

Decision on an application to vary conditions of a resource consent under section 127 of the Resource Management Act 1991



Discretionary activity under section 127(3) for a subdivision consent

Application number: LUC60111076-A and LUC60271724-A
Applicant: Pokorua Holdings Ltd
Site address: 45 and 45A Constable Road, Waiuku
Legal description: Section 1 Survey Office Plan 65394 (NA85A/37)
Proposal:

To vary the condition of consent to position retaining walls 1 and 2 hard to the eastern boundary of the site.

The discretionary activity under s127 of the Resource Management Act 1991 (RMA) is for changes condition(s) of consent LUC60111076 and LUC60271724 involving the following amendments (with ~~strike through~~ for deletion, underline for insertions):

Changes to condition 1

- The earthworks activity shall be carried out in accordance with the documents and drawings and all supporting additional information submitted with the application, detailed below, and all referenced by the council as resource consent number BUN60077077 LUC60271724 LUC60111076 and further amended by the subsequent information with the change of condition application and plans referenced LUC60111076-A and LUC60271724-A.

- Application Form and Assessment of Environmental Effects prepared by Tripp Andrews, dated 27 March 2019
- Application Form and Assessment of Environmental Effects prepared by Tripp Andrews, dated 23/03/17

Report title and reference	Author	Rev	Dated
Resource Consent Application, 45 Constable Road, Waiuku	Tripp Andrews		23/03/17
<u>S127 Application for BUN60077077, LUC60271724, LUC60111076</u>	<u>Tripp Andrews</u>		<u>27 Mar 2017</u>

Drawing title and reference	Author	Rev	Dated
Overall Earthworks Plan, C200	Crang Civil	<u>6-5</u>	<u>06/03/19</u> <u>12/02/19</u>
Earthworks Cross Section A-A and B-B,	Crang Civil	3	14/01/19

C201				
Earthworks Cross Section C-C and D-D, C202	Crang Civil	3		14/01/19
Earthworks Plan Sheet 1, C203	Crang Civil	6 <u>5</u>	06/03/19	<u>12/02/19</u>
Overall Earthworks Plan, Sheet 2, C204	Crang Civil	4		12/02/19
Earthworks Plan, Sheet 1 of 3, C205	Crang Civil	5		12/02/19
Earthworks Plan, Sheet 2 of 3, C206	Crang Civil	5		12/02/19
Earthworks Plan, Sheet 3 of 3, C207	Crang Civil	6 <u>5</u>	06/03/19	<u>12/02/19</u>
Cut-Fill Depth Plan (Isopachs), C210	Crang Civil	4		12/02/19
Cut-Fill Depth Plan (Isopachs) Sheet 1, C211	Crang Civil	4		12/02/19
Cut-Fill Depth Plan (Isopachs) Sheet 2, C212	Crang Civil	4		12/02/19
Erosion and Sediment Control Plan, C220	Crang Civil	1		14/02/19
Erosion and Sediment Control Details 1, C221	Crang Civil	1		14/02/19
Erosion and Sediment Control Details 2, C222	Crang Civil	1		14/02/19
Retaining Wall Plan, C230	Crang Civil	5 <u>4</u>	06/03/19	<u>04/02/19</u>
Retaining Wall Elevations, C240	Crang Civil	5 <u>4</u>	06/03/19	<u>04/02/19</u>
Retaining Wall Details, C250	Crang Civil	0		1/11/18

Decision

I have read the application, supporting documents, and the report and recommendations on the application for resource consent. I am satisfied that I have sufficient information to consider the matters required by the RMA and make a decision under delegated authority on the application.

Acting under delegated authority, under sections 104, 104B, 127, 106 and Part 2 of the RMA, the application for variation to conditions of resource consent is **GRANTED**.

Reasons

The reasons for this decision are:

1. The proposal is appropriately considered under s127 as the changes will not result in a fundamentally different activity or materially different effects.
2. In accordance with an assessment under s104(1)(a)-(ab) and s127(3) of the RMA the actual and potential effects from the variation will be acceptable as:
 - a. The proposal will not compromise the amenity or liveability of the subject site, adjoining properties or the surrounding environment. The outcome of the proposal will remain

consistent with the conclusion reached in the original decision and the integrity of the original decision is considered to be maintained.

- b. The actual and potential effects from the 1m side yard infringement along the eastern boundary of the site will be less than minor as the retaining walls 1 and 2 will be designed and constructed in such a way that it will be sympathetic to the surrounding environment. Written approval from the owner/occupier of the adjacent property to the east of the site that may be adversely affected by the 1m side yard infringement has been provided.
 - c. The proposal will not undermine the amenity and character of the adjacent sites. Any adverse character or amenity effects from this proposal on adjacent persons and sites will be less than minor.
 - d. With reference to s104(1)(ab), there are no specific offsetting or environmental compensation measures proposed or agreed to by the applicant to ensure positive effects on the environment.
3. In accordance with an assessment under s104(1)(b) and s127(3) of the RMA the variation is consistent with the relevant statutory documents. Granting consent to the requested change will not be contrary to the relevant objectives and policies contained within E11.2, E11.3, E12.2, E12.3, H4.2 and H4.3 of the Auckland Unitary Plan (Operative in Part) as the proposed changes are within the scope of the original approval and a separate assessment is not required.
 4. In accordance with an assessment under s104(1)(c) of the RMA no other matters are considered relevant.
 5. This variation achieves the sustainable management purpose of the RMA in Part 2 because the proposal will not result in any adverse effects on the street scape amenity, the character of the area or the amenity of adjoining properties.
 6. Overall the proposal is considered acceptable and, the actual and potential effects will be less than minor as the rural residential character of the surrounding area will be maintained.

Conditions

Under section 108, 108AA and 220 of the RMA, this variation is subject to the following amendments to existing conditions:

The following changes shall be read in conjunction with the original resource consent referenced BUN60077077, LUC60111076 and LUC60371724 granted on 19 March 2019.

Note: Deletions are shown as ~~strikethrough~~ and amendments as **bold**.

Condition 1 has been amended to read

1. The earthworks activity shall be carried out in accordance with the documents and drawings and all supporting additional information submitted with the application, detailed below, and all referenced by the council as resource consent number BUN60077077 LUC60271724 LUC60111076 **and further amended by the subsequent information with the change of condition application and plans referenced LUC60111076-A and LUC60271724-A.**

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Cut-Fill Depth Plan (Isopachs) Sheet 2, C212	Crang Civil	4	12/02/19
Erosion and Sediment Control Plan, C220	Crang Civil	1	14/02/19
Erosion and Sediment Control Details 1, C221	Crang Civil	1	14/02/19
Erosion and Sediment Control Details 2, C222	Crang Civil	1	14/02/19
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Retaining Wall Details, C250	Crang Civil	0	1/11/18

Advice notes

1. *A copy of the consolidated set of conditions of consent as amended is included as attachment 1 to this section 127 decision.*

Delegated decision maker:

Name: Jane Masters

Title: Team Leader, Resource Consents

Signed: 

Date: 17.4.19.

Attachment 1: Consolidated conditions of consent as amended

General conditions

These conditions apply to all resource consents.

1. The earthworks activity shall be carried out in accordance with the documents and drawings and all supporting additional information submitted with the application, detailed below, and all referenced by the council as resource consent number BUN60077077 LUC60271724 LUC60111076 and further amended by the subsequent information with the change of condition application and plans referenced LUC60111076-A and LUC60271724-A.
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2. The consent holder shall pay the council an initial consent compliance monitoring charge of \$990 inclusive of GST), plus any further monitoring charge or charges to recover the actual and reasonable costs incurred to ensure compliance with the conditions attached to this consent/s.

Advice note:

The initial monitoring deposit 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. In order to recover actual and reasonable costs, monitoring of conditions, in excess of those covered by the deposit, shall be charged at the relevant hourly rate applicable at the time. The consent holder will be advised of the further monitoring charge. Only after all conditions of the resource consent have been met, will the council issue a letter confirming compliance on request of the consent holder.

Predevelopment Conditions

3. Prior to the commencement of earthworks activity on the subject site, the consent holder shall hold a pre-start meeting that:
- (i) Is located on the subject site.
 - (ii) Is scheduled not less than 5 days before the anticipated commencement of activity.
 - (iii) Includes Council's Compliance Monitoring Officer and Development Engineer
 - (iv) Includes representation from the contractors who will undertake the works.

The following matters shall be discussed at the meeting:

- The erosion and sediment control measures;
- The earthworks methodology;
- Shall ensure all relevant parties are aware of and familiar with the necessary conditions of this consent; and
- Status of subdivision matters.

The following information shall be made available at the pre-start meeting:

- (i) Resource consent conditions;
- (ii) Timeframes for key stages of the works authorised under this consent;
- (iii) Approved Engineering Plans
- (iv) Traffic Management Plan
- (v) Construction Management Plan

- (vi) Contact details of the site contractor and site engineer;
- (vii) Erosion and Sediment Control Plan; and
- (viii) Chemical Treatment Management Plan (CTMP).

A pre-start meeting shall be held prior to the commencement of the earthworks activity in each period between October 1 and April 30 that this consent is exercised.

Advice Note:

To arrange the pre-start meeting, required by condition above, please contact the Team Leader Compliance Monitoring South on (monitoring@aucklandcouncil.govt.nz).

The conditions of consent will be discussed at this meeting. All additional information required by the Council should be provided 2 days prior to the meeting.

Development in Progress Conditions

Archaeological Matter

4. Although the proposed location of the earthworks do not contain any archaeological sites, it is possible that unrecorded sites may exist. Under the heritage New Zealand Pouhere Taonga Act 2014, it is unlawful for any person to destroy, damage or modify an archaeological site unless the relevant consents have been obtained from the New Zealand Heritage. In the event of archaeological features being uncovered (e.g. shell midden, hangi or oven stones, pit depressions, defensive ditches, artefact material or human bones) work is to cease in the vicinity of the discovery and Heritage NZ and appropriate Iwi authorities, in particular Ngai Tai Ki Tamaki Tribal Trust shall be contacted so that appropriate action can be taken. This includes such persons being given reasonable time to record and recover archaeological features discovered before work may recommence.

Specific conditions –LUC60271724 (Land Disturbance - Regional)

5. Upon abandonment or completion of earthworks on the subject site all areas of bare earth shall be permanently stabilised against erosion in accordance with Auckland Council's Guideline Document 2016/005 Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05). Written certification shall be provided to the Team Leader – Compliance Monitoring South, Auckland Council by a suitably qualified and experienced person to confirm that all areas of bare earth have been permanently stabilised against erosion in accordance with Auckland Council's Guideline Document 2016/005 Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05).

Advice Note:

In accordance with Condition 6 should the earthworks be completed or abandoned, bare areas of earth shall be permanently stabilised against erosion. Measures may include:

- *the use of mulching;*
- *top-soiling, grassing 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.

6. For the avoidance of doubt, all Decanting Earth Bunds utilised during earthworks shall be designed to ensure that they:
 - a. Have a three percent storage capacity, being at least 3m³ of impoundment volume for every 100m² of contributing catchment;
 - b. Be constructed to a 3:1 to 5:1 length-to-width ration and have a rectangular shape; and
 - c. Have a T-bar floating decant which decants at a rate of 3 litres per second, per hectare contributing catchment.

Duration

7. Regional Earthworks Consent BUN60077077 LUC60271724 shall expire five years from the date of issue unless it has been surrendered or been cancelled at an earlier date pursuant to the RMA.

Predevelopment Conditions

Chemical Treatment Management Plan

8. Prior to the commencement of bulk earthworks at the site, a Chemical Treatment Management Plan shall be submitted for the written approval of the Team Leader Compliance Monitoring South, Auckland Council. The plan shall include as a minimum:
 - a) Specific design details of the chemical treatment system based on a rainfall activated dosing methodology for the site's Sediment Retention Pond (SRP);
 - b) Monitoring, maintenance (including post storm) and contingency programme (including a record sheet);
 - c) Details of optimum dosage (including assumptions);
 - d) Results of initial chemical treatment trial;
 - e) A spill contingency plan; and
 - f) Details of the person or bodies that will hold responsibility for long term operation and maintenance of the chemical treatment system and the organisational structure which will support this system.

Advice Note:

In the event that minor amendments to the Chemical Treatment Management Plan are required, any such amendments should be limited to the scope of this consent. Any amendments which affect the performance of the Chemical Treatment Management Plan may require an application to be made in accordance with section 127 of the RMA. Any minor amendments should be provided to the Team Leader Southern Monitoring, Compliance, Auckland Council prior to implementation to confirm that they are within the scope of this consent.

Erosion and Sediment Controls

9. Prior to bulk earthworks commencing, a certificate signed by a suitably qualified environmental practitioner (SQEP) shall be submitted to the Team Leader Compliance Monitoring South,

Auckland Council, to certify that the erosion and sediment controls have been constructed in accordance with the erosion and sediment control plan.

Certified controls shall include the Sediment Retention Pond, Runoff Diversion Bunds, Clean Water Diversions and Stabilised Entraceways. The certification for these subsequent measures shall be supplied immediately upon completion of construction of those measures. Information supplied if applicable, shall include:

- a) Contributing catchment area;
- b) Shape and volume of the structure (dimensions of structure);
- c) Position of inlets/outlets; and
- d) Stabilisation of the structure.

Development in Progress Conditions

10. The sediment retention pond and decanting earth bund shall be chemically treated in accordance with the approved Chemical Treatment Management Plan.
11. The operational effectiveness and efficiency of all erosion and sediment control measures specifically required as a condition of resource consent or by the Erosion and Sediment Control Plan shall be maintained throughout the duration of earthworks activity, or until the site is permanently stabilized against erosion.
12. There shall be no deposition of earth, mud, dirt or other debris on any 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.

Advice Note:

In order to prevent sediment laden water entering waterways from the road, the following methods may be adopted to prevent or address discharges should they occur:

- *provision of a stabilised entry and exit(s) point for vehicles*
- *provision of wheel wash facilities*
- *ceasing of vehicle movement until materials are removed*
- *cleaning of road surfaces using street-sweepers*
- *silt and sediment traps*
- *catchpit protection*

Under no circumstances is the washing of deposited materials into drains advised or otherwise condoned.

It is recommended that you discuss any potential measures with the Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact the Team Leader – Compliance Monitoring South, Auckland Council for more details. Alternatively, please refer to Auckland Council's Guidance Document 05 'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region' (GD05).

13. The site shall be progressively stabilised against erosion at all stages of the earthworks activity, and shall be sequenced to minimise the discharge of contaminants to surface water.

Advice Note:

In accordance with Condition 13 earthworks shall be progressively stabilised against erosion during all stages of the earthwork activity. Interim stabilisation measures may include:

- *the use of waterproof covers, geotextiles, or mulching;*
- *top-soiling and grassing 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.*

It is recommended that you discuss any potential measures with the Council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact the Team Leader – Compliance Monitoring South, Auckland Council for more details. Alternatively, please refer to Auckland Council's Guidance Document 05 'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region' (GD05).

Seasonal Restrictions and Monitoring

14. No earthworks activity on the subject site shall be undertaken between 30 April and 1 October in any year, without the written approval of the Team Leader Compliance Monitoring South, Auckland Council at least two weeks prior to 30 April of any year. Revegetation/stabilisation is to be completed by 30 April in accordance with measures detailed in Auckland Council's Guideline Document 2016/005 *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region* (GD05) and any amendment to this document.

Specific conditions – LUC60111076 (Land Disturbance - District)

15. Under section 125 of the RMA, this consent lapses five years after the date it is granted unless:
- a. The consent is given effect to; or
 - b. The council extends the period after which the consent lapses.

Predevelopment Conditions

Construction Management Plan

16. Prior to commencement of any works on the site, the consent holder shall submit to the Team Leader Compliance Monitoring South a Construction Management Plan (CMP) for the approval. The purpose of the CMP is to set out the management procedures and construction methods to be undertaken in order to avoid, remedy, or mitigate potential adverse effects arising from the construction period.

The CMP shall be implemented and maintained throughout the construction period. The CMP shall contain specific details with regard to avoiding, remedying or mitigating adverse effects on the environment of Earthworks and Engineering Works and the management of all works associated with each stage of development as follows:

- a) Details of the Site Manager, including 24 hour contact details (telephone, email and postal address). The location of a large notice board on the site visible from a public

place that clearly identifies the name, telephone number, email and address for service of the Site Manager;

- b) A general outline of the construction programme for each stage of development.
- c) Measures to maintain the site in a tidy condition in terms of the storage and disposal of rubbish, unloading and storage of building materials and similar construction activities;
- d) Measures to stockpile unearthed tree stumps/logs, preferably away from public roads and reserves, and their disposal;
- e) Plans showing areas where stockpiles, equipment (including contractor parking) will occur so that there is no obstruction of public space (e.g. roads).
- f) Plans showing the location of any site offices, staff facilities and staff car parking required during the construction period.
- g) Ingress and egress to and from the site for vehicles and construction machinery during the Works period;
- h) Location of wheel-wash facilities;
- i) Numbers and timing of truck movements throughout the day and their proposed route/s;
- j) Proposed hours of work on the site (noting the working hours authorised by this consent);
- k) An overview of measures that will be adopted to prevent unauthorized public access during the construction period.
- l) Procedures for ensuring that the owners and/ or occupants in the immediate vicinity of the construction area are given prior notice of the commencement of construction activities and are informed about the expected duration of works and potential effects of the works (e.g. noise associated with construction activities).
- m) Temporary protection measures that will be installed to ensure that there shall be no damage to public roads, footpaths, berms, kerbs, drains, reserves or other public assets as a result of the earthworks and construction activities.
- n) All necessary steps shall be taken to avoid unnecessary damage to other utility services, roading network or private property and any damage shall be made good at the consent holder's expense.
- o) Any other details of the intended Works programme.

