunction with other controls, dust emissions are minimised.



133. All ponds shall be maintained at such capacity that application of water as a dust control measure is not limited. A log shall be kept of pond maintenance and of weekly checks on sediment and water levels in ponds.

134. Contouring and re-vegetation of overburden dumps shall take place as soon as practicable to reduce windblown dust.

135. All stockpiles shall be constructed and positioned to minimise the potential for dust emissions, and all practicable steps shall be taken to suppress dust from stockpiles~~these emissions shall be suppressed to the satisfaction of the manager~~.

136. The consent holder shall ensure that no material shall be disposed of by open burning on site.

137. Within 20 days of the date of commencement of this consent, a Dust Management Plan (DMP) shall be submitted to the Team Leader - Southern Monitoring for certification, to confirm that the activities undertaken in accordance with the DMP will achieve the objectives of the Plan and compliance with the relevant consent conditions. Any subsequent review of the DMP shall also be submitted to the Team Leader – Southern Monitoring for certification. The consent holder shall meet the costs of the production, certification, monitoring and review of the DMP. The overall objective of the DMP shall be to set out the practices and procedures to be adopted to ensure compliance with the conditions of consent.

138. The DMP shall incorporate a series of monitoring, management and operational procedures, methodologies and contingency plans and together shall accurately record all information required to comply with the conditions of this consent. The DMP shall include the following:

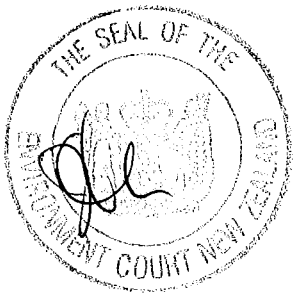
    (a) details of the operation, location and maintenance of the meteorological monitoring station referred to in condition 139;

    (b) details of management and monitoring practices in place to minimise discharges of dust; including but not limited to:

        i. the use of additional water carts and irrigation systems to dampen dusty surfaces;

        ii. stopping all work on areas of the site that are sources of excessive dust, other than dust control activities;

        iii. procedures for implementing instrumental monitoring of dust concentrations if a significant adverse dust effect beyond the boundary of the consent holder's property arising from on-site operations is identified as having occurred by Council and for which instrumental monitoring is deemed to be required. The determination of a significant adverse dust effect beyond the boundary of the consent holder's property shall be carried out using the guidance included in the Ministry for the Environment's Good Practice Guide for Assessing and Managing Dust and in consultation between the consent holder and Council. The requirement to implement an instrumental monitoring programme, the design of the monitoring system, including the monitoring methods to be used, location of monitor(s), contaminants to be monitored, duration of monitoring, alert thresholds and reporting



systems shall be determined in consultation between the Council and consent holder.

(c) the identification of staff responsibilities; and

(d) procedures for the receipt, recording and handling of complaints received about dust generated by the quarry.

139. Within 6 months of the date of commencement of this consent, the consent holder shall install and operate a meteorological monitoring station to measure wind speed, wind direction, temperature and rainfall at the site. The monitor shall continuously log these meteorological conditions in real-time so that the readings are available to site staff and be of a type and in a location agreed to by the Team Leader – Southern Monitoring. The location of the monitor shall minimise the potential for obstacles to affect the accuracy of the readings.

140. No later than 10 working days after 30 April in the first year of quarrying and every year thereafter, the consent holder shall provide an updated DMP to the Team Leader – Southern Monitoring, which in addition to those matters detailed in the earthworks consent shall contain details of the dust suppression undertaken and a record of any air quality complaints received.

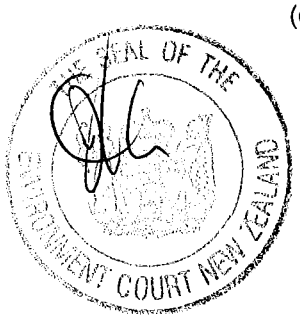
141. The consent holder shall log all air quality complaints received. The complaint details shall include:

(a) the date, time, position and nature of the complaint;

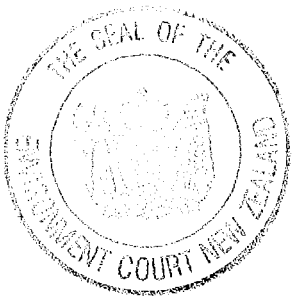
(b) the name, phone number and address of the complainant unless the complainant refuses to supply these details;

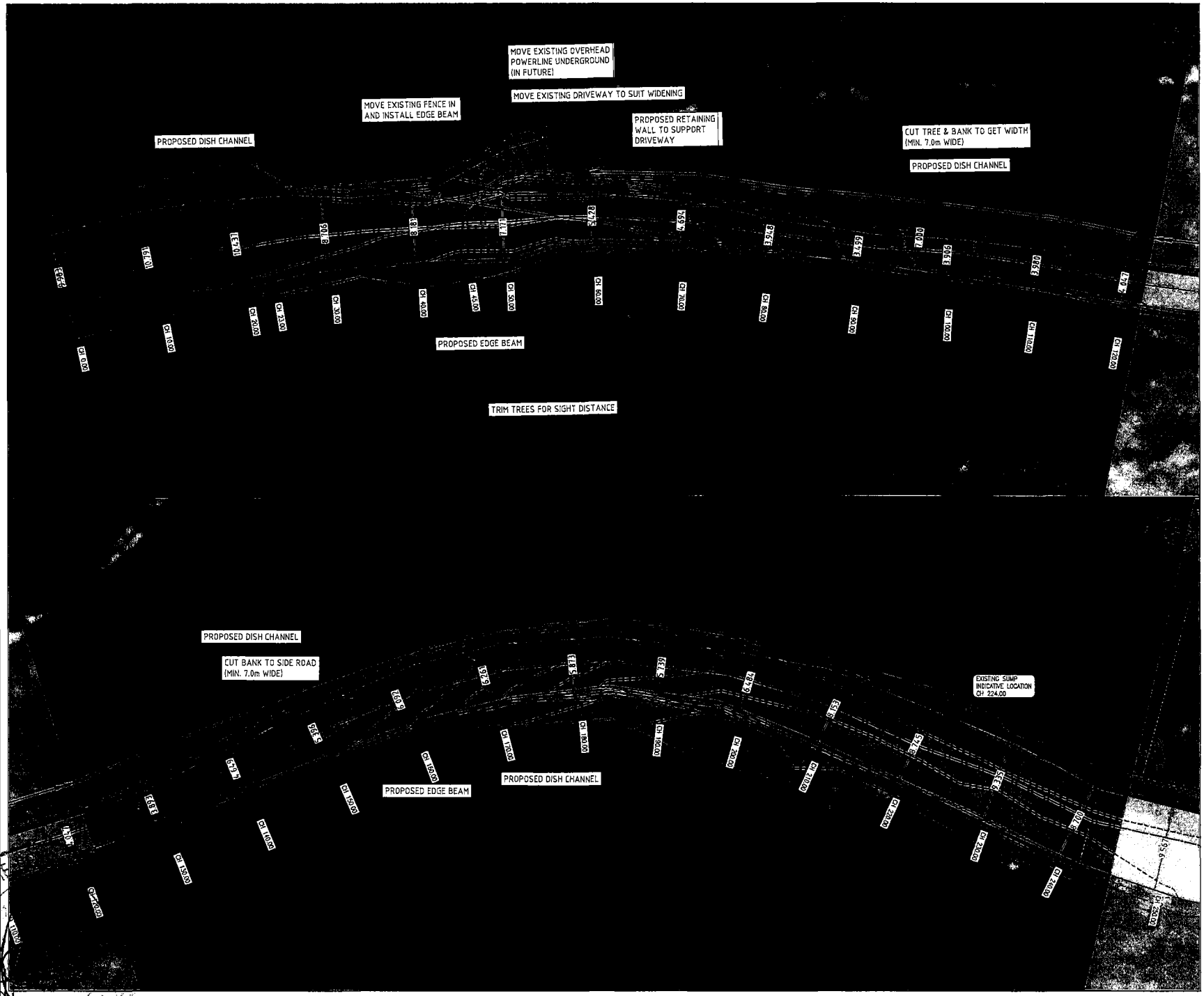
(c) any remedial actions taken; and

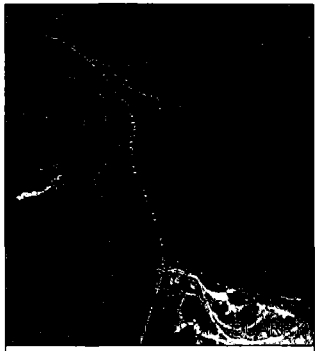
(d) details of any complaints received shall be provided to the Team Leader – Southern Monitoring within 7 days of receipt of the complaint/s.



ATTACHMENT 1 – MCNICOL ROAD WORKS PLANS







NOTES:

- – – – – – PROPOSED 600mm WIDE DISH CHANNEL
- ---------- PROPOSED 200mm WIDE EDGE BEAM
- —•—•—•— PROPOSED RETAINING WALL

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Proposed Layout

FH

Sheet 1 of 3

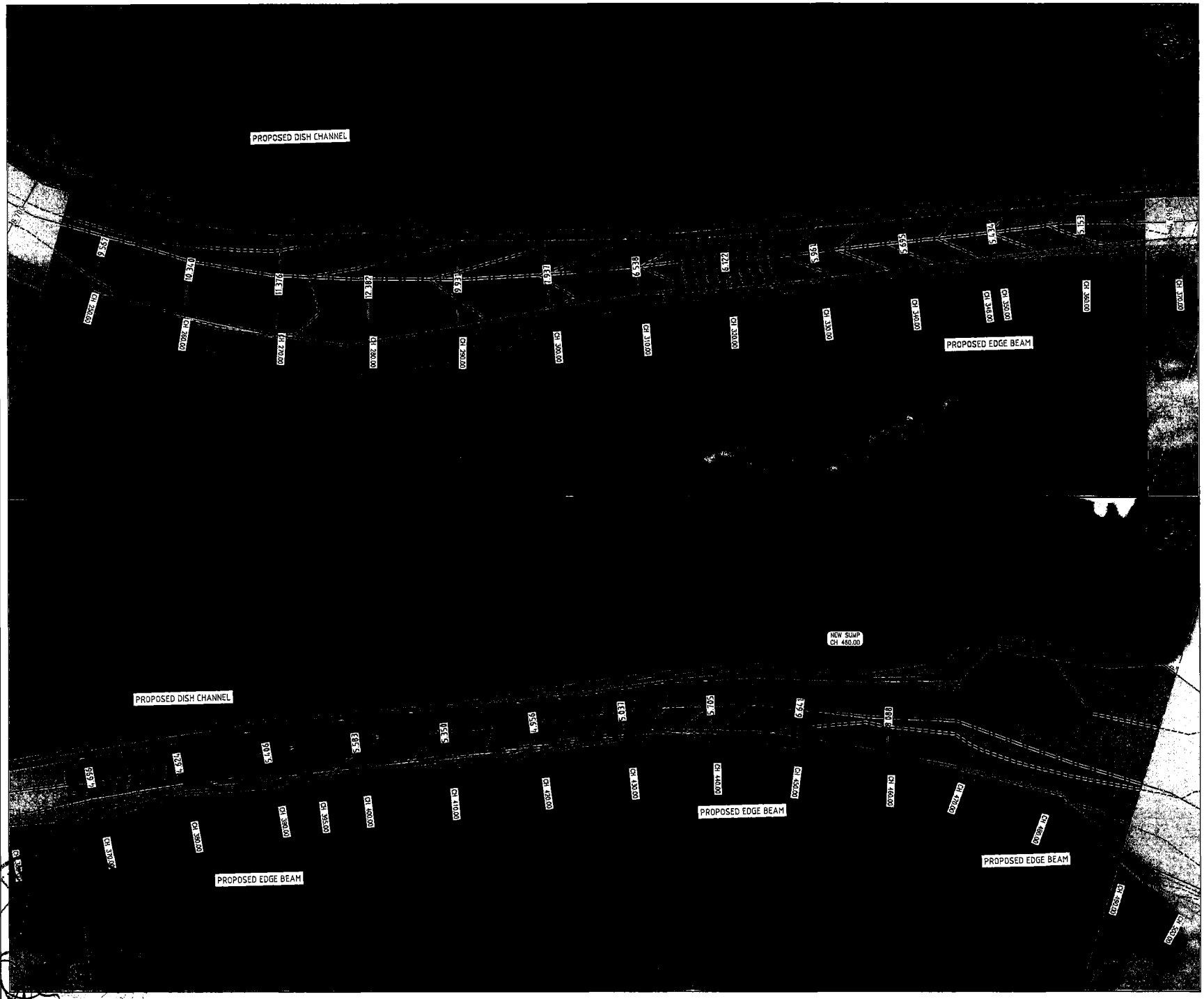
SCALE (A1) - 1:200
SCALE (A3) - 1:400

DATE 12/09/2017

FILE PATH G:\10 Construction\Surveys\Jobs\FH Maintenance (200886)\Clevedon Quarry\17) FH Design\Current

DRAWING NUMBER McNicol Rd Design Layout 170912(A)

REVISION A



NOTES:

PROPOSED 600mm WIDE DISH CHANNEL

PROPOSED 200mm WIDE EDGE BEAM

PROPOSED RETAINING WALL

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Proposed Layout

FH

Sheet 2 of 3

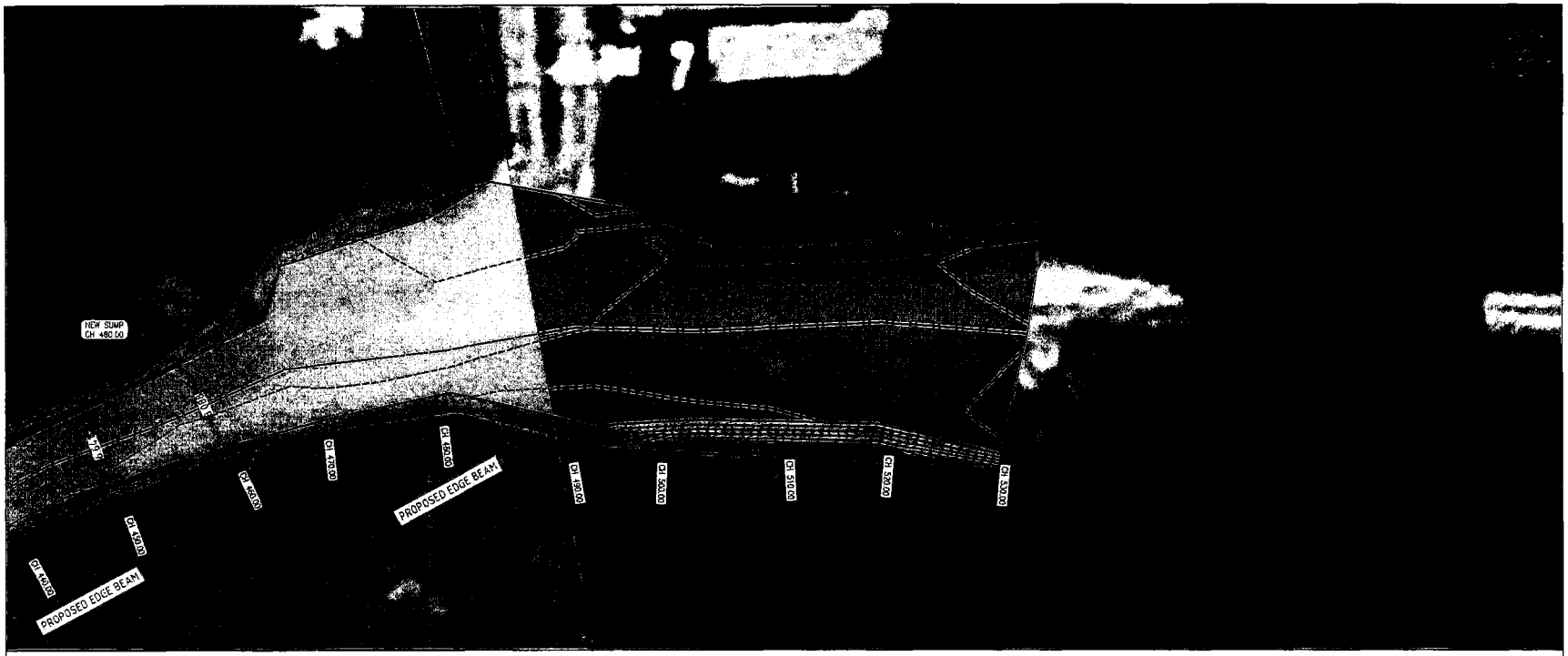
SCALE (A1) - 1:200
SCALE (A3) - 1:400

DATE 12/09/2017

FILE PATH G:\10 Construction\Survey Jobs\FH Maintenance (200888)\Clarendon Quarry\11) FH Design\Current

DRAWING NUMBER McNicol Rd Design Layout 170912(A)

REVISION A



PROPOSED 600mm WIDE DISH CHANNEL

PROPOSED 200mm WIDE EDGE BEAM

PROPOSED RETAINING WALL

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Proposed Layout

FH

Sheet 3 of 3

SCALE (A1) - 1:200
SCALE (A3) - 1:400

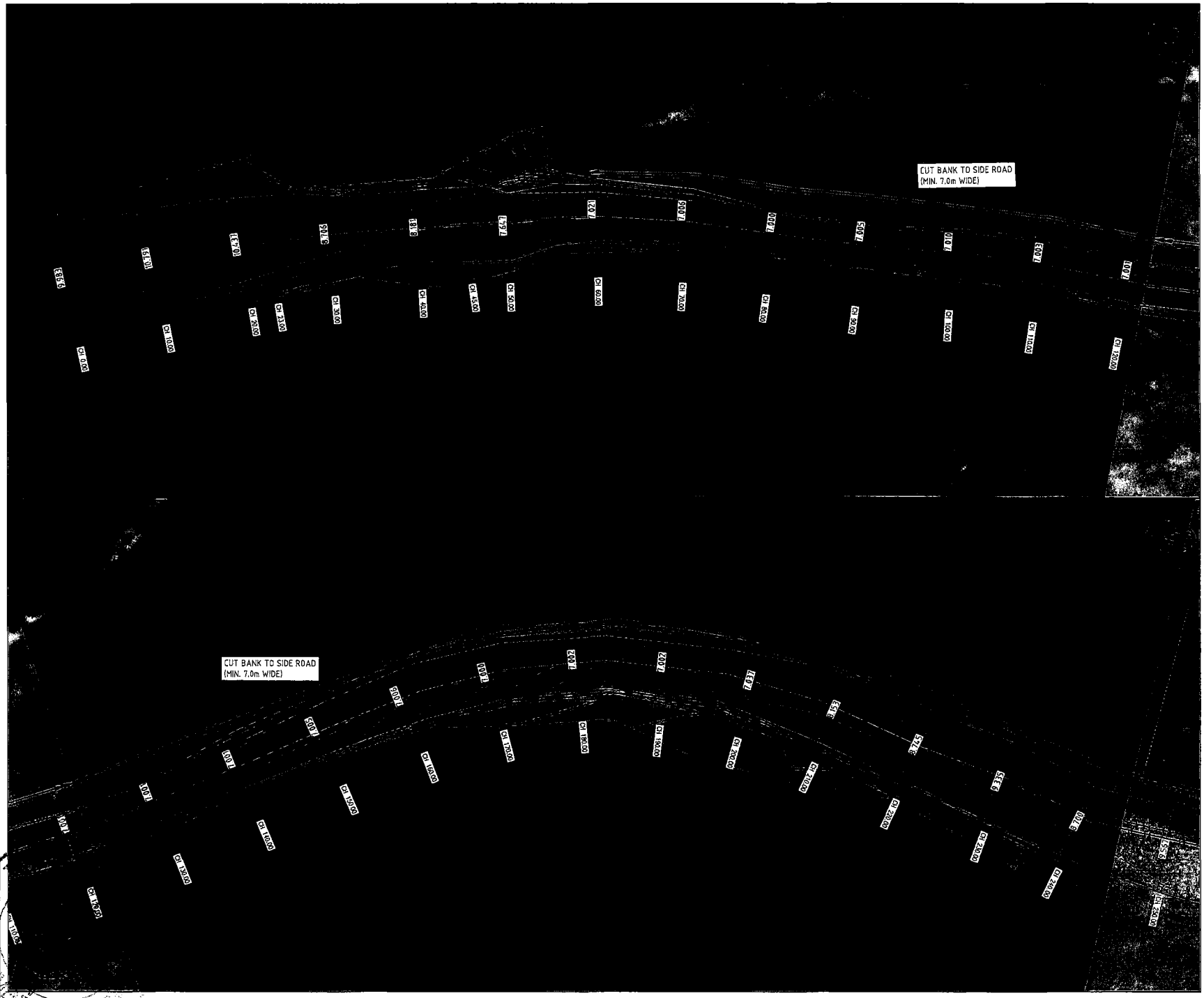
DATE 12/09/2017

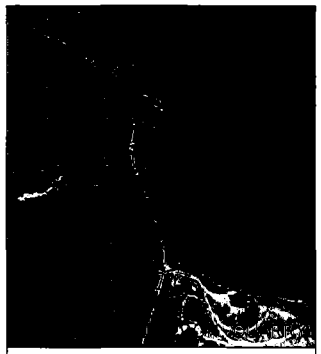
FILE PATH G:\10 Construction\Survey Jobs\FH Maintenance (200886)\Clevedon Quarry\11) FH Design\Current

DRAWING NUMBER McNicol Rd Design Layout 170912(A)

REVISION A

THE SEAL OF THE ENVIRONMENT COURT NEW ZEALAND





NOTES:

200mm OVERLAY AND UNDERCUT
TOTAL AREA: 3398.8m²

200mm OVERLAY AND AC
TOTAL AREA: 751.6m²

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Proposed Site Plan

FH

Sheet 1 of 3

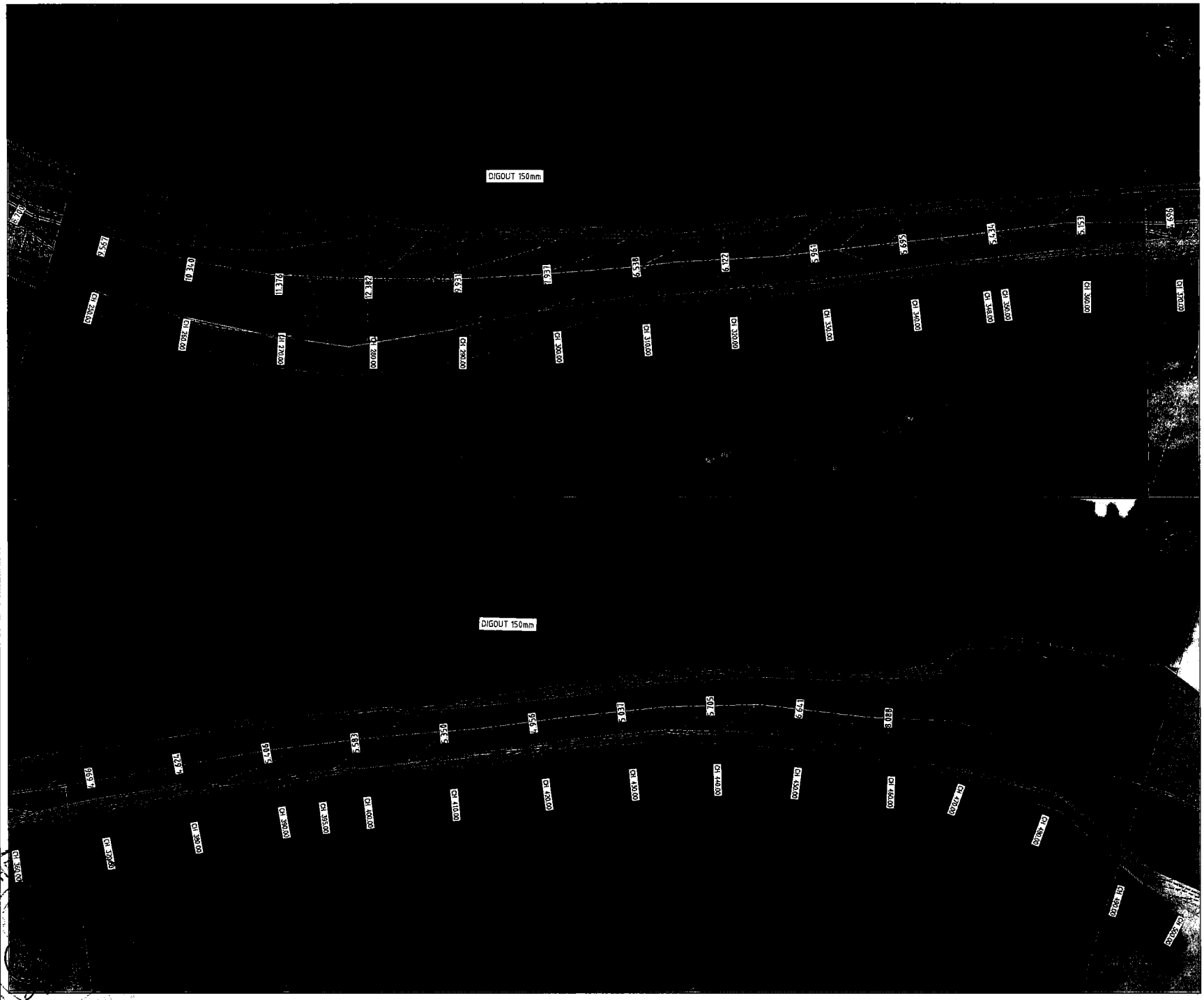
SCALE (A1) - 1:200
SCALE (A3) - 1:400

DATE 12/09/2017

FILE PATH G:\10 Construction\Survey\Jobs\FH Maintenance (200886)\Clevedon Quarry\11) FH Design\Current

DRAWING NUMBER McNicol Rd Design Site Plan 170912(A)

REVISION A



NOTES:

200mm OVERLAY AND UNDERCUT
TOTAL AREA: 3398.8m²

200mm OVERLAY AND AC
TOTAL AREA: 751.6m²

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Proposed Site Plan

FH

Sheet 2 of 3

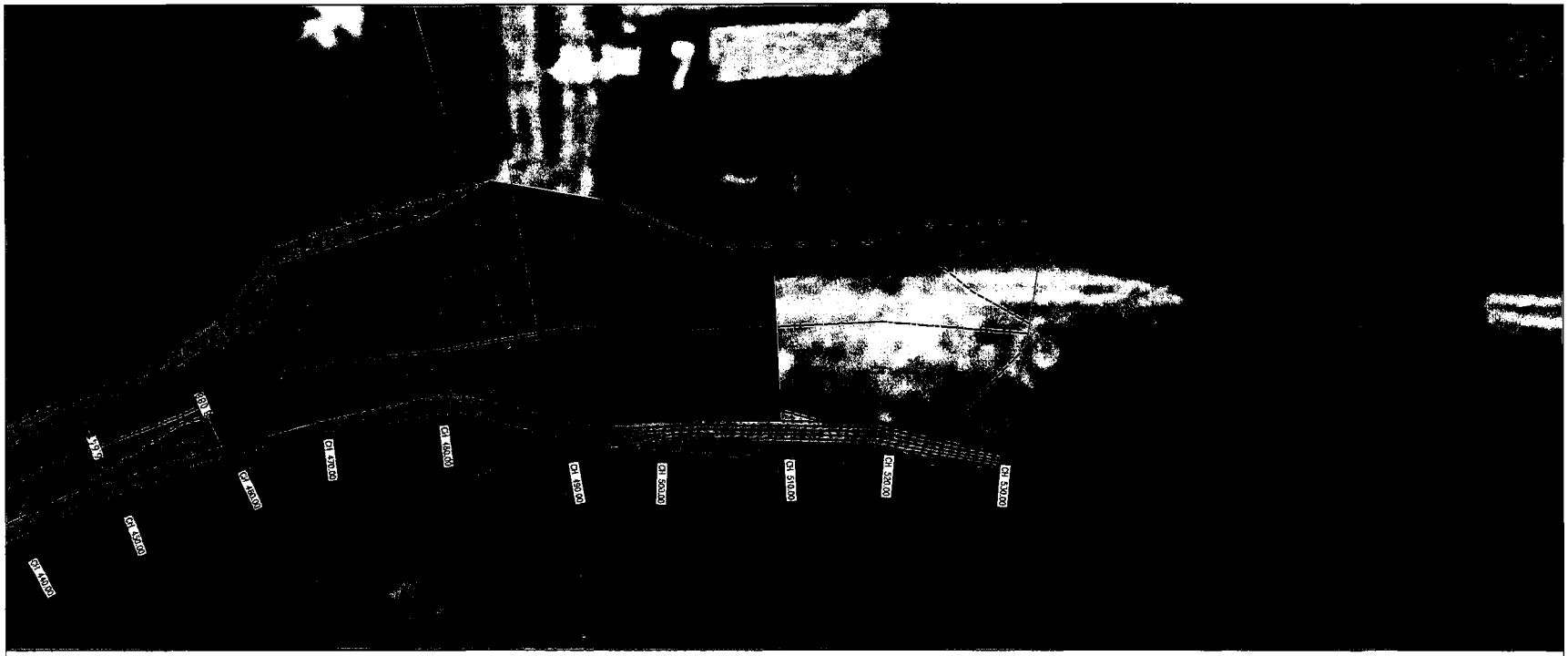
SCALE (A1) - 1:200
SCALE (A3) - 1:400

DATE 12/09/2017

FILE PATH G:\10 Construction\Survey\Jobs\FH Maintenance (200886)\Clovedon Quarry\11 FH Design\Current

DRAWING NUMBER McNicol Rd Design Site Plan 170912(A)

REVISION A



200mm OVERLAY AND UNDERCUT
TOTAL AREA: 3398.8m²

200mm OVERLAY AND AC
TOTAL AREA: 751.6m²

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Proposed Site Plan

FH

Sheet 3 of 3

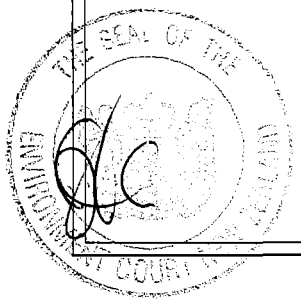
SCALE (A1) - 1:200
SCALE (A3) - 1:400

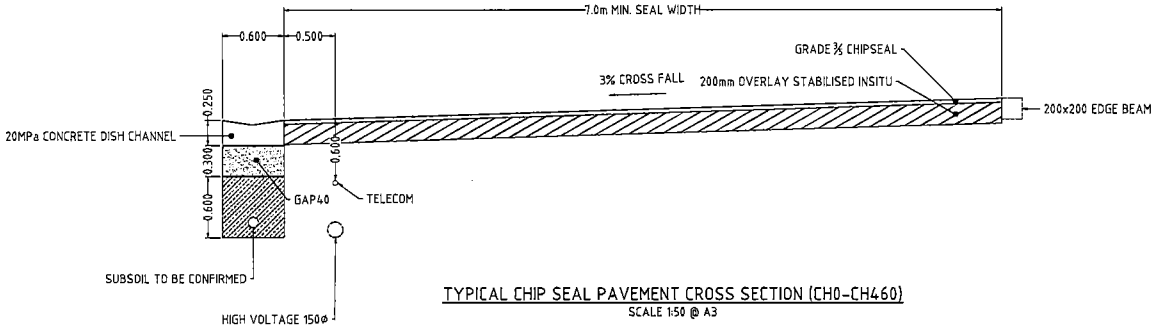
DATE 12/09/2017

FILE PATH G:\10 Consruction\Survey\Jobs\FH Maintenance (200886)\Clarendon Quarry\1) FH Design\Current

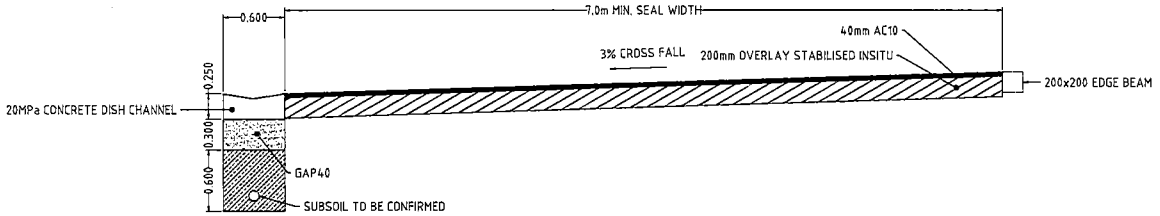
DRAWING NUMBER McNicol Rd Design Site Plan 170912(A)

REVISION A

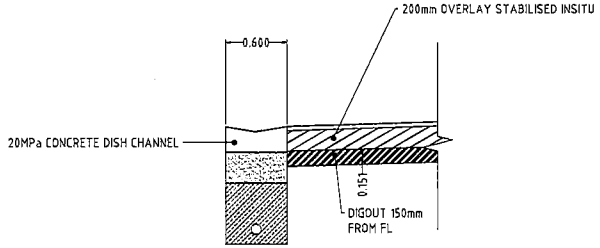




TYPICAL CHIP SEAL PAVEMENT CROSS SECTION (CH0-CH460)
SCALE 1:50 @ A3



TYPICAL ASPHALT PAVEMENT CROSS SECTION (CH460-CH510)
SCALE 1:50 @ A3



TYPICAL DIGOUT CROSS SECTION
SCALE 1:50 @ A3

NOTES:

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	-	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

Stated Height -

Fulton Hogan
SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Pavement
Typical Cross Sections

FH

Sheet 1 of 1

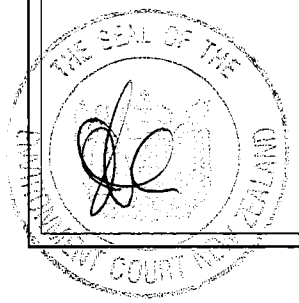
SCALE (A1) - 1:25
SCALE (A3) - 1:50

DATE 12/09/2017

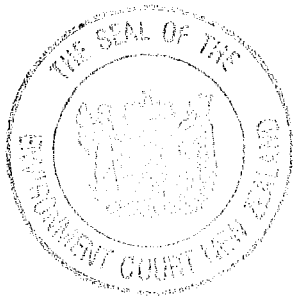
FILE PATH G:\10 Construction\Survey\Jobs\FH Maintenance (200026)\Clevedon Quarry\01 FH Design\Current\

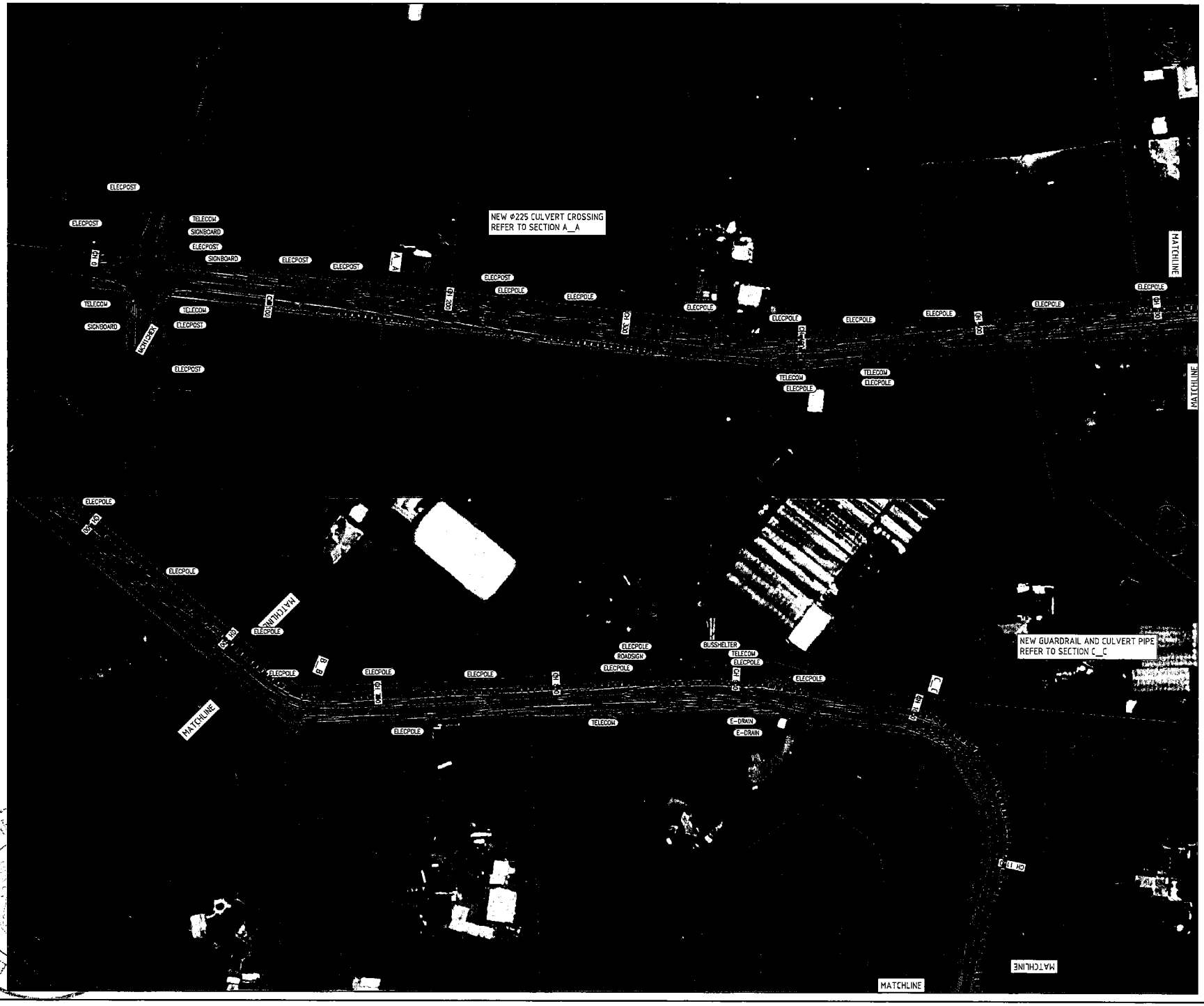
DRAWING NUMBER McNicol Rd Pavement Typical Cross Sections 170912(A)

REVISION A

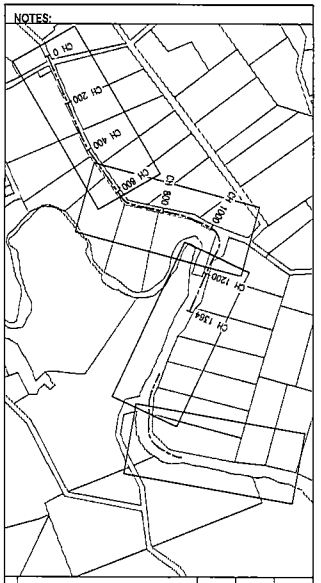


ATTACHMENT 2 - MCNICOL ROAD SOUTH RECREATIONAL TRAIL PLANS





NOTES:



REVISION		SURVEY	DRAWN	DATE
A	Original Drawing	HC	EC	20/11/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Existing Road Topo

FH

Sheet 1 of 3

SCALE (A1) - 1:1000
SCALE (A3) - 1:2000

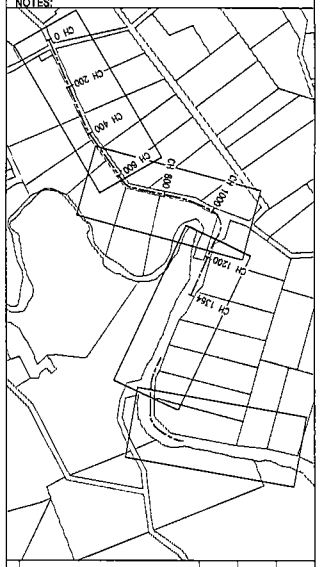
DATE 20/11/2017

FILE PATH G:\10 Construction\Survey\Jobs\FH Maintenance (200886)\Clevedon Quarry\7) Existing Topo

DRAWING NUMBER McNicol Rd Topo 171121 (2018)

REVISION A

NOTES:



REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	29/11/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Existing Road Topo

FH

Sheet 2 of 3

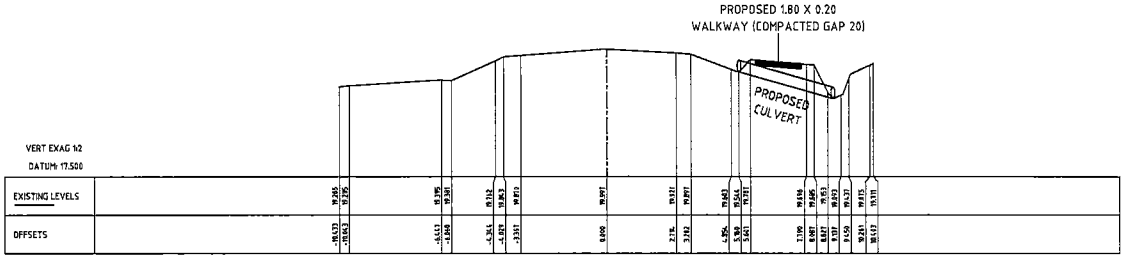
SCALE (A1) - 1:1000
SCALE (A3) - 1:2000

DATE 20/11/2017

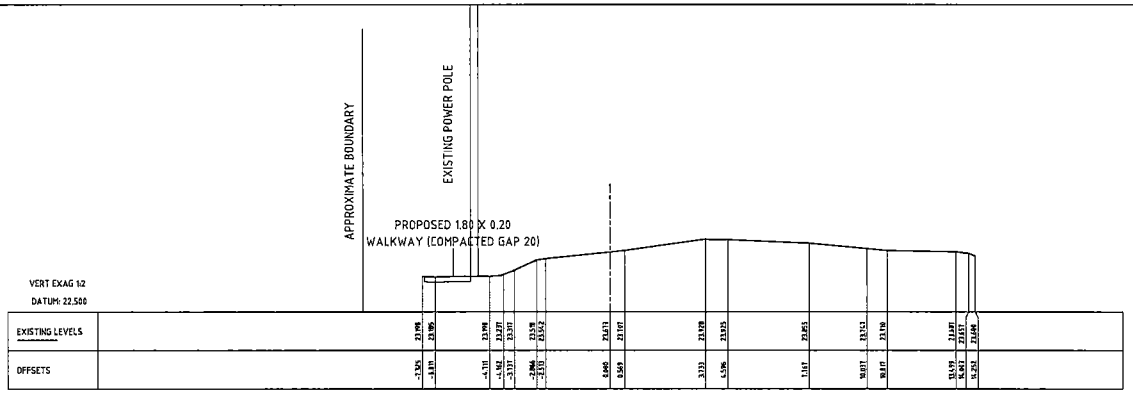
FILE PATH G:\10 Construction\Survey\Jobs\FH Maintenance (200986)\Clevedon Quarry\7) Existing Topo

DRAWING NUMBER McNicol Rd Topo 171121 (2018)

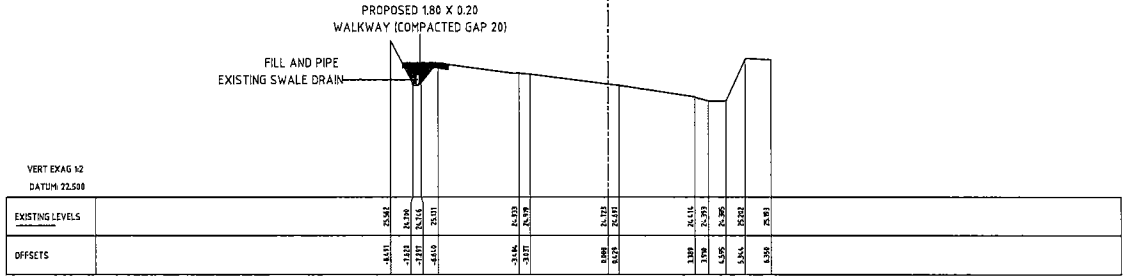
REVISION A



SECTION: A_A



SECTION: B_B



SECTION: C_C

NOTES:

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	20/11/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Existing Road Topo

FH

Sheet 3 of 3

SCALE (A1) - 1:100
SCALE (A3) - 1:200

DATE 20/11/2017

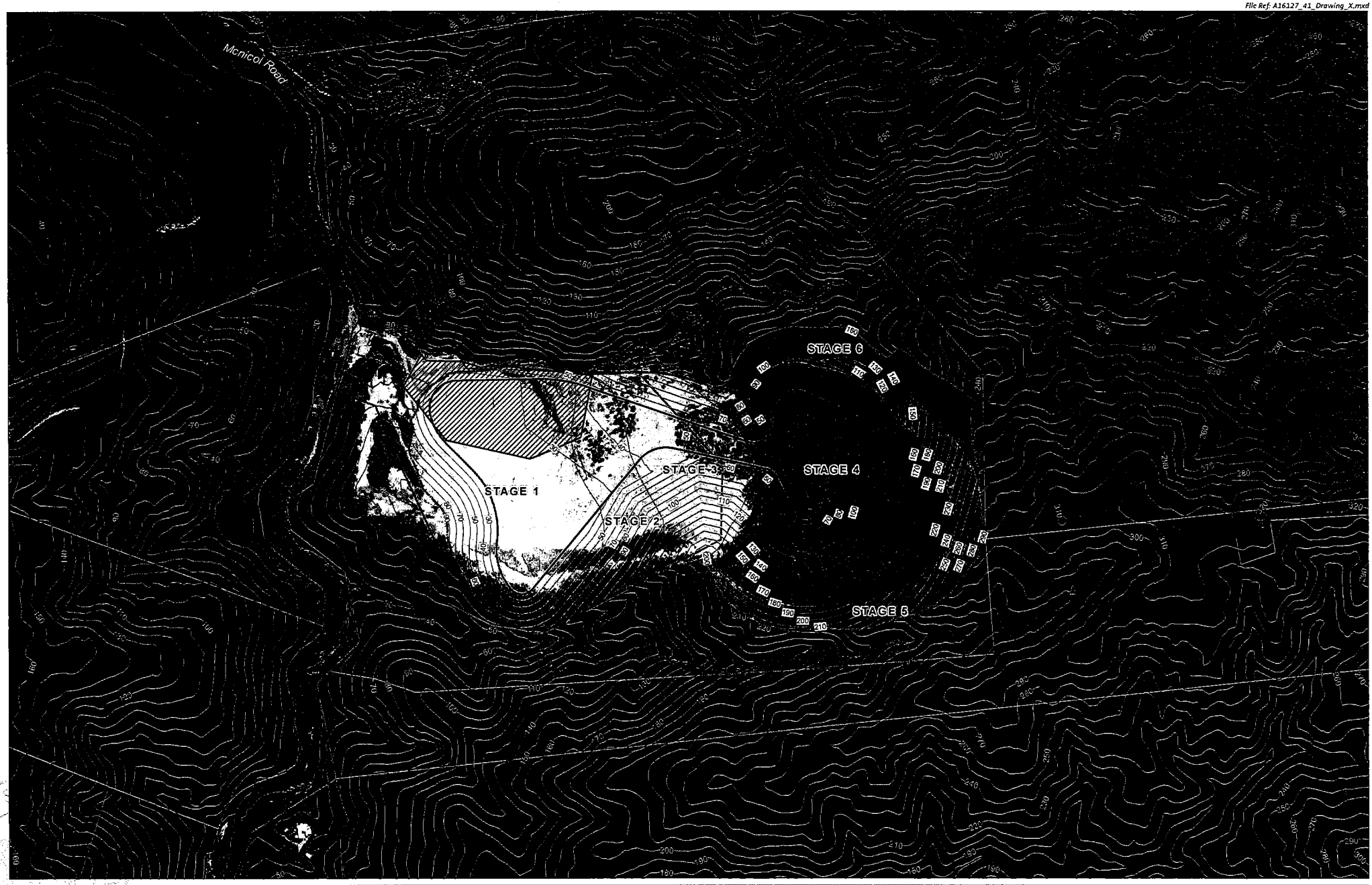
FILE PATH G:\10 Construction\Survey\Jobs\FH Maintenance (200886)\Clovedon County\7) Existing Topo

DRAWING NUMBER McNicol Rd Topo 171121 (2018)

REVISION A

ATTACHMENT 3 – FIGURE X

File Ref: A16127_41_Drawing_X.mxd



Boffa Miskell
www.boffamiskell.co.nz

0 50 100 m
1:5,000 @ A3

Data Sources: Aerials (Fulton Hogan, Auckland Council), LINZ (Cadastre), Riley Consultants, AC Contours 2008
Projection: NZGD 2000 New Zealand Transverse Mercator

Legend
- Pines to be Retained
- North Stream 10m Setback where practicable
- Consented Quarry Extent
- Quarry Extent
- Processing and Stockpile Area
- Quarry Floor

Proposed Quarry Stages
- STAGE 1
- STAGE 2
- STAGE 3
- STAGE 4
- STAGE 5
- STAGE 6
- Land Parcels
- AC Contours 10m Interval

A16127 CLEVEDON QUARRY

Drawing X

Date: 23 May 2018 | Revision: 0
Plan prepared by Boffa Miskell Limited
Project Manager: John.Goodwin@boffamiskell.co.nz | *Drawn:* SGa | *Checked:* JGo

ANNEXURE B

Part A - General Conditions applying to all consents

Activity in General accordance with documents

1. Subject to the conditions listed below, the expansion of Clevedon Quarry (Quarry) within that part of the special purpose quarry zone shown in the application shall be undertaken generally in accordance with the land use consent application (Fulton Hogan, dated may 2017), subsequent section 92 responses received by council during September to November 2017, all referenced by the Council as BUN60302442 (application material), and the reduction in application area as shown in the plans attached (Attachment 3) to exclude that part of the site zoned Rural - Rural Production Zone:

   (a) Assessment of Environmental Effects Report Clevedon Quarry Expansion, Fulton Hogan, dated 28 April 2017;

   (b) Draft Quarry Management Plan CQ-FHIMS-EN_2001, Fulton Hogan, dated 3 April 2017;

   (c) McNicol Road Quarry Assessment of Noise Effects, Marshall Day, dated 27 April 2017;

   (d) Assessment of Effects of Discharges to Air from Clevedon Quarry, Beca, dated 26 April 2017;

   (e) External Lighting Assessment of Effects, Kern Consultants, dated 26 April 2017;

   (f) Transportation Assessment, Traffic Engineering & Management Ltd, dated March 2017;

   (g) Clevedon Quarry: McNicol Road, Visual Effects Assessment, Boffa Miskell dated 4 May 2017;

   (h) Assessment of Terrestrial Ecology Effects, Boffa Miskell, dated 4 May 2017;

   (i) Assessment of Ecological Effects on Ephemeral Streams, Boffa Miskell, dated 4 May 2017;

   (j) Assessment of Hydrological Changes on Stream Receiving Environments, Boffa Miskell, dated 27 April 2017;

   (k) Preliminary Statement on Groundwater/Surface Water Effects, PDP, dated 19 April 2017;

   (l) Resource and Geotechnical Assessment Quarry Expansion Clevedon Quarry, Riley Consultants, dated 5 May 2017;

   (m) Riley Consultants Drawing Numbers 15211 Figures 13, 14, 15, 16, 17 & 18 dated November 2016 Revision 0 and Figure 20 dated 1/12/2017 Revision 2;

   (n) Boffa Miskell Drawings A16127 Clevedon Quarry Figures 1 to 4 inclusive dated 4 December 2017 Revision C;

(o) Fulton Hogan drawing CQ100.001 Clevedon Quarry – New Office and Entrance Layout dated 10 April 2017;

(p) Fulton Hogan drawing McNicol Rd Topo 171121 (2018) (REV B) 3 sheets illustrating the McNicol Road Proposed Walkway;

(q) Fulton Hogan drawing HPMV Tracking Curve Existing Road 171204 (REV A) 3 sheets;

(r) Fulton Hogan drawing McNicol Road Design Site Plan illustrating the upgrades to the unsealed section of McNicol Road 170912A (REV B) 3 sheets dated 12/9/2017 and McNicol Road Pavement Typical Cross-Sections 170912B (REV B) 1 sheet dated 4 December 2017;

(s) Letter titled Clevedon Quarry consent applications – section 92 further information by Jonathan Green, Fulton Hogan dated 2 November 2017;

(t) Letter Proposed Expansion of Clevedon Quarry – Terrestrial Ecology section 92 response by Eddie Sides, Boffa Miskell dated 4 October 2017;

(u) Letter titled Response to Section 92 Request Geotechnical Information Clevedon Quarry Expansion by Steven Price, Riley Consultants, dated 7 September 2017;

(v) Memo Clevedon Quarry Section 92 Responses Erosion and Sediment Control by Campbell Stewart, Southern Skies dated 18 October 2017 and revised Clevedon Quarry Erosion and Sediment Control Plan CG-ESCP 2017-2018 dated 17 October 2017 Issue No. 2 Revision B;

(w) Groundwater and surface water effects – section 92 responses, PDP, dated 17 October 2017;

(x) Boffa Miskell section 92 request response to landscape architect Sally Peake, Auckland Council, undated;

(y) Letter Clevedon Quarry – 546 McNicol Road, Clevedon BUN60302442 s92 lighting response, Kern Consultants, dated 29 August 2017; and

(z) Letter 546 McNicol Road, Clevedon – traffic response to section 92 request for further information by Traffic Engineering & Management Ltd dated 19 September 2017.

2. To the extent that there are any inconsistencies between the conditions of this consent and the application material, then these conditions take precedence.

Quarry Management Plan

3. The consent holder shall develop and implement for the duration of this consent a Quarry Management Plan (QMP), which shall be held on site at all times. The overall objective of the QMP shall be to set out the practices and procedures to be adopted to ensure compliance with the conditions of consent.

4. Within 20 days of the date of commencement of this consent, the QMP shall be submitted to the team leader-southern monitoring for certification, to confirm that the activities undertaken in accordance with the QMP will achieve the objectives of the Plan and compliance with the relevant consent conditions. Any subsequent review of

the QMP, or any document within the QMP, shall also be submitted to the Team Leader – Southern Monitoring for certification. The consent holder shall meet the costs of the production, certification, monitoring and review of the QMP.

5. The QMP shall comprise:

(a) A site plan indicating:

(i) existing topography, contours, drainage, natural watercourses, vegetation cover and any other significant landform or features;

(ii) site layout, general design and location of buildings;

(iii) areas for extraction (including pits and faces), storage (including overburden), stockpiling, processing and distribution;

(iv) predicted final contours and drainage; and

(v) areas where land disturbance activities are not proposed.

(b) A description of current and future operations, including:

(i) vegetation removal and site preparation, including stripping and stockpiling or disposal of soil and overburden;

(ii) the method of site access, vehicle circulation and onsite parking; and

(iii) monitoring and reporting proposed in relation to the above measures.

(c) Details of how the hydro-seeding or other mitigation is to be undertaken on completed benches in accordance with condition 48 below, and details of how the harvesting of the pine trees on the northern ridge will be managed in accordance with condition 49 below.

6. The QMP shall also include the following management plans, each of which is more particularly described in later conditions of this consent:

(a) Traffic Management Plan (TMP);

(b) Dust Management Plan (DMP);

(c) Slope Stability Monitoring Plan (SSMP);

(d) Groundwater and Surface Water Monitoring and Contingency Plan (GSWMCP);

(e) Erosion and Sediment Control Plan (ESCP);

(f) Noise Management Plan (NMP);

(g) Consent Compliance Plan, including a complaints procedure;

(h) Stakeholder and Community Engagement Plan; and

(i) End Use/Quarry Rehabilitation Plan (to be developed towards the end of the Quarry's life).

6A. If the QMP or any of the management plans required by this consent does not meet the requirements of the relevant conditions, then the Team Leader – Southern Monitoring will require the consent holder to amend those plans so as to comply.

Community Liaison Group

7. The consent holder shall, in consultation with mana whenua, local community groups and representatives of local residents (particularly those on Tourist Road and McNicol Road), form a Community Liaison Group (CLG). The purpose of the CLG is to discuss matters relevant to the quarry including, but not limited to:

(a) concerns and complaints and aspects of non-compliance and ways of alleviating them, particularly in respect of truck movements to and from the Quarry;

(b) dissemination of information to the CLG about the Quarry, including the presentation of the Quarry Management Plan and amendments, up and coming quarry operations, and any future proposals for the quarry, relevant monitoring information, in particular the monitoring data on quarry truck movements required by condition 22; and

(c) assisting with the development and implementation of any mitigation or enhancements proposed by the consent holder over the life of the consent.

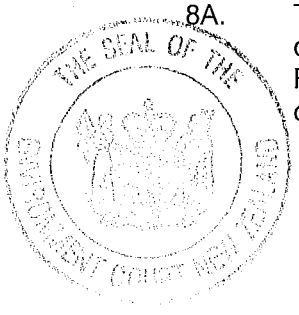
For the avoidance of doubt, the CLG may, by majority resolution at a meeting, seek a formal written response from the consent holder on a matter relevantly and reasonably raised. The Consent Holder must within 10 working days provide a written response responding to the matter raised by the CLG, including any steps to be taken.

7A. The consent holder will provide advance notice to the CLG of any projects that require the use of the 60 evening periods (6pm-9pm, Monday to Thursday) (**evening periods**) provided for in condition 23(a).

7B. The consent holder will use its best endeavours to provide at least seven days' advance notice to the CLG for any major projects that require the use of 3 or more consecutive nights of the 60 evening periods (6pm-9pm, Monday to Thursday).

8. Subject to the following groups agreeing to participate, the CLG shall comprise an independent chair, and a representative of Nga Tai Ki Tamaki, Clevedon community and business association, the Local Board, Auckland Transport, two representatives of the residents of McNicol Road and Tourist Road, a representative from the consent holder, and, unless another representative previously referred to is also a member of the Clevedon Protection Society 2017, a representative from the Clevedon Protection Society 2017. The CLG shall comprise no fewer than 6 and no more than 10 representatives (including the chair). Meetings of the CLG should be held on a quarterly basis (or less frequently as determined by the CLG) and meeting minutes taken and distributed to members of the CLG. The consent holder will cover the costs of the meeting venue and the independent chair.

8A. The Consent Holder shall inform the CLG prior to any application to vary the conditions of this consent, or any other consent application concerning the McNicol Road Quarry, which in either case has potential adverse effects beyond the boundary of the site.



8B. The Consent Holder shall ensure that a suitably qualified independent professional, mutually acceptable to the Council, the CLG and the Consent Holder, reviews and verifies the quarry manager's report, any other information received over the previous quarter (including any complaints) relating to the quarry's operation, and including any monitoring information received in the previous quarter, annual, or 5 yearly period. The professional shall prepare a report on that information, including a specific comment on any potential non-compliances, and provide it to the Council 2 weeks prior to any CLG meeting scheduled above, and, subject to any feedback from Council, provide to the CLG at least one week from a scheduled CLG meeting.

Advice note:

The quarry manager's report shall be prepared by the Consent Holder specifically summarising truck movements, complaints (and responses to those complaints), and any monitoring data collected under the consent.

Council Access

9. The servants or agents of the Council shall be permitted to have access to relevant parts of the property at all reasonable times for the purpose of carrying out inspections, surveys, investigations, tests, measurements and/or to take samples.

Enforcement and Compliance

10. The costs incurred by the Council in monitoring and ensuring compliance with the conditions of this consent may be on-charged to the consent holder. If the Council's costs are on-charged payment must be made within 20 working days unless prior approval of a longer credit period has been given by the Southern Manager, Resource Consents and Compliance.

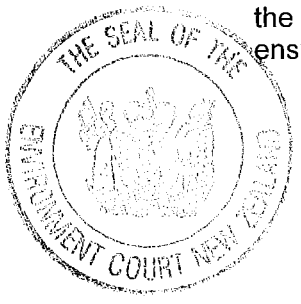
11. If, in the Council's opinion, a breach of any of the conditions of this resource consent is occurring, the costs of investigating any such breach may be on-charged to the consent holder. If such costs are on-charged payment must be made within 20 days unless prior approval of a longer credit period has been given by the Southern Manager, Resource Consents and Compliance.

12. If enforcement action is taken in respect of a breach of any condition of this resource consent the Council may, pursuant to section 128(1)(a) of the RMA, review any or all of the conditions of this resource consent to ensure that they remain appropriate in light of the breach referred to above.

13. Where, in the Council's opinion, any non-compliance has arisen from inaccuracies contained in the application for consent, the Council may also initiate a review under section 128(1)(c) of the RMA, which may in some circumstances result in cancellation of the resource consent.

Charges

14. The consent holder shall pay the Council a consent compliance monitoring charge of $960.00 (excluding GST), plus any further monitoring charge or charges to recover the actual and reasonable costs that have been incurred to ensure compliance with the conditions attached to this consent (this charge is to cover the cost of inspecting the site, carrying out tests, reviewing conditions, updating files, etc, all being work to ensure compliance with the resource consent).



15. The $960.00 (excluding GST) charge shall be paid as part of the resource consent fee and the consent holder will be advised of any further monitoring charge or charges as they fall due. Such further charges are to be paid within one month of the date of invoice.

Lapse

16. In accordance with section 125 of the RMA, this consent will lapse five years after the date on which it commences unless it has been given effect to before the end of that period.

Term

17. All land use consents have an unlimited term. All water, air and discharge permits shall have a term of 35 years from commencement of each of those consents.

Surrender of existing consents

18. Within one month of notice being given to the Team Leader, Southern Monitoring, Resource Consenting and Compliance, that these consents are being given effect to:

    (a) the existing groundwater consent (permit 35864) shall be surrendered;

    (b) the land use consent attached to the Environment Court's decision C34/2000 (2000 Consent) shall be superseded, to the extent that that earlier consent relates to works within the Special Purpose - Quarry Zone. (For the avoidance of doubt, the limits on truck movements in this consent shall replace those in the 2000 Consent.)

Review

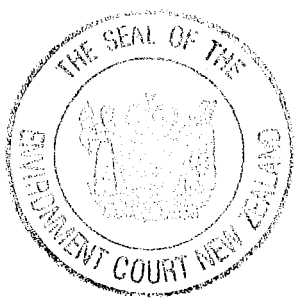
19. Under section 128 of the RMA the conditions of this consent may be reviewed by the Manager Resource Consents at the consent holder's cost at annual intervals following commencement of consent in order to:

    (a) Deal with any adverse effect on the environment which may arise or potentially arise from the exercise of this consent and which it is appropriate to deal with at a later stage, in particular adverse effects on groundwater levels, groundwater quality and stream base flows.

    (b) Avoid or mitigate an adverse effect on the environment relating to traffic and access (Rule H28.7.1.(1)(a) including the matters described in Rule H28.7.2(1)(a) of the Auckland Unitary Plan); noise and vibration levels from on-site operations; and any significant adverse visual effects of the Quarry as experienced from those residential dwellings that are in close proximity to the Quarry and existed at the date of commencement of this consent.

    (c) Vary the quantities, monitoring and reporting requirements, and mitigation and contingency measures in order to take account of information, including the results of previous monitoring and changed environmental knowledge, on:

        (i) water availability, including rate of groundwater inflow into the quarry pit dewatering pond;



(ii) actual and potential quantity of water taken including, but not limited to, monitoring information and reporting required;

(iii) groundwater levels and inflow;

(iv) review of water level data and geology including information obtained from any new boreholes drilled since the commencement of consent within the zone of dewatering influence;

(v) spring flows and stream flows;

(vi) groundwater quality and stream water quality and ecology; and

(vii) those matters covered in condition 19(b).

(d) Assess the effectiveness of erosion and sediment control measures and the relative impact of sediment on the environment, including to:

(i) implement such changes as are necessary to site runoff, erosion and sediment control measures to more appropriately control the actual and potential effects of the discharge of sediment on the environment;

(ii) amend the monitoring requirements and the discharge standard from the site; and

(iii) assess the rehabilitation of quarried areas so that sediment loss from finished surfaces resembles their natural state.

(e) To deal with any significant adverse effect on the environment arising from the exercise of the consent that was not foreseen at the time the application was considered and which is appropriate to deal with at the time of the review.

(f) In respect of the discharge to air consent, to consider the adequacy of conditions which prevent nuisance beyond the boundary of the site, particularly if regular or frequent complaints have been received and validated by an enforcement officer, including:

(i) to consider developments in control technology and management practices that would enable practical reductions in the discharge of contaminants to air, and

(ii) to alter the monitoring requirements, including requiring further monitoring, or increasing or reducing the frequency of monitoring.

Advice Notes:

I. The consent holder is advised that it will be required to pay to the Council any

administrative charge fixed in accordance with section 36(1) of the RMA and any additional charge required pursuant to section 36(3) of the RMA in respect of the receiving and processing of the resource consent application up to and including the issuing of the section 42a report.

II. The consent holder is advised that, pursuant to section 126 of the RMA, if this resource consent has been exercised, but is not subsequently exercised for a continuous period of five years, the consent may be cancelled by the Council unless other criteria contained within section 126 are met.

III. The consent holder shall obtain all other necessary consents and permits, including those under the Building Act 2004, and the Heritage New Zealand Pouhere Taonga Act 2014. This consent does not remove the need to comply with all other applicable acts (including the property law act 2007), regulations, relevant bylaws, and rules of law. This consent does not constitute building consent approval. Please check whether a building consent is required under the Building Act 2004. Please note that the approval of this resource consent, including consent conditions specified above, may affect a previously issued building consent for the same project, in which case a new building consent may be required.