No works on the subject site shall commence until written confirmation from the Team Leader, Compliance Monitoring South is provided that the CMP is satisfactory. The approved CMP shall be implemented for the duration of the entire works period.

Erosion and Sediment Control Plans

17. Prior to the commencement of earthworks activity on the subject site, a finalised Erosion and Sediment Control Plan shall be prepared in accordance with Auckland Council's Guideline Document 2016/005 *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region* (GD05) and shall include, but is not limited to:

- a. Specific erosion and sediment control works for the earthworks in accordance with GD05/TP90, including earthworks required to cross beneath the bed of any stream or Significant Ecological Area;
- b. Supporting calculations and design drawings;
- c. Details of construction methods;
- d. Monitoring and maintenance requirements;
- e. Catchment boundaries and contour information;
- f. contingency measures in the event a 'frack-out' occurs; and,
- g. Details relating to the management of exposed areas (e.g. grassing, mulching).

This finalised Erosion and Sediment Control Plan shall be submitted to the Team Leader, Compliance Monitoring South at monitoring@aucklandcouncil.govt.nz . No earthworks activity on the subject site shall commence until written confirmation from the Team Leader Compliance Monitoring South is provided that the finalised Erosion and Sediment Control Plan is satisfactory.

Traffic Management Plan

18. Prior to the commencement of earthworks and construction activities, a Traffic Management Plan (TMP) shall be submitted to, and approved by the Team Leader Compliance Monitoring South. The TMP shall be prepared in accordance with the Auckland Transport Code of Practice 2013 (ATCOP) Standards and shall address the control of vehicle movements to and from the site. No earthworks and construction activities shall commence until confirmation is provided from the Council that the CTMP satisfactorily meets the requirement of ATCOP Standards and any required measures referred to in that plan have been put in place.

Advice Note:

The TMP should contain sufficient detail to address the following matters:

- *Measures to ensure the safe and efficient movement of the travelling public (pedestrians, vehicle occupants and local residents)*
- *Restrict hours of vehicle movements to protect amenity of surrounding environment during earthworks and construction phase.*

Engineering Plan Requirements and approvals

19. Prior to the commencement of works on the site the consent holder shall submit two hard copies and one PDF/CD version of complete engineering plans (including engineering calculations and specifications) to the Team Leader Regulatory Engineering South for approval. Details of the registered engineer who will act as the consent holder's representative for the duration of the development shall also be provided with the application for Engineering Plan Approval.

The engineering plans shall include but not be limited to the information regarding the following engineering works:

- Design and details of any retaining walls in the road reserve or parks reserves or adjacent to the reserve(s), and any other structures in the reserves.

- Design and details of any retaining walls proposed by the development to be in future private property
- Design and location of any counterfort and/or subsoil land drainage required and the proposed ownership and maintenance of the counterfort and/or subsoil land drainage.

Development in Progress Conditions

Sediment Control

20. All earthworks shall be managed to minimise any discharge of debris, soil, silt, sediment or sediment-laden water beyond the subject site to either land, stormwater drainage systems, watercourses or receiving waters. In the event that a discharge occurs, works shall cease immediately and the discharge shall be mitigated and/or rectified to the satisfaction of the Team Leader Compliance Monitoring South.

Advice Note:

All earthworks shall be undertaken to ensure that all potential sediment discharges are appropriately managed. Such means and measures may include:

- *Catchpit protection*
- *run-off diversions*
- *sediment retention ponds*
- *silt and sediment traps*
- *decanting earth bunds*
- *silt fences*

During excavation, the ingress and accumulation of surface run-off water and/or perched groundwater can be minimised by:

- *maintaining a waterproof cover over any excavation trenches and pits outside of working hours,*
- *diversion of surface water flow around the works area, and*
- *regular disposal of the water into an appropriate sediment control device, if ponding occurs within the excavation.*

Please note that the diversion of stormwater and/or groundwater may require a consent in accordance with Chapter E of the Auckland Unitary Plan (Operative in Part).

It is recommended that you discuss any potential measures with the council's monitoring officer who may be able to provide further guidance on the most appropriate approach to take. Please contact the Council's Team Leader Compliance Monitoring South on monitoring@aucklandcouncil.govt.nz for more details. Alternatively, please refer to "Auckland Council's Guideline Document 2016/005 Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05).

Noise

21. All works activity on the subject site shall comply at all times with Standard E25.6.27 'Construction noise levels in all zones except the Business – City Centre Zone and the Business – Metropolitan Centre Zone' of the Auckland Unitary Plan (Operative in Part).

Vibration

22. Where works on the site are creating vibrations, that in the opinion of the Team Leader Compliance Monitoring South, constitute an unreasonable disturbance beyond the boundaries of the subject site, the consent holder shall cease works until a suitably qualified expert has been engaged to undertake monitoring of the works and provide confirmation that peak particle velocities measured on any foundation or uppermost full storey of any building not located on the subject site, do not exceed the limits set out in Table 1 of German Standard DIN 4150 Part 3:1986 "Structural Vibration in Buildings – Effects on Structures."

Dust

23. There shall be no airborne or deposited dust beyond the subject site as a result of the earthworks, construction and demolition activity, which in the opinion of the Team Leader Compliance Monitoring South, is noxious, offensive or objectionable.

Advice Note:

In accordance with above condition in order to manage dust on the site consideration should be given to adopting the following management techniques:

- *stopping of works during high winds*
- *watering of haul roads, stockpiles and manoeuvring areas during dry periods*
- *installation and maintenance of wind fences and vegetated strips*
- *positioning of haul roads, manoeuvring areas and stockpiles or the staging of works (in relation to sensitive receptors such as dwellings)*

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

- *The frequency of dust nuisance events*
- *The intensity of events, as indicated by dust quantity and the degree of nuisance*
- *The duration of each dust nuisance event*
- *The offensiveness of the discharge, having regard to the nature of the dust*
- *The location of the dust nuisance, having regard to the sensitivity of the receiving environment.*

It is recommended that potential measures as discussed with the council's monitoring officer who will guide you on the most appropriate approach to take. Please contact the Team Leader Compliance Monitoring South on monitoring@aucklandcouncil.govt.nz for more details. Alternatively, please refer to the Ministry for the Environment publication "Good Practice Guide for Assessing and Managing the Environmental Effects of Dust Emissions".

Vehicle Movements

24. Vehicle movements to and from the site associated with construction and earthworks activities shall be restricted to the following hours:

- Monday to Saturday: 7:30a.m. to 7:00p.m.

There are to be no vehicle movements associated with the earthworks and construction on Sundays or public holidays.

No Obstruction

25. There shall be no obstruction of access to public footpaths, berms, private properties, public services/utilities or public reserves resulting from construction activity at all times. All materials and equipment shall be stored within the subject site's boundaries unless otherwise authorised by the respect land / asset owner.

Inspections

26. All sediment and erosion controls at the site of the works shall be inspected by the consent holder on a regular basis and within 24 hours of each rainstorm event that is likely to impair the function or performance of the control measure. A record shall be maintained of the date, time and any maintenance undertaken in association with this condition which shall be forward to the Team Leader, Compliance Monitoring South on request.

Clean Fill

27. All imported fill used shall:
 - a. comply with the definition for 'cleanfill' in the Ministry for the Environment publication 'A Guide to the Management of Cleanfills' (2002)
 - b. be solid material of a stable, inert nature and
 - c. not contain hazardous substances or contaminants above recorded natural background levels of the receiving site.

Advice Note:

In addition to the characteristics for imported fill outlined in condition 27 please refer to the relevant New Zealand Standard [e.g. NZS 4431:1989 'Code of Practice for Earth Fill for Residential Development'] to ensure that all fill used is of an acceptable engineering standard.

Background contamination levels for the site receiving clean fill referred to by condition 27 can be found in the Auckland Council, Technical Publication No. 153, Background concentrations of inorganic elements in soils from the Auckland Region (2001)

Certification – Clean Fill

28. Within 10 working days following the completion of earthworks, the suitably qualified engineering professional responsible for supervising the works shall provide to the Team Leader Compliance Monitoring South, written evidence that all fill used on the subject site has the characteristics set out in condition 27 above. Written evidence shall be in the form of a receipt, compaction certificate(s) or similar.

Geotechnical

29. The land modification works proposed shall be undertaken in a manner which ensures that the land within the site and the land on adjoining properties remain stable at all times. In this regard the consent holder shall employ a suitably qualified civil / geotechnical engineer to investigate,

direct and supervise all construction works, particularly in close proximity to neighbouring properties to ensure that an appropriate design and construction methodology is carried out to maintain the short and long term stability of the site and surrounds.

30. Any required retaining walls and/or temporary stabilising works shall be constructed in a timely manner under engineering design and supervision. The consent holder shall ensure that all necessary approvals for retaining walls are obtained and that sufficient resources are available to construct the required retaining walls as directed by the geotechnical engineer, prior to commencement of any significant excavation works.

Advise Note

Where applicable retaining walls shall be built under a building consent. This will need to be identified on the engineering plans when lodged for approval

31. The construction of all earthworks including the placement and compaction of fill materials shall be supervised by a suitably qualified engineering professional. In supervising the works, the suitably qualified engineering professional shall ensure that they are constructed and otherwise completed in accordance with the approved plans forming part of the application.
32. Certification from a suitably qualified engineering professional responsible for supervising the works shall be provided to the Team Leader Regulatory Engineering South confirming that the works have been completed in accordance with approved plans within ten (10) working days following completion. Written certification shall be in the form of a Geotechnical Completion Report, producer statement or any other form acceptable to Council.
33. All earthworks and excavation shall be monitored and supervised on-site by a Supervising Engineer. When the earthworks are completed an Engineer's Certificate and Geotechnical Completion Report shall be provided to the satisfaction of the Team Leader Regulatory Engineering South, certifying:
 - a. That the works were undertaken in accordance with NZS4431:1989, the Code of Practice for Earth Fill for Residential Subdivisions; AND
 - a. The suitability of the filled ground and the original unfilled ground for the erection of buildings not requiring specific design under NZS3604:1999; AND
 - b. Recommendations for each lot, confirming adequate factors of safety, and as built records of earthworks and drainage; AND
 - c. The extent to which settlement of the site is expected and its impact on future house construction; AND
 - d. Settlement on the site, and any specific requirements; AND
 - e. Definition of settlement that must have occurred prior to commencement of house construction; AND
 - f. Include a statement of professional opinion as to the suitability of the site for residential development.
- b. Any related matters that are identified in other conditions of this consent.

34. All construction works (including bulk earthworks, subsoil drainage, shear keys, retaining walls and any other stability measures including monitoring) shall be subject to detailed design by a suitably qualified and experienced Chartered Professional Engineer. The Consent Holder shall submit the detailed design (engineering plans) to the Council for approval prior to the commencement of any works onsite. The Council may appoint an independent geotechnical engineer to peer review the detailed design for the purposes of determining if it can give its approval. This shall be done at the consent holder's expense.

Overland Flow Paths

35. The overland flow paths within the development must be designed to the satisfaction of the Team Leader Regulatory Engineering South and be designed in accordance with the following requirements:
- a. The overland flow paths and ponding areas must be able to cope with flows in terms of the Auckland Council's Code of Practice for Land Development and Subdivision.
 - b. The contours surrounding the flow paths must be designed and constructed to channel the excess flow into the overland flow paths; and
 - c. The overland flow paths, where possible, must be located on roads and access ways

Advise Note

The nature of the overland flow path will need to be further detailed with the engineering plans for the subdivision.

Post Development Conditions

Geotechnical Report

36. A Geotechnical Completion Report by a suitably qualified and Registered Engineer shall be provided to Council on completion or abandonment of the earthworks. The report shall confirm the stability of the land for residential development including any special conditions/requirements to be met for any future development on the site. The Geotechnical Completion Report shall also include all associated 'as-built' plans for earthworks and subsoil drains and a Statement of Professional Opinion on Suitability of the Land for building construction.

Advice Note:

The findings of this Geotechnical Completion Report may necessitate the requirement for a consent notice on the residential lots in respect to future development of a dwelling.

37. A Consent Notice pursuant to Section 221 of the RMA shall be registered on the Certificates of Title for any residential lots which are recommended for specific engineering investigation or design as outlined in the Geotechnical Completion Report required by these conditions to ensure that the conditions set out in that report are compiled on a continuing basis.

The consent notices shall be prepared by the Council's solicitor, executed and registered on the Computer Freehold Register (Certificate of Title) for the land at the consent holder's expense, and is to require the owner of the land to comply with this condition on a continuing basis.

Advice notes

1. Any reference to number of days within this decision refers to working days as defined in s2 of the RMA.
2. For the purpose of compliance with the conditions of consent, "the council" refers to the council's monitoring inspector unless otherwise specified. Please contact monitoring@aucklandcouncil.govt.nz to identify your allocated officer.
3. For more information on the resource consent process with Auckland Council see the council's website: www.aucklandcouncil.govt.nz. General information on resource consents, including making an application to vary or cancel consent conditions can be found on the Ministry for the Environment's website: www.mfe.govt.nz.
4. If you as the applicant disagree with any of the above conditions, or disagree with the additional charges relating to the processing of the application, you have a right of objection pursuant to sections 357A or 357B of the Resource Management Act 1991. Any objection must be made in writing to the council within 15 working days of your receipt of this decision (for s357A) or receipt of the council invoice (for s357B).
5. The consent holder is responsible for obtaining all other necessary consents, permits, and licences, 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 and the Health and Safety at Work Act 2015), 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.
6. Approval in principle only is given for the proposed retaining walls. A Building Consent is required for any structures, retaining walls, private drainage, demolitions etc. unless exempted under the First Schedule of the Building Act 2004. (ie. retaining walls above 1.5 metres in height or walls which will support a surcharge such as floor or traffic loads.)
7. Any new retaining walls where their heights are equal or more than the distance from the boundary shall be designed to a minimum of 12kPa surcharge.
8. This consent does not constitute authority to build or undertake private drainage works or retaining walls and it may be necessary for you to apply for a Project Information Memorandum and Building Consent if you have not already done so.
9. A copy of this consent and the associated approved drawings should accompany your application for a Project Information Memorandum and Building Consent. If not supplied unnecessary delay may occur in the processing of your application.
10. A Corridor Access Request, (CAR), is required for all works undertaken within the 'road corridor'. See Auckland Transport's website <https://at.govt.nz/about-us/working-on-the-road/corridor-access-requests/#applycar> for more information.
11. The site is subject to an overland flow path as determined by approved engineering drawings, a "right to drain" water easement will be required to be granted over the land in favour of the Auckland Council at the time of subdivision and development of the property.