IV. A copy of this consent should be held on site at all times. The consent holder is requested to notify the council, in writing, of their intention to begin works, a minimum of seven days prior to commencement. Such notification should be sent to the (name and title and email address and phone number) and include the following details:

a. name and telephone number of the project manager and the site owner;

b. site address to which the consent relates;

c. activity to which the consent relates.

V. Compliance with the consent conditions will be monitored by the Council in accordance with section 35(d) of the RMA. This will typically include site visits to verify compliance (or non-compliance) and documentation (site notes and photographs) of the activity established under the resource consent. In order to recover actual and reasonable costs, inspections, in excess of those covered by the base fee paid, shall be charged at the relevant hourly rate applicable at the time. Only after all conditions of the resource consent have been met, will council on request of the consent holder issue a letter confirming this fact.

VI. The conditions of consent should be included with any relevant contract documents and all personnel working on the site (consultants, contractors and subcontractors) should have access to the relevant documentation inclusive of the consent conditions.

VII. The consent holder should ensure that there are adequate provisions on site to prevent possible fuel spillage.

VIII. The consent holder should make all relevant site personnel aware of the industry education course available to plan preparers and plan implementers through the council.

IX. For the purpose of compliance with the conditions of consent, "the Council" refers to the Council's monitoring inspector unless otherwise specified. Please contact the Team Leader – Southern Monitoring on 09 3010101 or monitoring@aucklandcouncil.govt.nz to identify your allocated officer.

X. Some specific conditions have been offered by the applicant and accepted by the decision makers on an **Augier** basis. Those conditions are clearly labelled accordingly.

Part B - Land Use Consent (Application LUC60291842)

Hours of operation

20. Subject only to any specific limitation included in the conditions below, the hours of operation for on-site mineral extraction activities within the Special Purpose - Quarry Zone as defined by the Auckland Unitary Plan shall be 24 hours per day seven days a week.

Limitation on truck movements

21. For the purposes of this consent:

    (a) "truck movement" means a truck with a Gross Vehicle Mass (Gvm) of more than 3,500 kg travelling to or from Clevedon Quarry either carrying or intended to carry aggregate or overburden (quarry truck); and

    (b) "emergency works" mean works relating to emergencies and natural disasters, including floods, slips, earthquakes and storms.

22. Quarry truck movements to and from the quarry shall not exceed an hourly maximum of 90 truck movements (Monday to Saturday), or exceed an average of 900 truck movements per day (Monday to Saturday) measured on a 12-month rolling basis, and this shall be monitored through a data recorder/logbook at the quarry weighbridge. That data shall be summarised on a monthly basis on a spreadsheet and made available for inspection at any time by a Council officer and be reported quarterly and to the Community Liaison Group.

23. All quarry truck movements to and from the quarry shall only occur between 6.30 am and 6pm on Monday to Friday, and between 6.30am and 1.00pm on Saturday (excluding public holidays), except:

    (a) that truck movements may occur between 6.00pm and 9.00pm Monday to Thursday on a maximum of 60 days during a calendar year; or

    (b) for deliveries of aggregate required by emergency works.

    For the avoidance of doubt, except as required for emergency works, no loaded quarry trucks shall exit the quarry weighbridge before 7am on Monday to Saturday, after 1pm on Saturdays, after 6pm on Monday to Friday, or after 9pm for the 60 days per year described in condition 23(a) above.

    Advice Note: The consent holder records that if and when the consent holder adopts a fleet of electric trucks or similar, the consent holder may reconsider the above limitations on hours of operation and truck movements. That is likely to require a variation to this consent and/or an additional consent.

24. The consent holder will take all practicable steps to ensure that quarry trucks do not enter Tourist Road or McNicol Road before 6.30 am, Monday to Saturday.

25. The Consent Holder shall take all practicable measures to ensure that all quarry trucks must not exceed a speed of 50 kilometres per hour on all of McNicol Road, or on Tourist Road east of the one-lane bridge.

26. The Consent Holder shall take all practicable measures to ensure that no quarry trucks shall use the section of McNicol Road north of Tourist Road, unless they are

visiting Clevedon, or are associated with deliveries (in this area or environs beyond), or are required to use this route due to temporary restrictions imposed on Tourist Road.

27. The Consent Holder shall take all practicable measure to ensure that no parking of quarry trucks shall occur on McNicol Road north of 530 McNicol Road or on Tourist Road at any time, except where stopping is required for legal or safety related reasons.

Temporary limits on truck movements and hours of operation

28. Notwithstanding conditions 22 - 27 above, the following additional restrictions shall apply:

    (a) For a period of 5 years from commencement of consent (**Augier** condition):

        (i) Where temporary restrictions apply to Tourist Road (for example closure due to flooding), the number of quarry truck movements through Clevedon Village shall not exceed 200 per day.

    (b) Quarry truck movements shall be limited to a maximum of 45 per hour until the sealing of the unsealed section and all of the road widening works (described in condition 60(a)-(f)) have been completed on McNicol Road.

Section 16 of the Resource Management Act

29. In recognition of the intent of s16, Resource Management Act 1991, namely to avoid unreasonable noise, ensure, as far as reasonably practicable, that all tailgates on quarry trucks are securely fixed to avoid "clanging", the consent holder shall advise Auckland Transport of any areas of road that become worn or are beginning to pothole (thereby contributing to increased noise), avoid unnecessary engine braking, especially on McNicol Road or at the Monument Road/Tourist Road intersection, and require all quarry trucks owned or directly managed by the consent holder to be regularly serviced to ensure engine and other noise is minimised. (***Augier*** condition).

Dusty Loads

30. The consent holder shall ensure that all quarry trucks exiting the quarry conveying dusty loads are covered, or where covers are not available that any dusty loads are dampened prior to leaving the quarry.

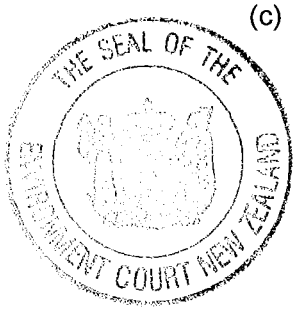
Cartage Contractors Safety Rules and Guidelines

31. The following matters shall be included in a Cartage Contractors Safety Rules and Guidelines document, or similar, to be provided to all quarry truck operators, and the consent holder shall take all practicable steps to ensure that all quarry truck operators using the quarry are alerted to these matters and abide by them:

    (a) Hours of operation and limitations on truck movements, short term and longer term;

    (b) The specific matters referred to in conditions 24 to 27;

    (c) The general need to be courteous and observe safe distances when passing pedestrians, horse riders and cyclists;



(d) The active on-demand traffic signals and the need to observe the Give Way requirements of the one lane bridge on Tourist Road;

(e) Extra care to be taken when travelling through the curved section at the eastern end of Tourist Road;

(f) The location of schools along the route, including Alfriston, Clevedon, Ardmore and Brookby schools, the location of school bus routes and stops, the lower speed limit when passing a parked school bus (20 km/h) or through an active school zone between 8.00am – 9.30am and 2.30pm - 4.00pm (40 km/h), and the need to actively look out for school children at these times;

(g) Reasonably practicable alternative routes (if any) for the quarry trucks to use during times of significant peak traffic at Ardmore School (e.g. at the beginning and end of each term or at other times agreed between the School and the consent holder), and contain a process for the consent holder to advise Ardmore School if there are likely to be times of high quarry truck movements; and

(h) The covering or dampening of dusty loads and the securing of loads.

Implementation of Transport Matters

32. The matters stated in condition 31 are to be implemented by and augmented by the following measures:

(a) Information packages and formal inductions for quarry truck operators; and

(b) Signage for the following safety and amenity matters:

I. The covering or dampening of dusty loads and the securing of loads;

II. The restriction on parking of quarry trucks on Tourist Road and McNicol Road north of 530 McNicol Road;

III. The speed limit of 50 km/h on McNicol Road and on Tourist Road east of the one lane bridge for all quarry trucks; and

IV. The presence of the unsealed path along McNicol Road as referred to in condition 59(e);

(c) Requirements for all quarry truck drivers entering the quarry to sign a copy of the Cartage Contractors Safety Rules and Guidelines and undertake to comply with them;

(d) Sanctions for non-compliance with the Cartage Contractors Safety Rules and Guidelines, including temporary bans or exclusions.

Traffic Management Plan and Reporting

33. The requirements of conditions 31 and 32 above are to be submitted to the Team Leader – Southern Monitoring as a TMP for certification that the contents will meet the conditions of consent and serve to mitigate adverse safety and amenity matters. The contents of the TMP shall include:

(a) The Cartage Contractors Safety Rules and Guidelines (or similar);

(b) Information packages and an outline of the formal induction process for quarry truck operators;

(c) The details of the signage proposed at the quarry and, subject to the approval of Auckland Transport, signage at other locations along the route to and from the quarry.

(d) The details for how compliance with the limitations on hours of operation, maximum quarry truck movements, times of entry to McNicol Road, and performance against the Cartage Contractors Safety Rules and Guidelines (or similar) will be monitored and reported upon, and how any complaints about any of those requirements will be recorded and responded to. This shall include a specific requirement to report, on a quarterly basis, or less frequently as agreed with the Team Leader – Southern Monitoring, on the speeds of quarry trucks recorded on Tourist Road and McNicol Road and on the log of daily movements.

(e) The details of the sanctions regime for non-compliance with the Cartage Contractors Safety Rules and Guidelines.

(f) The details of speed camera locations.

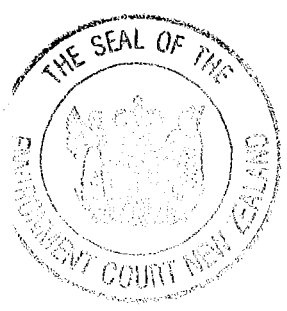
34. The TMP shall also include the details for the monitoring of the Tourist Road/Creightons Road/Papakura-Clevedon Road intersection, as required by condition 62. The details are to be submitted to the Team Leader – Southern Monitoring as a TMP for certification that they meet the purposes outlined in condition 62.

Noise

35. Noise from mineral extraction activities within the Special Purpose - Quarry Zone must not exceed the noise levels in the table below at a notional boundary from any dwelling that existed at the date of commencement of this consent. (for the purposes of this consent, the closest dwelling that existed at the date of commencement of this consent outside the Special Purpose – Quarry Zone is 600 McNicol Road, approximately 480m away.)

Times	Noise levels
7am-9pm, Monday to Friday	L_{Aeq} 55dB
7am-4pm, Saturday	L_{Aeq} 55dB
All other times and on public holidays	L_{Aeq} 45dB L_{AFmax} 75dB

36. Noise must be measured and assessed in accordance with new Zealand Standard On Acoustics - Measurement Of Environmental Sound (NZS 6801:2008) and New Zealand Standard On Acoustics - Environmental Noise (NZS:6802:2008). The details of measurement, any results obtained, and any noise complaints received in respect of noise from the quarry, shall be described in the NMP. The NMP shall be completed and submitted to the Team Leader – Southern Monitoring for certification within three months of the commencement date of this consent.



37. Prior to the commencement of stage 3 of the quarry expansion (as shown on Riley Consultants Drawing Number 15211 Fig 20, dated 1/12/2017 Revision 2) and each stage thereafter, the consent holder shall arrange for monitoring of the proposed on-site activities by a suitably qualified expert so as to demonstrate that these noise limits continue to be met. Details of this monitoring, together with any details of complaints received about noise and any action taken in response, shall be described within the NMP and submitted to the Team Leader – Southern Monitoring.

Advice Note

The consent holder is reminded of its general obligation under section 16 of the Resource Management Act 1991 to adopt the best practicable option to ensure that the emission of noise from the quarry site does not exceed a reasonable level.

Vibration and Blasting

38. Noise created from the use of explosives must not exceed a peak overall sound pressure of 120db I_{zpeak}.

39. The measurement of blast noise (air blast) from blasting must be undertaken at the notional boundary of a dwelling that existed at the date of commencement of this consent (for the purposes of this consent, the closest dwelling that existed at the date of commencement of this consent outside the Special Purpose – Quarry Zone is 600 McNicol Road, approximately 480m away.)

40. Vibration generated by blasting shall be measured within a building in accordance with Appendix j of Part 2 of Australian Standard AS 2187 2006.

41. Except where necessary because of safety reasons, all blasting is restricted to:

(a) 9am - 5pm, Monday to Saturday; and

(b) an average of two occasions per day over a calendar fortnight.

42. Blasting activities must be controlled to ensure any resulting ground vibration does not exceed the limits set out in German Standard *DIN 4150-3 1999: Structural Vibration – Part 3 Effects Of Vibration On Structures* when measured on the foundation in the horizontal axis on the highest floor of an affected building.

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

Lighting

44. Any security or other lighting shall be designed and operated to ensure that it does not cause any direct light spill or disturbing glare for any occupiers of other properties. Any light spill or glare on to McNicol Road shall comply with the standards in E24.6 of the Auckland Unitary Plan.

45. Prior to any permanent external lighting being established, the consent holder shall provide a finalised lighting design plan to the Council that demonstrates that the proposed lighting meets the permitted standards in chapter E24.6 of the Auckland Unitary Plan.

46. Within 2 months of installation of lighting, the consent holder shall provide a report from a suitably qualified lighting expert confirming that all lighting has been installed

in accordance with the approved finalised lighting design plan, and complies with the permitted standards in chapter E24.6 of the Auckland Unitary Plan.

Landscape

47. Within six months of the commencement of this consent the consent holder shall submit to Council (attention Team Leader – Southern Monitoring) a detailed planting plan for the establishment of the proposed front yard landscaping to be implemented within 12 months of the commencement of this consent. The details of this plan shall demonstrate that the proposed vegetation will be *myrtle rust* resistant, be planted and maintained for a period of 3 years in a manner that will ensure its successful establishment and continuing healthy state. This plan shall include, but not be limited to the following:

    (a) The proposed species, size at time of planting and plant spacing; and

    (b) An implementation, weed and pest animal control and maintenance schedule.

48. Within 6 months of completion of the quarrying and formation of the final benches in stages 5 and 6 (as shown on Boffa Miskell drawing Figure 4, Proposed Quarry Stages, dated 4 December 2017 Revision C), the consent holder shall hydro seed or otherwise visually mitigate the batter slopes of those benches from a height of RL 290m to a height of RL 200m.

48A. Any area of overburden (exposed clay or topsoil but not rock) shown within the ESCP that is not planned to be disturbed for a period of 24 months or more shall be hydro-seeded or otherwise visually mitigated where practicable.

49. To maintain screen planting on the ridgeline, the Consent Holder shall not harvest the pine trees in the hatched area of the northern ridgeline as illustrated on Figure X, attached to this consent.

Ecology

50. Within six months of commencement of this consent, the consent holder shall submit to Council (attention the Southern Manager, Resource Consents and Compliance) a detailed planting plan for the establishment of the proposed planting of 600m^2 of native vegetation. Planting shall comprise eco-sourced native species including but not limited to kānuka, mānuka, flax, and cabbage trees. The details of this plan shall demonstrate that the proposed vegetation will be planted and maintained for a period of 3 years in a manner that will ensure its successful establishment and continuing healthy state. This plan shall include, but not be limited to the following:

    (a) The proposed species, size at time of planting and plant spacing; and

    (b) An implementation, weed and pest animal control and maintenance schedule.

51. The works shall be undertaken during the first planting season after the removal of the kānuka shrubland and shall provide a minimum area of 600 m^2 of native vegetation. Planting shall take place within the true left riparian margin of the North Stream in order to provide additional bank stability and buffering from quarrying activities. All planted areas shall be maintained in a generally weed-free state and actively maintained for a minimum 3 year period. Thereafter, and on an on-going basis, vegetation in all planted areas shall be monitored and maintained in a healthy

state, with on-going replacement of dead or diseased vegetation to the satisfaction of the Council to ensure the integrity of the planting is maintained.

Advice note:

Based on the expert advice received, the proposed 600m^2 of native vegetation planting is not required to mitigate the effects of the kanuka removal, but has been offered by the consent holder.

Herpetofauna within Kanuka shrubland

52. Prior to any earthworks and vegetation removal within the identified area of kānuka shrubland as identified in the Boffa Miskell report, Figure 3, dated 4 May 2017, the consent holder shall provide for the certification of the Team Leader – Southern Monitoring and the Council's ecologist a Herpetofaunal Mitigation Plan to minimise any potential effects on indigenous skinks and/or geckos within that kānuka shrubland habitat. Copies of any Department of Conservation permits that are required shall also be attached to this plan. The Herpetofaunal Mitigation Plan shall be prepared by a qualified and experienced herpetologist, and shall include:

(a) Timing of works;

(b) A description of the methodology for trapping and relocation of herpetofauna;

(c) A description of where any trapped herpetofauna are to be relocated;

(d) Any monitoring requirements;

(e) The credentials and contact details of the herpetologist who will implement the Plan; and

(f) A suitably qualified and experienced herpetologist shall be onsite during the removal of any indigenous vegetation to supervise the removal of c.300 m^2 of kānuka shrubland in order to search for and rescue any indigenous skinks and/or geckos found and relocate them to the suitable alternative location on or adjacent to the site.

53. The removal of indigenous vegetation shall avoid the bird breeding season (August-December inclusive).

54. Within two weeks of the completion of the herpetofaunal mitigation programme, the herpetologist shall certify that the Herpetofaunal Mitigation Plan has been carried out in accordance with the approved plan, and shall provide details on any species removed or relocated to the Council's ecologist.

55. Any findings resulting from the implementation of the herpetofaunal mitigation plan shall be recorded on an amphibian and reptile distribution scheme card and sent to the Department of Conservation.

Long Tailed Bats in Mature Pine Trees

56. Prior to the consent holder undertaking any clearance of mature pine trees within the Special Purpose – Quarry Zone that might be required to implement this resource consent, the consent holder shall:

(a) Appoint a suitably qualified person to undertake a survey to identify whether any of the mature pine trees to be removed are used as roosts by Long Tailed bats and provide their report to the Team leader – Southern Monitoring; and

(b) If those trees are used as roosts by Long Tailed bats, the consent holder:

(i) shall advise the Team Leader – Southern Monitoring of this finding prior to any tree removal;

(ii) may only clear those pine trees between October and April (inclusive); and

(iii) must, prior to undertaking any clearance within those months appoint a suitably qualified person to confirm that none of the mature pine trees contain Long Tailed bats.

Biological monitoring of permanent reaches of North and South Streams

57. Biological monitoring of permanent reaches of the North and South Streams shall be undertaken for a 2-year period (summer and winter) at the commencement of each of stages 3-6 of the quarry development, at fixed locations in order to detect changes in aquatic conditions. Two downstream (impact) locations and one upstream (control) shall be monitored in each of the streams (refer to Figure 1, Boffa Miskell report *Assessment of Hydrological Effects on Stream Ecology* dated 4 May 2017). Aquatic macroinvertebrates shall be collected and analysed so that a Macroinvertebrate Community Index (MCI) and Quantitative Macroinvertebrate Community Index (QMCI), or another appropriate metric specified within an approved Groundwater and Surface Water Monitoring And Contingency Plan (GSWMCP), can be determined for each sampling location.

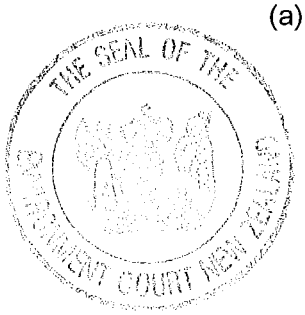
58. The GSWMCP shall include the baseline biological monitoring results (once undertaken) and specify what variations are considered biologically significant and shall describe the further investigations and reporting, or other contingency methods, that might be required if biologically significant changes are occurring as a result of activities associated with the quarry. The GSWMCP shall be submitted to the Team Leader – Southern Monitoring for certification prior to works commencing.

59. Prior to the commencement of stage 3 of the quarry development, baseline monitoring at the same locations as are to be used for the on-going biological monitoring required by condition 57 shall be undertaken for at least one summer and winter in the same 12-month period.

Road upgrades / maintenance / monitoring

60. Within 3 months of the commencement of this resource consent, unless the works have already been undertaken, the consent holder shall submit an Engineering Works Approval to Council for the following upgrades as recommended in the Traffic Impact Assessment prepared by Traffic Engineering & Management Ltd (Team) dated March 2017:

(a) Localised shoulder widening along McNicol Road between Tourist Road and south of Whiteside Lane. The minimum two-way sealed carriageway width shall be 7.2m. The works shall also include additional widening of the existing carriageway of McNicol Road at, and in the immediate vicinity of,



the bend at the McNicol Road/Whiteside Lane intersection to accommodate the simultaneous movement of a truck and trailer travelling in each direction.

(b) Widening of the existing sealed carriage way of McNicol Road south of Whiteside Lane to the existing end of the sealed section of McNicol Road (near 530 McNicol Road) as follows:

(i) Between McNicol Road south of Whiteside Lane and north of 458 McNicol Road, the minimum two-way sealed width shall be 7.2m. This excludes the upgrade works associated with Bryan's Culvert on McNicol Road. The works shall also include additional widening of the existing bend on McNicol Road in the vicinity of 448 and 458 McNicol Road to accommodate the simultaneous movement of a quarry truck and trailer travelling in each direction.

(ii) Between 458 McNicol Road and 530 McNicol Road, the consent holder shall widen the existing carriageway to a width of 7m where practicable. Where this is not practicable because of constraints associated with the banks and riparian margin of the Wairoa River, a minimum carriageway width of 6.6m shall be achieved.

(c) Sealing, upgrading and widening of McNicol Road, from the existing end of the sealed section of McNicol Road (near 530 McNicol Road) to the Quarry entrance as shown on the McNicol Road Works Plans (Attachment 1). The minimum two way sealed width shall be 7m. Where sections of one-way road may be necessary due to topographical constraints, these sections should be no greater than 50m in length and should be clearly signposted as being single lane sections.