12. *All machinery associated with the earthworks activity shall be operated in a way which ensures that spillages of hazardous substances such as fuel, oil, grout, concrete products and any other contaminants are prevented.*



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17/04/2019

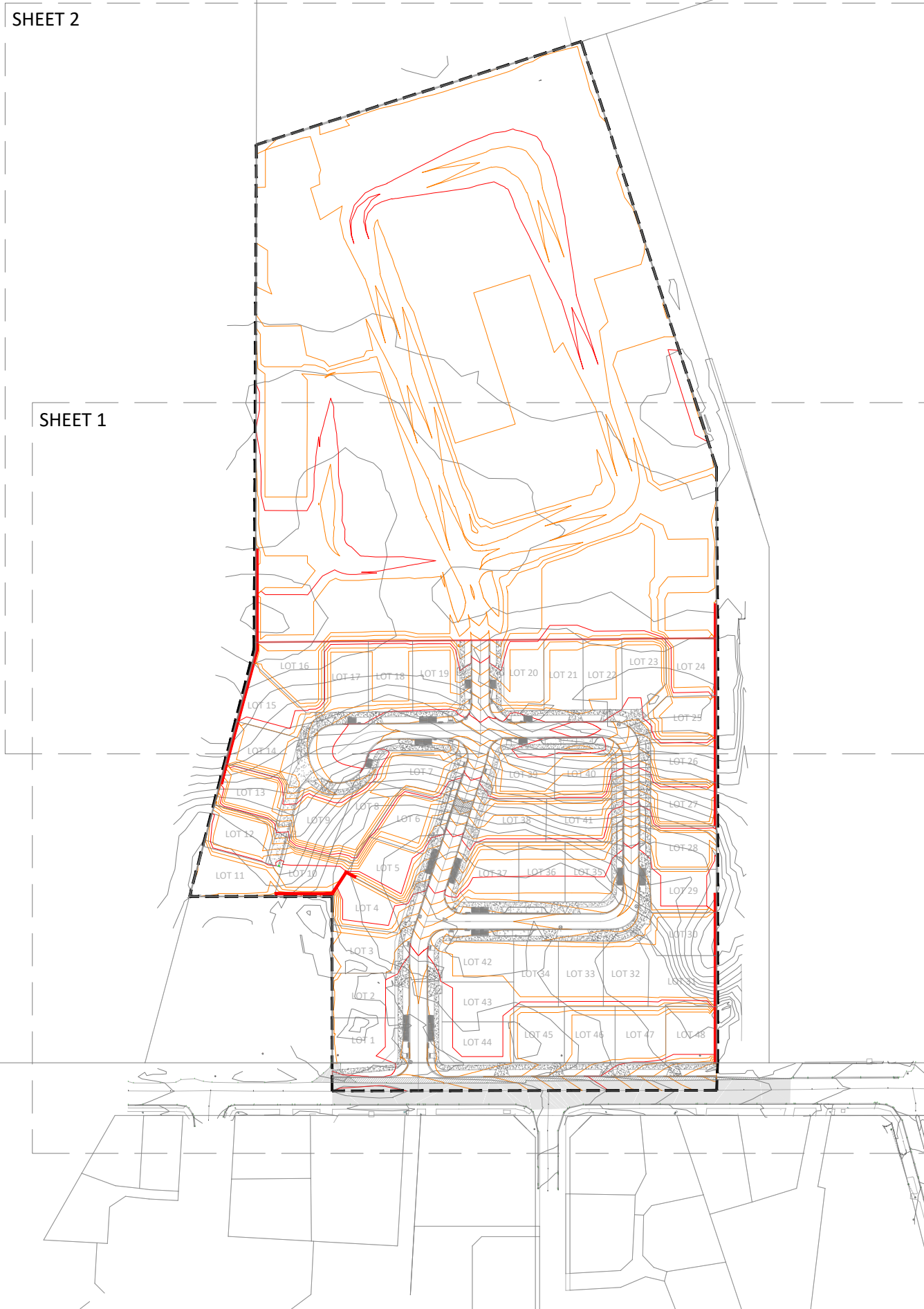


LEGEND

- PROPOSED LOT BOUNDARY
- ADJOINING LOT BOUNDARY
- 10.0 EXISTING CONTOUR
- 10.2 EXISTING CONTOUR
- 10.0 PROPOSED CONTOUR
- 10.2 PROPOSED CONTOUR
- EARTHWORKS EXTENT
- NEW TIMBER RETAINING WALL

SHEET 2

SHEET 1



REVISION	CHANGES	CHECKED	DATE
5	LOT 10 & RW 6 LOWERED		12/02/19
4	RW 4 & 5 REMOVED		14/01/19
3	WALL HEIGHTS REDUCED		05/12/18
2	RESPONSE TO RC QUERIES		8/11/18
1	RESPONSE TO QUERIES		13/08/18
0	ORIGINAL ISSUE	VC	16/04/18

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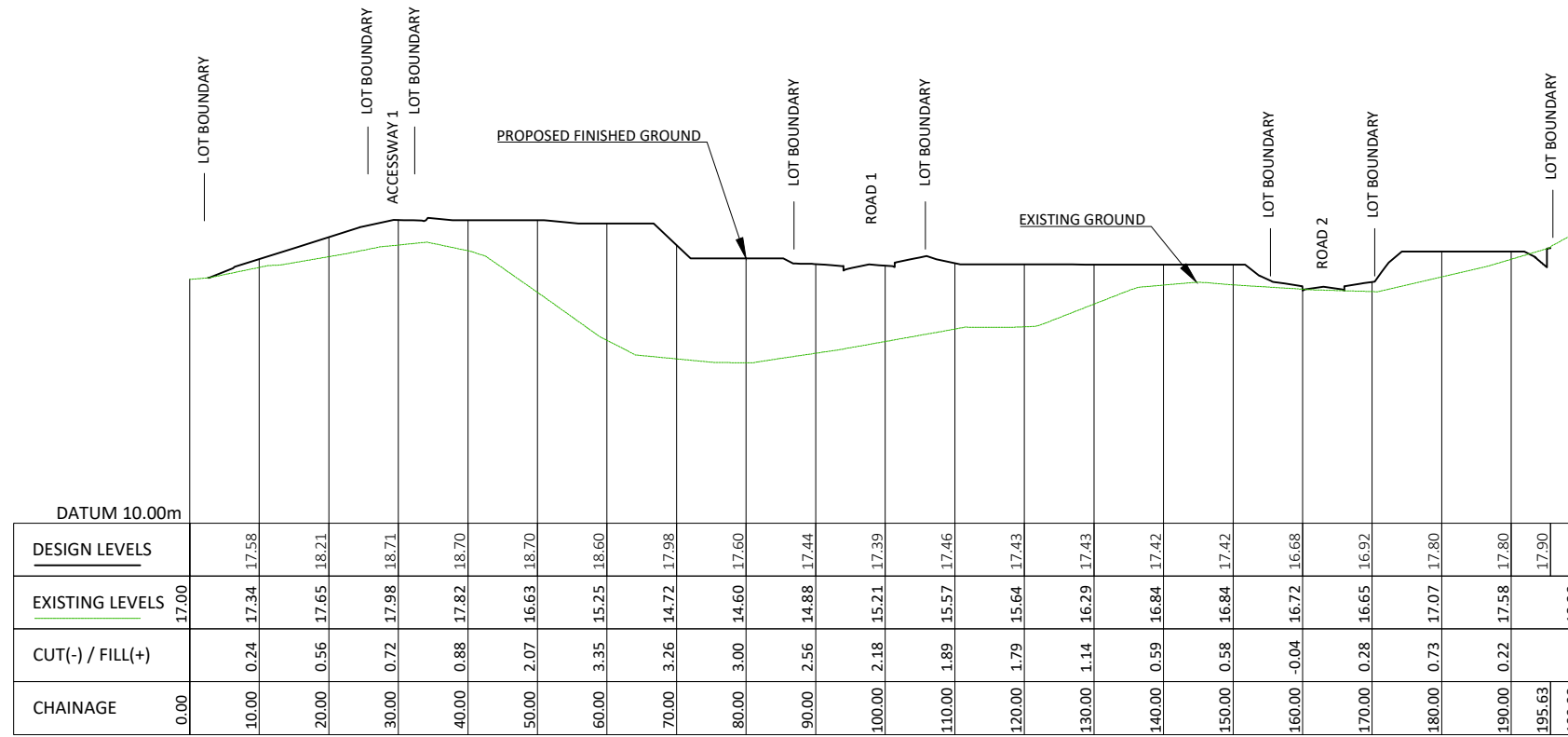
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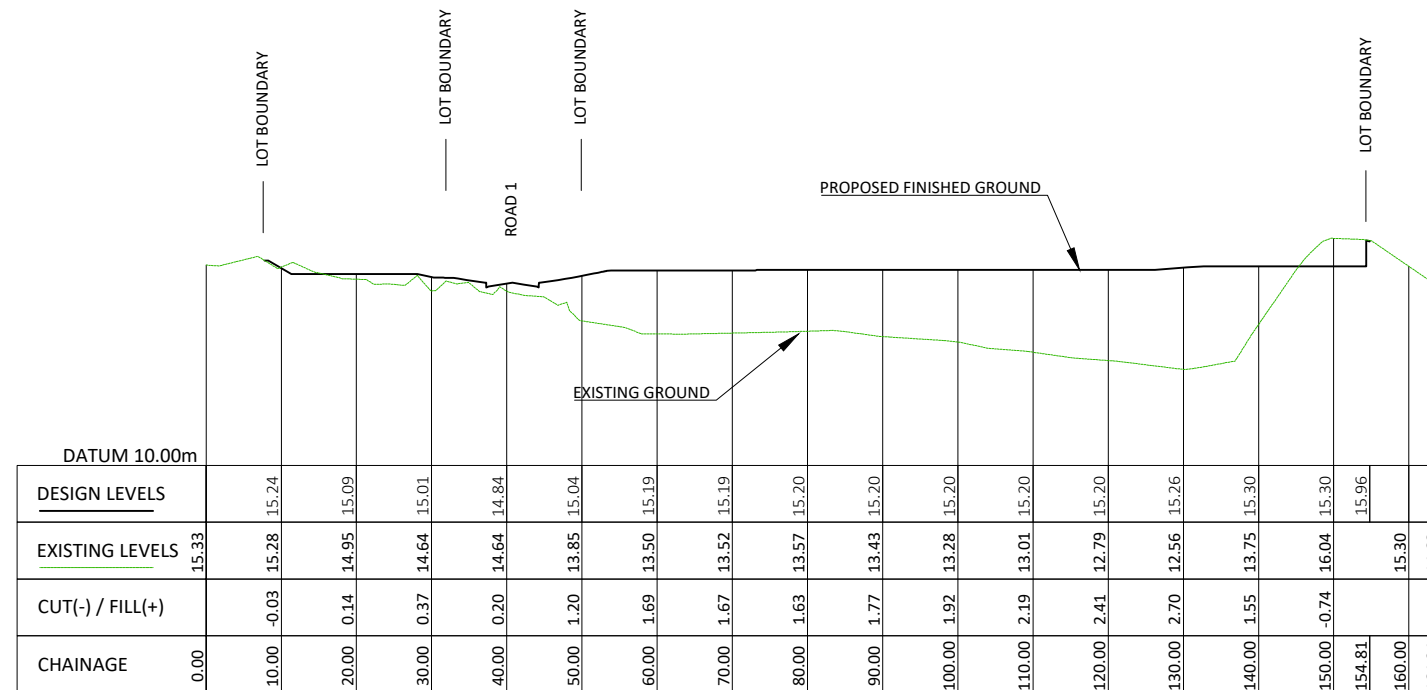
PROJECT
45 CONSTABLE ROAD WAIUKU

TITLE
OVERALL EARTHWORKS PLAN

DATE	SCALE
DEC 2018	A1 1:500
DRAWN SH	A3 1:1000
DESIGNED SH	REVISION
PROJECT No 1231	DRAWING No C200
	5



CL- CROSS SECTION A-A
SCALE 1H:5V



CL- CROSS SECTION B-B
SCALE 1H:5V

REVISION	CHANGES	CHECKED	DATE
3	RW 4 & 5 REMOVED		14/01/19
2	WALL HEIGHTS REDUCED		05/12/18
1	RESPONSE TO QUERIES		08/11/18
0	ORIGINAL ISSUE	VC	31/01/18

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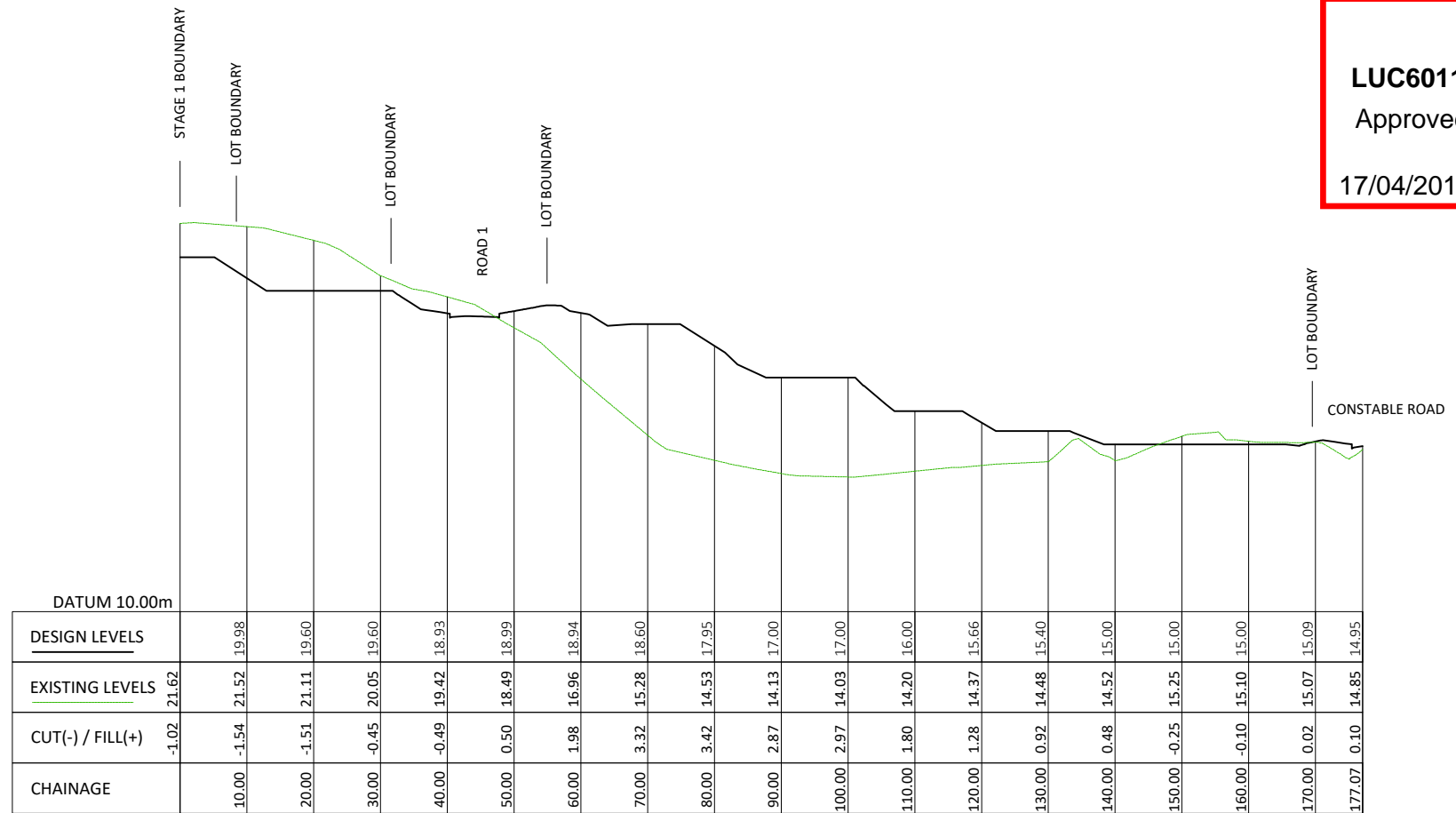
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PROJECT
45 CONSTABLE ROAD WAIUKU

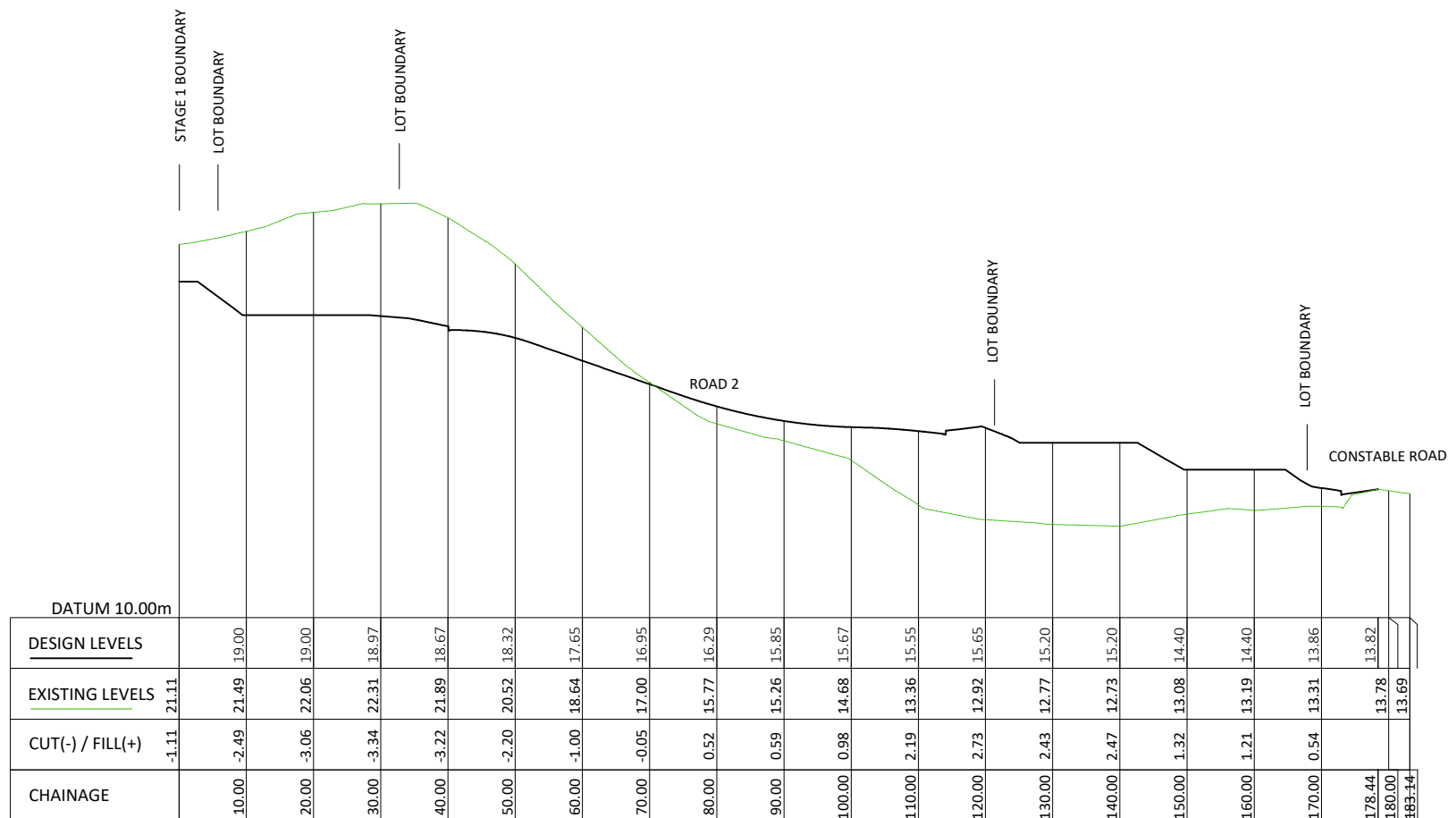
TITLE
EARTHWORKS CROSS SECTION A-A AND B-B

DATE	SCALE
DEC 2018	A1 1:500
DRAWN SH	A3 1:1000
DESIGNED SH	REVISION
PROJECT No 1231	DRAWING No C201
	3


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CL- CROSS SECTION C-C
SCALE 1H:5V



CL- CROSS SECTION D-D
SCALE 1H:5V

3	RW 4 & 5 REMOVED		14/01/19
2	WALL HEIGHTS REDUCED		05/12/18
1	RESPONSE TO QUERIES		08/11/18
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TITLE
EARTHWORKS CROSS SECTIONS C-C AND D-D

DATE	DEC 2018	SCALE	
DRAWN	SH	A1	1:500
DESIGNED	SH	A3	1:1000
PROJECT No	1231	DRAWING No	C202
		REVISION	3



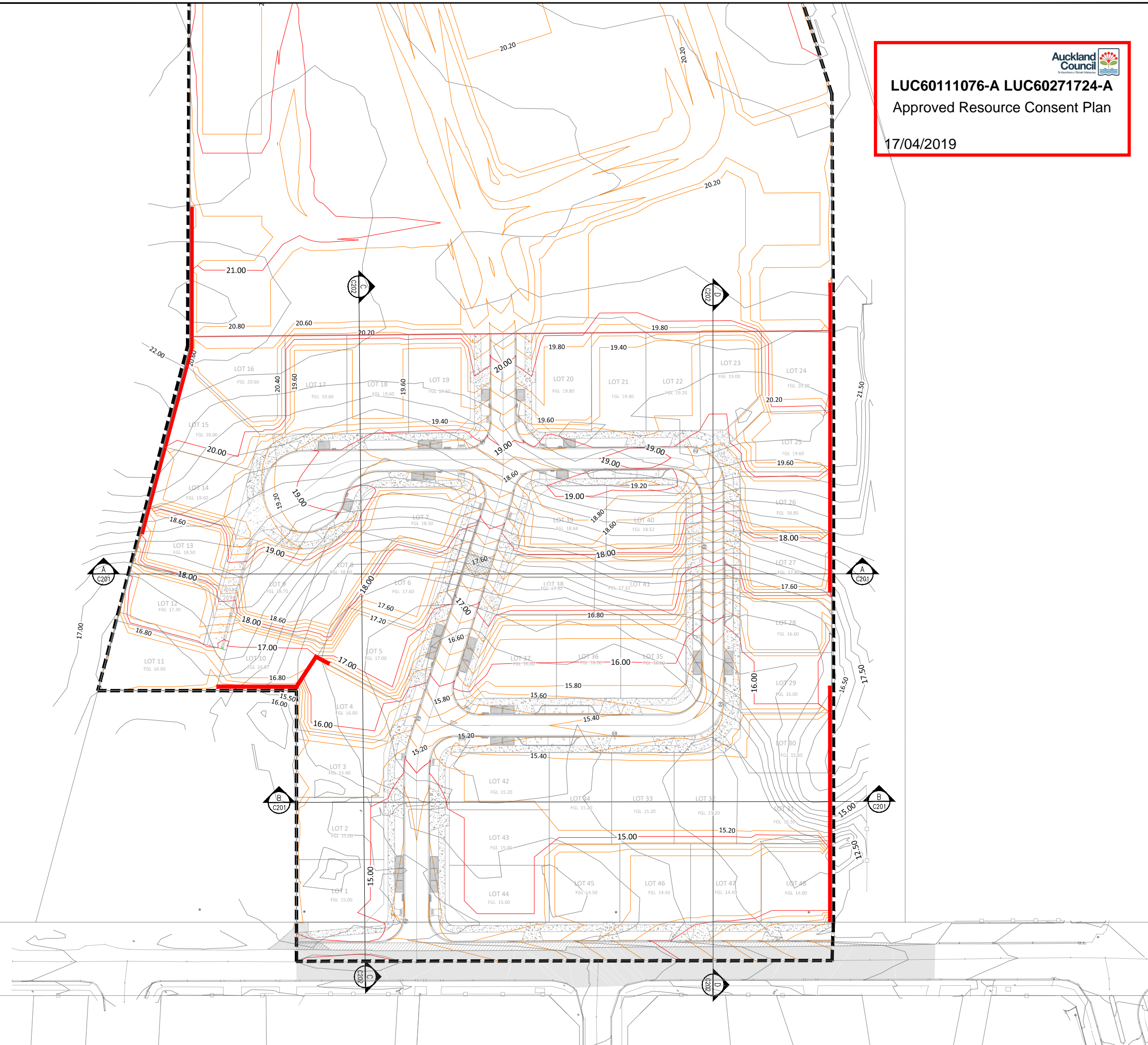
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17/04/2019



LEGEND

- PROPOSED LOT BOUNDARY
- ADJOINING LOT BOUNDARY
- 10.0 EXISTING CONTOUR
- 10.5 EXISTING CONTOUR
- 10.0 PROPOSED CONTOUR
- 10.5 PROPOSED CONTOUR
- EARTHWORKS EXTENT
- NEW TIMBER RETAINING WALL



REVISION	CHANGES	CHECKED	DATE
5	LOT 10 & RW 6 LOWERED		12/02/19
4	RW 4 & 5 REMOVED		14/01/19
3	WALL HEIGHTS REDUCED		05/12/18
2	RESPONSE TO RC QUERIES		8/11/18
1	RESPONSE TO QUERIES		13/08/18
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PROJECT
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TITLE
EARTHWORKS PLAN SHEET 1

DATE	SCALE
DEC 2018	A1 1:500
DRAWN SH	A3 1:1000
DESIGNED SH	REVISION
PROJECT No 1231	DRAWING No C203
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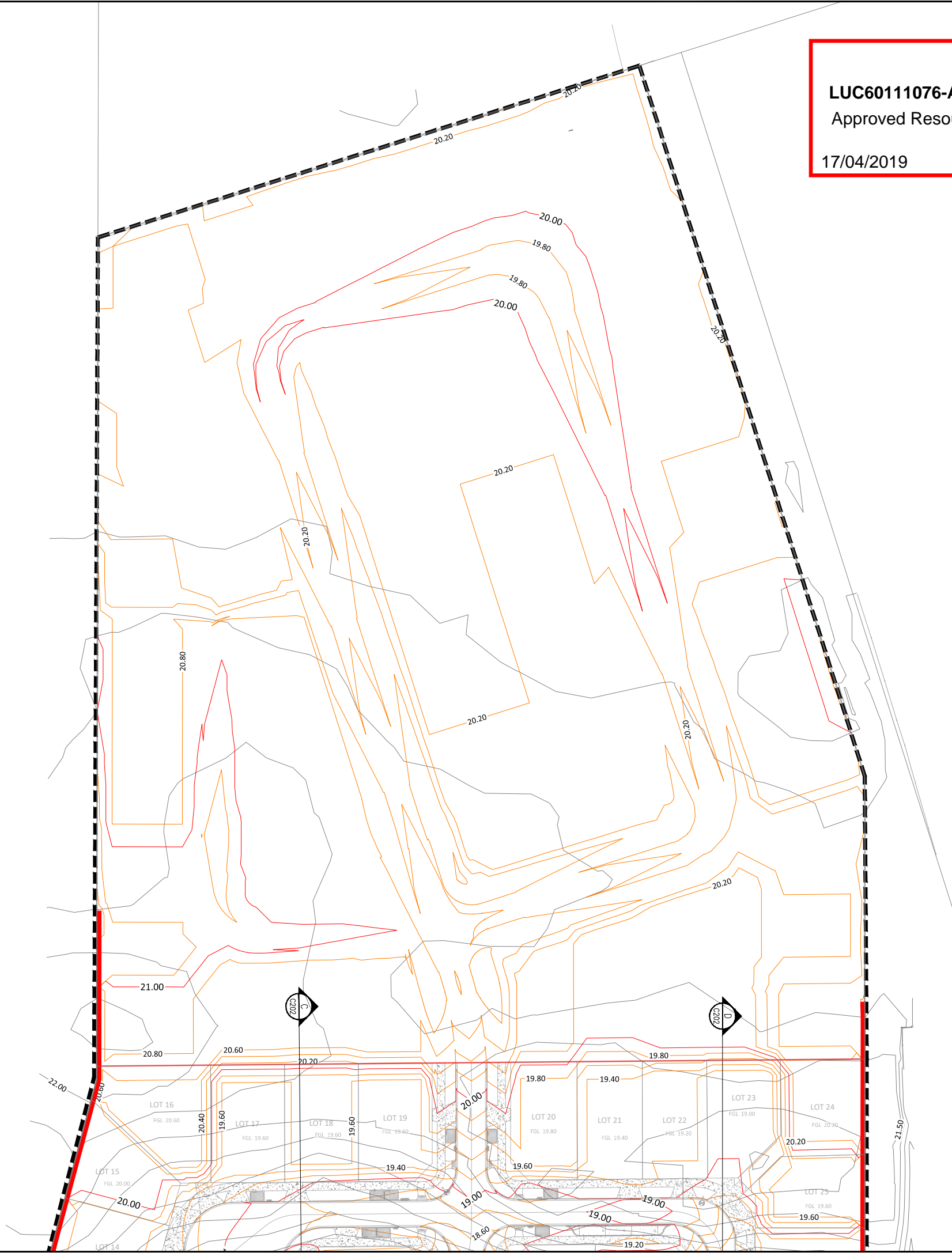
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17/04/2019



LEGEND

- PROPOSED LOT BOUNDARY
- ADJOINING LOT BOUNDARY
- 10.0 EXISTING CONTOUR
- 10.5 EXISTING CONTOUR
- 10.0 PROPOSED CONTOUR
- 10.5 PROPOSED CONTOUR
- EARTHWORKS EXTENT
- NEW TIMBER RETAINING WALL



REVISION	CHANGES	CHECKED	DATE
4	LOT 10 & RW 6 LOWERED		12/02/19
3	RW 4 & 5 REMOVED		14/01/19
2	WALL HEIGHTS REDUCED		05/12/18
1	RESPONSE TO RC QUERIES		8/11/18
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TITLE
OVERALL EARTHWORKS PLAN SHEET 2

DATE	DEC 2018	SCALE
DRAWN	SH	A1 1:500
DESIGNED	SH	A3 1:1000
PROJECT No	1231	DRAWING No
		C204
		REVISION
		4

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LEGEND

- PROPOSED LOT BOUNDARY
- ADJOINING LOT BOUNDARY
- 10.0 EXISTING CONTOUR
- 10.5 EXISTING CONTOUR
- 10.0 PROPOSED CONTOUR
- 10.5 PROPOSED CONTOUR
- EARTHWORKS EXTENT
- NEW TIMBER RETAINING WALL

REVISION	CHANGES	CHECKED	DATE
5	LOT 10 & RW 6 LOWERED		12/02/19
4	RW 4 & 5 REMOVED		14/01/19
3	WALL HEIGHTS REDUCED		05/12/18
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1	RESPONSE TO QUERIES		13/08/18
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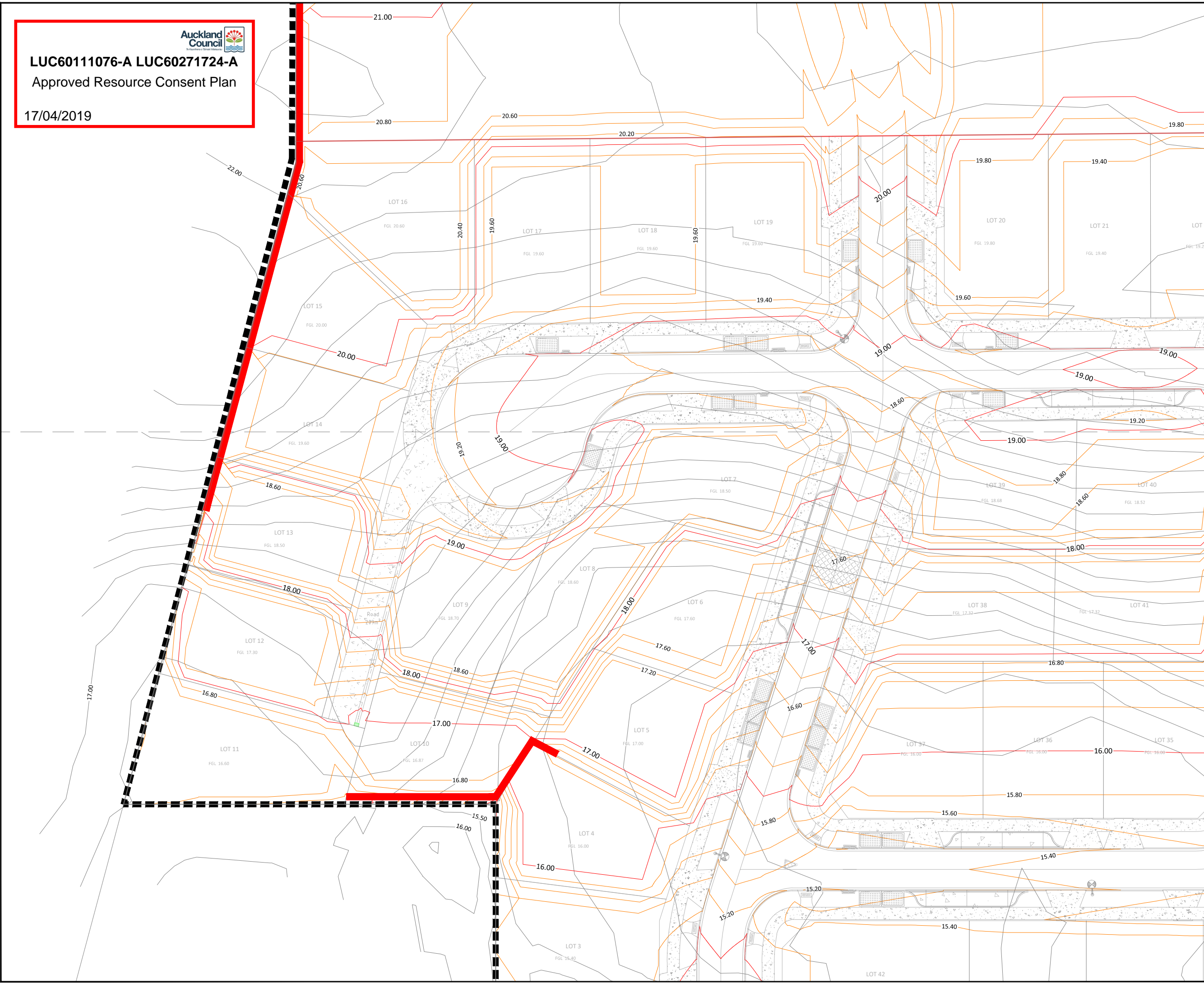
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PROJECT
45 CONSTABLE ROAD WAIUKU

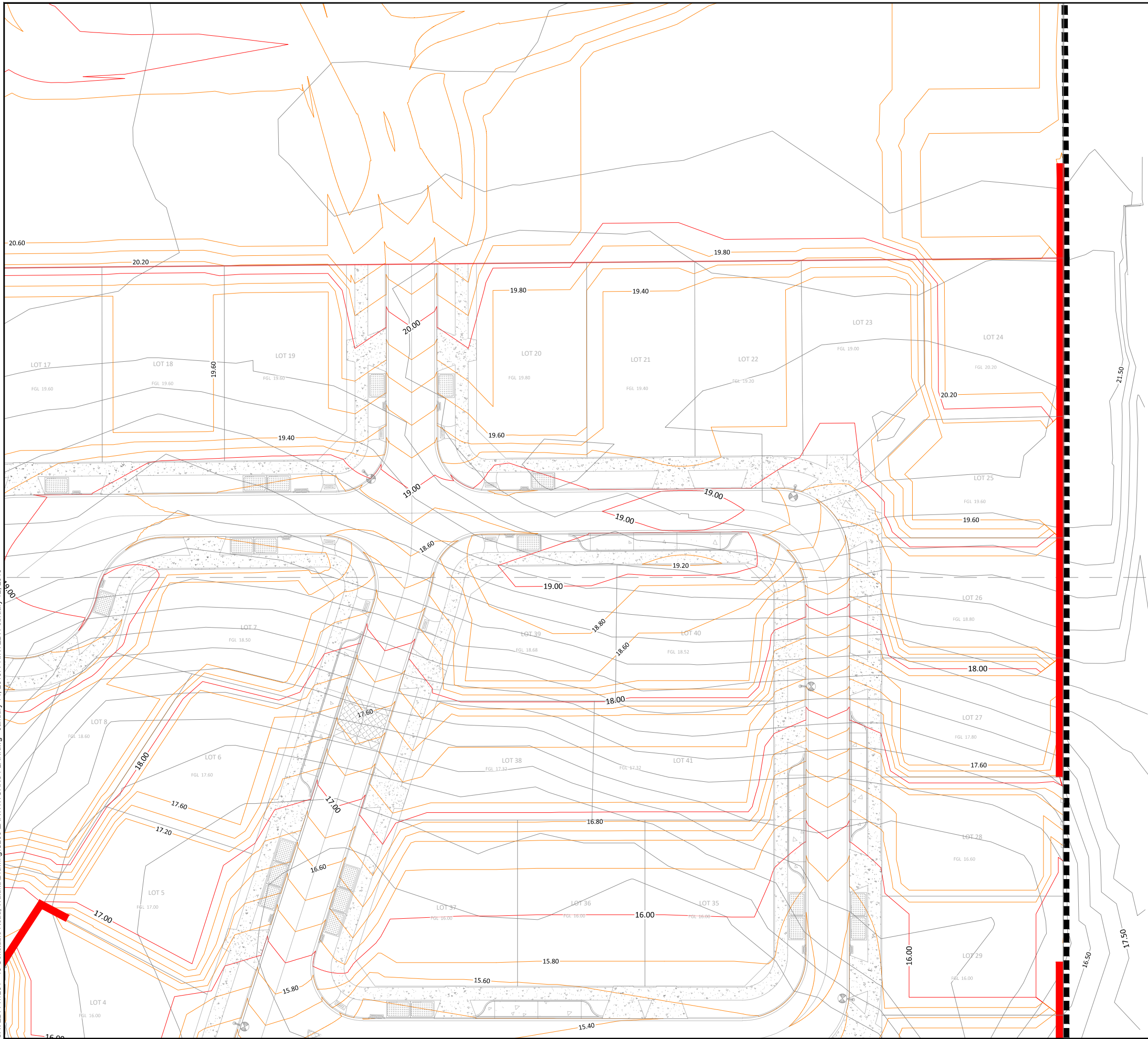
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DATE	SCALE
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DRAWN SH	A3 1:500
DESIGNED SH	REVISION
PROJECT No 1231	DRAWING No C205
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LEGEND