(d) Upgrading of the entrance to the Quarry, including the locational details of the weighbridge(s) and security gates, in a manner to be approved by Auckland Transport.

(e) Provision of an unsealed path of 1.5m width, separated wherever possible from the carriageway, on McNicol Road from Tourist Road to 458 McNicol Road, and then from 20m before the Quarry entrance to 20m after the Quarry entrance as shown on drawing McNicol Road South Recreational Trail Plans (Attachment 2). From 458 McNicol Road to 20m before the Quarry entrance, a path shall be provided where practicable along the route shown, or where it is unable to be separate because of topographical and legal constraints, that sight distance is available to allow short sections on the carriageway, or a berm or dish channel is provided for pedestrians to step off the road if required. Signs, markings and other measures (if necessary) shall be provided to Auckland Transport's satisfaction to clearly indicate where the unsealed path crosses McNicol Road, and in those sections where the unsealed path may not be practicable to construct, clearly indicate where road users are required to share the McNicol Road carriageway. Signage shall warn quarry trucks of the possibility of pedestrians on this section of McNicol Road.

(f) Widening the intersection of McNicol Road and Tourist Road to accommodate the simultaneous movement of a truck and trailer travelling in each direction and localised widening to achieve a minimum two-way sealed width of 7.2m between that intersection and the Tourist Road one-lane

bridge. Alternatively, confirmation shall be provided that such widening is not necessary (e.g. swept paths for intersection).

(g) The design and installation of appropriate and comprehensive active on-demand traffic signals, able to be activated by pedestrians, cyclists and equestrians, shall be installed at the one-lane bridge on Tourist Road. Subject to obtaining any necessary approvals, including any resource consents, the consent holder shall also install street lighting at this bridge (note: the consent holder is not responsible for the on-going costs of this street lighting). This system, and any street lighting, should be developed and installed in consultation with, and to the satisfaction of, Auckland Transport.

(h) Unless already completed at the time of commencement of this consent, upgrade the Tourist Road/Monument Road intersection to the satisfaction of Auckland Transport. This work should have regard to:

(i) the potential provision of additional traffic safety devices on each approach of Tourist Road;

(ii) the provision of shoulder widening, remarking of the centreline and provision of edge lines in agreed areas of Monument Road to the north of Tourist Road;

(iii) the provision of chevron and speed advisory signage on the two horizontal curves on Monument Road immediately to the north of Tourist Road; and

(iv) measures to secure in perpetuity (unless and until the land is owned by Auckland Council / Auckland Transport) safe sight distance to the north from the eastern Tourist Road approach and / or reduce speeds on the northern Monument Road approach to the intersection.

61. The works identified in condition 60 shall be completed by the consent holder at its cost within the first summer period after the issue of Engineering Works Approval and any necessary resource consents that may be required to authorise those works.

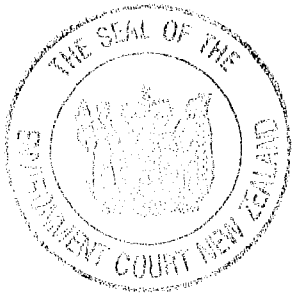
62. The consent holder shall monitor the Tourist Road/Creightons Road/Papakura-Clevedon Road intersection within 5 years of the consent commencing, or sooner if required by the Council, to establish if some/all of the works identified in TEAM's concept design need to be implemented. The details of any proposed monitoring shall be described in the TMP.

63. The engineering plans in respect of the McNicol Road works shall include the following information regarding the engineering works:

(a) Design of the stormwater system and devices for the management of quality of the stormwater runoff from the new seal associated with McNicol Road, comprising catchpits and catchpit filters at the culvert inlets.

(b) Design of the road widening recognising the narrow nature of the road in some areas, and that minor works may only be needed in other areas.

(c) In particular:



(i) Detailed design of all roads to be sealed or widened; and

(ii) A road marking and signage plan.

64. Except where associated with the works associated with the road maintenance/upgrading works, the consent holder shall ensure that no quarry trucks or other activities associated with the quarry result in any actual or potential restrictions on access to the banks and riparian margins of the Wairoa River.

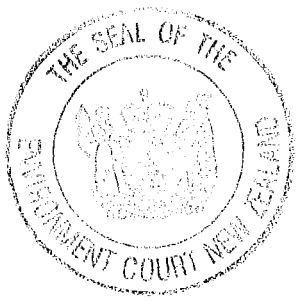
Maintenance of McNicol Road and Tourist Road by the consent holder

65. Subject to Auckland Transport undertaking the necessary works on McNicol Road and Tourist Road (as described in condition 66 below), the consent holder will, at its cost, but otherwise in accordance with the usual contractual conditions with Auckland Transport in terms of response times etc, undertake any required maintenance of McNicol Road (to the intersection of Tourist Road), and Tourist Road. This maintenance will be strictly limited to digouts, stabilised patches, mills and fills, edge breaks and potholes. The consent holder shall undertake a condition report at the time of commencing this maintenance obligation based on the RCM requirements and shall undertake a second condition report at the conclusion of these maintenance obligations, and shall ensure that the nominated portion of McNicol Road and Tourist Road are of the same or similar condition at the end of the maintenance period. This obligation shall end on a date that is 4 years from commencement of this consent, or 15 January 2022, whichever occurs first. (***Augier*** condition)

66. For the purposes of condition 65, the works to be undertaken by Auckland Transport on McNicol Road and Tourist Road before the obligations in condition 65 take effect comprise those works agreed between the consent holder and Auckland Transport in correspondence dated 4 July 2018. For the avoidance of doubt, the consent holder's maintenance obligation for any of the particular matters stated above commences when the relevant matter has been undertaken by or on behalf of Auckland Transport.

End Use / Quarry Rehabilitation Plan

67. No later than 3 years prior to the consent holder giving notice to the Council that the quarry will be closed permanently, the consent holder shall prepare and submit for certification an End-Use and/or Rehabilitation Plan to the Team Leader – Southern Monitoring, which addresses the proposed end use and/or rehabilitation of the quarry. The plan shall incorporate, amongst other things, details on the nature and timing of any proposed rehabilitation work including any groundwater diversion and landscape rehabilitation measures proposed. The certified plan shall be implemented by the consent holder.



Part C - Groundwater Consent (Application WAT60302444)

Authorised quantities

68. The daily abstraction shall not exceed 2,500 cubic metres.

69. The total volume of water abstracted in each 12-month period, commencing 1 June of any year and ending 31 May of the following year, shall not exceed 912,500 cubic metres.

Advice Note:

Of the 2,500 cubic metres per day take it is anticipated that sustained groundwater inflows from the regional and perched aquifers will be less than 1,500 cubic metres per day, with the remaining 1,000 cubic metres per day being sourced from short term release from storage.

Actual groundwater inflows in dry conditions will be assessed in accordance with condition 77. The annual reporting to be provided under condition 101 shall include commentary on trends in total metered pump out from the quarry, compared to the actual groundwater inflows as assessed by condition 77 and will be reported against the authorised quantities noted above.

Installation of a water meter

70. A water meter with an electronic pulse output connected to a data logger shall be installed and maintained with any pump to the satisfaction of the Team Leader Compliance Monitoring. The water meter and recording device/system shall:

- be fit for the purpose and water it is measuring;
- measure the volume of water taken, with an accuracy of +/- 5% of the actual volume taken;
- provide data in a form suitable for electronic storage;
- be tamper-proof and sealed; and
- be installed and maintained in accordance to the manufacturer's specifications.

71. The water meter, and any device or system used to record water take volume, shall be verified in-situ as accurate by a suitably qualified professional at the following times:

(a) prior to the exercise of this permit;

(b) within 5 working days of the water meter being serviced or replaced;

(c) by 30 June of the fifth (5^{th}) year from the commencement of consent, and thereafter at five (5) yearly intervals.

72. The water meter, its verification and evidence of its accuracy shall be in accordance with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 (or any equivalent regulations that may replace them) and a copy

of the verification shall be provided to the Team Leader – Southern Monitoring within 10 working days of the meter/devices being verified as accurate.

Water meter readings

73. A water meter reading shall be taken consistently at one of these times:

    (a) before pumping starts for that day;

    (b) at the end of pumping for that day.

74. The time, date and the water meter reading shall be recorded and supplied to the Council in accordance with condition 100 below:

    (a) readings shall be taken at weekly intervals for the first six months of each quarry expansion stage. Following this, readings can be reduced to fortnightly; and

    (b) where a data logger is required, and in the event of failure of the data logger and/or associated electronic devices, the water meter shall be read manually at daily intervals until the devices are repaired and records kept of the date, time and corresponding water meter reading.

    Advice Note:

    If no water is taken during any period, the current meter reading must still be recorded.

Notice of commencement of dewatering

75. The Team Leader – Southern Monitoring shall be advised in writing at least 30 working days prior to commencement of any activities pursuant to this consent.

Dewatering Limit

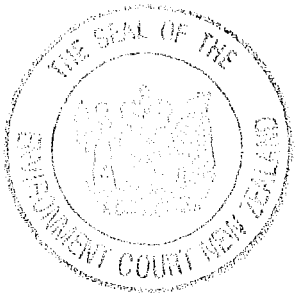
76. Groundwater levels within the existing quarry floor area shall not be drawn down below 20 MRL.

Groundwater inflow estimation

77. The rate at which groundwater is diverted (groundwater inflow) into the Clevedon Quarry pit sump shall be measured and recorded. The methodology for determining groundwater inflow shall be outlined in the GSWMCP.

Quarry pit pumped quality

78. The consent holder shall, starting within one month of commencement of this consent and thereafter at annual intervals, collect a water sample from the quarry pit dewatering pond, have the sample analysed and record the results of analyses to establish water chemistry (including ph, temperature, DO and TDS). A further sample shall be collected when quarry pit groundwater inflow measurements required by condition 77 above are undertaken.



Daily rainfall

79. The consent holder shall measure rainfall at the same time each working day when the site is operating and keep records of each date and corresponding rainfall measurement. The records shall be submitted in accordance with reporting dates specified in conditions 100 and 101.

Technical review

80. A technical review shall be undertaken no less than three months and no more than six months prior to commencing stage 4 of the quarry expansion identified in the application documents (PDP 2017, Appendix A.1). The review shall include an analysis and interpretation of monitoring data, a comparison of actual groundwater level values to predicted values, and an assessment of any actual or potential adverse effects on the environment as a consequence of dewatering/diversion. The consent holder shall forward the technical review to the Team Leader – Southern Monitoring within one month of the completion of the review. If the technical review shows that the effects of the activity are greater than predicted in the application and that monitoring and mitigation provisions of this consent are not adequate for the avoidance or mitigation of adverse effects, then the dewatering shall not proceed to the next stage, unless the consent holder demonstrates to the Team Leader Compliance Monitoring South's satisfaction that those matters are satisfactorily resolved.

Groundwater and Surface Water Monitoring and Contingency Plan

81. A Groundwater and Surface Water Monitoring and Contingency Plan (GSWMCP) shall be completed and submitted to the team leader – southern monitoring within three months of the commencement date of this consent or before any further excavation below the elevation of the pit existing as at the date of commencement of consent, whichever occurs first, for review and written certification. The GSWMCP shall accurately record all management and operational procedures, monitoring requirements, methodologies and contingency measures necessary to comply with the conditions of this consent. Any proposed amendment of the GSWMCP shall also be submitted to the Team Leader for written approval.

82. The GSWMCP shall include but not be limited to:

(a) a monitoring and reporting schedule which integrates the requirements relating to pit groundwater inflow, quarry pit water levels, monitoring bore water levels, surface water flows and any other monitoring required by this consent;

(b) a schedule and updated final plan (based on Figure 2: Surface Water Catchment Plan, PDP 2017) of all monitoring bores and piezometers for groundwater pressures and / or groundwater level monitoring, giving location, elevation RL, construction details, and practices for bore water level monitoring;

(c) a procedure for quarry pit groundwater inflow measurement in accordance with condition 77;

(d) a procedure for review of the pit inflow rates annually (as part of the annual monitoring report) to confirm the augmentation rates;

(e) Details of the proposed timing and staging of the quarry expansion and step wise change in groundwater level and anticipated timing of technical reviews as per condition 80;

(f) A schedule and updated final plan (based on Figure 2: Surface Water Catchment Plan, PDP 2017) of all stream gauging sites and locations of stream augmentation;

(g) Details of all trigger levels established by monitoring required by this consent;

(h) Details of all contingency plans for remedial actions in response to decrease in stream base flows or lowering of bore water levels below expected values, caused by the exercising of this consent, in accordance with conditions of this consent;

(i) Details of the Clevedon Quarry site management structure and of personnel responsible for the maintenance of the GSWMCP, and of the related record keeping and reporting requirements;

(j) Procedures for demonstrating efficient water use; and

(k) Methods for assessing the significance of and any steps to be taken in response to elevated levels of sediment entering the Wairoa River between the two automatic turbidity meters described in condition 124.

Monitoring bore construction for water level measurements

83. Provision at the top of the monitoring bores for water level measurements shall be made and maintained so that a probe can be lowered vertically into the bore to measure the water level in the bore.

Monitoring bore construction for sampling

84. Provision at the top of the monitoring bores for water quality sampling shall be made and maintained so that a sample of water can be taken from the bore for water quality analysis.

Locations for groundwater level monitoring

85. Monitoring of groundwater levels shall be carried out in bores as set out in Schedule A below and located on Figure 2: Surface Water Catchment Plan prepared by PDP, 2017 and as may be confirmed by the operational GSWMCP.

Schedule A: Groundwater monitoring bores					
Bore	**Coordinates**		**Screened Interval**		**Monitoring Frequency**
	Easting	Northing	Geology	Elevation (mRL)	
FH1shallow	1784636	5899983	River Alluvium	9.4 to 15.4	**Monthly**
FH1deep	1784636	5899983	Fresh Greywacke	-15 to -9	**Monthly**

FH2shallow	1785787	5900241	Weathered Greywacke	198 to 204	**Monthly**
FH2deep	1785787	5900241	Fresh Greywacke	-1 to 13	**Monthly**
GW2N	1784803	5899969	Fresh Greywacke	-3.5 to 2.5	**Monthly**
FH4deep[1]	to be determined		Fresh Greywacke	to be determined	**Monthly**
[1] To be installed prior to commencing Stage 4 quarry expansion					

86. The necessity for the well FH4deep shall be considered as part of the technical review required by condition 80. In the event the review finds that the well is needed, it shall be installed, and details provided (in accordance with conditions 83, 84 and 85) to the Team Leader – Southern Monitoring prior to commencing the stage 4 quarry expansion.

Frequency of groundwater level monitoring

87. Groundwater levels in the bores shall be measured and recorded at monthly intervals in the monitoring bores listed in Schedule A. Records shall be kept of each date, time and corresponding water level(s) for each bore

As-built survey of groundwater level monitoring bores

88. The elevations of the top of the casings and the NZ Transverse Mercator map reference of each bore in Schedule A of condition 85 shall be measured and recorded to an accuracy of 0.01 m and 2 m respectively, and forwarded to the Team Leader – Southern Monitoring. These measurements shall be undertaken within three months of the commencement date of this consent and be included in the GSWMCP.

Maintenance of groundwater level monitoring bores

89. In the event of any of the monitoring bores being destroyed, becoming inoperable, the water level being at or dropping below the bottom of the bore, or the landowner on whose property the bore is located does not allow access, that bore shall be substituted with another constructed and/ or otherwise identified as suitable by a suitably qualified practitioner, with the written approval of the Team Leader – Southern Monitoring. Access to the bores shall be maintained for sampling, monitoring and compliance purposes.

Stream flow monitoring

90. Within at least three months of the date of commencement of this consent, stream flows shall be measured and recorded in the North Stream and South Stream at the locations specified in Schedule B and at the location shown on Figure 2: Surface Water Catchment Plan, prepared by PDP, 2017, or as otherwise revised by the GSWMCP.

The objective of this monitoring is to establish the natural (pre-stage 3 expansion) MALF based on the correlation with the continuous stream flow gauging at Wairoa River. The flow correlation shall relate to the natural stream flow data collected for

the monitoring period with concurrent flows at the Auckland Council Wairoa River station.

Schedule B: Stream flow monitoring locations				
Site	**Coordinates (NZTM)**		**Location**	**Monitoring Frequency**
	Easting	Northing	Geology	
M1			Wairoa River	**Twice yearly**
M2			Wairoa River	**Twice yearly**
N1	1785348	5900075	North Tributary	**Twice yearly**
N2	1785059	5899998	North Tributary	**Twice yearly**
N3	1784817	5899995	North Tributary	**Twice yearly**
N4	1784750	5900017	North Tributary	**Twice yearly**
S1	1785319	5899533	South Tributary	**Twice yearly**
S2	1785034	5899555	South Tributary	**Twice yearly**
S3	1784669	5899628	South Tributary	**Twice yearly**

Advice Note:

For the purpose of achieving the objectives, minor differences in gauging locations are tolerable. However, if any of the stations given in Schedule B shift by more than 50 m (e.g. due to stream channel conditions), alternative gauging sites shall be established upon written approval of the Team Leader.

Frequency of stream flow monitoring

91. Stream flows shall be measured on two occasions (separate days and not in the same week) during dry weather conditions (as agreed with Team Leader – Southern Monitoring) or on the tail of any stream flow recession at a range of flows, within the period commencing 1 October and ending 31 May of each 'water calendar' year (so twice every year).

Stream flow monitoring methodology

92. The stream flow records collected and reported shall include details of the method, dates and times of the gauging procedure employed, all measurements taken, and flow calculations. All field measurements and procedures, including appropriately recognising any discharge from the Wairoa Dam, shall be as per the methodology set out in the GSWMCP.

Stream flow maintenance (augmentation)

93. Within the period from 1 November to 31 May (inclusive) of any 'water calendar' year, augmentation flow discharges, calculated in accordance with Schedule C and based on the percent of groundwater inflow measured according to condition 77, to the North and South Streams shall take place continuously if flow at the specified flow site drops below the specified value noted below. The discharge shall be at a constant rate over 24 hours. The default specified site and value (which will be confirmed in the annual monitoring report) is the Auckland Council Wairoa River @ Tourist Road, Clevedon flow site (site number 08516) and a value of 544.5 l/s (150 % of MALF) for a 48h period. In the event of the Wairoa River flow sites being disestablished or becoming inoperable, then the consent holder shall demonstrate to the Team Leader – Southern Monitoring's satisfaction a suitable alternative.

Schedule C: Daily Augmentation Flows to North and South Streams		
Pit Inflow (m^3/d)	**North Stream** (% of pit inflow)	**South Stream** (% of pit inflow)
0 – 2500	11	3

94. The pit groundwater inflow shall be based on the sump groundwater inflow test in dry conditions over the previous 12 months ending 31 May, as determined annually and required by condition 101 in accordance with the GSWMCP.

Stream flow augmentation discharge points

95. The augmentation discharge points should be upstream of the stream reaches that may potentially be affected by the dewatering. The location of augmentation shall be shown on the revised Surface Water Catchment Plan prepared by PDP, 2017 and in the GSWMCP.

Establishing baseline stream water quality

96. Baseline monitoring of water temperature, dissolved oxygen, Ph and TDS at the location of the stream flow gauging sites along the North and South Streams shall be undertaken for one summer period between 1 November to 31 May, after commencement of consent and before implementing any augmentation programme. The measurements shall be undertaken every month using calibrated temperature, Ph and dissolved oxygen meter(s).

Stream Water Quality monitoring

97. Within two months of completing the baseline survey, the GSWMCP shall be updated to include details around the stream water quality monitoring (described in condition 98 below) and shall be submitted to the Team Leader – Southern Monitoring outlining whether any adverse effects resulting from any increases in water temperature or changes in Ph, total dissolved solids (TDS) or dissolved oxygen (DO) are anticipated in the streams (after reasonable mixing) and if so, outline mitigation measures to be implemented to address such effects.

98. The details to be provided in accordance with condition 97 shall include but not be limited to:

(a) A monitoring and reporting schedule for on-going water quality monitoring;

(b) A schedule and updated final plan showing the location of monitoring;

(c) The procedures for undertaking the monitoring;

(d) Details of trigger levels established by the monitoring in (a); and

(e) Details of all contingency plans for remedial actions in response to changes in stream water quality.

Monitoring of pumped stream augmentation flows

99. Water meters shall be installed on the outlet of the pumps used to augment stream flows that are compatible with an electronic storage device. The meters shall continuously (at a maximum 15-minute intervals) measure the total quantity of water being discharged as augmentation flow into the streams. The water meter should meet the requirements of conditions 70, 71 and 72.

Reporting requirements

100. The consent holder shall ensure that the monitoring records collected under the above conditions, and as summarised in Schedule D are submitted to the Team Leader – Southern Monitoring no later than 20 working days after the 28 February, 31 May, 31 August and 30 November each year.

Schedule D: 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

Schedule D: Reporting Requirements		
Information	**Reporting frequency**	**Due date(s) for reporting**
Stream flow quality	Annual	30 June

Stream augmentation flow rates	Quarterly	No later than 20 working days after 28 February, 31 May, 31 August and 30 November
Efficient water use	Annual	30 June

Annual reporting requirements

101. The consent holder shall submit by 30 June of each water calendar year, to the Team Leader – Southern Monitoring a report analysing and interpreting the results of groundwater and surface water monitoring required in accordance with the conditions of consent. The report should provide an overall analysis that includes but is not limited to:

(a) volume of water pumped from the quarry sump pit and any reuse of this water (efficiency of collective groundwater and surface water takes);

(b) trends in groundwater level or groundwater quality indicated by monitoring and comparison to expected trends;

(c) an estimation of groundwater inflow to the pit and implications for augmentation rates;

(d) trends in stream flow and quality indicated by monitoring (including catchment areas, the correlation graphs, and values for R2, y intercept, slope, regression expression, and specific discharge for the MALF) and comparison to expected trends; and

(e) details of augmentation (timing, duration, quantum) undertaken in the preceding water calendar year and effectiveness in maintaining stream conditions (flow and ecological values).

102. The report shall be prepared to a standard acceptable to the Team Leader – Southern Monitoring and consider all data collected, and in particular examine and evaluate compliance with the consent conditions and any effects on the environment during the previous year and since this consent was exercised.

Efficient Water Use

103. The annual reporting shall include a summary of water use efficiency that considers all groundwater and surface water take consents. The report shall assess the groundwater inflows and total pumped quarry volumes over the previous 12 months, and any water abstracted from the north stream, against best practice in respect of the efficient use of water for the purpose consented.

Part D — Earthworks Consent (Application LUC60291842)

Erosion and Sediment Control

104. An annual ESCP shall be submitted no later than 10 working days after 30 April each year, commencing 30 April 2018, for certification by the Team Leader – Southern Monitoring that it contains the information in condition 105, prior to the commencement of works proposed in the annual ESCP.

105. The annual ESCP shall contain the following information:

(a) calculations to confirm compliance with GD05 for quarrying and associated activities including overburden removal for the next 12 months;

(b) Overburden removal and disposal operations planned for the next 12 months;

(c) areas of expected quarry operations for the next 12 months;

(d) proposed maintenance and enhancement of riparian vegetation, as required by other conditions of consent;

(e) results of the previous 12 months of sampling inclusive of summarised rainfall records and assessment of results;

(f) the methodology of the ecological survey and the results of the ecological survey and assessment of results, as required by other conditions of consent;

(g) assessment of effectiveness of erosion and sediment control measures and any sediment related effects on the receiving environment; and

(h) procedures to ensure compliance with the requirements of condition 124.

106. Prior to the commencement of any land disturbance activities authorised by the granting of this consent, a certificate signed by an appropriately qualified and experienced person shall be submitted to the Team Leader – Southern Monitoring to certify that the erosion and sediment controls measures have been constructed in accordance with the annual ESCP.

107. Certified controls shall include temporary and permanent diversion bunds, and any sediment retention devices (e.g. sediment retention ponds (SRP) and decanting earth bunds (DEB)). The certification for these measures shall be supplied immediately upon completion of construction of those measures. Information supplied if applicable shall include:

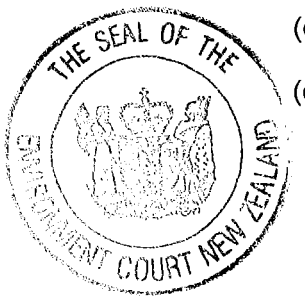
(a) contributing catchment area;

(b) retention volume of the structures;

(c) shape and composition of structures;

(d) position of inlets/outlets and drop structures;

(e) stabilisation of the structure; and



(f) confirmation of compliance with GD05.

108. All erosion and sediment control measures referred to in condition 105 above, including temporary measures shall be constructed and maintained in general accordance with Auckland Council guideline document 2016/005, Erosion and Sediment Control Guide for Land Disturbing Activities in The Auckland Region (GD05).

109. Accumulated sediment is to be removed from sediment retention devices before the sediment reaches 20% of the live storage capacity of the devices. Removed sediment is to be deposited in an area that cannot wash into receiving waters.

110. All sediment retention ponds shall incorporate an emergency spillway, which shall be constructed to withstand a 100 year return frequency storm event without breaching.

111. The operational effectiveness and efficiency of all erosion and sediment control measures specifically required as a condition of resource consent or by the ESCP referred to in condition 105 shall be maintained throughout the duration of land disturbing activities or until the site is permanently stabilised against erosion. A record of any maintenance work shall be kept and be supplied to the Team Leader – Southern Monitoring, on request.

112. Notice shall be provided to the Team Leader – Southern Monitoring at least two (2) working days prior to the removal of any erosion and sediment control works specifically required as a condition of resource consent.

Interim and Final Stabilisation

113. The site shall be progressively stabilised against erosion (bare rock excluded) at all stages of the land disturbing activity, and throughout the duration that the consent is exercised. Interim stabilisation measures may include the use of waterproof covers, geotextiles, or mulching; or aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.

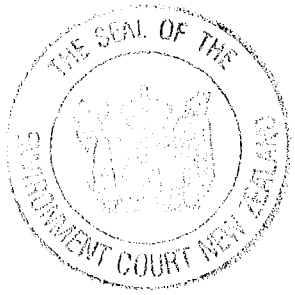
114. Upon abandonment or completion of land disturbing activities on the subject site, all areas of bare earth shall be permanently stabilised against erosion to the satisfaction of the Team Leader – Southern Monitoring.

115. If works are to be abandoned on-site, adequate preventative and remedial measures shall be undertaken to control sediment discharge, and shall thereafter be maintained for so long as necessary to prevent sediment discharge from the site. All such measures shall be of a type, and to a standard, which are to the satisfaction of the Team Leader – Southern Monitoring.

Advice Note

Measures may include the use of mulching, top-soiling, seeding and mulching of otherwise bare areas of earth, or aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.

The on-going monitoring of these measures is the responsibility of the consent holder. It is recommended that you discuss any potential measures with the Council's monitoring officer who will guide you on the most appropriate approach to take. Please contact the Team Leader – Southern Monitoring for more details. Alternatively, please refer to Auckland Council Guideline Document 2016/005,



Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05).

Sediment on Roads

116. The consent holder shall install and make operational a wheel wash by 31 March 2018. All quarry trucks and vehicles exiting the operational quarry areas shall pass through the wheel wash prior to entering McNicol Road.

117. There shall be no deposition of earth, mud, dirt or other debris on any public road or footpath resulting from earthworks activity on the subject site. In the event that such deposition does occur, it shall immediately be removed. In no instance shall roads or footpaths be washed down with water without appropriate erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses or receiving waters.

North Stream

118. The consent holder shall ensure that mineral extraction activities are set back from the North Stream by 10m (except in the areas illustrated by the blue line on Figure X attached to this consent, which shall be 10m where practicable) where within stages 1 to 3. From stage 4 onwards the setback shall be 20m from the North Stream. A 10m riparian margin (stages 1-3) and 20m riparian margin (stage 4 onwards) shall be planted with appropriate native species and maintained for a period of 5 years from completion of works in that stage.

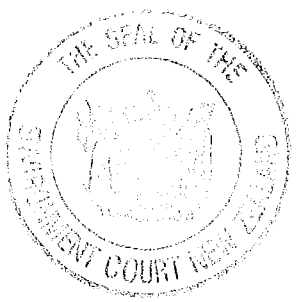
119. Within 3 months of this consent commencing the consent holder shall submit to the Team Leader Compliance Monitoring South, Auckland Council, a report prepared by a suitably qualified chartered professional engineer on the sufficiency of the bund height of the existing SRP bund to exclude entry of flood water from the North Stream during a 20 year ARI flood with allowance for future increased rainfall associated with 2.1 degree C increase in temperature; and

    (a) Should the existing bund be of insufficient height to exclude a 20 year ARI flood the report shall make detailed recommendations, in sufficient detail to allow the consent holder to implement any construction aspects of the recommendations with respect to raising the SRP bund or other suitable measure to ensure 20 year flood flows from the North Stream do not overtop the SRP bund; and

    (b) Any recommendations on raising the SRP bund or other suitable measure to ensure 20 year flood flows from the North Stream do not overtop the SRP bund shall be carried out as soon as soon practical, but not later than 7 months after submitting the engineers report.

120. To ensure that the SRP (excluding the outlet and scour protection) is able to withstand potential damage from extreme flood flows and the existing bund adjoining the North Stream prevents such flows entering the quarry pit, the consent holder shall carry out the following:

    (a) A report shall be prepared by a suitably qualified chartered engineer on flow velocities in the North Stream adjacent to the SRP bund during a 100 year ARI flood with allowance for future increased rainfall associated with a 2.1 degree C increase in temperature and assessment of the ability of the existing SRP bund to withstand these velocities without substantial scour or other damage to the bund embankment; and



(i) Should 100 year flood flow velocities be assessed to be likely to cause substantial scour and/or damage to the SRP bund the report shall make recommendations in sufficient detail suitable to allow the consent holder to implement any construction aspects of the recommendations for upgrading or strengthening the bund such that damage will not occur from a 100 year flood;

(ii) The above described report shall be prepared within 3 months of this consent commencing and a copy provided to the Team Leader Compliance Monitoring South, Auckland Council. Any recommendations on upgrading or strengthening the existing SRP bund shall be carried out as soon as soon practical, but not later than 7 months after receiving the engineers report; and

(iii) In the event that it is not practical to upgrade or strengthen the bund with the SRP in its existing location, the SRP shall be relocated to another location and the reporting carried out to demonstrate that damage will not occur to the bund during a 100 year flood. This shall be carried out as soon as practical, but not later than 8 months after receiving the engineers report.

(b) A report shall be prepared by a suitably qualified chartered engineer on the adequacy of the bund adjoining the North Stream to prevent flood flows from the stream entering the quarry pit and its ability to withstand erosion from flood flows in the North Stream in a 100 year ARI flood with allowance for future increased rainfall associated with a 2.1 degree C increase in temperature and

(i) Should the existing bund be of inadequate height to prevent flood flows from the stream entering the quarry pit and/or be unable to withstand erosion from flood flows in a 100 year ARI flood, the report shall make detailed recommendations, in sufficient detail to allow the consent holder to implement any construction aspects of the recommendations with respect to raising and/or reconstructing or strengthening the bund to ensure 100 year flood flows from the North Stream do not overtop or erode the bund;

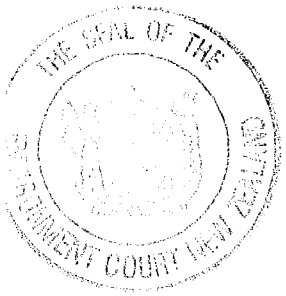
(ii) The above described report shall be prepared within 3 months of this consent commencing and a copy provided to the Team Leader Compliance Monitoring South, Auckland Council; and

(iii) Any recommendations with respect to raising and/or reconstructing or strengthening the bund shall be carried out as soon as practical, but not later than 7 months after receiving the engineers report.

Slope Stability Monitoring Plan

121. A Slope Stability Monitoring Plan (SSMP), with trigger levels and actions shall be developed by a suitably qualified professional and approved by Council as part of the QMP processes if it complies with condition 122. The monitoring plan, trigger levels and action within the QMP shall be reviewed annually.

122. The SSMP shall present detailed quarry planning to demonstrate slopes have been designed to accepted industry best practice factors of safety against slope instability with respect to quarry batters.



Extent of works

123. Quarrying activities shall be restricted to those parts of the Special Purpose - Quarry Zone areas as described in documents lodged in support of the land use consent application (luc60291842).

Limit condition

124. An automatic and continuous recording turbidity meter shall operate to record water quality within the north stream upstream of the SRP discharge point and 20m downstream of the SRP discharge point. The water quality monitoring shall measure for threshold exceedance. Should the threshold change be greater than 20% between upstream and downstream NTU, specific methods of monitoring, actions required, and reporting to Council shall be undertaken as described in the ESCP.

Sampling programme

125. Site rainfall shall be measured at the same time each working day, when the site is operating or have access to daily rainfall figures for the quarry. A working day is defined as Monday through to Friday inclusive, plus those days outside this period when the quarry is operating.

Archaeological

126. If, at any time during site works, potential koiwi (human remains), archaeology or artefacts are discovered, then the following discovery protocol is to be followed:

(a) All earthworks will cease in the immediate vicinity (at least 10m from the site of the discovery) while a suitably qualified archaeologist is consulted to establish the type of remains.

(b) 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, southern monitoring, 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.

(c) If the discovery contains koiwi, archaeology or artefacts of maori origin, representatives from Ngai Tai Ki Tamaki are to be provided information on the nature and location of the discovery.

(d) Ngai Tai Ki Tamaki is to be given the opportunity to monitor the earthworks and conduct karakia and other such religious or cultural ceremonies and activities as are appropriate.

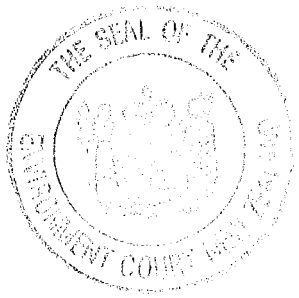
127. If any site that meets the RMA definition of historic heritage is exposed as a result of any activity associated with the consent proposals then these sites shall be recorded within the Auckland Council Cultural Heritage Inventory by the project archaeologist/historic heritage expert.

Advice note:

I. Māori artefacts such as carvings, stone adzes, and greenstone objects are considered to be tāonga (treasures). These are taonga tūturu within the meaning of the Protected Objects Act 1975 (hereafter referred to as the Act). According to that

act (section 2) taonga tūturu means an object that – relates to māori culture, history, or society; and was, or appears to have been – manufactured or modified in New Zealand by māori; or brought into New Zealand by māori; or used by māori; and is more than 50 years old. The act is administered by the Ministry of Culture and Heritage. Tāonga may be discovered in isolated contexts, but are generally found within archaeological sites. The provisions of the Heritage New Zealand Pouhere Taonga Act 2014 in relation to the modification of an archaeological site should be considered by the consent holder if tāonga are found within an archaeological site, as defined by the Heritage New Zealand Pouhere Taonga Act 2014. It is the responsibility of the consent holder to notify either the chief executive of the Ministry of Culture and Heritage or the nearest public museum, which shall notify the chief executive, of the finding of the taonga tūturu, within 28 days of finding the taonga tūturu; alternatively provided that in the case of any taonga tūturu found during the course of any archaeological investigation authorised by Heritage New Zealand Pouhere Taonga under section 48 of the Heritage New Zealand Pouhere Taonga Act 2014, the notification shall be made within 28 days of the completion of the field work undertaken in connection with the investigation. Under section 11 of the Act, newly found taonga tūturu are in the first instance Crown-owned until a determination on ownership is made by the Māori Land Court. For information please contact the Ministry of Culture and Heritage - 04 499 4229 / protected-objects@mch.govt.nz.

II. The Heritage New Zealand Pouhere Taonga Act 2014 provides for the identification, protection, preservation and conservation of the historic and cultural heritage Of New Zealand. It is an offence under this Act to destroy, damage or modify any archaeological site without an authority from Heritage New Zealand Pouhere Taonga. An archaeological site is defined as a place associated with pre-1900 human activity where there may be evidence relation to history of New Zealand. Archaeological features' may include old whaling stations, ship wrecks, shell middens, hangi or ovens, pit depressions, defensive ditches, artefacts, or koiwi tangata (human skeletal remains), etc. For guidance and advice on managing the discovery of archaeological features, contact the Team Leader Cultural Heritage Implementation, Auckland Council on 09 301 0101.



Part E: Air Discharge Consent (Application DIS60302443)

128. The consent holder shall, at all times, operate, maintain, supervise, monitor and control all processes on site so that in the opinion of the Team Leader, Southern Monitoring, Resource Consents and Compliance emissions authorised by this consent are maintained at the minimum practicable level:

(a) beyond the boundary of the site there shall be no odour, dust or fume caused by discharges from the site which, in the opinion of an enforcement officer, is noxious, offensive or objectionable;

(b) no discharge 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, offensive or objectionable; and

(c) 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 likely to be detrimental to human health or the environment.

Advice Note:

In assessing whether the effects are noxious, offensive or objectionable, the following factors will form important considerations:

1. The frequency of dust/visible emission nuisance events

2. The intensity of events, as indicated by dust quantity and the degree of nuisance

3. The duration of each dust nuisance event

4. The offensiveness of the discharge, having regard to the nature of the dust; and

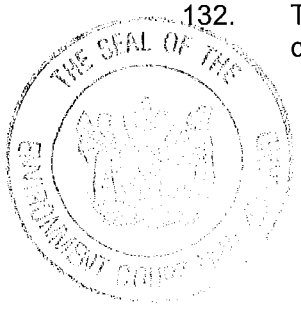
5. The location of the dust nuisance, having regard to the sensitivity of the receiving environment

129. The consent holder shall, as far as practicable, operate the plant and associated processes in accordance with the documentation submitted to the Council as part of application number DIS60302443, where not amended by the conditions of this resource consent. No alterations shall be made to the plant or processes that do not comply with the provisions of this consent, a regional rule, or regulations under the RMA.

130. The consent holder shall be responsible for all discharges to air from the site and shall make any person on site aware of any relevant conditions of this consent.

131. The consent holder shall ensure techniques are used for excavating rock, blasting and drilling which minimise dust emissions. Dust emissions from all crushing, screening and transfer operations shall be kept to a practicable minimum. Dust suppression equipment shall be maintained in good condition.

132. The consent holder shall limit vehicle speed in dry weather to a speed such that, in conjunction with other controls, dust emissions are minimised.



133. All ponds shall be maintained at such capacity that application of water as a dust control measure is not limited. A log shall be kept of pond maintenance and of weekly checks on sediment and water levels in ponds.

134. Contouring and re-vegetation of overburden dumps shall take place as soon as practicable to reduce windblown dust.

135. All stockpiles shall be constructed and positioned to minimise the potential for dust emissions, and all practicable steps shall be taken to suppress dust from stockpiles.

136. The consent holder shall ensure that no material shall be disposed of by open burning on site.

137. Within 20 days of the date of commencement of this consent, a Dust Management Plan (DMP) shall be submitted to the Team Leader - Southern Monitoring for certification, to confirm that the activities undertaken in accordance with the DMP will achieve the objectives of the Plan and compliance with the relevant consent conditions. Any subsequent review of the DMP shall also be submitted to the Team Leader – Southern Monitoring for certification. The consent holder shall meet the costs of the production, certification, monitoring and review of the DMP. The overall objective of the DMP shall be to set out the practices and procedures to be adopted to ensure compliance with the conditions of consent.

138. The DMP shall incorporate a series of monitoring, management and operational procedures, methodologies and contingency plans and together shall accurately record all information required to comply with the conditions of this consent. The DMP shall include the following:

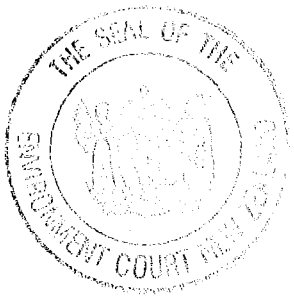
    (a) details of the operation, location and maintenance of the meteorological monitoring station referred to in condition 139;

    (b) details of management and monitoring practices in place to minimise discharges of dust; including but not limited to:

        i. the use of additional water carts and irrigation systems to dampen dusty surfaces;

        ii. stopping all work on areas of the site that are sources of excessive dust, other than dust control activities;

        iii. procedures for implementing instrumental monitoring of dust concentrations if a significant adverse dust effect beyond the boundary of the consent holder's property arising from on-site operations is identified as having occurred by Council and for which instrumental monitoring is deemed to be required. The determination of a significant adverse dust effect beyond the boundary of the consent holder's property shall be carried out using the guidance included in the Ministry for the Environment's Good Practice Guide for Assessing and Managing Dust and in consultation between the consent holder and Council. The requirement to implement an instrumental monitoring programme, the design of the monitoring system, including the monitoring methods to be used, location of monitor(s), contaminants to be monitored, duration of monitoring, alert thresholds and reporting systems shall be determined in consultation between the Council and consent holder.



(c) the identification of staff responsibilities; and

(d) procedures for the receipt, recording and handling of complaints received about dust generated by the quarry.

139. Within 6 months of the date of commencement of this consent, the consent holder shall install and operate a meteorological monitoring station to measure wind speed, wind direction, temperature and rainfall at the site. The monitor shall continuously log these meteorological conditions in real-time so that the readings are available to site staff and be of a type and in a location agreed to by the Team Leader – Southern Monitoring. The location of the monitor shall minimise the potential for obstacles to affect the accuracy of the readings.

140. No later than 10 working days after 30 April in the first year of quarrying and every year thereafter, the consent holder shall provide an updated DMP to the Team Leader – Southern Monitoring, which in addition to those matters detailed in the earthworks consent shall contain details of the dust suppression undertaken and a record of any air quality complaints received.