- PROPOSED LOT BOUNDARY
- ADJOINING LOT BOUNDARY
- 10.0 EXISTING CONTOUR
- 10.5 EXISTING CONTOUR
- 10.0 PROPOSED CONTOUR
- 10.5 PROPOSED CONTOUR
- EARTHWORKS EXTENT
- NEW TIMBER RETAINING WALL


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REVISION	CHANGES	CHECKED	DATE
5	LOT 10 & RW 6 LOWERED		12/02/19
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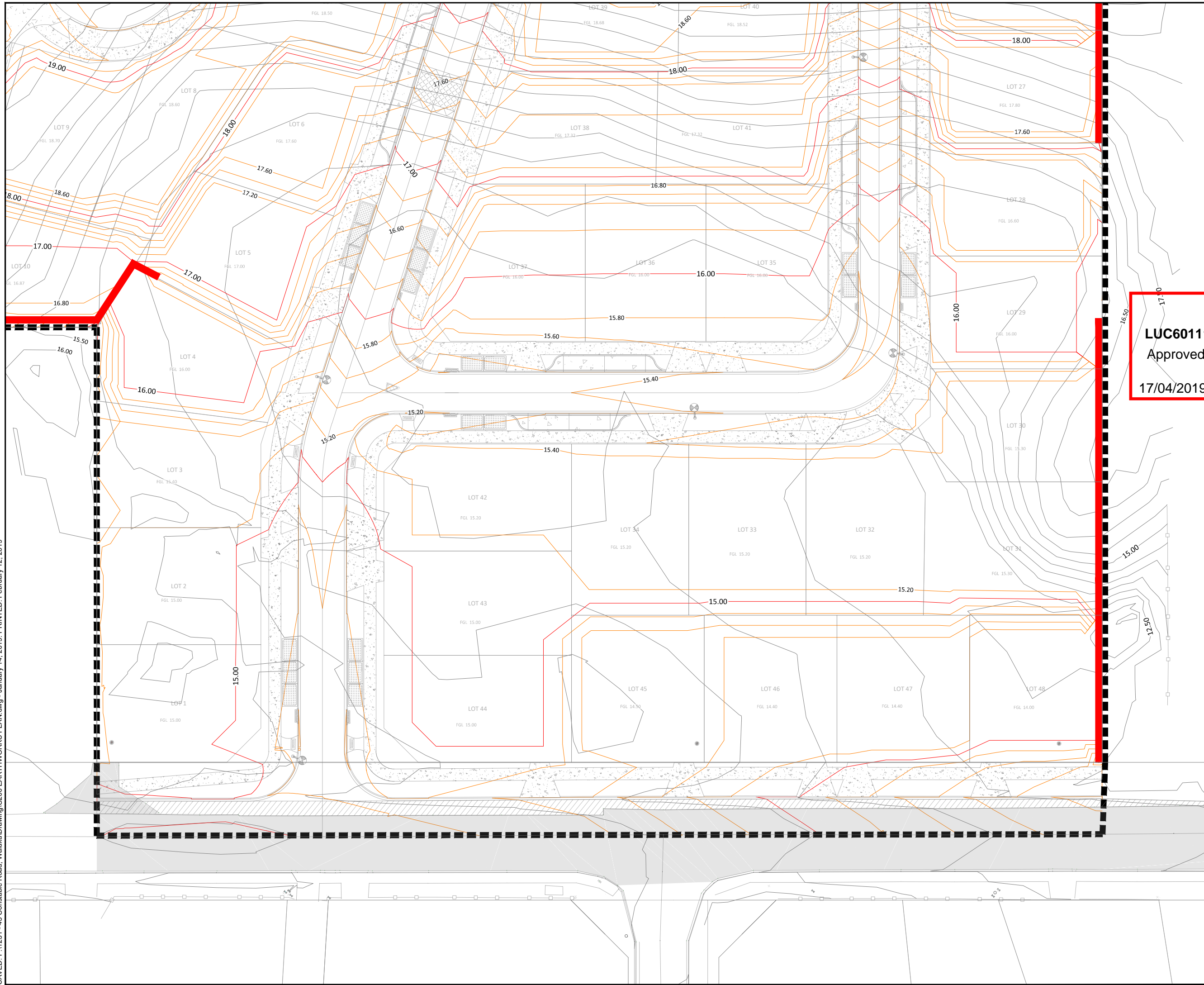
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45 CONSTABLE ROAD WAIUKU

TITLE
EARTHWORKS PLAN SHEET 2 OF 3


DATE	SCALE
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DRAWN SH	A3 1:500
DESIGNED SH	REVISION
PROJECT No 1231	DRAWING No C206
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LEGEND

- PROPOSED LOT BOUNDARY
- ADJOINING LOT BOUNDARY
- 10.0 EXISTING CONTOUR
- 10.5 EXISTING CONTOUR
- 10.0 PROPOSED CONTOUR
- 10.5 PROPOSED CONTOUR
- EARTHWORKS EXTENT
- NEW TIMBER RETAINING WALL


LUC60111076-A LUC60271724-A
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 17/04/2019

REVISION	CHANGES	CHECKED	DATE
5	LOT 10 & RW 6 LOWERED		12/02/19
4	RW 4 & 5 REMOVED		14/01/19
3	WALL HEIGHTS REDUCED		05/12/18
2	RESPONSE TO QUERIES		08/11/18
1	RESPONSE TO QUERIES		13/08/18
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PROJECT
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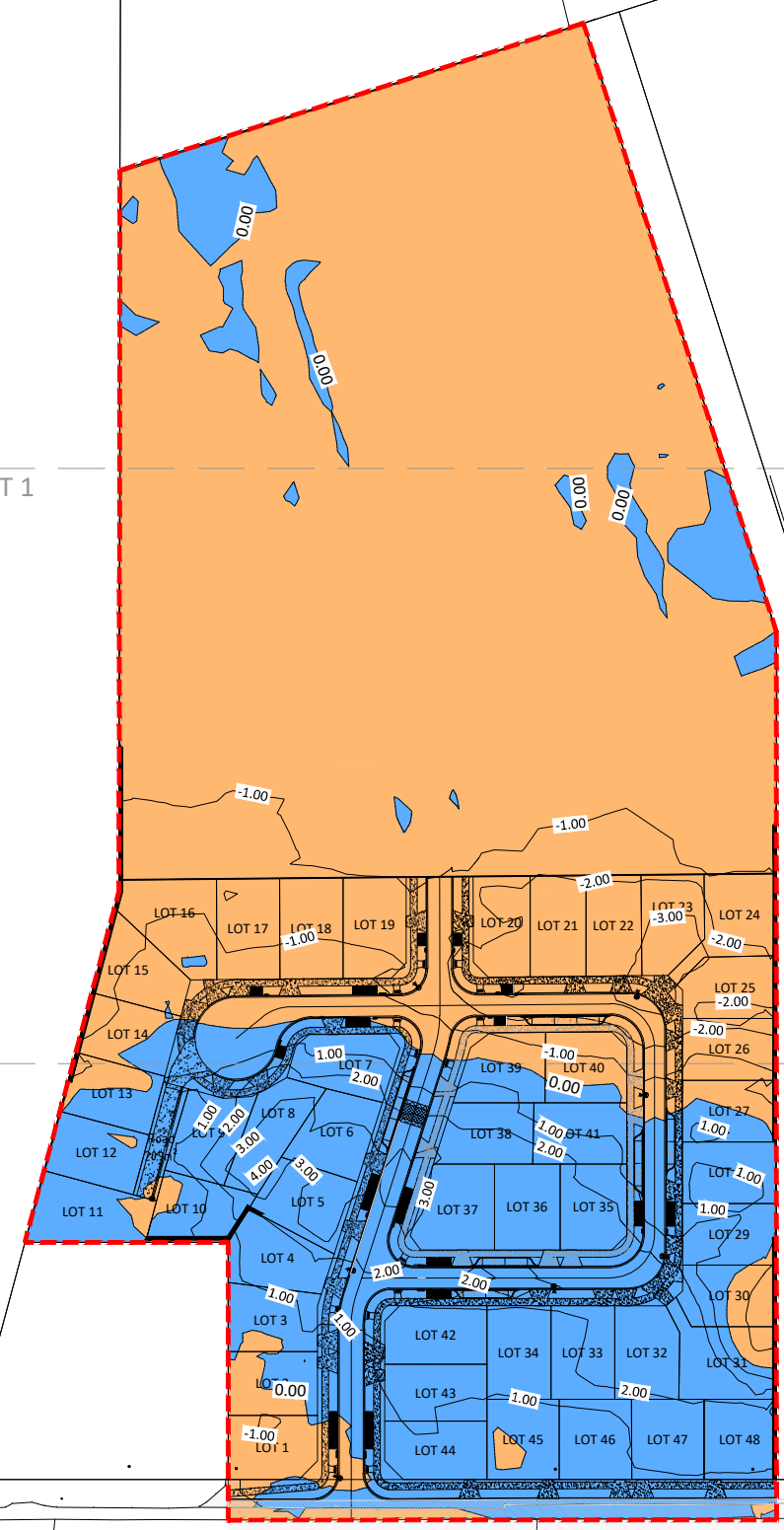
TITLE
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DATE	SCALE
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DRAWN SH	A3 1:500
DESIGNED SH	REVISION
PROJECT No 1231	DRAWING No C207
	5

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SHEET 2

SHEET 1



Surface Analysis: Elevation Ranges				
Number	Color	Minimum Elevation (m)	Maximum Elevation (m)	Volume (m ³)
1	CUT	-3.557	0.000	26235.1
2	FILL	0.000	4.391	25971.2

*REFER TO NOTES FOR ADJUSTED EARTHWORKS VOLUMES AND ASSUMPTIONS

Auckland Council

LUC60111076-A LUC60271724-A
Approved Resource Consent Plan

17/04/2019

LEGEND

--- EARTHWORKS BOUNDARY

NOTES

1. CUT/FILL SURFACE IS FROM EXISTING NATURAL GROUND TO FINISHED SURFACE LEVELS. (NO BULKING FACTORS APPLIED)
2. A SUMMARY OF THE BULK EARTHWORKS VOLUMES IS AS FOLLOWS:
 CUT: - 26235 m³
 FILL : + 25971 m³
 BALANCE: - 264 m³ (CUT)
3. TOPSOIL STRIP: 12607m³ (200mm ASSUMED DEPTH)
4. TOPSOIL RESPREAD : 10821m³ (200mm ASSUMED DEPTH)
5. ESTIMATED ADJUSTED VOLUME SUMMARY (TO INCLUDE PAVEMENT THICKNESS (0.51m), FOOTPATH SUBGRADE (0.2m), COMPACTION FACTOR (17.5%) AND SERVICE TRENCH CUT:
 • CUT TO FILL (CLAY/SILT) = 28017m³
 • IMPORTED FILL = 2092m³
6. ADJUSTED VOLUMES TO BE CONFIRMED WHEN GEOTECHNICAL REPORT RECEIVED.

REVISION	CHANGES	CHECKED	DATE
4	RW 6 LOWERED		12/02/19
3	RW 4 & 5 REMOVED		14/01/19
2	WALL HEIGHTS REDUCED		05/12/18
1	RESPONSE TO QUERIES		08/11/18
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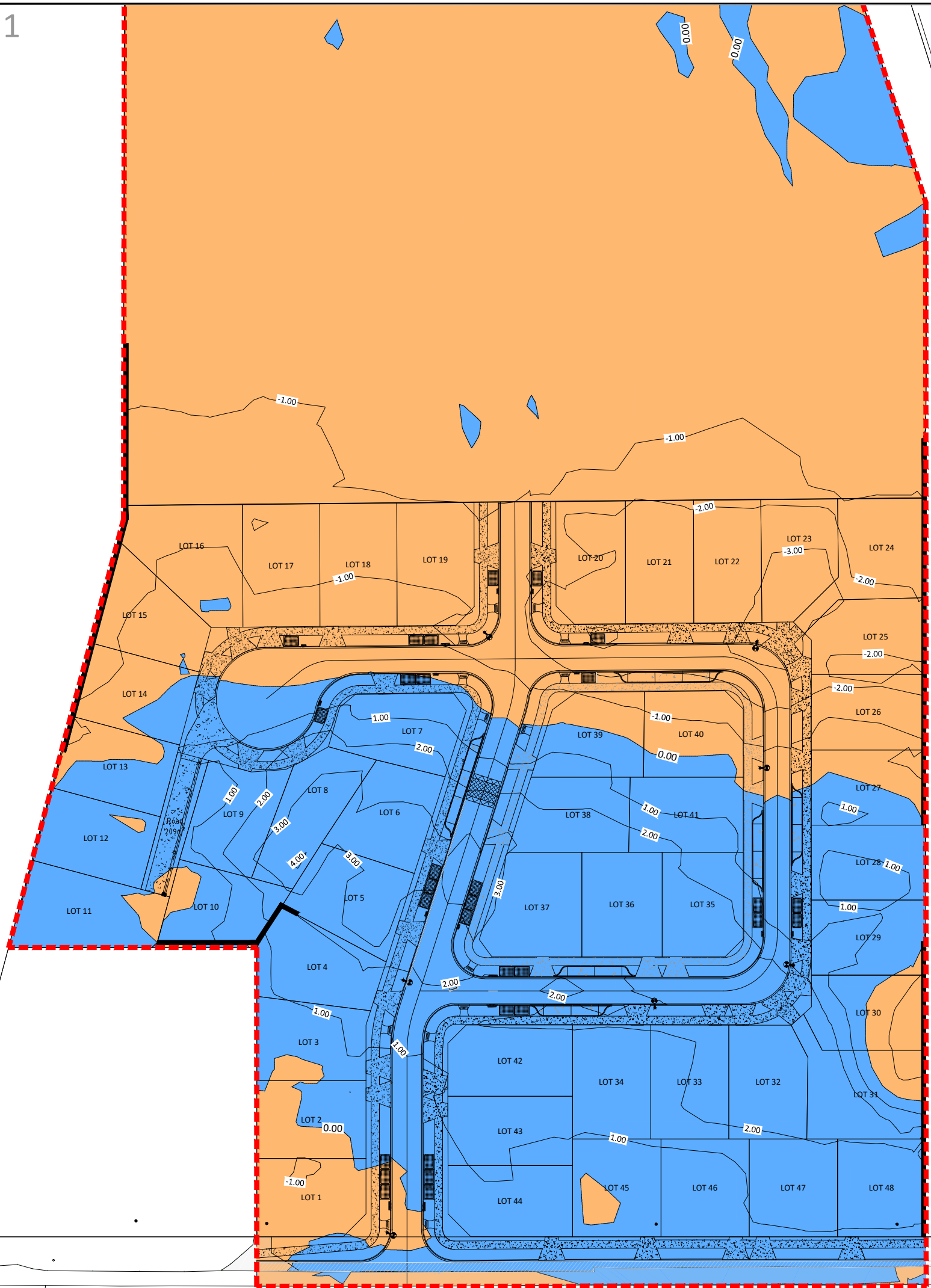
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PROJECT
45 CONSTABLE ROAD WAIUKU

TITLE
CUT - FILL DEPTH PLAN (ISOPACHS)


DATE	SCALE
DEC 2018	A1 1:1000
DRAWN SH	A3 1:2000
DESIGNED SH	REVISION
PROJECT No 1231	DRAWING No C210
	4



Surface Analysis: Elevation Ranges

Number	Color	Minimum Elevation (m)	Maximum Elevation (m)	Volume (m ³)
1	CUT	-3.557	0.000	26235.1
2	FILL	0.000	4.391	25971.2

*REFER TO NOTES FOR ADJUSTED EARTHWORKS VOLUMES AND ASSUMPTIONS


LUC60111076-A LUC60271724-A
 Approved Resource Consent Plan
 17/04/2019

LEGEND

--- EARTHWORKS BOUNDARY

NOTES

- CUT/FILL SURFACE IS FROM EXISTING NATURAL GROUND TO FINISHED SURFACE LEVELS. (NO BULKING FACTORS APPLIED)
- A SUMMARY OF THE BULK EARTHWORKS VOLUMES IS AS FOLLOWS:
 CUT: - 26235 m³
 FILL: + 25971 m³
 BALANCE: - 264 m³ (CUT)
- TOPOSOIL STRIP: 12607m³ (200mm ASSUMED DEPTH)
- TOPOSOIL RESPREAD: 10821m³ (200mm ASSUMED DEPTH)
- ESTIMATED ADJUSTED VOLUME SUMMARY (TO INCLUDE PAVEMENT THICKNESS (0.51m), FOOTPATH SUBGRADE (0.2m), COMPACTION FACTOR (17.5%) AND SERVICE TRENCH CUT):
 - CUT TO FILL (CLAY/SILT) = 28017m³
 - IMPORTED FILL = 2092m³
- ADJUSTED VOLUMES TO BE CONFIRMED WHEN GEOTECHNICAL REPORT RECEIVED.