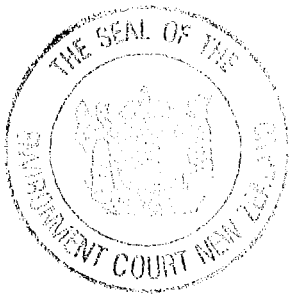
141. The consent holder shall log all air quality complaints received. The complaint details shall include:

(a) the date, time, position and nature of the complaint;

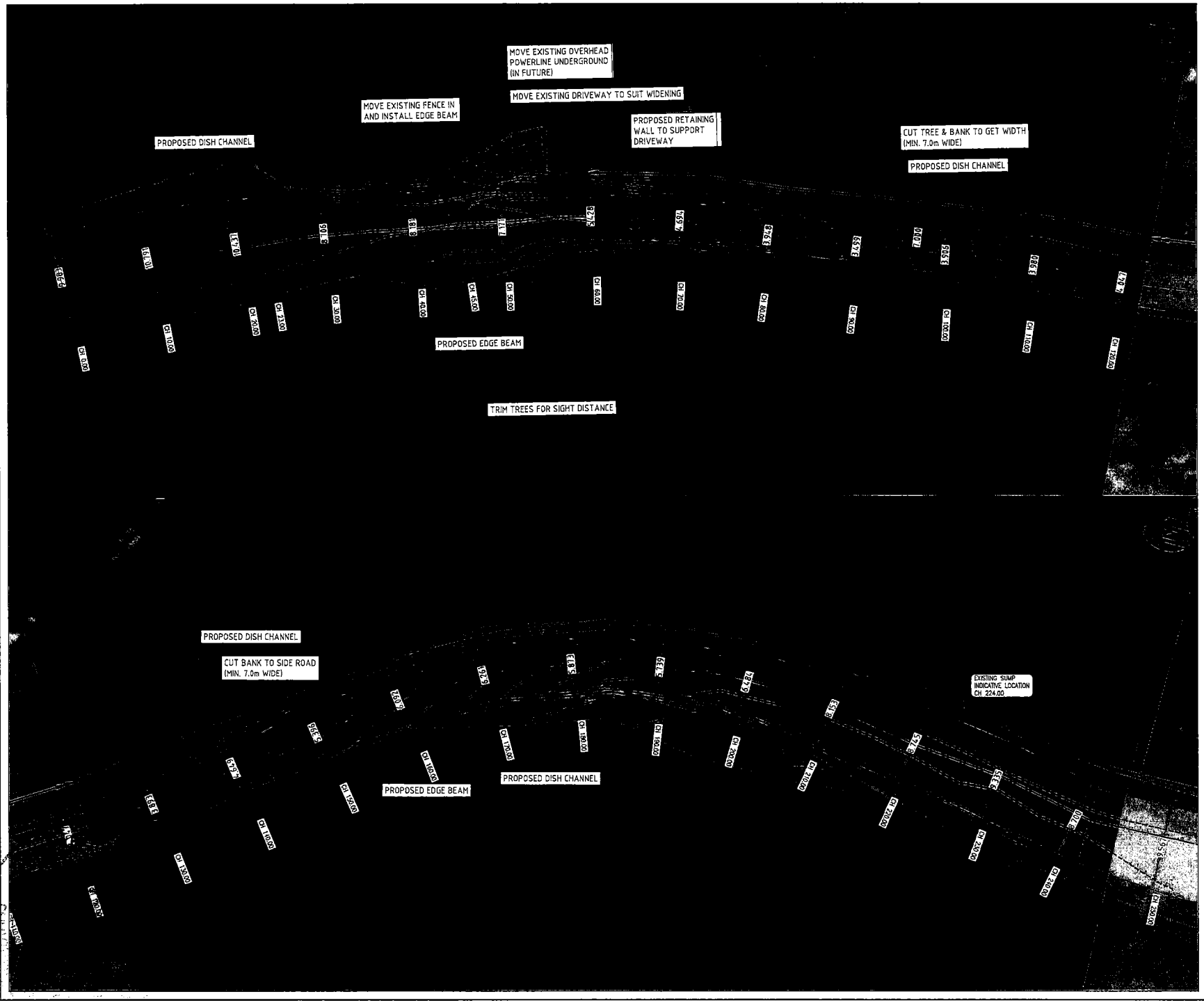
(b) the name, phone number and address of the complainant unless the complainant refuses to supply these details;

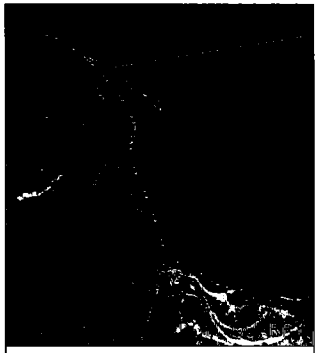
(c) any remedial actions taken; and

(d) details of any complaints received shall be provided to the Team Leader – Southern Monitoring within 7 days of receipt of the complaint/s.



ATTACHMENT 1 – MCNICOL ROAD WORKS PLANS





NOTES:

- PROPOSED 600mm WIDE DISH CHANNEL
- PROPOSED 200mm WIDE EDGE BEAM
- PROPOSED RETAINING WALL

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Proposed Layout

FH

Sheet 1 of 3

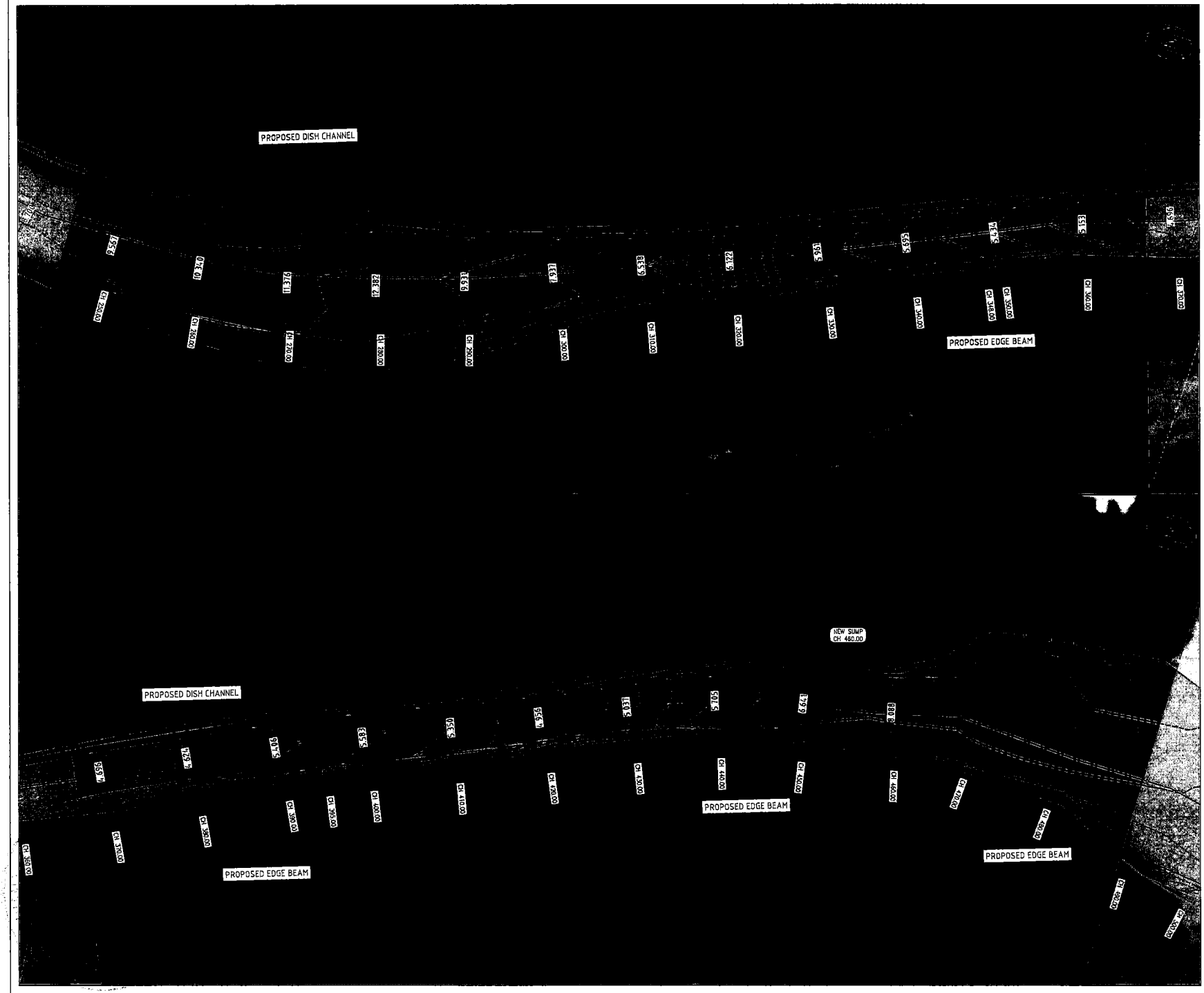
SCALE (A1) - 1:200
SCALE (A3) - 1:400

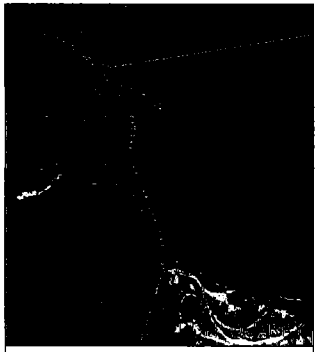
DATE 12/09/2017

FILE PATH G:\10 Construction\Surveys\Jobs\FH Maintenance (200885)-Clovedon Quarry\(1) FH Design\Current

DRAWING NUMBER McNicol Rd Design Layout 170912(A)

REVISION A





NOTES:

- PROPOSED 600mm WIDE DISH CHANNEL
- PROPOSED 200mm WIDE EDGE BEAM
- PROPOSED RETAINING WALL

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

Fulton Hogan

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Proposed Layout

FH

Sheet 2 of 3

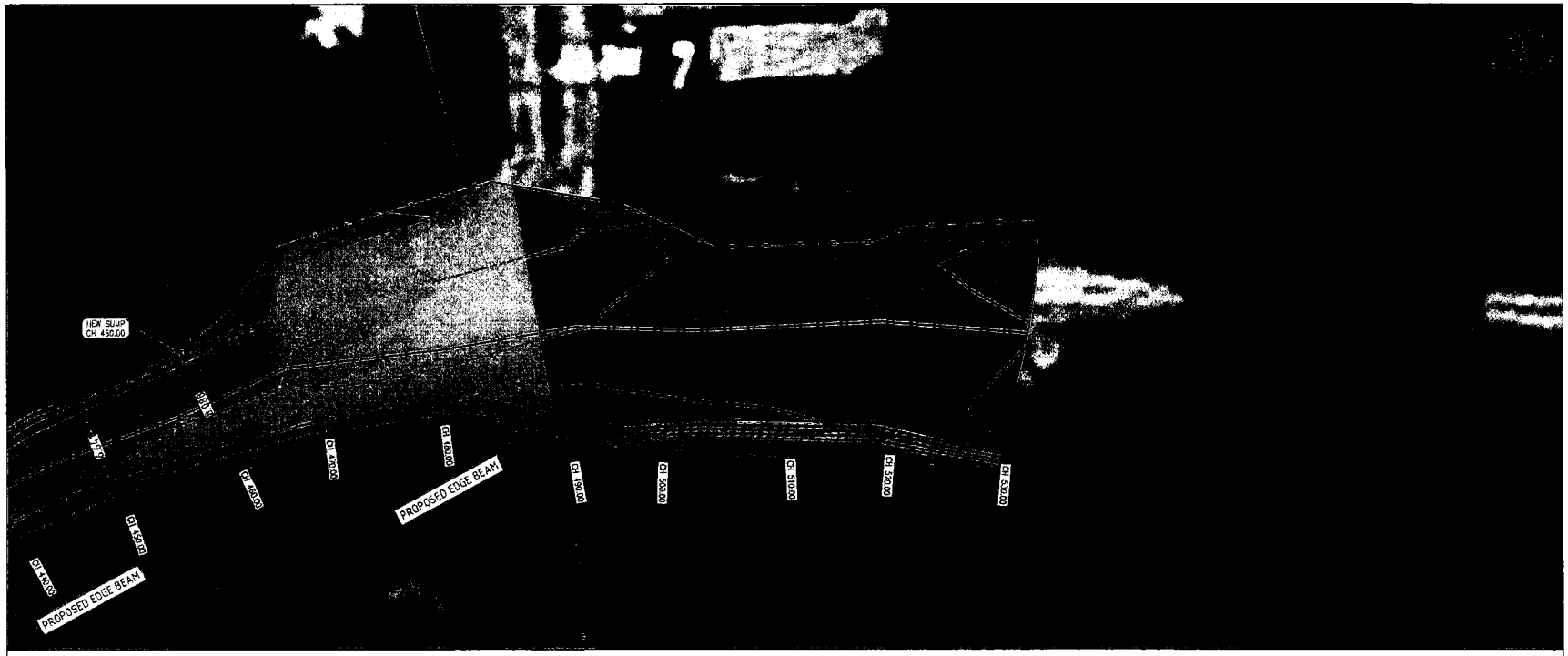
SCALE (A1) - 1:200
SCALE (A3) - 1:400

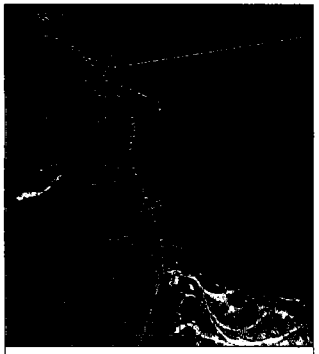
DATE 12/09/2017

FILE PATH G:\10 Construction\Survey Jobs\FH Maintenance (200886)\Clevedon Quarry\(1) FH Design\Current

DRAWING NUMBER McNicol Rd Design Layout 170912(A)

REVISION A





PROPOSED 600mm WIDE DISH CHANNEL

PROPOSED 200mm WIDE EDGE BEAM

PROPOSED RETAINING WALL

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Proposed Layout

FH

Sheet 3 of 3

SCALE (A1) - 1:200
SCALE (A3) - 1:400

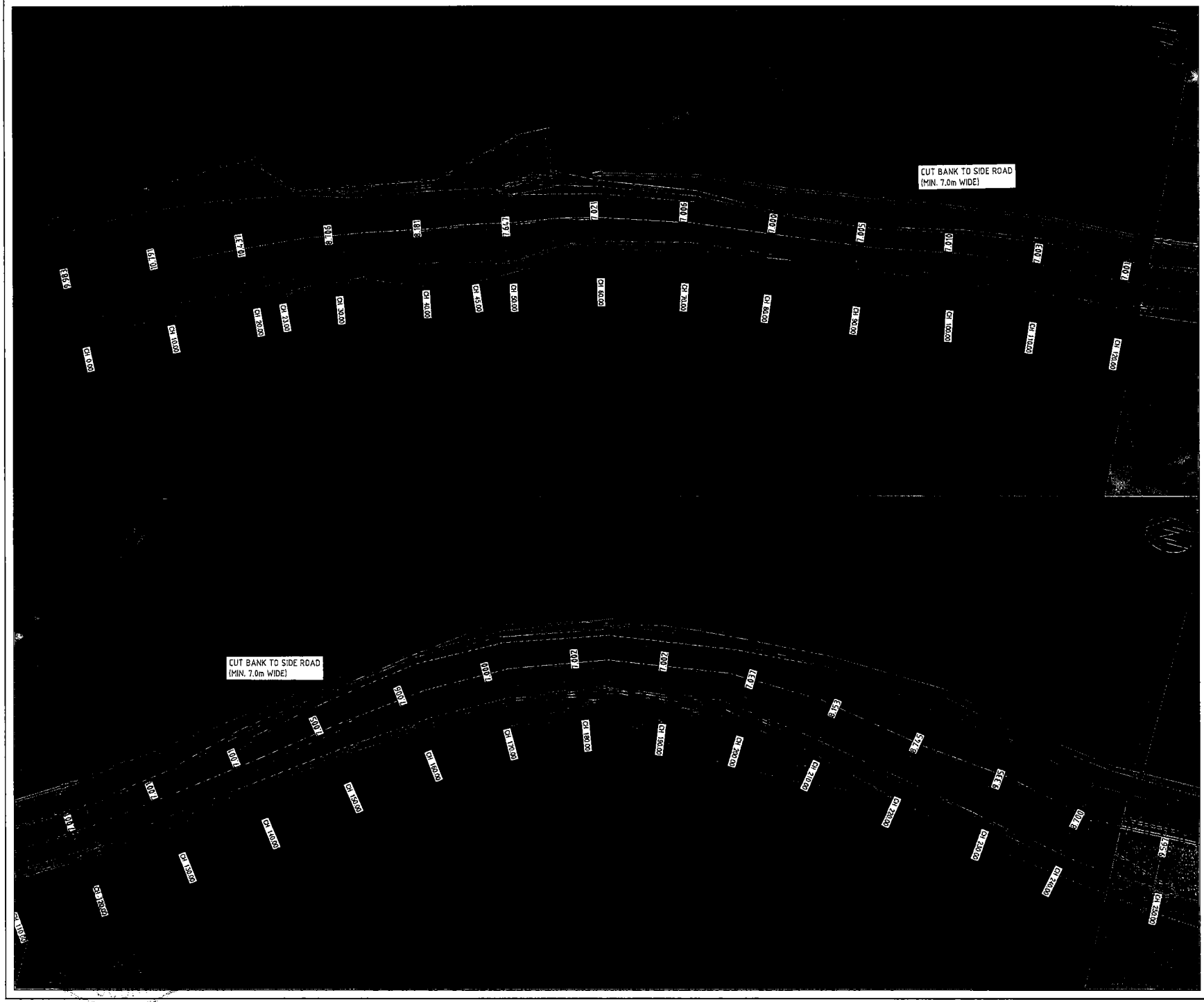
DATE 12/09/2017

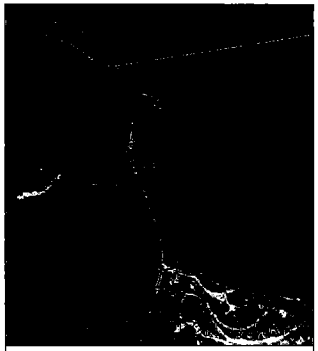
FILE PATH G:\10 Construction\Survey Jobs\FH Maintenance (200885) Clevedon County\(1) FH Design\Current

DRAWING NUMBER McNicol Rd Design Layout 170912(A)

REVISION A

THE SEAL OF THE DISTRICT COURT NEW ZEALAND





NOTES:

200mm OVERLAY AND UNDERCUT
TOTAL AREA 3398.8m²

200mm OVERLAY AND AC
TOTAL AREA: 751.6m²

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

Fulton Hogan
SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Proposed Site Plan

FH

Sheet 1 of 3

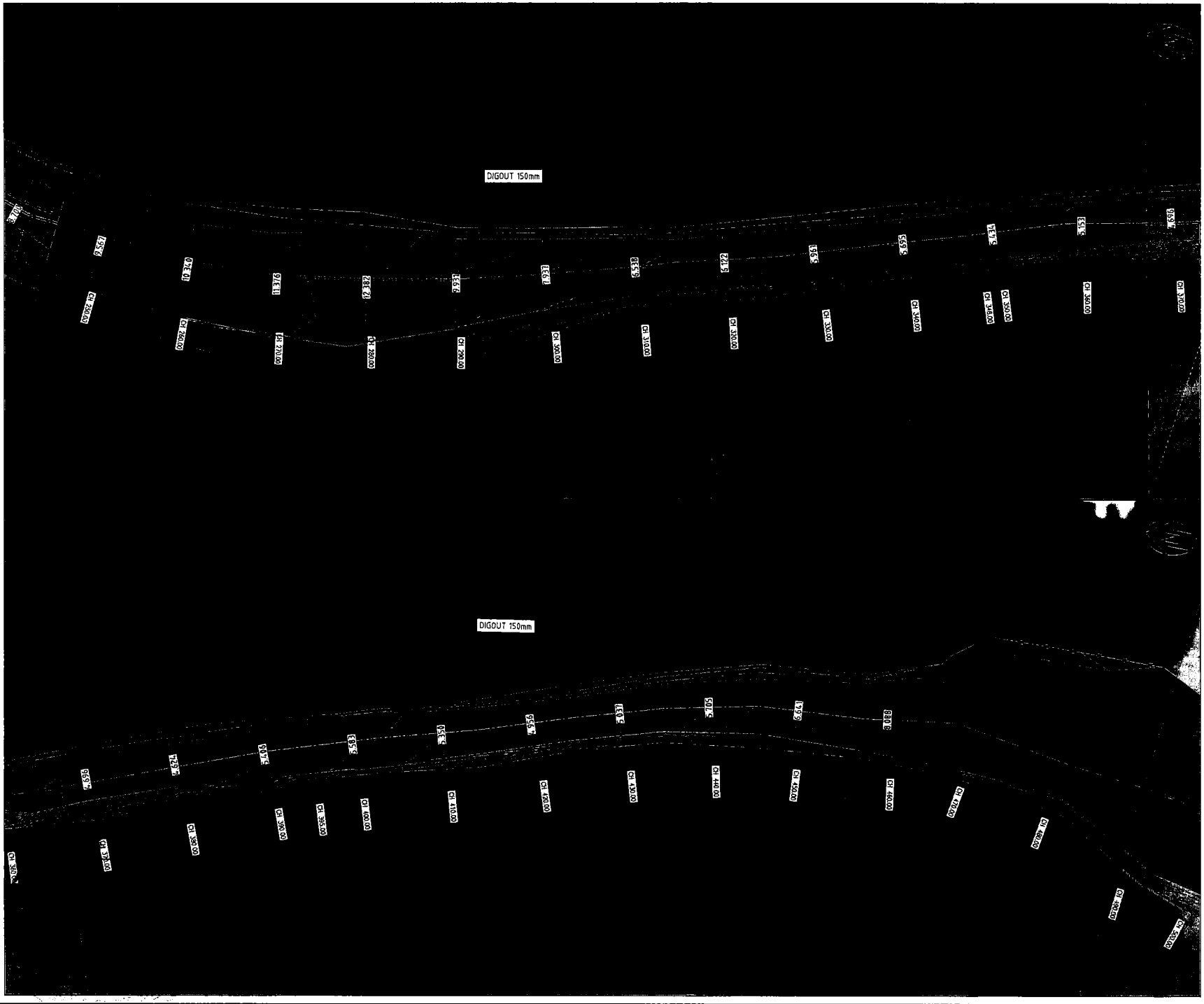
SCALE (A1) - 1:200
SCALE (A3) - 1:400

DATE 12/09/2017

FILE PATH Q:\10 Construction\Survey Jobs\FH Maintenance (200886)\Clevedon Quarry\1) FH Design\Current

DRAWING NUMBER McNicol Rd Design Site Plan 170912(A)

REVISION A



NOTES:

200mm OVERLAY AND UNDERCUT
TOTAL AREA: 3398.8m²

200mm OVERLAY AND AC
TOTAL AREA: 751.6m²

REVISION		SURVEY	DRAWN	DATE
A	Original Drawing	HC	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Proposed Site Plan

FH

Sheet 2 of 3

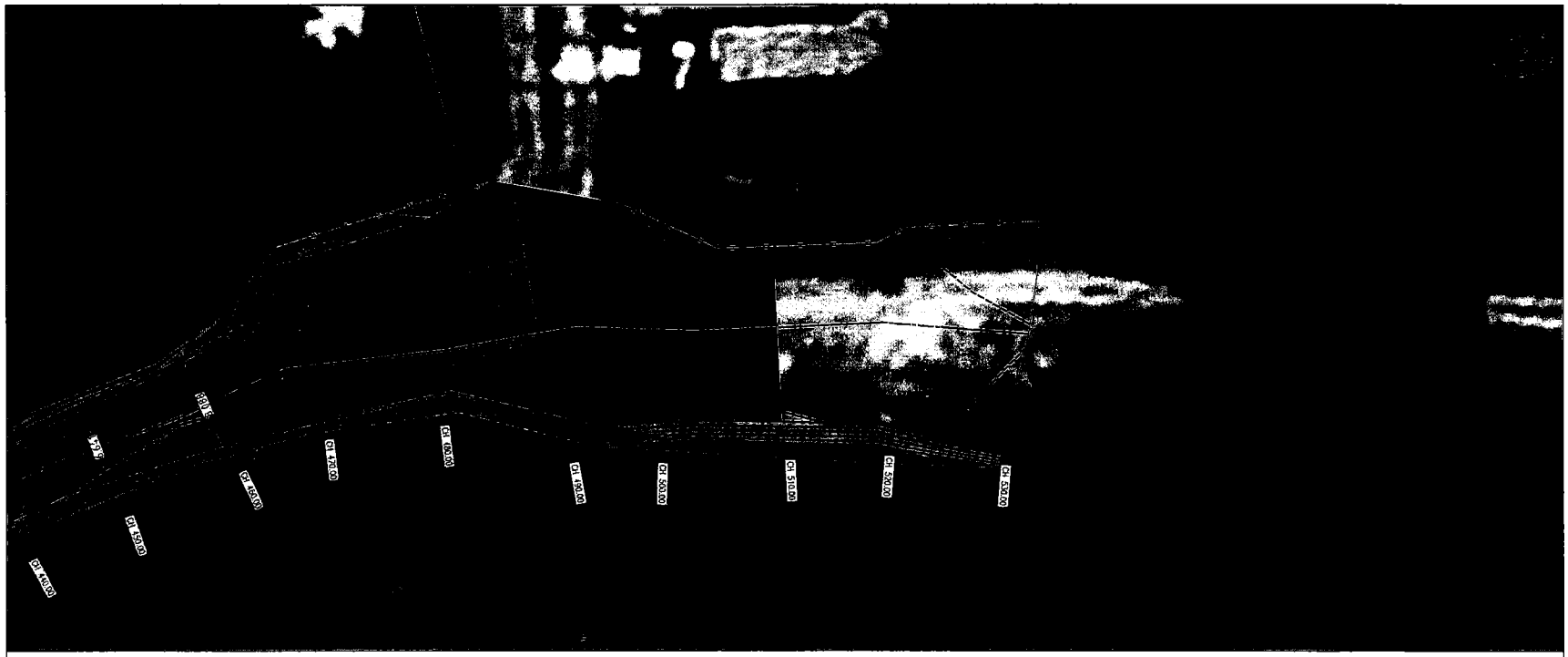
SCALE (A1) - 1:200
SCALE (A3) - 1:400

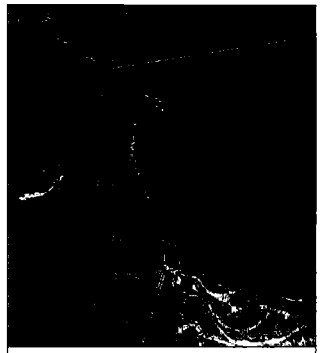
DATE 12/09/2017

FILE PATH G:\10 Construction\Survey\Jobs\FH Maintenance (200986)\Clevedon Quarry\A1 FH Design\Current

DRAWING NUMBER McNicol Rd Design Site Plan 170912(A)

REVISION A





200mm OVERLAY AND UNDERCUT
TOTAL AREA: 3398.8m²

200mm OVERLAY AND AC
TOTAL AREA: 751.6m²

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Proposed Site Plan

FH

Sheet 3 of 3

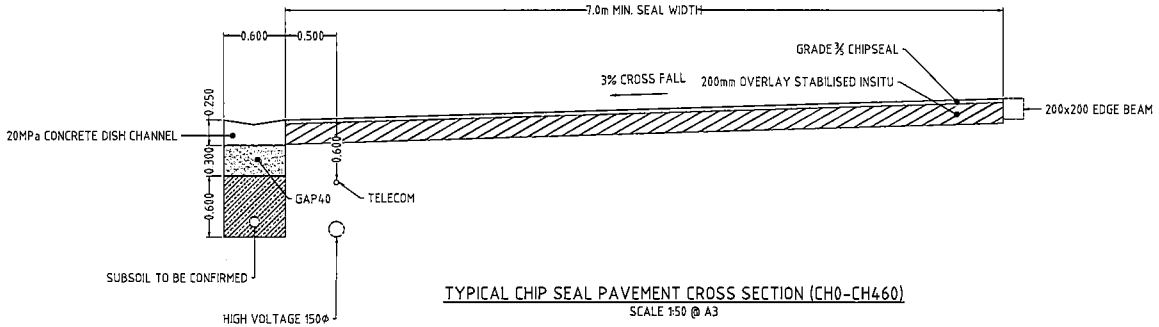
SCALE (A1) - 1:200
SCALE (A3) - 1:400

DATE 12/09/2017

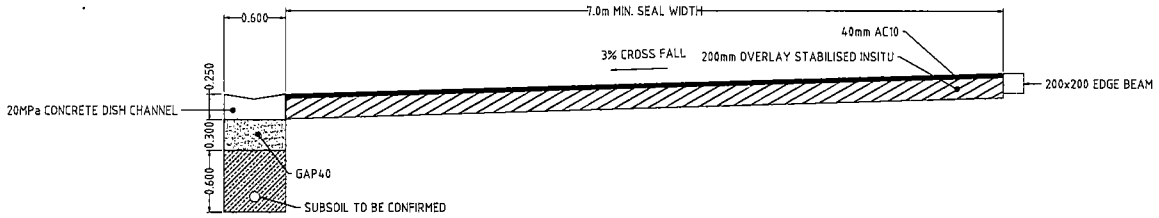
FILE PATH G:\10 Construction\Surveys\Jobs\FH Maintenance (200885)\Clarendon Quarry\1] FH Design\Current

DRAWING NUMBER McNicol Rd Design Site Plan 170912(A)

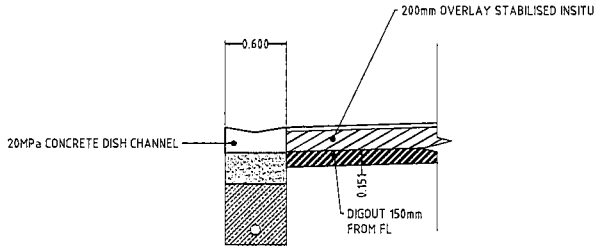
REVISION A



TYPICAL CHIP SEAL PAVEMENT CROSS SECTION (CH0-CH460)
SCALE 1:50 @ A3



TYPICAL ASPHALT PAVEMENT CROSS SECTION (CH460-CH510)
SCALE 1:50 @ A3



TYPICAL DIGOUT CROSS SECTION
SCALE 1:50 @ A3

NOTES:

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	-	EC	12/09/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

Stated Height -

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Pavement
Typical Cross Sections

FH

Sheet 1 of 1

SCALE (A1) - 1:25
SCALE (A3) - 1:50

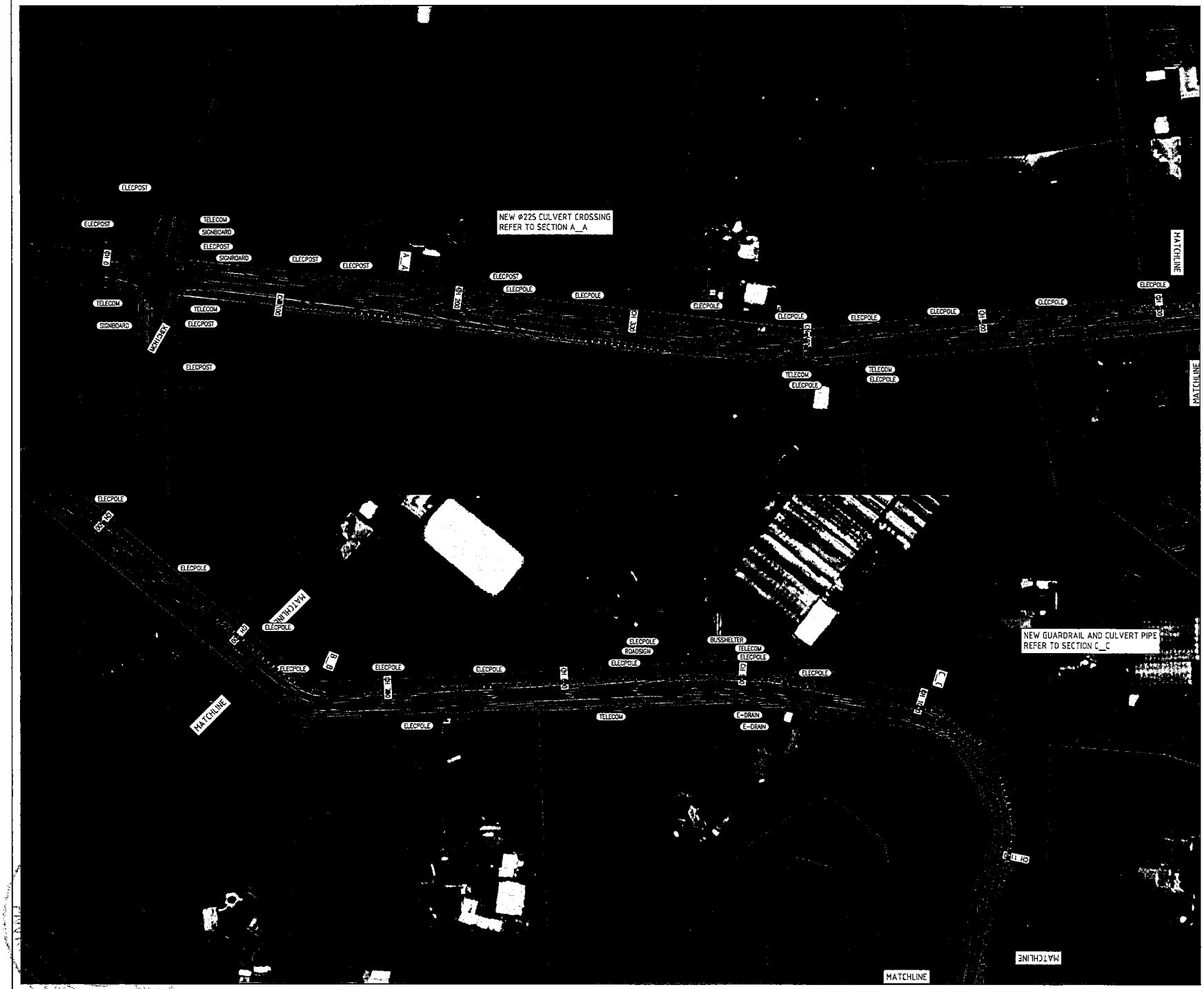
DATE 12/09/2017

FILE PATH G:\10 Construction\Survey\Jobs\FH Maintenance (2003z5)\Clevedon Quarry\(1) FH Design\Current

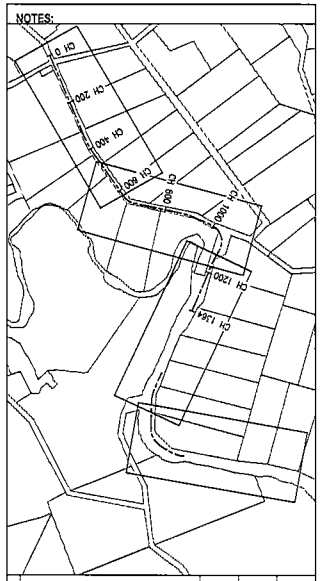
DRAWING NUMBER McNicol Rd Pavement Typical Cross Sections 170912(A)

REVISION A

ATTACHMENT 2 - MCNICOL ROAD SOUTH RECREATIONAL TRAIL PLANS



NOTES:



REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	20/11/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Existing Road Topo

FH

Sheet 1 of 3

SCALE (A1) - 1:1000 SCALE (A3) - 1:2000	DATE 20/11/2017

FILE PATH: G:\10 Construction\Survey\Jobs\FH Maintenance (200886)\Elevation Query\7) Existing Topo

DRAWING NUMBER	REVISION
McNicol Rd Topo 171121 (2018)	A

NOTES:

A	Original Drawing	HC	EC	20/11/17
	REVISION	SURVEY	DRAWN	DATE

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Existing Road Topo

FH

Sheet 2 of 3

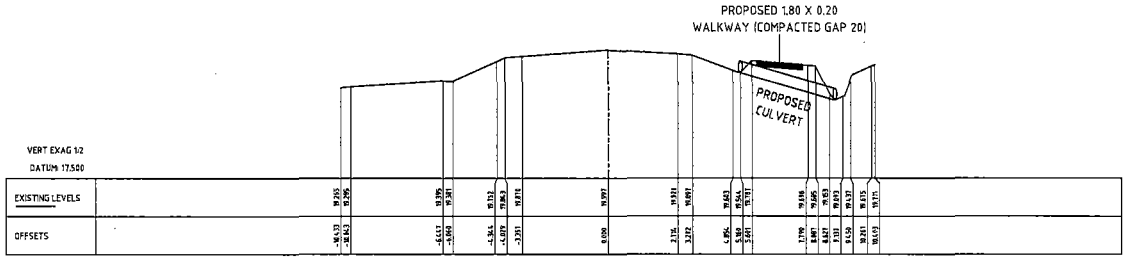
SCALE (A1) - 1:1000
SCALE (A3) - 1:2000

DATE 20/11/2017

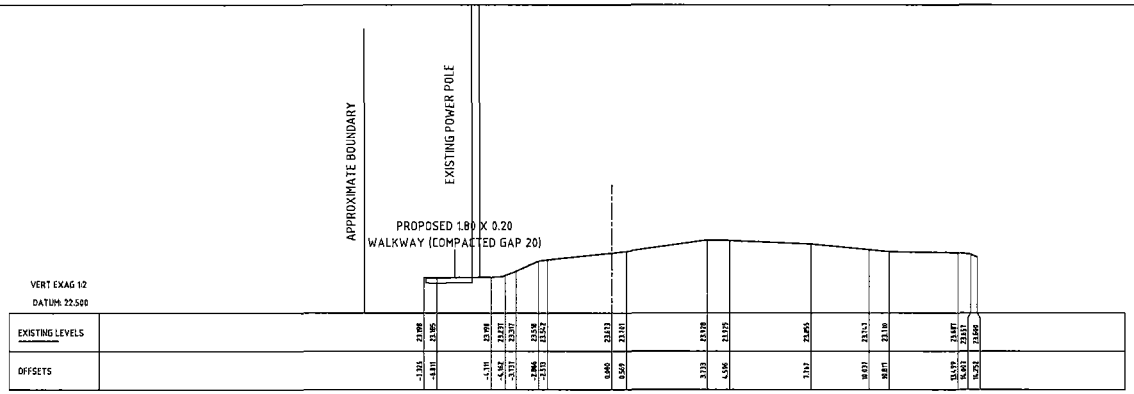
FILE PATH G:\10 Construction-Survey\Jobs\FH Maintenance (200886) Clevedon Quarry\7) Existing Topo

DRAWING NUMBER McNicol Rd Topo 171121 (2018)

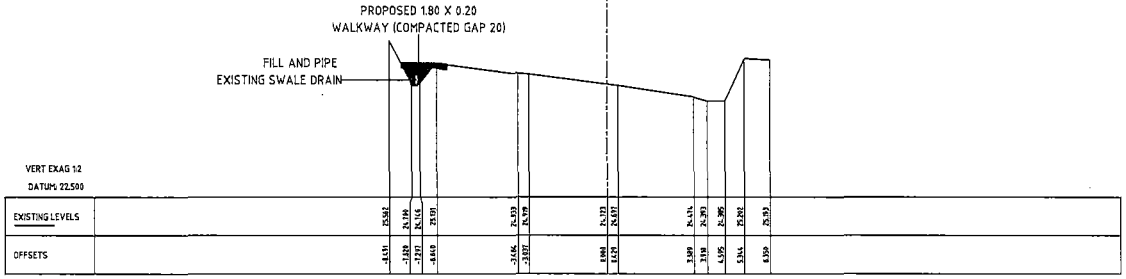
REVISION A



SECTION: A_A



SECTION: B_B



SECTION: C_C

NOTES:

REVISION	SURVEY	DRAWN	DATE
A Original Drawing	HC	EC	20/11/17

COODINATE DATUM
GEODETIC 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES

LEVEL DATUM
MEAN SEA LEVEL AUCKLAND 1946
ORIGIN OF LEVELS

SURVEY DEPARTMENT
FULTON HOGAN AUCKLAND
RELIABLE WAY
MOUNT WELLINGTON
AUCKLAND
PO BOX 11900
ELLERSLIE 1051

McNicol Road

Existing Road Topo

FH

Sheet 3 of 3

SCALE (A1) - 1:100
SCALE (A3) - 1:200

DATE 20/11/2017

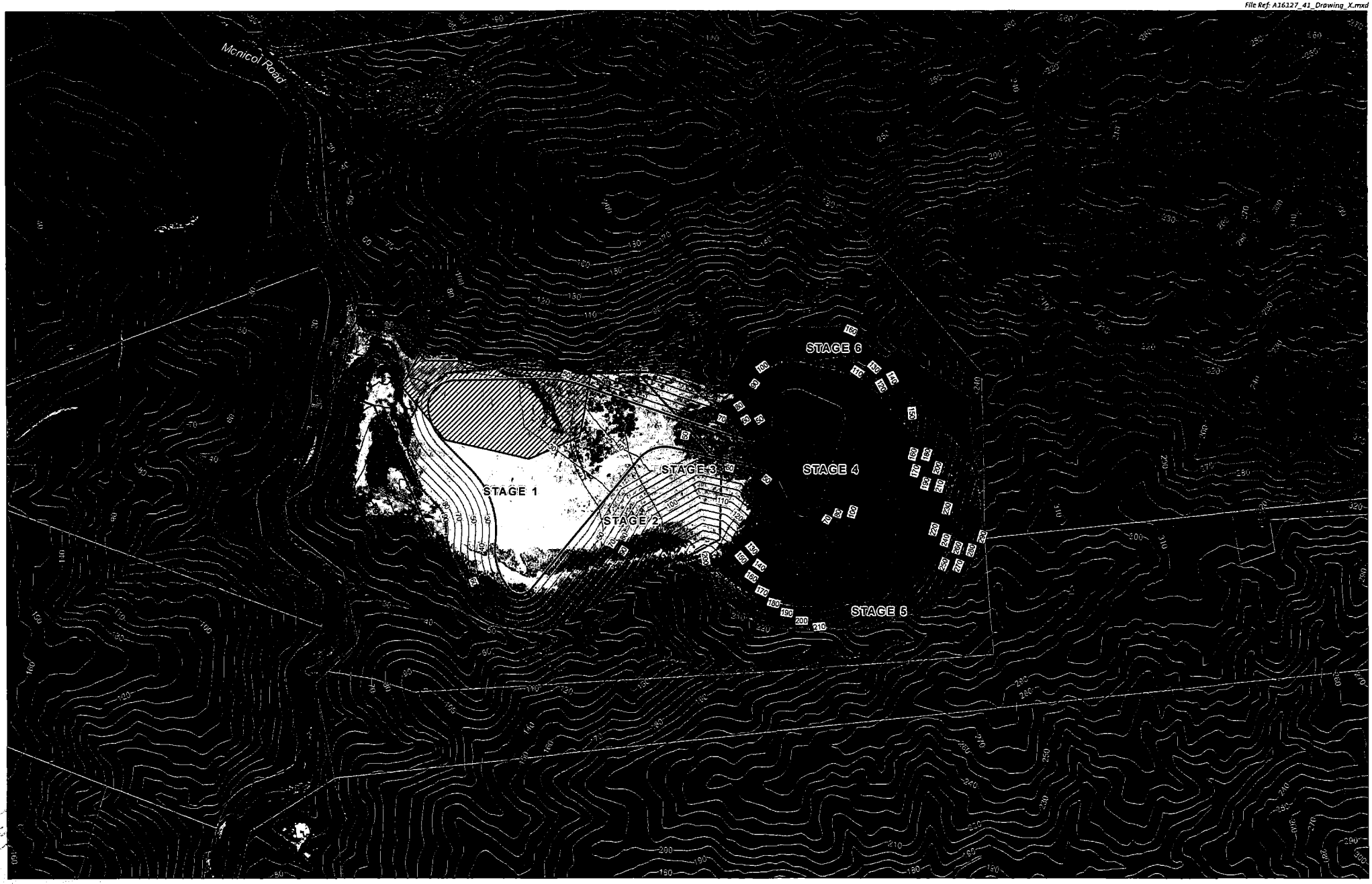
FILE PATH G:\10 Construction\Survey\Jobs\FH Maintenance (200888)\Clevedon Quarry\2) Existing Topo

DRAWING NUMBER McNicol Rd Topo 171121 (2018)

REVISION A

ATTACHMENT 3 – FIGURE X

File Ref: A16127_41_Drawing_X.mxd



Boffa Miskell
www.boffamiskell.co.nz

0 50 100 m
1:5,000 @ A3

Data Sources: Aerials (Fulton Hogan, Auckland Council), LINZ (Cadastre), Riley Consultants, AC Contours 2008

Projection: NZGD 2000 New Zealand Transverse Mercator

Legend

- Pines to be Retained
- North Stream 10m Setback where practicable
- Consented Quarry Extent
- Quarry Extent
- Processing and Stockpile Area
- Quarry Floor

Proposed Quarry Stages

- STAGE 1
- STAGE 2
- STAGE 3
- STAGE 4
- STAGE 5
- STAGE 6
- Land Parcels
- AC Contours 10m Interval

A16127 CLEVEDON QUARRY

Drawing X

Date: 23 May 2018 | Revision: 0
Plan prepared by Boffa Miskell Limited
Project Manager: John.Goodwin@boffamiskell.co.nz | *Drawn:* SGa | *Checked:* JGo