REVISION	CHANGES	CHECKED	DATE
4	RW 6 LOWERED		12/02/19
3	RW 4 & 5 REMOVED		14/01/19
2	WALL HEIGHTS REDUCED		05/12/18
1	RESPONSE TO QUERIES		08/11/18
0	ORIGINAL ISSUE	VC	16/04/18

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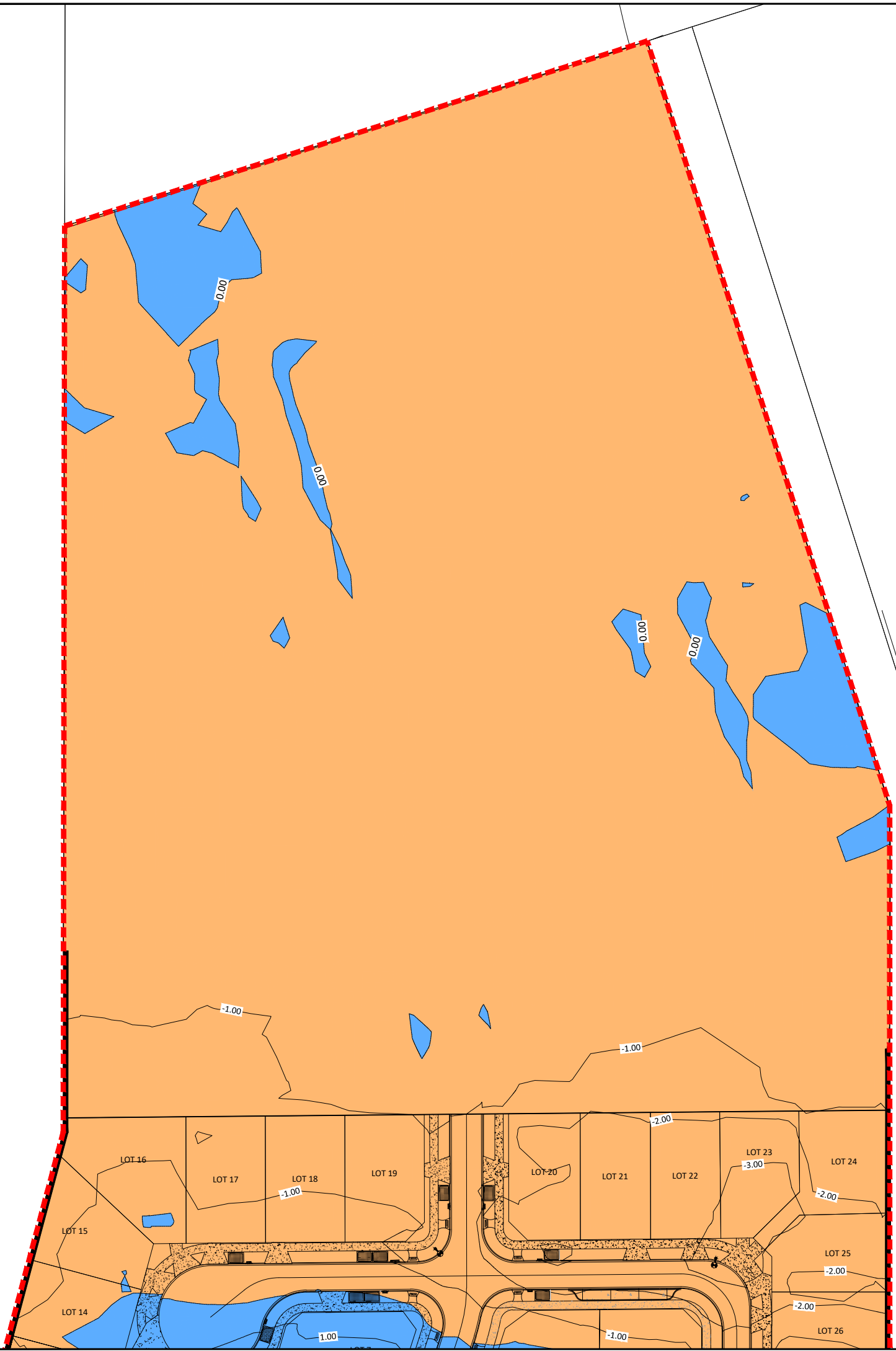

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45 CONSTABLE ROAD WAIUKU


TITLE
CUT - FILL DEPTH PLAN (ISOPACHS) SHEET 1

DATE	DRAWN	DESIGNED	PROJECT No	DRAWING No	REVISION	SCALE
DEC 2018	SH	SH	1231	C211	4	A1 1:500 A3 1:1000



Surface Analysis: Elevation Ranges				
Number	Color	Minimum Elevation (m)	Maximum Elevation (m)	Volume (m ³)
1	CUT	-3.557	0.000	26235.1
2	FILL	0.000	4.391	25971.2

*REFER TO NOTES FOR ADJUSTED EARTHWORKS VOLUMES AND ASSUMPTIONS



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LEGEND

 EARTHWORKS BOUNDARY

NOTES

1. CUT/FILL SURFACE IS FROM EXISTING NATURAL GROUND TO FINISHED SURFACE LEVELS. (NO BULKING FACTORS APPLIED)
2. A SUMMARY OF THE BULK EARTHWORKS VOLUMES IS AS FOLLOWS:
 CUT: - 26235 m³
 FILL : + 25971 m³
 BALANCE: - 264 m³ (CUT)
3. TOPOSOIL STRIP: 12607m³ (200mm ASSUMED DEPTH)
4. TOPOSOIL RESPREAD : 10821m³ (200mm ASSUMED DEPTH)
5. ESTIMATED ADJUSTED VOLUME SUMMARY (TO INCLUDE PAVEMENT THICKNESS (0.51m), FOOTPATH SUBGRADE (0.2m), COMPACTION FACTOR (17.5%) AND SERVICE TRENCH CUT:
 - CUT TO FILL (CLAY/SILT) = 28017m³
 - IMPORTED FILL = 2092m³
6. ADJUSTED VOLUMES TO BE CONFIRMED WHEN GEOTECHNICAL REPORT RECEIVED.

REVISION	CHANGES	CHECKED	DATE
4	RW 6 LOWERED		12/02/19
3	RW 4 & 5 REMOVED		14/01/19
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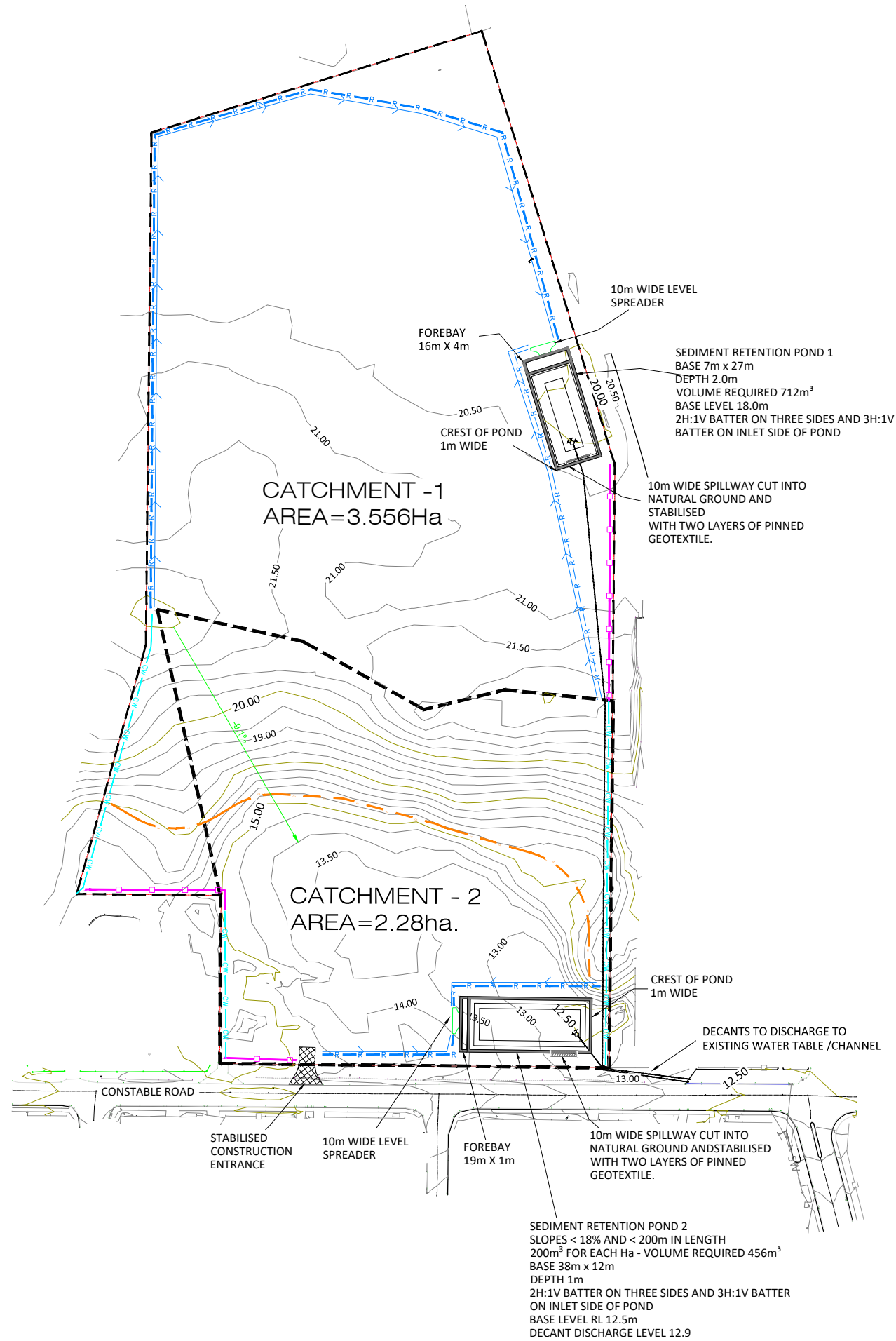
TITLE
CUT - FILL DEPTH PLAN (ISOPACHS) SHEET 2

DATE	SCALE
DEC 2018	A1 1:500
DRAWN SH	A3 1:1000
DESIGNED SH	REVISION
PROJECT No 1231	DRAWING No C212
	4



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LEGEND

- RUNOFF DRAIN
- CLEAN WATER
- SILT FENCE
- CONTOUR DRAIN
- LOT BOUNDARY
- CATCHMENT BOUNDARY
- 20.00 EXISTING CONTOUR
- 20.50 EXISTING CONTOUR

REVISION	CHANGES	CHECKED	DATE
1	FOR CONSENT		14/02/19
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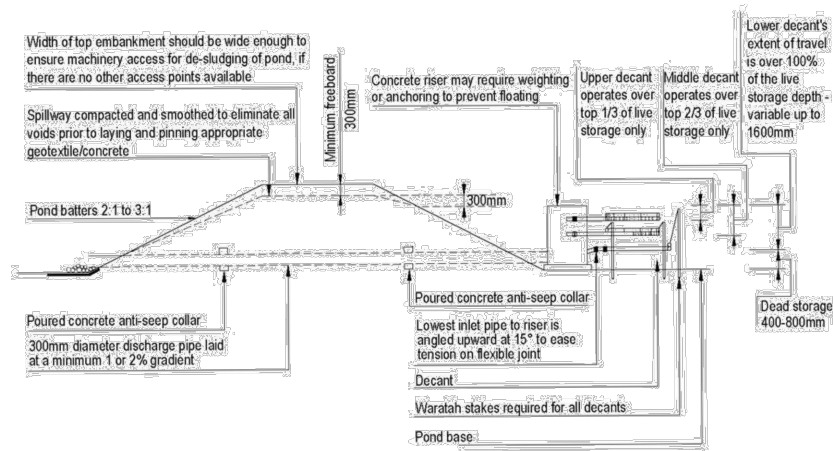
PROJECT
45 CONSTABLE ROAD WAIUKU

TITLE
EROSION AND SEDIMENT CONTROL PLAN

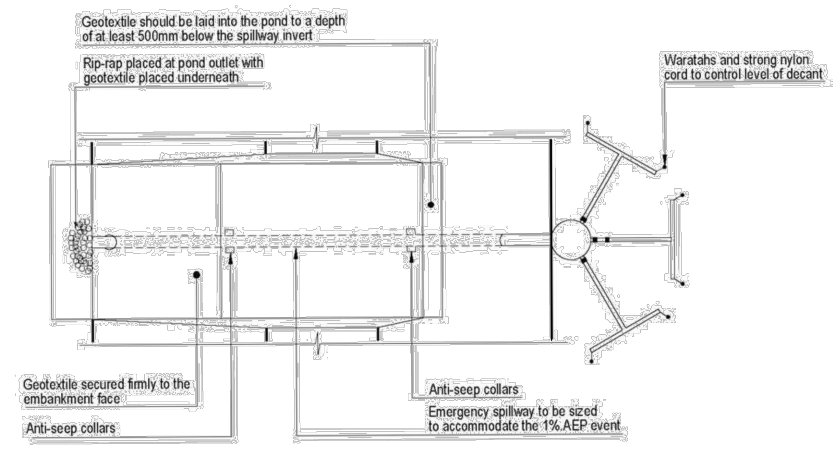
DATE	SCALE
DEC 2018	A1 1: 2000
DRAWN SH	A3 1: 1000
DESIGNED SH	REVISION 1
PROJECT No 1231	DRAWING No C220

NOTES:

1. ALL SEDIMENT AND EROSION CONTROLS TO BE CONSTRUCTED IN ACCORDANCE WITH AUCKLAND COUNCIL GD05 (EROSION AND SEDIMENT CONTROL GUIDE FOR LAND DISTURBING ACTIVITIES IN THE AUCKLAND REGION GUIDELINE DOCUMENT 2016/005)



Cross-section



Plan view

Figure 73: Sediment retention pond for 3 to 5 ha catchment

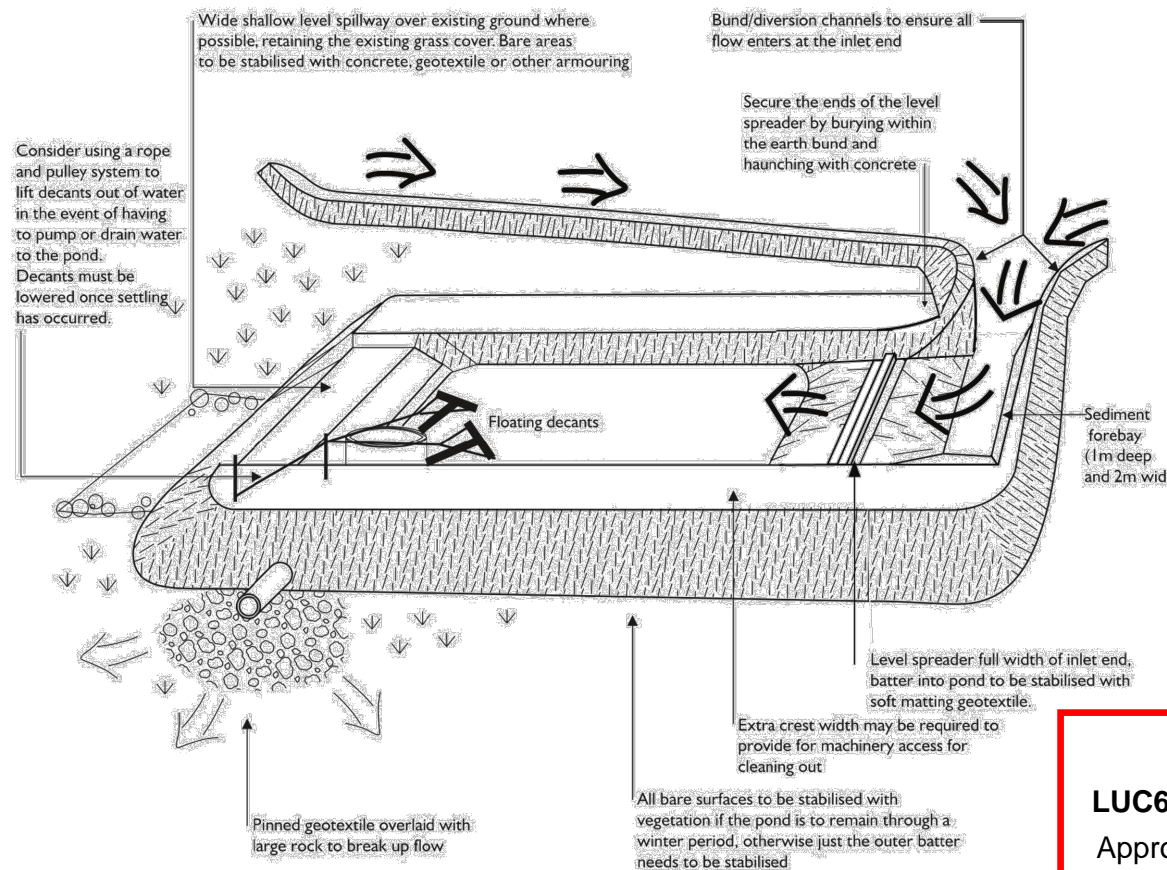



Figure 64: Schematic of a sediment retention pond


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STABILISED CONSTRUCTION ENTRANCE – SPECIFICATIONS:

APPLICATION

USE A STABILISED CONSTRUCTION ENTRANCE AT ALL POINTS OF CONSTRUCTION SITE INGRESS AND EGRESS WITH A CONSTRUCTION PLAN LIMITING TRAFFIC TO THESE ENTRANCES ONLY. THEY ARE PARTICULARLY USEFUL ON SMALL CONSTRUCTION SITES BUT CAN BE UTILISED FOR ALL PROJECTS.

DESIGN:

1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS AND OTHER UNSUITABLE MATERIAL AND PROPERLY GRADE IT.
2. PROVIDE DRAINAGE TO CARRY RUNOFF FROM THE STABILISED CONSTRUCTION ENTRANCE TO A SEDIMENT CONTROL MEASURE.
3. PLACE AGGREGATE TO THE SPECIFICATIONS BELOW AND SMOOTH IT.

STABILISED CONSTRUCTION ENTRANCE AGGREGATE SPECIFICATIONS:

AGGREGATE SIZE	5-75mm WASHED AGGREGATE
THICKNESS	150mm MINIMUM
LENGTH	10m MINIMUM
WIDTH	4m MINIMUM

MAINTENANCE

1. MAINTAIN THE STABILISED CONSTRUCTION ENTRANCE IN A CONDITION TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. AFTER EACH RAINFALL INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT FROM THE STABILISED CONSTRUCTION ENTRANCE AND CLEAN OUT AS NECESSARY.
2. WHEN WHEEL WASHING IS ALSO REQUIRED, ENSURE THIS IS DONE ON AN AREA STABILISED WITH AGGREGATE WHICH DRAINS TO AN APPROVED SEDIMENT RETENTION FACILITY.

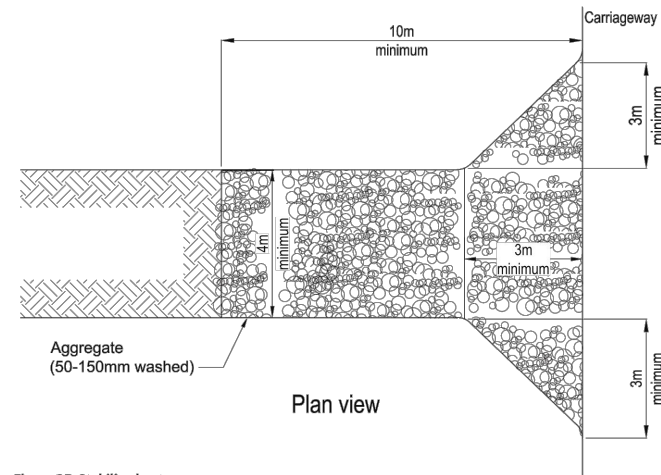
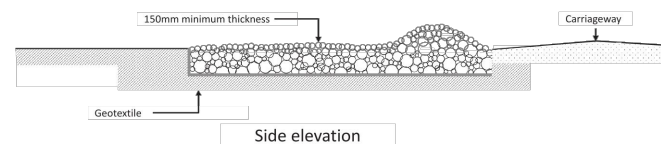
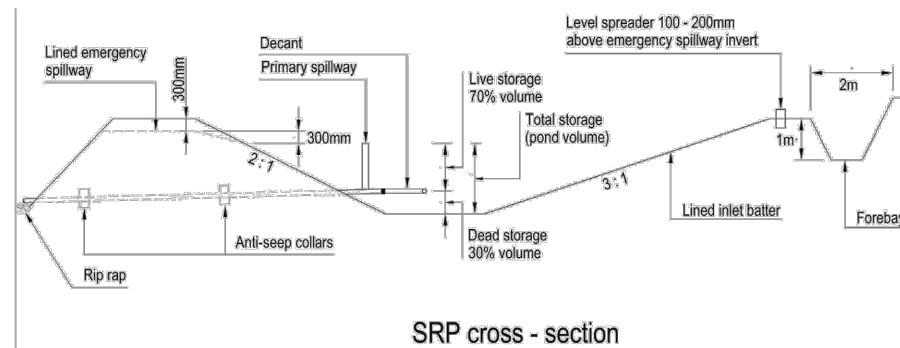


Figure 35: Stabilised entranceway



SRP cross-section

Figure 65: SRP cross-section

1	FOR CONSENT	14/02/19
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TITLE
EROSION AND SEDIMENT CONTROL DETAILS SHEET 1

DATE	DEC 2018	SCALE	
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DESIGNED	SH	A3 1: 1000	
PROJECT No	1231	DRAWING No	C221
		REVISION	1

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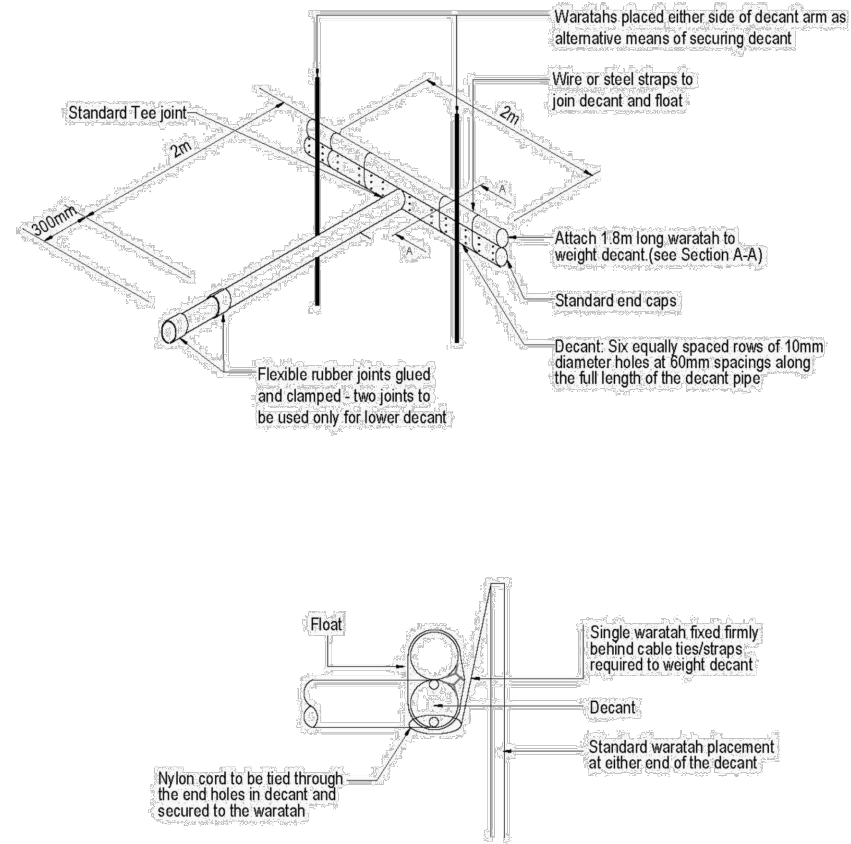


Figure 66: Schematic of standard T-bar design

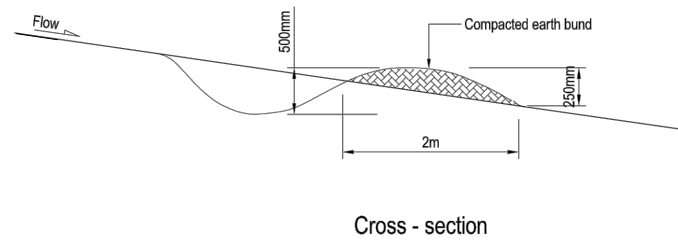


Figure 23: Contour drain cross-section

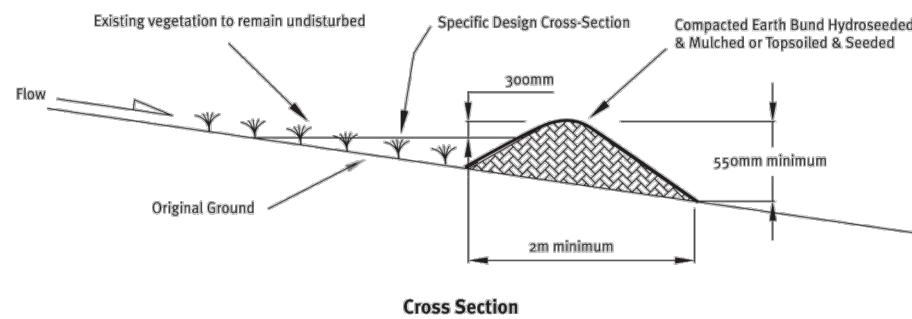


Figure 16: Cross-section of clean water diversion

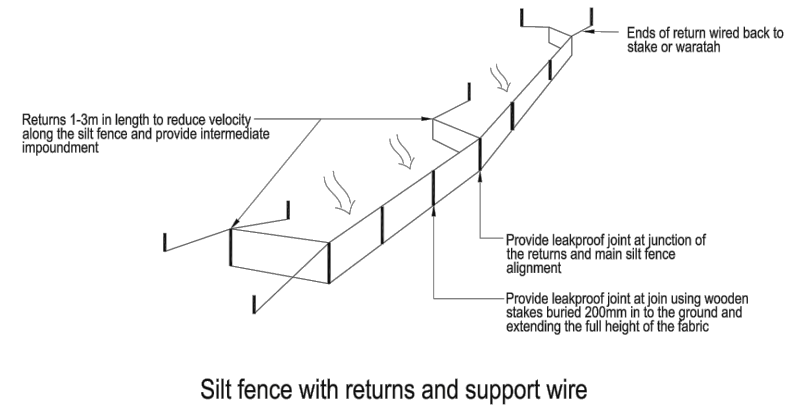
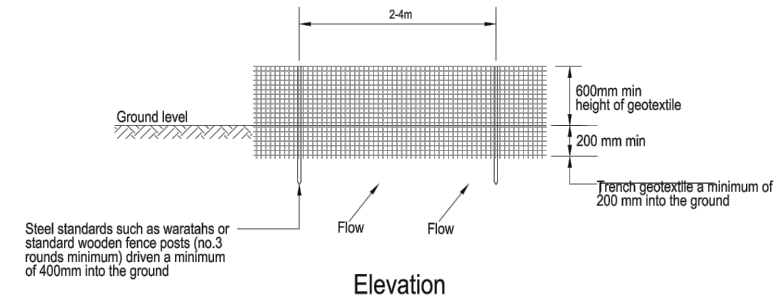



Figure 82: Schematic of a silt fence



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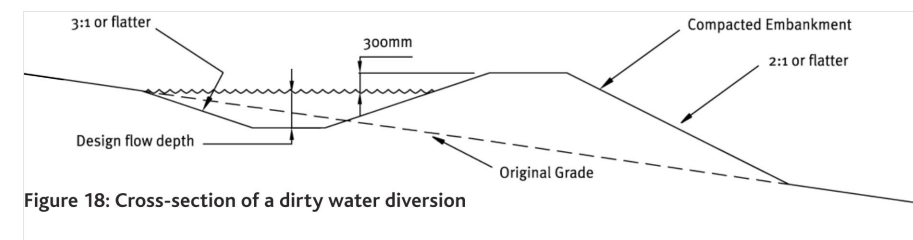


Figure 18: Cross-section of a dirty water diversion

- NOTES:
- ALL SEDIMENT AND EROSION CONTROLS TO BE CONSTRUCTED IN ACCORDANCE WITH AUCKLAND COUNCIL GD05 (EROSION AND SEDIMENT CONTROL GUIDE FOR LAND DISTURBING ACTIVITIES IN THE AUCKLAND REGION GUIDELINE DOCUMENT 2016/005)

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EROSION AND SEDIMENT CONTROL DETAILS SHEET 2

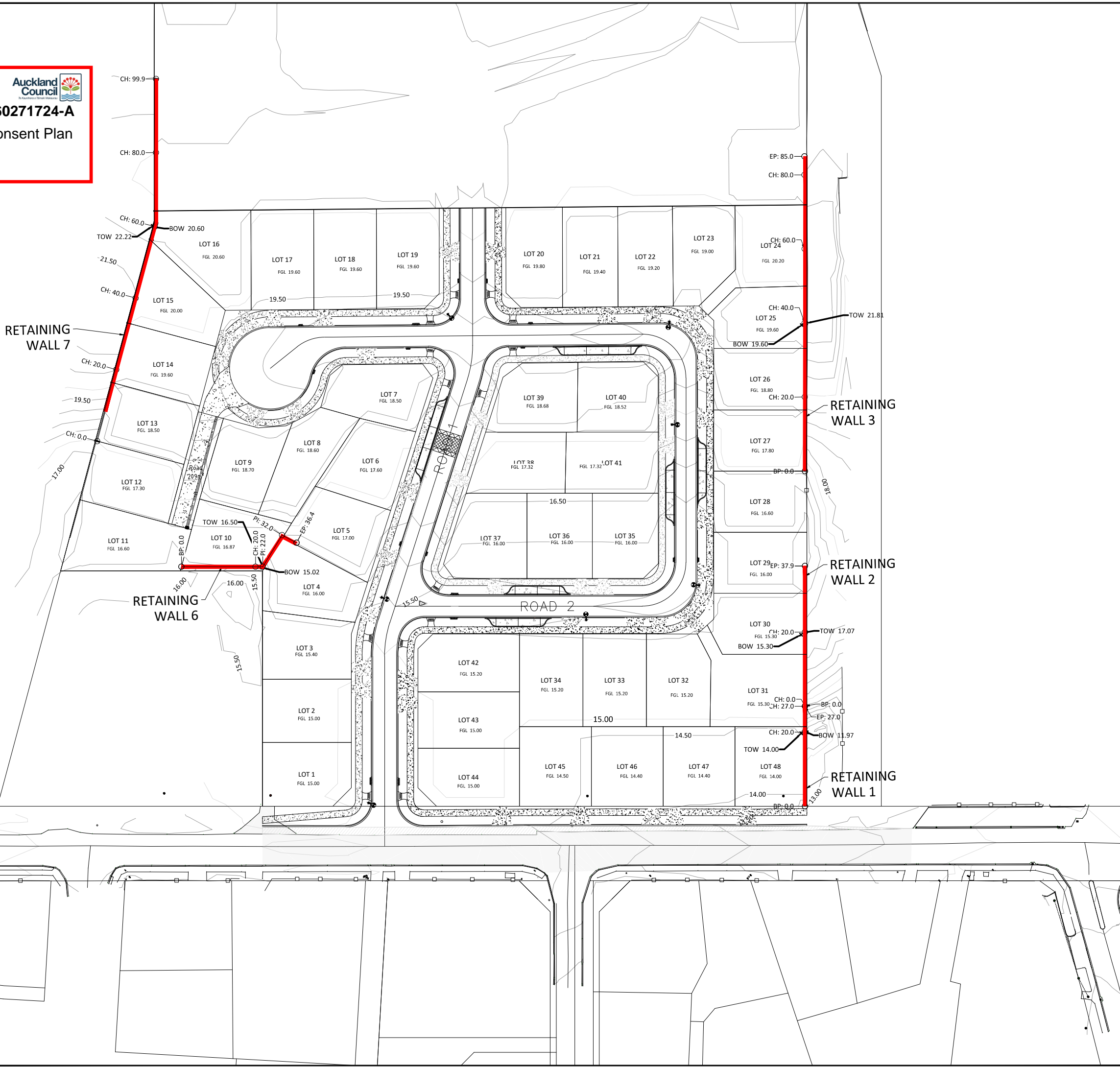
DATE	DEC 2018	SCALE
DRAWN	SH	A1 1: 2000
DESIGNED	SH	A3 1: 1000
PROJECT No	1231	DRAWING No
		C222
		REVISION
		1

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 17/04/2019



LEGEND

- PROPOSED LOT BOUNDARY
- TIMBER RETAINING WALL
- PROPOSED VEHICLE CROSSING FOOTPATH/WALKWAY CONCRETE PAVEMENT



REVISION	CHANGES	CHECKED	DATE
4	RW 6 LOWERED		04/02/19
3	RW 4 & 5 REMOVED		14/01/19
2	WALL HEIGHTS REDUCED		05/12/18
1	RC QUERIES - WALL 5		18/11/18
0	ORIGINAL ISSUE		7/11/18

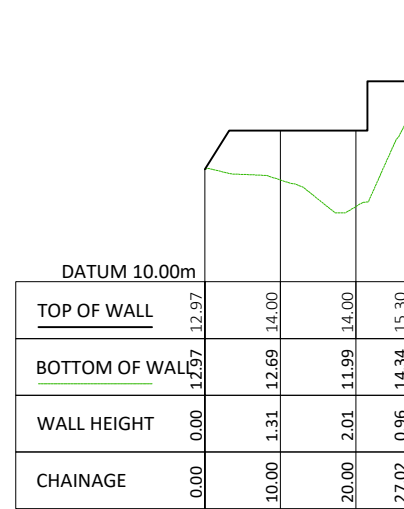
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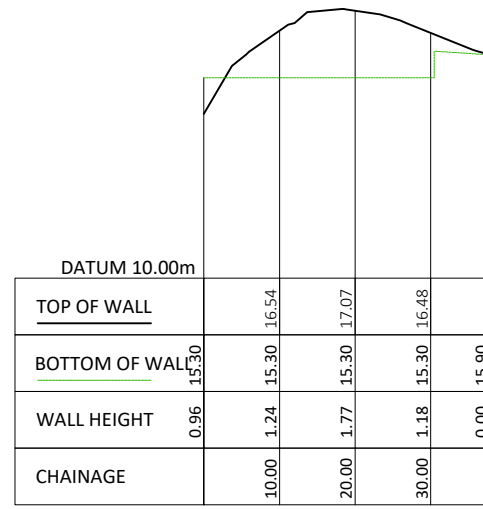
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TITLE		RETAINING WALL PLAN	
DATE	DEC 2018	SCALE	A1 1:500
DRAWN	SH		A3 1:1000
DESIGNED	SH		
PROJECT No	1231	DRAWING No	C230
		REVISION	4

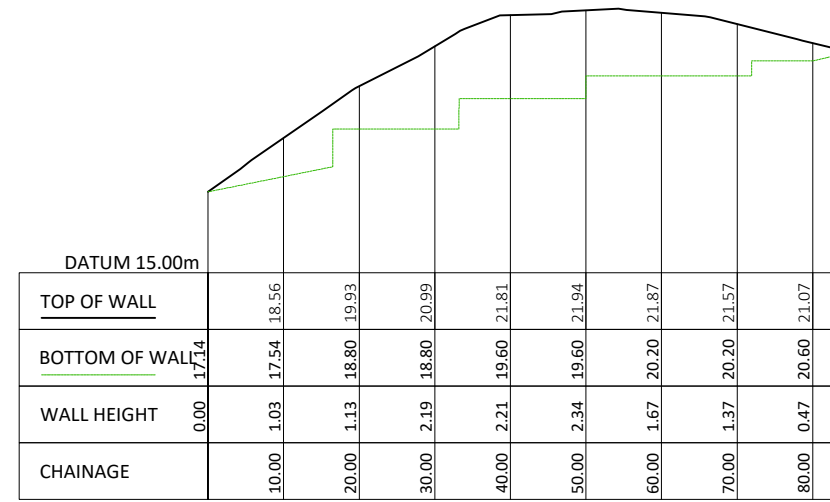
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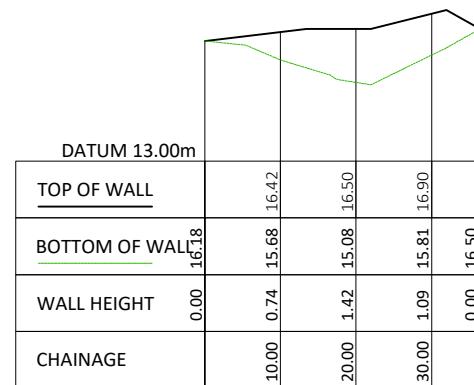
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SCALE 1H:5V



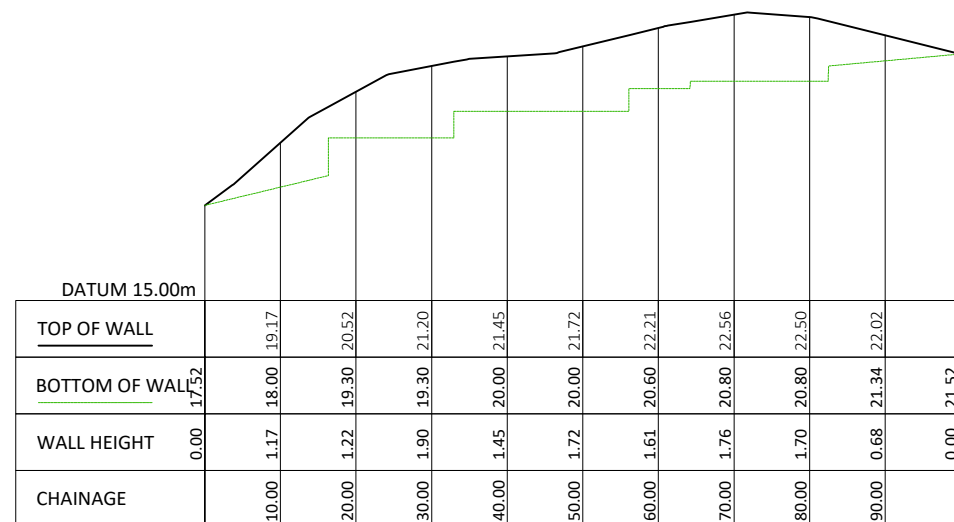
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SCALE 1H:5V



CL- RW 3
SCALE 1H:5V



CL- RW 6
SCALE 1H:5V



CL- RW 7
SCALE 1H:5V

REVISION	CHANGES	CHECKED	DATE
4	RW 6 LOWERED		04/02/19
3	RW 4 & 5 REMOVED		14/01/19
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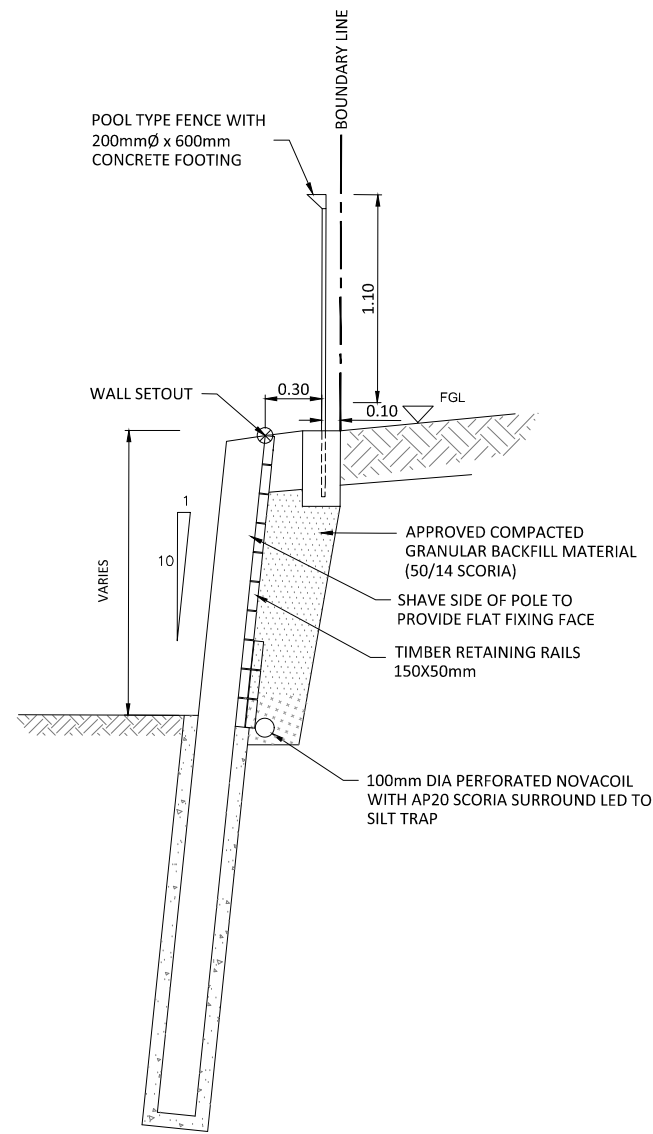
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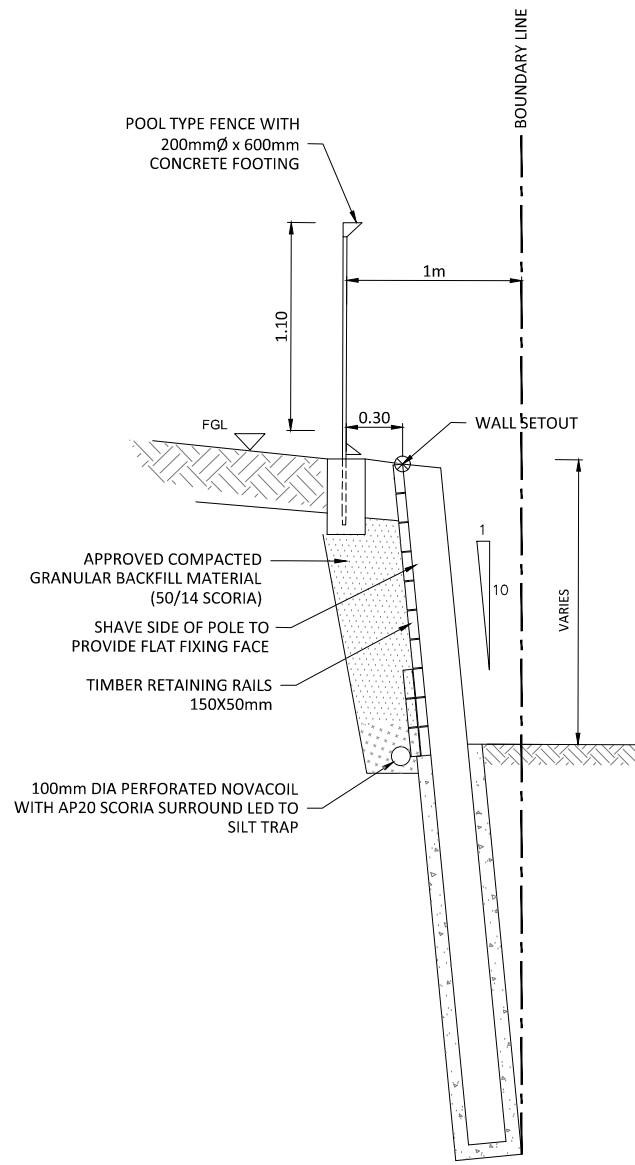
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45 CONSTABLE ROAD WAIUKU

TITLE
RETAINING WALL ELEVATIONS

DATE	SCALE
DEC 2018	A1 1:500
DRAWN SH	A3 1:1000
DESIGNED SH	REVISION
PROJECT No 1231	DRAWING No C240
	4



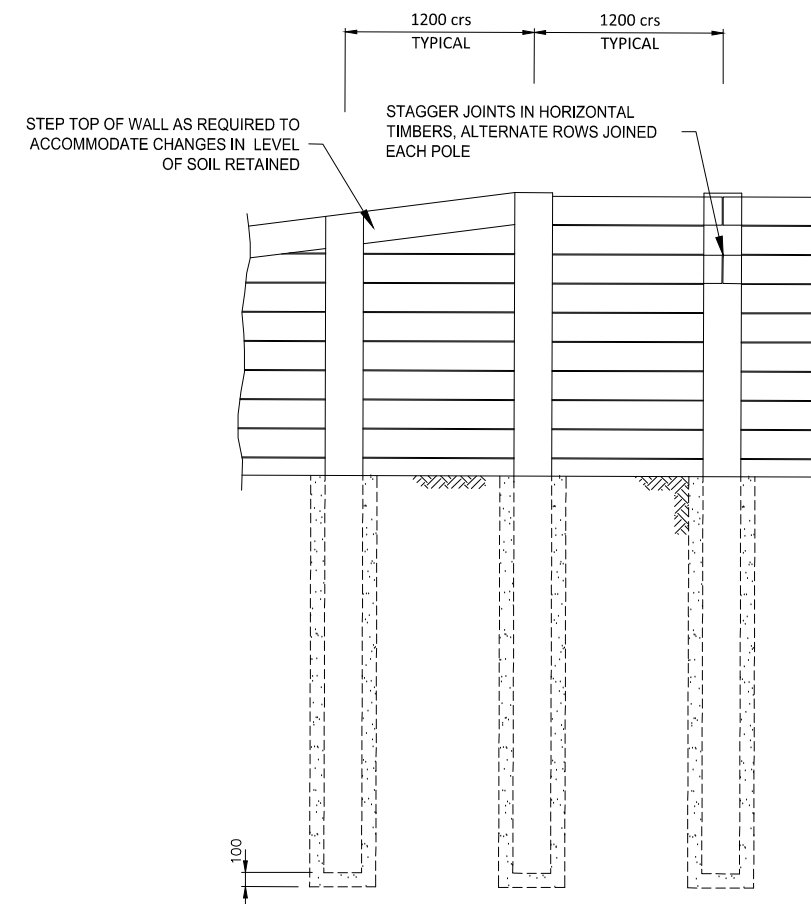
RETAINING WALL TYPICAL DETAIL
SCALE : A1 @ 1:20 & A3 @ 1:40




RETAINING WALL TYPICAL DETAIL
SCALE : A1 @ 1:20 & A3 @ 1:40

NOTES: (WALL)

- REFER SITE PLAN FOR THE LOCATION AND EXTENT OF THE TIMBER POLE RETAINING WALLS.
- CONSTRUCTION OF TIMBER POLE RETAINING WALL SHALL BE IN ACCORDANCE WITH THIS DRAWING UNLESS OTHERWISE APPROVED BY THE DESIGN ENGINEER.
- ALL TIMBER POLES SHALL BE H5 TREATED RADIATA PINE IN ACCORDANCE WITH NZS3603:1990 UNLESS OTHERWISE SPECIFIED.
- ALL TIMBER POLES SHALL HAVE CONCRETE ENCASEMENT BELOW THE GROUND LEVEL WITH A MINIMUM OF 75mm SIDE COVER AND 100mm AT THE BASE.
- THE TIMBER RAILINGS SHALL BE ex 150 x 50 OR ex 200 x 50 H5 TREATED RADIATA PINE AND SHALL BE FIXED TO THE POLES WITH GALVANISED NAILS. CUTTING OF TIMBERS SHALL BE AVOIDED WHEREVER POSSIBLE. IF CUTTING IS NECESSARY THE EXPOSED SURFACES SHALL BE FLOODED WITH A COPPER NAPHTHENATE TYPE OF WOOD PRESERVATIVE.
- THE MAXIMUM RETAINING HEIGHT SHALL BE AS SPECIFIED ON THE DRAWING AND SHALL NOT BE EXCEEDED UNLESS APPROVED BY THE DESIGN ENGINEER IN WRITING.
- THE CHARACTERISTIC COMPRESSIVE STRENGTH OF CONCRETE SHALL BE $f_c' = 17.5$ MPa UNLESS OTHERWISE NOTED. NOTE: $f_c' = 20$ MPa FOR CONCRETE WALLS AND STAIRS.
- THE CONCRETE ENCASEMENT SHALL BE ADEQUATELY VIBRATED WITH A PENCIL VIBRATOR TO AVOID "HONEY-COMBING".
- THE EXTENT OF EXCAVATION REQUIRED SHALL BE MARKED OUT ON THE GROUND HAVING REGARD TO THE POSITIONS OF POLES, WORKING SPACE FOR CONSTRUCTION, THE BACKFILL REQUIRED AND DRAINAGE PROVISIONS.
- EXCAVATIONS FOR FOUNDATIONS SHALL BE TAKEN OUT BY AUGURING TO THE DIMENSIONS DETAILED, WITH ALL SURPLUS SOLID BEING DISPOSED OFF AWAY FROM THE SITE. ALLOWANCE SHALL BE MADE IN POSITIONING AUGURED HOLES FOR THE SLOPE OF THE WALL AND FOR CONCRETE SURROUND TO POLES. DRIVING OF POLES IS NOT ACCEPTABLE AS AN ALTERNATIVE TO AUGURING, UNLESS OTHERWISE APPROVED BY THE DESIGN ENGINEER.
- A PERFORATED OR OPEN JOINTED SUBSOIL DRAIN SHALL BE LAID AND SURROUNDED IN FINE GRANULAR MATERIAL WITH INVERT BELOW GROUND LEVELS AND LED TO A FREE OUTLET AT A POINT OF SAFE DISCHARGE.
- REFER SPECIFICATION FOR DETAILS OF CONSTRUCTION AND MATERIAL SPECIFICATION.
- THE CONTRACTOR SHALL REFER TO THE DESIGN ENGINEER AS SOON AS POSSIBLE FOR FURTHER INSTRUCTION SHOULD ANY UNFORESEEN CIRCUMSTANCES OR ABNORMAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL CHECK ALL SERVICES PLANS AND LOCATE ALL SERVICES ON SITE.
- WIND LOADING ON FENCE HAS NOT BEEN ASSESSED



WALL ELEVATION TYPICAL DETAIL
SCALE : A1 @ 1:20 & A3 @ 1:40


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TITLE
RETAINING WALL DETAILS

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DESIGNED	SH	A3 1:1000
PROJECT No	1231	DRAWING No
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REVISION	0	